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ERRATA.

Page 647, line 8, *for* Plate xviii *read* Plate xxvii.
 " ii " " Elecranon " Olecranon.
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JOURNAL
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New Series.

Vol. VI.—1910.



i. Fashion in Iron Styles.

By I. H. BURKILL.

Most of the styles in the Indian Museum belong to a long, representative and very interesting series which the Government of Madras collected at the instance of the Reporter on Economic Products, from almost every district of that Presidency. In the *Agricultural Ledger* No. 6 of 1908-09 on "Indian Pens," pp. 95-96, the collection is referred to. To that Ledger, this paper on "fashion" in the shape of the styles is supplementary: by illustrating the different types and indicating in what parts of the western peninsula of India each type is used, it carries the subject further than would have been appropriate to a journal such as the *Agricultural Ledger*: it makes no attempt to connect the shape of the pens with the character of the writing, for such a subject is well beyond the writer's field of work and best left to philologists.

The numbers quoted for each style in this account are the permanent registration numbers of the Ethnologic court of the Indian Museum, where the specimens are all exhibited. The drawings reproduced were made in the Government School of Art, Calcutta, under the kind supervision of Mr. Percy Brown, the Principal. All are drawn to the same scale, *viz.*, $\frac{1}{8}$ of the original.

For the purpose of the paper the styles have been classed under four divisions.

FIRST DIVISION.

Styles without a Knife edge attached.

Pens belonging to the first division are figured on plate xx. If the reader will kindly turn to the plate he will observe that the pens are grouped on it into six series. The first series illustrates types 1 to 4, being simple light styles: the second series is of equally double-pointed styles,—types 5 and 6: the third series is of long styles weighted at the very apex, being types 7 to 9: the fourth series is of fusiform styles,—types 10 and 11: the fifth series is of styles weighted by a more abrupt swelling,—types 12 to 15; and the last series of the plate is of heavy tapering styles which are here types 16 and 17. The descriptions of the figures may conveniently be given series by series: the first series is of the following styles:—

- FIG. 1. Type 1. Style No. 10862, from the Kistna District.
 FIG. 2. Type 2. Style No. 10666, from the Malabar District.
 FIG. 3. Type 3. Style No. 10790, from the Godaveri District.
 FIG. 4. Type 4. Style No. 10808, from the Kistna District.
 FIG. 5. Type 4. Style No. 10810, from the Kistna District.

The iron style in its simplest form may be very like a porcupine quill; and with such a type we may conveniently start. Short light styles of no greater length than the porcupine quill are uncommon but exist; and figure 1 is of an example from the Kistna District: its total length is $7\frac{1}{4}$ inches; its weight is only $\frac{3}{4}$ oz., and its centre of gravity $4\frac{1}{2}$ inches from the point.

A somewhat similar style is seen in figure 2 from Malabar: it is $6\frac{3}{4}$ inches long; it weighs $1\frac{1}{4}$ oz., and has its centre of gravity 4 inches from the tip. It is a transition towards type 10.

Longer simple styles are much commoner than these short simple styles. Firstly may be considered two which come from the Godaveri District, one of which is here shown as figure 3. It has an unusual slight, but abrupt, thickening towards the middle. The other has no such thickening. Both have exactly similar obtuse points. Their lengths are respectively $8\frac{3}{4}$ and $9\frac{1}{4}$ inches; their weights are 2 oz. each, and their centres of gravity $4\frac{3}{4}$ and $4\frac{5}{8}$ inches distant from their tips.

Longer styles have been received abundantly from the Districts of the Kistna and Godaveri and also from the contiguous Districts of Ganjam, Vizagapatam, Kurnool and Nellore. The longest of all come from the Kistna District: indeed the average length (15 inches) of styles received from that District is greater than the average length of all the styles of this type.

Here follows a table, arranged with the shortest styles first, stating the lengths, weights, and the distances of the centre

of gravity of each from its tip. Figs. 4 and 5 are given in illustration of the type.

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Godaveri .. 10789	10 $\frac{3}{8}$	2	5 $\frac{1}{2}$
Vizagapatam .. 10759	11 $\frac{1}{2}$	2 $\frac{1}{4}$	5 $\frac{3}{4}$
Kistna, Guntur .. 10803	12 $\frac{3}{4}$	3 $\frac{1}{4}$	8 $\frac{1}{8}$
Ganjam .. 10733	13 $\frac{3}{8}$	2	7
Kistna, Guntur .. 10805	13 $\frac{3}{4}$	3	8
Kistna, Guntur .. 10800	13 $\frac{7}{8}$	2 $\frac{1}{4}$	6 $\frac{3}{8}$
Vizagapatam .. 10760	13 $\frac{7}{8}$	2 $\frac{1}{4}$	6 $\frac{3}{8}$
Kistna, Bezwada .. 10844	14	2 $\frac{5}{8}$	7 $\frac{3}{4}$
Vizagapatam .. 10761	14	2 $\frac{1}{2}$	7 $\frac{1}{2}$
Kistna, Guntur .. 10804	14	2 $\frac{1}{2}$	7 $\frac{7}{8}$
Nellore .. 10767	14 $\frac{1}{8}$	3	7 $\frac{1}{2}$
Godaveri .. 10785	14 $\frac{1}{8}$	3	8 $\frac{3}{8}$
Godaveri .. 10787	14 $\frac{1}{8}$	3 $\frac{1}{4}$	8
Godaveri .. 10788	14 $\frac{1}{8}$	3 $\frac{1}{4}$	6 $\frac{1}{8}$
Godaveri .. 10791	14 $\frac{1}{8}$	3 $\frac{1}{4}$	8 $\frac{1}{8}$
Godaveri .. 10792	14 $\frac{1}{8}$	3 $\frac{1}{4}$	8
Kistna, Guntur .. 10802	14 $\frac{1}{2}$	2 $\frac{3}{4}$	7 $\frac{7}{8}$
Kurnool .. 10816	14 $\frac{5}{8}$	2 $\frac{3}{4}$	8
Kistna, Tiruvur .. 10850	14 $\frac{5}{8}$	3	8 $\frac{3}{8}$
Kistna .. 10859	15	3 $\frac{1}{4}$	8 $\frac{1}{2}$
Godaveri .. 10794	15	3 $\frac{1}{2}$	8
Kistna .. 10808	15 $\frac{1}{4}$	3 $\frac{1}{8}$	9 $\frac{1}{2}$
Kistna, Tiruvur .. 10852	15 $\frac{1}{4}$	3 $\frac{1}{2}$	8 $\frac{1}{2}$
Kistna .. 10810	15 $\frac{3}{4}$	4 $\frac{1}{8}$	8 $\frac{7}{8}$
Kistna, Bezwada .. 10845	16 $\frac{3}{4}$	4 $\frac{1}{2}$	9 $\frac{3}{4}$
Kistna .. 10809	17 $\frac{1}{2}$	5 $\frac{3}{4}$	9 $\frac{7}{8}$
Kistna, Bezwada .. 10847	17 $\frac{3}{8}$	4	9 $\frac{1}{2}$
Average	14.38	3.11	7.52
Average of Kistna specimens	15.00	3.41	8.49

The following figures, illustrative of pens next to be described, make the second series on plate xx:—

- FIG. 6. Type 5. Style No. 10745, from Ganjam.
- FIG. 7. Type 6. Style No. 10683, from Malabar, Pannianur.
- FIG. 8. Type 6. Style No. 10690, from Malabar.
- FIG. 9. Type 6a. Style No. 10839, from Burma.

The Districts of Ganjam and Vizagapatam possess the

Type 5. little double-pointed style, fig. 6. There are five such styles in the Indian Museum: and four of them are very similar indeed to one another. The length varies from 5 $\frac{1}{4}$ to 6 $\frac{1}{4}$ inches, the weight from 1 $\frac{3}{4}$ to 1 $\frac{1}{2}$ oz., and the centre of gravity of all is at the middle. The fifth specimen, from Vizagapatam, is smaller, weighing

only $\frac{3}{4}$ oz., and being $4\frac{1}{2}$ inches long. Every specimen is similarly ornamented at the middle.

District of Origin.	Length in Inches.	Weight in Ounces.	Centre of Gravity.
Vizagapatam .. 10749	$4\frac{1}{2}$	$\frac{3}{4}$	at the middle.
Ganjam .. 10746	$5\frac{1}{4}$	$1\frac{1}{4}$	
Ganjam .. 10745	$5\frac{3}{4}$	$1\frac{1}{8}$	
Ganjam .. 10747	6	$1\frac{1}{2}$	
Vizagapatam .. 10751	$6\frac{1}{4}$	$1\frac{1}{4}$	
Average ..	5.55	1.17	

Far away from the Circars in Malabar and South Canara another double pointed style is used; but it is of a much heavier type. That the two are quite unlike is readily shown by a comparison of the figures 7 and 8 with figure 6.

The following table gives the length and weight of this heavy pen. The centre of gravity is in all examples at the middle.

Type 6.

District of Origin.	Length in Inches.	Weight in Ounces.	Centre of Gravity.
Malabar, Pannianur .. 10683	10	$6\frac{3}{4}$	at the middle
South Canara .. 10822	$10\frac{3}{4}$	8	
Malabar .. 10686	$13\frac{3}{4}$	$9\frac{3}{4}$	
Malabar, Pannianur .. 10674	$14\frac{1}{4}$	14	
Malabar .. 10690	$17\frac{1}{4}$	$22\frac{1}{2}$	
Average ..	13.20	12.20	

The last style of the five in the table is so very large and heavy that it almost might have been separated from the other as a distinct type.

We now pass on to styles weighted towards the upper end such as are illustrated by the following figures on plate xx:—

Type 7.

FIGS. 10 and 11. Type 7. Styles Nos. 10853 and 10855, from the Kistna District.

FIG. 12. Type 8. Style No. 10734, from the Ganjam District.

FIG. 13. Type 9. Style No. 10858, from the Kistna District.

FIG. 14. Type 9. Style No. 10848, from Bezvada, Kistna District.

FIG. 15. Type 9. Style No. 10860, from the Kistna District.

A very simple form of weighting is that in which the top is turned over: two such pens have been received from the

[N.S.]

Kistna District (figs. 10 and 11): they are respectively $13\frac{1}{2}$ inches and $11\frac{1}{4}$ inches long; they weigh respectively $2\frac{5}{8}$ and 3 oz., and their centres of gravity are $7\frac{3}{4}$ and $6\frac{1}{2}$ inches remote from the tips. That they differ in very little from type No. 4 is evident. Type 4 is also from the Kistna District.

The next form of weighting is a curious one (fig. 12),
 Type 8. seen only in one style received from
 Ganjam: it is contrived by a bar affixed
 across the top. The style is 9 inches long, weighs $2\frac{1}{4}$ oz., and
 has its centre of gravity $6\frac{1}{2}$ inches from the tip.

The next set of specimens are like long nails (vide figs.
 Type 9. 13, 14, and 15). They all come from the
 Kistna or Kurnool Districts, whence the
 similar types 4 and 7 come.

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.	
alike { Kistna .. 10858	$11\frac{1}{4}$	$2\frac{1}{4}$	$8\frac{1}{2}$	
	Kistna .. 10854	$12\frac{1}{2}$	$2\frac{1}{2}$	$7\frac{1}{2}$
		Kistna, Bezwada .. 10848	$12\frac{1}{2}$	$2\frac{7}{8}$	$7\frac{1}{2}$
alike { Kurnool .. 10818	$12\frac{1}{8}$	$3\frac{1}{4}$	$7\frac{1}{2}$	
	Kistna, Bezwada .. 10863	12	$3\frac{1}{4}$	$7\frac{1}{4}$
		Kistna .. 10860	$13\frac{1}{2}$	$3\frac{1}{2}$	8
Average ..	12.31	2.94	7.71	

Next in turn may be taken in succession of types of pen
 Type 10. weighted above by means of a fusiform
 swelling. These types are illustrated on
 plate xx by the following figures:—

- FIG. 16. Type 10. Style No. 10664, from the Coimbatore District.
 FIG. 17. Type 11. Style No. 10775, from the Tanjore District.
 FIG. 18. Type 11. Style No. 10829, from North Arcot.
 FIG. 19. Type 11. Style No. 10776, from the Tanjore District.
 FIG. 20. Type 11. Style No. 10669, from Malabar.
 FIG. 21. Type 11. Style No. 10720, from South Arcot.

Style No. 10664 from Coimbatore (fig. 16) which has a length of $6\frac{3}{4}$ inches, and a weight of $1\frac{1}{4}$ oz., and in which the distance of the centre of gravity from the tip is 4 inches, is the simplest of the types, being a transition between type 1, figure 1, and the types 11 and 12.

Of styles of type 11 are here offered five illustrations,—
 figures 17, 18, 19, 20 and 21. Some
 Type 11. styles of this type are rounded, but most
 are octagonal in section above, either equal sided or with
 broader and narrower sides alternating as in figure 21. I give
 a table of styles of type 11 arranged according to their
 lengths:—

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Madura .. 10728	5 $\frac{7}{8}$	2 $\frac{3}{4}$	4
Coimbatore .. 10662	6 $\frac{1}{4}$	2 $\frac{1}{4}$	4 $\frac{1}{4}$
Malabar .. 10681	6 $\frac{1}{4}$	2 $\frac{1}{2}$	4 $\frac{1}{8}$
Trichinopoly .. 10707	6 $\frac{3}{8}$	1 $\frac{3}{4}$	4
South Arcot .. 10721	6 $\frac{3}{4}$	2 $\frac{1}{2}$	4 $\frac{3}{8}$
Trichinopoly .. 10708	6 $\frac{1}{2}$	1 $\frac{1}{2}$	4 $\frac{3}{4}$
Tanjore .. 10775	6 $\frac{7}{8}$	2 $\frac{1}{4}$	5
Tinnevelly .. 10782	7	2 $\frac{3}{4}$	5 $\frac{1}{8}$
South Arcot .. 10720	7	2 $\frac{1}{4}$	4 $\frac{1}{2}$
Salem .. 10655	7 $\frac{1}{4}$	2 $\frac{1}{2}$	4 $\frac{5}{8}$
Tanjore .. 10779	7 $\frac{1}{2}$	2 $\frac{1}{2}$	5 $\frac{1}{2}$
Salem .. 10653	7 $\frac{3}{4}$	2 $\frac{1}{2}$	4 $\frac{3}{4}$
Trichinopoly .. 10704	7 $\frac{7}{8}$	2 $\frac{3}{4}$	5 $\frac{1}{4}$
Tanjore .. 10776	8 $\frac{1}{8}$	3 $\frac{1}{4}$	5 $\frac{3}{4}$
Chingleput .. 10799	8 $\frac{1}{4}$	2 $\frac{1}{2}$	5 $\frac{3}{4}$
North Arcot .. 10829	8 $\frac{1}{2}$	2 $\frac{3}{4}$	6
Malabar, Anjengo .. 10813	8 $\frac{3}{8}$	3 $\frac{1}{4}$	6
Malabar .. 10669	8 $\frac{3}{4}$	4 $\frac{1}{2}$	6
South Arcot .. 10722	8 $\frac{7}{8}$	3 $\frac{1}{2}$	5 $\frac{3}{4}$
South Arcot .. 10713	9 $\frac{3}{4}$	4	6 $\frac{1}{8}$
Kistna, Guntur .. 10801	10 $\frac{1}{4}$	3 $\frac{1}{4}$	6 $\frac{3}{4}$
Kistna .. 10857	10 $\frac{3}{8}$	3 $\frac{1}{4}$	7 $\frac{3}{8}$
Kurnool .. 10187	10 $\frac{7}{8}$	3 $\frac{1}{4}$	7 $\frac{1}{2}$
Godaveri .. 10793	11 $\frac{1}{8}$	2 $\frac{3}{4}$	7 $\frac{3}{8}$
North Arcot .. 10828	11	4	7 $\frac{1}{4}$
Nellore .. 10765	11 $\frac{1}{4}$	3	7
Kistna, Guntur .. 10806	11 $\frac{1}{4}$	4 $\frac{1}{4}$	7 $\frac{1}{2}$
Kistna, Bezwada .. 10840	12	4 $\frac{3}{8}$	8
Kurnool .. 10825	12 $\frac{3}{8}$	4 $\frac{1}{2}$	8 $\frac{1}{4}$
Average ..	8.67	3.00	5.75
Average of specimens from N. of Madras ..	10.91	3.54	7.30
Average of specimens from Madras and South ..	7.49	2.72	4.93

It is very easy to see from the table that the style of the Southern Districts is much shorter than that of the Northern.

[N.S.]

The fourth series on plate xx is composed of the following pens now to be described :—

- FIG. 22. Type 12. Style No. 10849, from the Kistna District.
 FIG. 23. Type 12. Style No. 10769, from the Nellore District.
 FIG. 24. Type 13. Style No. 10667, from Malabar.
 FIG. 25. Type 13. Style No. 10730, from the Madura District.
 FIG. 26. Type 14. Style No. 10807, from the Kistna District.
 FIG. 27. Type 15. Style No. 10766, from the Nellore District.

Departing from the last type in the direction of type No. 9 are the following pens constructed

Type 12. as in figures 22 and 23. It will be noticed that they all belong to the Districts which have supplied type 9 (figs. 13-15), except No. 10769 (fig. 23) which came from a more southern District, and differs in being half of brass.

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Vizagapatam .. 10756	$7\frac{1}{2}$	$1\frac{3}{4}$	5
Vizagapatam .. 10755	$7\frac{1}{2}$	2	$5\frac{1}{8}$
Nellore .. 10769	8	$2\frac{5}{8}$	$5\frac{3}{4}$
Kistna, Attili .. 10851	$8\frac{7}{8}$	$3\frac{1}{4}$	$5\frac{3}{4}$
Vizagapatam .. 10753	$9\frac{3}{4}$	3	$6\frac{1}{4}$
Kistna, Mogalter range 10849	$11\frac{1}{2}$	$3\frac{7}{8}$	$7\frac{7}{8}$
Average ..	8.85	2.75	5.96

The next type has a bulb on the stem, solid generally,

Type 13. but in one of the specimens it is hollow. Often the stem of styles of this type is ornamented prettily with bidri work. The examples in the Indian Museum are arranged in the next table by length; and two are drawn in figures 24 and 25.

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Madura .. 10730	$4\frac{1}{8}$	$1\frac{1}{4}$	$2\frac{1}{8}$
South Canara .. 10824	$5\frac{1}{4}$	$1\frac{3}{4}$	$3\frac{1}{4}$
Malabar .. 10673	$5\frac{3}{8}$	$1\frac{3}{4}$	$2\frac{3}{4}$
Malabar, Pannianur .. 10671	$5\frac{3}{4}$	2	$2\frac{7}{8}$
Malabar .. 10675	$7\frac{1}{4}$	$2\frac{7}{8}$	$4\frac{1}{2}$
Malabar .. 10699	$7\frac{1}{2}$	$1\frac{7}{8}$	$4\frac{1}{2}$
Malabar .. 10696	$7\frac{3}{4}$	$2\frac{7}{8}$	$4\frac{1}{2}$
Malabar, Anjengo .. 10815	$8\frac{1}{2}$	$1\frac{3}{4}$	$5\frac{1}{4}$
Malabar .. 10667	$8\frac{7}{8}$	$2\frac{3}{4}$	$5\frac{3}{4}$
Malabar .. 10682	$9\frac{1}{8}$	$2\frac{3}{4}$	6
Malabar .. 10693	$9\frac{1}{4}$	$2\frac{1}{8}$	6
Malabar .. 10701	$9\frac{7}{8}$	$3\frac{1}{4}$	6
Nellore .. 10768	$10\frac{1}{8}$	$2\frac{3}{4}$	$6\frac{7}{8}$
Malabar .. 10697	$12\frac{1}{2}$	5	$7\frac{1}{2}$
Average ..	7.98	2.48	5.27

We find one heavy Malabar pen, which might almost be made a separate type. The very short pen from Madura is of brass with an iron point and has its swelling hollow.

Four styles have been received with the swelling higher up the stem, one of which is represented in

Type 14. fig. 26. They are as follows:—

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Kistna, Guntur .. 10807	$9\frac{1}{4}$	$3\frac{1}{4}$	$6\frac{1}{4}$
Kistna .. 10861	$9\frac{1}{2}$	$4\frac{1}{8}$	$6\frac{1}{2}$
Nellore .. 10764	10	$2\frac{3}{4}$	$6\frac{3}{4}$
Kistna, Bezwada .. 10843	$12\frac{3}{4}$	$4\frac{1}{4}$	8
Average ..	10.37	3.59	6.87

The upper parts of the first, second and last are made of brass.

Style No. 10766 (fig. 27) is a peculiar departure akin to the last. It was received from Nellore, weighs $1\frac{3}{4}$ oz., is 7 inches long, and its centre of gravity is 5 inches above the point.

Type 15.

[N.S.]

The last series on plate xx is composed of the following four figures :—

- FIG. 28. Type 16. Style No. 10670, from the Malabar District.
 FIG. 29. Type 16. Style No. 10672, from South Canara.
 FIG. 30. Type 16. Style No. 10311, from the Malabar District.
 FIG. 31. Type 17. Style No. 10691, from the Malabar District.

Heavy cigar-shaped styles, such as is figured as 28, come from Malabar: and if ornamented they become like figs. 29 and 30, the first of which was received from South Canara, an adjoining District: otherwise the examples have all come from Malabar.

The weights and length of these pens are:—

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Malabar, Pannianur .. 10680	$5\frac{1}{2}$	$2\frac{3}{4}$	$3\frac{1}{2}$
Malabar, Anjengo .. 10812	$6\frac{1}{2}$	$2\frac{1}{4}$	$4\frac{3}{4}$
Malabar .. 10668	7	$1\frac{3}{4}$	$4\frac{3}{4}$
Malabar, Pannianur .. 10676	$7\frac{1}{4}$	$3\frac{3}{4}$	$4\frac{3}{4}$
Malabar, Pannianur .. 10679	$7\frac{3}{8}$	$3\frac{1}{2}$	5
Malabar, Pannianur .. 10678	$8\frac{1}{8}$	$7\frac{1}{2}$	$5\frac{1}{8}$
Malabar .. 10665	$8\frac{5}{8}$	$3\frac{1}{2}$	$5\frac{1}{4}$
South Canara .. 10823	9	$4\frac{3}{4}$	$5\frac{3}{4}$
Malabar, Anjengo .. 10811	$9\frac{3}{4}$	$2\frac{1}{2}$	$6\frac{3}{4}$
Malabar, Pannianur .. 10672	$11\frac{1}{2}$	8	$7\frac{1}{2}$
Malabar, Pannianur .. 10670	$11\frac{3}{4}$	$10\frac{1}{2}$	$7\frac{1}{2}$
Average ..	8.40	4.61	5.52

We find in the same part of India styles that taper evenly from a flat head to the point (fig. 31).

Type 17.

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Malabar, Anjengo .. 10814	$7\frac{1}{2}$	$3\frac{1}{4}$	$5\frac{1}{2}$
Malabar .. 10698	$7\frac{3}{8}$	$2\frac{3}{4}$	$4\frac{5}{8}$
Malabar .. 10693	$9\frac{1}{8}$	$4\frac{1}{2}$	$6\frac{3}{4}$
Malabar .. 10885	$10\frac{1}{4}$	$5\frac{1}{4}$	7
Malabar .. 10691	12	17	$8\frac{3}{4}$
Average ..	9.25	6.55	6.52

SECOND DIVISION.

Styles with a Knife edge associated.

The simplest forms of styles, with a knife blade worked on to them, are to be seen in figs. 32, 33, 34 and 35.

These four figures, 32-35, together with figure 36, make the first series on plate xxi :—

- FIG. 32. Type 19. Style No. 10717, from South Arcot.
 FIG. 33. Type 22. Style No. 10748, from the Vizagapatam District.
 FIG. 34. Type 20. Style No. 10750, from the Vizagapatam District.
 FIG. 35. Type 21. Style No. 10763, from the Nellore District.
 FIG. 36. Type 23. Style No. 10738, from Ganjam.

The simplest of all is style No. 10750 (fig. 34), from the district of Vizagapatam, which may be used as the starting point of a series. We may group the similar styles to be found in the Indian Museum Collection as follows :—

Type 18, long thin style with straight blade,
 Vizagapatam, 10750 (fig. 34), and 10754.

Type 19, thin style, blade turned at an angle of about 30°,
 South Arcot, 10717 (fig. 32).

Type 20, thin style, blade sickle-shaped,
 Vizagapatam, 10758 (not figured, is, as it were, an
 exaggeration of the next, fig. 35).

Type 21, very long, otherwise as type 21,
 Nellore, 10763 (fig. 35).

Type 22, thin style, blade turned about at an angle of 90°,
 Vizagapatam, 10748 (fig. 33).

It is noteworthy that they all come from the Coromandel Coast, whence come also the thin styles that have no knife blades attached.

The weight and length of these pens are as follows :—

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Vizagapatam .. 10748	$7\frac{1}{8}$	$1\frac{13}{32}$	$4\frac{1}{8}$
Vizagapatam .. 10758	$8\frac{1}{2}$	$1\frac{13}{32}$	$3\frac{7}{8}$
South Arcot .. 10717	$8\frac{7}{8}$	$1\frac{13}{32}$	5
Vizagapatam .. 10754	12	$2\frac{1}{2}$	6
Nellore .. 10763	$16\frac{1}{2}$	$4\frac{1}{8}$	$9\frac{1}{2}$
Vizagapatam .. 10750	$17\frac{1}{4}$	$4\frac{3}{8}$	9

Styles such as these just described, lead up to the very characteristic style of Orissa (fig. 36) which has a downwardly

directly cutting edge, and an eye-hole by which it may be suspended. All Orissa styles of this type are very much alike, as a glance down the following table shows. Their use extends to Midnapur, Calcutta (among immigrant Uriyas), Ganjam and Vizagapatam.

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Vizagapatam .. 10757	5 $\frac{1}{4}$	0 $\frac{3}{4}$	3 $\frac{1}{4}$
Ganjam .. 10737	6 $\frac{1}{2}$	2	4 $\frac{3}{8}$
Ganjam .. 10744	6 $\frac{1}{2}$	2	4 $\frac{1}{2}$
Orissa .. 7240	6 $\frac{1}{2}$	1	4 $\frac{3}{8}$
Ganjam .. 10742	6 $\frac{3}{4}$	1 $\frac{3}{4}$	4 $\frac{1}{4}$
Ganjam .. 10740	7 $\frac{1}{4}$	2	4 $\frac{1}{2}$
Midnapur .. 4243	7 $\frac{1}{2}$	1 $\frac{3}{4}$	5 $\frac{3}{8}$
Cuttack .. 491	7 $\frac{5}{8}$	1 $\frac{5}{8}$	5 $\frac{1}{8}$
Ganjam .. 10738	7 $\frac{3}{4}$	1 $\frac{7}{8}$	5 $\frac{3}{8}$
Ganjam .. 10735	7 $\frac{3}{4}$	2 $\frac{3}{4}$	5 $\frac{5}{8}$
Ganjam .. 10741	8	1 $\frac{1}{4}$	4 $\frac{3}{4}$
Ganjam .. 10743	8	2 $\frac{1}{4}$	5 $\frac{1}{4}$
Vizagapatam .. 10752	8	2	5 $\frac{3}{4}$
Ganjam .. 10739	8 $\frac{1}{8}$	1 $\frac{1}{2}$	5 $\frac{5}{8}$
Cuttack .. 489	8 $\frac{1}{8}$	2 $\frac{1}{4}$	5 $\frac{1}{4}$
Ganjam .. 10736	9 $\frac{1}{2}$	2	5 $\frac{3}{4}$
Average ..	7.44	1.79	4.96

The second series of pens on plate xxi is made up of the following:—

- FIG. 37. Type 24. Style No. 10687, from the district of Malabar.
 FIG. 38. Type 25. Style No. 10700, from the district of Malabar.
 FIG. 39. Type 26. Style No. 10821, from the district of Kurnool.
 FIG. 40. Type 27. Style No. 10820, from the district of Kurnool.
 FIG. 41. Type 28. Style No. 10784, from the district of Cuddapah.

The eye-holes of the Orissa styles reappear in styles of the same coast from Districts further south (*vide* figs. 40 and 41): but no styles from the Malabar coast exist in the Indian Museum which have these eye-holes in the knife blade. However, Malabar has supplied the style figured as fig. 37, which possesses two rows of six holes below the blade. This style is a long thin one such as one would have expected from the Districts of the Kistna or Kurnool, its weight is 6 $\frac{1}{4}$ oz., its length 17 inches, and its centre of gravity is 10 inches from the tip.

Very like type 25 are two other styles from Malabar, one of which is figured as fig. 38. Their

Type 25. weight, length and the position of the centre of gravity are as follows:—

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Malabar .. 10700	13	$4\frac{7}{8}$	7
Malabar .. 10702	$13\frac{5}{8}$	$3\frac{7}{8}$	$7\frac{5}{8}$

Type 26.

The eastern coast and the District of Coimbatore have supplied type 26 (fig. 39).

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Coimbatore .. 10663	$8\frac{1}{4}$	$2\frac{1}{4}$	$4\frac{3}{8}$
Kistna .. 10842	$9\frac{1}{2}$	$2\frac{1}{8}$	$5\frac{3}{8}$
Kurnool .. 10819	$10\frac{3}{4}$	$2\frac{3}{4}$	$6\frac{1}{2}$
Kurnool .. 10821	$11\frac{1}{2}$	$2\frac{1}{4}$	$7\frac{1}{4}$
Average ..	10·00	2·34	5·87

Type 27.

Very similar but with two eye-holes (*vide* fig. 40).

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Anantapur .. 10827	$11\frac{3}{8}$	$2\frac{3}{8}$	$7\frac{3}{4}$
Kistna .. 10856	$12\frac{1}{4}$	$2\frac{1}{4}$	$7\frac{3}{4}$
Kurnool .. 10820	$12\frac{1}{4}$	$3\frac{1}{4}$	$7\frac{1}{4}$
Kistna .. 10841	$12\frac{7}{8}$	$2\frac{1}{4}$	8
Average ..	12·00	2·53	7·69

The pen figured as fig. 41 differs from the last in having two knife edges. It comes from Cudda-

Type 28.

pah, its weight is 3 oz.; it is $14\frac{1}{4}$ inches long, and has the centre of gravity $8\frac{1}{2}$ inches from the tip.

The above completes the enumeration of the light styles with knife edges attached; and we proceed to the heavy styles with such knives. They fall into types by the shapes of the blade.

The third series of figures on plate xxi illustrates them.

- FIG. 42. Type 29. Style No. 10684, from Malabar.
 FIG. 43. Type 29. Style No. 10774, from Trichinopoly.
 FIG. 44. Type 30. Style No. 10709, from Trichinopoly.
 FIG. 45. Type 31. Style No. 10725, from Madura.
 FIG. 46. Type 32. Style No. 10795, from Chingleput.

Just as the heavy styles without knife-edges come from southern and western India, so do the heavy styles with knife-edges. The following enumerates those of the heavy series in which (as in fig. 42) the edge is straight.

District of Origin.		Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Trichinopoly	.. 10706	$5\frac{5}{8}$	$2\frac{3}{4}$	$3\frac{1}{2}$
Tanjore	.. 10770	$6\frac{3}{8}$	$1\frac{1}{8}$	4
Madura	.. 10729	$7\frac{1}{4}$	$3\frac{1}{8}$	$4\frac{1}{2}$
Tanjore	.. 10777	$7\frac{1}{2}$	$1\frac{5}{8}$	$5\frac{7}{8}$
Tanjore	.. 10771	$7\frac{5}{8}$	$1\frac{3}{8}$	$4\frac{7}{8}$
South Arcot	.. 10719	$8\frac{1}{4}$	3	$4\frac{7}{8}$
Tanjore	.. 10780	$8\frac{1}{4}$	$3\frac{3}{8}$	$5\frac{1}{2}$
Tanjore	.. 10778	$8\frac{5}{8}$	$2\frac{7}{8}$	$5\frac{3}{4}$
Chingleput	.. 10798	$8\frac{7}{8}$	$2\frac{3}{8}$	$5\frac{1}{2}$
Tanjore	.. 10774	$8\frac{7}{8}$	$1\frac{3}{4}$	$5\frac{1}{2}$
Malabar	.. 10692	$9\frac{1}{8}$	$5\frac{1}{4}$	6
Malabar	.. 10694	$11\frac{1}{2}$	$3\frac{1}{4}$	$6\frac{3}{4}$
Malabar	.. 10684	$11\frac{3}{4}$	$8\frac{3}{4}$	$7\frac{1}{8}$
Malabar	.. 10688	$16\frac{1}{2}$	7	$9\frac{1}{2}$
Average	..	9.06	3.43	5.67

We pass on to those of the heavy series in which the blade is hooked (fig. 44). A table enumerating them is to be found on the next page.

The average length and weight of styles with hooked blades (type 30) is less than the average weight and styles with straight blades (type 29), as a consequence of Malabar supplying some characteristically heavy styles with straight

blades, and none with hooked blades : from a glance at the preceding table of the specimens of type 29, it will be observed that Malabar has supplied the four pens which are the heaviest.

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
Tanjore .. 10770	6 $\frac{3}{8}$	1 $\frac{1}{8}$	4 $\frac{1}{4}$
Madura .. 10729	7 $\frac{1}{8}$	3 $\frac{1}{4}$	4 $\frac{1}{2}$
Tanjore .. 10777	7 $\frac{1}{4}$	1 $\frac{3}{4}$	5 $\frac{1}{8}$
Tanjore .. 10771	7 $\frac{3}{8}$	1 $\frac{1}{2}$	5
Tanjore .. 10719	8 $\frac{1}{4}$	3	4 $\frac{7}{8}$
Tanjore .. 10780	8 $\frac{1}{4}$	3 $\frac{1}{2}$	5 $\frac{1}{2}$
Tanjore .. 10778	8 $\frac{1}{2}$	3	5 $\frac{3}{4}$
Trichinopoly .. 10774	8 $\frac{7}{8}$	1 $\frac{3}{4}$	5 $\frac{1}{2}$
Trichinopoly .. 10709	9 $\frac{3}{8}$	3 $\frac{1}{4}$	6 $\frac{1}{4}$
Average ..	7.99	2.46	5.19

Type 31 and 32.

The blade again differs in the styles figured as figs. 45 and 46.

District of Origin.	Length in Inches.	Weight in Ounces.	Distance in inches of the Centre of Gravity from the tip.
31 } Madura .. 10725	8 $\frac{1}{2}$	4 $\frac{3}{4}$	5 $\frac{1}{4}$
31 } Chingleput .. 10798	8 $\frac{3}{4}$	2 $\frac{3}{8}$	5 $\frac{1}{2}$
32 Chingleput .. 10795	12 $\frac{1}{2}$	3 $\frac{3}{8}$	7 $\frac{3}{8}$

THIRD DIVISION.

Clasp Knives.

The figures of this type are given on plate xxi.

FIG. 47. Type 33. Style No. 10659, from Coimbatore.

FIG. 48. Type 34. Style No. 10826, from Chingleput.

FIG. 49. Type 36. Style No. 10689, from Malabar.

The two common forms of styles constructed as clasp-knives are drawn in figs. 47 and 48. They vary in the shape of the blade: the shape of the style is always the same. The base of the style is always folded round the base of the blade.

Knives of the first type (fig. 47) with light brown wood handles have come from the Districts of

Type 33. Coimbatore, Madura, and Tinnevely, with ebony handles from the Districts of Chingleput, South Arcot, Coimbatore, Salem, Tanjore and Madura, and with bone handles from the Districts of Coimbatore, Salem, Tanjore and Madura.

Knives of the second type with ebony handles have come from the Districts of North Arcot,

Type 34. Chingleput, South Arcot, Nellore and Trichinopoly; and with bone handles from the Districts of Trichinopoly.

Sometimes these knives, instead of the brass knob which is figured at the base in fig. 47, have a brass disc for a seal: sometimes they have a bone knob: but often they have nothing, as in fig. 48.

An European two-bladed knife, with one blade filed down to make a style, has been received from

Type 35. Salem: and a curious knife (fig. 49) has been received from Malabar, which has the style and

Type 36. blade in one piece, so that when one is sheathed the other must be unsheathed.

FOURTH DIVISION.

Circle Machines.

Last of all is to be figured the machine (fig. 50) for making circles, which can also be used for making

Type 37. parallel lines. Three such styles have been received: one from Madura (which is figured on plate xxi as fig. 50), one from South Arcot, and one from Salem.

District of Origin.		Length in Inches.	Weight in Ounces.
Salem	.. 10654	3 $\frac{3}{4}$	1
South Arcot	.. 10718	5	
Madura	.. 10731	5	

In conclusion, by way of bringing out clearly that the types of style are local, the following table has been drawn up:—

	Orissa.	Ganjam.	Vizagapatam.	Godaveri.	Kistna.	Karnool.	Bellary.	Anantapur.	Cuddapah.	Nellore.	North Arcot.	Chingleput.	South Arcot.	Salem.	Trichinopoly.	Tanjore.	Madura.	Tinnevelly.	Coimbatore.	Malabar.	South Canara.
SIMPLE RODS.																					
Type 1—Short, like a porcupine quill, (fig. 1)	x	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Type 2—Similar—a transition from type, towards type 10 (fig. 2)
Type 3—Longer (fig. 3)	x	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	x	..
Type 4—Longer still (figs. 4 and 5)	x	x	x	x	x	..	..	..	x	..	..	..	..	..	..	..	..	..	..	..
DOUBLE STYLES.																					
Type 5—Double-pointed short rods (fig. 6)	x	x	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Type 6—Very heavy double styles (figs. 7 and 8)	x	x
WEIGHTED STYLES.																					
Type 7—Thin and looped over (figs. 10 and 11)	x	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Type 8—T-shaped (fig. 12)	x	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Type 9—With a short head (figs 13, 14 and 15)	x	x	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Type 10—Intermediate between types 1 and 11 (fig. 16).	x	..	..

STYLES WITH KNIFE EDGE.—(Contd.)

	Orissa.	Ganjam.	Vizagapatam.	Godavari.	Kistna.	Karnool.	Bellary.	Anantapur.	Cuddapah.	Nellore.	North Arcot.	Chingleput.	South Arcot.	Salam.	Trichinopoly.	Tanjore.	Madura.	Tinnevelly.	Coimbatore.	Malabar.	South Canara.
Type 27—Similar but with 2 eye holes (fig. 40)	x	x	..	x	..	..	..	..	..	..	..	..	..	..	..	..	..
Type 28—Similar with double knife edge (fig. 41)	x	..	..	..	..	..	..	..	..	..	..	..	..
Type 29—Heavy stout styles with straight knife edge (fig. 42)	x	x	..	x	x	x	..	..	x	..
Type 30—Heavy stout styles with hooked blade (fig. 44)	x	x	x	..	..	..	..
Type 31—Blade differing (fig. 45)	x	..	..	..	..	x	..	..	..	..
Type 32— „ (fig. 46)	x	..	..	..	..	..	..	..	..	..
CLASP KNIFE.																					
Type 33—Clasp knife with straight blade (fig. 47)	x	x	x	..	x	x	x	x	..	..
Type 34—Clasp knife with half moon cut out of blade (fig. 48)	x	x	x	x	..	x	..	..	..	..	..	..
Type 35—European clasp knife	x	..	..	..	..	..	..	..
Type 36—Knife and style in one piece (fig. 49)	x	..
CIRCLE MACHINE.																					
Type 37—(fig. 50)	x	x	..	..	x	..	..	..	..

2. On a probable identity between *Clypeaster complanatus*, Duncan and Sladen, and *Clypeaster duncanensis*, Noetling.

By HEM CHANDRA DAS-GUPTA.

1886. *Clypeaster complanatus*, Duncan and Sladen, in Pal. Ind., Ser. xiv., Vol. I., 3 fasc., v, p. 325, pl. L.

1901. *Clypeaster duncanensis*, Noetl., in Pal. Ind., New Ser., Vol. I., pt. 3, p. 105, pl. I, fig. 13.

While arranging the duplicates of *Clypeaster* described from the Indian Tertiaries I had an opportunity of studying *Clypeaster duncanensis*, Noetl., from the miocene beds of Burma occurring at an 'unknown horizon near Prome.' Dr. Noetling believed this species to be quite different from any of the species previously described from Western India but compared it, among others, with *Clypeaster complanatus*, Dunc. and Slad. Dr. Noetling, however, thought that these two species could be distinguished by (1) the large size, (2) the small base and (3) the nature of the poriferous zones in the type from Burma. In plate I, fig. 13, of Dr. Noetling's monograph there is a restoration of the species, and on a careful examination of the restored figure two features stand out prominently. In the text it is mentioned that the length is greater than the breadth, but the length of the restored specimen is 100 mm. while that of the greatest breadth is 107 mm. Dr. Noetling's specimen which is in a fragmentary state shows parts only of the ambulacral petals III and IV and a very small portion of Va. A careful measurement of the angles between the adjacent median-lines of the ambulacral petals as restored by Dr. Noetling gives the following results:—

Between the median-line of I and that of	II ..	70° (α)
„ „	III ..	76° (β)
„ „	IV ..	76° (γ)
„ „	V ..	64° (δ)
„ „	I ..	74° (ε)

In the measurements given above the differences between (α) and (δ) are very striking, showing clearly that the relative lines of the ambulacral petals must be quite different from what we find in the restored figure in Dr. Noetling's monograph.

Dr. Noetling lays a great stress on the large size attained by his species; but in the collection of Mr. Vredenburg from

the Gaj beds of Rochro in Kelat (K 10. 630) there is a specimen of *Clypeaster complanatus*, Dunc. and Slad., which is intermediate between the Western Indian and the Burman types in size. One important character of *Clypeaster complanatus* is that the inner pores are round and the outer pores are oval. This distinction is also constant in Mr. Vredenburg's specimen, *i.e.*, in those parts of the ambulacral zones which have escaped weathering. But many of the inner pores of the latter specimen are oval due to weathering, and on close inspection I find that a few of the pores lying in IIIb of Dr. Noetling's type are more rounded than oval, showing that those portions of the poriferous zones which are better preserved have retained more of their original form, and that originally the characters of the poriferous zones in *Clypeaster complanatus* and in *C. duncanensis* were alike.

It is clear that the restoration of this species, after Dr. Noetling, is open to modification: and the dimensions of (A) Duncan and Sladen's type of *C. complanatus*, (B) Mr. Vredenburg's specimen and (C) the Burman type as proposed to be restored by me, are given below:—

Dimensions in millimetres.

	A.	B.	C.
Length (a) ..	79	84	110
Breadth (b) ..	72	79	107
Base (c) ..	47	53	74
I (d) ..	22	25	33
II (d) ..	22	25	33
III (e) ..	24	27	35

From the dimensions given above the following ratios are obtained:—

	A.	B.	C.
b : a ..	0·91	0·94	0·97
c : b ..	0·65	0·67	0·69
d : c ..	0·51	0·47	0·44
d : e ..	0·91	0·92	0·94

It may be mentioned in this connection that the Geological Survey collections contain a few duplicates of *C. complanatus*, but most of these are in a fragmentary state, and I could pick out from them only two capable of being measured, and they gave the following results in millimetres:—

	(i)	(ii)
Length (a) ..	62	70
Breadth (b) ..	55	63
Base (c) ..	?	41

[N.S.]

From these dimensions the following ratios are obtained:—

	(i)	(ii)
b : a	0·89	0·90
c : b	?	0·65

These ratios show that with the growth of the test, the relative dimensions of the species in the different directions are a little variable.

The figures obtained for A, B and C, taken in consideration with the above remarks, clearly point out the probability of A, B and C as belonging to the same species. It may also be mentioned that the portion of the base that is preserved in Dr. Noetling's type indicates a slight convexity in the median interr radial line with slight concavities on the two sides, a feature which is also found in *C. complanatus*.

From the foregoing considerations it appears to me that there is probably no specific difference between *C. complanatus*, Duncan and Sladen, and *C. duncanensis*, Noetl., and that the latter is only a large sized representative of the typical Gaj species with a base of about 74 mm., and that the specimen collected by Mr. Vredenburg from the province of Kelat is intermediate between these two.

3. Pre-Mughal Mosques of Bengal.

By MONMOHAN CHAKRAVARTI, M.A., B.L., M.R.A.S.

In the article on Bengali Temples¹ I pointed out how the Hindu structures were influenced, and powerfully influenced, by old Bengali mosques. A few words on these buildings will not therefore be out of place, specially as I notice considerable confusion in the general notions about such mosques.

A.—EARLIEST MOSQUES.

Mosques had been built in Bengal from the very beginning of Moslem rule. *Tabaqāt-i-Nāsiri* Earliest Mosques. mentions that mosques were erected in the capital Lakhanāwāṭi by the first Sultān Muḥammad-i-Bakhtyār (596-602 H.), and his successor Huṣām-ud-dīn 'Iwāḥ (612 ?-624 H.).² No building of their times has survived. The oldest existing inscription regarding the erection of a mosque in Bengal is that of Gaṅgārāmpūr in Māldā District. It bears the date 1st Maḥarram 647 H. (16th April, 1249 A.D.) in the time of the Sultān Jalāl-ul-haḳ Ma'sūd Shāh Jāni.³ This mosque, too, is no longer traceable.

Of the existing mosques the oldest ones are found near Satgāon. The mosque of Jāfar Khān at Trivenī has an inscription, dated 698 H. (1298 A.D.), and is thus the oldest in Bengal. At Choṭa Pāṇduā the Bāradwārī appears to be another old mosque. It has lost its inscription, if any. Tradition ascribes it to the time of Shāh Safi-ud-dīn, said to be a contemporary of the aforesaid Jāfar Khān, and the architectural details resemble largely those of Jāfar Khān's mosque. These two may be briefly described as follows:—

1. Jāfar Khān's mosque of Trivenī. 698 H. Externally 76'·9" × 34'·7". In the Trivenī. hall, *pillars* partly buried in earth, ten in number, in two rows of five each, 6 to 8 ft. high, the front row hexagonal, the back row square and octagonal; *openings* on three sides, five in front, and two on each side (5 + 2 + 2), with unequal interspaces; back-wall with five *prayer niches* (corresponding to five

¹ J.A.S.B., 1909, pp. 148—150.

² Raverty's Translation, pp. 560, 583.

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front openings), of which the southernmost one is fallen with the roof. Above the stone pillars rise brick *arches* that originally held up ten low hemispherical *domes*, in two rows of five each, of which only seven now remain, the front five and the back two. Much of it in ruins.

[See the half-plan, fig. 1.]

2. Bāradwāri Mosque of Chota Pāṇḍuā,—1st quarter of the 14th century (?). Externally 231' × 42'. In the Pāṇḍuā, Bāradwāri. hall, *pillars*, 6 ft. high, 42, in two rows of 21 each, in varying size and shape, about half uncarved, the rest carved with garlands ending in bell, etc., some octagonal, others square at the base and octagonal above; *openings* 27 (21 + 3 + 3); in the back-wall 21 prayer niches or *mīhrabs* corresponding to 21 openings in front, the niches well carved on the top and at the sides; above the pillars spring brick arches supporting 63 low hemispherical *domes*, in 3 rows of 21 each, many damaged; several carvings traceable on the front wall, though more or less dilapidated; in the N.W. corner a high masonry platform with a small room on it, said to have been the *chillah-khānā* or resting-house of the saint, but more likely the zenana portion. Much of it in ruins.

[See half-plan, fig. 2.]

Their architectural details reveal several peculiarities, due partly to the age, and partly to the country. Hindu Influence. Though the general plan is Saracenic, the details are broadly Hinduistic. The carvings on the pillars, on the front wall, and round the prayer niches, are more or less copies of Hindu ornamentations, the tessellated garlands and the geometrical intertwinings being specially noticeable. The arches spring direct from the pillars, without any pendentives, thus differing from Saracenic examples. The domes are also built up of concentric rings of bricks, one ring above the other, each becoming smaller and smaller in circumference, until the top opening is closed by a stone, just as in Hindu towers built on horizontal arches.

This Hindu influence is quite natural. During the first century of Moslem rule, the governors and their chief amīrs were mostly Turks, hardy, active soldiers, but rude and illiterate. For the practice of their religion, prayer-places were a necessity; but they had not sufficient taste or attainments to build them by themselves, or even to supervise their construction properly. They had to depend almost entirely on Hindu

[N.S.]

artisans for construction; and for materials they utilised the fragments of Hindu temples they had demolished. The result was this curious superposition of Hindu details on general Saracenic plans.

Another peculiarity is the prevalence of bricks. In the
 Prevalence of Bricks. plains of Bengal no stone can be had anywhere, and if required had to be brought from long distances, chiefly by water. Hence stones were very sparingly used. The bricks made from stiff clay of the plains were fairly lasting and far cheaper, and could further at a small cost be moulded into various neat carvings. Hence in the Bengal mosques bricks practically superseded stones as building material. Its effect was that the mosques became more and more long with numerous domes and a profusion of carvings, but they could not be made high, with correspondingly imposing openings. The domes were also low in height, in the earliest mosques partly from the use of horizontal arches. The pillars were of stone; but even they, from scarcity of this material, had to be made sufficiently low. The pillars were usually of Rājamahal basalt. In some of the largest mosques of later times, the walls were up to a certain height faced with stones.

B.—LATER MOSQUES.

About 1338 A.D., Bengal became independent, and this
 Later Mosques. independence lasted for nearly two centuries and a half. Under the independent Sultāns a large number of mosques came to be built in various parts of the province. Architectural art was more and more developed; and in course of time a special style was developed showing various peculiarities both in the general plan and in the details. Among such peculiarities may be mentioned curved battlements, four corner towers octagonal and rising just above the battlement, many low domes without any base of cylindrical drum, height low in comparison with length, and in consequence openings generally insignificant, a profusion of brick carvings and in several instances of fine glazed tiles. The best specimens of the style are naturally found in the two capitals, Gauṛ and Pāṇḍuā. But notable examples lie scattered in and near Satgāon, Sunārgāon, Khalifātābad, Devīkoṭ and elsewhere. The earliest examples have disappeared. At present the oldest and the most imposing of them is the Adinah mosque of Hazrat Pāṇḍuā bearing the date Rajab 776 H. or December 1374 A.D.

It is a matter of great regret that most of these mosques
 Its Divisions. are more or less in ruins. A careful examination of their remains enables us, however, to group them into two broad divisions.

- (α) One-domed cubes, and
 (β) Many-domed parallelepipeds.

The first group is the simpler, having among other peculiarities the following:—

- i. The halls have no internal pillars;
- ii. The halls are square in ground-plan, usually changing into octagonal above;
- iii. The roof has one dome; and where a corridor exists, usually with three more small domes over the corridor.

The presence or absence of the corridor subdivides this group into two sections. The better-known specimens may be described briefly as follows:—

a. corridorless. (α) Those without a corridor—

- (1) The mosque at Mollā Simla, Śrīrāmpur subdivision, Huglī. Date uncertain; according to Blochmann, 777 H., but architecturally not earlier than the second half of the ninth century H. Internally 17 ft. sq. (externally 24 ft.); in the back-wall three *mihṛābs*, with a pulpit between the second and third niches; one door in the front wall, and two smaller side doors in the side walls; four octagonal corner towers, each face with a diameter of one foot; plastering fallen from S.W. corner of the outside (back wall) and showing thin bricks, $6\frac{3}{4}'' \times 3\frac{1}{2}'' \times 1\frac{3}{4}''$; back wall buried a little at the base, the remaining height 15·6".

[See PHOTOGRAPH AND PLAN, figs. 3 and 4].

- (2) The smaller mosque at Chota Pāṇḍuā, Huglī, 1st Maḥarram, 882 H. (15th April, 1477 A.D.). 25½ ft. sq.; three *mihṛābs* in the back wall; five openings (3 + 1 + 1); four polygonal corner towers.
- (3) Purāṇi mosque at Goāldihi, Sunārgāon, 925 H. (1519 A.D.). 16½ ft. sq.; in the back wall three semi-octagonal niches; and in each side wall two rectangular niches; five openings (3 + 1 + 1); four octagonal corner towers.

b. With a corridor. (β) Those with a corridor in front.

- (3) The mosque at Gopālgañj, Dinājpur, 16th Safar, 865 H. (1st December, 1460 A.D.). Hall 12 ft. sq. internally; corridor 12' \times 5½'; hall openings five (3 + 1 + 1) and corridor openings five (3 + 1 + 1); in the back wall three niches; outer archways 6 ft. high and 28" wide; the wall faced with hewn stones up to a little below the arch-springs.

[N.S.]

- (4) Chāmkaṭṭi mosque, Gaur. Inscription lost, 880 H. (?) or 1475 A.D. Hall 23·8" sq. (externally 50'·4" × 34'·10"); one bay in the back-wall; both hall and corridor, have each five openings (3 + 1 + 1); no domes over the corridor; four octagonal corner towers; wall-face divided into panels, ornamented with chain and bell, and bordered with glazed tiles.
- (5) Laṭṭan mosque, Gaur. Inscription lost, 880 H.(?) or 1475 A.D. Hall 34 ft. sq (74½ × 51'); hall openings nine (3 + 3 + 3) and corridor openings five (3 + 1 + 1); 3 bays in the back-wall; corner towers six, four on four sides of the hall and two on the front side of the corridor; three small domes on the corridor; the whole wall surface, inside and outside, covered with beautiful glazed tiles.
- (6) The mosque at Kheraul, Murshidābād. 900 H. (1594-5 A.D.). Three bays in the back wall; three small domes over the corridor.
- (7) Rukn Khān's mosque at Devīkoṭ, Dinājpur. 918 H. (1512 A.D.). Hall 26'·10" sq. with walls 5'·9" thick; one niche highly ornamented; domes gone; the lower part of the wall of coarse grey stone.

The mosque at Mollā Simlā (No. I) has not been described before. The place is three quarter of a mile south of the new station Nasibpur in the Tārakeswar branch line of the East Indian Railway. The building stands close to the Sarasvatī river. It must have been built at a time when the place flourished as a *bandar* (port), having been situated on the junction of the Sarasvatī with some large creek of the Hugli river. Excavations now and then bring to light thin bricks of the old time and remains of masonry platforms.

The mosque has lost its inscription, if any. It was repaired from time to time, but the general plan does not appear to have been materially changed. In front of the mosque, *i.e.*, to its east, is the tomb of the saint Shāh Anwar Kuli Halibi; and over the doorway of the latter is fixed an Arabic inscription recording the erection of a mosque in 777 H. (1475 A.D.). Blochmann takes this date to be that of the present one. Architecturally, however, the existing mosque belongs to a group, which were built only within a limited time, 865 to 925 H.; and no details can be found to antedate it by nearly a century. Traditions, curiously enough, postdate its erection to 1001 H.

According to local traditions, the mosque was built by a merchant. His boat while passing in the Sarasvatī was about to be drowned; he prayed to the local saint for help, and the

boat was miraculously saved; in gratitude the merchant caused this mosque to be built close to the saint's *dargah*. The saint is said to have been the son of a *pādshāh*, and to have wandered on to the place as a fakir. Two of his resting-places, *nazargahs*, are still pointed out, one at Burigān, two and a half miles west, and the other at Tiṭāgarh on the other side of the Huglī river. Various quaint legends are told of his power. Coconut trees bowed their heads before him and offered him fruit as tribute. A Hindu barber used to shave him. One day he noticed the right hand of the saint all of a sudden became wet. He asked the saint, who told him that just then he had heard a merchant's prayer for saving his sinking boat, and had raised the boat up. One day the saint picked up some earth, and putting it into the barber's hand, ordered him not to open the fist until he reached his home. When half-way, the barber's curiosity overcame his prudence. He opened the palm and found half the earth had been turned into gold.

The many-domed parallelopiped is the more common variety, and contains the best specimens of Bengali mosques. In this group:—

- (1) The halls are oblong (not square);
- (2) They are divided into aisles by free pillars which support the dome arches;
- (3) The back-wall is cut into several prayer-niches, three, five or eleven in number corresponding to as many front openings, or subdivided into a central nave and two wings, the nave being separated from the wings by thicker pillars;
- (4) The roof-domes are many, corresponding to the inter-spaces between the internal pillars.

Their brief description.

According to the number of the bays or prayer-niches, this group may be further subdivided.

(a) *Those with three bays—*

- (1) Bābā Ādam's mosque, Vikrampur. Middle of Rajab, 888 H. (August 1483 A.D.). Hall $34' \times 22\frac{3}{4}'$ (externally $43' \times 36'$); two aisles formed by one row of two octagonal stone pillars; two rectangular niches on each side wall; three openings all in front; four octagonal corner towers; six domes, in two rows of three each.
- (2) Jalāl-ud-dīn's mosque at Satgāon, Huglī. Ramazan, 936 H. (May 1529 A.D.). In ruins; the north bay smaller than the other two; six domes.
- (3) Majlis Sāheb's mosque at Kālnā, Bardwān. Inscription lost. Hall, internally $75' \cdot 9'' \times 25' \cdot 3''$; four (?) stone pillars; the two side bays provided with

platforms (for *zenānā* ?) ; ten domes, in two rows of five each.

- (4) *Masjidkūr* mosque, *Khulnā*. Inscription lost (10th century H. ?). Hall, four pillars in two rows; three domes.
- (5) *Kasbā* mosque, *Bākhargañj*. Inscription lost. Hall, four pillars in two rows ; openings five (3 + 1 + 1) ; four corner towers of which three are fallen ; nine domes in three rows of each.
- (6) *Kusumbhā* mosque, *Rājshāhi*. Inscription not yet published. Hall, two (?) pillars in one row ; openings five (3 + 1 + 1) ; a platform in the north bay (for *zenānā* ?) ; six domes in two equal rows.
- (7) *Salik* mosque at *Bashirhāt*, 24-Parganās. Date of inscription over the central *mihrab* not legible. Said to have been built by one 'Alā-ud-dīn in 1305 A.D., but architecturally much later. Hall, 36' × 24' ; two stone pillars in a row 8 feet high, carved ; three *mihrabs* ; three front openings ; two windows in each side wall with a niche between ; six domes in two equal rows.¹

(b) *Those with five bays—*

- (8) *Tāntipārā* mosque, *Gaur*. Inscription lost, 885 H.(?) 1480 A.D. Hall, 78' × 31' (externally 91' × 43½') ; four square pillars in one row ; openings nine (5 + 2 + 2) ; four octagonal corner towers ; ten domes in two equal rows ; outer wall-face ornamented with large panels flower-bordered and containing pointed arches under which is a bell hung by a chain ; towers similarly ornamented. "The finest of all the buildings now remaining in *Gaur*" (Cunningham).
- (9) *Chota Sonā* mosque, *Fīrozpur* suburb, *Gaur*. Inscription of *Huṣen Shāh*'s time (899-925 H.), the

¹ Since writing this article, Moulvie *Hamidul Huḳ*, a *matwalli* of the mosque, has sent me a rubbing of the inscription taken by *Babu R. D. Banerjea* (see fig. 5). This Arabic inscription is in two lines, written in *Tughra* characters, and reads as follows:—

1. *Lā ilāhā illillā Muḥammada-r-rasūl-Alla. Bane hāzal masjid-ul-Majlis=*

2. *-ul-muazzam-wal-mukarram Majlis-i-A'zam dāmūt azimutho. San aḥadā + subinā samanamāyata.*

Translation:—"No God there is but He; and *Muḥammad* is His prophet" (creed). This mosque built by the great and the liberal *Majlis*, *Majlis-i-A'zam*—May his greatness be perpetuated!—in the year eight hundred seventy one (1466-7 A.D.). "The great and liberal *Majlis*, *Ulugh Majlis-i-A'zam*" is also mentioned in the inscription of the cubical mosque (No. 2), of *Chota Pāṇḍuā*, *Huglī*, dated 1st *Maharram*. 882 H., *J.A.S.B.*, 1873, p. 276.

year being lost. Hall, 70'·4" × 40'·9" (externally 82½' × 52'); eight square pillars in two rows of four each; openings eleven (5 + 3 + 3); the bay in the N.W. corner in two storeys, the upper room screened with trellis-work for ladies; four octagonal corner towers; on the roof fourteen domes in three rows (besides the upper story room), the domes being of different heights diminishing from the centre to the end; interior covered with carvings and gilded; doorways and inter-doorway niches bordered with broad bands of ornaments; wall of bricks with outside facings of stones up to the springing of arches.

- (10) Bāghā mosque, Rājshāhi. 930 H. (1523—4 A.D.). Dimensions nearly the same as those of Tāntipārā (No. 8). Hall, four square pillars in a row; openings nine (5 + 2 + 2); the fourth bay occupied by the pulpit and the fifth bay in the N.W. corner has a smaller *mihrāb* with a platform (for *zenānā*?); ten domes in two equal rows, more or less broken; brick wall, adorned inside and outside with many ornamentations.
- (11) Hemtābād mosque, Dinājpur. 906 H. (1500-1 A.D.). Hall, eight pillars in two rows; openings eleven (5 + 3 + 3); the central bay largest; domes 15 (?).

(c) *Those with eleven bays—*

- (12) Sātḡumbaz mosque, near Bāgerhāt, Khulnā. Inscription lost, 9th century H. (?). Hall, 144' × 96' (externally 160' × 105'); twelve square stone pillars in two rows of six each, 8 ft. high; openings twenty-five (11 + 7 + 7); one door let through the bay to the right of the central, and in the central aisle two small brick platforms of which one near the prayer niche being probably for pulpit and the other for *zenānā* (?); four corner towers; seventy domes in ten rows of seven each, besides one row of seven vaults over the central aisle.
- (13) Bara Sonā mosque, Gaur. 932 H. (1526 A.D.). Hall with a corridor in front, externally 168' × 76'. Hall divided into three long aisles by twenty square pillars in two rows of ten each, and separated from a long corridor by another row of ten thicker pillars. Main hall openings seventeen (11 + 3 + 3), and the corridor openings thirteen (11 + 1 + 1). The three bays in the N.W. corner occupied by a two-storeyed structure, the upper room of which is screened off for ladies.

Eleven domes over the corridor, and some thirty over the hall in three rows. Six thin octagonal pinnacle-crowned minarets, four for the hall and two for the corridor. Walls of brick faced with stones, both inside and outside, up to a height of about 20 ft.; probably gilded inside. Three large gateways of the compound, $38\frac{1}{2} \times 13\frac{1}{2}$ ' each, faced with stone and ornamented with flowers in glazed tiles of different colours.

(d) *Those in which the bays are divided into a central nave and two wings.*

- (14) Ādinah mosque, Hazrat Pāṇḍuā, Māldā. 776 H. (?), December, 1374 A.D. The largest and the most imposing mosque in Eastern India. For fuller descriptions, see Buchanan in Martin's *Eastern India*, vol. ii, Cunningham in *Archæological Survey Report of India*, vol. xv, and Ravenshaw's *Gaur*.

Externally $507\frac{1}{2} \times 285\frac{1}{2}$ ' with a courtyard of $397' \times 159'$ surrounded by cloisters. The cloisters on the west side form the prayer hall and are five aisles deep; those on the other three sides are only three aisles deep. In the centre of the prayer-hall is the nave, $64' \cdot 4'' \times 33' \cdot 82\frac{1}{2}''$, made up in the back-wall of two bays, with a pulpit to the north of the northern bay. The wing to the south has 18 bays with 68 pillars in four rows of 17 each. The wing to the north had 18 bays; but has now a door let through the first bay (beginning from the south), while the bays 3rd to 8th are occupied by a raised two-stoned platform *Pādshāh-kā-takht*, and three doors let through the 6th to 8th bays. The nave is accessible from the courtyard by a wide opening, 33 ft. in span and more than 60 ft. high; while each wing has fifteen openings into the courtyard. The nave is separate from the wings by two sets of four thick pillars. The ordinary pillars are 10 ft. high and 18 inches in diameter, except those below the *Pādshāh-kā-takht* which are octagonal and thicker, $3\frac{1}{2}$ ft. in diameter. The wall is of plain stone up to 12 ft. and of brick above, of which some 20 ft. is elaborately carved. The doors are in comparison with length insignificant. The roof over the nave was a long vault; and over the cloisters the roof had no less than 378 small domes. The vault and most of the small domes have fallen; and scores of the tall stone pillars have disappeared. No corner towers visible. This mosque

is said to have been built after the celebrated mosque of Damascus.

- (15) Gunmant mosque, Gaur. Inscription lost, 88) H. (?), 1484 A.D. Hall with a corridor-Hall, externally $140' \cdot 9'' \times 59' \cdot 3\frac{3}{4}''$, and the corridor from its remains appears to have been a long one, about 18 ft. wide. The hall is divided into a central nave $51' \times 16' \cdot 10''$ and two wings, the nave being separated from each wing by two octagonal pillars, $4\frac{1}{2}$ ft. square at the base. In each wing are eight square pillars in two rows of four each. In the back wall are nine bays, one for the nave and four for each wing. Including the wide opening of the nave, the hall had nine openings in front, besides three openings on each side ($9 + 3 + 3$ or 15). The nave is covered by a ribbed vault with gable ends, and each wing by twelve hemispherical domes. The lower part of the walls up to the springing of the arches is of stones, rough blocks inside with cut facings. The brick walls faced with glazed tiles. In ruins now.

C.—PECULIAR MOSQUES.

Under this head fall the peculiar structures known as *Ḳadam Rasūl Buildings*. Strictly they are not mosques, but places sanctified by the presence of prophet's footprints. Hence they do not contain prayer-inches. *Ḳadam Rasūl* buildings have been erected at various places in Bengal, *e.g.*, near Murshidābad, at Katak and Balasore in Orissa, in Sunārgāon and Nabigañj (Dacca), and elsewhere; but with one exception none of them appears to be pre-Mughal. The only exception is that at Gaur built in 937 H. (1530 A.D.). It consists of a three-doored hall, $25' \cdot 2'' \times 15'$, with a verandah on three sides, $9' \cdot 2''$ wide. The verandah has three arched openings in front and one on each side or five in all ($3 + 1 + 1$). At each corner stands an octagonal tower, with the diameter of each face, $1' \cdot 5''$ wide. According to traditions the sacred foot-print had been brought originally to Pāṇḍuā by Shāh Jalāl-ud-dīn Tabrizī; and these traditions must be pretty old, as in an unique gold coin of Fath Shāh dated 890 H., the saint is described as "the Shaikh that waits on the *Ḳadam Rasūl*." From Pāṇḍuā the footprints were removed to Gaur, and were enshrined in this large edifice built by Sultān Naṣrat Shāh.

The simplest form of prayer-place is the *Idgah*, a masonry wall with prayer niches, facing which the Musalman prays, kneeling on a platform. *Idgahs*. No existing *Idgah* can be traced to the pre-Mughal time.

[N.S.]

The dates of the existing mosques clearly show that the Bengal style was created and developed by three dynasties, the dynasty of Ilyās Shāh, of Maḥmūd Shāh, and of Huṣen Shāh.¹ Among the Sultāns, Sikandar Shāh of the first dynasty, Bārbak and his son Yūsūf of the second, and Huṣen and his son Naṣrat of the third dynasty stand out prominent as great mosque builders. The Adinah mosque is the only remains of Sikandar's time, surviving on account of the solidity of its construction. During the time of the other two dynasties Gaur was adorned with numerous mosques and other buildings, rivalling in splendour those of imperial Delhi.

Conclusion.

It must be evident that architectural progress went on so long as Bengal remained independent.

Architectural changes under Mughal Rule.

Under Mughal subjection, local skill and enterprise declined seriously. With gov-

ernors removable at pleasure, with the surplus incomes all drawn into the Emperor's coffers or misappropriated by the local authorities, with the best artisans attracted to the great capitals Agrā and Delhi, thus decline is inevitable. A few mosques were built in the headquarters by princely governors; viz., by Mānsingh and Shāh Sujah at Rājmahal, by Shāistā Khān and prince Azimus-shān at Dacca, or by the practically independent Nabāb Nāzims at Murshidābad. But they are, more or less, the reflex of the imperial glory, imitations as a rule, and not even good imitations. Among the changes in the general plan may be noticed domes bulbous (not hemispherical), slender round minarets rising high crowned with pinnacles (not thick octagonal towers rising just above the battlement), larger and more imposing openings and doorways, with the arch-openings semi-circular (and not stilted or pointed).

¹ About these dynasties, see my article on *Gaur and other Old Places in Bengal*, J.A.S.B., 1909, pp. 204-211, 218-223.

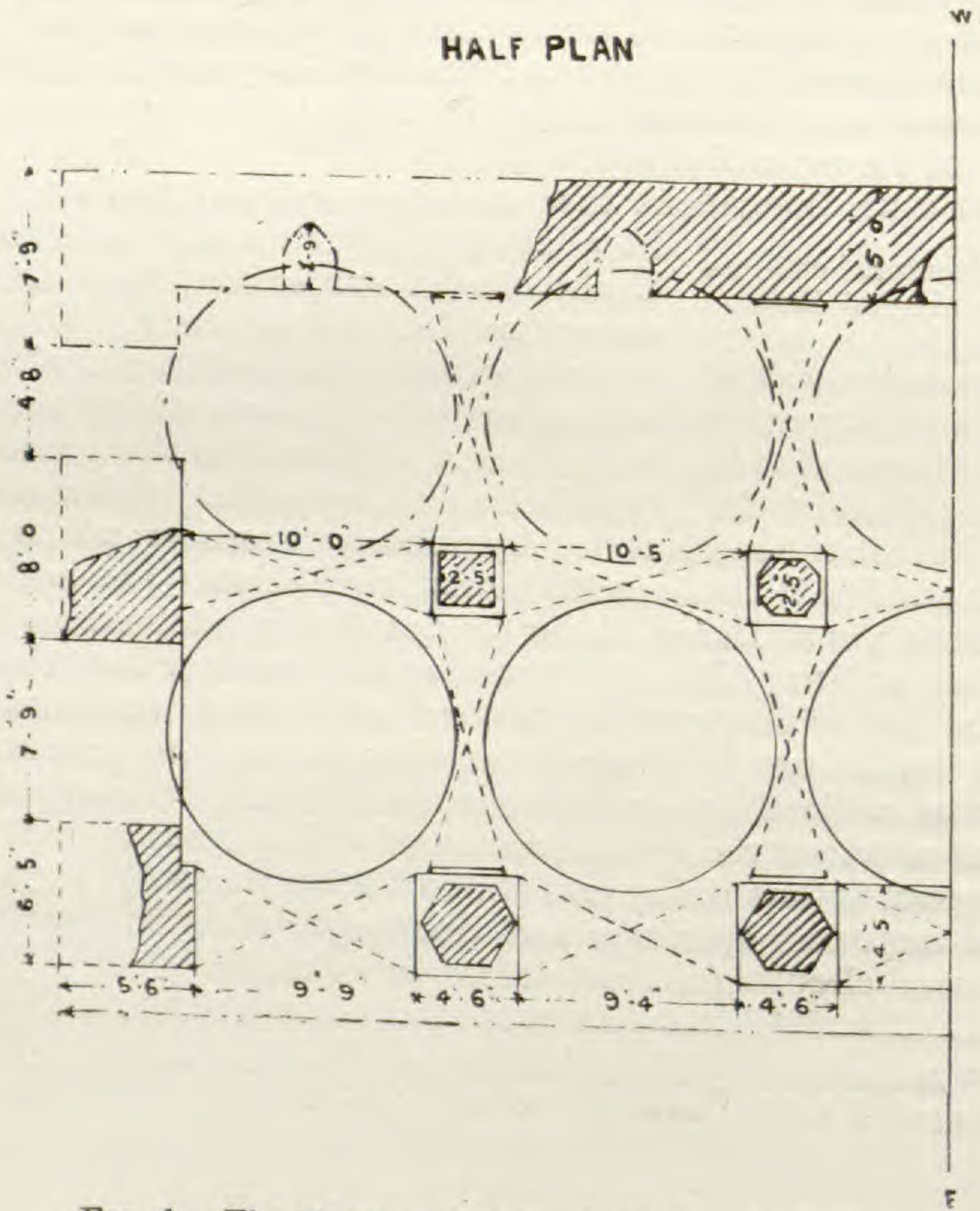


FIG. 1.—The Mosque at Triveni, Hugli, 10 ft. = 1".

HALF PLAN.

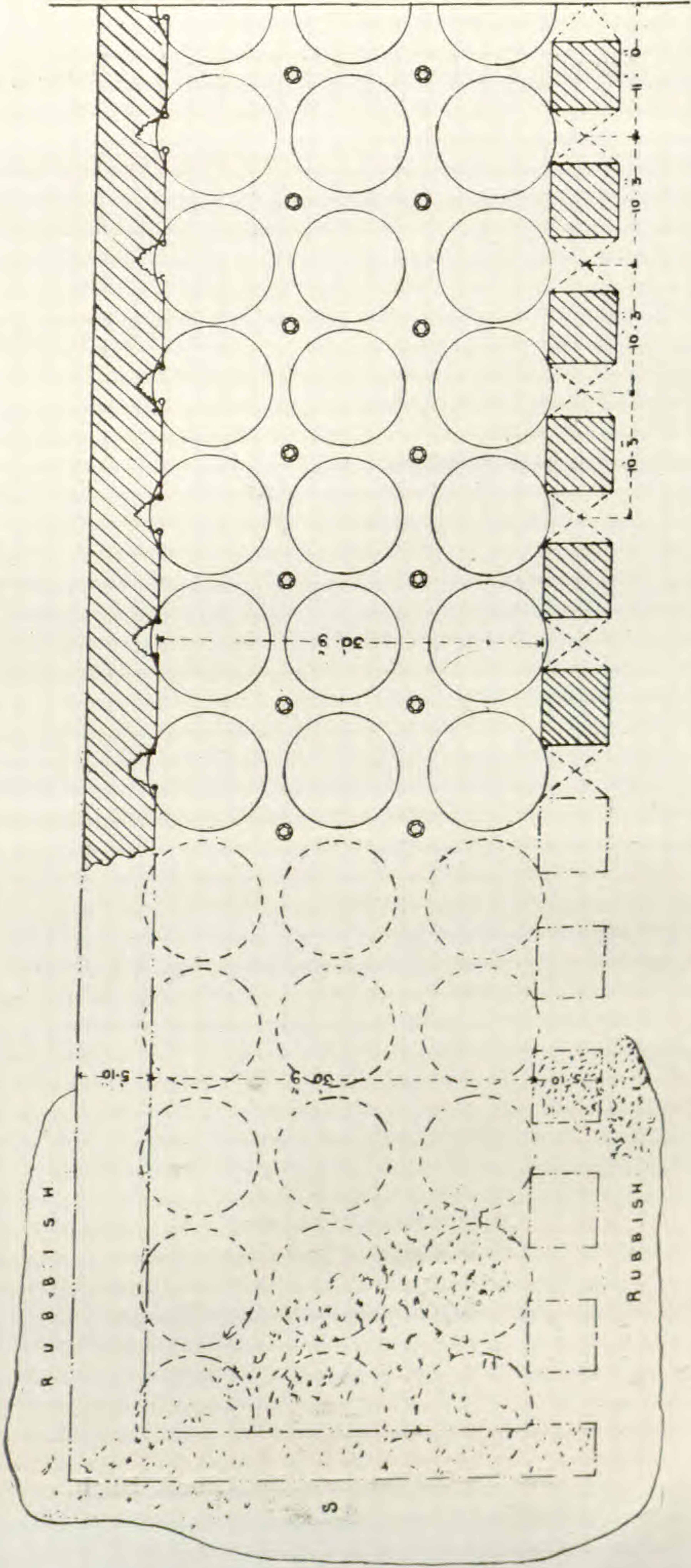


FIG. 2.—The Bāradwāri Mosque at Pāṇḍuā, Huglī, 10 ft. = 1".

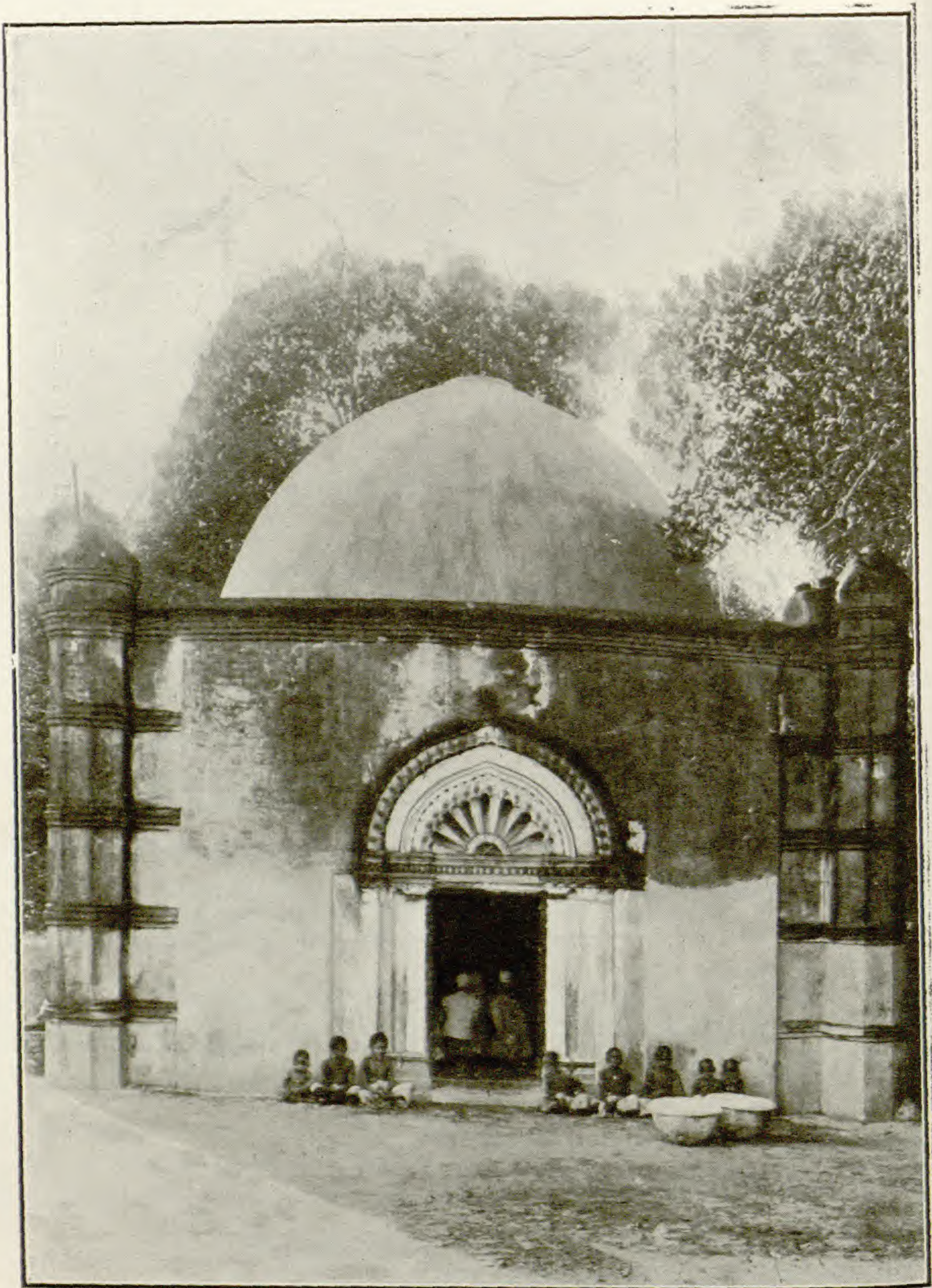


FIG. 3.—Old Mosque at Mollā Simlā, Huglī.

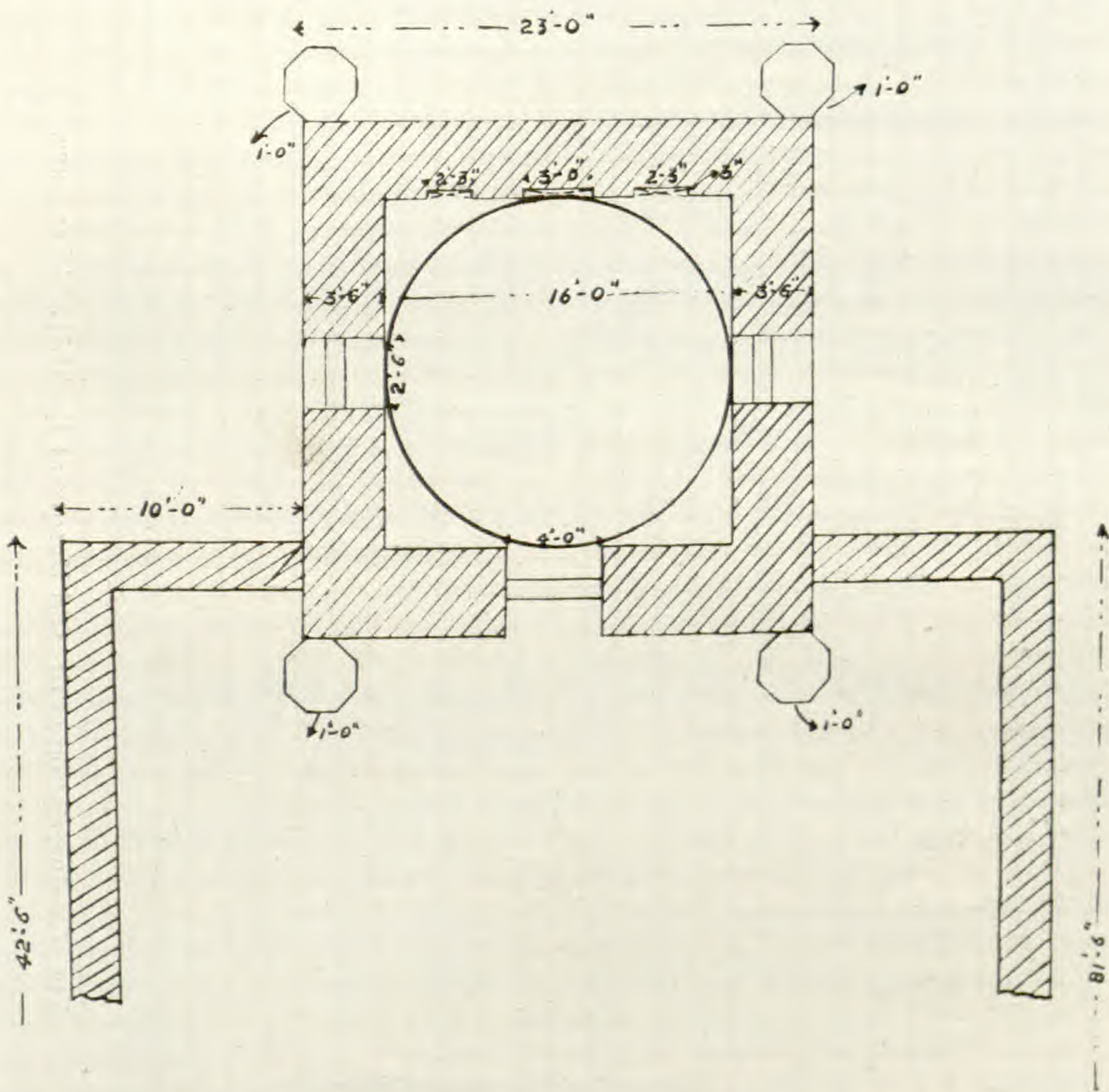


FIG. 4.—Plan of the Old Mosque at Mollā Simlā, Huglī, 8 ft. = 1".

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
مَدِينَةِ الْقُدْسِ فِي رَجَبِ سَنَةِ ١٠٠٠

FIG. 5.—Inscription of the Old Mosque at Basirhāt, 24-Parganas.

JANUARY 1910.

The Monthly General Meeting of the Society was held on Wednesday, the 5th January, 1910, at 9-15 P.M.

THE HON'BLE MR. JUSTICE ASUTOSH MUKHOPADHYAYA, M.A., D.L., F.R.S.E., Vice-President, in the chair.

The following members were present:—

Dr. N. Annandale, Babu Rakhal Das Banerji, Mr. J. H. Burkill, Babu Monmohan Chakravarti, Mr J. A. Chapman, Mr. B. L. Chaudhuri, Mr. F. Doxey, Mr. L. L. Fermor, Rai Matilal Ganguli Bahadur, Mr. D. Hooper, Dr. W. C. Hossack, Mr. T. H. D. LaTouche, Rev. W. R. LeQuesne, Mr. A. H. Lewes, Mr. W. S. Milne, Dr. Girindra Nath Mukhopadhyaya, Mr. W. W. K. Page, Lieut.-Col. D. C. Phillott, Major L. Rogers, I.M.S., Captain F. H. Stewart, I.M.S., Dr. A. Subwardy, Dr. M. W. Travers, Rev. A. W. Young, and others.

Visitors:—Babu Hem Chandra Das-Gupta, Mr. J. Henderson Gray, Mr. G. D. Hope, Miss Morrison, Mrs. E. Denison Ross, and others.

The minutes of the last meeting were read and confirmed.

Two hundred and ten presentations were announced.

The Chairman reported that he had received one essay in competition for the Elliott Prize for Scientific Researches for the year 1909.

The General Secretary read the following Minutes of the Special Meeting of the Council held on the 8th December, 1909, nominating Fellows of the Society.

A Special Meeting of the Council of the Asiatic Society of Bengal was held on Wednesday, the 8th December, 1909, at 5-30 P.M.

Present:—The Hon'ble Mr. Justice Asutosh Mukhopadhyaya, M.A., D.L., F.R.S.E.; G. Thibaut, Esq., Ph.D., C.I.E.; Lieut.-Col. F. J. Drury, M.B., I.M.S.; D. Hooper, Esq., F.C.S.; E. D. Ross, Esq., Ph.D.; N. Annandale, Esq., D.Sc., C.M.Z.S.; Mahamahopadhyaya Satis Chandra Vidya-bhusana, M.A., Ph.D., M.R.A.S.; Major L. Rogers, M.D., B.Sc., I.M.S.; H. G. Graves, Esq., A.R.S.M.; Babu Monmohan Chakravarti, M.A., B.L.; Dr. E. P. Harrison; Lieut.-Col. D. C. Phillott.

Business.—Nomination of Fellows.

Order.—The following names were selected by ballot for nomination, each obtaining at least a two-thirds majority of the votes of the members of Council present at the meeting. The names are arranged in alphabetical order.

Dr. N. Annandale, D.Sc., C.M.Z.S., F.L.S.; The Hon'ble Mr. Justice Asutosh Mukhopadhyaya, C.S.I., M.A., D.L., D.Sc., F.R.A.S., F.R.S.E.; I. H. Burkill, Esq., M.A., F.L.S.; Mahamahopadhyaya Haraprasad Shastri, M.A.; Sir Thomas Holland, K.C.I.E., D.Sc., A.R.C.S., F.G.S., F.R.S.; D. Hooper, Esq., F.C.S.; T. H. D. LaTouche, Esq., B.A., F.G.S.; Babu Monmohan Chakravarti, M.A., B.L.; Lieut.-Col. D. C. Phillott; Dr. Prafulla Chandraray, D.Sc.; Major L. Rogers, M.D., B.S., F.R.C.P., F.R.C.S., I.M.S.; Dr. E. D. Ross, Ph.D.; Mahamahopadhyaya Satis Chandra Vidyabhusana, M.A., Ph.D., M.R.A.S.; Dr. G. Thibaut, Ph.D., C.I.E.; Dr. M. W. Travers, D.Sc., F.R.S.; A. Venis, Esq., M.A.; Dr. G. T. Walker, M.A., F.R.S.

The following four gentlemen were balloted for as Ordinary Members :—

Mr. J. N. Farquhar, M.A., proposed by Rev. A. W. Young, seconded by Mr. D. Hooper; *Mr. David A. David*, Merchant, 55, Free School Street, proposed by Mr. M. J. Seth, seconded by Babu Rakhal Das Banerji; *Major W. M. Coldstream*, R.E., Survey of India, proposed by Mr. T. H. D. LaTouche, seconded by Dr. N. Annandale; *Dr. Geoffrey D. Hope*, B.Sc., Ph.D., Scientific Officer, Indian Tea Association, proposed by Mr. D. Hooper, seconded by Dr. N. Annandale.

Dr. E. D. Ross delivered a lecture on Csoma de Körös and Tibetan Buddhism.

The following papers were read :—

1. *On a probable identity between Clypeaster complanatus, Duncan and Sladen, and Clypeaster duncanensis, Noetling.*—By HEM CHANDRA DAS GUPTA. Communicated by MR. VREDENBURG.

2. *Fashion in Iron Styles.*—By I. H. BURKILL.

3. *A passage in the Turki text of the Babarnamah.*—By H. BEVERIDGE.

4. *An unpublished Tibetan-Latin vocabulary (with pronunciations marked) by an Italian Capuchin named Da Fano, written in 1714. (From the collection in the Imperial Library, Calcutta.)*—By HARINATH DE.

These two papers will be published in a subsequent number of the *Journal*.

The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Wednesday, the 12th January, 1910, at 9-30 P.M.

LIEUT.-COLONEL J. T. CALVERT, I.M.S., in the chair.

The following members were present :—

Dr. U. N. Brahmachari, G. C. Chatterjee, Dr. B. N. Ghosh, Captain D. M. McCay, I.M.S., Captain J. W. D. Megaw, I.M.S., Dr. G. N. Mukerji, Dr. Indumadhab Mullick, Major L. Rogers, I.M.S., *Honorary Secretary*.

Visitors :—Dr. S. C. Bural, Captain E. D. W. Greig, I.M.S.

The minutes of the last meeting were read and confirmed.

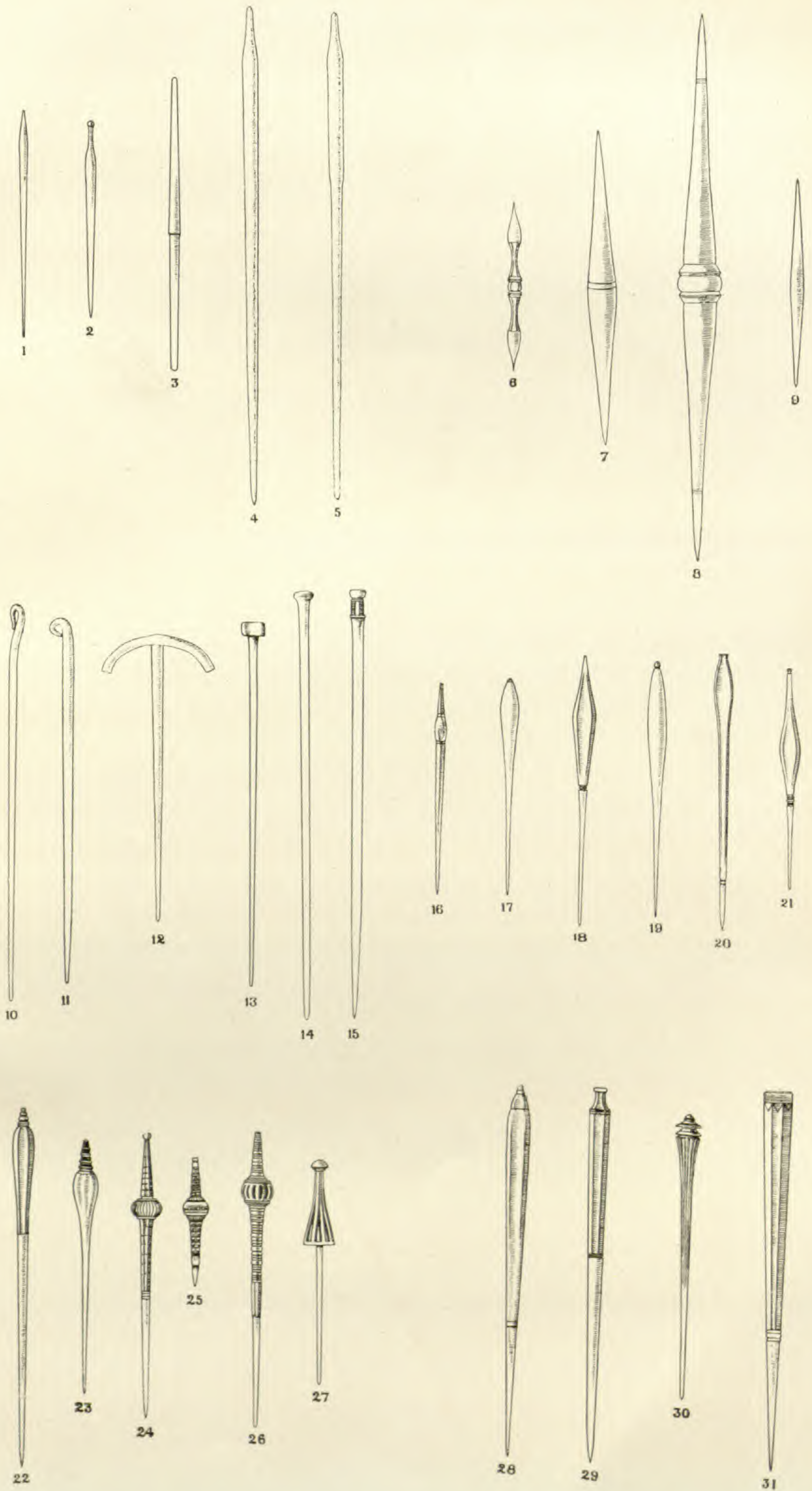
A case of Pityriosis rubra was shown by Lieut.-Colonel J. T. Calvert.

A paper was read on Circulatory Diseases of the circulatory system in India by Captain J. W. D. Megaw, I.M.S., and the discussion on this subject was concluded.

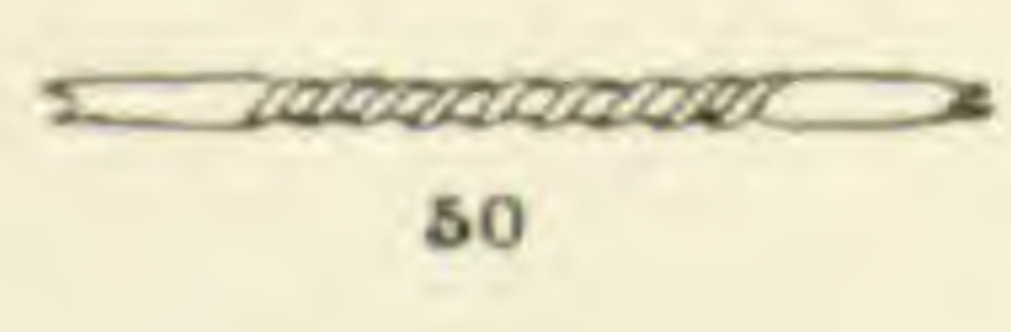
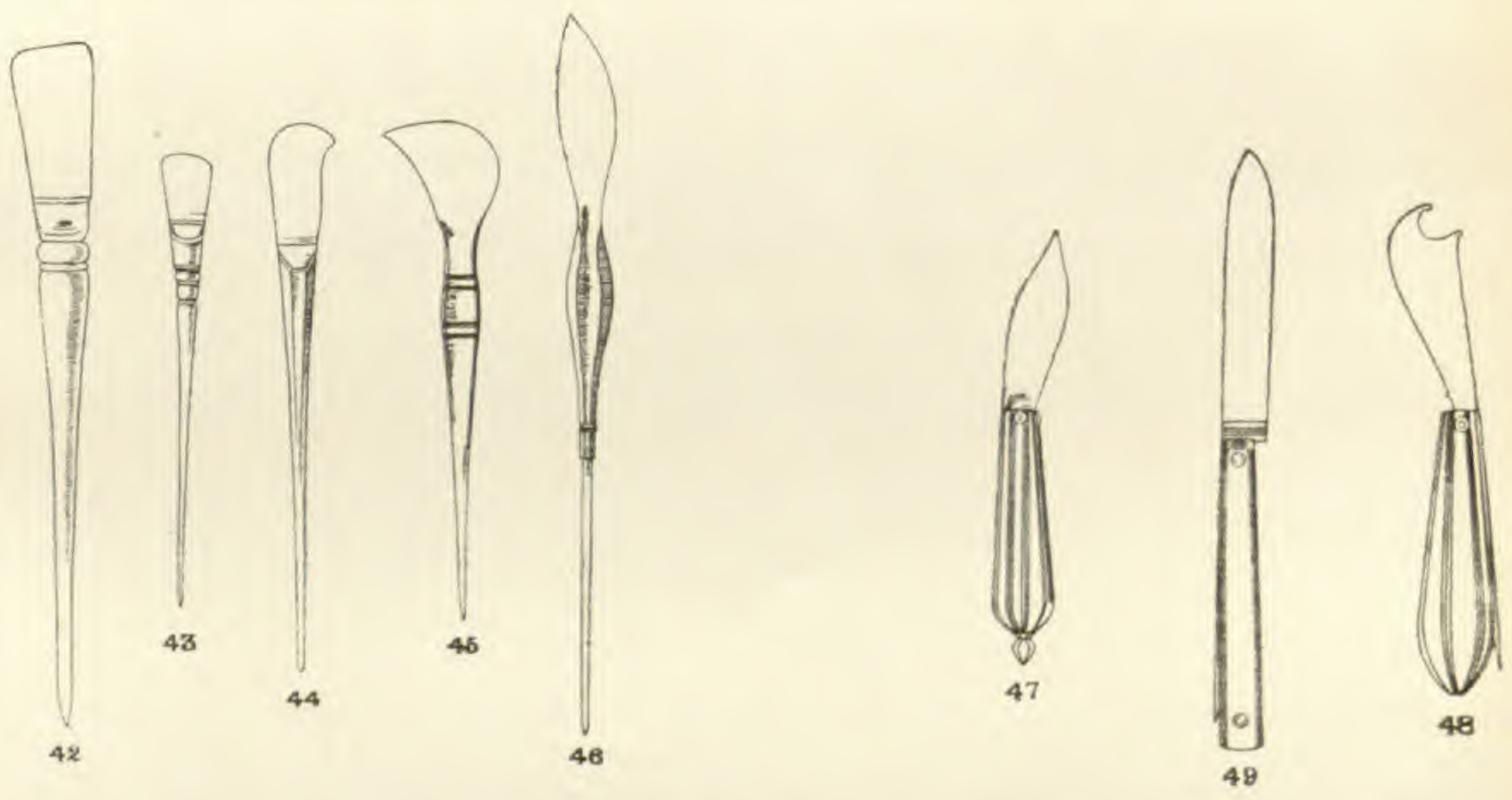
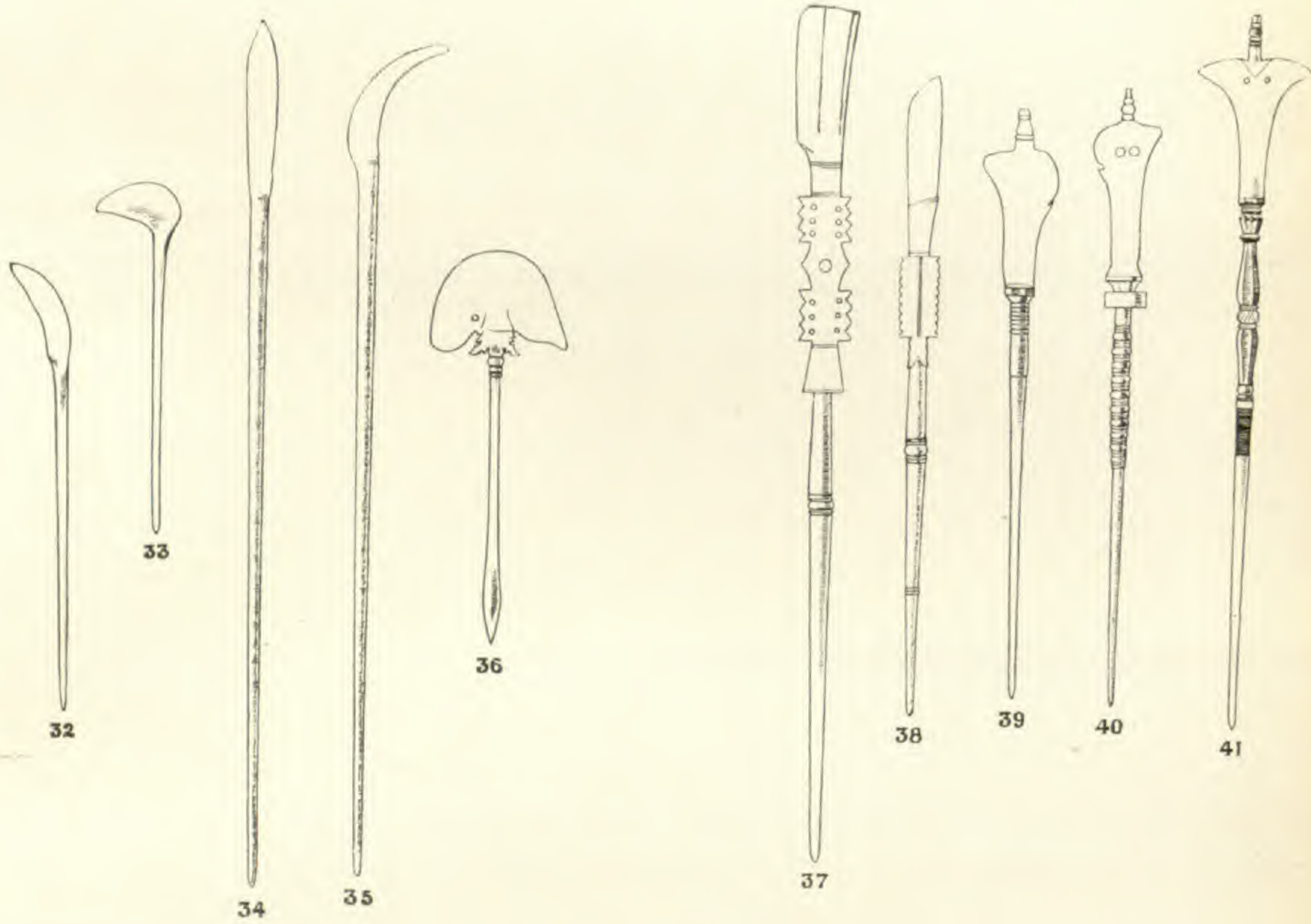
The following papers were also read :—

1. *Researches on Kala-azar.*—By DR. UPENDRA NATH BRAHMACHARI.

2. *The occurrence of an epyzootic of fowl septicaemia in Calcutta and prophylactic treatment by a vaccine.*—By DR. G. C. CHATTERJEE.



IRON STYLES, $\times \frac{1}{8}$



IRON STYLES, $\times \frac{1}{8}$

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E. P. Harrison, Esq., Ph.D.

Lieut.-Colonel D. C. Phillott.

4. On the Experimental Determination of the Electro-Chemical Equivalent of Nickel.¹

By S. N. MAITRA, M.A.

*Formerly Government Research Scholar, Presidency College ;
Lecturer and Demonstrator in Physics, Presidency
College, Calcutta.*

The following research was undertaken as a preliminary to the accurate investigation of the effect of a magnetic field on electrolytes of magnetic metals. Nickel was the metal chosen for the present experiments, iron being undesirable on account of the readily oxidizable character of its deposits and solutions as well as its distinct double valency.

Previous Observations.

It has long been known that, during electrolysis of the magnetic metals, iron, nickel and cobalt, hydrogen is liberated at the cathode along with the metals themselves even from perfectly neutral solutions. Hittorf,² who was the pioneer in the investigation of these and similar complicated cases of mixed conduction, found that, in consequence, the amount of these metals deposited was not by any means that which might have been expected from Faraday's laws. He ascribed the discrepancy to secondary reactions, some of which were too complicated to be got rid of at all easily. For instance, when investigating the effect of the temperature of an electrolyte on the amount of the metal deposited, he found that with nickel sulphate more metal is separated from a hot than from a cold solution, and that even at the same temperature the amount of deposit varies considerably.

Values given by Hittorf as well as other observers show how widely the e. c. e.'s vary from one another as well as from the theoretical value as given by the product of the e.c.e. of hydrogen and the ratio of the atomic weight and valency of nickel.

It appears that on account of these complications the values of the e.c.e. of nickel which are given in text-books are merely those which have been calculated from a knowledge of the atomic weight and valency.³

¹ Being the Elliot Prize Essay for original research for 1904, awarded by the Asiatic Society of Bengal.

² Ann. Chim. Phys., lxxxix, 1853; also Dr. Alfred Coehn, in *Electro-technische Zeitschrift*, 1891, p. 497.

³ Merrick in *Journ. Chem. Soc.*, xi., p. 204; also in *Chem. News*, xxvi, p. 209.

Object of Present Experiments.

The main object of this paper is to show that the matter is not by any means so complicated as it at first appears, and that it is possible to prescribe simple conditions under which a single experiment lasting for a quarter of an hour will give a value of the e.c.e., not differing from the mean of a large number of similar experiments by more than four parts in a thousand, the mean also agreeing very closely with the value of the e.c.e., which is usually adopted. It also appears probable that if special attention be paid to the chemical purity of the materials used, it will be possible to give a value of the atomic weight of nickel with considerably greater accuracy than one which can be expected from the purely chemical processes of investigation which have hitherto been used.¹

The work recorded below may be conveniently divided into two parts. Part I is an investigation into the nature and causes of the variations in the experimental value of the e.c.e. of nickel. Part II gives a gradual development of the method of successfully arresting these variations and of securing a steady value for the e.c.e. of nickel, agreeing within a very close limit with the value deduced from Faraday's law.

PART I.

Preliminary Experiments.

The voltameter used in these experiments consisted of a glass reservoir with a pair of nickel plates suspended parallel to each other by means of adjustable clamps. A Kelvin Centi-Ampere balance, previously standardized with a silver voltameter, was used with a carbon rheostat to regulate the current. The current values easily agreed to within one part in a thousand. Both the cathode and anode were polished rectangular plates of nickel (10 c. m. \times 4 c. m.), the area immersed being about 35 sq. c. m. Borda's method of double weighing was used in weighing these plates.² The temperature of the room was about 25°C on the average.

The double sulphate of nickel and ammonium was the first salt tried. Observations were made with different strengths of aqueous solutions and for various values of current between .2 to 1.2 amperes. The deposit was generally good, but a rapid

¹ Russell in *Journ. Chem. Soc.*, 2. i., 1863, p. 58:—58. 59m. Russell in *ibid* 2. vii., 1869, p. 292:—58.56. Schneider in *Pogg. Ann.*, ci., 1857, p. 387:—57.90. Dumas in *Ann. Chim. Phys.*, ser. 3. lv., 1859, p. 129:—58.87. Winkler in *Zeit. Ann. Chem.*, vi., 1867, p. 22:—58.83. Winkler in *Zeit. Anorg. Chem.*, iv., 1893, p. 462, also viii., 1894, p. 281:—58.60 or 58.42. Richards and Chusman in *Zeit. Anorg. Chem.*, xx., 1899, p. 352:—58.25.

² The sensibility of the balance was 11 divisions per milligramme for a load of 70 grms. on the scale pans.

disengagement of gases with an unpleasant smell took place from the surface of both the electrodes, especially from the Cathode, and the value of the e.c.e.'s as determined from the deposits were much lower than the theoretical value .0003043. The best value obtained was .0002528. Saturated solutions gave no better results.

As it was thought that the complexity of the action in nickel ammonium sulphate might be the cause of the bad results, sulphate of nickel was the next salt worked with. At first a weak solution of the salt was taken, but the disengagement of gases, though much less than with the double sulphate, was still considerable. Strong solutions gave slightly better results. Lowering the difference of potentials between the plates reduced the evolution of gases, but owing to the high electrolytic resistance of nickel sulphate the current fell too low for accurate measurements with the apparatus employed.

Effect of Purity of the Salt.

The e.c.e.'s obtained in these preliminary experiments were much below the theoretical value and differed widely from one another. In every case there was copious evolution of gas from both the plates.

As these experiments showed that there was no prospect of getting constant values for the e.c.e., by means of small variations of current and voltage alone, attention was drawn to the materials employed.

The nickel sulphate crystals in stock were purified by repeated crystallisations. Two separate solutions were thus prepared, one the "pure stuff" consisting of the first few crops of crystals dissolved in distilled water, the other, the "impure stuff", *i.e.*, the mother liquor left after the removal of the several crops of crystals. (S. G. of pure stuff 1.318 at 24°8 C., volume 216 c. c. S. G. of impure stuff 1.306 at 24°8 C., volume 750 c. c.).

It may be mentioned here that all the crystals obtained were of the prismatic or neutral type except those of the last crop, which were thrown down as the pyramidal or acid variety. These latter were not added to the "pure stuff" but redissolved in the mother liquor with addition of a little distilled water, and the process of separation by crystallisations was not continued any further. The last set of crystals gave an important clue as to the acid character of the mother liquor, *i.e.*, the "impure stuff", an indication which was subsequently found very useful. A number of observations were made with both the stuffs in order to examine the effect of purification by crystallisation.

It was found that a much better value of the e.c.e. was obtained with the pure than with the impure solution. The

bubbling of gases though still noticeable, was considerably reduced, especially that from the cathode.

The acid character of the impure stuff, as guessed by the pyramidal crystals it had yielded, was naturally supposed to be associated with the very much larger quantity of gas which was evolved at the time of electrolysis. Both the solutions were, at this stage, tested for acid. The impure stuff was found to be strongly acid on chemical examination, the pure stuff only gave a slight acid reaction.

In order to examine whether the acid character of the solutions was the cause of the effervescence at the time of electrolysis and of the low values of the e.c.e., both the solutions were treated with precipitated Nickel Carbonate and filtered.

Experiments were now repeated with these neutralized solutions with a view to see if the absence of acid would also be marked by a corresponding disappearance or diminution of gaseous evolutions at the electrodes, as well as by a larger amount of deposit on the cathode, giving thereby a higher value of the e.c.e.

Results.

The evolution of gases was found to be considerably reduced in the impure solution at the first electrolysis after treatment with Nickel Carbonate. Only very minute bubbles appeared at the cathode; at the anode the evolution of gas was still fairly large though much reduced. In the pure solution no difference was perceptible.

The impure stuff gave a value more than double its value before neutralization, better even than the one given by the pure stuff. The value, however, fell steadily on repeated electrolysis, being successively :—

Before treatment :— ·000127

After treatment :— $\left\{ \begin{array}{l} \cdot 0002770 \text{—1st electrolysis.} \\ \cdot 0002406 \text{—2nd electrolysis.} \\ \cdot 0001666 \text{—3rd electrolysis.} \end{array} \right.$

The pure stuff did not show any improvement at all. On the contrary the values were not quite so good as before, and the fall in successive experiments was even more marked and accompanied by a distinctly brisker evolution of gases.

Before treatment :— ·0002590

After treatment :— $\left\{ \begin{array}{l} \cdot 0002359 \text{—1st electrolysis.} \\ \cdot 0001507 \text{—2nd electrolysis.} \end{array} \right.$

The condition as regards time, current and temperature were almost the same throughout this series, yet the variations in the value of the e.c.e. are extremely large.

An attempt to interpret these discordant results may not, perhaps, be out of place here before proceeding to bring further experiments to bear upon such variations. The results obtained in the preceding experiments leave little room for doubt that the presence of free acid in the electrolyte was responsible for the anomalous values of the e.c.e., and that they went down steadily with increased production of acid in the voltameter, each time the liquid was electrolysed.

It appeared extremely probable that the comparative insolubility of the nickel anode was at the root of the irregularities. The sulphions, failing to dissolve the anode as readily as with silver and copper for instance, combined with water to form sulphuric acid. A gradual fall of the e.c.e. at each successive electrolysis and a simultaneous accumulation of acid thus seem to be closely allied phenomena, while the removal of the acid by neutralization with the carbonate, accompanied by a corresponding set of higher values of the e.c.e. as obtained with the impure solution proved conclusively enough that the presence of the acid developed was the immediate cause of these discrepancies.

Since the amount of free acid produced may be taken to be proportional to the quantity of electricity passed through the solution, it is clear that, other conditions remaining the same, more acid was developed in the pure solution when it was electrolysed after treatment with Nickel Carbonate with a current .9396 ampere than before, when the current value was .9144 ampere, the solution being neutral to start with in either case. This will account for the worse result with the pure stuff as pointed out above.

An explanation of the slower rate of fall in the values for the impure stuff, though not quite clear at first sight, will be so on the following considerations.

The total volume (750 c. c.) of the impure solution was much greater than that of the pure stuff (216 c. c.), though equal volumes from each (160 c. c.) were taken for the experiments. After each electrolysis the solutions were put back into their respective stock bottles. The result was that the amount of acid liberated in an experiment became diluted (very largely so in the case of the impure stuff) in the bottles before the solutions were electrolysed for the next time. The larger dilution of the acid in the impure stuff very much enfeebled its effect at the time of experiment, and the fall in the value of the e.c.e. was therefore much slower in consequence.

Effect of Repeated Electrolysis.

To examine more systematically the cumulative effect of the acid generated during electrolysis, experiments were made as follows.

The nickel plates used in previous experiments were thickly electro-plated with nickel to ensure their purity. A fresh quantity of nickel sulphate solution was prepared from purified crystals, digested with nickel carbonate and filtered. Specific gravity of the neutral solution was found to be 1.336 at 18 C. The volume of solution taken for the experiments was 160 c. c. The same quantity was electrolysed twenty times in succession for known intervals of time. Observations were taken at the end of each experiment both for cathode gain and anode loss, and the corresponding e.c.e.'s were determined from the two sets of data. The results are given below.

TABLE I.

Effect of successive determination on a given Solution.

Second.	Ampere.	Ca. Gain. (grm.)	An. Loss (grm.)	E. C. E. (ca)	E. C. E. (An)
840"	·8669	·2118	·0107	·0002908	·0000147
840"	·8664	·1867	·0097	·0002572	·0000133
840"	·8735	·1001	·0117	·0001363	·0000159
740"	·8675	·0903	·0113	·0001334	·0000168
840"	·8923	·0974	·0109	·0001300	·0000145
840"	·8925	·0716	·0123	·0000955	·0000164
840"	·8945	·0710	·0211	·0000944	·0000280
840"	·8875	·0575	·0243	·0000771	·0000326
840"	·8820	·0573	·0256	·0000772	·0000345
840"	·8825	·0516	·0160	·0000597	·0000216
1800"	·8807	·1135	·0616	·0000716	·0000389
1800"	·8773	·1195	·0706	·0000756	·0000447
1800"	·8741	·1038	·0673	·0000660	·0000428
1800"	·8738	·0985	·0663	·0000622	·0000422
1800"	·9222	·1092	·0726	·0000657	·0000437
1800"	·8854	·1041	·0740	·0000633	·0000454
1800"	·8323	·0879	·0670	·0000586	·0000447
1800"	·8854	·0986	·0796	·0000615	·0000500
1800"	·8629	·0930	·0736	·0000598	·0000473
3600"	·8853	·1903	·1556	·0000597	·0000488

From the above results the average value of the e.c.e. for known times for which the current was passed are calculated from the total cathode gains and anode losses for these intervals and the mean values of the current over these times. The results are given in Table II.

TABLE II.

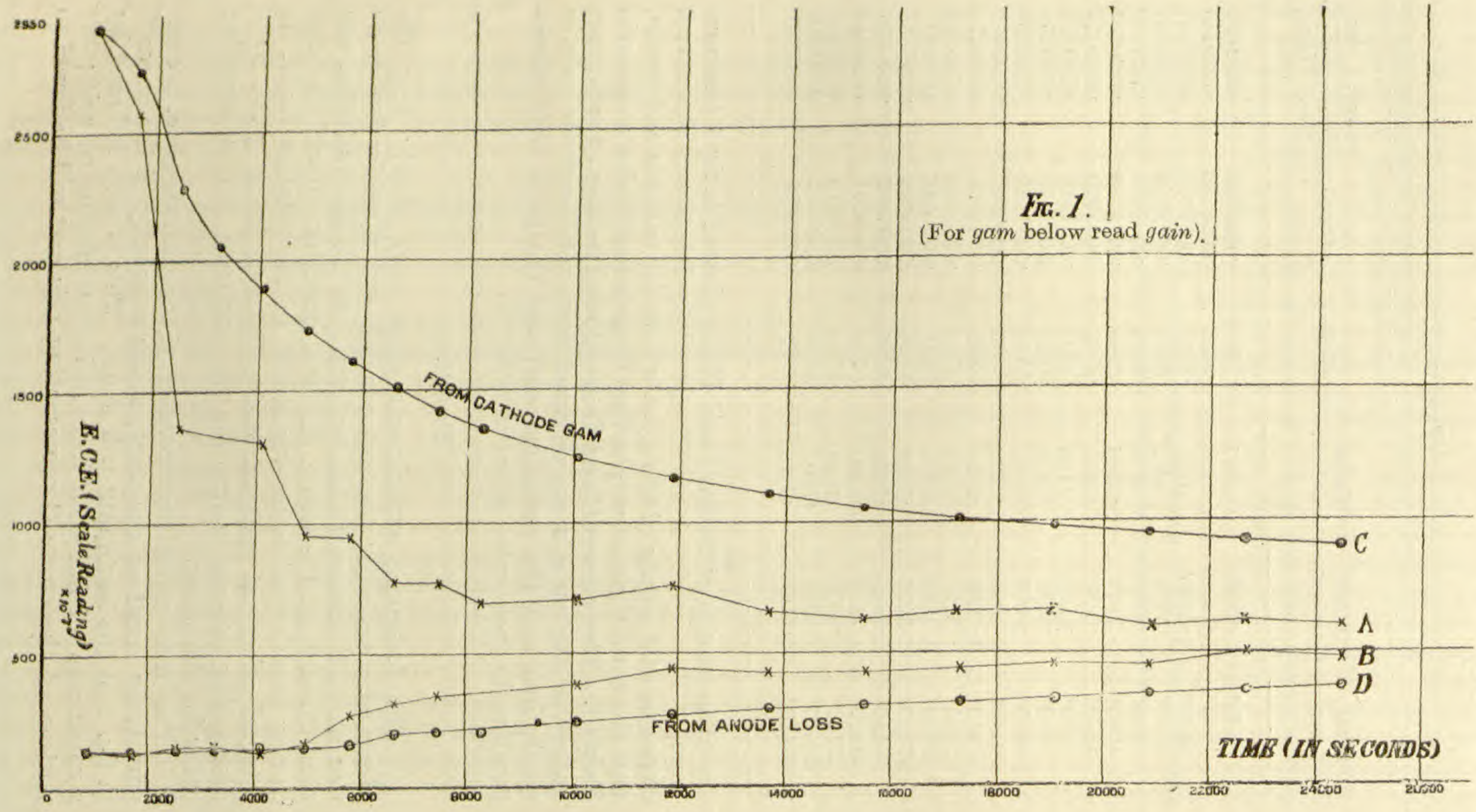
Total Time.	Total Ca. Gain.	Total An. loss.	Average.	Current.	Avrg. E.C.E. (Ca.)	Av. E.C.E. (An.)
840"	·2118	·0107	·8669	·0002908	·0000147	
1680"	·3985	·0204	·8667	·0002736	·0000140	
2520"	·4986	·0321	·8689	·0002276	·0000147	
3300"	·5889	·0433	·8685	·0002055	·0000151	
4140"	·6863	·0543	·8733	·0001898	·0000150	
4980"	·7579	·0666	·8765	·0001736	·0000153	
5820"	·8289	·0877	·8791	·0001620	·0000171	
6660"	·8864	·1120	·8801	·0001512	·0000191	
7500"	·9437	·1376	·8803	·0001429	·0000208	
8340"	·9953	·1536	·8806	·0001355	·0000209	
10140"	1·1088	·2152	·8806	·0001242	·0000241	
11940"	1·2283	·2858	·8803	·0001168	·0000272	
13740"	1·3321	·3531	·8798	·0001103	·0000292	
15540"	1·4310	·4194	·8794	·0001048	·0000307	
17340"	1·5402	·4920	·8822	·0001006	·0000321	
19140"	1·6494	·5660	·8824	·0000972	·0000335	
20940"	1·7322	·6330	·8795	·0000941	·0000344	
22740"	1·8308	·7126	·8798	·0000916	·0000356	
24540"	1·9238	·7862	·8789	·0000892	·0000364	
28140"	2·1141	·9418	·8792	·0000854	·0000380	

The results of Tables I and II are plotted in fig. 1 (see next page). The curves A and B are plotted between the actual experimental values of the e.c.e.'s both for cathode and anode, and the total time corresponding to each such value as given in Table I. The curves C and D are plotted between the average values of the e.c.e.'s (as deduced from total cathode gain or anode loss and the mean current) and the total time corresponding to each value given in Table II.

Results.

The foregoing experiments show very clearly how the observed e.c.e.'s for the cathode fall and those for the anode rise at each successive electrolysis. As the same solution was used throughout the series, the total quantity of acid liberated during these experiments was stored in the solution itself, its integral effect at each successive interval being given by a descending order of values for the one case and an ascending order for the other.

The rate of fall in the value of the cathode e.c.e. is comparatively small at the start, as the convexity of the curve C in fig. 1 at the beginning will show. This is soon followed by a rapid rate of fall with increased accumulation of acid; the portion of the curve C representing this part will be found to



have become concave after an inflexion. With prolonged electrolysis, however, the fall became gradually smaller and smaller till at last the values tended to become more or less stationary, as the last part of the curve would indicate.

With the anode e.c.e. the reverse is the case, though the rate of rise is more gradual and much smaller throughout than that for the fall of the cathode equivalent. It is interesting to note how the observed values of the e.c.e. both for cathode and anode tended to equalize with repeated electrolyses, the former coming down by rapid steps and the latter going up more slowly but steadily. For instance, at the end of the first experiment the e.c.e.'s for cathode and anode are $\cdot 0002906$ and $\cdot 0000147$; while at the end of the last determination they were found to be $\cdot 0000597$ and $\cdot 0000488$ respectively!

It is difficult to understand the sudden drop in experiment 3, Table I. The deposit obtained was good, so that there was no loss of weight at the time of washing. It could, however, be explained on the hypothesis that it was only due to the effect of accumulation of acid developed in previous experiments in the part of the solution lying between cathode and anode. In all subsequent experiments the solution was thoroughly stirred before the current was started. To investigate whether this sudden drop was accidental, the following set of observations were made with a fresh quantity of the same volume (160 c. c.) of neutral solution (specific gravity different). The current was passed for only five minutes at a time in order to examine the steps of fall more closely. The results are tabulated below:—

TABLE III.

Effect of successive Electrolysis for small intervals.

Total time. Second.	Current (Amp.) Actual.	Current (Amp.) Mean.	Ca. Gain (Grm.)	Total Ca. Gain (Grm.)	E.C.E. (Ca.) 7×10^{-7}	E.C.E. (Ca.) Mean. $\times 10^{-7}$
300"	$\cdot 8541$	$\cdot 8541$	$\cdot 0768$	$\cdot 0768$	2997	2997
600"	$\cdot 8083$	$\cdot 8312$	$\cdot 0697$	$\cdot 1464$	2872	2937
900"	$\cdot 8738$	$\cdot 8454$	$\cdot 0718$	$\cdot 2183$	2739	2869
1200"	$\cdot 8938$	$\cdot 8575$	$\cdot 0688$	$\cdot 2870$	2564	2789
1500"	$\cdot 8922$	$\cdot 8644$	$\cdot 0599$	$\cdot 3469$	2255	2675
1800"	$\cdot 9197$	$\cdot 8736$	$\cdot 0604$	$\cdot 4073$	2188	2589
2100"	$\cdot 8862$	$\cdot 8754$	$\cdot 0522$	$\cdot 4594$	1962	2499
2400"	$\cdot 9092$	$\cdot 8796$	$\cdot 0398$	$\cdot 4993$	1459	2364
2700"	$\cdot 8704$	$\cdot 8793$	$\cdot 0373$	$\cdot 5365$	1427	2261
3000"	$\cdot 8732$	$\cdot 8780$	$\cdot 0325$	$\cdot 5690$	1240	2160

The above values of the e.c.e. show that the fall is gradu-

ally throughout and nowhere so abrupt as in experiment 3 of the previous series.

The curve E. in fig. 2 is plotted between the average value of the e.c.e. (Ca.) given in Table III and the total time corresponding to these values. The point P, at which the curve meets the Y axis, gives by extrapolation the value of the e.c.e. of a perfectly neutral solution, inasmuch as the acid developed may be regarded as proportional to the time of flow of current. This gives $\cdot 0003045$ as the approximate value of the e.c.e. as read from the curve.

Drawing F (fig. 2), the first part of curve C on the same scale as E and producing it to cut the axis at Q, a similar point is obtained which fixes the cathode e.c.e. approximately at $\cdot 0003015$; both these values do not differ from the standard value $\cdot 0003043$ by more than one per cent.

The results of Table I and II seem to reveal a definite experimental law with time, underlying this wide range of variation in the values of the e.c.e. of nickel. It appears that the only natural explanation lies in the fact that the anode is not readily attacked by the acid ions liberated at the time of electrolysis. The result is that, corresponding to the number of nickel ions leaving the solution at any instant, the number entering it is less, as these latter are supplied by the anode dissolved. The sulphions, thus failing to act on the anode, react upon the water forming sulphuric acid. As the acid goes on accumulating with time, it draws away a good portion of the current passing through the voltameter owing to its higher conductivity, and an equivalent quantity of hydrogen instead of nickel is deposited on the cathode. The effective current actually employed in decomposing nickel sulphate is therefore only a fraction of the whole current sent through the voltameter, and the values of the e.c.e. based upon the Ammeter readings become necessarily lower and lower as the acid increases in proportion. A divided circuit thus seems to be established in the electrolyte, the total current branching off into the acid and nickel lines, in the inverse ratio of the resistances offered by each respectively. But this cannot go on indefinitely. For, with increased concentration of acid, the anode gradually becomes more amenable to its solvent action and begins to lose more weight than before, thus restoring nickel ions in larger numbers to the solution, and thereby increasing the conduction through the nickel line. In consequence of this mixed conduction the cathode gradually gains less and the anode loses more, and the tendency is such as to make the gain and loss equal. Electrolytic balance will thus be reached at the point when the quantity of acid developed is just enough to dissolve away as many nickel ions from the anode as leave the solution at any moment. At this point the curves C and D will meet.

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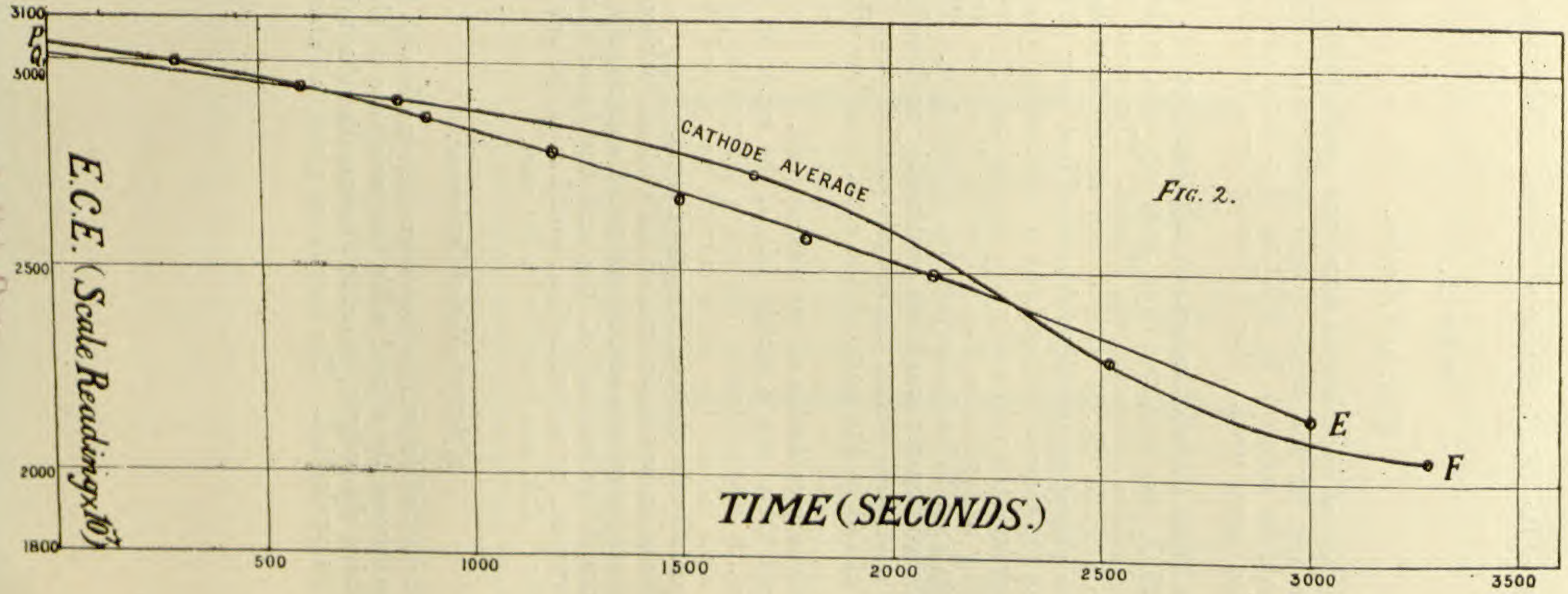


Fig. 2.

PART II.

Effect of Dilution.

A number of experiments were now undertaken with a view to see how far the effect of acid generated during electrolysis could be reduced by dilution if a large quantity of the solution were used. The following arrangements were made.

About three litres of saturated solution (specific gravity 1.334 at 23°C) was prepared from pure crystals, boiled with precipitated nickel carbonate and filtered. The clear solution was put in a bottle (fig. 3) with a tap at the bottom. The bottle was placed on an adjustable stand just over the voltameter. At the time of experiment a continuous run of the solution through the voltameter was maintained by drawing off the liquid by a syphon and so adjusting the flow from the bottle as to keep its level always at the same height. The solution in the voltameter was thus continually replenished and the acid developed during electrolysis carried away from it. The rate of fall in the value of the e.c.e. was thus effectually checked.

Hardly any evolution of gas was noticed.

Though there was a steady fall in the e.c.e. all through this series, it was evidently very much slower than what was noticed when about the same current was passed through a smaller quantity for the same length of time.

The solution was again treated with nickel carbonate, filtered and subjected to a second course of electrolysis, just to make sure if the removal of the acid developed during the last experiment, by neutralization, would raise the value of the e.c.e. again. This was found to be the case.

Effect of Nickel Carbonate.

A number of determinations were next made with the solution kept thoroughly stirred with the carbonate in the voltameter during electrolysis, in order to neutralize the acid at the time of its production. The results are given in Table IV.

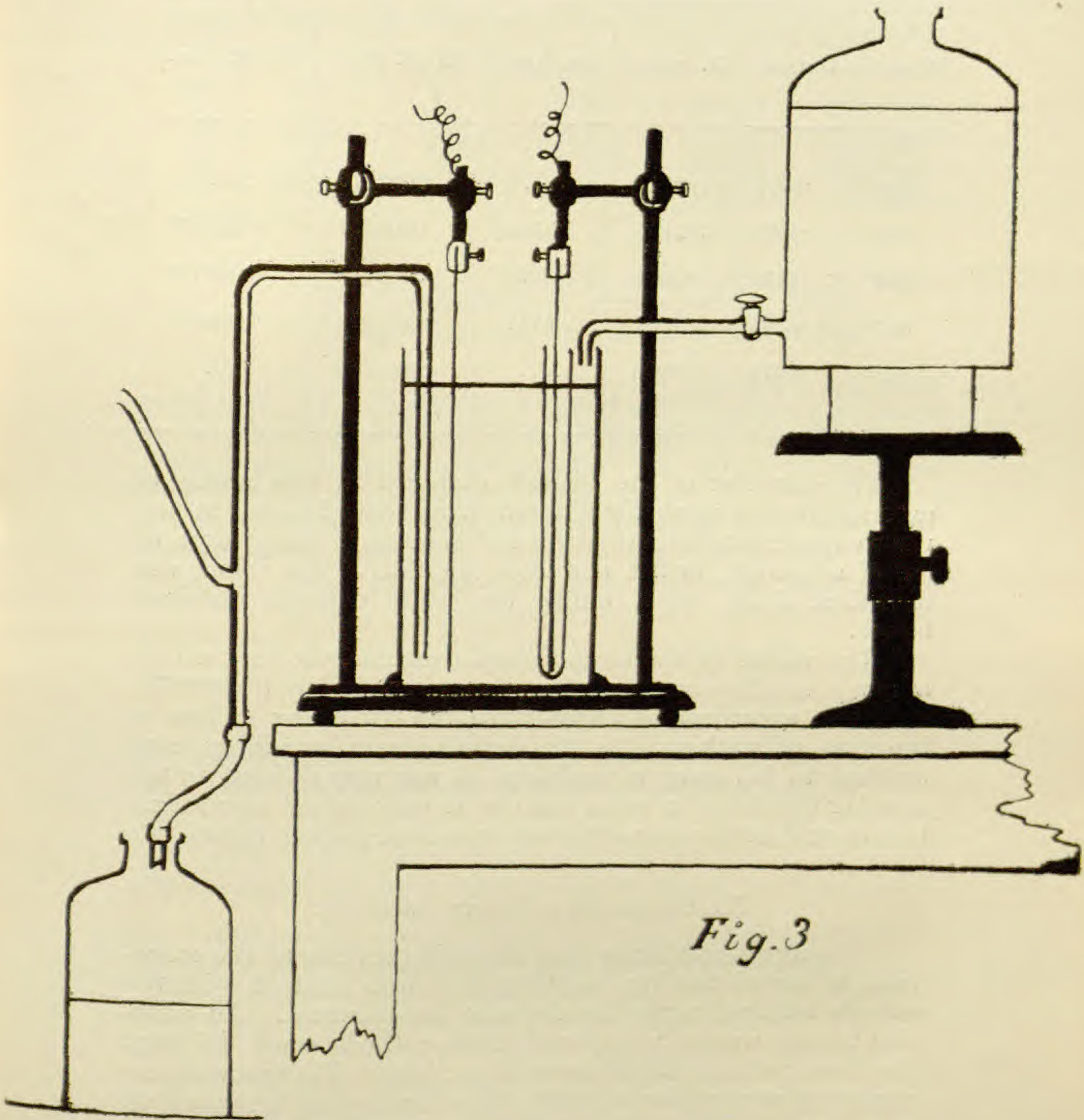


TABLE IV.

Effect of Nickel Carbonate suspended in the Solution.

Second.	Ampere.	Ca. gain.	An. loss.	E.C.E. (Ca.).	E.C.E. (An.).
840"	·9204	·2147	.....	·0002776	.....
840"	·8874	·2137	·0106	·0002867	·0000143
840"	·8803	·2062	·0095	·0002788	·0000128
840"	·8794	·1341	·0111	·0001814	·0000150
840"	·8874	·2090	.....	·0002803	.....

The character of the deposit obtained in this group of experiments was markedly different from that obtained in previous experiments from clear filtered solutions, being more or less of a spongy, brittle and loose character. The colour was of a dark shade, quite unlike the white deposits obtained before.

The values of the e.c.e. though irregular, yet kept within a much smaller range of the theoretical value ($\cdot0003043$), except in experiment 4 where it fell too low owing to loss at the time of washing. As the deposits were invariably loose and apt to fall away at washings, it was very difficult to tell whether the defect in value was due to only partial neutralization of acid or to a non-adherent deposit or to both causes.

The Cathode in a Porous Enclosure.

It seemed most likely that the solid particles of the carbonate of nickel coming, as they did, into contact with the cathode surface, made the deposits non-adherent. An adherent deposit was to be expected if the cathode could be kept free from contact with these solid particles. The following experiments were performed with the cathode plate wrapped up in a piece of filter paper, and a continuous supply of nickel sulphate solution largely mixed with nickel carbonate was kept flowing through the voltameter as described before. This arrangement combined the twofold advantage of large dilution and prompt neutralization of acid at the anode. The filter paper protected the cathode surface from contact with the carbonate particles. The results are given in Table V.

TABLE V.

Effect of covering the Cathode in Filter Paper.

Second.	Ampere.	Ca. gain.	An. loss.	E.C.E. (Ca.).	E.C.E. (an.).
840"	·9014	·2241	·0153	·0002959	·00002023
840"	·9014	·2225	·0187	·0002939	·00002468
840"	·8874	·2139	·0169	·0002869	·00002267
840"	1·1924	·2901	·0201	·0002896	·00002006
840"	1·0840	·2686	·0201	·0002950	·00002004

Mean e.c.e. = ·0002913.

Mean probable error of the result = ·000001.

Probable error of one observation = ·000003.

The values of the e.c.e. obtained in this series are fairly consistent. In experiments 3 and 4 the deposits were found to be dark and loose at those places where the filter paper pressed against the cathode surface. The values of the e.c.e. were therefore comparatively low.

In the next set of experiments, a bag of filter paper was prepared with a stiff collar to prevent its collapse under liquid pressure. There was sufficient space inside the enclosure to keep the cathode hanging quite freely. Decidedly better results were obtained as will be seen from Table VI.

TABLE VI.

Effect of circulating the replenishing mixture of Nickel Sulphate and Carbonate round the filter bag with the Cathode.

Second.	Ampere.	Ca. gain.	An. loss.	M.C.E. (Ca.).	E.C.E. (An.).	Character of deposit.
960"	·9334	·2545	·0191	·0002872	·0000216	Loose and dark.
840"	1·1762	·2942	·0202	·0002977	·0000200	White and firm.
840"	·8776	·2195	·0130	·0002978	·0000176	do. do.
840"	·8803	·2214	·0124	·0002993	·0000168	do. do.
840"	·9937	·2495	·0292	·0002989	·0000349	do. do.
840"	·9014	·2289	·0155	·0003023	·0000204	do. do.
840"	·9151	·2338	·0250	·0003035	·0000325	do. do.
840"	·8944	·2197	·0606	·0002924	·0000807	Loose and dark.
840"	·8944	·2242	..	·0002983	..	White and firm
840"	·8944	·2294	·0272	·0003053	·0000362	do. do.

Mean e.c.e. = ·0002983.

Probable error of the result = ·000001.

The modification in the shape of the filter partition thus produced the desired effect. The values of the e.c.e. for the cathode are on the whole quite concordant.

The arrangement was, however, still unsatisfactory, because in some cases the nickel carbonate got inside the enclosure through holes in the filter paper. It was also difficult to avoid contact with the filter paper altogether, specially at the bottom. The deposit obtained in such cases of contact were as a rule bad.

In experiment 8, the anode equivalent was exceptionally high. This was because the filter bag was, by mistake, put on the anode instead of the cathode. The result was, the acid ions which collect round the anode were inside the partition, and thus, protected to a great extent from the diluting and neutralizing action of the fluid circulating through the voltameter, they attacked the anode with greater concentration, and its loss was consequently much greater in this case. The cathode plate got the characteristic dark and loose deposit as it was exposed to contact with the carbonate particles.

A further improvement was made upon the porous partition by mounting the filter paper on an U-shaped wooden frame. A piece of thread was wound on the frame underneath the paper forming a sort of net-work, which prevented the walls of the filter paper from touching the cathode. About 3 litres of the solution largely mixed with nickel carbonate were run through the cell as before. The mixture was stirred from time to time with a glass rod both in the voltameter as well as in the bottle. The results are given below.

TABLE VII.

Final Results obtained with replenishing mixture and porous partition.

Second.	Ampere.	Ca. gain.	An. loss.	E.C.E. (Ca.).	E.C.E. (An.).
840"	·8803	·2209	..	·0003023	.....
840"	·8930	·2275	·0079	·0003033	·00001054
840"	·8902	·2279	·0262	·0003047	·00003500
840"	·8986	·2281	·0231	·0003021	·00003057
840"	·9028	·2309	·0252	·0003044	·00003328
840"	·8944	·2290	·0228	·0003048	·00003032
840"	·9069	·2308	·0282	·0003029	·00003698
840"	·8930	·2286	·0279	·0003047	·00003720

Mean e.c.e. = ·0003036.

Probable error of the mean = ·0000003.

Mean error of one observation = ·0000008.

In experiment 1 a flat earthen-ware pot (such as those used in ordinary Grove cells) was used, for the rest the specially devised filter paper partition was used.

Concluding Remarks.

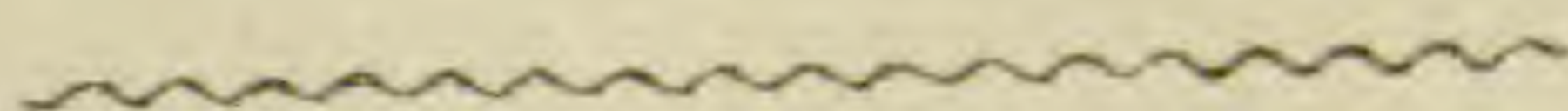
The device adopted in the last series of experiments may probably be used with advantage in nickel-plating on a commercial scale both for the saving of current from useless waste in gaseous decompositions and also for the good adherent deposits which it ensures.

An experimental determination of the electro-chemical equivalent of cobalt and iron on these lines might be found useful.

The atomic weights of nickel and cobalt as determined by chemical methods, is at present only known with an uncertainty of about two per cent. A careful determination of the e.c.e. of nickel and cobalt according to the method suggested by these researches has, it may be presumed, its special advantages for examining the atomic weights of these metals and will evidently furnish quite an independent method of verifying results obtained by purely chemical processes. With the solution of nickel sulphate which has been worked with, not paying any attention to its chemical purity other than that which may be looked for from repeated crystallizations, I find that the e.c.e. of nickel (taken that of silver as $\cdot 001118$) is $\cdot 0003036 \pm \cdot 0000003$ (probable error), which leads to a value of the atomic weight of nickel as $58\cdot 52 \pm \cdot 06$.

A repetition of Hittorf's experiments on the effect of temperature of the electrolyte upon its deposits performed with the precautions for eliminating spurious effects due to acid, as adopted in these investigations, would be an interesting experimental study.

In conclusion, I have much pleasure in acknowledging my indebtedness to Professor V. H. Jackson, M.A., of the Indian Educational Service, for many encouraging suggestions and help during the progress of the work.



5. Buddhist Legends of Asoka and his Times.

*Translated from the Pāli of the Rasavāhinī by LAKṢMAṆA ŚĀSTRĪ,
Sadho Lal Scholar and Head Paṇḍit, Queen's Collegiate
School, Benares, with a Prefatory Note
by H. C. NORMAN.*

Asoka is admittedly one of the most interesting figures in Indian history, and the story of his conversion presents many problems which have engaged the attention of most Indianists. Any old document which gives some account of this monarch, even though it be in a legendary form, is therefore of interest, and especially a Pāli work by a Buddhist, as representing the orthodox opinion on this matter. Various stories of Asoka are to be met within the Sinhalese chronicles and in Buddhaghosa, but as they are to be found conveniently arranged in a prose form in the *Rasavāhinī*, and as Paṇḍit Lakṣmaṇa Śāstrī is at present preparing an edition of that work¹ for the Pāli Text Society, I urged him to make a translation of this tale of Asoka—one of the longest in the book. The authorities on which the author of this interesting old work has drawn are the *Mahāvamsa* and Buddhaghosa's commentaries, and he has followed his authorities with a minute exactitude which is characteristic of Buddhist works, following them almost word for word in the essential passages.

In addition to other matters, the legend gives the story of how Asoka found the Buddha's relics and distributed them over India. This story occurs in Buddhaghosa's *Sumaṅgalavilāsinī*, and forms part of a long account of the fate of the relics after their first dispersal. By way of explanation, and in order to make the account more connected, I have ventured to give a translation from that part of Buddhaghosa's Commentary on the *Mahāparinibbāna Sutta* which deals with Ajātasattu's treatment of the relics. For this the Burmese edition of Rangoon, 1903, has been used. Dr. Fleet in the *J.R.A.S.* for October 1906 has given the story of the relics from the Pāli, and presumably from the same edition. My version agrees in all essentials with Dr. Fleet's, but, at the risk of being wearisome, I have literally translated every detail of the text, with some notes on slight points of difference between us. For a complete discussion of the fate of the relics, Dr. Fleet's articles in the *J.R.A.S.* must be referred to, for they are of prime importance, giving as they do the best results of modern criticism.

¹ According to Goonaratne in the *J.P.T.S.* for 1884, p. 51, the *Rasavāhinī* is probably a work of the fourteenth century A.D.

TRANSLATION.

“ After the stūpas had thus been set up, however, the elder Mahākassapa, perceiving that danger threatened the relics, approached the presence of king Ajātasattu and said: ‘ O great king, one receptacle ought to be made for the relics.’ ‘ Very well, reverend Sir, let the making of the receptacle be my concern. But how am I to get the remaining relics?’ ‘ Great king, the getting of the relics is not your task, but mine.’ ‘ Very well, reverend Sir, do you get the relics, and I will make the receptacle.’ The elder brought the remaining relics, leaving with the various royal families only enough for purposes of worship, but at Rāmagāma the Nāgas took possession of the relics, and no accident happened to them. Knowing that in the future they would be deposited in the Great Caitya of the Mahāvihāra in Ceylon, he did not take them, but took them from the remaining seven cities. Then standing at a spot to the south-east of Rājagaha he willed the following resolve: ‘ Let the stone which is in this place vanish, let the sand become spotless, let not water rise up in it.’ The king had that place dug up, and then caused bricks to be made with the soil therefrom. Then he had Caityas to the eighty great disciples constructed. When people asked: ‘ What is the king having made here?’ they were told ‘ Caityas for the great disciples.’ No one knew about the existence of a relic-receptacle. When that place had been made eighty cubits deep, he had laid down an iron¹ flooring. Then he had made a copper house of the size of the sanctuary in the Thūpārāma, and likewise eight boxes and stūpas of yellow sandal and other woods. Then he took the relics of the Blessed One and cast them into a yellow sandal-wood box, and this yellow sandal-wood box he put in another yellow sandal-wood box, and that too in another, and so on, putting the boxes one inside the other. In exactly the same way he had the eight yellow sandal-wood boxes put in eight stūpas of yellow sandal-wood, the eight stūpas of yellow sandal-wood in eight boxes of red sandal-wood, the eight boxes of red sandal-wood in eight stūpas of red sandal-wood, the eight stūpas of red sandal-wood in eight boxes of ivory, these boxes in eight stūpas of ivory, these stūpas in eight boxes of all kinds of jewels, these boxes in eight stūpas of all kinds of jewels, these stūpas in eight golden boxes, these boxes in eight golden stūpas, these stūpas in eight silver boxes, these boxes in eight silver stūpas, these stūpas in eight jewel-boxes, these boxes in eight jewel-stūpas, these stūpas in eight ruby-boxes, these boxes in eight ruby-stūpas, these stūpas in eight cat’s-eye boxes, these

¹ ‘ Brass,’ Fleet. The Pāli has lohasanthāram. “ Its bottom was lined with iron bars,” Bigandet, who in his second volume follows Buddhaghosa’s account of the fate of the relics.

boxes in eight cat's-eye stūpas, these stūpas in eight boxes of crystal, these boxes in eight stūpas of crystal. Above them all was a crystal Caitya of the same size as the Caitya in the Thūpārāma. Above it he had made a house of all kinds of jewels, above that was one of gold, above that again one of silver, above that one of copper. Having scattered there the dust of all kinds of jewels and having strewn thousands of flowers that grow on land and flowers that grow in the water, he caused to be made (figures of) the five hundred and fifty births, the eighty great Elders, the great king Suddhodana, Queen Māyā, and the seven Connate Ones¹—all these of gold. He had set up five hundred brimming jars of gold and five hundred of silver and five hundred banners; five hundred lamps of gold and five hundred of silver he had made and filled them with fragrant oil and set in them wicks of fine cloth. Then the reverend Mahākassapa willed: 'Let not the garlands wither, let not the perfumes be destroyed, and let not the lamps be extinguished.' He then caused letters to be engraved on a plate of gold: 'In the future a prince called Piyadāsa shall raise the royal umbrella and become Asoka, the king of righteousness. He shall cause these relics to be dispersed far and wide.' The king having performed adoration with all his ornaments first of all went out shutting the door. Having closed the copper door, he fastened a key-ring to the string for closing the door² and in that very place set a great magic jewel,³ on which he had engraved: 'In the future let a poor king come and take this jewel and pay honour to the relics.' Sakka, the king of the gods, summoned Vissakammā, and saying: 'Sir, Ajātasattu has made a receptacle for the relics, set up a guard here,' sent him off. When he arrived, he fitted up a vālasānaghāṭa-machine (a revolving platform). Having set up his machine which caused wooden figures with crystal-bright swords in their hands to revolve in the relic-chamber with a speed like that of the wind,⁴ he fastened it with just one pin,⁵ and, having made a stone enclosure round about like the Giñjakāvasatha⁶ (or 'like a tiled dwelling'), closed it with one pin. Having thrown about sand and made the ground even, he set above it a stone stūpa. After the relic-receptacle had been constructed, the elder entered into complete Nibbāna, after

¹ See for these, J.A.S.B., vol. iv, No. 3, 1908.

² Āviñchanarajjuyam kuñcikumuddikam bandhitvā. See Vinaya Texts (S.B.E.) III, 106. 'Fastened it with a rope and sealed the knot.' (Fleet.)

³ Mañikkhandham.

⁴ Vātasadisena vegena anupariyāyantam yantam.

⁵ Āni. This would act as an axis.

⁶ 'This, the Brick Hall or Tiled Hall, was a building at Nādika.' (Fleet). Cf. M.P.S. II, 5,6: 'tatra sudam Bhagavā Nādike viharati Giñjakāvasathe.' Cy. iṭṭhakāmaye āvasathe.

finishing his term of life. The king too departed this life, and so did those (work) men.”

THE STORY OF THE THREE BROTHERS,
THE HONEY MERCHANTS.

Formerly there were three brothers in Benares who lived harmoniously together. They maintained their family by the honey-trade. One of them used to go to foreign countries and buy honey from the hands of the residents of the Malaya country, the second despatched the honey to the town, and the third sold it at Benares. At that time a Paccekabuddha (one who has attained the knowledge necessary to Nirvāna), who lived on the Gandhamādana mountain, was suffering from a wound. Another Paccekabuddha, perceiving him thus indisposed, thought within himself that the wound was to be cured only by means of honey. He accordingly put on his robe on the Gandhamādana mountain and went through the air. Having alighted at the gate of the town, he stayed there, looking about him to find out whence the honey was to be procured.

Meanwhile a servant maid, who earned her bread by serving, was passing by, holding a jar in her hand in order to fetch water from the river; she made way for him, and having placed her jar on the ground, saluted him, and stood aside. The Paccekabuddha addressed her, ‘Sister! in which place is the honey obtained by mendicants?’ She having heard what he had to say, conducted him to the honey-market, and pointing with her hand, she said, ‘Here, Sir, is the honey-market.’ While thus pointing, she was pondering within herself, ‘In case this Paccekabuddha does not get the honey, I shall supply him with it even at the cost of the clothes I wear.’ Thus meditating, she stayed there awaiting his return.

Now the Paccekabuddha proceeding in due course at last reached the honey-market. A man of affluence (one of the three brothers) on seeing him, took the bowl from his hands, and having placed it on a stand, brought a jar of honey and in pouring the contents into the bowl tilted up the jar quickly. When the bowl was filled up to the brim, the honey began to flow out on to the ground. On seeing it the merchant was overjoyed and made the following request. It is said in the Mahāvamsa:—“When the Paccekabuddha arrived there, that pious merchant gave him a bowl full of honey, and seeing it filled up and the honey brimming over and falling to the ground, he full of faith then made the following prayer:—‘Let me alone enjoy the undisputed authority over Jambudīpa by the virtue of this charity, and let my commands have their control over the regions of the sky and those of the earth for a yojana in both directions.’” Having thus spoken, he presented the

[N.S.]

bowl to the Paccekabuddha, which he accepted, and standing in that self-same spot he said :—“ Let this charity quickly fulfil all your wishes, just as the fifteenth day of the month fulfils the moon, or as a magical jewel does the wishes of its possessor.” Having thus blessed him, he departed.

The maid-servant of the jar, who was waiting in the way, seeing him return, proceeded to welcome him and asked, ‘ Sir, did you get the honey ? ’ ‘ Yes, sister. ’ ‘ What did the merchant say at the time he presented the bowl to you ? ’ The Paccekabuddha related to her all that had passed. Having heard it, she requested him, ‘ Be so good, Sir, as to wait a moment here for the sake of your humble servant, ’ and she went quickly home. There she took a piece of cloth, her own garment, and having washed and folded it, she presented it to him, saying, ‘ Whenever, Sir, the honey-supplier should happen to be the king of the whole of Jambudīpa, I should like to become his chief queen, ’ and making a prayer she spoke as follows : ‘ When he, reverend Sir, who gave thee the honey, becomes king over the earth, may I then, Sir, become his beloved queen ; of fair form, voice, and fame, devoted to him, and beautiful may I be, and dear and pleasing and adorable to him always. ’ The Paccekabuddha having poured his blessings upon her also, saying, ‘ So be it ’, took his aerial way to the Gandhamādana mountain.

Thereafter those three brothers met together, and when investigating the honey enquired, ‘ Where is that jar of honey ? ’ He gave an explanation by narrating what he had done, and thus concluded, ‘ If you want to take advantage of this charity, so much the better : if not, take the price of the honey from me. ’ They said, ‘ The honey is nothing to us, but to what kind of a person did you give it ? ’ On hearing this the other said, ‘ These Paccekabuddhas are people who live in seclusion on the Gandhamādana mountain and wear yellow robes. They live by begging from family to family. They are pious and observe the Sīla precepts. ’ ‘ The Caṇḍālas in the guise of Brāhmins, ’ said the eldest, ‘ go about wearing such yellow robes. I think he must be one of them. ’ The second brother also got angry, and said, ‘ I shall throw your Paccekabuddha to the other side of the sea. ’ The honey-supplier, having heard their talk, warned them, ‘ Do not be so harsh unto the reverend Paccekabuddhas, who possess great influence and power. Do not you fear the sufferings of hell ? ’ He tried thus to warn them and convince them of their power. Both the brothers were satisfied by the reasoning and agreed to what he had done.

Afterwards when they died they transmigrated in the deva-worlds and in the world of men, and having enjoyed great fortune in their various existences at last were again born two hundred years after the death of Buddha in the place that each one had attained. It is thus related :—“ The merchant who

gave the honey was born as king Asoka, the maid-servant as the queen Asandhimittā, he who had called the Paccekabuddha a Caṇḍāla as Nigrodha, and he who blamed him as Tissa.”

The eldest who had abused him as a Caṇḍāla was born as the son of prince Sumana, the eldest son of king Bindusāra. His story runs thus:—

At the time that king Bindusāra became powerless, prince Asoka, having left the kingdom of Ujjain, which had been taken by him, came and took possession of the whole city and captured prince Sumana. On that very day the wife of prince Sumana, who was about to be delivered, disguised herself, and, when she had left the city no great distance behind and was going in the direction of a village of Caṇḍālas, she heard the voice of a deity who had occupied the banyan tree close to the house of the head Caṇḍāla, saying: ‘Come along this way.’ She went close to the deity. The deity suddenly built a house by its power and awarded it to her, saying, ‘Dwell in this house.’ On the very day of her going, she was delivered of a male child. She called him by the name of Nigrodha, as he was favoured by the deity residing in the Nigrodha (or banyan) tree. The head Caṇḍāla, from the day he saw her, looked upon her as the daughter of his master, and continually took every possible care of her. The princess lived there seven years, and the prince Nigrodha grew up to the age of seven.

In the meantime an Arahat called Mahāvaruṇatthera, who had perceived that the child was destined to become an Arahat, sojourning (there) thought: ‘The boy is now seven years old, now has the proper time arrived to ordain him a monk.’ Accordingly he caused the princess to be apprised of the fact, and admitted prince Nigrodha into the monastic life. The prince attained to Arahatship in the Hall of Tonsure. It is said in the Mahāvamsa:—‘Having seen that the little prince was destined to become an Arahat, the elder Mahāvaruṇa ordained him; the prince attained to Arahatship in the Hall of Tonsure.’ Now one day he, after taking care of his body and having performed the duties of a monk, took his bowl and robe, and started, resolving that he would go to the door of his mother, the lay devotee. To reach his mother’s dwelling-place, he had to enter the city by the south gate, go by the king’s palace, and emerge by the east gate, and at that time Asoka, the pious king, was pacing up and down at a window and looking towards the eastern direction. At that very moment Nigrodha, who had attained to tranquillity of mind and senses, looking only nine spans before him and endowed with the decency of deportment, reached the compound of the palace. As soon as the king perceived him, he began to think, “All these people are persons of scattered thoughts, and always have an inclination for food and game. But this boy seems to be undisturbed. His looks

as well as his other movements are very seemly. He must have acquired some transcendent virtue." The king was pleased immediately on seeing him and at once felt an inclination and attachment towards him. The cause of this was that he was the eldest brother of the king, the merchant, at the time of doing that charity in the previous life. "An inclination towards somebody arises either through an association with him in a former birth, or through the present obligation he is under, as a lotus springs up in water." The king thus feeling a strong inclination and respect towards the Sāmaṇera, ordered his ministers to summon him. Being impatient at their delay he again despatched some two or three servants to tell him to come quickly. Presently the Sāmaṇera presented himself before him in his usual way. He pointed to him a seat, befitting his rank, and requested him to take it. He, looking around him to see that there was no other Bhikkhu present, approached the royal throne, on which the umbrella had been raised, and made a sign to the king to take the bowl. The king, seeing him approaching the throne, thought within himself: 'This Sāmaṇera would become the lord of this palace this very day.' The Sāmaṇera, presenting the bowl to the king, ascended the throne. The king ordered various articles of food to be brought before him that had been prepared for himself. The Sāmaṇera accepted as much as was necessary for his sustenance. When he had taken his food, the king said: 'Do you know the exhortation given you by your teacher?' "Yes, my lord, a portion of it." "Tell it to me also, Sir." "Very well, my lord." So he recited to him, by way of returning thanks, the Appamādavagga (section on Heedfulness) of the Dhammapada as suitable for the king.

When the king heard, 'carefulness is the source of immortality and carelessness is that of death,' he said, 'I have understood, Sir, please complete it.' The Sāmaṇera at the end of returning thanks received thirty-two fixed portions of food. Next day he took along with him thirty-two Bhikkhus and penetrated into the private apartments of the king. There he took his food. The king requested him: "Let another thirty-two Bhikkhus take their food with you to-morrow." In this way increasing the number day by day, the king stopped the sanctioned food of sixty-thousand Brāhmaṇ mendicants and apportioned it forever to as many Bhikkhus in the inner apartment. By the virtue of the inclination to Nigrodha shown by the king Nigrodhatthera established the king along with his court in the three Saraṇas (or Refuges) and in the five Sīla precepts. Nigrodhatthera too instilled into the king a firm faith in the Buddha's teaching, a faith firmer than that of the ordinary unconverted man. The king, on his part, commanded a monastery, namely, the Asokārāma, to be built, and supplied sixty-thousand Bhikkhus with boiled rice every day. He also

built eighty-four thousand monasteries in eighty-four thousand towns throughout Jambudīpa. And so it is said: "Through the fault of having used 'Caṇḍāla' as a term of abuse he (Nigrodha) was born in a Caṇḍāla hamlet, and through obtainment of the fruition of his approval of the good deed he became a perfect Arahat." This is the narrative of Nigrodhatthera.

The merchant who gave the honey, however, having descended from the world of Devas, was reborn in the royal family of Pupphapura as the prince Piyadāsa, and after having raised aloft the royal umbrella enjoyed an undisputed authority over the whole of Jambudīpa. How was this?

King Bindusāra had a hundred sons. Asoka assassinated them all with the exception of prince Tissa, who was born of the same mother as himself. After murdering them all he managed the government for four years without being formally anointed. But at the expiration of that period, two hundred and eighteen years after the death of Buddha, he attained to a coronation as sole ruler over the whole of Jambudīpa. On this occasion the kings ruling over the eighty-four thousand cities in the whole of Jambudīpa, came to pay respect to him. He had three palaces appropriate to the three seasons. One of them was called Mahāsappika, the second Moragīvā, and the third Maṅgala; in these he abode, surrounded by countless thousands of dancers. The maid-servant, who had shown him (the Paccekabuddha) the honey-market, was born as the princess Asandhimittā, as beautiful as a heavenly nymph, and became the principal queen of king Dhammāsoka, with authority over sixty thousand women.

No sooner had the coronation taken place than the king was furnished with the following kingly powers. His commands prevailed for a yojana below the earth and for a yojana above in the sky. Deities daily brought sixteen jars full of water, eight men's load, from the Anotatta lake, from which when converted to the Faith he gave eight to the assembly of mendicants, two to sixty Tipiṭaka-bhikkhus, two to his chief queen, Asandhimittā, and four he kept for his private use. Deities also supplied him daily with tender, fresh and tasteful tooth-cleaners, made from the betel-vine and brought from the Himālaya. They were so abundant that they sufficed for the daily cleansing of the teeth of all—the king, the chief queen, sixteen-thousand dancers, and sixty thousand Bhikkhus. The deities also presented him with the Āmalaka and the Haritaka medicines and the tasty and sweet-scented golden leaves of mango trees. They brought for him clothes of five colours from the Chaddanta lake, and gave him a yellow kerchief for wiping the hands, and heavenly beverages. And daily too the Nāga kings brought him from the Nāga palace emollient scent, jasmine-flowered cloth without seam for his apparel, and collyrium. Likewise from the Chaddanta lake every day parrots

brought for him nine hundred thousand cart-loads of rice which was produced there. Mice cleared it of the husks : there was not a broken grain of rice. This very rice was in use in every place belonging to the king. The bees prepared honey for him. In the workshops bears smote with the sledgehammers. The birds warbling sweetly brought him an oblation of song.

Endowed with these Iddhis (supernatural powers), the king one day despatched a golden chain and ordered the king of Nāgas, named Mahākāla, who had seen all the four Buddhas and was destined to live for a Kappa, to be brought before him. The king seated him on a costly royal couch underneath a white umbrella, and worshipped him with flowers of countless hundreds of colours, those produced on the earth as well as those that grow in the water, and also with golden flowers. And then surrounding him on all sides with the sixteen thousand dancers, decked with all kinds of ornaments, he entreated him, ' Please bring before the ken of these eyes of mine the form of the supreme Buddha of endless knowledge who set in motion the excellent wheel of the Good Law.'

Thereupon he made the image. It had a pure lustre spreading throughout its person, was endowed with the eighty minor characteristics of a Buddha, and beautified with the thirty-two marks of a Mahāpurusha. It seemed like the surface of water, smiling with blossoming lotuses, pink and blue, and it had the lustre of the sky illuminated by the refulgence sparkling from the multitudes of the gleams of the rays of the starry hosts. It had its fair head irradiated with a halo of blue, yellow, and other colours, which surrounded it with variegated hues which shone for a fathom round about it and made it look like the peak of a golden mountain on which play the hues of twilight, the rainbow, and the lightning. It afforded great delight to the eyes of the hosts of gods of the Brahma and Deva-worlds men, Nāgas, and Yakshas. The king, seeing the image, performed the worship named Akkipūjā for a week. His attachment to heretical and non-Buddhistic sects continued for three years after his coronation. But in the fourth year he became a believer in the Buddhist faith.

His father, king Bindusāra, was an adherent of Brāhmanism. He used to feed sixty thousand Brāhmaṇs, heretics of Brāhman caste, and white-robed mendicants every day. King Asoka was following the same system of charity in his palace.

One day the king, while standing at a window, saw them eating in an unrestrained way, with no control over their passions and uncomely in their deportment, and he thought within himself : ' Such a system of charity must be abolished, and it should be bestowed on some fitting object.' Having formed this opinion, he summoned his ministers and commanded them : ' Go and introduce the Samaṇas and Brāhmaṇas of good report with you into the palace ; I will bestow gifts on them.' ' As it

pleases your Majesty,' they said, and went away to execute the royal commands. Soon they returned accompanied by white-robed mendicants, naked ascetics, and Nirgranthakas, and having presented them before the king, said, 'Here, may it please your Majesty, are our Arahats.' The king ordered seats of various kinds to be brought for them, and bade them as they came up take their seats according to their ranks. Some of them occupied the best seats and others benches. Seeing them, the king thought: 'these men have not the truth in them.' He then gave them suitable food, hard and soft, and sent them away. While the time was thus passing away, the king one day saw Nigrodhasāmaṇera from the window. On account of the natural inclination towards him, he became a believer in the Buddhist faith, and driving away the sixty thousand heretics, he entertained as many Bhikkhus in their stead. Having become a convert to Buddhism he had built a monastery named the Asokârāma and made the monks reside therein.

One day the king, after having bestowed gifts on the sixty thousand mendicants at the Asokârāma, sat among the Bhikkhus, and offering to the Order the four Paccayas or requisites, asked them, "Reverend Sirs, what is the extent of the Law of Piety as laid down by the Blessed One?"

"It has nine divisions," said they, "and the divisions thereof are eighty-four thousand." The king was filled with faith in the Dhamma, and saying, 'I will honour each division of the Law by building a monastery,' on a certain day he expended ninety-six crores of wealth and ordered his ministers: 'By building in each several city a monastery have eighty-four thousand monasteries built.' He himself provided the work for the building of the Asokamahāvihāra in the Asokârāma. The Order provided the elder Indagutta by name, an Arahata of wonderful ability and power, as superintendent of the new work; whatever was not completed he caused to be completed by his own miraculous power. Thus in three years the work of building the monasteries was completed.

On a certain day letters were received, containing the news of the completion of the eighty-four thousand monasteries. Then the king approached the Order of mendicants and said: 'Reverend Sirs, I have had eighty-four thousand monasteries built, whence am I to get the relics?' "Your Majesty, we hear that there is a repository of relics, but its exact position is not known."

The king had the Caitya at Rājagaha broken open, but did not see any relics. He restored it to its former condition, and accompanied by the four classes of disciples—monks, nuns, lay disciples, and female devotees—went to Vesālī. But there too his efforts were in vain, so he went to Kapilavatthu, but to no purpose. He then went to Rāmagāma. But the Nāgas did not allow him to break open the Caitya at Rāma-

gāma; as the picks fell upon the Caitya, they broke in pieces. Thus his attempts were useless there too. He broke open all the Caityas at Allakappa, Pāvā, and Kusinārā, but could not find the relics, so he restored them to their original condition and went to Rājagaha. There he caused the four classes of disciples to be assembled and asked: "Has anyone heard before of the relics being deposited in this or that place?" Thereupon a certain elder, aged one hundred and twenty years, said: "My lord, I do not know the exact place where the relics are deposited, but when I was seven years old, my father, an eminent thero, giving the basket of garlands into my hands, said to me, 'Come, Sāmanera, in the midst of a certain clump of trees is a stone stūpa, let us go there.' Having gone thither and worshipped, he said: 'It is fitting to pay careful heed to this spot, O Sāmanera.' So much do I know, my lord," said the monk. "It is the very place," said the king, and having had the shrubs removed and the stone stūpa and the dust taken away, he saw underneath a plastered floor. Then he ordered the plaster and bricks to be removed therefrom, and in due course descending to the cell, he saw the dust of seven kinds of jewels and revolving wooden figures¹ with swords in their hands. He invoked the aid of the yaksha-servants and had oblations offered, but seeing that even this was of no effect he made obeisance to the gods and said: "If I obtain the relics, I will deposit them in the eighty-four thousand monasteries and treat them with reverence; let not the gods defeat my purpose." Sakka, lord of gods, who was discharging his usual duties, perceived him, and summoning Vissakammā, commanded: "Go and help king Asoka, the commander of the Faith, to take away the wooden images, for he has gone to the cell with an intention of taking the relics out." He, disguised as a village lad with five locks of hair,² went and stood bow in hand before the king, and said: "Your Majesty, I can remove them." "Do so, my lad," said the king. He took out an arrow and discharged it against the very joints of the masonry. Everything was rent asunder. Then the king took hold of the key-ring that was fastened to the string for opening the door, and seeing the magic jewel, he deciphered the letters engrave on it as follows: "In future time let poor kings take this jewel and pay reverence to the relics." This made him angry and he said: "Are kings like myself poor?" This was an improper thing to say. After repeated efforts he opened the door, and penetrated within. The lamps that had been set up more than two hundred and eighteen years ago were burning as brightly as ever. The blue lotus flowers looked as if they had just been

¹ Kattharūpakāni samparivattakāni (Buddhaghosa) °ntāni (Rasavāhinī).

² Pañcacūlagāmadārakavesena, Buddhaghosa. Pañcacūlaka°, Ras.

plucked and laid there, the flowery couch as if it had that moment been spread. The perfumes were as fresh as if they had been pounded up and put there that very instant. The king took up the golden plate and read as follows: "In the future a prince, called Piyadāsa, shall raise the royal umbrella and become Asoka, the king of Righteousness: he shall cause these relics to be dispersed far and wide." Having read it, he said: "I have been specially appointed by Mahākassapa," and hollowing his left hand he smote on it with his right. He deposited there only as much of the relics as was necessary for worship, took away the rest, closed the door as it had been closed before, arranged the things in their original position, had a Caitya of stones built on top and distributed the relics over the eighty-four thousand Vihāras.

One day the king went to the Vihāra, and, having saluted the assembly of Bhikkhus, sat down on one side, and said: "Reverend Sirs, I have spent ninety-six crores of wealth and have had eighty-four thousand monasteries with Caityas built; if I am not a Sāsanadāyāda (entitled to the inheritance of religion), what other person is?" "Your Majesty, you are indeed a Paccayadāyaka (donor of requisites), but he who admits his son and daughter into the Order is said to be a Sāsanadāyāda." The king being desirous of becoming a Sāsanadāyāda and seeing Prince Mahinda standing at a little distance, said: "My dear son, will you be able to become a monk?" The prince, who had a natural inclination towards the Order, was very much pleased to hear the speech of the king, and said to him: "I am ready, Sir, to enter the monastic life, therefore cause me to be admitted, and become yourself a Sāsanadāyāda. At that time, too, the princess Saṅghamittā was standing in that place. Looking at her, he said: 'Wilt thou also be able to enter the Order?' She complied, saying: 'Certainly, dear father.'" The king was highly delighted at learning the will of his children and approached the assembly of mendicants and said: "Reverend Sirs, kindly initiate these children and make me a Sāsanadāyāda." The Saṅgha agreed to the king's proposal and initiated the prince into the Order through the aid of Tissatthera, the son of Moggali as preceptor, as well as that of Mahādevatthera as spiritual guide, and had him ordained by the elder Majjhantika. In the enclosure of ordination he obtained Arahatship along with its supernatural faculties. The spiritual guide of Saṅghamittā the princess was called Āyupālattherī, her preceptress was called Dhammapālattherī.

The king, however, having illumined the Order in many ways, with the aid of Moggaliputtatissa expelled sixty-thousand vicious sectarians from the Buddhist Order and held the third Rehearsal of the Law. Now at that meeting how many monks and nuns were there? It is said:—

At that meeting were eighty crores of Bhikkhus, among

whom were one hundred thousand ascetics free from worldly attachments and ninety hundred Bhikkhunis, among whom were a thousand free from worldly attachments.

Thus Asoka, having become the paramount power in India, lived beautifying the doctrine. This is only a brief account, the details are to be found in the Mahāvamsa. Thus it is said :—

‘King Tissa, the honey-supplier, by virtue of his exceeding merit, enjoyed everywhere and always all felicity.’

The second honey-dealer was reborn in Laṅkā, on account of the sin he had committed in using harsh words against the Paccekabuddha. His story runs thus :—

A king named Muṭasīva ruled over the island of Tambapaṇṇi for sixty years. He had ten sons, each endowed with the virtues of purity and wisdom and mutually striving for each other’s good. He had also two daughters. All of them lived together in harmony. Once upon a time, after the death of king Muṭasīva, the ministers anointed prince Devānampiyatissa as king. Contemporaneously with his coronation many wonderful things took place. The Ācāryas, who composed the Mahāvamsa to throw light on these wonders, have said—

“ The second son of the king far-famed as Devānampiyatissa was more pure and wise than his brothers. He ascended the throne after the death of his father. Simultaneously with his coronation many wonderful things took place. Numerous treasures and jewels, that had hitherto been hidden under the ground, rose up above the surface of the earth, throughout the whole of Laṅkādīpa. And both the jewels which came from ships wrecked near Laṅkādīpa and those which were produced in the sea rose up upon the dry land. At the foot of the Chāta mountain there sprang up three posts as large as chariot-goats. One of them was a creeper-post, its creepers glittered with silver sheen; some of the creepers were golden, and they all looked charming and delightful. The other was a flower-post covered with flowers of various kinds and colours, and spread its charming lustre round about. The third, a bird-post, had artificial birds and animals so perfectly made that they seemed alive. There were altogether eight kinds of pearls, namely, the Horse, the Elephant, the Chariot, the Āmalakya, the Bracelet, the Aṅgulivethaka, the Kakudhaphala, and the ordinary pearl. Pearls coming out of the sea were scattered all round the shore. It was all a result of the merit of Devānampiyatissa. All kinds of jewels such as the sapphire, the beryl, the ruby, and the pearls and the posts they brought to the king within a week of his coronation.”

At this time both Devānampiyatissa, the great king, and Asoka, the king of Righteousness, were friends, although they had not personally seen each other. Therefore, king Tissa sent

these jewels and many other presents by way of a gift to the great king Asoka, saying: "Give these to my friend." Asoka was pleased on seeing this and sent in return the five royal insignia and many other presents for the ensuing coronation-festival, saying: 'Let them induct my friend.' Not only did he send these material presents, but also this religious present. Thus:—"I have taken refuge in the Buddha, the Law, and the Order, and have become a lay devotee in the Order of Sakya-putta. O best of men, put your trust in these three, the best of all things, and with faith take these as your refuge." The ministers returned to Laṅkā and solemnised the coronation of the king.

Meanwhile king Asoka made enquiries of Moggaliputtatissa as to where the Order must be well established in future, and investigating came to know that it was to be established in a foreign country. He accordingly despatched many Theras to various parts of the world and ordered Mahāmahindatthera to go and convert Tambapaṇṇidīpa. Instantly Sakka, the lord of gods, approached the Thera, saying: "Respected Sir, Muṭasīva being dead, Devānampiyatissa, the great king, is ruling on his throne, and your going has been predicted by the Supreme Buddha, 'In future times the mendicant Mahinda shall convert Tambapaṇṇidīpa to the Faith.' So the proper time for your departure to the best of islands has now come; I too will attend upon you." The elder complied with this request, and departing with six others from the monastery of the Caityaka mountain, flew up into the air and descended on the top of the Missaka mountain, to the east of Anurādhapura, which is known to-day also as the Cetiya mountain.

There was a great rejoicing throughout Tambapaṇṇidīpa on that day. The king ordered his ministers to observe the festival and himself started for the Missaka mountain, accompanied by forty thousand attendants, with the intention of hunting. A deity who lived on this very mountain determined within himself to present the Theras to the king, and appeared before him in the form of a red deer, grazing on grass and leaves not far away from the spot where he was. The king thought within himself: "It is not proper to kill a being unconscious of danger," and he twanged his bow-string. The deer began to run away, taking the road to Ambatthala. The king in pursuit of the deer ascended to Ambatthala. Now the deer disappeared not very far from the place where the Theras stood. Mahindatthera, perceiving the king coming towards him at no great distance, willed that the king should see himself but not the others, and said: "Tissa, Tissa, come this way." The king, hearing him, thought within himself: "None has the boldness in Tambapaṇṇidīpa to address me in such a way. And this shaveling dressed in rags dares call me by name. Who is he? A mortal or an immortal?"

[N.S.]

The elder said :—“ We are, O lord, monks, disciples of the king of righteousness. We have come from Jambudīpa out of kindness to you.” King Tissa, recollecting in what way the admonition had been sent him by Asoka Dhammarāja, threw down his weapon and sat down on one side holding friendly converse with him.

While he was doing so his forty thousand followers came up and surrounded him. The Thera then showed the other elders to the king. “ When did they come ? ” inquired the king. “ They came along with me, lord,” responded the Thera. “ Are there any other monks like these in Jambudīpa ? ” asked the king. “ My lord,” answered the Thera, “ Jambudīpa now-a-days is glittering with orange robes, and holy ones abound in all directions. There are many Arahats who know all the three Vedas, who have attained to the supernatural powers, who can penetrate into the hearts of others, and in whom human passion is extinct.” The king was highly pleased to hear this speech.

The elder having discerned his intellectual skill by means of the Tree-simile and so on taught him the Dhamma, causing men and gods to applaud. It is said :—

“ Having known the king to be a wise man, the wise Thera imparted to him the small Suttanta of the elephant’s foot-print simile.¹ At the end of the sermon he, along with those forty thousand men, became established in the three Refuges.”

Now the king, having invited the Thera to take food at his place the next day, went to the city and decorated the whole city as well as the palace for this occasion. Then he caused the elders to sit down and served them with choice food, specially prepared for the occasion. Then he went and sat down on one side with five hundred women headed by queen Anulā. Then the Thera caused to rain down upon them a shower of the precious jewels of the Law, and the five hundred women attained to the fruits of the First Path.

Thereafter he converted a thousand people in the elephant-stables and a thousand in Nandanavana ; thus, on the second day, he established in the fruits of the First Path two thousand five hundred souls, on the third day eight or nine thousand. Thus he caused the mind of many hundreds, of many thousands, of many hundreds of thousands to imbibe the Law. It is said :

“ Mahāmahindatthera like the sun, shining in the sky of Laṅkā, made the converted people bloom like lotuses by means of the rays of the Dhamma. Mahāmahinda in the midst of the sky of Laṅkā caused the converted people who were like lotuses to blossom by means of the rays of the Dhamma. Mahāma-

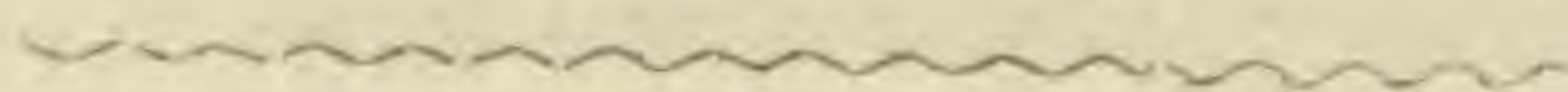
* ¹ Cullahatthipadopamam suttantam. Majjhima I. 175 ff. Compare Saṃyutta I. 86, Aṅg. V. 21, and the Dhammapada Commentary I. 228.

hinda was, too, like a cloud, in sprinkling the water of the Dhamma on the hearts of people which were like seeds, and produced thereby the shoots of happiness.”

Then the king obtained from the hands of Asoka, by means of Sumanasāmanera, relics which filled a begging bowl used by the Sammāsambuddha and the right-collar-bone relic from Sakka, and starting with a stūpa on the Cetiya mountain had stūpas built at every yojana throughout Laṅkā, and having enshrined the right-collar-bone relic he had set up over it the Thūpārāma dagoba. Then he planted the right great bough of the illustrious great Bodhi tree which had been brought by the Therī Saṅghamittā, and worshipped it. The details of this story should be seen in the Mahāvamsa.

On account of the sin he had committed in blaming the Paccekabuddha, he was born far away, on the farther shore of the sea, and at the same time, for granting the bowl, he became the king of Laṅkā.

Reflecting that a sinful action produces the one kind of fruit and a meritorious action another kind of fruit, perform, Sirs, meritorious actions, which cause not sorrow wherever you may go (in whatever existence you may be born).



Murgh-Nāma.

By LIEUT.-COLONEL D. C. PHILLOTT.

Extract on Cocking ("Murgh-Nāma") from the "Ṣayd-gāh-i Shawkatī," an Urdu work on sport, written by Nawāb Yār Muḥammad Khān of the Rāmpūr State, A.D. 1883, and two Appendices: translation by Lieut.-Colonel D. C. Phillott, F.A.S.B., Secretary, Board of Examiners, Calcutta.

The Cocker must know that there are in Hindustan¹ four breeds of fowl. First there is the *tenī*² or common barn-door fowl kept for domestic purposes: second the *ghāgas*³ or cross between the game-fowl and the *tenī*: third the *karnātak* or *karaknāth*,⁴ a breed in which the skin, bones, tongue, eyes and blood are all black; this breed is useless for fighting: and fourth the *asīl*⁵ or Indian game-fowl, which is kept for fighting only.

The points⁶ of the Indian game-cock are, beak white, shanks⁷ white, eyes white and blood-shot (if the white of the eye be slightly yellowish it does not signify), the comb of medium size, the jaw and cheeks⁸ large and hard and with little flesh, the bones of the neck small, the whole neck being like an iron bar, the pope's nose⁹ large, the tail-feathers small, and the jaws⁸ and wings not fleshy.¹⁰ Its crow is not as long as that of the barn-door cock.¹¹ The best breed is obtained from Haiderabad,¹² Deccan.

¹ Hindustan amongst natives generally means the United Provinces.

² *Tenī*, H., a breed of small fowls; also a bantam.

³ A large breed with feathered feet.

⁴ Probably from the Karnatak, Deccan, just as *sabzwār* is the name of a breed of fowls from Sabzwar in Persia. The test of this breed is the colour of the tongue, which should be black.

⁵ The *asīl* is also called *kulang*. A common taunting proverb is:—*Mān tenī bāp kulang jin ke bachche rang ba-rang*. "The father was a game-cock, the mother a bantam. The offspring are a mixed lot."

⁶ For further points see Appendix.

⁷ *Sāqain* ساقين. In one Persian MS. it is laid down that the shanks must be void of red marks.

⁸ *Kalla*, lit. "head", is by some "Cockers" applied to the "jaw and cheeks" only.

⁹ *Dum kā gath*.

¹⁰ *Sutā hū, ā*.

¹¹ The end of the crow (*azān* or *bāng*) especially, is not so long drawn out.

¹² The Singapore cocks are also famous: they are called *kal-kāṭiyā* as they have black spurs. In an Indian-Persian MS. without name or date, it is stated that the *Chātgamī* (Chittagong) breed, though fine and large, is not equal to the former.

When the game-cockerels are a year old, the cocker should keep them apart, feeding them on *bājra*¹ wetted in water. Should *bājra* not be obtainable, he must substitute wheat-flour mixed with butter. In either case he must give them but little water to drink. When the cockerel is in high condition, he must foment it with butter² and begin feeding it on the yolks of two eggs³ to begin with. The following is the method of feeding on the yolks of eggs:—

Take the yolk⁴ of one egg, one *tolā*⁵ of butter, one *māsha*⁶ of *Sāmbhar* salt,⁷ and four *māshas* of pepper-corns: mix together and half fry, and give to the cockerel, giving it water every third or fourth day. This will make it strong and lusty.

Another Receipt.—Take the yolks of 200 eggs, of musk 2 *māshas*, of good ambergris⁸ 2 *māshas*, of saffron 2 *māshas*, of white sifted sugar 5 *sers*,⁹ of almond kernels 2½ *sers*, of kernels of the Edible Pine¹⁰ 1½ *sers*, of *pista* kernels 2 *sers*, of walnut kernels one *ser*, of butter 6 *sers*, and of fine wheaten flour 5 *sers*. First fry the flour well in the butter, and then cast in the sifted sugar. Next add all the ingredients (with the exception of the saffron) having previously pounded them well. Then add to the mixture¹¹ the saffron well-rubbed

¹ *Bājra*, spiked millet, *Pennisetum yphoideum*. In a Persian MS. it is stated that they should be fed on grain (*dāna*) and small millet (*bājri*) wetted overnight, and that in the rains mustard seed (*sarshaf*) should be substituted for these grains. In the language of saises *dāna* means gram, but amongst pigeon-fanciers it means the *phatkan* or mixed winnowed refuse of several grains, wheat, gram, pease, *masūr*, pulse, etc., etc. In another MS. it is stated that the following strengthening food should be given in the evening: fine flour, turmeric, white sugar, butter, 2 *miṣqāl* (1⅓ drachm) of each, pounded and made into a *ḥalwā*, and that two hours later water should be given.

² Every day? The hand is warmed before the fire, the palm and fingers dipped in butter and pressed on the joints. *Senknā* is a term specially applied to fomenting with *ḥalwā*. The *ḥalwā* is tied up in a bag, warmed before a fire, and pressed on the limb.

³ Later the writer says one egg.

⁴ Indian eggs are very small.

⁵ The *tolā* is reckoned at 16 *māshas* of 6½ grains each, and weighs therefore 184 grains Troy: in practice, however, it is calculated at 12 *māshas*, a jewellers' and druggists' weight, and weighs nearly 210 grains. A rupee, however, is considered to be one *tolā*, and a rupee weighs only 10 *māshas*.

⁶ See above. The *māsha* weighs in practice about 17 grains Troy.

⁷ A variety of natural salt, obtained from the saline lake of Sambar, near Ajmeer. See Khory's *Bom. Mat. Med.*, p. 70.

⁸ *Ambar-i ashhab*, the best kind of ambergris, described as being of a clear, yellowish colour: see *Makhzan-ul-Adwiyah*, II, 959.

⁹ *Ser* about 2 lbs.

¹⁰ *Chilghoza*, the seeds of the Neosia or Edible Pine, *Pinus Gerardiana*.

¹¹ *Halwā* is properly an Arab sweetmeat made of flour, sugar and butter: hence any soft, sticky mixture.

down¹ in 'keura² water.' The first day give one *tolā* as a dose, and on the top of that a feed of wheaten flour unmixed with butter, so that the grease may be removed from the cock's throat. Then put on the muzzle, either the leather muzzle,³ or the string-muzzle⁴ (so that it may neither pick up any grit nor drink) and let it loose to exercise itself. There are two times for exercise: first early in the morning till seven o'clock when the cockerel should be fed, spouted with water,⁵ and confined under a square coop⁶ or a round coop.⁷ At four o'clock it must be released, spouted as before, and muzzled and freed for exercise till five o'clock. The cock should be studied, to see whether it has increased in strength or not. If the cock is lusty and strong, more *halwā* should be given to it and less flour. If it is not strong and has become fat, it should, at night, be dry-fomented with a pad.⁸ If fat has collected on the *langot* (stomach), it must be reduced by dry fomentation, and the cock must be kept confined in a warm place away from cold air. In the morning it should be fought for two *pānī*⁹ with a *dalbā*¹⁰ to see whether it has improved in condition or not. If it has improved, then keep it at this weight and condition. If it has disimproved, fight it again, fat, thin, and medium, and observe in which condition it fights best and keep it in that condition. Every week increase the

¹ *Kharal karnā*, to rub down spices, etc., in butter or in juice, on a curry-stone.

² 'Arq-i-keora "keora water." The *keorā* is a species of *Pandanus odoratissimus*, a plant which bears a strong-scented flower.

³ *Tomrī*, a leather tip.

⁴ *Raddā* (in the text incorrectly *roda*), is loop-muzzle of cotton-thread.

⁵ *Phū'i karnā*: the mouth is filled with water and blown in a spray over the cock's face and head.

⁶ *Karkul*, in text incorrectly *qalqul*, is a square hen-coop.

⁷ *Sūtī* or *sotī* is a round coop, generally called *tāpā*.

⁸ The pad is heated before the fire and applied hot.

⁹ *Do pānī*. A match is made for so many *pānī* or intervals for rest. The first day, the first *pānī* is 20 minutes, the second 30, the third 40, the fourth 50, and the fifth 60. On the second day (or any *pānī* after the fifth) every *pānī* is 60 minutes.

On the first day, the match may commence at any time between 2 and 4 o'clock, usually the second hour. On the second day the match must commence at 2 o'clock. An antagonist failing to come to the scratch when time is called, or to turn up at the correct time, loses a *pānī*. Say A and B make a match for five *pānī*. A sees his cock getting the worst of the encounter: he claims a *pānī*. The fight is stopped for 20 minutes, while both pitters spout their cocks, etc. A, however, has now only 4 *pānī* to his credit while B has still 5. The cocker who first loses his five *pānī* is counted the loser, and has to pay. Though the duration of each *pānī* is fixed by scale, no limit is fixed for each round in fighting. Written rules are not drawn up: custom alone rules.

¹⁰ *Dalbā* H. is a weak barn-door cock or an inferior game-cock, kept for a young game-cock to bully. *Chutthā* is a quail kept for a fighting quail to bully.

number of rounds (*pānī*) with the *dalbā* by one, till the number of 11 *pānī* is reached, which is called by cockers *lām*.¹ After each day's bout foment with the following:—

Receipt.—Take of turmeric 4 oz., of dry ginger 2 oz., of small pepper² 2 *tolās*, of aloes 2 *tolās*, of *maidā lakrī*³ one *tolā*, of butter $\frac{1}{2}$ lb., of wheaten flour $\frac{1}{2}$ lb., of white sugar $\frac{1}{2}$ lb., of almonds 4 *tolās*, and of *spikenard*⁴ 2 *tolās*. Pound and make into a *halwā* and put into two bags, and foment by first dipping the bag into butter and then applying to the joints. Use one bag in the evening and the other in the morning, and anoint with the following dressing:—

*Ingredients of the zimād or ointment*⁵: Take of turmeric 2 *māshas*, of dry ginger 2 *māshas*, of zedoary⁶ 2 *māshas*, of dry *mako*⁷ 2 *māshas*, of small pepper 2 *māshas*, of *spikenard* 2 *māshas*, of alum 2 *māshas*, of *maidā lakrī*⁸ 2 *māshas*, and of aloes 2 *māshas*. Pound all these ingredients and cook them in water, and apply as a thick dressing to the cock's face.

A second dry fomentation⁹: *Maidā lakrī*¹⁰ 9 *māshas*, *baibarang*¹¹ 4 *māshas*, *taj*¹² 6 *māshas*, pomegranate-rind¹³ one *māsha*, *sajjī*¹⁴ 3 *māshas*, green *māzū*¹⁵ 4 *māshas*, white sugar one *māsha*, and butter $\frac{1}{2}$ lb. Pound, mix, and make into a *halwā*, and foment the cock with it after battle.

Ingredients of a second ointment or zimād: Take of *maidā lakrī* 9 *māshas*, of round zedoary¹⁶ 6 *māshas*, of *taj*¹⁷ 2 *māshas*, of *misi*¹⁸ 7 *māshas*, of *nāspāl*¹⁹ (pomegranate-rind) 2 *māshas*, of dry *mako*²⁰ 2 *māshas*, of white cumin seeds²¹ one *māsha*, of *majīth*²² 2 *māshas*, of *chiniā gond*²³ 2 *māshas*, of

- 1 *Lām* H. is an expedition, a raid.
- 2 The small variety of long pepper, *Piper longum*.
- 3 The bark of *Litsaea sebifera*.
- 4 *Bāl-chhar* Spikenard, *Nardostachys Jatamansi*.
- 5 For a description of the *zimād* see *Makhzan*^u 'l-*Adwiya*, Vol. I, p. 92. An ointment, a dressing and also a poultice.
- 6 *Jadwār*, zedoary, *Curcuma zedoaria*; Khory, p. 126.
- 7 *Mako*, *Solanum nigrum*, Khory, p. 454.
- 8 *Vide* note 3, above.
- 9 *Takmīd*.
- 10 *Vide* note 3, above.
- 11 Fruits of *Embelia Ribes*.
- 12 *Taj*, H., Malabar cassia bark, *Cinnamomum Tamala*.
- 13 *Nāspāl*, Hind., rind of the Pomegranate, *Punica granatum*.
- 14 *Sajjī*, H., a variety of carbonate of soda; natron.
- 15 *Māzū*, P., the Gall or Dyer's Oak, *Quercus infectoria*.
- 16 *Ambā haldī*, round zedoary, *Curcuma aromatica*.
- 17 *Vide* note 12, above.
- 18 According to the *Makhzan*, the Hindi name for Kakanj, *Withania coagulans* or Indian Rennet.
- 19 *Vide* note 13, above.
- 20 *Vide* note 7, above.
- 21 *Zīra safed*, white cumin, *Cuminum cyminum*.
- 22 *Majīth*, Indian madder, *Rubia cordifolia*.
- 23 Bengal kino, the gum of *Butea frondosa*.

green *māzū*¹ one *tola*, of betel-leaf juice² a sufficiency, of double-distilled wine, a sufficient quantity. Grind the ingredients and then heat them in the wine and betel-leaf juice, and dress or anoint the cock's face.

Ingredients for washing a cock's face.—*Ambā haldī* 2 *māshas*, fried alum of Yemen³ one *māsha*, aloes 2 *māshas*, dry *mako* 2 *māshas*, opium one *māsha*, leaves of *taj*⁴ 2 *māshas*, juice of green *mako*⁵ a sufficient quantity. Cook all the ingredients in hot water, wash the cock's face with the liquid, and dry with a handkerchief.

Receipt for a food to be given to the cock before battle.—Take of syrup of sweet pomegranates one *tolā*, of preserved *āmlā*⁶ one, of apples one, of preserved quinces one, of gold leaf 6 *māshas*, of silver leaf 6 *māshas*, of barberries 2 *māshas*, of cucumber seeds 2 *māshas*, of *kāsnī*⁷ seeds 3 *māshas*, of seed of the *bel* fruit 2 *māshas*. Grind; add the pomegranate syrup; roll into pills of four *māshas* each, and cover with gold and silver leaf, and give four *māshas* to the cock; after one *gharī*⁸ go to the cock-pit⁹ and fight your cock. If you find a lack of fire in the cock, give it half a fresh *jalebī*,¹⁰ peppercorns, and the egg of a red fowl, mixed with the juice of garlic and the juice of green ginger. Next, tying up the spurs¹¹ with cloth, and then spouting the bird, make it fight. It then rests with the cocker¹² to make or mar the bird.

Further binding on the horn covering¹³ of the beak, if it becomes loosened, fitting (*i.e.*, imping) a cock with a spur¹⁴, imping a feather,¹⁵ cutting round the eyelids,¹⁶ sewing up the eyelids,¹⁷ are also the business of a cocker.

¹ *Vide* note 15, p. 76.

² *Areca Catechu*.

³ *Shabb-i-Yamānī*: the best kind of alum. See *Makhzan*, Vol. II, p. 832.

⁴ *Vide* note 12, p. 76.

⁵ *Vide* note 7, p. 76.

⁶ The fresh fruit of the Emblic Myrobalan, *Phyllanthus Emblica*, preserved as a confection.

⁷ *Kāsnī*, Endive chichory, *Cichorium Intybus*.

⁸ The space of twenty-four minutes; a small (indefinite) period of time

⁹ *Pālī*.

¹⁰ *Jalebī*, a sweetmeat made of inspissated milk, flour and sugar.

¹¹ *Kāntā bāndhnā* is blunting the spur with a file and then binding it up to make it ineffective.

¹² *Khilārī*, sportsman.

¹³ *Chonch*, the upper mandible and *jabrā*, the lower. The *chilkā* or horn covering of the beak sometimes gets loosened by fighting.

¹⁴ *Kāntā charhānā*. If a spur is broken another natural spur is taken from another cock and fitted on.

¹⁵ *Par gānthnā* "to imp a cock's or a hawk's feather."

¹⁶ *Chakkar chashm ke tarāshnā*, cutting off, during the fight, the swollen flesh that closes the eyes and prevents the cock seeing. The eye will thenceforward always remain open since the eyelid is removed. This is a delicate and very rarely performed operation.

¹⁷ *Chaupalkā tānkānā*: if during a fight the lids swell from wounds,

To know the colours and breeding of a game-cock.—You must know that the following are the colours of the game-fowl :—

1. *Lākhā* (or red).
2. *Pīlā*¹ (or dark yellow).
3. *Jawā*² (or well-mixed white and black).
4. *Chītā* (or spotted, main colour dark with white spots, *i.e.*, of several colours).
5. *Nūrī* (or pure white).
6. *Lākhorī* (or very dark red).
7. *Kesariyā*³ (or light yellow).
8. *Gul-i kھیār*⁴ (or — — ?).
9. *Do-bāz* (or half the wing *lākhā* and half white).
10. *Siyāh* (or black).

Game-fowls are found in all these colours. The game cock has a beak, white like a peeled almond or like ivory, and the stalke, feet, and nails are white like the beak, and down the middle of the stalke there is a line drawn⁵: the eyes are white and blood-shot, the comb is small, and the head large. A cock with a hanging comb is a powerful spurrer⁶; but one with a small comb is quick and active. One with a large, straight and castellated comb and very pendulous wattles⁷ is called *bihangum*⁸ or “awkward looking”, and one with a small comb shorter than its head is called *tikariya*⁹ and is quick and active, and if the pope’s nose is hard and compact¹⁰ so much the better.

In the author’s opinion the best birds have thick, powerful beaks, white as described above; the eyes white like lustrous pearls; large jaws and head; a small comb; the *tūtan*¹¹ bone is conspicuous; the neck short and the neck-bones¹² small, fine, and the ridges small, fleshless, and strong as an iron rod; and the back broad like the stone of a hand-mill; the feathers and the *muhra*,¹³ *gul-kār* or spotted, and beautiful like the eye of a

the upper or lower lids are stitched to the bottom or the top of the head so that the eyes are forcibly kept open and the cock can see. When in about 10 days the swelling goes down the stitches are removed.

1 Yellow is not a game colour.

2 Or *jāwā*.

3 “Saffron-coloured.”

4 *Gul-i-khairū*? Marsh mallow flowers, *Althæa officinalis*.

5 The scales (*fil*s or *pūlak*) should so meet in front that an indented line is formed.

6 *Katet* strikes forcibly and quickly.

7 *Lolkī*; wattles, below.

8 *Bihangam*, Hindi, clumsy in shape and also awkward in manner.

9 *Tikariya* or *tekar* with a small low comb, in Hindi *chaptā tāj*. It is not necessary to cut such a comb.

10 *Tainī* fowls have a soft loose pope’s nose. The tail-feathers, too, should droop and not point upwards.

11 *Tūtan*, the neckbone next the skull.

12 *Garden ke manke*.

13 ~~४,५~~ apparently a misprint.

peacock's feather. The bird should be handsome, and shapely, and active, and quick as a cobra in movement; and in fighting it should be *hama-gīr*,¹ and retiring after a blow so as to avoid its adversary's counter²; and should it receive a blow, it should so retaliate as to lay its adversary at its feet in the throes of death, fluttering as though its throat had been cut.

To make the young cockerel strong and fit for battle.—When the cockerel is four months old the cocker should separate it from the mother³ and make it familiar with him, and give it daily two almonds mixed with *ātā* (course wheaten flour) and feed it on *pilā,o* or *sālan*,⁴ etc., *i.e.*, whatever the cocker eats himself, and give it *halwā*, of yolks of eggs, according to the following receipt:—

Receipt.—The yolk of one egg, clarified butter 9 *māshas*, white sugar one *tolā*, ground pepper-corns 2 *māshas*, seed of red chillies one *māsha*, almonds three, pistachio nuts two, black raisins⁵ two, one gold leaf, fine wheaten flour 25 *dāms*,⁶ Lahore salt⁷ three *māshas*. Make into a *halwa*.

In the morning give half a belly-full of the *halwā*, and on the top of it half a belly-full of balls of course wheaten flour. After exercising⁸ the cock, put on the muzzle, spout water over its face, shampoo⁹ with the hand, and confine in a *qalqul* or square coop, releasing it at four in the afternoon. After a time look and see if it is thirsty, and if it is, take it out of the coop and give it water. At four o'clock release it. If it is thirsty it will drink. If it is not thirsty and wont drink, then again spout it and shampoo it, and exercise⁸ it for an hour. After that bring it into the house, and confining a hen in a small basket-cage,¹⁰ let loose the cockerel that it may see the hen and run round and round her and by the exercise increase his strength, but do not let him tread the hen. After running, lift up the

¹ *Hama-gīr*, adj.; applied to a cock that will seize with the beak any part of its antagonist's body: opposed to *ek-gharā*, adj., one that always attacks a particular shot.

² *Pichhal-pā,ī karnā*.

³ Game chicks will remain with the mother for a year if not interfered with, but common fowls not more than 4 or 5 months.

⁴ *Sālan*, anything eaten with bread or with rice, and specially vegetables cooked with meat, such as curry, etc. Game fowls are fed from the hand and are not allowed to pick up food from the ground lest the beak should become worn. Some game-fowl given to the translator were so wedded to the hand that they starved rather than pick up food from the ground.

⁵ *Mawez-ī munaqqā*, black raisins, bloom raisins.

⁶ *Dām*; according to the *Makhzan*, p. 96, it is a weight of five *tank* or 20 *māshas*.

⁷ Rock salt from Lahore.

⁸ *Tahlānā*.

⁹ By grasping and pressing all the limbs and joints.

¹⁰ *Khānchā* or *khānchī*.

cockerel, and shampoo him. In the evening see whether the cock has digested its food. If it has, then in the evening too give it *halwā*, etc., as before. If, however, the cock has not digested its morning meal, give it a few whole pepper-corns: the cocker had, too, better continue to give it pepper-corns in the evening, and keep it awake by lamp-light for an hour, tickling it under the pope's nose to make it oil itself.¹ Then setting it down on a swing made out of a child's cot² swing it for an hour, or else place it on a perch.³ Then confine it somewhere in a safe place, in a basket-cage. In the morning at prayer time,⁴ take it out of the coop,⁵ give it water to drink, and then spout it, and, putting on the muzzle, let it exercise⁶ itself for a full hour. After this feed it. You must gradually increase the amount of *halwā* and decrease the amount of flour, feeding and treating the bird as already described for forty days. Once a week too, at night, you must foment it with a damp, hot, pad, fomenting those parts of the body that have accumulated fat. The places to foment are, first from the head to the neck or rather to the shoulders, next the two wings on the top, next the thighs inside and outside, also the hip joints and the loins, and underneath between the legs, omitting the lower gut or the stomach near the anus, and also the breast. The object of fomenting is to make flesh and joints hard and strong.

When the cockerel is ten months old then feed on the following *halwā* :—

Receipt for strengthening the cock.—Take of white sugar one pound, butter one pound, fine wheaten flour one and a half pounds, hen's eggs 39, pistachio nuts 4 oz., almonds 4 oz., saffron 6 *māshas*, cloves 3 *tolās*, cardamums one *tolā*, nutmegs 2, sweet fennel⁷ 2 oz., black pepper 2 *tolās*, gum mastic of

¹ *Kuriz karnā*, the author's word for to preen or oil, is properly "to moult." Ordinary fowls are said not to oil their feathers.

² *Kātholī*, dim. of *kāth*. Some cockers say this is injurious. The swinging strengthens the legs. To exercise a cock, the cocker carrying a second cock in his arms will run for a short distance with it and then show it to its antagonist. The cock on the ground will run up to the attack when the cocker repeats the manœuvre, and so on.

³ The author probably means a hanging perch.

⁴ *i.e.*, about an hour before sunrise.

⁵ *Tāpā*, properly a dome-shaped coop, either of close basket-work or else barred like a cage.

⁶ Large heavy cocks may be exercised for an hour, but small active cocks get worn out and should be only exercised for $\frac{1}{4}$ hour—so an experienced cocker informs the translator.

The method of strengthening the cock's legs is to lift it with both hands a few inches from the ground and drop it. This is done a few times and the cock is then shampooed on the breast and legs. It is then again 'danced' as before, and so on.

Fighting quails are 'danced' by hand on a cloth.

⁷ *Saunf* or *sonf*, H., Indian sweet fennel seeds, *Foeniculum vulgare*.

Rūm¹ 6 *māshas*, sal ammoniac fried 6 *māshas*, Indian senna² 6 *māshas*, Socotrine aloes 6 *māsha*, silver-leaf 3, gold-leaf one, preserved apples 9, preserved quinces one, preserve of *har*³ nine, sultana raisins 4 oz., dried apricots⁴ 4 oz., black raisins 4 oz. Make into a *halwā* in the ordinary way. The first day give one ounce of the *halwā*, and on the top of it a few pills of flour. After three days, again give the *halwā* with a few dough pills; and, as described above, put on the muzzle and confine under a coop and act as already described. If the cock does not digest the *halwā* then give it the following digestive⁵:—

Receipt to promote digestion and increase appetite.—All four kinds of Ajava seeds⁶ 4 *tolās*, *mālkangnī*⁷ one *tolā*, black salt⁸ one *tolā*, bay salt⁹ one *tolā*, *chūrī* salt¹⁰ one *tolā*, Lahore salt¹¹ one *tolā*, dry ginger one *tolā*, pepper-corns one *tolā*, dried mint one *tolā*, English vinegar a sufficient quantity, Indian senna¹² one *tolā*, green ginger one *tolā*, garlic juice a sufficient quantity, mustard seed one *tolā*, long pepper one *tolā*.

Another receipt for halwā.—Wheat one seer, goat's milk 2 seers, almonds 2 *tolās*, pistachio nuts one *tolā*, seed of the edible pine one *tolā*. First soak the wheat in the milk and make it into a starch; then make the whole into a *halwā*. Next add the following: Peeled walnut kernels 2 *tolās*, turnip seed one *tolā*, raddish seed one *tolā*, juice of both kinds of pomegranate¹³ one *tolā*, peeled celery stalk¹⁴ one *tolā*, Chinese rhubarb¹⁵ two *tolās*, gum mastic of Rūm¹⁶ 6 *māshas*,

1 The word *Rūm* applies to Asia Minor as well as to Greece.

2 *Sanāmakkī*, *Cassia lanceolata*.

3 *Terminalia chebula*, the chebulic or black myrobalan.

4 *Khūbānī* are a kind of dried apricots from Kabul.

5 *Chūran* or *pāchak* is a digestive, generally in powder form.

6 *Ajwain* is, according to Watt, Bishop's weed and Lovage. There are the Indian, the *Khurasani*, the *Rūmī* and the *Ajmūd* varieties.

Mr. Burkill of the Indian Museum tells me that the first is the seed of *Carum copticum*; that the second is 10 per cent. of the seeds of *Hyoscyamus* plus 90 per cent. of purposely sifted grit; that the fourth is the seed of *Carum Roxburghianum*; while the third is the seed of an allied plant common in the Punjab bazaars but not yet determined. *Hyoscyamus niger* is the English Henbane.

7 *Mālkangnī* *Oleum Nigrum*, *Celastrus paniculata*.

8 *Namak-i siyāh*, black salt. *Khory*, p. 70.

9 *Namak-i sang*, bay salt, *Khory*, p. 67.

10 *Namak-i chūrī*=*kānch-namak*.

11 *Vide* note 7, p. 79.

12 *Vide* note 2, above.

13 Probably the juice of the sweet and acid varieties of pomegranate.

14 *Maghz-i karajs*, celery, *Apium graveolens*.

15 Chinese Rhubarb, said to be the dried root stock of *Rheum officinale*. *Raivand* or *rāwand-i Chīnī* is the name of the imported article of commerce.

16 *Vide* note 1, above.

*batāsha*¹ 6 *māshas*, sugar-candy 4 oz., cardamums one *tolā*, the yolks of nine eggs. Fry the yolks in butter and then add them to the *halwā*; put the whole into a coarse cloth and rub through, and then add wheaten flour sufficient to soak up all liquid. Give of this to the cock as described above from six *māshas* up to two *tolās*.

When the cockerel is ten months old, fight it one *pānī* with a *dalbā*² of its own age, but first put the muzzle on to the *dalbā*. Afterwards spout and suck the cock's beak and face well, to remove blood-spots, and damp a rag in water and clean the inside of the throat with it.

If the jaws be fleshy³ or if the wattles are large and it is desired to remove them, then extract the oil of *bhilāwan*⁴ and rub it on the cock's face, and if it please God this defect will be removed and will not return. If the comb is too large and it is desired to cut it off, then, after fighting, cut the comb immediately to the size desired, applying to the wound the white web⁵ of a spider, or else staunch with small feathers plucked from under the cock's wings: until a recovery takes place do not spout the cock. *Agar murgh ko sādā hī pharkānā ho*⁶ then take a quarter of a piece⁷ of turmeric and add half a nux vomica nut and a little edible lime⁸ and heat over the fire, and plaster the mixture thickly on the cock's face; but first of all take 9 *māsha* of *gur*⁹ with 3 *māsha* of ground turmeric and make into a pill and give it to the cock; and, if it is the cold season, keep the cock in the sun, if the hot in the shade. The cock must not be fed during the day but in the evening after fomentation, when it should be fed on *halwā* or on bread dipped in fresh milk. In the evening the cock should be fomented with a pad dipped in a liquid decoction.

¹ A sweetmeat or sugar-cake (of a spongy texture and hollow within).

² *Dalbā* a cocking term for a common or a half-bred cock kept to be bullied by a game cockerel. The *dalbā* is muzzled and hobbled before being pitted against its aristocratic antagonist.

One writer states that a cockerel should not be fought till he is one year old and that he should then be pitted against one of his own age for five minutes the first day, ten the second, and fifteen the third, and then for as long as desirable; and that at the expiration of the fixed time the birds should be separated and their beaks sucked and blown upon. (If a child falls and hurts itself, Indians generally blow upon the seat of injury with the idea of cooling the spot and lessening the pain.)

³ *Bad-goshtā* adj., with too much flesh on the jaws. The wattles only can be cut off, not the flesh from the jaws.

⁴ *Bhilāwan* H., the marking-nut plant, *Semecarpus anacardium*.

⁵ i.e., the "white web" of small spiders opposed to the "yellow web" of large spiders.

⁶ Author's meaning unintelligible. He probably means, "If it is wished to fight the cock at once before the wound has healed."

⁷ Turmeric is sold in pieces about two inches long.

⁸ *Chūna-e khurdanī*.

⁹ *Qand-i siyāh* is probably *gur*, a raw, unrefined sugar.

After fifteen days when the cock has recovered from its wound let it be fought for two *pānī* with the unmuzzled *dalbā*, and act as described above. After twenty-two days let the trainer fight his cock three *pānī* and act as before. After forty days let him fight four *pānī*, and lastly after an interval five *pānī*. After fighting five *pānī*, he should foment the cock's face with a small bag of *halwā*, and dipping a pad into the hot liquid application he should foment the loins, the hip-joints, both the shoulder joints, the breast, and between the legs as described before. After this evening fomentation, he should feed the cock on *halwā*, or on bread dipped in fresh milk. In the morning he should again foment in the same manner, and, mixing some of the best *missī*¹ in wine should heat it on the fire and paint the cock's face thickly with it. Increase gradually the number of *pānī* up to eleven, acting as just described. Then fight your cock for a wager with someone, having first put it on dry food², and please God the cock of your antagonist will be unable to face yours.

Just before fighting your cock, you (being in a state of ceremonial purity), should repeat once into each of its ears the words "Allah the Immutable" and exhale your breath, and if it please God Most High your cock will never deteriorate.

Should your cock show signs of flight then give it this *badriqa*³ [reinforcement?]:—

Musk one *māsha*, *tabāshīr*⁴ three *māshas*, small cardamoms three *māshas*: pound and put in a paper. Take of juice of Indian sweet fennel seed two ounces and put it in a vessel. When you see that your cock intends flight, first give it two *māshas* of the powdered medicine, and then two *tolās* of the juice. Your cock will go mad and will never quit the field.

When you wish to cease fighting your cock and to pair him with a hen do so, but pair him with a mature hen⁵, but this must be in the warm days of spring. You must not mate your cock with a young hen.⁶

¹ *Missī*, a powder (compound of yellow myrobalan, gall-nut, iron filings, vitriol, etc.), supposed to be beneficial for the teeth. It turns the teeth black.

² *Rūkhā karnā* is to stop feeding on *halwā* and butter, etc., and to feed on *bājrā*, etc.

³ A Persian word meaning "a vehicle in medicine; a corrective or anything prescribed to be taken with medicine."

⁴ *Tabāshīr*, a silicious substance found in the interior of the hollow stems of some bamboos, chiefly *Bambusa arundinacea*. In modern Arabic *tabāshīr* means chalk.

⁵ *Pākhat*; of 3 or 6 years old. The hen will certainly desire the attentions of the cock in spring; only a few game hens will mate in the cold weather.

⁶ *Paṭṭha* masc., and *paṭṭhī* fem., i.e., chicks about a year old. These words are also applied to young pigeons (squeakers), and to young wrestlers.

As long as the cock is treading the hen, give him daily a little *halwā* to keep his strength up.

Diseases of the Game-Fowl.

The game fowl is subject to several diseases : (1) *Zahrbād*¹ or Erysipelas ; (2) *Chechak* or small-pox ; (3) *Tālū kā sar-jānā* or canker of the palate ; and (4) *Laqwa* or paralysis of the face.

There are three forms of *zahrbād*. In the first, the comb turns black ; in the second, the face turns black ; and in the third, the nails and comb turn black. If the comb becomes black, chew up some cocoa-nut, with betel-leaf prepared for eating,² and give it to the cock. If the face turns black, take long peppers of the smaller variety³ and old *gur* and mix and make pills and give to the cock. If the nails turn black, cut off the cock's comb, and pound up cinnamon, *gūgal*,⁴ and Lahore salt, together with betel-leaf, and make a pill the size of a wild *ber* fruit⁵ and give it to the cock. Please God a complete recovery will take place.

Receipt for Zahrbād.—*Khurāsānī ajwā'in*⁶ two *dām*,⁷ pepper-corns 7 *māshas*, long-pepper 7 *māshas*, dry ginger one *fulūs* (pice),⁸ *bindāl*⁹ one *fulūs*, parched wheat 7 *māshas*, *bairbarang*¹⁰ 7 *māshas*, black hellobore¹¹ 7 *māshas*, sonf¹² 3 *māshas*, anise¹³ 3 *māshas*, caraway seed¹⁴ 7 *māshas*, *kālī zīrī*¹⁵ 7 *māshas*, rock salt one *tolā*, *namak-i shor*¹⁶ one *tolā*, black salt¹⁷ one *tolā*, *sāmbhar*¹⁸ salt one *tolā*, *kasondī*¹⁹ leaves one *tolā*, leaves of Persian lilac²⁰

¹ *Zahr-bād*, a name given to several vague diseases, including erysipelas, quinsy, leprous sores, etc. Horses and elephants are specially subject to *zahrbād*.

² *Pān kā berā* is a *pān*-leaf containing the areca-nut, lime, spices, catechu, etc., prepared for chewing.

³ *Pīpal-i khurd*.

⁴ Gum *Gūgal* or Indian *Bdellium*, *Balsamodendron Mukul*.

⁵ *Ber-i-sahrā,ī*, i.e., the size of a small acorn.

⁶ Seeds of *Hyoscyamus niger*, black henbane.

⁷ *Vide* note 6, p. 79.

⁸ A pice weight is 6 *māshas*. According to the *Makhzan*, p. 95, it is 10 *māshas*; while the Alamgiri pice, according to the same authority, is equivalent to one *tolā* or 12 *māshas*.

⁹ *Bindal*, H., a medicinal herb, resembling the betel-leaf. See *Makhzan*, I. 374. Probably *Luffa echinata*.

¹⁰ *Vide* note 11, p. 76.

¹¹ *Kutkī*, H., a bitter root, *Picrorhiza kurrooa*.

¹² *Vide* note 7, p. 80.

¹³ *Anīsūn*, the Anise, *Pimpinella anisum*.

¹⁴ *Zīra-e siyāh*, Caraway seed (*Carum nigrum*).

¹⁵ *Kālī zīrī*, the Purple Flea-bane, *Vernonia anthe mintica*.

¹⁶ *Khārī nimak*, earth-salt; *nimak shor*, saltpetre-salt.

¹⁷ *Vide* note 8, p. 81.

¹⁸ *Vide* note 7, p. 74.

¹⁹ *Kasondī*, H., *Cassia occidentalis*, *Khory*, p. 258.

²⁰ *Bakāyan*, the Persian lilac, *Melia Azedarach*.

one *tolā*, leaves of 'Inab'-s-Sa'lab¹ (or *mako*) one *tolā*, dried leaves of the *nīm*² tree one *tolā*, juice of the leaves of the castor-oil plant a sufficient quantity, fresh green ginger one *fulūs*, dry mint two *tolās*, garlic two *tolās*, seed of red chillies one *tolā*, old *gur* two *tolās*, Indian senna³ one *tolā*, common country *ajwā'in*⁴ three *dām*, black myrobalan⁵ one *māsha*, *palās pāprā*⁶ 4 *māshas*, *bhilāwan*⁷ nuts seven, flowers of the *mahū,ā* tree⁸ 9 *māshas*, aloes wood⁹ 9 *māshas*, dark aloes wood¹⁰ 9 *māshas*, pale ambergris¹¹ one *māsha*, musk two *ratī*,¹² saffron 6 *māshas*, otters' testes¹³ 3 *māshas*, salep¹⁴ 6 *māshas*, curds from the belly of a young Arabian camel¹⁵ 6 *māshas*, *āgarqarhā*¹⁶ 3 *dām*, *taj*¹⁷ two *dām*, gum mastic of Rūm¹⁸ two *tolās*, the red-velvet insect¹⁹ two *tolās*, walnut 9 *māshas*, cinnamon 6 *māshas*, cloves one *tolā*, quick-silver 9 *māshas*, juice of betel-leaf two ounces, opium one *tolā*. Pound all together, make a pill the size of a wild *kunār*²⁰ and give when necessary; give also warm water to drink.

Chechak or small-pox.—This is the common and well-known disease that attacks men as well as birds and beasts. It arises from black bile.²¹ Every man holds and expresses his own opinion concerning the origin of this disease, but most people

1 *Solanum nigrum*, *Khory*, p. 454. For *mako*, vide note 7, p. 76.

2 *Melia Azadirachta*, the Neem or Margosa Tree

3 Vide note 2, p. 81.

4 Common *ajwain*, in contradistinction to *ajwain-i-khurāsānī*, the henbane: vide note 6, p. 81.

5 *Halīla-e khurd*, the ripe fruit of *Terminalia Chebula*, the chebulic or Black Myrobalan.

6 *Pālāspāprā*, the seeds of *Butea frondosa* or Bastard teak.

7 Vide note 4, p. 82.

8 *Mahū,ā* *Bassia latifolia*. Native wine is made from this fruit. Bears are fond of the fruit.

9 'Ud-i-hindī (Indian wood), technical name for the Aloes-wood, *Aquilaria Agallocha*.

10 'Ud-i-jharqī, aloes-wood that sinks when thrown into water; it is of a black colour. See Watt's Dictionary of Economic Products, A. 1252.

11 *Ambar-i-ashhab*, white or pale ambergris, pure ambergris.

12 i.e., about 4 grains.

13 *Jund-i-bedastar*, the castoreum of European writers. Vide also *Khory*, p. 101.

14 *Sā'lab-i-misrī*, salep, the root of a species of orchis, *Orchis mascula*.

15 *Māya-y-shūtur-i-arabī*; a forty-days' old camel is allowed to suck its fill of milk and is five hours later slaughtered, when the milk in the intestines is found in a curdled state. This is dried and sold as a drug.

16 *Aqarqarhā*, the Pellitory of Spain, *Anacyclus Pyrethrum*.

17 Vide note 12, p. 76.

18 Vide note 1, p. 81.

19 *Bīr-bahutī*, the red-velvet insect, the scarlet fly, *Trombidium grandissimum*.

20 *Kunār*, P=H., *ber*, the Indian Jujube, or Chinese Date, *Zizyphus Jujuba*.

21 *Ar. As-Sawdā*, an imagined secretion of the renal or atrabiliary glands.

hold the view that it is engendered in the foetus while still in the womb, through the mother's menstrual blood.

Remedy.—*Kakarwandā* leaves ¹ 2 *tolās*, pepper-corns 4 *māshas*. Apply juice of the leaves of the above plant to the cock's face. Then pound together the two ingredients as stated and make into pills the size of a wild *ber* ² and give daily morning and evening. Should a cure not take place, then burn old leather and smoke the cock's head. Should even this not result in a cure, then grind together equal quantities of cubebs ³ and red ochre.⁴

Another.—*سیداء نمودار* 4 ounces, fresh shell lime ⁵ 6 *māshas*, carbonate of soda ⁶ 3 *māshas*, frog's fat 4 *tolās*, worms from rhinoceros dung one *tolā*, old *sānbar* ⁷ leather burnt 2 *tolās*, *asgand nāgawari* ⁸ 9 *māshas*, burnt alum 6 *māshas*, blue-stone 5 *māshas*, pure wax 2 ounces, well-water a sufficient quantity, white catechu ⁹ one *tolā*, oxide of lead ¹⁰ one *tolā*, *āmla* ¹¹ *sār* sulphur 9 *māshas*, camphor 6 *māshas*, betel-nut 2, washed *kāmīlā* ¹² 6 *māshas*, *kaselā* ¹³ 6 *māshas*. Make into an ointment in the ordinary way and anoint the wounds.

Disease of the Palate.—This is a common disease known to all cockers: it needs no description.

Remedy.—*Safīda* of *Kāshghār* ¹⁴ 6 *māshas*, white catechu ¹⁵ 4 *māshas*. Grind together and apply to the palate, which should be first well cleansed. Take juice of henna leaves 4 ozs., red ochre one *tolā*, *rasaut* ¹⁶ 9 *māshas*, cubebs 9 *māshas*. Mix a suffi-

¹ The leaves of *Blumea lacera*, also called in Hindi *janglī mūlī*.

² The fruit of the wild *ber*, *Zizyphus Jujuba*, resembles the crab-apple in flavour and appearance and is never larger than a gooseberry. (Watt's Dictionary.)

³ *Kabāb-chīnī*, H., cubebs, *Piper cubeba*.

⁴ *Gerū*, red ochre.

⁵ *Chūna-e-ṣadaḥ*, called in Hindustani *sīpī kā chūna*.

⁶ *Sajjī*, natron, impure carbonate of soda.

⁷ The *Sānbar* stag.

⁸ *Asgand nāgawrī*, the root of *Withania somnifera*.

⁹ *Kath*, the pale catechu of India, a grey crystalline substance prepared from a concentrated decoction of *Acacia Catechu* wood.

¹⁰ *Murdār sang*, litharge or oxide of lead.

¹¹ *Āmla-sār*, the pale yellow variety of sulphur, also called *Kibrit-i-Fārsī*. Vide *Khory*, p. 60.

¹² It is a convention to wash it in a hundred waters, *Kamīlā* H., a red powder chiefly obtained from the ripe capsules of *Mallotus philippinensis*.

¹³ *Kaselā* Hindi, the name of two species of gall. Called in Bengali *Barā* and *chhotā mā,ī*. Dr. Hooper of the Indian Museum tells me that the latter is the gall of *Tamarix articulata*, a tree abundant in Sindh and in the Punjab. The Arabic name is said to be *ṣamarat* 'l-asl*. The former is the gall of *Tamarix gallica*. Both are astringent and used in tanning instead of the true oak-gall.

¹⁴ *Safeda-e-Kashghārī*, carbonate of lead.

¹⁵ Vide note 9, above.

¹⁶ *Rasaut*, H., the dried extract of the root of the barberry, *Berberis aristata*.

ent quantity and paint thickly on the palate, but first cleanse the palate well with cloth. Do this twice or thrice a day. Should this application not prove effective, try the following receipt, to which some cockers add *missī*¹ powder.

Receipt.—Large cardamoms one *tolā*, shell *ṭabāshīr*² 5 *mashas*, *دود سقنقش*³ 6 *māshas*. Make into a powder and apply to the palate three or four times a day, and if God please a complete recovery will result.

Dislocation or sprain of the wing or leg.—This is an accident known to all cockers, and is caused by the cock jumping from a height, or running too much, or from a blow, or from rough handling by the cocker.⁴ The cock is useless for further fighting purposes, but can be kept for breeding, after treatment.

Remedy.—*Kutkī*⁵ 9 *māshas*, *bārtang*⁶ 5 *māshas*, dried Bukhara plums⁷ seven, opium 2 *māshas*. Make into an ointment and “foment” with this.

Another.—Mummy⁸ one *ratī* (about 2 grains), pulp of the *gekwār*⁹ leaf 4 ozs., *hālūn*¹⁰ 2 *tolās*, henna leaf 2 *tolās*, butter 4 ozs., white sugar 4 ozs., fine wheat-flour one lb. Make into a *halwā* in the ordinary way and foment with this.

Laqwa or Paralysis of the face.—In this disease, which is also called *hawā-zadagī* or wind-stroke, the cock’s head is twisted to one side.

Remedy.—Give soup made of wild pigeons or *lawā*-quails.¹¹ Also give to drink an infusion of *kānphal*,¹² saffron, opium-poppy-heads, small long-pepper,¹³ and garlic; give this and not water. Keep the cock in a dark place. After this¹⁴ purge.

Receipt for a purge.—Gum *gogal*¹⁵ one *tolā*, turmeric one

¹ *Missī*, vide note 1, p. 83.

² *Ṭabāshīr-i šadafī*, vide note 4, p. 83. In modern Arabic *ṭabāshīr* means “chalk.”

³ *دود سقنقش* = *سقنقور*? *دود سقنقش* the shink.

⁴ Ordinary natives, not cockers, often carry a fowl by one or by both wings.

⁵ Vide note 11, p. 84.

⁶ *Bārtang*, seeds of *Plantago major*, or *P. psyllium*.

⁷ *Alū Bukhāra*, the Plum, *ālūcha* (*Prunus communis*).

⁸ *Osteo colla*, supposed to be an exudation from mummies.

⁹ *Ghīgwār*, H., Barbadoes or Indian Aloes, *Alce vera* of Linn.

¹⁰ *Hālūn* is the cress; but this is probably a corrupt reading for *halyūn*, the berries of *Asparagus officinalis*.

¹¹ *Lawā*, a name given to several species of quail used for fighting, other than the common quail.

¹² *Kānphal*=*kā’ephal*, the bark of *Myrica Nagi*.

¹³ Vide note 2, p. 76.

¹⁴ Apparently the next day.

¹⁵ Vide note 4, p. 84.

tolā, dry powdered ginger¹ 9 *mashas*, black myrobalan² 9 *māshas*, old *gur* 2½ *tolās*. Make into pills and of these give one *tolā* in weight; give, too, in the evening, warm water to drink.³ Please God a recovery will take place.

Remedy for a hen that is egg-bound or for one that lays eggs with soft shells.—To make a hen lay, some experts give burnt cowrie-shells, while others give wheat-flour mixed with barley-bran, and others again give wax and gum-mastic mixed. Some cockers, to an egg-bound hen, give, mixed with wax, two grains of glass as finely powdered as antimony for the eyes; and to a hen that does not lay, one *māsha* of similarly ground glass and one *māsha* of wax, mixed together and made into a pill: this should prove efficacious. Others give in the morning before food bone-dust mixed with wax, for a period of from three days to one week, which is a good and proved remedy for a hen-pigeon also, the quantity being regulated to the size of the bird.

On making a dusting-place for fowls.—Dig a hole in the ground about one and a half spans deep, and fill up with fine earth as fine as hemp-seed.⁴ Let the fowls take dust-baths and clean themselves in this. Should lice make their appearance, or canker of the feathers, then take 4 ounces of *ghar-bachcha*⁵ with ½ lb. of onion-juice, ½ lb. of old water from a used water-pipe, and sprinkle the fowl with it, and then let the fowl dust itself in the pit.

To cause a broken spur to grow.—Take of the marking-nut plant⁶ half a pound, castor-oil seed ½ lb., small burnt fish⁷ 2 ounces, *mom-rawghan*⁸ 4 ounces, and red mustard seed (*sarson*). Make all into an ointment and bind on to the injured spur with a cloth, and spout the spur daily, three times, with cold water. Do this for a week. If the soles of the feet get swollen, scrape them, apply to them a thick coating of antimony for the eyes, and bind above that a rag well smeared with the above ointment.

—o—

¹ *Sonṭh satū'ā*; *sonṭh* is dry ginger; while *satū'ā* is applied to a special kind of ginger, and means 'pulverable, free from threads or fibres.'

² *Vide* note 5, p. 85.

³ The cock would be kept thirsty during the day.

⁴ *Dāna-e-mūng*, lit. *mūng*, a kind of pulse.

⁵ *Ghar bachcha* is the same as *darūnaj-i-'agrabi* *Doronicum pardalichan*: it is described by the author of the *Makhzan*, p. 647, as a scorpioid knotted root with greyish exterior and white interior; hard, faintly bitter, and aromatic. See also *Khory*, p. 362.

⁶ *Bhilāwan*; *vide* note 4, p. 82.

⁷ *Māhī-e sokhta-e-khurd*.

⁸ Wax and oil mixed; dubbing.

APPENDIX A.

FURTHER POINTS OF THE GAME-COCK.¹

The bill is thick but short, the white of the eye pearl-coloured² (not red or yellow), the comb³ thick and very low, the wattles very small, the region below the ears red,⁴ the cheek-bones protuberant, the head large and square, the neck long, the wings held apart from the body, the chest thrown out, the tail small and drooping from the base, the back flat and not roached,⁵ the back and wings viewed from above heart-shaped,⁶ the flesh hard and the body compact, the stalk-bones thick and square. In fight the game-cock is staunch till death.

If tickled lightly by the finger on the stomach about an inch above the vent, it should begin to oil itself⁷; it should be very free and familiar with man. Its crow is short and deep. If the cock is young and has been parted for some time from hens, it should "dance"⁸ when the fingers are snapped. There are many breeds of game, viz.: (1) *Shaykh Buddhū*⁹; (2) *Kal-kātiyā* or "black-spurred"¹⁰; (3) *Pattī-tūtā*¹¹; (4) *Sonā-tol*¹² or "gold in value"; (5) *Amīr Khān*; (6) *Muhammad 'Alī Beg*.

The *Shaykh Buddhū* is never the aggressor in fight. The best birds of this breed will stand on the spot they are placed without advancing an inch towards their antagonist, and therefore cocks of this breed can be turned out loose together.

Game-cocks are never white, yellow, nor *bāndhnū* (regularly speckled throughout).

The game hen lays one or at the most two clutches¹³ of eggs in the year.

¹ For this information the translator has to thank a learned Indian Mawlavi, an amateur breeder.

² *Motī chūr*, "like powdered pearl."

³ *Mor* or *mawr* = *tāj*.

⁴ In domestic fowls generally white.

⁵ *Māhī pusht*, "fish-backed."

⁶ *Lit.* shaped like a betel-leaf ♡.

⁷ This is a sign of familiarity with men and of fearlessness. Common fowls do not preen, however tame.

⁸ *i.e.*, show off by lowering the wing and circling, as a cock does before a hen.

⁹ *Buddhū* is a name given by the vulgar to a son born on *Buddh* or Wednesday.

¹⁰ No. 1 is the heaviest built of all game-fowls and (2) the lightest. The latter, a famous breed in Singapore, is noted for its activity.

¹¹ Two cocks of this breed were once fighting. A man separated them by inserting between them a *chār pā'i* or Indian bedstead. The spurring cock struck the bedstead and split its *pattī* or frame.

¹² One of this breed was once scaled and sold to a Nawab for its weight in gold.

¹³ *Ek jhol andā* "a clutch laid by one hen." *Ek jhol bachcha* "a brood."

APPENDIX B.

FROM THE 'AJĀ'IB-UL-MAKHLŪQĀT¹(Or *The "World of Wonders"*).

The cock is the most lustful and the vainest of birds. It heralds the dawn. One of the strangest things about it is that it knows the watches of the night, and apportions the times for its night-crowing according to the length or shortness of the nights; for instance, if the night is fifteen hours in length, he crows, at stated intervals, the same number of times as he does in a night of nine hours; and this he does by a God-given instinct.² It is related that the Prophet (May the Peace and Blessing of God be upon him) said, "God the Most High has created a cock beneath His Throne, with wings that can extend beyond the East and the West; and towards dawn he spreads his wings, and flaps them, and raises his voice in praise of Him, crying, 'Glory to the Most Holy King' and; when he has ceased, all the cocks in the Earth join in returning that cry, flapping their wings in like manner. It is said that the chief caller-to-prayer amongst the cocks, is that breed that has long wattles and a castellated comb. The cock has a sense of jealous honour about his wives, and he is generous to them, and cares for them. It is a belief that, should a man rise from sleep at cock-crow, he will be fresh and bright all day. A white cock puts to flight the lion. The best of cocks is the game-cock. Its points are, a red comb, a thick neck, small and black eyes, sharp claws, a loud cry. A cock is unselfish to his hens; he takes a grain in his beak and casts it to them. It is said that he does this in the time of his youth, when his passions dominate him; but that when he ages he no longer does so. The cock defends his hens from the attack of an enemy, and at night collects them in a safe place and stands guard at the door. They say, too, that the cock lays one egg in his lifetime, called in Arabic *bayzat* "l-'uqr (بيضة العقر),³ and that it is very small. The following lines are by the poet Bashshār:—

*Thou hast visited me but once in all this time.
Make not thy visit rare like the egg of the cock.*

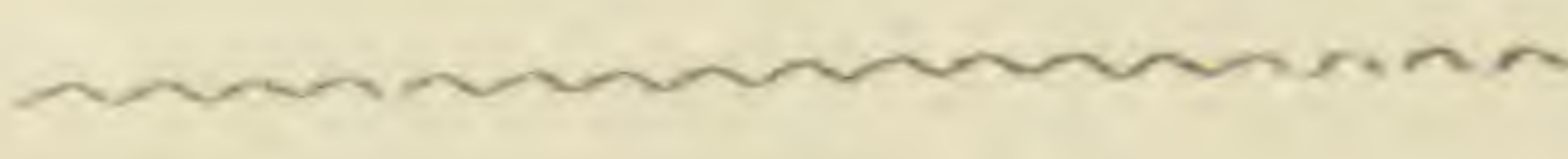
It is a belief that one who slaughters a white cock with a divided comb, will suffer loss in his possessions and in his house, and also that the Devil never enters a house in which

¹ An Arabic work by Al-Qazwīnī, who died A.D. 1283.

² الهام من الله

³ An obscure phrase.

such a cock is to be found. As for the properties of the several parts of the cock, if the comb be dried and pounded and given to drink to a piss-a-bed, the bad habit will depart from him. The smoke of the dried comb of a white or of a red cock does good to a madman. The gall applied as a collyrium to the eyes, cures dimness of sight, or a film over the eye. Some physician has said that the gall must be placed in a silver vessel and used continuously to obtain a cure. Polonias has said that the gall of a cock, mixed with mutton-broth and taken in the morning on a fasting stomach, is a cure for loss of memory. If the wing-bone be bound on one suffering from intermittent fever, the fever will depart. If a rider ties that bone on his loins he will suffer no fatigue. The blood, used as a collyrium, is beneficial for film over the eyes. If the blood drawn in a cock-fight be mixed with food and given to a number of people, it will cause dissension amongst them. If you take a cock's blood and mix it with honey, and place it on the fire, and apply the mixture to the penis of a man, it will increase his virile power as well as his sexual enjoyment. If you take the dried flesh of a cock and pound it with equal quantities of gall-nuts and sumach, and make pills the size of peas, and administer them with a draught of water to one that has a pain in his belly, he will be relieved on the spot. In the stomach of the cock there is a pebble, sometimes sky-blue in colour and sometimes crystal, which, if suspended round the neck of a madman, cures him : and if it be attached to the person of any man, it increases his sexual appetite.



FEBRUARY, 1910.

The Annual Meeting of the Society was held on Wednesday, the 2nd February, 1910, at 9-15 P.M.

The Hon'ble Mr. Justice Asutosh Mukhopadhyaya, C.S.I., D.L., D.Sc., F.R.S.E., Vice-President, in the chair.

The following members were present:—

Dr. N. Annandale, Babu Rakhal Das Banerji, Mr. R. C. Banerji, Mr. J. A. Chapman, Babu Monmohan Chakravarti, Babu Nilmani Chakravarti, Dr. W. A. K. Christie, Mr. B. L. Chaudhuri, Mr. D. A. David, Mr. L. L. Fermor, Mr. H. G. Graves, Dr. E. P. Harrison, Mr. D. Hooper, Mr. T. H. D. La Touche, Mr. W. A. Lee, Mr. E. M. Löffler, Mr. W. H. Miles, Dr. Indu Madhab Mallick, Dr. Girindra Nath Mukerjee, Babu Panchanan Mukhopadhyaya, Lieut.-Colonel D. C. Phillott, Dr. P. C. Ray, Dr. E. D. Ross, Hon. Mr. Justice S. Sharfuddin, Mahamahopadhyaya Haraprasad Shastri, Mr. A. C. Sen, Mr. M. J. Seth, Captain F. H. Stewart, I.M.S.; Mr. E. Vredenburg, Hon. Mr. Justice H. Holmwood.

Visitors:—Babu S. C. Bagchi, Babu Hem Chandra Das-Gupta, Babu Phanindra Lal Gangooly, Mr. R. W. Harrison, Mr. K. Mukerji, Mr. A. Wanen and others.

The Chairman ordered the distribution of voting papers for the election of Officers and Members of Council for 1910, and appointed Captain F. H. Stewart, I.M.S., and Babu Rakhal Das Banerji, to be scrutineers.

The Chairman also appointed Mr. L. L. Fermor and Mr. B. L. Chaudhuri to be scrutineers for the election of the Fellows of the Society.

The Chairman announced that only one essay had been received in competition for the Elliott Prize for Scientific Research for the year 1909, which was sent to the Director of Public Instruction, Bengal, one of the Trustees, for report, and that the result had not yet been received.

The Chairman called upon the Secretary to read the Annual Report.

ANNUAL REPORT FOR 1909.

The Council of the Society has the honour to submit the following report on the state of the Society's affairs during the year ending 31st December, 1909.

Member List.

The number of Ordinary Members at the close of the year was 473. Seventy Ordinary Members were elected during 1909. Out of these, 7 have not yet paid their entrance fees; 1 member withdrew, and 1 died. The number of Ordinary Members, therefore, added to the list was 61, in addition to another 1 elected in 1908, who has paid his entrance fee during the year, making a total of 62 Ordinary Members added to the last list. On the other hand, 20 withdrew, 7 died, 2 were struck off under Rule 38, and 8 under Rule 40.

The following table gives the statistics for the past six years:—

YEAR.	PAYING.				NON-PAYING.				TOTAL.
	Resident.	Non-Resident.	Foreign.	Total.	Life.	Absent.	Special Non-Subscribing.	Total.	
1904 ..	132	130	14	276	21	45	1	67	343
1905 ..	144	133	12	288	20	47	1	68	357
1906 ..	173	147	15	335	20	51	1	72	407
1907 ..	174	175	20	369	20	30	1	51	420
1908 ..	181	193	17	391	19	38	—	57	448
1909 ..	183	217	13	413	20	40	—	60	473

The Ordinary Members whose deaths we lament were—Babu Annadāprasad Bose, Dr. T. Bloch, Mr. A. M. T. Jackson, Babu Jain Vaidya, Babu Mohinimohan Mitra, Babu Muksudan Dās, Dr. Priyanāth Sen, and Mahārāja Radhakishore Deb, Bahadur.

There were two deaths among Honorary Members, *viz.*—Professor M. J. DeGœje and Sir George King. The number is now 28.

The number of the Special Honorary Centenary Members remain unchanged since last year.

During the year we have elected Mr. Balkrishna Atmaram Gupte as an Associate Member, the number now standing at 14.

One Member, Mahārāja Jagadindranath Roy Bāhādur, compounded for his subscriptions during the year.

Indian Museum.

During the year there has been one vacancy amongst the Trustees. Sir Thomas Holland resigned his office as a Trustee of the Indian Museum on behalf of the Society, and Mr. T. H. D. La Touche, B.A., F.G.S., was appointed. Dr. G. Thibaut acted as a Trustee till October, when Lt.-Col. D. C. Phillott returned to India and resumed his seat. The other Trustees who represent the Society are—the Hon. Mr. Justice Asutosh Mukhopadhyaya, M.A., D.L.; Mr. R. P. Ashton, Lieut.-Col. G. F. A. Harris, M.D., F.R.C.P., I.M.S.

The Government of Bengal forwarded a draft bill to consolidate and amend the law relating to the Indian Museum, with a statement of objects and reasons for criticism, and the Council agreed with its main provisions. They were, however of the opinion that at least two representatives on the Board of Trustees should be appointed by turn instead of one as laid down in the Bill.

Finance.

The Accounts of the Society are shown in the appendix under the usual heads. Statement No. 12 contains the Balance Sheet of the Society, and of the different funds administered through it.

The credit balance of the Society at the close of the year was Rs. 1,93,522-13-3, against Rs. 1,89,731-7-0 in the preceding year, which shows an increase in our financial position by about Rs. 3,800. A sum of Rs. 2,000 has been advanced as a loan to the Arabic and Persian MSS. Fund; this added, the closing balance would show an actual increase by about Rs. 5,800.

The Budget 1909 was estimated at the following figures:—

Receipts	..	..	Rs. 24,834.
Expenditure	..	..	„ 24,770.

The Budget Estimate of Receipts is exclusive of “Admission Fees,” “Compound Subscription” and “Government Allowance” (for Researches in History, Religion, Ethnology and Folklore of Bengal).

The actual receipts for the year, exclusive of these items, have amounted to Rs. 23,487-7-4, or about Rs. 1,350 less than

the estimate ; Rs. 2,048 have been received as Admission Fees, Rs. 240 as a Compound Subscription, and Rs. 7,200 as Government Allowance (for Researches in History, Religion, Ethnology and Folklore of Bengal), or about Rs. 8,150 in excess of the estimate. The sum of Rs. 2,300 has been credited to the Permanent Reserve Fund from the Admission Fees and Compound Subscription received during the year, which now stands at Rs. 1,58,000. The Receipts have exceeded the estimate under the heads of "Members' Subscriptions," "Subscriptions for the Society's *Journal* and *Proceedings* and *Memoirs*," "Interest on Investments," and "Miscellaneous"; the increases under these heads being Rs. 728-1-7, Rs. 144, Rs. 223, and Rs. 59-5-9, respectively. The Receipts have fallen short of the estimate under the following heads: "Sale of Publication" owing to certain sale proceeds not having been realised during the year, "Government Allowance" on account of non-receipt of allowance from the Government of Eastern Bengal and Assam, and "125th Anniversary Entertainment Fund" owing to non-realisation of all the voluntary contributions.

In the Budget the expenditure was estimated at Rs. 24,770, distributed under 21 heads. Of this sum, Rs. 310 provided for the "Tibetan Catalogue" was not utilised. The actual expenditure has amounted to Rs. 24,041, or Rs. 729 less than the estimate. The expenditure has exceeded the estimate under the heads of "Stationery," "*Journal* and *Proceedings*" and "*Memoirs*," "Petty Repairs," and "125th Anniversary Entertainment Fund." "Stationery" has been higher owing to purchase of stencil papers, ink, etc., for the use of the Medical Section. "*Journal* and *Proceedings*" and "*Memoirs*" have been increased owing to the printing charges of Material for a Flora of the Malayan Peninsula. "Petty Repairs" has been higher owing to whitewashing and painting the room rented to the Automobile Association of Bengal. And "125th Anniversary Entertainment Fund" has been increased owing to bonus given to the Staff of the Society. The other increments are not very large, and are proportionate to the amount of work done during the year.

During 1909 the Council sanctioned the following items of expenditure: "Manuscript Catalogue" (for the Arabic and Persian Section of the Society), Rs. 369-12; "Copper Plate Catalogue," Rs. 175; "Loan" (advanced to Arabic and Persian MSS. Fund, Rs. 2,000; and Sanskrit MSS. Fund, Rs. 1,150), Rs. 3,150; and "Salary" (Researches in History, Religion, Ethnology, and Folklore of Bengal), Rs. 4,200; Total Rs. 7,894-12. The sum of Rs. 11-5-10 was paid for interest on Rs. 5,000 Government Promissory Note purchased during the year. The total expenditure has amounted to Rs. 31,947-1-10.

The following sums were held at the close of the year on account of the different funds administered by the Society :—

	Rs.	A.	P.
Oriental Publication Fund No. 1 (less Rs. 432 advanced to Dr. L. Suali, and Rs. 400 to Maulavi Abu Musa Ahmad-al Haque) ..	4,819	14	8
Do. Do. No. 2 ..	5,675	1	0
Do. Do. No. 3 ..	2,340	11	6
Sanskrit Manuscripts Fund ..	758	4	11
Arabic and Persian MSS. Fund (less Rs. 166 advanced to Maulavis) ..	1,899	1	6
Bardic Chronicles MSS. Fund (less Rs. 500 advanced to Officer-in-charge) ..	1,216	2	6
TOTAL Rs. ..	16,709	4	1

The Permanent Reserve Fund at the close of the year was Rs. 1,58,000, and the Temporary Reserve Fund at the close of the year Rs. 44,300, against Rs. 1,55,700 and Rs. 41,600, respectively, of the previous year.

The Permanent Reserve Fund has increased by Rs. 2,300 from the Admission Fees and one Compound Subscription received during the year, and the Temporary Reserve Fund has increased by Rs. 2,700 from the Government Promissory Note purchased during the year. The Trust Fund at the close of the year was Rs. 1,400.

The Budget Estimate of Receipts and Disbursements for the year 1910 has been fixed as follows :—

Receipts	Rs. 30,697
Expenditures	,, 28,443

The Budget Estimate of Receipts is about Rs. 3,430 less than the Actuals, and Rs. 5,865 more than the estimate of 1909. "Members' Subscriptions" are higher owing to the increase in the number of new members. "Subscriptions for the Society's *Journal* and *Proceedings* and *Memoirs*" have been increased owing to a few more subscribers being added to the list. "Interest on Investments" shows an increase owing to the purchase of Government Paper. "Rent" has decreased owing to the realisation in 1909 of the rent for the month of December, 1908. "Government Allowance" is higher owing to the non-receipt of Rs. 1,000 from the Government of Eastern Bengal and Assam. There is a further estimate of the Government Allowance for the Researches in History, Religion, Ethnology, and Folklore of Bengal. "Loan" advanced to the Arabic and Persian MSS. Fund is to be realised from the same in April, 1910. There will be no income from the Anniversary Entertainment Fund, as the account is now closed.

The Budget Estimate of Expenditure is Rs. 3,500 less than the Actuals, and Rs. 3,675 more than the estimate of 1909. "Salaries" have been increased owing to increment allowed to the Staff, and an extra Duftry appointed for 6 months. "*Journal and Proceedings and Memoirs*" are higher, because all the publications of 1909 have not been issued. "Contingencies" have been increased owing to the winter clothing given to the menials of the Society. "Library Catalogue" is reduced, owing to the prospect of only one part being published. "Paging of Manuscripts," "Building" and "Salary" have been added to the estimate. "Paging of Manuscripts," remuneration for examining the pages, etc., of the Arabic and Persian MSS. presented to the Society by Khan Bahadur Shams-ul-Ulama Nawab Aziz Jung of Hyderabad, Deccan, and "Salary," will be met from the Government Allowance which is awaited. The other items are based upon the actuals of the last year.

Two extraordinary expenditures have been budgetted for during the year 1910, namely, Rs. 1,300 for printing of about 20 plates of the drawings of Gangetic Fish with a synonymy of the species and notes, and Rs. 1,500 for the purchase of standard works as a commencement of the Medical Reference Library. Total—Rs. 2,800.

The expenditure on the Royal Society's Catalogue (including subscriptions remitted to the Central Bureau, London) has been Rs. 5,399-14-7, while the receipts under this head from subscription received on behalf of the Central Bureau (including a grant of Rs. 1,000 from the Government of India) have been Rs. 6,065-3. A sum of Rs. 4,826-14-10 has been remitted to the Central Bureau, London. And the amount of Rs. 5,129-7-1 is still to be forwarded.

The Hon. Mr. Justice Asutosh Mukhopadhyaya was appointed to the office of Treasurer in April, 1909, on Mr. Hooper proceeding on furlough for 6 months. Mr. D. Hooper resumed charge in November, 1909.

BUDGET ESTIMATE FOR 1910.

Receipts.

	1909. Estimate.	1909. Actuals.	1910. Estimate.
	Rs.	Rs.	Rs.
Members' Subscriptions..	9,500	10,228	9,700
Subscriptions for the Society's <i>Journal and Proceedings and Memoirs</i> ..	1,560	1,704	1,704
Sale of Publications ..	2,000	1,393	2,000
Carried over ..	Rs. 13,060	13,325	13,404

	Rs.	Rs.	Rs.
Brought forward ..	13,060	13,325	13,404
Interest on Investments ..	6,770	6,993	6,993
Rent of room	650	650	600
Government Allowances	3,000	2,000	4,000
Ditto (for Researches in History, Religion, Ethnology, and Folklore of Bengal) .. .. .	..	7,200	3,600
Miscellaneous	100	159	100
125th Anniversary Enter- tainment Fund	485	360	..
125th Anniversary Balance carried forward from 1908	769		
Loan .. .. .	..	1,150	2,000
Admission fees .. .. .	..	2,048	..
Compound Subscription ..	..	240	..
	<hr/>	<hr/>	<hr/>
TOTAL Rs. ..	24,834	34,125	30,697
	<hr/>	<hr/>	<hr/>

Expenditure.

Salaries	5,680	5,688	6,350
Commission	525	557	550
Pension	455	420	420
Stationery	125	198	150
Light and Fans	275	262	260
Municipal Taxes	1,465	1,465	1,465
Postage	600	596	600
Freight	380	102	300
Contingencies	500	463	600
Books	1,200	634	1,200
Binding	1,000	892	1,000
<i>Journal and Proceedings and Memoirs</i>	7,500	8,134	9,000
Printing Circulars, etc. ..	300	215	250
Auditor's fee	100	100	100
Petty repairs	100	171	100
Insurance	190	187	188
Library Catalogue	1,700	1,329	1,000
Grain Compensation Al- lowances	300	251	300
Tibetan Catalogue	310	..	310
125th Anniversary Enter- tainment Fund	1,285	1,752	..
Repairs	780	625	..
	<hr/>	<hr/>	<hr/>
Carried over ..	Rs. 24,770	24,041	24,143

	Rs.	Rs.	Rs.
Brought forward ..	24,770	24,041	24,143
Salary (for Researches in History, Religion, Eth- nology, and Folklore of Bengal) .. ..	..	4,200	3,600
Manuscript Catalogue ..	..	370	..
Interest on Government Paper purchased .. ..	..	11	..
Copper Plate Catalogue ..	..	175	..
Loan .. ..	..	3,150	..
Paging of Manuscripts ..	..	..	200
Building .. ..	..	..	500
TOTAL Rs. ..	24,770	31,947	28,443

Extraordinary Expenditure.

	Estimate. 1909. Rs.	Actuals. 1909. Rs.	Estimate. 1910. Rs.
“Journal and Proceedings” and “Memoirs”	1,300
“Books”	1,500
TOTAL Rs.	2,800

Agencies.

Mr. Bernard Quaritch and Mr. Otto Harrassowitz continued as the Society's Agents in Europe.

The number of the copies of the *Journal* and *Proceedings* and the *Memoirs* sent to Mr. Quaritch during the year 1909 was 586, valued at £55-8-8, and of the *Bibliotheca Indica* 399, valued at Rs. 577-10; of these copies, to the value of £14-10-10 and Rs. 48-8 have been sold.

Twenty-five invoices of books purchased, and of publications of various Societies sent in exchange, have been received during the year, the value of the books purchased amounting to £33-16-3.

The number of the copies of the *Journal* and *Proceedings* and the *Memoirs* sent to Mr. Harrassowitz during 1909 was 164, valued at £22-9-6, and of the *Bibliotheca Indica* 316, valued at Rs. 428-12. The sale proceeds have been £29-12-8 and Rs. 397-3 respectively.

Library.

The total number of volumes and parts of magazines added to the Library during the year was 3,433, of which 354

were purchased, and 3,079 were either presented or received in exchange.

Part II of the Library Catalogue up to the letter L has been published, and the third part to end of the letter R is under revision, and will be published shortly.

A large collection of books and MSS. in the Oriental language was presented by Shams-ul-ulamā Ahmad 'Abdu-l-Aziz, Khān Bāhādur, of Hyderabad, Deccan, to the Society's Library, and a Catalogue of the collection has been prepared and will be published shortly.

A Catalogue of the Copper-plates in the possession of the Society has been prepared, and will be published in the Society's *Journal*.

Mr. J. H. Elliott has continued as Assistant Secretary throughout the year.

International Catalogue of Scientific Literature.

The work of the Regional Bureau has not been light. The number of index slips sent to London for the Catalogue during the year was 2,527; and the accounts from the initiation of the Bureau have been subjected to a complete scrutiny. Of course, *pari passu* with the increase of scientific workers in India, the number of index slips annually increases, as the following figures show:—

1907	..	..	..	1,189
1908	..	..	..	2,147
1909	..	..	..	2,527

To meet the increased work, all labour-saving devices that suggest themselves are adopted.

The scrutiny of the Bureau's accounts was made in order that the books might be compared with those of the Central Bureau.

Accounts up to date will be found in statement No. 13 of the appendix. As there shown, the maintenance of the Bureau has cost the Government of India Rs. 6,169-10-7, or approximately Rs. 617 per annum: later years have cost more than the earlier years. The Regional Bureau has distributed 2,177 volumes in India and collected Rs. 34,543-10-3 in subscriptions. The sum of Rs. 991-5-0 is still due on the fourth and sixth annual issues. The Bureau has received and distributed in India volumes to the value of £2,371-0-7, and towards the payment for them has remitted to London £1,963-16-11 at a cost of Rs. 29,414-3-2. When the Bureau shall have collected the sum of Rs. 991-5-0 overdue, it will hold a balance of Rs. 6,120-12-1 from subscriptions, which amount is a little more than will be the cost of the remittance at the present unfavourable rate of exchange of the £407-3-8 due to London.

The Bureau to date has thus a small profit on subscriptions ; but this small profit will be turned into a deficit by another year of an unfavourable rate of exchange, to avoid which the Council of the Society has decided that the discount, in generosity hitherto allowed to the subscribers, must in future go towards the upkeep of the Bureau ; and from the seventh annual issue a complete set will cost in India Rs. 270 instead of Rs. 255.

The question of the future of the Catalogue is to come before the International Council in London at an early date : this is a consequence of the unremunerativeness of the whole undertaking.

The following gentlemen assisted the Regional Bureau in making and checking the index slips :—

Dr. N. Annandale.
Mr. I. H. Burkill.
Professor E. P. Harrison.
Mr. D. Hooper.
Mr. H. Maxwell Lefroy.
Major L. Rogers.
Mr. E. Vredenburg.

Anniversary of the Society.

The Society celebrated its 125th Anniversary on Friday, January 15, 1909. The celebration took the form of an evening reception held, by permission of the Trustees, in the Indian Museum. Many Scientific, Archæological, Philological and Historical exhibits were shown, illustrating the progress and activities of the Society.

In connection with the Anniversary the Council has decided to publish a History of the Society for the past 25 years.

Fellows of the Society.

At the suggestion of Sir Thomas Holland, K.C.I.E., the Council appointed a Sub-Committee to discuss the question of creating Fellowships as a distinction among ordinary members of the Society. Several meetings of the Sub-Committee were held, and circulars under Rules 64A and 65 framing rules approved by the Council were sent to the members of the Society. These rules were approved of by the general body of members, and at a special meeting of the Council held on the 8th December, 1909, the following gentlemen were nominated by ballot for election as Fellows of the Society, each obtaining at least a two-thirds majority of the votes of the members of the Council present at the meeting.

Dr. N. Annandale, D.Sc., C.M.Z.S., F.L.S.
 The Hon'ble Mr. Justice Asutosh Mukhopadhyaya, C.S.I.,
 M.A., D.L., D.Sc., F.R.A.S., F.R.S.E.
 I. H. Burkill, Esq., M.A., F.L.S.
 Mahamahopadhyaya Haraprasad Shastri, M.A.
 Sir Thomas Holland, K.C.I.E., D.Sc., A.R.C.S., F.G.S.,
 F.R.S.
 D. Hooper, Esq., F.C.S.
 T. H. D. LaTouche, Esq., B.A., F.G.S.
 Babu Monmohan Chakravarti, M.A., B.L.
 Lieut.-Colonel D. C. Phillott, 23rd Cavalry, F.F.
 Dr. Prafulla Chandra Ray, D.Sc.
 Major L. Rogers, M.D., B.S., F.R.C.P., F.R.C.S., I.M.S.
 Dr. E. D. Ross, Ph.D.
 Mahamahopadhyaya Satis Chandra Vidyabhusana, M.A.,
 Ph.D., M.R.A.S.
 Dr. G. Thibaut, Ph.D., C.I.E.
 Dr. M. W. Travers, D.Sc., F.R.S.
 A. Venis, Esq., M.A.
 Dr. G. T. Walker, M.A., F.R.S.

Elliott Prize for Scientific Research.

The subject selected for the Elliott Gold Medal for the year 1909 was "Mathematics", and only one essay has been received in competition. It has been referred to the Trustees for report.

Barclay Memorial Medal.

In connection with the Barclay Memorial Medal, the Council awarded the Medal for 1909 to Lieut.-Colonel David Prain, M.A., M.B., LL.D., F.R.S., I.M.S. (retired), in recognition of his biological researches.

Society's Premises and Property.

At the suggestion of Babu Rākhāl Dās Banerji, the Society lent a Buddhist Chaitya in bronze to the Indian Museum for exhibition with the majority of the Society's Collection.

Messrs. Martin & Co. has submitted definite proposals on the question of building new premises for the Society on its own ground, and the matter is still under consideration of the Council.

Exchange of Publications.

During 1909, the Council accepted two applications for exchange of publications, *viz.* (1) from the Vijiranana National Library, Bangkok, the Society's *Journal* and *Proceedings* and the *Memoirs* containing papers relating to the Far East for their

publications on the old literature on Siam, (2) University of Nebraska, the Society's *Journal* and *Proceedings* and the *Memoirs* for their "Studies."

Publications.

There were published during the year eleven numbers of the *Journal* and *Proceedings* (Vol. IV, Nos. 10-11; Vol. V, Nos. 1-7, Extra No. 1909, and Vol. LXXIV, Part 4) containing 883 pages and 11 plates.

Of *Memoirs*, two numbers were published (Vol. II, Nos. 8 and 9) containing 186 pages and 4 plates.

Numismatic Supplement No. 10 has been published in the *Journal* and *Proceedings*, Vol. IV, No. 10, under the editorship of the Hon. Mr. H. Nelson Wright.

There were also published Part II of the Society's Library Catalogue, and a separate number containing a Lecture on Sea Fishing by Dr. Travis Jenkins.

Mr. G. H. Tipper continued as General Secretary and editor of the *Proceedings* until November, from which month Dr. N. Annandale officiated for him. Dr. E. D. Ross left India at the end of January, and Mahāmahopādhyāya Satis Chandra Vidyābhūṣaṇa was appointed to carry on the work of the Philological Secretary and Editor of the Philological Section of the *Journal*. Mahāmahopādhyāya Satis Chandra Vidyābhūṣaṇa carried on the duties till June, when he left Calcutta on deputation. Dr. G. Thibaut acted until Dr. Ross' return. Dr. Ross returned in August and resumed charge of his office. The Natural History Section of the *Journal* was edited by Mr. I. H. Burkill, the Natural History Secretary, and the Anthropological Section of the *Journal* by Dr. N. Annandale, the Anthropological Secretary, while Mahāmahopādhyāya Haraprasad Shastri continued the work of collecting Sanskrit MSS. throughout the year. Mahāmahopādhyāya Haraprasad Shastri was also appointed officer in charge for the Search of Bardic Chronicles. Mahāmahopādhyāya Satis Chandra Vidyābhūṣaṇa carried on the duties of the Joint Philological Secretary till June, when he left Calcutta, and Dr. Thibaut was appointed to carry on the work. Dr. Thibaut continued till the end of July when Dr. Ross returned and took over charge of the work. Dr. Ross was also in charge of the Search for Arabic and Persian MSS. during January, when he left India and Mr. G. H. Tipper carried on the work. Dr. Ross returned in August and resumed charge of the Search. Major Rogers continued as Medical Secretary throughout the year. The Coin Cabinet was in charge of the Hon. Mr. H. Nelson Wright, who has reported on all Treasure-Trove Coins sent to the Society.

Philology.

In the field of Sanskritic Studies.—Mr. A. C. Sen published a lengthy article on Trita, one of the Hero-Gods of the Rig-veda; in which he tries to remove some of the difficulties which have beset scholars in East and West with regard to the double character and personality of this god. He has taken all the passages in the Rig-veda in which reference is made to Trita, and arranged these passages under groups, according to the various conflicting statements, and offered an interpretation of each. Mr. A. C. Sen tries to prove that Trita was a man, and as such worshipped the gods and performed sacrifices to propitiate them, appointing a clan of the Angiras family as his priests. He is claimed as a kinsman by a Vedic bard named Kutsa. That Trita was a man is further evident from the passages which refer to his distress; for instance, he is spoken of as having once fallen into a well. That Trita fell into a well is a fact of ordinary life, the significance of which is easily understood by those who have had occasions to travel in the jungle lands of India, where open wells are even now a terror to travellers. While setting forth his own views, Mr. Sen frequently refers to a monograph on Trita by Prof. A. Macdonell, according to whom Trita is the god of the atmosphere, or more precisely, the third form of fire or lightning, and his being thrown into a well symbolises the obscuration of the atmosphere by clouds.

Mr. D. R. Banhardkar of Poona has a long and learned article on the Origin of the Guhilot dynasty of Rajputana; and explains among other things how the Guhilots, who were originally Nâgar Brâhmaṇas, became Brahmakshatris or Khatris, exchanging their priestly for military pursuits.

Mr. Rakhal Das Banerji contributed two articles, one on the Mathura Inscriptions now in the Indian Museum, and the other on the history of Saptagrâma or Satgānw.

In the field of Buddhist Research.—Mr. Nundolal Dey contributed a very interesting article on the Vkiiramasilā Monastery, in which he deals with the foundation and subsequent history of this *Vihāra*, which was the last Buddhist University in the kingdom of Maghada. From various inferences the writer concludes that the *Vihāra* cannot have been founded earlier than the middle of the eighth century of the Christian era, and be the ruins at Pātharghātā. Mahāmohopadhyaya H. P. Shastri contributed two important articles connected with Buddhist Literature. The first on a new Manuscript of the *Buddha-Carita* found in the Divyadeva Collection in the Darbar Library, Nepal, supplies certain lacunæ left in Cowell's edition. The second deals with another Nepalese Manuscript in which the learned Shastri has discovered a hitherto unknown epic by the famous Buddhist author Aṣvaghōṣa. Dr. Satis Chandra Vidyabhusana also contributed a valuable paper on certain rare Sanskrit works on

Grammar, Lexicography and Prosody which have been recovered from Tibetan sources. He shows that Indian works continued to be translated into Tibetan, not only during the time of Bu-ston in the fourteenth century A.D., but even as late as 1684 A.D. when the Tibetan version of the Sārasvata Vyākaraṇa and of its commentary was prepared under the auspices of the Dalai Lama Tsaṅs-Dwyaṅs-Rgya-Mtsho at Potala.

Mr. Monmohan Chakravarti has contributed no less than three long articles on Archæological subjects to our *Journal* during the year under review, the most important of which is one on the Temples of Bengal and their general characteristics. The article is copiously illustrated and throws considerable light on a subject which has hitherto only been lightly touched upon. The other articles deal respectively with certain disputed or doubtful events in the History of Bengal during the early Muhammadan period, and the city of Gaur and other ancient sites in Bengal. In an article on "Certain disputed or doubtful events in the History of Bengal, No. 2" Babu Monmohan Chakravarti controverts Major Raverty's assertions that Muhammad-i-Bakht-Yar sacked Bihar and Nudiah in 589 H. and 590 H. respectively. As a fact these events seem to have taken place after 593 H. In his "Notes on Gaur and other old places in Bengal" the same writer discusses a number of important problems connected with the political history of Bengal, especially with that of its five capitals, viz: Lakhnauti, Pāṇḍua, Tāṇḍa, Rājmaḥl and Murshidābād during the Mahomedan rule 1200—1757 A.D.

Mr. William Irvine gave us a final contribution of his most valuable series of notes and observations on the Later Mughals.

"The Malla-Yastikā grant of Nandana" by Babu Paramesvar Dayal is a paper on a copper-plate inscription in Sanskrit discovered in the district of Gya. The inscription which is dated the year "232" (supposed by the writer to be of the Gupta era) records the grant by a chieftain named Nandana, of the village Malla Yastika, to a Brahman named Ravi-Svāmin of the Gargya Gotra and Yajurveda. In his article on the "Mathura Inscriptions in the Indian Museum" Babu Rakhaldas Banerjee reproduces mechanical facsimiles of the inscriptions and discusses their readings and translations as published by Dr. Mitra, Professor Dawson, and Dr. Lüders. The same writer in his paper on Saptagrāma gives a systematic account of the place from the period of its conquest by the Mahomedans to the time of the Portuguese settlement. In a note added to the paper Dr. Bloch edits an Arabic inscription left unnoticed by Dr. Blochmann, who published some time ago, in the *Journal of the Society*, most of the Arabic and Persian inscription that still exist at Saptagrāma.

Only one number of the *Memoirs* was published during the year under review, namely, A Polyglot List of Birds in Turki,

Manchu and Chinese.''' This is an attempt by Dr. Ross to utilise the resources of the great Dictionary in five languages prepared by the order of the Chinese Emperor K'ien Lung, of which only one copy is known to exist to-day, namely, the Manuscript in the British Museum. Three hundred and sixty bird names occur in this work, and of these upwards of 200 have been approximately identified.

An extra number of the *Journal* contains a Grammar and Dictionary of the Kanawari, a dialect of the Punjab. A complete structure of the dialect is clearly set forth in the grammar in the course of only 27 pages. The Dictionary, which consists of 138 pages, embodies the principal words in Roman character explained in English together with an occasional discussion of their etymology. The works have been compiled by Pandit Tikaram Joshi, and edited by Mr. H. A. Rose, I.C.S.

Mathematics and the Natural Sciences.

The total number of contributions to the Society's publications under the heading Mathematics and the Natural Sciences is seventeen: of them one is in pure mathematics, one is in mineralogy, two are in chemistry, one in geology, four in zoology, and eight in botany.

The Society published during 1909 Professor Syamdas Mukhopadhyaya's second paper on *A General Theory of Osculating Conics*.

On July 7th, 1909, Professor Sommerfeldt exhibited before it at a general meeting a modification of Websky's Geniometer which he had devised. The modification enables crystals to be measured accurately as by a theodolite-geniometer.

Mr. Hooper's paper on *Tamarisk manna* names the origin of the exudation: and the author shows that the chief sugar in it is not mannite, but a saccharose. Babu Bidhu Bhusan Dutta in a paper on *The Constituents of the roots of Arisæma concinnum, Schott, and A. speciosum, Mart.*, points out that these two famine foods contain a considerable amount of nutriment, chiefly starch. Babu Hem Chandra Das-Gupta in a short paper called attention to a fossil shell of the genus *Goniomya* from the Cretaceous rocks of Southern India, different specifically from any hitherto described. Dr. N. Annandale had exhibited before the Society on Nov. 4, 1908, specimens of the Polyzoon—*Pectinatella burmanica*, from Puri, Bengal: and a note on this exhibit was published in the Society's Proceedings during 1909. Mr. B. L. Chaudhuri, on Feb. 3rd, 1909, called the attention of the Society to the *Mosquito-larvæ eating propensity of fish of the genus Haplochilus*: and asked for co-operation in making further observations. He states that several species of this genus of small fishes are voracious feeders on the larvæ. Dr. H. Travis Jenkins at a special meeting on Feb. 17th, 1909, brought the

matter of *Sea-fishing* before the Society: his paper has been published as a pamphlet. Major Wall's valuable *Monograph of the Sea Snakes* has been issued as Memoir No. 8 of the 2nd volume: it is very completely illustrated.

Of botanic papers there are eight to mention. Babu Nibaran Chandra Bhattacharjee called attention to the way in which *Marsilia quadrifolia* only fruits when the water in which it has been growing has receded from it, and left it dry. Mr. H. Martin Leake's paper on Indian cottons, entitled *Studies in the Experimental Breeding of Indian Cottons: on buds and branching*, is of importance. His object being to breed a race of cotton suitable for cultivation at Cawnpur, with the good lint of the slow maturing cottons, but early, he has been observing the characters in bud development which lead to early or late maturity, in order to recognise such as combine with the desirable quantities in the lint, and how to set to work to breed out what is not required. Mr. E. P. Stebbing has sent to the Society his observations on *the Loranthus parasite of the Moru and Ban oaks (Quercus dilatata, Lindl., and Quercus incana, Roxb.)*: he shows how destructive the parasite is to these oaks in the neighbourhood of Naini Tal and in Kumaon: the parasite's seeds are distributed by birds; they affect more easily a lodgment if the branches of the oaks are moss-covered, and finally with the aid of boring beetles kill the limbs of the trees. In part 4 of vol. lxxiv, Sir George King's *Materials for a Flora of the Malayan Peninsula* has been continued. The part contains accounts of the orders Gesneraceæ by Mr. H. N. Ridley, and Verbenaceæ by Mr. J. Sykes Gamble: with the index, it runs to 180 pages. Mr. Burkill has diagnosed two varieties of the lemon oil grass—*Cymbopogon Martini*. Prof. P. Brühl has contributed a long and useful paper on *Recent plant immigrants into Bengal*: 234 species are named by him: their origin discussed, and the causes of these introduction. America has supplied 54·7% of these immigrants. The origin of two Indian drugs Astukhudus and Mishmi Tita have been discussed by Mr. Burkill.

Anthropology, etc.

Only two papers on anthropological subjects have been published during the year, both in the *Journal*. Both deal, directly or indirectly, with a subject of great interest to which comparatively little attention has been paid, *viz.*, the exact meaning to be attached to the words translated in English as "soul" by writers on the comparative religion of primitive peoples. The titles of the two papers are:—1. Kathi Kasham. The "Soul-departure" Feast as practised by the Tangkul Nagas, Manipur, Assam: by the Rev. Wm. Pettigrew. 2. The Theory of Souls among the Malays of the Malay Peninsula: by N. Annandale, D.Sc.

Medical Section.

Meetings of this Section have been held each month, except during the vacation, and the interest and attendance has been well maintained. The first two monthly meetings were devoted to a continuation of the discussion on Tubercular affections in India, which brought out many important facts regarding the prevalence of this very serious disease. Lt.-Col. Pilgrim dealt with the records of the European General Hospital for some years, while Major Mulvaney worked out the incidence in the Bengal jails, illustrating the prevalence in different parts of the province by charts. Drs. Pearse and Chatterjee gave figures regarding tubercle in Calcutta, where an increase in its prevalence appears to have taken place in recent years. The frequency with which it affects a number of members of a household points to its infectiousness and the necessity of the treatment of the early cases in a properly equipped sanatorium. Captain Delany contributed an interesting paper on the sanatorium treatment of phthisis, which clearly brought out the fact that climate plays a part of only secondary importance compared with careful treatment and regulation of every detail of life, which can only be secured in a fully equipped institution under a specially qualified medical man. After an exhaustive discussion extending over three meetings the following resolution was unanimously carried:—

“The Medical Section of the Asiatic Society of Bengal having discussed the subject of tuberculous disease in Bengal, and its wide prevalence, are of the opinion that it is an extremely common cause of great suffering and mortality both among the European and Indian communities, and therefore venture to call the attention of the Government of India and the local Governments to the urgent necessity for providing a properly equipped sanatorium for the treatment of early phthisis, such as has been provided, with most satisfactory results, in nearly all civilised countries.”

This resolution has been presented by Sir Thomas Holland, as President of the Society, to the Patron, His Excellency the Viceroy, and will, it is hoped, in due time bear fruit, as the discussion has established the fact that tubercular diseases cause far more suffering and death in India than even cholera and many other dreaded tropical diseases.

Another interesting discussion took place on a paper of Dr. Hossack on plague, in which he vigorously attacked the conclusions of the Bombay Plague Commission. Major Vaughan contributed a valuable paper on Small-pox based on great experience in the isolation wards at the Campbell

Hospital, and it is satisfactory to note that his good work has recently received recognition from the Government. Surgical practice was represented by a paper on Prostatectomy by Lt.-Col. Brown. At the last meeting of the year, a discussion on the prevalence of diseases of the circulatory system was opened by Lt.-Col. Drury, and will be continued at a later meeting. It already promises to make important additions to our knowledge of the subject. In addition to the above-mentioned papers, others of less importance were read, numerous rare and interesting cases and specimens were shown, while a demonstration on the precipitant test for the differentiation of human from other mammalian blood was given by Lt.-Col. Sutherland. Altogether the work of the Medical Section has been maintained at a high level.

Further additions have been made to the numbers of medical men belonging to the Society, a notable feature being the joining of recruits from nearly every province of India, largely on account of the efforts which have been made to found a Reference Medical Library by contributions of sets of Journals by the members themselves. In addition to about 50 Medical Journals, which are being received without cost to the Society, by an arrangement made by the Medical Secretary with the Editor of the *Indian Medical Gazette*, many valuable sets of back numbers of Medical Journals and other books have been presented by Surgeon-General Bomford, Lt.-Colonel Harris, Lt.-Colonel Crawford, Dr. Bentley, and the Medical Secretary. Unfortunately owing to financial and other difficulties during the three-and-a-half years that the Medical Section has been in existence, only a very small sum has been spent by the Society on the purchase of the medical books, although through the efforts of the medical members several thousand rupees worth have been added to the library. In future any additions of the medical members must depend on recruiting from beyond Calcutta, and such can only be obtained by the foundation of a Medical Reference Library, which is the crying need of the profession in India. In the annual address delivered in February 1909, the President said: "For this substantial addition to our strength (over 100 in the last five years, that is, more nearly one-fourth of the total numbers) we have to be grateful mainly to the medical profession from whom our recent members have been in a large measure recruited, and I trust that this will prove to be a source of constant supply of strength, if we find ourselves in a position, as we hope we may, to provide an adequate medical library for reference and research." It is a matter for congratulation that the Council has now arranged to make a start in this direction by providing a substantial sum in the next two years for the purchase of some standard works of reference on the different branches of medicine.

Bibliotheca Indica.

Of the 25 fasciculi of texts of different dimensions published in the *Bibliotheca Indica* series during the year under review 15 belong to Brahmanic Sanskrit, 4 to Jaina Sanskrit, 1 to Jaina Prakrit, 1 to Buddhist Sanskrit, 1 to Tibetan, and the remaining 3 to Persian literature. The fasciculi include Mr. Beveridge's translation of the Akbarnama, vol. ii, fasc. vi, Mahāmahopādhyāya Candra Kānta Tarkālaṅkāra's revised edition of the Gobhiliya Grihya-sūtra, and Yogaśāstra, fasc. ii, edited by the learned Jaina Sādhu Srī Vijayadharmā Sūri. Of the new works sanctioned last year, 6 fasciculi have been published this year, viz. :—

(1) One fasciculus (216 pages) of *Gobhila-pariśista* edited with a gloss by Mahāmahopādhyāya Candra Kānta Tarkālaṅkāra. It embodies three distinct treatises, called respectively—Snāna-sūtra (a treatise on ablution), Sandhyā-sūtra (a treatise on daily prayers), and Srāddha-kalpa (a treatise on oblations offered to the dead ancestors).

(2) One fasciculus (192 pages) of *Karma-pradīpa* (a lamp of rituals) edited by Mahāmahopādhyāya Candra Kānta Tarkālaṅkāra. It embodies the text of Kātyāyana together with the commentary of Nārāyaṇopādhyāya and a gloss by the editor himself.

(3) One fasciculus (214 pages) of *Hāralatā* edited by Pandit Kamal Krishna Smṛtitīrtha. This work, which treats mainly of mourning and rejoicing observances, is said to have been written by Aniruddha Bhaṭṭa in the eleventh century A.D.

(4) One fasciculus (96 pages) of *Sāntinātha-carita*, a Śvetāmbara Jaina work on the life and teachings of Sāntinātha the 16th Tīrthaṅkara, edited by Muni Indra Vijaya. The author of the work was Ajitaprabha Sūri, who is said to have lived in Gujarat in 1250 A.D.

(5) One fasciculus (96 pages) of *Parīkṣāmukha-sūtra*, a Digambara Jaina treatise on Logic, by Māṅikya Nandi (800 A.D.), together with the commentary of Anantavīrya (about 1050 A.D.) edited by Mahāmahopādhyāya Satis Chandra Vidyābhūṣaṇa.

(6) One fasciculus (110 pages) of a history of Gujarat in Persian, by Mīr Abū Turāb Valī (about 1574 A.D.), edited with introduction and notes by Dr. E. D. Ross.

Coins.

Nine gold, 23 silver and 31 copper coins were presented to the Society in the year under report. They may be classified as follows :—

Gold—

Kedara	..	..	..	1
Kumara Pala Deva of Qanauj	..	..	..	1
Ganga Dynasty of Kalinga	..	..	..	1
Vijayanagar	..	..	..	3
Yadavas of Devagiri	..	..	..	3

Silver—

Arakan	..	..	..	1
Gujarat Dynasty	..	..	..	5
Mughal	..	..	..	9
Sikh	..	..	..	1
Native State	..	..	..	6
East India Company	..	..	..	1

Copper—

Malwa Dynasty	..	..	..	28
Ancient North Indian	..	..	..	3

Five of the gold and 16 of the above silver coins were received from the Royal Asiatic Society, Bombay; one gold and 28 copper coins from the Central Provinces Government; one gold and seven silver coins from the Punjab Government, one gold coin from the United Provinces Government, one gold coin from the Mysore State, one silver coin from the Burma Government, and three copper coins from Lt.-Col. Godfrey, C.I.E.

The Numismatic Secretary examined and reported on fifteen cases of treasure trove comprising six gold, 641 silver, 252 bullion and 248 copper coins, or 1147 coins in all. Notices of the rarer coins discovered in the course of these examinations are to be found in the pages of the Numismatic Supplement.

Two issues of the Numismatic Supplement have appeared during the year under report, containing notes of considerable interest to Indian Numismatists. The contributors to the Numismatic Supplement were the Rev. Dr. G. P. Taylor, Lt.-Col. Vost, and Messrs. W. Irvine, H. Beveridge, R. Burn, R. B. Whitehead, Framji Jamasjee Thanawala, and H. Nelson Wright.

Report on the Search for Sanskrit Manuscripts.

During the year 1909, Mahāmahopādhyāya Haraprasāda Sāstrī had charge of the operations in search of Sanskrit Manuscripts; and he made several trips to Benares for the acquisition of Sanskrit Manuscripts, his retirement giving him leisure to devote to this business. The success of his endeavour

may be measured by the fact that 1,573 MSS. have been secured for Government.

The majority of manuscripts belong to the families of two well-known Paṇḍits and MS. collectors of Benares. (I) Hari-kr̥ṣṇa Vyāsa was a Sārasvata Brāhmaṇa of the highest distinction in the Punjab. He came early in his life to Benares, accompanying his aged mother, who wanted to lay her bones in the Holy City. His business was to recite Purāṇas and the Vedānta. He had numerous Sannyāsīs among his pupils. He was an indefatigable collector of MSS., and several distinguished Paṇḍits of Benares used to borrow MSS. from his collection. He became a recognised Paṇḍit of his time and died at the ripe age of 90 in the year 1894 A.D., leaving a collection of about 3,000 MSS. and much house property to his sons, Hṛṣīkeṣa and Vidyādhara. Vidyādhara sold a part of his share of the paternal collection to the Sanskrit College, Benares, and a part to German and English MS. collectors. Hṛṣīkeṣa died in May, 1909, and his share has been secured for the Government of India. Paṇḍita Harikr̥ṣṇa Vyāsa copied manuscripts himself and employed scribes to copy them. He got some manuscripts from the Caitanya Maṭha. Many he got from Dhunḍupāṇi Bhaṭṭa, who lived near Kāla-Bhairava, and who collected all the manuscripts of twenty different Paṇḍits. But the majority of his manuscripts came from Mannu Bhūñjā (a seller of fried grain) who used to advance provisions to indigent students and Paṇḍits on the security of their MSS.; and the forfeiture of these manuscripts enabled him to make a large collection, which he sold to Harikr̥ṣṇa. Harikr̥ṣṇa wrote several tracts in Sanskrit and was never slow in expressing his opinion on the current religious and social topics of the day.

(II) Lakṣmīnārāyaṇa Kavi was a Bhāṭ Brāhmaṇa from the Punjab. He was a pupil of Paṇḍita Thākura Datta. He was at Benares for 58 years. He was a poet, and wrote Sanskrit verses with considerable fluency. He died in 1909, aged 80. His business was to recite Saptaśatī at the temple of Annapūrṇā. He also was a noted Paṇḍita of his time, and collected a large number of manuscripts from various sources. The copy of the Mahābhārata in his collection belonged originally to Sadānanda Vyāsa, who was the chief expounder of the Purāṇas at the Vyāsa-Pīṭhā at Vālujikā-Farās in the city of Benares. During the last quarter of the 18th and the first quarter of the 19th century, Sadānanda Vyāsa was a very popular expounder of the Purāṇas, and he acquired much wealth in his profession. He had no son, and Lakṣmīnārāyaṇa Kavi got his manuscripts from his widowed daughter. Many of Sadānanda's Sanskrit works are to be found in the Benares Sanskrit College Library. Lakṣmīnārāyaṇa had a widowed daughter-in-law, who sold his collection of Sanskrit Manuscripts to the Government of India.

Besides the copy of the Mahābhārata above referred to, several Saṃhitās of the Śiva Purāna have been acquired, such as Rudra Saṃhitā, Bhauma Saṃhitā, Vāyavīya Saṃhitā, Koṭi-rudra Saṃhitā, and so on. Several nighaṅṭus, too, have been acquired, such as Rājanighaṅṭu, Sarvanighaṅṭānukramaṅikā, Madana Vinodanighaṅṭu, Bhāvaprakāsanighaṅṭu, Nāma-Ratnā-karanighaṅṭu, Gaṇanighaṅṭu and Amarakoṣanighaṅṭu.

The Hārikṛṣṇa-Collection is specially rich in manuscripts of Upaniṣad literature. Of the Vṛhadāraṅyaka, it contains commentaries by Nīlakaṅṭha and by Nityānandāśrama. It is a well-known fact that the Vṛhadāraṅyaka commented upon by Śaṅkarācārya belongs to the Kāṅvaśākhā of the White Yajurveda. But this collection has vṛtti commentaries by Nīlakaṅṭha, Dviveda Gaṅga and by Vāsudeva-Brahma Bhagavān on the Vṛhadāraṅyaka of the Mādhyandina-sākhā of the White Yajurveda. There are several Upaniṣads in this collection, commented upon by Dāmodara Śāstri, a name unknown to Aufrecht. The commentary on the Praṣna Bhāṣya by Nārāyaṇendra, and Svetāsvataropaniṣadvivaraṇa by Jñānottama appear to be altogether new. In the Bundle containing Nyāya works, there are many rare and valuable works, of which Nyāya Kautuka and Nyāya-siddhānta-saṅgraha seem to be unknown to Aufrecht. Of the Vedānta works, Vedānta-Pārijāta by Sadānanda with a commentary entitled Vedānta-Pārijāta-Maṅjarī by the author himself is not in Aufrecht, but unfortunately the MS. is incomplete. Aufrecht says in Vol. I that the name Vedānta-Vibhāvanā belong to two works, one by Nārāyaṇa Yati, and the other by Nārāyaṇācārya. But he corrects the statement in Vol. II by saying that the work and the commentary are both by Nārāyaṇatīrtha. For the statement in the first volume his authority is Keilhorn's list, and for that in the second the catalogue of Ulwar manuscripts. The MS. No. 8562 of our collection says that the text is by Nārāyaṇa Yati, and the commentary is by Nārāyaṇatīrtha. But these appear to be one and the same person, as both are disciples of Rāma Govinda and students of Vāsudeva. Of the Pūrvamīmāṃsā, there is a manuscript of a new commentary on the Sūtras by Rāmeśvara in this collection. Sāṃkhya-krama-Dīpikā purports to be the instructions imparted by Kapila to a Brāhmaṇa, and according to one manuscript to Āsuri. It is written in the form of the most ancient stage of Sūtra literature. The twenty-five Kapila Sūtras are imbedded in it. Two manuscripts were known to Dr. Rājendra Lāla Mitra, a third correctly and beautifully written has been acquired for the Government. In the Sāṃkhya tradition, Kapila comes as the first historical teacher, Āsuri the second, Boḍhu third, and Pañcaśikha fourth. Pañcaśikha is mentioned in the Śāntiparva of the Mahābhārata. Boḍhu or Bodhu is known from Chinese sources. But Āsuri is not mentioned in the Mahābhārata at

all. He seems to have been forgotten when that great work was written. If, as some manuscripts testify, Āsuri is one of the interlocutors in this work, it is really an important discovery. It is throughout written in the Sūtra form, not in the form of comparatively modern Sūtras like Kautilya's Arthaśāstra, Vatsyāyana's Kāmasūtra and even Pāṇini's Aṣṭādhyāyī, but in the more ancient form of the Sūtras of Vaśiṣṭha and Gotama. Jaimini Sutrā-kāśikā is a commentary on astrological Sūtras attributed to Jaimini. The commentator is Malayavarma, a Rājā of Kumāyun.

Abhinava Gupta was a noted Śaiva teacher of Kāśmīr. A complete copy of his commentary on the Gītā has been found in the collection acquired from Lakṣmī Nārāyaṇa Kavi. Śatarañja-kutūhala, a work on chess-play, appears to be new in this collection. Sāṃkhya-pradīpa, Vidyāmañjarī, Commentary on Sūryaśataka by Vālabhaṭṭa Pāyagunḍe, Nimvāditya-prastāva, Nimvādityalaghustava and Ratnodyota by Cirañjīva are new works found in this collection.

Of the eight schools of Sanskrit grammar, the Jinendra School is the least known. Twelve or thirteen years ago, a description of the work appeared in the pages of Indian Antiquary, and a search was at once instituted in Benares, to find if a copy of that work was available. At last a manuscript was traced in one of the richest Jaina-Upāśrayas in that city, and a copy procured for Government. From Nepal came two manuscripts, one of which, Ekallavīra-caṇḍa-Mahāroṣaṇatantra, represents the modern mystic worship of Tantrik Buddhism. No amount of persuasion would procure the work at Kathmūṇḍu from the Vajrācāryas there. They say that it is their Guhya worship and should not go to profane hands. Fortunately, however, the work has been procured this year. Sārasaṃgraha by Ratnākara Miśra is a Smṛiti compilation current at Chittagong. It is one of those works by which, on the loss of political power, the Brāhmaṇas sought to keep up their ascendancy in the Hindu society. It is written throughout on a thick bark procurable in Assam and Chittagong only.

Two volumes of the Notices of Sanskrit Manuscripts are in the press, over forty forms of which have been printed off. The volumes could not be completed owing to interruptions on account of tours, both in search of Sanskrit Manuscripts, and of Bardic Chronicles. Harikṛṣṇa-Vyāsa collection of 567 manuscripts have been fully catalogued.

Search for Arabic and Persian Manuscripts.

The year under review is the first year of second quinquennial sanction of the Government of India for the Search of Arabic and Persian Manuscripts. The Government of India

has been pleased to grant a sum of rupees five thousand a year during the quinquennial period.

During the absence of Dr. Ross from India (February-August) Mr. G. H. Tipper, M.A., F.G.S., was in charge of the work, and under his supervision a general list of the manuscripts, on the system of the previous catalogue printed under the supervision of Dr. Ross, was prepared.

On the return of Dr. Ross, travelling Maulavis were sent in different parts of India such as Benares, Delhi, Lucknow, Lahore and Hyderabad; and some valuable additions have been made to the collection. Special attention was paid to gathering information about private libraries. In Hyderabad the libraries of Nawab Sirtaj Jung, A.D.C. to H.H. the Nizam, and of Mulla Abdul Qayyum, deceased, were visited by Maulavi Hafiz Nazir Ahmad. The former contains 677 manuscripts and 2,957 printed books, out of which about 120 manuscripts are old and in good condition; among the latter are some rare and valuable MSS., particularly the *Aurang-namah* is of special interest. It is a history (in Persian Poetry) of *Shâh Jahân*, and of the civil wars among his sons till the accession of Aurang *Shah* better known in history as Aurangzib. It was composed in 1072 A.H. and seems to be the autograph copy containing some 7,800 and odd verses: the author appears to be one Haqiri.

The authorities at the request of Dr. Ross kindly permitted a transcription from the original to be made for the Society.

During the year under review, 164 manuscripts were purchased for the total sum of Rs. 3,434, and the collection is representative of almost every branch of literature and science.

Of the recent acquisition the following manuscripts are of interest:—

1. *At-Tahdîb-fit-Tafsîr*, a very old copy, dated A.H. 674, comprising the commentary on the latter half of the eighth chapter to the first half of the eleventh chapter of the Quran, by Abu Sa'ad Muhsin bin Karâmat-al-Jashami-al-Baihaqi, who flourished in the fifth century of the Muhammadan era.

2. *Bahrul Madâhib*, a rare and valuable work on theology, by an Indian author 'Abdul Wahhâb al-Qudwâ'î al-Qannauji, better known as Mun'im Khan, composed in A.H. 1125, and dedicated to the king Farrukh Siyar (1124-1131).

3. *Tuhfatul-Masihâ*, an autograph copy of a very useful medical work in Persian, dealing with the properties of simple and compound medicine; ingredients and their chemical solutions; diseases and therapeutics; prescriptions and descriptions of herbs with their medicinal properties, with some very useful prescriptions and specifics due to the author's

association with hermits and ascetics in course of his wanderings through jungles, composed in 1160-1749 by a Christian named Dominic Gregory Yutist (Jesuit) known as Dakhani Beg, son of John Yutist. The author belonged to Aleppo, but came to India and settled at Shahjahanabad, and subsequently at Udaipur under the service of Rana Jagat Singh to whom he dedicated this work.

A list of the drugs and medical ingredients with their equivalents in Portuguese is given at the beginning of the copy.

4. A splendid old copy of the Quran beautifully illuminated at the beginning, once in the possession of the celebrated Abdur Rahim Khan Khanan, the first prime minister of the Emperor Akbar. A note explaining the way of taking omen from the Koran is written in the handwriting of the Khan Khanan on the last folio of the MS. Another note at the beginning is in the handwriting of Muhammad Sâlih, the well-known author of the *Amal-i-Sâlih*, and a distinguished historian of Shah Jahan's time.

5. A very old copy (apparently written in the fourteenth century) of the ninth volume of the well-known history, by 'Izzuddin Abul Husain ash-Shaibâni known as Ibn-i-Athir, who died in 630 A.H.

6. A rare and unique collection of the ten valuable treatises (all autographs) by the following ten eminent 'Ulamâs of the 10th century A.H., who composed these works at the request of the distinguished Wazir 'Alî Shîr Nawâ'î (dated A.H. 906) for the Qazi of Samarkand, who requested the Wazir to send him specimens of their learning, particularly of the subjects in which each of them was supposed to be a master. The collection consists of Arabic treatises with a Turkish poetical version of the *Chihil Hadis* of Jami (died 898 A.H.) by the Wazir himself.

(a) A treatise in Arabic on theology, by Saifuddin Ahmad Taftâzânî.

(b) A treatise in Arabic on the Science of tradition, by Amîr Jamâluddin Ataullah-al-Husaini, died 926 A.H.

(c) A treatise in Arabic on the excellence of learning and learned men, by 'Abdul 'Azîz bin Muḥammad bin 'Abdul 'Azîz al-Abhari.

(d) A treatise in Arabic on the various readings of the Quran, by Ḥâfîz Nâsiruddin Qâri.

(e) A treatise in Arabic on Logic, Theology and Science, by Kamâluddin Shirwâni, died 905 A.H.

(f) A treatise in Arabic on Logic, by Amir 'Atâullah Mashhadi, died 913 A.H.

(g) A treatise in Arabic on Theology, by 'Oṣmân.

- (h) A short commentary on a portion (Mabhaṣ-i-Aghlât-i-Hiss) of Sharh-i-Mawâqif, by Burhânuddin 'Aṭâullah ar-Râzî, died 902 A.H.
- (i) A commentary in Arabic on 'Arba'in-i-Navavi, better known as the Ḥadîṣ of Jibrail, by Faṣîḥuddîn Nizâmi, died 917 A.H.
- (j) A Turkish poetical version of the Chihil Ḥadîṣ of Jâmi, by 'Ali Shir, died 906 A.H.

7. *Aṣ-Sirât-l-Mustaqîm wa Mukhâlifat-i-Ahl-il-Jahîm*, a controversial work against the Christians and the Jews, by Abul 'Abbâs Aḥmad bin Abdul Ḥalim bin Abd-al-Salâm bin Taimiyah (died 728 A.H.)—a very rare work, of which the only other known copy is in the Berlin Library.

Other interesting manuscripts will be noted in a later and detailed report. In conclusion, the Officer-in-charge of the Search wishes to express his satisfaction with the valuable work done by Maulavi Ḥafiz Nazîr Aḥmad; the first travelling Maulavi of the Society; Maulavi Ḥasir Razavi, the second travelling Maulavi; and Moulavi Abdul Hamid, the resident Maulavi.

Search for Bardic Chronicles.

In the annual report for the year 1908 it is stated that "during the year Major Baldock resigned his office and Mahāmāhopādhyāya Sudhākar Dvivedî, of the Benares Sanskrit College, was appointed to supervise and direct this collection of MSS. No further progress has been reported." In fact nothing was done during the year under review, and very little during the four years since the receipt of the Government of India's letter requesting the Asiatic Society to submit a preliminary report on the conservation of Bardic MSS.

The President, Sir Thomas Holland, K.C.I.E., requested Mahāmāhopādhyāya Haraprasād Shāstrî to submit a note on the subject. The note was considered in the February Council and Paṇḍit Shāstrî was appointed to take charge of the work. He travelled in Gujrat and Rājputānā for two months, from 18th September to 18th November, visiting Jaipore, Jodhpore, and Baroda, interesting chiefs and leading men of Rājputāna and Gujrat in the work. At Jaipore the Prime Minister, Nawab Sāhib, permitted the Shāstrî to see all the Thākur Sāhibs then residing at the city. The old class Thākur Sāhibs, who took a pride in their Bardic songs, were all grateful to the Government of India for undertaking a conservation of their national history which no single State could do with thoroughness, and promised their entire support. The younger generation of Thākur Sāhibs, who did not take much interest in these old-world ballads, were roused to a sense of responsibility in this matter and promised to collect their family songs, and to

make them over to the Shāstrī when he would come again. The Mahārājā of Baroda took a personal interest in the Bardic chronicles, granted the Shāstrī a private interview, and promised to help him in collecting Marhatta and Gujrati ballads in Gujrat and Katiawar. His Devan, Mr. R. C. Dutt, introduced the Shāstrī to leading men in these provinces and promised him every support. It was very little known at the time that Mr. Dutt would so soon be snatched away from his new sphere of activity by the cruel hand of death. Munshi Jagamohanlāl, Private Secretary to the Mahārāja of Ulwar, introduced the Shāstrī to an All-India Conference of literary men, then sitting at Baroda; and Sampat Rāo Gaikwar, the Mahārāja's brother, introduced him to all scholars that take an interest in this branch of National Literature.

At Jodhpore the Darbar under the advice of the enlightened Rāo Bahādur Sukdevaprasād, C.I.E., senior member of the Mehakumā Khās, undertook the collection and even the publication of the Bardic songs by their own agency and at their own cost under the expert supervision of the Asiatic Society of Bengal. The Shāstrī was requested to tell them definitely what is to be done, and he submitted a note which they approved, and according to which they issued orders, and appointed men for the collection of Bardic songs throughout their dominions. The Mahārājā himself took a personal interest in the matter, and in a private interview assured the Shāstrī that his government is prepared to do everything to further the object of the Government of India.

The Bardic songs are very little understood outside the provinces of Rājputānā and Gujrat. Thākur Sāhib Bhūr Singji of Malsisar in Sekhāvati, a nobleman thoroughly conversant with this branch of literature, gave the Shāstrī every opportunity of learning and understanding the Bardic songs, presented him with all books necessary for understanding them, and granted him long interviews and introduced him to the best and the most learned bards living at Jaipore. The Shāstrī is grateful to him for all the enlightened trouble he took for him, and records publicly the appreciation of his work. At his instance, Thākur Sāhib Keśari Singji, of Acrol, placed at his disposal the valuable collection of Bardic works belonging to his family and freely allowed him to take copies. Mahāmahopādhyāya Morārdānji, a member of the Mehakumā Khās of Jodhpore, a Cāraṇa by caste and himself a bard of superior abilities, regarded as one of the foremost men in Jodhpore, was really delighted to find that the Government of India is taking an interest in what he considered as the property of his own caste, and did everything to make the collection of Bardic collection in Marwar a success. Paṇḍit Rāmnāth Ratnu, a member of Kishenghar Council, who was living with Thākur Sāhib of Malsisar, and who has written a history of Rājputānā from

Bardic sources, gave much valuable assistance and advice and promised to help the Shāstrī at Kishenghar when he would go there. Bārhaṭ Bālābux, of Hanutia, promised to do any amount of editing work for the Asiatic Society. He has devoted his whole life in the collection and elucidation of Bardic history in Rājputānā. Munshi Devīprasād, an officer in the reserved list of the Jodhpur Darbar, was deputed by that Durbar to accompany the Shāstrī wherever he went. The Munshi's family migrated from Delhi to Bhopal, from Bhopal to Ajmere, and from Ajmere to various States in Rājputāna. His accurate and extensive knowledge of history written in Persian, and the keen interest he feels in the antiquities, archæology, and ethnology of Rājputāna was of great service to the Shāstrī. Paṇḍit Tukārām Vāman Sāligrām, with whose assistance Mr. Akworth made his now classic collection of Marhatta ballads, has made another collection of more than 60 such ballads, and is prepared to place his whole collection at the disposal of the Asiatic Society of Bengal under certain conditions. Rām Rām Mūrtaṇḍa Bhāmbūrūr, head clerk to the Private Secretary of the Mahārājā of Gaikwar, has made a very respectable collection of the Marhatta ballads of the Gaikwar family, and is likely to publish them at the cost of the Gaikwar's Government.

The difficulty of the collection of the Bardic chronicles lies in the fact that the greater portion of them are still handed down by the word of the mouth. The written literature is not even a third of the oral. The bards are proverbially bad caligraphists. The little that they have written is illegible to others. It requires to have the services of trained scribes to write these songs in legible Nagri, keeping each word distinct from the other. Copying the songs, therefore, is not only difficult but very costly. But thanks to the interest taken by Malisar and other noblemen, such scribes can, with a little search, be had in many parts of Rājputānā. Two such scribes have been already employed by the Shāstrī to copy out Surajprakāśa by Karanīdāna, a classical work on the history of Rājputāna written about 200 years ago, and the Bardic chronicles of the family of Acrol in Jaipore, or what is called the Balabhadrot family.

The area which is to be explored for the purposes of the conservation of Bardic chronicles is bounded on the north by Delhi, on the south by the Kriṣṇa, on the east by Behar, and on the west by the Indus. There is no knowing that Bardic chronicles do not exist beyond these limits. The meaning of the word Rājput is very vague. If it means anything definite it means any ruling family of high caste. A Rājput cannot subsist without a Cāraṇa. The Cāraṇa lives with the Rājput, shares all his weals and woes and by his songs keeps him straight, rouses his spirits in moments of depression, and keeps

him in the path of duty. The Rajput gives him land, villages, horses, camels, shawls, ornaments, and so forth. Great chiefs often grant him Lākh-pasāo, *i.e.*, movable and immovable property worth a lac of rupees, sometimes for one song only. Mahāmahopādhyaya Morardānji received such Lakh-pasāos three times. His grandfather Bānkidās was granted Lākh-pasāo twice in his life but was three times expelled the country for songs which too severely criticised the reigning princes' actions. In Marwar alone the Cāraṇs enjoy the revenue of nearly 380 villages with an income of over two lacs of rupees.

But the Cāraṇs are not the only people that write verses in Rājputānā. There is a song to the effect that they are clever people and they attach themselves to Rājput alone, while Bhāṭs write songs for all classes of men. The Bhāṭs seem to be the older people than Cāraṇs. They are very jealous of the Cāraṇs. While Cāraṇs say that they keep the Rājput straight, the Bhāṭs say that they lead them astray. The Bhāṭs had very great influence over the Rājputs during the earlier centuries of the Muhammadan rule. Witness the Prithvirājrāsa written by Cānd Kavi, who was a Bhāt. One of his descendants, Suradās, the contemporary of Akbar, is still regarded as a great poet in Western India. The Bhāṭs say that they are Brahmins, the Cāraṇs claim a divine descent. They think that they were descended from the celestial songsters, Cāraṇs.

Besides Bhāṭs and Cāraṇs there are Baḍoās, the genealogists, who keep the genealogies of all castes; they also write songs in honour of their clients. The Dhulies or drummers, who live by beating drums on all ceremonial occasions, also write historic songs. Bīr Bhān, an old Bardic work, was written by a Dhuli. Sevakas, a class of Sākadvīpī Brāhmaṇas, who officiate in the religious ceremonies of the Jains, also compose Bardic songs. In some parganas of Marwar these are very influential. It sometimes so happens that Rājputs themselves are writers, and their compositions are certainly valuable. Mahārājā Mān Sing, of Jodhpur, who led an eventful life during the first quarter of the nineteenth century, was not only a patron of bards, but he was a bard himself. The Brahmins also do compose. They compose not only in vernacular but also in Sanskrit. Ajitodaya and Abhayodaya, describing the warlike operations of Ajit Sing and Avaya Sing, Rājās of Marwar in the first half of the eighteenth century, are written by a Brahmin poet, and are, to all intents and purposes, Bardic chronicles.

Not only Hindus but Jains also compose. Among the Bardic chroniclers there are many Jaina Banias. The Jaina monks, too, compose songs. The Rāsas in Gujrat, from which Mr. Forbes drew his materials for the Rāsmālā, and the Dhāḍs in Rajputana, have been found in Jain Upāśrayas. The Dhāḍs are not always Bardic, but they often contain Bardic songs. Nearly

300 Dhāds have recently been published by Paṇḍit Rāmkanan of the historical Duptar of Jodhpur.

In the Muhammadan State of Tonk and in Bharatpore there are Mahammadan Bhāts who compose Bardic songs.

In the Marhatta country the Bardic songs or Povādās are composed by a caste called Gandhālis. The great Sivaji immediately after storming the fort of Singhar sent for a Gandhāli and asked him to write a Povādā. Povādā is still extant. It is a long and spirited ballad in which Sivaji is the hero. The Lāunias are generally love songs, but they often celebrate historical incidents. Ānandafandi is a well-known writer of Lāunias. The Kāṭārs sung or recited rapidly like the whirl of a sword are also historical songs among the Marhattas.

From the above it will be plain that these songs are written in Marhatti, Gujrati, Hindi, and in all the various dialects of Rājputāna, but the Rājputs and the Bards of Rājputāna invariably say that their songs are either in Piṅgal or in Ḍiṅgal. Piṅgal is a well-known word. It is the name of the first and most celebrated writer in Sanskrit on Prosody. From his name the art of Prosody has come to be termed Piṅgal. In Rājputānā all songs in religious, amorous, and descriptive subjects are said to be Piṅgal, and all Bardic historical songs Ḍiṅgals. It was extremely difficult to understand the difference between the two. Some say the distinction is that of style, others again that the distinction is in versification only, and every one is prepared to support this theory by facts. What is called Ḍiṅgal by one scholar is called Piṅgal by another. I was told at Jaipur that the great work entitled Vamśabhāskara composed at Bundi by Bārhaṭ Surajmaḷ, recently published from Jodhpur in nine volumes, is composed in the best Ḍiṅgal, but at Jodhpur it is regarded as Piṅgal. But it is believed that the explanation of Ḍiṅgal as given by Mahāmohopādhyāy Morardānji is most reasonable. He says that its substratum is Marubhāṣā or Marwari, which is an Ungad bhāṣā, unpolished language. He compares it with Ḍagar, a stone in its natural state, or a lump of earth. It takes words from Sanskrit, various Prakrits, and various vernaculars, but corrupts them in an awful manner to suit the rhyme, rhythm, alliteration, and what is called Varnamaitrī or similarity of sounds. The rules of versification are the same in Piṅgal as in Ḍiṅgal. The style also is the same. So according to Morardān, it is a language current among the bards based upon Marwari in which Sanskrit, Prakrit, and vernacular words are corrupted to suit the ear. As an instance of the corruption, he says that the word Ḍagar has been corrupted into Ḍiṅgal to alliterate with Piṅgal. Though it is an Ungad bhāṣā, unpolished language, it has many koṣas or dictionaries. The Hambīr Nāma-mālā is learnt by rote by every bard. A copy of the Piṅgal-koṣa, a more recent work, has been secured for the Government of India, and a larger koṣa work of two Cāraṅs,

father and son, containing 1,000,000 words is to be found at Jodhpur.

It would be a serious omission not to mention the name of Rev. Dr. Macalister of Jaipur who most generously gave, in perpetual loan, the collection he had made of Hindi MSS. to the Society. It contains one very valuable Bardic MS., namely, a collection of Vāts. The historical literature of Rājputānā is classified according to its degree of credibility into (I) Khyats, well known, historical (II) Vāts, known as facts, may be historical or not (III) Danta-katha, legends of uncertain credibility (IV) Gup, story-telling, known to be incredible.

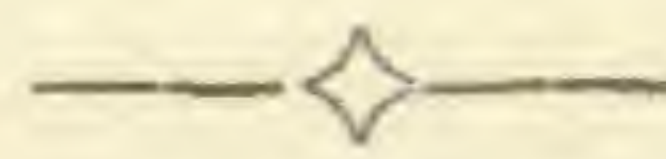
Though it is an Ungad bhāṣā or an unpolished language the gifted Brāhmaṇa of the historical Duftar, Rāmkan, has prepared a very useful grammar of the Marubhāṣā which forms the substratum of the Dīngal.

The importance of these Bardic chronicles lies in the historical information they afford. Dates are often given, but oftener not given. But they can always be ascertained, and sometimes very accurately, from Persian sources. The historical information shows the Hindu side of the question, and unless the Hindu and the Muhammadan side of every historical problem is carefully weighed, a true history of India cannot be written. For the history of Rājputāna these chronicles very often afford the only reliable information.

But the editing of these songs and these chronicles is a work of great difficulty. Each song should be preceded by the historical incident which gives rise to the song, and should be followed by a literary commentary, as the Dīngal is a very difficult language, and as sometimes words, current when the songs were written, have become obsolete or obsolescent. In the current language of Rājputānā the songs should have two commentaries, the Vātārtha and the Akṣarārtha, *i.e.*, the historical commentary and the word-for-word commentary. The difficulty of making these commentaries is enhanced by the fact that similar and same names are often found in Rājput history. But fortunately Thākur Sāhib Bhūrsingji of Malsisar has set an example how these difficulties are to be overcome. He has published a work entitled Vividhasaṃgraha containing much Bardic matter with well-ascertained historic incident for each song. It is very useful. It is sure to be a guide to future editors, but it wanted a literary commentary, and he has printed off, and is about to publish, a real Bardic work entitled the Mahārāṇā Yaśaḥprakāśa with both historical and literary commentary in easy Hindi.

The collection of Bardic chronicles, written and oral, and their publication in critical editions is, what is thought of in the present report. Their translation into English would be a question of time.

In view of the interest evinced by the chiefs and the leading families of Rājputāna and Gujrat, it is desirable that the work in search of Bardic chronicles should be continued, and if other states follow the example set by the enlightened Darbar of Jodhpur, the work will be easy and less costly, and the Government of India would earn the gratitude of their Hindu subjects for their endeavour to preserve the historical literature of Western India, as they have done by the conservation of Sanskrit and Persian manuscripts.



The Report having been read, and some copies having been distributed, the Hon. Mr. Justice Asutosh Mukhopadhyaya, Vice-President, delivered an address.

Annual Address, 1909.

GENTLEMEN,

During the last four years, it has been my privilege to address the Society thrice on the occasion of our annual gatherings. Twelve months ago, when at the end of the second term of my office as President I reviewed the history of the Society during the last quarter of a century, I hoped, in the year following, to listen to a learned and brilliant discourse from my distinguished friend Sir Thomas Holland. The absence of Sir Thomas Holland, however, has deprived us not only of his able guidance but also of what would undoubtedly have proved one of the most striking of our long series of Presidential addresses. No one regrets more keenly than Sir Thomas himself his inability to address us this evening, and it is at his special request that I have undertaken to review in brief outline the present position of the Society, and the progress of our work during the past year, and I trust I may claim your indulgence, however imperfect the execution of my task may be.

The first point upon which one naturally feels tempted to dwell on such an occasion, is the steady continuance of our material prosperity. The growth of the numerical strength of the Society, to which I referred on the last occasion, has been maintained with undiminished vigour. In fact, during the last six years the strength of the Society has been increased by nearly forty per cent. We are indebted to the members of the Medical profession, in a considerable measure, for this accession of strength. It is a matter of some satisfaction that the Council has now found it possible to provide a special grant for the formation of a Reference Medical Library, and the sum of Rs. 3,000, sanctioned for this purpose, will be spent in the

course of the present and the next year. I trust I may be permitted to express the hope that this allotment will be regarded as a practical proof of the desire of the Council to meet the special needs of one of the most important sections of the Society, and I feel no doubt that if a larger number of members is attracted to the Society by the formation of a Reference Library and by reason of the satisfactory arrangements made by our enthusiastic Medical Secretary Dr. Rogers for the supply of medical periodicals, a still more liberal grant would be found possible in future years.

The most important point in connection with the internal administration of the Society during the last year, is the decision about the creation of Fellowships, to be conferred solely in recognition of literary and scientific work. It cannot be denied that a membership of the Asiatic Society does not import any recognition of original work, and as such, has little or no attraction to the modest scholar whose main object is the advancement of knowledge. To alter the constitution of the Society so as to restrict admission only to persons distinguished for research, would obviously narrow the field of supply, and might, indeed, in a brief space of time, prove suicidal. On the other hand, if the prestige and reputation of the Society are to be maintained undiminished, the object can be attained only by the enrolment, as members, of distinguished workers in the different branches of historical, philological, and scientific activity. With the formation, however, of important departments of State, devoted to the furtherance of scientific research in special branches, with the simultaneous increase in the number of special societies for the promotion of different branches of knowledge, and with increased facilities for the publication of original researches of any degree of value and importance, it would be idle to expect that any considerable proportion of the research carried on in this country should, as it was a century ago, be communicated for the first time to the learned world through the medium of our publications. The practical monopoly which we then enjoyed in this respect, has long since disappeared, and if we desire still to attract to our ranks the best amongst the original workers in this country, we must be prepared to create a distinction which would be valued as a recognition of merit by people engaged in the task of widening the bounds of knowledge. The fellowships which have now been instituted, and the first appointments to which will be made to-night, will, I trust, prove the means of adding substantially to our strength. The success of the experiment will depend entirely upon the wisdom with which it is conducted. If we never forget, that these fellowships are to be conferred solely in recognition of historical, philological, or scientific work, irrespective of personal considerations of rank and position, if in other words, we always jealously seek in this matter to

maintain the reputation of the Society as a learned body, I am confident that the distinction will be regarded as worthy of attainment by all scientific workers in our ranks.

There is only one other matter relating to the internal management of the Society to which I must make a passing reference before I deal with the work of the year. Our building, now more than a century old, has proved to the members of this generation a costly and burdensome inheritance. We are indebted to Mr. Burkill for the advance which has been made with the scheme of a new building for the Society, which might prove adequate for our growing needs, and might at the same time prove a source of income for the maintenance and expansion of our legitimate work. The land on which our present building stands, received by us as a gift from the Government, is an asset of considerable value, and if it is properly laid out, there can be no question that a profitable building scheme may be developed. In matters, however, where large sums of money are involved, and an unprofitable investment may lead to financial disaster, we must necessarily proceed with caution. I trust, however, that the scheme now in hand will shortly be placed on a thoroughly sound financial basis.

In the course of the last twelve months, we have lost from our ranks two distinguished workers to whose memory a passing tribute is imperatively called for on an occasion like this. By the death of Sir George King, we have lost one of our brilliant members whose writings have considerably enhanced the reputation of the Society. He was not only a devoted worker in the field of Indian Botany, but deliberately chose our publications for the communication of many of his researches to the learned world, and his monumental work on the Flora of the Malayan Peninsula, of which one instalment was published so late as May last, will long be remembered as one of the most notable contributions to our Journal in recent years. Dr. Theodor Bloch, who joined the Society about 13 years ago, and was for some years its Philological Secretary, has been cut away in the prime of life, while in the pursuit of important researches in the field of Indian History and antiquities. He was a scholar of extraordinarily varied attainments, and an examination of his published works proves conclusively how heavy a loss has been caused by his premature death to investigations in the field of Indian Archæology.

I shall now turn for a moment to a brief review of the activities of our members in the different domains of research during the last twelve months. It is a matter for congratulation that the papers contributed are, on the whole, of a high standard of excellence and will tend to maintain the reputation of the Society.

In the field of Sanskrit studies, we had an important paper from Mr. Ambicacharan Sen, of a somewhat controversial

character. Mr. Sen has been engaged in systematically investigating the history of the Hero-Gods of the Rig Veda, and in the present paper which deals with Trita, he has arrived at a conclusion different from that of Professor Macdonell of Oxford. Mr. Sen maintains that this so-called Hero-God was a human being, whereas the learned Oxford Professor regards him as a personification of fire or lightning. The question is obviously of considerable interest from an anthropological point of view, and the grounds of the respective theories deserve a fresh examination and comparison.

In the field of historical research, we had a number of important papers beginning with the Buddhistic period and terminating with comparatively recent times. Mr. Nanda Lal Dey deals with the monastery at Bikramsila where the last Buddhist University in the Kingdom of Magadh was founded and maintained. He inclines to the conclusion that the University was established about the middle of the eighth century of the Christian era, a view which remains to be supported by independent testimony. Mahamahopadhyaya Haraprasad Sastri and Dr. Satis Chandra Vidyabhusan have also made notable contributions in the field of Buddhistic research. The former has discovered a new manuscript of the Buddha Charita in Nepal, which supplies many defects in manuscripts hitherto available. He has also brought to light an unknown epic by the famous Buddhist author Aswaghose. Dr. Satis Chandra has given an account of a large number of Sanskrit works on Grammar, Prosody and Lexicography which have been recovered from Tibet. It is now clear beyond reasonable doubt that the Tibetan Monks continued their task of translation of Sanskrit works quite as late as the end of the seventeenth century, and if we can induce a sufficient number of Sanskrit scholars to undertake the study of Tibetan, we are sure to recover from Tibetan sources valuable Sanskrit works which have long disappeared from this country.

When we come down to more modern times, we have interesting historical questions examined in several papers by well-known members of the Society. Babu Rakhal Das Banerjee traces the history of Saptagram or Satgaon from the time of its conquest by the Mahomedans to the period of the Portuguese Settlement. To this paper is appended a valuable note by Dr. Bloch in which he edits an inscription not included among those deciphered by the late Professor Blochmann. Babu Rakhal Das Banerjee has also discussed the Mathura inscriptions in the Indian Museum, the true reading and import of which had previously led to some difference of opinion among well-known scholars. Babu Manomohan Chakravarti, who has for many years past made a special study of problems connected with the early history of Bengal, has given us valuable articles on the temples of Bengal, and has also dealt with several disputed

and doubtful events during the early Mahomedan period, specially problems connected with the five successive capitals of Bengal during Mahomedan Rule. The only other paper in this department which demands prominent mention is the Memoir of Dr. Ross on Birds in Turki, Manchoo and Chinese. Our enthusiastic Philological Secretary also invited the attention of the members of the Society to the life and writings of the Hungarian scholar Csoma de Körös, the value of whose work as that of a pioneer in the field of Tibetan research can never be over-estimated, and we are anxiously awaiting the publication of the unique work on Tibetan vocabulary by the Hungarian scholar which has been undertaken by Dr. Ross and Dr. Satis Chandra Vidyabhushan.

In the domain of Pure and Applied Science, we have had a number of important papers. Professor Syamadas Mookerjee has continued his researches on the theory of Osculating Conics, which contain the germs of a general theory of great importance and wide application. In the field of Chemistry, we had papers of practical importance from Mr. Hooper and Babu Bidhu Bhusan Dutt, the latter of whom has analysed the constituents of two well-known famine foods. In the field of Zoology, there were valuable notes by Dr. Annandale and Mr. Chowdhuri, while Dr. Travers Jenkins gave us an interesting discourse on Sea-fishing. To these must be added the Monograph on Sea snakes by Major Wall, published as a Memoir during the course of the year. In the department of Botany, we had more than one paper likely to prove to be of great practical importance. Of these, the most important are the contributions of Mr. Leake on Indian Cottons and of Mr. Stebbing on a peculiar kind of parasites destructive of oaks in the Himalayas. We had also interesting notes by Mr. Burkill on varieties of the Lemon oil grass, and on two well-known Indian drugs. To these must be added an elaborate paper by Professor Bruhl in which he examines the subject of recent plant immigrants into Bengal. In the department of Anthropology, there were only two papers, but both of them of very special interest. Dr. Annandale and Mr. Pettigrew have both dealt with the subject of the theory of souls, the former among the Malayas and the latter amongst the people of Manipore in North Eastern India. A comparison of the two papers brings into prominence the fundamentally distinct notions on the subject which prevail amongst people in different grades of civilization, a distinction likely to be obscured, if not overlooked, when notions so widely different are sought to be represented by the same English word.

I feel myself incompetent to review even in the barest outline the work of the Medical Section. But there is one Resolution of that section, which will, I am sure, meet with universal approval from all persons interested in the mitigation of the sufferings of humanity. That Resolution emphasises

the paramount necessity for the establishment of a properly equipped sanatorium for the treatment of phthisis, a mode of treatment which has produced the most beneficial result in other civilized countries. This Resolution was presented by our President to His Excellency the Viceroy who is the Patron of our Society. I trust that, even in these times of financial stress, the complete fulfilment of the object in view will not be unduly delayed. One may, I hope without offence, further venture to maintain the opinion that if the major portion, if not the whole, of the funds raised for the purpose of a Marble Memorial to Her late Majesty the Queen Empress were devoted to the foundation of an institution for the amelioration of suffering humanity, it would be more consonant to the wishes of the people amongst whom the memory of the good Queen will ever be held in loving remembrance as that of the Mother of her beloved subjects.

There are three other departments of activity in which notable work has been accomplished by members of the Society during the last twelve months. The publication of Sanskrit and Arabic Works in the *Bibliotheca Indica* has made steady progress throughout the year. In the branch of Sanskrit studies the most important publications undoubtedly are the editions of the ancient work on Ritual by Govila which have nearly been completed under the able editorship of Pundit Chandrakanta Tarkalankar who possesses a deep and wide knowledge of the vast literature on the subject. We have also made an important advance in the matter of publication of Jain Works, one of which dealing with the subject of Logic was composed in the eighth century and is being edited by Dr. Satis Chandra, whilst the other dealing with the life and teaching of Santinath, the famous Jain Saint, is being edited by Munindra Bijoy. In the department of Arabic studies, where our members, in recent years, have not indicated the same measure of activity as in the department of Sanskrit studies, we have, I am glad to be able to say, evidence of solid work well advanced or accomplished. The most important is undoubtedly the edition brought out by Dr. Ross of Abu Turab's History of Guzrat. The work appears to have been composed towards the end of the sixteenth century and gives a valuable account of the history of Bahadur Shah, his wars with Humayun and the conquest of Guzrat by Akbar. Other historical works of considerable importance have also been pushed forward during the year. Of these, I need only mention the translations of the *Akbarnama* and *Maasir-ul-Umara* by an ex-president of the Society, Mr. Beveridge. The former deals with the history of the reign of Akbar by his great minister Abdul Fazl, and the latter gives the biographies of the great Amirs of the Indian Empire from the beginning of the reign of Akbar to the end of the 17th century. Both the works are valuable as authorities upon the

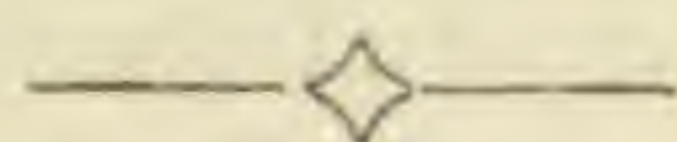
most brilliant period of Mogul rule in this country, and it is to be trusted, that the completion of these translations will not be further delayed.

The search for Sanskrit, Persian and Arabic manuscripts has been sedulously pursued during the year just brought to a close. It has some time been supposed, even by well-informed people, that as the search for Sanskrit manuscripts has been vigorously carried on now for a quarter of a century, we can only hope in future to come across duplicates of well-known works, and the discovery of unknown treasures can hardly be expected. How erroneous such an opinion is, is amply illustrated by the success which has attended the labours of Pandit Hara Prasad Sastri in this direction. In the course of the last twelve months, the Sastri has been able to secure from Benares two extensive collections of manuscripts formerly owned by two families of well-known pandits and manuscript collectors. It will necessarily take many years before these collections, which have been catalogued, are minutely examined and their contents made available to Sanskrit scholars. It is sufficient to state on the present occasion that they include a copy of the Mahabharat, portions of the Shivapurān, commentaries on the Upanishads, a new commentary on the Purva Mimansa and a Shaiva commentary on the Bhagabadgita. These and the other manuscripts require careful scrutiny, and it is a matter for regret that amongst the younger generation of Sanskrit scholars, we have not got a sufficient number of trained and enthusiastic workers, ready to devote themselves to the difficult task of appraising the new materials brought to light. It is manifest that the publication of complete editions of these works must take many years, even if funds are ever forthcoming. But it is quite practicable to have full summaries of the contents of the new works, indicating adequately the points of divergence from existing works or commentaries on the same subject, and it would not be much to our credit if work of this description is indefinitely delayed.

The search for Arabic and Persian manuscripts has also been energetically conducted during the year, and a large number of manuscripts, representing almost every branch of literature and science, has been secured, several of which are distinctly interesting from an Indian point of view. Of these, the most notable is a splendid copy of the Koran beautifully illuminated, which originally belonged to the first Prime Minister of the Emperor Akbar, and subsequently passed into the possession of a distinguished historian of the time of Shah Jehan. Here also it is obviously impossible, with the limited funds at our disposal, to hope for the early publication of any considerable portion of the new works brought to light, and what is urgently needed is a full and detailed account of works hitherto unpublished.

There is only one other topic to which I would briefly invite your attention this evening before I bring my address to a close. For several years past, we have had at our disposal the sum granted by the Government for the search of the Bardic chronicles of the Rajputs. We have hitherto found it impossible to make any satisfactory arrangement even for a preliminary survey of the work to be undertaken. Fortunately, Mahamahopadhyaya Hara Prasad Sastri, on his retirement from the Principalship of the Sanskrit College, found it possible to devote his time to an enquiry into this fascinating subject, and the offer of his services was gladly accepted by the Society. He travelled in Gujrat and Rajputana for two months last year, and the information collected by him furnishes a tolerably accurate idea of the nature and extent of the work to be accomplished. It is beyond dispute that many of these chronicles have, from time to time, been reduced to writing, but many more still exist only in the form of ballads and songs in the memory of professional and hereditary Bards, scattered throughout the various Rajput States. What is required, therefore, is not merely to collect manuscripts, more or less accurate, of the chronicles, but to take down and reduce to writing the ballads handed down by word of mouth from generation to generation. Work of this description has been undertaken and accomplished in other civilized countries, notably in England, Scotland, and Denmark. In Denmark, as is well-known the distinguished scholar Grundtvig was enabled to make a collection of ancient popular ballads, fairly complete and representative of the national character, only by means of national help. All Denmark combined to help him in his labours, and schoolmasters and clergymen in retired nooks where tradition longest lingers, actively engaged themselves in taking down ballads from the mouths of the people. If, therefore, we are to undertake a complete collection of the Bardic chronicles of Rajputana, we must have a systematic organisation for reducing to writing the ballads as they are recited by the Bards, and obviously this can be accomplished successfully only with the active co-operation of the Rajput Chiefs themselves. If this work is accomplished, as I trust it may, we shall have collected first-hand materials for a proper appreciation of the history and antiquities of one of the most important and interesting branches of the Indian race. It must not be overlooked, however, that the study of the materials when collected, must prove to be a task not wholly free from linguistic difficulties, as the chronicles, whether reduced to writing or recited from mouth to mouth, are not composed in one uniform dialect. This, however, is a matter which ought not to stand in the way of an early and a systematic effort to collect and preserve the materials which may otherwise disappear, and become irrecoverable before the lapse of many years.

I trust I have said enough to convince people unacquainted with the precise nature of the work in which our members are engaged, that the field for research in Indian history, philology, antiquities and science, is by no means restricted or exhausted. It may be conceded that discoveries of an epoch-making character cannot be made every twelve months, but there is no room for dispute that solid work on an extensive scale is accomplished by our workers from year to year, and in spite of their sustained effort, much remains yet to be accomplished. Investigations into many a recondite problem of Indian history and of the development of different branches of the Indian race have yet to be undertaken and vigorously pushed forward, and scholarly men of the younger generation may rest assured that their labours in these fields will be amply repaid. It is not in the lot of every man to be a Jones or a Prinsep, but that is no reason why a modest scholar should lose heart and abandon a field where so many others before him have worked with profit in the cause of the advancement of knowledge.



The Chairman announced the result of the election of Officers and Members of Council for 1910 as follows:—

President.

T. H. D. La Touche, Esq., B.A. (Cantab), F.G.S.

Vice-Presidents.

The Hon. Mr. Justice Asutosh Mukhopadhyaya, C.S.I., D.L.,
D.Sc., F.R.S.E.

G. Thibaut, Esq., Ph.D., C.I.E.

Mahamahopadhyaya Haraprasad Shastri, M.A.

Lieut.-Colonel F. J. Drury, M.B., I.M.S.

Secretary and Treasurer.

General Secretary:—G. H. Tipper, Esq., M.A., F.G.S.

Treasurer:—D. Hooper, Esq., F.C.S.

Additional Secretaries.

Philological Secretary:—E. D. Ross, Esq., Ph.D.

Natural History Secretary:—I. H. Burkill, Esq., M.A., F.L.S.

Anthropological Secretary:—N. Annandale, Esq., D.Sc.,
C.M.Z.S., F.L.S.

Joint Philological Secretary :—Mahamahopadhyaya Satis Chandra Vidyabhusana, M.A., Ph.D., M.R.A.S.

Medical Secretary :—Major L. Rogers, M.D., B.S., I.M.S.

Other Members of Council.

H. G. Graves, Esq., A.R.S.M.

Babu Monmohan Chakravarti, M.A., B.L.

The Hon. Abdulla al-Mamun Suhrawardy, Esq., M.A., LL.D.

Lieut.-Colonel F. P. Maynard, M.D., F.R.C.S., D.P.H., I.M.S.

The Hon. Mr. Justice H. Holmwood, I.C.S.

E. P. Harrison, Esq., Ph.D.

Lieut.-Colonel D. C. Phillott.

The Chairman also announced that the following gentlemen were elected as Fellows of the Society by a majority of votes :—

Dr. N. Annandale, D.Sc., C.M.Z.S., F.L.S.

The Hon. Mr. Justice Asutosh Mukhopadhyaya, C.S.I., M.A.,

D.L., D.Sc., F.R.A.S., F.R.S.E.

I. H. Burkill, Esq., M.A. F.L.S.

Mahamahopadhyaya Haraprasad Shastri, M.A.

Sir Thomas Holland, K.C.I.E., D.Sc., A.R.C.S., F.G.S., F.R.S.

D. Hooper, Esq., F.C.S.

T. H. D. LaTouche, Esq., B.A., F.G.S.

Babu Monmohan Chakravarti, M.A., B.L.

Lieut.-Colonel D. C. Phillott.

Dr. Prafulla Chandra Ray, D.Sc.

Major L. Rogers, M.D., B.S., F.R.C.P., F.R.C.S., I.M.S.

Dr. E. D. Ross, Ph.D.

Mahamahopadhyaya Satis Chandra Vidyabhusana, M.A., Ph.D., M.R.A.S.

Dr. G. Thibaut, Ph.D., C.I.E.

Dr. M. W. Travers, D.Sc., F.R.S.

A. Venis, Esq., M.A.

Dr. G. T. Walker, M.A., F.R.S.

The Meeting was then resolved into the Ordinary General Meeting.

T. H. D. LaTouche, Esq., B.A., F.G.S., President, in the chair.

The minutes of the last meeting were read and confirmed.

Twenty-one presentations were announced.

The General Secretary reported :—

1. That Lieut.-Colonel W. J. Bytheil, R.E., Lala Lajput Rai, Rev. J. Culshaw, and Babu Jadu Nath Sen had expressed a wish to withdraw from the Society.

2. That Babu Muksoodan Das and Mr. A. M. T. Jackson were dead.

The following five gentlemen were balloted for as Ordinary Members:—

Dr. S. K. Sen, L.R.C.P., L.R.C.S. (Edin.), 115, Lower Circular Road, Calcutta, proposed by Mr. E. Vredenburg, seconded by Dr. N. Annandale; *Mr. W. H. Buchan*, I.C.S., proposed by Mr. H. G. Graves, seconded by Captain F. H. Stewart, I.M.S.; *Sri Ram Paplai*, B.A., Extra Judicial Assistant Commissioner, Delhi, proposed by Mir Nasir Ali Khan Bahadur, seconded by Mr. J. P. Thompson; *Mr. Manahar Lal*, M.A., Minto Professor of Economics, Calcutta University, proposed by Dr. G. Thibaut, seconded by Lieut.-Colonel D. C. Phillott; *Mr. Thomas Hanson Kingdon*, proposed by Mr. W. R. Criper, seconded by Major L. Rogers, I.M.S.

The following papers were read:—

1. *Some remarks on Mundari Phonology and its treatments in the Records of the Linguistic Survey of India.*—By REV. MR. C. MEHL. *Communicated by the Philological Secretary.*

2. *The Rupee and Indian Prices.*—By H. R. PERROTT. *Communicated by the General Secretary.*

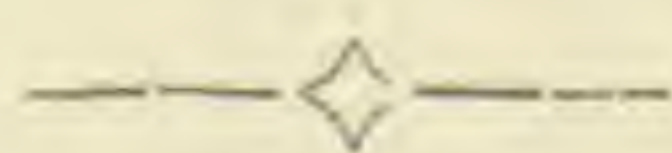
These papers will be published in a subsequent number of the *Journal*.

3. *Lisu Tribes of Burma-China Frontier.*—By A. ROSE and J. COGGIN BROWN.

This paper will be published in the *Memoirs*.

4. *Note on the strength of sulphuric acid solution used in secondary cells in India.*—By E. P. HARRISON, PH.D.

This paper will be published in a subsequent number of the *Journal*.



The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Wednesday, the 9th February, 1910, at 9-30 P.M.

LIEUT.-COLONEL F. P. MAYNARD, I.M.S., in the chair.

The following members were present:—

Dr. Adrian Caddy, Lieut.-Colonel C. R. M. Green, I.M.S., Captain R. E. Lloyd, I.M.S., Captain D. McCay, I.M.S., Captain J. W. D. Megaw, I.M.S., Lieut.-Colonel A. H. Nott, I.M.S., Major F. O'Kinealy, I.M.S., Captain H. B. Steen, I.M.S., Major L. Rogers, I.M.S., Honorary Secretary.

Visitors:—Mr. C. N. David, Captain A. E. J. Lister, I.M.S., Major E. A. Newman, I.M.S., Dr. D. Pratt, Dr. Atindranath Sen.

The minutes of the last meeting were read and confirmed.

Captain Megaw, I.M.S., showed a case of pneumothorax treated successfully by a new method, and one of stricture of the oesophagus treated by fibrolysin.

Major F. O'Kinealy, I.M.S., gave a demonstration of Direct Laryngotracheoscopy.

The Honorary Medical Secretary announced that the Council had sanctioned the sum of Rs. 3,000 for the purchase of books for the Medical Reference Library.

Lieut.-Colonel Nott, I.M.S., proposed, and Major O'Kinealy, I.M.S., seconded, a vote of thanks to the Council, which was carried unanimously.

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LIST OF MEMBERS
OF THE
ASIATIC SOCIETY OF BENGAL.

ON THE 31ST DECEMBER, 1909.

LIST OF OFFICERS AND MEMBERS OF COUNCIL
OF THE ASIATIC SOCIETY OF BENGAL
FOR THE YEAR 1909.

President :

Sir Thomas Holland, K.C.I.E., D.Sc., F.R.S., F.G.S.

Vice-Presidents :

The Hon'ble Mr. Justice Asutosh Mukhopadhyaya,
M.A., D.L., F.R.S.E.

G. Thibaut, Esq., Ph.D., C.I.E.

Mahāmahopādhyāya Haraprasād Shāstrī, M.A.

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Anthropological Secretary :—N. Annandale, Esq.,
D.Sc., C.M.Z.S.

Joint Philological Secretary :—Mahāmahopādhyāya
Satis Chandra Vidyabhusana, M.A., Ph.D.,
M.R.A.S.

Medical Secretary :—Major L. Rogers, M.D., B.Sc.,
I.M.S.

Other Members of Council.

Harinath De, Esq., M.A.

J. A. Cunningham, Esq., B.A.

H. G. Graves, Esq., A.R.S.M.

Babu Monmohan Chakravarti, M.A., B.L.

The Hon. Dr. Abdulla al-Mamun Suhrawardy, M.A.,
LL.D.

Lieut.-Colonel F. P. Maynard, M.D., F.R.C.S.,
D.P.H., I.M.S.

The Hon. Mr. Justice H. Holmwood, I.C.S.

LIST OF ORDINARY MEMBERS.

R. = Resident. N.R. = Non-Resident. A. = Absent. L.M. = Life Member.
F.M. = Foreign Member.

An Asterisk is prefixed to the names of the Fellows of the Society.

N.B.—Members who have changed their residence since the list was drawn up are requested to give intimation of such a change to the Honorary General Secretary, in order that the necessary alteration may be made in the subsequent edition. Errors or omissions in the following list should also be communicated to the Honorary General Secretary.

Members who are about to leave India and do not intend to return are particularly requested to notify to the Honorary General Secretary whether it is their desire to continue Members of the Society; otherwise, in accordance with Rule 40 of the rules, their names will be removed from the list at the expiration of three years from the time of their leaving India.

Date of Election.		
1907 June 5.	R.	The Hon. Dr. Abdulla al-Mamun Suhrawardy, M.A., D.LITT., LL.D., Barrister-at-Law. 34, <i>Elliott Road, Calcutta.</i>
1909 May 5.	N.R.	Abdul-Kalam Azad, Maulavi. <i>Bombay.</i>
1909 Mar. 3.	N.R.	Abdul Latif, Syed, Deputy Magistrate. <i>Patuakhali.</i>
1909 July 7.	R.	Abdur Rahim, Maulavi. 51, <i>Taltolla Lane, Calcutta.</i>
1894 Sept. 27.	N.R.	Abdul Wali, Maulavi, District Sub-Registrar. <i>Purulia.</i>
1895 May 1.	R.	Abdus Salam, Maulavi, M.A., Presidency Magistrate. <i>Calcutta.</i>
1901 April 3.	N.R.	Abhaya Sankar Guha, Extra Assistant Commissioner. <i>Nowgong.</i>
1902 June 4.	N.R.	Abu Ahmed Ghuznavi. <i>Mymensingh.</i>
1903 April 1.	N.R.	Abul Aâs, Maulavi Sayid, Raees and Zemin-dar. <i>Langar Toli, Bankipore.</i>
1907 April 3.	N.R.	Abul Faiz Muhammad Abdul Ali, M.A., Deputy Magistrate. <i>Netrokona, Mymensingh.</i>
1904 Sept. 28.	N.R.	Ahmad Hasain Khan, Munshi. <i>Jhelum.</i>
1888 April 4.	R.	Ahmud, Shams-ul-Ulama Maulavi. 3, <i>Maulavi's Lane, Calcutta.</i>
1898 Nov. 2.	N.R.	Akshaya Kumar Maitra, B.A., B.L. <i>Rajshahi.</i>
1885 Mar. 4.	L.M.	Ali Bilgrani, Sayid, B.A., A.R.S.M., F.G.S. <i>Chudderghaut, Hyderabad.</i>
1899 Jan. 4.	N.R.	Ali Hussain Khan, Nawab. <i>Lucknow.</i>
1903 Oct. 28.	R.	Allan, Dr. Alexander Smith, M.B. 3, <i>Esplanade, East, Calcutta.</i>

Date of Election.		
1902 Feb. 5.	R.	Ambica Churan Sen, I.C.S. (retired). 57, Lansdowne Road, Calcutta.
1898 Feb. 2.	R.	Amrita Lal Bose, Dramatist. 9-2, Ram Chandra Maitra's Lane, Calcutta.
1897 Jan. 6.	R.	Amrita Lal Sircar, Dr., F.C.S. 51, Sankarittolla Lane, Calcutta.
1905 July 5.	R.	Amulya Charan Ghosh Vidyabhusana. 66, Manicktolla Street, Calcutta.
1893 Aug. 31.	A.	Anderson, Major Adam Rivers Steele, B.A., M.B., D.P.H., C.M.Z.S., I.M.S. Europe.
1884 Sept. 3.	A.	Anderson, J. A. Europe.
1904 Sept. 28.	R.	*Annandale, Nelson, D.Sc., C.M.Z.S., Superintendent, Indian Museum. Calcutta. [cutta.
1909 May 5.	R.	Ashgar, A. 8, European Asylum Lane, Cal-
1904 Jan. 6.	R.	Ashton, Ralph Percy. 4, Fairlie Place, Calcutta.
1902 Aug. 27.	R.	Ashutosh Chaudhuri, Barrister-at-Law. 47, Old Ballygunge, Calcutta.
1886 May 5.	R.	*Asutosh Mukhopadhyaya, The Hon'ble Mr. Justice, M.A., D.L., F.R.A.S., F.R.S.E., Judge, High Court. Calcutta.
1904 July 6.	N.R.	Aulad Hasan, Khan Bahadur, Sayid, Inspector of Registration. Dacca.
1870 Feb. 2.	L.M.	Baden-Powell, Baden Henry, M.A., C.I.E. Ferlys Lodge, 29, Banbury Road, Oxford, England.
1909 Mar. 3.	R.	Badri Das Goenka, B.A. 31, Banstolla Street, Calcutta.
1891 Mar. 4.	N.R.	Baillie, Duncan Colvin, I.C.S., Member, Board of Revenue, North-West Provinces of Agra and Oudh. Allahabad.
1900 Aug. 29.	R.	Baker, His Honour Sir Edward Norman, K.C.S.I., I.C.S., Lieutenant-Governor of Bengal. Calcutta.
1893 Sept. 28.	R.	Banawari Lala Chaudhuri, B.Sc., Edin. 120, Lower Circular Road, Calcutta.
1891 Feb. 4.	N.R.	Ban Behari Kapur, Raja, C.S.I. Burdwan.
1869 Dec. 1.	L.M.	Barker, Robert Arnold, M.D., F.G.S. Fairfield, Oxford Road, Reading, Berkshire, England.
1898 Mar. 2.	N.R.	Barnes, Herbert Charles, M.A., I.C.S., Magistrate and Collector. Shillong.
1908 Nov. 4.	N.R.	Barnes, James Hector, B.Sc., F.I.C., F.C.S., Principal, Punjab Agricultural College, and Agricultural Chemist, Punjab Govt. Lyallpur, Punjab.
1907 Feb. 6.	N.R.	Barrow, John Rothney, Inspector of Schools. Jorhat, Assam.
1902 May 7.	R.	Bartlett, Edward William John. 4, Esplanade, East, Calcutta.

Date of Election.		
1895 July 3.	L.M.	Beatson-Bell, Nicholas Dodd, B.A., C.I.E., I.C.S. <i>Europe.</i>
1907 Feb. 6.	N.R.	Bell, Charles Alfred, I.C.S. <i>Gangtok, Sikkim.</i>
1909 April 7.	N.R.	Bentley, Charles A., M.B., D.P.H. <i>Jalpaiguri.</i>
1898 June 1.	R.	Bepin Behari Gupta. <i>Hooghly College, Chinsura.</i>
1880 April 7.	N.R.	Bepin Chandra Rai. <i>Giridih, Chota Nagpur.</i>
1906 Nov. 7.	N.R.	Bergtheil, Cyril. <i>Sirseah, Mozufferpore.</i>
1876 Nov. 15.	F.M.	Beveridge, Henry, I.C.S. (retired). <i>Pitfold, Shottermill, Haslemere, Surrey, England.</i>
1893 Mar. 1.	N.R.	Bharat Singh, Maharaja Kumara Sirdar, I.C.S. (retired). <i>Allahabad.</i>
1903 Feb. 4.	N.R.	Bhawani Das Batra, Rai, M.A., Revenue Minister, Jammu and Kashmir State. <i>Sri- nagar, Kashmir.</i>
1902 Mar. 5.	R.	Binoy Krishna Deb, Raja Bahadur. 106-1, <i>Grey Street, Calcutta.</i>
1907 Oct. 30.	R.	Birendra Nath Ghosh, Dr., L.M.S., Medical Practitioner. 109, <i>College Street, Calcutta.</i>
1908 Nov. 4.	N.R.	Bisvesvar Bhattacharji, Deputy Magistrate and Deputy Collector. <i>Faridpur.</i>
1893 Feb. 1.	N.R.	Bodding, The Revd. P. O. <i>Mahalpahari, viâ Rampore Haut, Sonthal Parganas.</i>
1909 July 7.	R.	Bonerji Ratnakrishna Curran. 6, <i>Park Street, Calcutta.</i>
1895 July 3.	N.R.	Bonham-Carter, Norman, I.C.S. <i>Shillong.</i>
1906 Sept. 19.	N.R.	Bradley-Birt, Francis Bradley, I.C.S. <i>Khulna.</i>
1909 Mar. 3.	R.	Brajlal Mukherjee, M.A. 9, <i>Old Post Office Street, Calcutta.</i>
1904 July 6.	R.	Brajendra Nath De, M.A., I.C.S., Magistrate and Collector. <i>Chinsura.</i> [<i>Agra.</i>
1906 Nov. 7.	N.R.	Bramley, Percy, Superintendent of Police.
1909 April 7.	R.	Briz Mohan Goenka. 24, <i>Banstolla Street, Calcutta.</i> [<i>Cooch Behar.</i>
1908 July 1.	N.R.	Brojendra Nath Seal, M.A., Victoria College.
1906 July 4.	R.	Brown, Lieut.-Col. Edwin Harold, M.D., I.M.S. 2, <i>Alipur Road, Calcutta.</i>
1907 July 3.	N.R.	Brown, John Coggin, B.Sc., F.G.S., F.C.S., Assis- tant Superintendent, Geological Survey of India. <i>Tengyueh viâ Bhamo.</i>
1909 Oct. 6.	R.	Brown, Percy, A.R.C.A., Government School of Art. <i>Calcutta.</i>
1905 Mar. 1.	N.R.	Brown, William Barclay, I.C.S., District and Sessions Judge. <i>Kamrup.</i>
1907 June 5.	N.R.	Browning, Colin Harington, M.A. <i>Shillong.</i>
1909 Oct. 6.	R.	Brühl, Paul Johannes, Civil Engineering College, Sibpur, <i>Howrah.</i> [<i>Europe.</i>
1901 Sept. 25.	A.	Buchanan, Lieut.-Col. Walter James, I.M.S.
1901 June 5.	R.	*Burkill, Isaac Henry, M.A., Reporter on Eco- nomic Products to the Government of India. <i>Calcutta.</i>

Date of Election.		
1896 Jan. 8.	N.R.	Burn, Richard, I.C.S. <i>Gonda, Oude.</i>
1900 May 2.	N.R.	Butcher, Flora, M.D. C/o Messrs. Grindlay Groom & Co., <i>Bombay.</i>
1898 Sept. 30.	A.	Cable, Sir Ernest, <i>Kt. Europe.</i>
1906 Dec. 5.	R.	Caddy, Dr. Adrian, M.D. (Lond.), F.R.C.S. (Eng.), D.P.H., R.C.P.S. (Lond.). 2-2, <i>Harrington Street, Calcutta.</i>
1906 July 4.	A.	Caddy, Dr. Arnold, M.D., F.R.C.S. <i>Europe.</i>
1907 Apl. 3.	R.	Calvert, Major John Telfer, M.B., M.R.C.P., I.M.S. 14, <i>Russell Street, Calcutta.</i>
1907 Mar. 6.	L.M.	Camaji Byramji Navroji Cama, B.A., LL.B., I.C.S. <i>Chhindwara.</i>
1901 Mar. 6.	N.R.	Campbell, William Edgar Marmaduke, I.C.S., Magistrate and Collector. <i>Hamirpur.</i>
1895 July 3.	R.	Carlyle, Robert Warrant, C.I.E., I.C.S., Secretary to the Government of India, Revenue and Agriculture Department. <i>Calcutta.</i>
1899 June 7.	N.R.	Chandra Kumar Sarkar. <i>Kawkanik, Moulmein.</i>
1901 Aug. 7.	R.	Chandra Narayan Singh, Rai Bahadur. 82, <i>Lansdowne Road, Calcutta.</i>
1906 Jan. 3.	R.	Chapman, John Alexander. 11, <i>Loudon Street, Calcutta.</i>
1904 July 6.	N.R.	Charles, Albert Pendrill, B.A., I.C.S., Registrar, Court of Judicial Commissioner. <i>Lucknow.</i>
1909 Feb. 3.	N.R.	Charu Deb Banerjee, B.A., LL.B. <i>Allahabad.</i>
1903 Sep. 23.	F.M.	Chinta Ito, Professor Dr. <i>Engineering College, Tokyo, Japan.</i>
1907 July 3.	R.	Christie, William Alexander Kynock, B.Sc., Ph.D., Chemist, Geological Survey of India. <i>Calcutta.</i>
1909 Nov. 3.	N.R.	Christophers, Capt. S. R., Research Laboratory. <i>Kasauli.</i>
1906 Nov. 7.	N.R.	Clarke, Geoffrey Roth, I.C.S. <i>Postmaster General, Allahabad.</i>
1907 Dec. 4.	R.	Cohen, Rachel Nathaniel, M.B., F.R.C.S., Lady Supdt., Lady Dufferin Victoria Hospital. <i>Calcutta.</i>
1906 July 4.	R.	Connor, Captain Frank Powell, F.R.C.S. (Eng.), L.R.C.P. (Lond.), I.M.S., Medical College. <i>Calcutta.</i>
1908 Jan. 1.	N.R.	Conway-Poole, Capt. Ivan Maxwell, Indian Army, Supply and Transport Corps. <i>Peshawar.</i>
1908 Nov. 4.	N.R.	Cook, Capt. Lewis, I.M.S., Lunatic Asylum. <i>Midnapur.</i>
1903 Aug. 26.	R.	Copleston, The Most Revd. Dr. Reginald Stephen, D.D. <i>Lord Bishop of Calcutta.</i>
1898 June 1.	F.M.	Cordier, Dr. Palmyr. 37, <i>Rue des Grange, Besançons (Douls), Paris, France.</i>

Date of Election.		
1907 July 3.	R.	Cotter, Gerald de Purcell, Assistant Superintendent, Geological Survey of India. <i>Calcutta.</i>
1908 Jan. 1.	A.	Crake, Dr. Herbert Milverton. <i>Europe.</i>
1901 June 5.	R.	Crawford, Lieut.-Col. Dirom Grey, I.M.S., Civil Surgeon. <i>Hughli.</i>
1876 Mar. 1.	F.M.	Crawford, James, B.A., I.C.S. (retired). <i>Thornwood, Uddington, Lanarkshire, Scotland.</i>
1887 Aug. 25.	R.	Criper, William Risdon, F.C.S., F.I.C., A.R.S.M. <i>Konnagar, E.I.R.</i>
1895 July 3.	R.	Cumming, John Ghest, I.C.S. 8, <i>Elysium Row, Calcutta.</i>
1905 July 5.	N.R.	Cunningham, John Arthur, B.A. <i>Purulia.</i>
1908 Sept. 2.	R.	Cunningham, John Richard, M.A., Assistant Director of Public Instruction, Bengal. <i>Calcutta.</i>
1873 Dec. 3.	F.M.	Dames, Mansel Longworth, I.C.S. (retired). <i>Algeria, Enfield, Middlesex, England.</i>
1885 Nov. 4.	R.	Damodar Das Barman. 55, <i>Clive Street, Calcutta.</i>
1904 Aug. 3.	N.R.	Dattalraya Balwant Parasnis. <i>Satara.</i>
1906 Dec. 5.	A.	Deare, Major Benjamin Hobbs, M.R.C.S. (Eng.), L.R.C.P. (Lond.), D.P.H. (Cantab.), I.M.S. <i>Europe.</i>
1904 Sept. 28.	N.R.	DeCourcy, William Bleunerhasset. <i>Silchar P.O., Cachar.</i>
1906 Dec. 5.	N.R.	Dentith, Arthur William, I.C.S. <i>Cooch Behar.</i>
1909 Mar. 3.	R.	Deva Prasad Sarbadhikari, Hon., M.A., B.L. 13, <i>Jeliapara Lane, Calcutta.</i>
1898 Jan. 5.	F.M.	Dods, William Kane, C/o Hongkong and Shanghai Banking Corporation. <i>Calcutta.</i>
1906 Dec. 5.	N.R.	Donnan, Major William, Indian Army, Examiner of Ordnance Factory Accounts in India. <i>Lucknow.</i> [Madras.]
1909 Nov. 3.	N.R.	Donovan, Major C., I.M.S., General Hospital.
1902 July 2.	A.	Doxey, Frederick. <i>Europe.</i>
1909 Aug. 4.	F.M.	Drake-Brockman, Digby Livingstone, I.C.S. C/o Messrs. Thomas Cook & Son, <i>Ludgate Circus, London</i>
1892 Sept. 22.	R.	Drury, Lieut.-Col Francis James, I.M.S. <i>Medical College, Calcutta.</i>
1889 Jan. 2.	A.	Dudgeon, Gerald Cecil. <i>Europe.</i>
1905 April 5.	N.R.	Dunnett, James Macdonald, I.C.S., Settlement Officer. <i>Ludhiana.</i> <i>cutta.</i>
1909 April 7.	R.	Durga Das Bhatta, 52/1, <i>Harrison Road, Calcutta.</i>
1908 April 1.	R.	Duval, Herbert Philip, M.A., I.C.S., United Service Club. <i>Calcutta.</i>
1905 May 3.	R.	Dwarkanath Chakravarti, M.A., B.L., Vakil, High Court. <i>Calcutta.</i>

Date of Election.		
1906 Nov. 7.	N.R.	Eadie, Lieut. John Inglis, 97, <i>Deccan Infantry, Bolaram.</i>
1907 Sept. 25.	A.	Eakins, Dr. Olin, M.D. <i>Europe.</i>
1909 July 4.	N.R.	Earle, The Hon. Mr. Archdale, I.C.S. Chairman, <i>Municipal Corporation, Calcutta.</i>
1903 May 6.	N.R.	Edwards, Walter Noel. <i>Sootea P.O., Tezpur, Assam.</i>
1901 Mar. 6.	A.	Fergusson, J. C. <i>Europe.</i>
1904 Aug. 3.	R.	Fermor, Lewis Leigh, A.R.S.M., B.Sc., F.G.S., Assistant Superintendent, Geological Survey of India. <i>Calcutta.</i>
1908 Sept. 2.	N.R.	Fida Ali, Syed, <i>Arrah.</i>
1906 Dec. 5.	R.	Finck, Herman H. G., M.D., Surgeon to the Consulate-General for Germany. 19, <i>Camac Street, Calcutta.</i>
1906 Oct. 31.	N.R.	Finlow, Robert Steel, Fibre Expert to the Govt. of Eastern Bengal and Assam. <i>Pusa, Tirhoot.</i>
1907 Mar. 6.	N.R.	Firminger, Revd. Walter Kelly, M.A., B.D., F.R.G.S. <i>Shillong.</i>
1908 Mar. 4.	N.R.	Fitzgerald, Henry George, Superintendent of Police. <i>Kohat.</i>
1906 Dec. 5.	R.	Foster, Captain Henry Bertram, I.M.S., Presidency General Hospital. <i>Calcutta.</i>
1908 Sept. 2.	N.R.	Foster, Lieut. Rodney, Indian Army, Survey of India. <i>Hazaribagh.</i>
1904 May 4.	N.R.	Framjee Jamasjee Thanawala. 90, <i>Cawasjee Patel Street, Fort, Bombay.</i>
1905 Jan. 4.	A.	Fraser, Sir Andrew Henderson Leith, M.A., LL.D., K.C.S.I. <i>Europe.</i>
1902 April 2.	A.	Fuller, Sir Joseph Bampfylde, K.C.S.I. <i>Europe.</i>
1903 Mar. 4.	R.	Gage, Captain Andrew Thomas, M.A., M.B., B.Sc., F.L.S., I.M.S. <i>Royal Botanic Garden, Sibpur, Howrah.</i>
1893 Jan. 11.	A.	Gait, Edward Albert, C.I.E., I.C.S. <i>Europe.</i>
1908 Feb. 5.	N.R.	Gardener-Brown, John Gerald Gardener, M.A., Muir Central College. <i>Allahabad.</i>
1907 Sept. 25.	N.R.	Gibbon, Captain Charles Monk. 89 <i>Royal Irish Fusiliers. United Service Club, Simla.</i>
1906 Feb. 7.	R.	Girindra Kumar Sen. 100, <i>Grey Street, Calcutta.</i>
1908 Feb. 5.	R.	Girindra Nath Mukhopadhyaya, Dr., B.A., M.B. 80, <i>Russa Road, North, Bhowanipur, Calcutta.</i>
1902 Feb. 5.	R.	Girish Chandra Ghosh, Dramatist. 13, <i>Bosepara Lane, Calcutta.</i>
1889 June 5.	N.R.	Girjanath Roy, Maharaja. <i>Dinagepore.</i>
1909 Jan. 6.	R.	Goganendranath Tagore. 6, <i>Dwarkanath Tagore's Lane, Calcutta.</i>

Date of Election.		
1908 Feb. 5.	R.	Gopal Chandra Chatterji, Dr., Medical College. <i>Calcutta.</i>
1909 Jan. 6.	R.	Gourlay, William Robert, I.C.S. 8, <i>Elysium Row, Calcutta.</i>
1901 Aug. 28.	N.R.	Govinda Das. <i>Durgakund, Benares City.</i>
1909 Jan. 6.	R.	Govinda Lall Mukherjee. 9, <i>Old Post Office Street, Calcutta.</i>
1905 May 3.	R.	Graves, Henry George, A.R.S.M. <i>United Service Club, Calcutta.</i>
1907 June 5.	R.	Green, Lieut.-Col. Charles Robert Mortimer, M.D., F.R.C.S., I.M.S. 6, <i>Harrington Street, Calcutta.</i>
1900 Dec. 5.	L.M.	Grieve, James Wyndham Alleyne, Deputy Conservator of Forests. <i>Darjeeling.</i>
1904 Jan. 6.	N.R.	Gulab Shanker Dev Sharman, F.T.S., M.R.A.S., Private Secretary to H.H. the Maharani Sahiba of Bettiah. <i>Allahabad.</i>
1901 Mar. 6.	N.R.	Habibur Rahman Khan, Maulavi, Raees. <i>Bhikanpur, Dt. Aligarh.</i>
1892 Jan. 6.	F.M.	Haig, Lieut.-Col. Wolseley, Indian Army, c/o Messrs. H. S. King & Co., 9, <i>Pall Mall, London, S.W.</i>
1907 Aug. 7.	N.R.	Haines, Henry Haselfoot, F.C.S., F.L.S. <i>Nagpur.</i>
1909 Nov. 3.	R.	Hale, Alexander, M.I.C.E.I. 2, <i>Grand Trunk Road, Howrah.</i>
1908 June 3.	R.	Hallowes, Kenneth Alexander Knight, B.A., A.R.S.M., F.G.S., Assistant Superintendent, Geological Survey of India. <i>Calcutta.</i>
1904 Sept. 28.	R.	Hallward, Norman Leslie. 6, <i>Camac Street, Calcutta.</i>
1889 Mar. 6.	N.R.	Hanuman Prasad, Raees and Zemindar. <i>Chunar.</i>
1885 Feb. 4.	R.	*Haraprasad Shastri, Mahamahopadhyaya, M.A. 12/1/4, <i>Pataldanga Street, Calcutta.</i>
1907 Feb. 6.	N.R.	Hare, His Honour Sir Lancelot, K.C.S.I., I.C.S., Lieutenant-Governor of Eastern Bengal and Assam. <i>Shillong.</i>
1904 Jan. 6.	R.	Harendra Krishna Mukerjee, M.A. 54, <i>Sankaripara Road, Calcutta.</i>
1903 June 3.	R.	Harinath De, M.A., Librarian, Imperial Library. <i>Calcutta.</i>
190 Dec. 3.	N.R.	Harnarain Shastri, Goswami. <i>Hindu College, Delhi.</i>
1908 Feb. 5.	R.	Harniman, B. G. 15, <i>Ballygunge, Calcutta.</i>
1906 Dec. 5.	N.R.	Harris, Lieut. G. 56 <i>Infantry, F.F., Hangu.</i>
1906 July 4.	N.R.	Harris, Lt.-Col. George Francis Angelo, M.D., F.R.C.P., I.M.S. <i>Lucknow.</i>

Date of Election.		
1908 April 1.	R.	Harrison, Edward Philip, ph.D. Presidency College, <i>Calcutta</i> .
1884 Mar. 5.	L.M.	Hassan Ali Mirza, Sir Wala Qadr Sayid, G.C.I.E. <i>Murshidabad</i> .
1897 Feb. 3.	R.	Hayden, Henry Herbert, B.A., B.E., F.G.S., Superintendent, Geological Survey of India. <i>Calcutta</i> .
1906 Dec. 5.	A.	Hayward, Major William Davey, M.B., I.M.S. <i>Europe</i> .
1905 July 5.	N.R.	Hemchandra Gossain. Extra Assistant Commissioner. <i>Tezpur</i> .
1905 May 3.	N.R.	Hemendra Prasad Ghose, Zemindar and Litterateur. <i>Prasad Lodge, Changalbha P.O., Jessore</i> .
1907 Nov. 6.	N.R.	Hepper. Captain Lionel Lees. <i>Royal Artillery, Maymyo, Burma</i> .
1908 June 3.	R.	Herron, Alexander Macmillan, B.Sc., Asst. Supdt., Geological Survey of India. <i>Calcutta</i> .
1908 June 3.	R.	Hira Lall Bose, Rai Bahadur, Dr. 25/2, <i>Mott's Lane, Calcutta</i> .
1908 April 1.	N.R.	Hirst, Capt. Frederick Christian, Indian Army. <i>Shillong</i> .
1906 Dec. 5.	N.R.	Hirst, Reginald John, District Superintendent of Police. <i>Burdwan</i> .
1891 July 1.	R.	*Holland, Sir Thomas Henry, K.C.I.E., D.Sc., A.R.C.S., F.G.S., F.R.S., Director, Geological Survey of India. <i>Calcutta</i> .
1908 July 1.	R.	Holmwood, The Hon. Mr. Justice Herbert, I.C.S. 22, <i>Theatre Road, Calcutta</i> . [<i>cutta</i> .
1898 Feb. 2.	R.	*Hooper, David, F.C.S. 1, <i>Sudder Street, Calcutta</i> .
1909 May 5.	N.R.	Horovitz, Dr. Josef, M.A.O. College. <i>Ali-garh</i> .
1901 Dec. 4.	R.	Hossack, Dr. William Cardiff. 26, <i>Mirzapur Street, Calcutta</i> .
1873 Jan. 2.	L.M.	Houstoun, George L., F.G.S. <i>Johnstone Castle, Renfrewshire, Scotland</i> .
1906 May 2.	N.R.	Howell, Evelyn Berkeley, B.A., I.C.S. <i>Ajmir</i> .
1905 July 5.	N.R.	Humphries, Edgar de Montfort, B.A., I.C.S., Settlement Officer. <i>Pertabgarh</i> .
1908 June 3.	A	Hutchinson, C. M. <i>Europe</i> .
1908 Mar. 4.	F.M.	Hyde, J. H. 18, <i>Rue Adolphe-Yvon, Paris</i> .
1909 Mar. 3.	R.	Indu Madhab Mullick, Dr., M.A., M.D. 10, <i>Shama Charan Dey's Street, Calcutta</i> .
1906 Dec. 5.	N.R.	Jack, James Charles, I.C.S., Settlement Officer, Eastern Bengal and Assam. <i>Faridpur</i> .
1904 Jan. 6.	N.R.	Jackson, Victor Herbert, M.A. <i>Patna College, Bankipur</i> .
1908 Nov. 4.	N.R.	Jacob, Sydney Montague, I.C.S. <i>Rawalpindi</i> .

Date of Election.		
1898 Mar. 2.	N.R.	Jadunath Sarkar. <i>Patna College, Bankipur.</i>
1903 July 1.	L.M.	Jagadindranath Roy, Maharaja Bahadur. 6, <i>Lansdowne Road, Calcutta.</i>
1895 Mar. 6.	R.	Jagadis Chandra Bose, M.A., D.Sc., C.I.E., Presidency College <i>Calcutta.</i>
1907 Dy 4.	R.	James, Henry Rosher, M.A., Bengal Education Service, Principal, Presidency College. <i>Calcutta.</i>
1895 Aug. 29.	N.R.	Jatindranath Rai Chaudhuri, M.A., B.L., Zemindar. <i>Taki, Jessore.</i>
1907 Sept. 25.	N.R.	Jenkins, Owen Francis, I.C.S., Offg. Joint Magistrate. <i>Budaon, U.P.</i>
1889 Jan. 2.	R.	Jogendra Chandra Ghose, The Hon. Mr., M.A., B.L., Pleader, High Court. 25, <i>Hurrish Chunder Mookerjee Road, Bhowanipore, Calcutta.</i>
1896 Mar. 4.	R.	Jogendra Nath Das-Gupta, B.A. (Oxon.), Barrister-at-Law. <i>Hughli College, Chinsura.</i>
1902 May 7.	R.	Jogendra Nath Sen, Vidyabhusana, M.A. 31, <i>Prasanna Kumar Tugore's Street, Calcutta.</i>
1908 June 3.	R.	Jones, Herbert Cecil, A.R.S.M., A.R.C.S., F.G.S., Asst. Supdt., Geological Survey of India. <i>Calcutta.</i>
1906 July 4.	R.	Jones, Lieut.-Col. John Lloyd, M.B. (Dub.), M.R.C.S. (Lond.), D.P.H. (Cantab.), F.C.A., I.M.S. <i>United Service Club, Calcutta.</i>
1908 Dec. 2.	A.	Jordon, Lieut.-Colonel J., I.M.S. <i>Europe.</i>
1899 Sep. 29.	R.	Jotindra Nath Mukharji, B.A., Solicitor. 3, <i>Old Post Office Street, Calcutta.</i>
1908 Sept. 23.	N.R.	Jyotiprakas Nande, Lala, Zemindar. <i>Burdwan.</i>
1909 Aug. 4.	N.R.	Jyotis Chandra Bhattacharjee, M.A., B.L. <i>Purneah.</i>
1904 Mar. 4.	N.R.	Kamlanand Singh, Kumar. <i>Srinagar Raj, Srinagar P.O., Purneah District.</i>
1905 May 3.	F.M.	Kashi Prasad Jayaswal. C/o Manager, Narghat Bazar Lac Factory. <i>Mirzapur.</i>
1877 Aug. 30.	R.	Kedar Nath Dutt. 1, <i>Sikdarpara Lane, Calcutta.</i>
1882 Mar. 1.	N.R.	Kennedy, Pringle, M.A., B.L., Vakil. <i>Mozafferpur.</i>
1906 Aug. 1.	R.	Kennedy, Dr. William Willoughby, M.A., M.D., D.P.H., M.R.S.C., L.R.C.P. 36, <i>Chowringhee, Calcutta.</i>
1906 Sept. 19.	R.	Kesteven, Charles Henry, Solicitor to Government. 26, <i>Dalhousie Square, Calcutta.</i>
1909 Oct. 6.	R.	Khaliluddin Ahmed, Dr. 36, <i>Taltolla Lane, Calcutta.</i>
1909 April 7.	N.R.	Kilner, Dr. John Newport, M.B., L.R.C.S., L.R.C.P. <i>Adra, Manbhum.</i>

Date of Election.		
1908 Feb. 5.	A.	King, Capt. George, M.B., I.M.S. <i>Europe.</i>
1895 Sept. 19.	N.R.	Kiran Chandra De, B.A., I.C.S., Registrar of Co-operative Credit Societies, Eastern Bengal and Assam. <i>Shillong.</i>
1904 May 4.	A.	Knox, Kenneth Neville, I.C.S. <i>Europe.</i>
1909 Jan. 6.	R.	Kshitindranath Tagore, B.A. <i>Howrah.</i>
1896 July 1.	R.	Küchler, George William, M.A., Director of Public Instruction, Bengal. <i>Calcutta.</i>
1894 July 4.	N.R.	Kushal Pal Singh, Raja, M.A. <i>Narki.</i>
1895 Aug. 29.	R.	Lachmi Narayan Singh, M.A., B.L., Pleader, High Court. <i>Calcutta.</i>
1887 May 4.	L.M.	Lanman, Charles Rockwell, 9, <i>Farrar Street, Cambridge, Massachusetts, U.S. America.</i>
1889 Mar. 6.	R.	*La Touche, Thomas Henry Digges, B.A., F.G.S., Superintendent, Geological Survey of India. <i>Calcutta.</i>
1909 Jan. 6.	A.	Leake, Dr. A. Martin, F.R.C.S., V.C. 14, <i>Garden Reach Road, Calcutta.</i>
1902 July 2.	N.R.	Leake, Henry Martin, M.A., F.L.S., Economic Botanist to the Government of United Provinces. <i>Cawnpur.</i>
1909 April 7.	A.	Leather, Walter, Ph.D. <i>Europe.</i>
1889 Nov. 6.	R.	Lee, William A., F.R.M.S. 38, <i>Strand Road, Calcutta.</i>
1909 Mar. 3.	R.	LeQuesne, Rev. W. R. <i>The Parsonage, Hastings, Calcutta.</i>
1902 Oct. 29.	R.	Lewes, A. H. 25, <i>Mangoe Lane, Calcutta.</i>
1908 Feb. 5.	N.R.	Lindesay, Major Victor Edward Hugh, M.B., I.M.S. <i>Darbhanga.</i> [baid.]
1907 Dec. 4.	N.R.	Lindsay, James Hamilton, M.A., I.C.S. <i>Dhan-</i>
1889 Feb. 6.	A.	Little, Charles, M.A. <i>Europe.</i>
1907 Dec. 4.	N.R.	Little, James Henry, Assistant Master, Victoria School. <i>Kurseong.</i>
1907 Mar. 6.	R.	Lloyd, Captain Richard Ernest, M.B., B.Sc., I.M.S. 27, <i>Chowringhee Road, Calcutta.</i>
1909 Nov. 3.	N.R.	Löffler, Emanuel Mano. <i>Darjeeling.</i>
1906 Oct. 31.	N.R.	Luard, Captain Charles Eckford, Indian Army, M.A. (Oxon). <i>Resident, Indore.</i>
1902 July 2.	R.	Luke, James, Journalist. 98, <i>Clive Street, Calcutta.</i>
1905 Aug. 2.	N.R.	Lukis, Lt.-Col. Charles Pardey, M.B., F.R.C.S., I.M.S. <i>Simla.</i>
1870 April 7.	L.M.	Lyman, B. Smith. 708, <i>Locust Street, Philadelphia, U.S. America.</i>
1896 Mar. 4.	A.	MacBlaine, Frederick, I.C.S. <i>Europe.</i>
1906 Nov. 7.	R.	MacCabe, William Bernard, M.INST.C.E., F.I.C., Chief Engineer to the Corporation. <i>Calcutta.</i>

Date of Election.		
1905 Aug. 2.	R.	McCay, Captain David, M.B., I.M.S., Professor of Physiology. <i>Medical College, Calcutta.</i>
1907 Aug. 7.	N.R.	McIntosh, William, Agent, Bank of Bengal. <i>Hyderabad.</i>
1907 April 3.	N.R.	Mackelvie, Captain Maxwell, I.M.S. <i>Puri.</i>
1906 April 4.	N.R.	Mackenzie, Evan, Church of Scotland Mission. <i>Kalimpong, via Sibiguri.</i>
1893 Jan. 11.	L.M.	Maclagan, Edward Douglas, M.A., I.C.S. C/o Messrs. H. S. King and Co., 9 Pall Mall, <i>London.</i>
1899 Mar. 1.	N.R.	McMinn, Charles W., B.A., I.C.S. (retired). <i>Jath Tal, Bhim P.O., Kumaon.</i>
1891 Feb. 4.	R.	Macpherson, Duncan James, M.A., C.I.E., I.C.S. <i>Chinsura.</i> [ing.
1902 April 2.	N.R.	Maddox, Major Ralph Henry, I.M.S. <i>Darjeel-</i>
1893 Jan. 11.	L.M.	Madho Rao Scindia Alijah, Bahadur, Colonel, His Highness Maharajah Sir, G.C.S.I., G.C.V.O., A.D.C., LL.D., Maharajah of Gwalior. <i>Jai Bilas, Gwalior.</i>
1907 July 3.	N.R.	Mahendra Nath De, M.A., B.Sc., <i>Habigunge.</i>
1895 Aug. 29.	R.	Mahmud Gilani, Shams-ul-Ulama Shaikh. <i>23, Lower Chitpur Road, Calcutta.</i>
1909 Mar. 3.	R.	Manmatha Nath Chatterjee, Dr., M.B. 295/1, <i>Upper Circular Road, Calcutta.</i>
1906 June 6.	R.	Manmatha Nath Mitra, Kumar. 34, <i>Shampukur Street, Calcutta.</i> [pore.
1908 Mar. 4.	R.	Manmatho Nath Moitry, Landholder. <i>Seram-</i>
1901 June 5.	N.R.	Mann, Dr. Harold Hart, D.Sc., M.Sc., F.L.S., Principal, Agricultural College. <i>Poona.</i>
1899 Aug. 30.	N.R.	Mannu Lal, Dr., Civil Surgeon. <i>Banda.</i>
1905 Dec. 6.	F.M.	Marsden, Edmund, B.A., F.R.G.S. 12, <i>Ellerdale Road, Hampstead, London.</i>
1902 May 7.	N.R.	Marshall, John Hubert, Director-General of Archæology. <i>Simla.</i> [Calcutta.
1909 Mar. 3.	R.	Matilal Ganguli, Rai Bahadur. <i>Currency Office,</i>
1892 April 6.	R.	Maynard, Lieut.-Col. Frederic Pinsent, M.B., D.P.H., F.R.C.S., I.M.S., Professor of Ophthalmic Surgery, Medical College. <i>Calcutta.</i>
1905 Feb. 1.	R.	Megaw, Captain John Wallace Dick, I.M.S. <i>Presidency General Hospital, Calcutta.</i> [long.
1895 July 3.	N.R.	Melitus, Hon. Mr. Paul Gregory, C.I.E., I.C.S. <i>Shil-</i>
1884 Nov. 5.	R.	Middlemiss, Charles Stewart, B.A., F.G.S., Superintendent, Geological Survey of India. <i>Calcutta.</i>
1905 Dec. 6.	R.	Midhut Mohamed Hossain Khan. 8, <i>Golam Sobhan's Lane, Calcutta.</i> [cutta.
1884 Sep. 3.	R.	Miles, William Harry. 7, <i>Church Lane, Cal-</i>
1904 April 6.	R.	Miller, The Hon. Mr. John Ontario, C.S.I., I.C.S., Revenue & Agriculture and P. W. D. Member, Government of India. <i>Calcutta.</i>

Date of Election.		
1898 April 6.	N.R.	Milne, Major Charles John Robertson, M.B., I.M.S. <i>Berhampur.</i>
1909 July 7.	R.	Milne, William Stanley, I.C.S. 3, <i>Loudon Street, Calcutta.</i>
1906 Mar. 7.	N.R.	Milsted, Walter Percy Spencer. <i>Boys' High School, Allahabad.</i>
1908 Jan. 1.	N.R.	Moberly, Arthur Norman, M.A., I.C.S. <i>Sambalpur.</i>
1885 June 3.	N.R.	Mohammad Naemullah, Maulavi. <i>Bijnor.</i>
1880 Aug. 4.	L.M.	Mohanlall Vishnulall Pandia, Pandit, F.T.S. <i>Muttra.</i>
1908 Mar. 4.	N.R.	Mollison, James, Inspector-General of Agriculture, C.P. <i>Nagpur.</i>
1901 Aug. 7.	N.R.	Molony, Edmund Alexander, I.C.S. <i>Government Farm, Cawnpur.</i>
1890 June 4.	R.	*Monmohan Chakravarti, M.A., B.L., Bengal Provincial Civil Service. 14, <i>Palmer's Bazaar Road, Balliaghatta, Calcutta.</i>
1895 July 3.	N.R.	Monohan, Francis John, I.C.S., Commissioner, Assam Valley District. <i>Shillong.</i>
1906 Dec. 5.	N.R.	More, Lieut. James Carmichael, 51st Sikhs, F.F. <i>Bannu.</i>
1906 Dec. 5.	N.R.	Morton, Captain Sidney. <i>24th Punjabis, Meerut.</i>
1908 Dec. 2.	R.	Moses, Capt. Owen St. John, M.D., F.R.C.S., I.M.S. <i>Resident Physician, Medical College, Calcutta.</i>
1909 Nov. 3.	N.R.	Mrityunjoy Roychaudhury. <i>Shyampur P.O., Rungpur.</i>
1906 July 4.	R.	Mulvany, Major John, I.M.S. <i>Presidency General Hospital, Calcutta.</i> [cutta.
1905 Mar. 1.	R.	Muralidhar Banerjee. <i>Sanskrit College, Cal-</i>
1906 Dec. 5.	N.R.	Murphy, Captain Charles Cecil Rowe, 30th <i>Punjabis, Jhansi.</i> [Europe.
1906 Dec. 5.	A.	Murray, Captain John George Patrick, I.M.S.
1908 Sept. 23.	N.R.	Muzaffur Ali Khan Bahadur, Syed, Zemin- der and Rais. <i>Jausath, Dist. Muzaffarnagar.</i>
1894 Sep. 27.	R.	Nagendra Nath Basu. 20, <i>Kentapuker Lane, Bagbazaar, Calcutta.</i>
1907 Jan. 2.	N.R.	Nasir Ali, Khan Bahadur, Mir, Superinte- ndent, North India Salt Revenue. <i>Farrash- khana, Delhi.</i>
1907 Jan. 2.	R.	Nasir Hosein Khan, S., Landholder. 32, <i>Ezra Street, Calcutta.</i>
1904 Dec. 7.	N.R.	Nathan, Robert, I.C.S., Commissioner, Dacca Division. <i>Dacca.</i>
1980 Feb. 5.	N.R.	Nesfield, Capt. Vincent Blumhardt, F.R.C.S., L.R.C.P., I.M.S., 2nd and 7th Gurkha Rifles. <i>Quetta.</i>

Date of Election.		
1901 Mar. 6.	N.R.	Nevill, Henry Rivers, I.C.S., Editor, District Gazetteers, United Provinces. <i>Allahabad.</i>
1909 Mar. 3.	R	Nilmani Chakravarti, M.A. <i>Presidency College, Calcutta.</i>
1889 Aug. 29.	L.M.	Nimmo, John Duncan, c/o Messrs. Walter Duncan & Co. 137, <i>West George Street, Glasgow.</i>
1887 May 4.	R.	Nobinchand Bural, Solicitor. 10, <i>Old Post Office Street, Calcutta.</i>
1906 Dec. 5.	N.R.	Norman, Henry Campbell, M.A. <i>Queen's College, Benares.</i>
1908 Feb. 5.	R.	Nott, Lieut.-Col. Arthur Holbrook, M.D., I.M.S. <i>Howrah.</i>
1901 June 5.	R.	Nundolal Dey. <i>Chinsura.</i>
1900 Dec. 5.	N.R.	O'Connor, Major William Frederick Travers, Royal Artillery, C.I.E. <i>Quetta.</i>
1906 Dec. 5.	R.	O'Kinealy, Major Frederick, M.R.C.S. (Eng.), L.R.C.P. (Lond.), I.M.S. 31/1, <i>Judge's Court Road, Alipore, Calcutta.</i>
1909 Jan. 6.	A.	Oldham, The Hon. Mr. Charles Evelyn Arbuthnot William, I.C.S. <i>Europe.</i>
1905 May 3.	N.R.	Ollenbach, Alfred James, B.A., I.C.S. <i>Khondmals, Phulbani, Orissa.</i> [<i>Europe.</i>]
1905 Nov. 1.	A.	O'Malley, Lewis Sydney Steward, B.A., I.C.S.
1892 Mar. 2.	L.M.	Ooday Pratab Singh, Raja, C.S.I., Raja of <i>Bhinga. Bhinga.</i>
1909 Oct. 7.	R.	Ordhendhu Kumar Ganguli. 12, <i>Ganguli's Lane, Calcutta.</i>
1906 Aug. 1.	N.R.	Osburn, Captain, Arthur C., M.R.C.S., L.R.C.P., (Lond.), R.A.M.C. <i>Bhamo, Upper Burma.</i>
1908 Aug. 5.	N.R.	Owens, Capt. Terence Francis, I.M.S., Chemical Examiner to the Government of Burma. <i>Rangoon.</i>
1909 April 7.	R.	Ozzard, Lieut.-Col. Fairlie Russell, I.M.S. <i>United Service Club, Calcutta.</i>
1907 July 3.	R.	Page, William Walter Keightley, Solicitor. 10, <i>Old Post Office Street, Calcutta.</i>
1909 Dec. 1.	N.R.	Panchanan Ghose, M.A. <i>Krishnagar College, Krishnagar.</i>
1892 Dec. 7.	R.	Panchanan Mukhopadhyaya. 45, <i>Bechoo Chatterji's Street, Calcutta.</i>
1907 Feb. 6.	R.	Panioty, Dr. John Emanuel, L.R.C.P. (Lond.), L.R.C.P. & S. (Ed.) 19, <i>Royd Street, Calcutta.</i>
1901 Aug. 28.	R.	Panton, Edward Brooks Henderson, B.A., I.C.S., District and Sessions Judge. 24- <i>Parganas, Calcutta.</i>

Date of Election.		
1899 Aug. 2.	R.	Peake, Charles William, M.A., Meteorological Reporter to the Government of Bengal. <i>Calcutta.</i>
1907 Dec. 4.	R.	Pearse, Dr. Thomas Frederick, M.D., F.R.C.S., M.R.C.P., D.P.H., Health Officer, <i>Calcutta.</i>
1906 Dec. 5.	N.R.	Peart, Captain Charles Lubé, 106th <i>Hazara Pioneers. Quetta.</i>
1888 June 6.	L.M.	Pennell, Aubray Percival, B.A., Barrister-at-Law. <i>Rangoon.</i> [<i>Calcutta.</i>
1881 Aug. 25.	R.	Percival, Hugh Melvile, M.A. 14, <i>Park Street,</i>
1877 Aug. 1.	N.R.	Peters, Lieut.-Col. Charles Thomas, M.B., I.M.S. (retired). <i>Dinajpur.</i>
1906 April 4.	R.	Petrocochino, Leonidar. 231, <i>Lower Circular Road, Calcutta.</i>
1907 Feb. 6.	N.R.	Petrie, David, Assistant Superintendent, Punjab Police. <i>Hungu.</i>
1900 May 2.	R.	Phani Bhusan Mukerji, B.Sc. 57, <i>Jhowtola Road, Ballygunge, Calcutta.</i>
1889 Nov. 6.	R.	*Phillott, Lieut.-Colonel Douglas Craven, Indian Army, Secretary, Board of Examiners. 4, <i>Park Street, Calcutta.</i>
1906 Mar. 7.	A.	Phra Maha Chandima. <i>Europe.</i>
1904 June 1.	R.	Pilgrim, Guy Elcock, B.Sc., F.G.S., Assistant Superintendent, Geological Survey of India. <i>Calcutta.</i>
1908 Jan. 1.	R.	Pilgrim, Lieut.-Col. Herbert Wilson, M.B., F.R.C.S., I.M.S. <i>Presidency General Hospital, Calcutta.</i>
1904 Mar. 4.	A.	Pim, Arthur W., I.C.S. <i>Europe.</i>
1906 May 2.	N.R.	Prabhat Chandra Borua, Raja. <i>Gauripur, Assam.</i>
1899 Aug. 29.	N.R.	Prabhu Narain Singh, Bahadur, H.H. The Maharaja Sir, G.C.I.E., Maharaja of Benares. <i>Ramnagar Fort, Benares.</i>
1907 Mar. 6.	R.	Prafulla Chundra Ghosh, M.A. 27/3, <i>Boitakhana Bazar Road, Calcutta.</i>
1890 Mar. 5.	R.	*Prafulla Chandra Ray, D.Sc., Professor, Presidency College. <i>Calcutta.</i>
1880 Nov. 3.	N.R.	Pramatha Nath Bose, B.Sc., F.G.S. <i>Ranchi.</i>
1901 April 3.	R.	Pramatha Nath Mullick, Zemindar. 7, <i>Prasanno Kumar Tagore's Street, Calcutta.</i>
1887 May 4.	R.	Prasanna Kumar Ray, D.Sc. (Lond. and Edin.). 7, <i>Ballygunge Circular Road, Calcutta.</i>
1869 Feb. 3.	N.R.	Pratapa Chandra Ghosha, B.A. <i>Vindiyachal.</i>
1906 Aug. 1.	N.R.	Price, Charles Stanley. <i>Victoria Boy's School, Kurseong.</i>
1909 April 7.	N.R.	Prithwipal Singh, Raja. Talukdar of Surajpur, District Barabanki. <i>Oudh.</i>
1898 April 6.	R.	Prodyat Coomar Tagore, Maharaja Sir, Kt. <i>Pathuriaghatta, Calcutta.</i>

Date of Election.		
1907 Sept. 25.	R.	Promode Prakas Chatterjee. 8, <i>Dixon Lane, Calcutta.</i>
1907 Jan. 2.	N.R.	Pulley, Lieut. Henry Cuthbert. <i>12th Pioneers, Jhansi.</i>
1906 Mar. 7.	N.R.	Puran Chand Nahar. <i>Azimgunj, Murshidabad.</i>
1908 Mar. 4.	A.	Quinlan, Dr. D. <i>Europe.</i>
1909 April 7.	N.R.	Rainier, Major Norman Robinson Jones, I.M.S. <i>Chhindwara.</i>
1902 April 2.	R.	Rajchunder Chunder, Attorney-at-Law. 2, <i>Old Post Office Street, Calcutta.</i>
1902 Mar. 5.	R.	Rajendra Chandra Sastri, Rai Bahadur, M.A., Bengali Translator to the Government of Bengal. <i>Calcutta.</i>
1898 May 4.	R.	Rajendra Nath Mookerjee, 20, <i>Beadon Street, Calcutta.</i>
1907 Jan. 2.	R.	Rakhal Das Banerjee. 45/4, <i>Simla Street, Calcutta.</i>
1901 Jan. 2.	N.R.	Ramavatar Pande, B.A., I.C.S., District Judge. <i>Azimgarh.</i>
1893 May 3.	N.R.	Ram Chandra Bhanj Deb, Maharaja Sri, Chief of Maurbhanj. <i>Baripada P.O., Balasore.</i>
1889 Nov. 6.	N.R.	Rameshwara Singh Bahadur, H. H. The Hon. Maharaja, K.C.I.E. <i>Durbhanga.</i>
1879 April 7.	N.R.	Ram Saran Das, Rai Bahadur, M.A., Manager, Oudh Commercial Bank, Ltd. <i>Fyzabad.</i>
1908 Feb. 5.	N.R.	Randle, Herbert Neil, B.A., Muir Central College. <i>Allahabad.</i>
1909 July 7.	N.R.	Rangnath Bazuz. <i>Girgaon, Bombay.</i>
1908 July 1.	N.R.	Ranganathasvami Aryavaraguru, S. P. V., Arshya Library. <i>Vizagapatam.</i>
1905 Jan. 4.	N.R.	Rankin, James Thomas, I.C.S. <i>Shillong.</i>
1907 Aug. 7.	N.R.	Ranking, Lieut. James, H. B. M.'s Consul for Arabistan. <i>Awaz, Persia.</i>
1904 Mar. 4.	F.M.	Rapson, E. J. 8, <i>Mortimer Road, Cambridge.</i>
1905 May 3.	R.	Richardson, The Hon. Mr. Justice Thomas William, I.C.S., Judge, High Court. <i>Calcutta.</i>
1908 Sept. 2.	R.	Ridsdale, Rev. Arthur Cyril. <i>The Parsonage, Howrah.</i>
1908 Feb. 5.	N.R.	Rigo-de-Riglie, Alceste Carlo. <i>Darjeeling.</i>
1908 July 1.	A.	Ritchie, David Henry Wybrent. <i>Europe.</i>
1907 Feb. 6.	A.	Robertson, Major George Alan, <i>15th Lancers. Europe.</i>
1909 April 7.	A.	Roe, Lieut.-Col. Robert Broadley, I.M.S. <i>Europe.</i>
1903 Mar. 4.	N.R.	Rogers, Charles Gilbert, F.L.S., F.C.H., Forest Department. <i>Port Blair, Andamans.</i>

Date of Election.		
1900 April 4.	R.	*Rogers, Major Leonard, M.D., B.S., F.R.C.P., F.R.C.S., I.M.S. 3, <i>Loudon Street, Calcutta.</i>
1907 Mar. 6.	R.	Roormall Goenka. 57, <i>Burtolla Street, Calcutta.</i>
1900 Aug. 29.	N.R.	Rose, Horace Arthur, I.C.S., Superintendent, Gazetteer Revision, Punjab. <i>Umbala.</i>
1901 Dec. 4.	R.	*Ross, Dr. Edward Denison, PH.D., Assistant Secretary, Government of India, Home Dept., and Principal, Calcutta Madrassah. <i>Calcutta.</i>
1906 Feb. 7.	A.	Russell, Charles, M.A. <i>Europe.</i>
1908 Feb. 5.	N.R.	Russell, Robert Vam, I.C.S., Supdt. of Gazetteer and Ethnography. <i>Nagpur.</i>
1886 Mar. 3.	L.M.	Rustomjee Dhunjeebhoy Mehta, C.I.E. 55, <i>Canning Street, Calcutta.</i>
1906 May 2.	N.R.	Sakhawat Hosain, Maulavi, B.A., Inspector of Schools. <i>Meerut.</i>
1896 Aug. 27.	N.R.	Samman, Herbert Frederick, I.C.S., Offg. Deputy Commissioner, Sonthal Pargana. <i>Monghyr.</i> [<i>Krishnagar.</i>
1905 Mar. 1.	N.R.	Sasi Bhusan Bose, M.A. <i>Krishnagar College,</i>
1902 June 4.	R.	*Satis Chandra Vidyabhusana, Mahamahopadhyaya, M.A., Ph.D. 26/1 <i>Kany Lal Dhur's Lane, Calcutta.</i>
1908 Mar. 4.	R.	Satis Kumar Banerji. 45, <i>Baniatola Lane, Calcutta.</i>
1896 Mar. 4.	N.R.	Satish Chandra Banerji, Dr., M.A., LL.D., Advocate, High Court. <i>Allahabad.</i>
1902 Feb. 5.	R.	Schulten, Joseph Henry Charles, Ph.D. 4, <i>Pollock Street, Calcutta.</i>
1900 Dec. 5.	N.R.	Schwaiger, Imre George, Expert in Indian Art. <i>Kashmir Gate, Delhi.</i>
1897 Dec. 1.	N.R.	Seth, Mesrovb J. <i>Bombay.</i> [<i>Ghazipore.</i>
1907 Aug. 7.	N.R.	Shah Munir Alam, B.A., LL.B. <i>Mainpura,</i>
1909 Jan. 6.	R.	Sharfuddin, The Hon. Mr. Justice Syed. 18, <i>Royd Street, Calcutta.</i>
1906 Dec. 5.	N.R.	Sharp, Henry, M.A., Director of Public Instruction, Eastern Bengal and Assam. <i>Shillong.</i>
1909 July 7.	R.	Shib Nath Bhattacharjee, Dr., M.B. 26, <i>Pataldanga Street, Calcutta.</i> [<i>Aligarh.</i>
1894 June 6.	N.R.	Shibli Nomani, Shams-ul-Ulama Maulavi.
1909 Jan. 6.	N.R.	Shirreff, Alexander Grierson, B.A., I.C.S. <i>Gonda, U.P.</i>
1908 Mar. 4.	R.	Shujaat Ali Khan Bahadur, Nasurul Mamalik Mirza, Acting Consul-General for Persia. 10, <i>Hungerford Street, Calcutta.</i>
1906 Mar. 7.	R.	Shyama Kumar Tagore, Kumar, Zemindar. 65, <i>Pathuriaghutta Street, Calcutta.</i>

Date of Election.		
1902 Feb. 5.	N.R.	Shyam Lal, Lala, M.A., LL.B., Deputy Collector. <i>Allahabad.</i>
1894 Aug. 30.	R.	Sibnarayan Mukerjee. <i>Uttarpara, Bally.</i>
1899 May 3.	N.R.	Silberrad, Charles Arthur, B.A., B.Sc., I.C.S. <i>Jhansi.</i>
1909 April 7.	N.R.	Simpson, G. C., D.Sc. <i>Simla.</i>
1903 Aug. 26.	N.R.	Simpson, John Hope, I.C.S., Registrar of Co-operative Credit Societies, Upper Provinces. <i>Allahabad.</i>
1898 Aug. 3.	N.R.	Sita Ram, B.A., Depy. Magistrate. <i>Lucknow.</i>
1872 Aug. 5.	N.R.	Skrefsrud, Revd. Laurentius Olavi, Secretary and Treasurer, Indian Home Mission to the Sonthals. <i>Benagerio, via Rampore Haut.</i>
1909 July 7.	R.	Smith, Capt. H. Emslie, I.M.S. 12, <i>Harrington Street, Calcutta.</i>
1907 Dec. 4.	N.R.	Smith, Lieut.-Col. John Manners, Indian Army, V.C., C.I.E. <i>Resident, Nepal.</i>
1907 Mar. 6.	N.R.	Sofiulla Saifuddin Ahmed, Maulavi, Inspector of Excise. <i>Silchar.</i>
1909 Feb. 3.	R.	Sommerfeldt, Prof. E. 4, <i>Pollock Street, Calcutta.</i>
1901 Dec. 4.	N.R.	Spooner, David Brainerd, Ph.D., Archæological Surveyor, North-West Frontier Province. <i>Peshawar.</i>
1907 Oct. 30.	N.R.	Sri Ram Dixit, Pandit, B.A., Secretary, Pratapgarh State. <i>Pratapgarh.</i> [bad.]
1909 April 7.	N.R.	Stanley, The Hon. Sir John, Kt., K.C. <i>Allaha-</i>
1904 Sept. 28.	N.R.	Stapleton, Henry Ernest, B.A., B.Sc., Inspector of Schools. <i>Dacca.</i>
1901 Mar. 6.	N.R.	Stebbing, Edward Percy, F.E.S., F.Z.S., Imperial Forest Zoologist. <i>Dehra Dun.</i>
1908 Dec. 2.	R.	Steen, Capt. Hugh Barkley, M.B., I.M.S., Resident Medical Officer, Eden Hospital. <i>Calcutta.</i>
1904 June 1.	R.	Stephen, The Hon'ble Mr. Justice Harry Lushington, Judge, High Court. <i>Calcutta.</i>
1899 Aug. 30.	R.	Stephen, St. John, B.A., LL.B., Barrister-at-Law. 7, <i>Russell Street, Calcutta.</i>
1900 Aug. 29.	N.R.	Stephenson, Major John, I.M.S. <i>Lahore.</i>
1907 Dec. 4.	R.	Stevens, Major C. R., I.M.S., Medical College. <i>Calcutta.</i>
1907 June 5.	N.R.	Stewart, Capt. Francis Hugh, I.M.S., Govt. Dockyard. <i>Bombay.</i>
1907 April 3.	A.	Stewart, Captain Hugh, Indian Army. <i>Europe.</i>
1906 Dec. 5.	N.R.	Stokes, Captain Claude Bayfield, Military Attaché. <i>Teheran, Persia.</i>
1904 July 6.	N.R.	Streatfield, Claude Arthur Cecil, I.C.S. <i>Jaunpur.</i>
1909 Feb. 3.	R.	Stuart, Sir Harold, K.C.V.O., C.S.I., United Service Club. <i>Calcutta.</i>
1904 Jan. 6.	N.R.	Stuart, Louis, I.C.S. <i>Meerut.</i>

Date of Election.		
1906 Dec. 5.	R.	Subodh Chandra Mahalanobis, B.Sc., F.R.S.E., F.R.M.S. 210, <i>Cornwallis Street, Calcutta.</i>
1905 Jan. 4.	R.	Sukumar Sen. 220, <i>Lower Circular Road, Calcutta.</i>
1908 June 3.	N.R.	Surendra Chandra Roy Chaudhuri, Zemin- dar. <i>Koondi, Rungpur.</i>
1906 June 6.	N.R.	Surendra Prasad Sanial, Sri, M.A., F.C.S., Private Secretary to Raja Bahadur. <i>Majhauri.</i>
1908 Jan. 1.	N.R.	Suresh Chandra Ghatak, Depy. Magistrate and Depy. Collector. <i>Dacca.</i>
1907 June 5.	N.R.	Swinhoe, Rodway Charles John, Solicitor. <i>Mandalay, Upper Burma.</i>
1904 July 6.	N.R.	Talbot, Walter Stanley, I.C.S., Revenue Com- missioner. <i>Kashmir, Srinagar.</i>
1893 Aug. 31.	N.R.	Tate, George Passman, Assistant Super- intendent, Survey of India. <i>Dehra Dun.</i>
1909 Jan. 6.	N.R.	Taylor, Charles Somers, B.Sc. <i>Bhagalpur.</i>
1907 June 5.	A.	Taylor, Dr. G. Orissa. <i>Europe.</i>
1878 June 5.	N.R.	Temple, Colonel Sir Richard Carnac, Bart., Indian Army, C.I.E. <i>C/o Messrs. King, King & Co., Bombay.</i>
1906 Dec. 5.	N.R.	Tek Chand, Dewan, B.A., M.R.A.S., I.C.S., Deputy Commissioner. <i>Ludhiana.</i>
1875 June 2.	R.	*Thibaut, G., Ph.D., C.I.E., Registrar, Calcutta University. <i>Calcutta.</i>
1909 Aug. 4.	N.R.	Thompson, John P., I.C.S. <i>Hoshiarpur.</i>
1908 Nov. 4.	A.	Thornely, Capt. Michael Harris, I.M.S. <i>Europe.</i>
1898 Nov. 2.	R.	Thornton, Edward, F.R.I.B.A. 6, <i>Clive Street, Calcutta.</i>
1904 June 1.	N.R.	Tipper, George Howlett, M.A., F.G.S., Assistant Superintendent, Geological Survey of India. <i>Madras.</i>
1907 Feb. 6.	N.R.	*Travers, Morris William, D.Sc., F.R.S., Director of Indian Institute of Science. <i>Bangalore.</i>
1861 June 5.	L.M.	Tremlett, James Dyer, M.A., I.C.S. (retired). <i>Dedham, Essex, England.</i>
1899 Aug. 30.	N.R.	Tribhuban Deb, Raja S., Feudatory Chief of Bamra. <i>Deogarh, Bamra.</i>
1897 Jan. 6.	N.R.	Tulsi Ram Misra, M.A., Acting Principal, Gurukula Academy. <i>Hardwar.</i>
1905 Jan. 4.	N.R.	Turner, Frank, B.A. <i>Dacca Club, Dacca.</i>
1908 Jan. 1.	R.	Upendra Nath Brahmachari, Dr., M.A., M.D. 10, <i>Nimtola Ghat Street, Calcutta.</i>
1905 Aug. 2.	N.R.	Urwin, Captain John Johnson, M.B., I.M.S. <i>Motihari.</i>
1907 Aug. 7.	N.R.	Valavanur Subramania Iyer, Instructor, Im- perial Forest School. <i>Dehra Dun.</i>

Date of Election.		
1905 July 5.	N.R.	Vanamali Chakravarti. <i>Gauhati.</i>
1900 Aug. 29.	A.	Vaughan, Major Joseph Charles Stoelke, I.M.S.
		<i>Europe.</i>
1890 Feb. 5.	N.R.	*Venis, Arthur, M.A. <i>Allahabad.</i>
1909 May 5.	N.R.	Venkayya, V., Govt. Epigraphist in India.
		<i>Simla.</i>
1894 Feb 7.	N.R.	Vishwa Nath Singh, H. H. The Raja Baha-
		dur. <i>Chhatturpur, Bundelkhund.</i>
1901 Mar. 6.	N.R.	Vogel, Jean Philippe, LITT. D., Archæological
		Surveyor, Punjab. <i>Lahore.</i>
1894 Sept. 27.	L.M.	Vost, Lieut.-Col. William, I.M.S., Civil Sur-
		geon. <i>Saharanpore.</i>
1902 Oct. 29.	R	Vredenburg, Ernest, B.L., B.SC., A.R.S.M., A.R.C.S.,
		F.G.S., Assistant Superintendent, Geological
		Survey of India. <i>Calcutta.</i>
1909 Jan. 6.	N.R.	*Walker, Gilbert T., D.SC., F.R.S., Director-
		General of Observatories. <i>Simla.</i>
1907 July 3	R.	Walker, Harold, A.R.C.S., F.G.S., A.M.INST.M.,
		Assistant Superintendent, Geological Survey
		of India. <i>Calcutta.</i>
1900 Jan. 19.	R.	Wallace, David Robb. 9, <i>Clive Row, Calcutta.</i>
1901 June 5.	N.R.	Walsh, Ernest Herbert Cooper, I.C.S., Com-
		missioner, Bhagalpur Division. <i>Bhagalpur.</i>
1900 April 4	N.R.	Walton, Captain Herbert James, M.B., F.R.C.S.,
		I.M.S. <i>C/o Messrs. King, Hamilton & Co.,</i>
		<i>Calcutta.</i>
1909 July 7.	A.	Waters, Major Ernest Edwin, I.M.S. <i>Europe.</i>
1905 Dec 6.	N.R.	Watson, Edwin Roy, M.A., B.SC. <i>Dacca.</i>
1909 Dec. 1.	N.R.	Webster, J. E., I.C.S. <i>Shillong.</i>
1902 April 2.	R.	Wheeler, Henry, I.C.S., Deputy Secretary,
		Government of India, Finance Dept. <i>Cal-</i>
		<i>cutta.</i>
1907 April 3.	N.R.	White, Lieut. Arthur Denham, M.B., B.S.
		(Lond.), I.M.S., Medical Officer. <i>Cooch</i>
		<i>Behar.</i>
1907 Feb. 6.	A.	White, Captain J. R., D.S.O., <i>Gordon High-</i>
		<i>landers. Europe.</i>
1906 Sept. 19.	N.R.	Whitehead, Richard Bertram, I.C.S., Assistant
		Commissioner. <i>Delhi.</i>
1909 April 7.	N.R.	Wilkinson, Major Edmund, I.M.S., L.R.C.S.,
		D. LITT. <i>Shillong.</i>
1909 Mar. 3.	N.R.	Wilson, J. R. R., M.I.C.E., F.G.S., <i>Dhanbad.</i>
1904 Mar. 4.	R.	Wood, William Henry Arden, M.A., F.C.S.,
		F.R.G.S., Principal, La Martinière. <i>Calcutta.</i>
1909 April 7.	N.R.	Woodhouse, W. G., B.A. <i>Sabour, E.I.R.</i>
1906 July 4.	A.	Woodley, Rev. Edward Carruthers, M.A.
		<i>Europe.</i>
1900 Dec. 5.	N.R.	Woodman, Henry Charles, I.C.S., Offg. Magis-
		trate and Collector. <i>Mozufferpore.</i>

Date of Election.		
1906 Mar. 7.	N.R.	Woolner, Alfred Cooper, M.A., Principal, Oriental College. <i>Lahore.</i>
1908 April 1.	R.	Wordsworth, William Christopher. 8, <i>Harington Street, Calcutta.</i>
1907 June 5.	R.	Wright, Harold, A.M.I.C.E. <i>E. I. R. House, Calcutta.</i>
1894 Aug. 30.	N.R.	Wright, The Hon. Mr. Henry Nelson, B.A., I.C.S., Legal Remembrancer, Government of United Provinces, <i>Allahabad.</i>
1900 Mar. 7.	R.	Yogesa Chandra Sastri-Samkhyaratna-Vedatirtha, Pandit. 59/3, <i>Harrison Road, Calcutta.</i>
1905 Mar. 1.	R.	Young, Rev. Arthur Willifer. 23, <i>Chowringhee Road, Calcutta.</i>
1906 June 6.	F.M.	Young, Mansel Charles Gambier. <i>Fawley Rectory, Henley-on-Thames, England.</i>

SPECIAL HONORARY CENTENARY MEMBERS.

Date of Election.		
1884 Jan. 15.		Dr. Ernst Haeckel, Professor in the University of Jena. <i>Prussia.</i>
1884 Jan. 15.		Charles Meldrum, Esq., C.M.G., M.A., LL.D., F.R.A.S., F.R.S. <i>Mauritius.</i>
1884 Jan. 15.		Revd. Professor A. H. Sayce, Professor of Assyriology, Queen's College. <i>Oxford, England.</i>
1884 Jan. 15.		Monsieur Émile Senart. 18, <i>Rue François Ier, Paris, France.</i>

HONORARY MEMBERS.

Date of Election		
1848 Feb. 2.		Sir Joseph Dalton Hooker, G.C.S.I., C.B., M.D., F.R.S., D.C.L., LL.D., F.L.S., F.G.S., F.R.G.S. <i>Sunningdale, Berkshire, England.</i>
1879 June 4.		Dr. Albert Günther, M.A., M.D., PH.D., F.Z.S., F.R.S. 23, <i>Lichfield Road, Kew, Surrey, England.</i>
1879 June 4.		Dr. Jules Janssen. <i>Observatoire d'Astronomie Physique de Paris, France.</i>
1879 June 4.		Professor P. Reynaud. <i>La Faculté des Lettres, Lyons, France.</i>
1883 Feb. 7.		Dr. Alfred Russell Wallace, LL.D., D.C.L., F.L.S., F.Z.S., F.R.S. <i>Curfe View, Parkstone, Dorset, England.</i>
1894 Mar. 7.		Mahāmāhopadhyāya Chandra Kanta Tarkalankara. 26, <i>Baranushee Ghose's Street, Calcutta.</i>

Date of Election.	
1894 Mar. 7.	Professor Theodor Noeldeke. <i>C/o Mr. Karl T. Trübner, Strassburg, Germany.</i>
1895 June 5.	Lord Rayleigh, M.A., D.C.L., D.SC., LL.D., PH.D., F.R.A.S., F.R.S. <i>Ferling Place, Witham, Essex, England.</i>
1895 June 5.	Charles H. Tawney, Esq., M.A., C.I.E. <i>C/o India Office, London.</i>
1896 Feb. 5.	Lord Lister, F.R.C.S., D.C.L., M.D., LL.D., D.SC., F.R.S., 12, <i>Park Crescent, Portland Place, London.</i>
1896 Feb. 5.	Professor Charles Rockwell Lanman. 9, <i>Farrar Street, Cambridge, Massachusetts, U.S. America.</i>
1899 Feb. 1.	Dr. Augustus Frederick Rudolf Hørnle, PH.D., C.I.E. 8, <i>Northmoor Road, Oxford, England.</i>
1899 Dec. 6.	Professor Edwin Ray Lankester, M.A., LL.D., F.R.S. <i>British Museum (Nat. Hist.), Cromwell Road, London, S.W.</i>
1899 Dec. 6.	Professor Edward Burnett Tylor, D.C.L., LL.D., F.R.S., Keeper, University Museum. <i>Oxford, England.</i>
1899 Dec. 6.	Professor Edward Suess, PH.D., Professor of Geology in the University of Vienna.
1901 Mar. 6.	Professor John Wesley Judd, C.B., LL.D., F.R.S., F.G.S., Late Prof. of the Royal College of Science. 30, <i>Cumberland Road, Kew, England.</i>
1902 Nov. 5.	Monsieur René Zeiller. <i>Ingénieur en chef des Mines. École superieur des Mines, Paris.</i>
1904 Mar. 2.	Professor Hendrick Kern. <i>Utrecht, Holland.</i>
1904 Mar. 2.	Professor Ramkrishna Gopal Bhandarkar, C.I.E. <i>Poona.</i>
1904 Mar. 2.	Professor Ignaz Goldziher, PH.D., D.LITT., LL.D. <i>Budapest, Hungary.</i>
1904 Mar. 2.	Sir Charles Lyall, M.A., K.C.S.I., C.I.E., LL.D. 82, <i>Cornwall Gardens, London, S.W.</i>
1904 Mar. 2.	Sir William Ramsay, PH.D. (Tüb.), LL.D., SC.D. (Dubl.), F.C.S., F.I.C. <i>University College, Gower Street, London, W.C.</i>
1904 July 2.	Dr. George Abraham Grierson, PH.D., D.LITT., C.I.E., I.C.S. (retired). <i>Rothfarnham, Camberley, Surrey, England.</i>
1906 Mar. 7.	The Right Hon'ble Baron Curzon of Kedleston, M.A., D.C.L., F.R.S. 1, <i>Carlton House Terrace, London, S.W.</i>
1908 July 1.	Lt.-Col. Henry Haversham Godwin-Austen, F.R.S., F.Z.S., F.R.G.S., Nore, <i>Godalming, Surrey, England.</i>
1908 July 1.	Prof. M. Treub, Director, Botanic Gardens, Buitenzorg. <i>Java.</i>
1908 July 1.	William Irvine, I.C.S. (retired), Holliscraft, <i>Castelnau, Barnes, London.</i>
1908 July 1.	Dr. H. Oldenderg. The University, <i>Gottingen, Germany.</i>

FELLOWS.

Date of Election.	
1910 Feb. 2.	Dr. N. Annandale, D.Sc., C.M.Z.S., F.L.S.
1910 Feb. 2.	The Hon'ble Justice Asutosh Mukhopadhyaya, C.S.I., M.A., D.L., D.Sc., F.R.A.S., F.R.S.E.
1910 Feb. 2.	I. H. Burkill, Esq., M.A., F.L.S.
1910 Feb. 2.	Mahamahopadhyaya Haraprasad Sashtri, M.A.
1910 Feb. 2.	Sir Thomas Holland, K.C.I.E., D.Sc., A.R.C.S., F.G.S., F.R.S.
1910 Feb. 2.	D Hooper, Esq., F.C.S.
1910 Feb. 2.	T. H. D. LaTouche, Esq., B.A., F.G.S.
1910 Feb. 2.	Babu Monmohan Chakravarti, M.A., B.L.
1910 Feb. 2.	Lieut.-Colonel D. C. Phillott, Indian Army.
1910 Feb. 2.	Dr. Prafulla Chandra Ray, D.Sc.
1910 Feb. 2.	Major L. Rogers, M.D., B.S., F.R.C.P., F.R.C.S., I.M.S.
1910 Feb. 2.	Dr. E. D. Ross, Ph.D.
1910 Feb. 2.	Mahamahopadhyaya Satis Chandra Vidyabhusana, M.A., Ph.D., M.R.A.S.
1910 Feb. 2.	Dr. G. Thibaut, Ph.D., C.I.E.
1910 Feb. 2.	Dr. M. W. Travers, D.Sc., F.R.S.
1910 Feb. 2.	A. Venis, Esq., M.A.
1910 Feb. 2.	Dr. G. T. Walker, M.A., F.R.S.

ASSOCIATE MEMBERS.

Date of Election.	
1875 Dec. 1.	Revd. J. D. Bate. 15, <i>St. John's Church Road,</i> <i>Folkstone, Kent, England.</i>
1882 June 7.	Herbert Giles, Esq. <i>Europe.</i>
1884 Aug. 6.	F. Moore, Esq., F.L.S. <i>Claremont House, Avenue Road,</i> <i>Penge, Surrey, England.</i>
1885 Dec. 2.	Dr. A. Führer. <i>Europe.</i>
1886 Dec. 1.	Sri Sarat Chandra Das, Rai Bahadur, C.I.E. 32, <i>Creek Row, Calcutta.</i>
1892 April 6.	Acharyya Satyavrata Samasrami. 16-1, <i>Ghose's</i> <i>Lane, Calcutta.</i>
1892 Dec. 7.	Professor Paul Johannes Brühl. <i>Civil Engineering</i> <i>College, Sibpur, Howrah.</i>
1899 April 5.	Pandit Visnu Prasad Raj Bhandari. Chief Librarian, Bir Library. <i>Katmandu, Nepal.</i>
1899 Nov. 1.	Revd. E. Francotte, s.J. 10, <i>Park Street, Cal-</i> <i>cutta.</i>
1902 June 4.	Revd. A. H. Francke, Moravian Missionary. <i>Kyelang, Kangra District.</i>
1908 July 1.	Babu Dinesh Chandra Sen. 19, <i>Kantapuker Lane,</i> <i>Calcutta.</i>

Date of Election.	
1908 July 1.	Mahamahopadhaya Sudhakara Dvivedi. <i>Sanskrit College, Benares.</i>
1908 July 1.	Revd. Father J. Hoffmann, s.J. <i>Mauresa House, Ranchi.</i>
1909 Mar. 3.	Balkrishna Atmaram Gupte, Esq. <i>Indian Museum, Calcutta.</i>

LIST OF MEMBERS WHO HAVE BEEN ABSENT FROM INDIA THREE YEARS AND UPWARDS.*

* *Rule 40.*—After the lapse of three years from the date of a member leaving India, if no intimation of his wishes shall in the interval have been received by the Society, his name shall be removed from the List of Members.

The following members will be removed from the next Member List of the Society under the operation of the above Rule:—

Gerald Cecil Dudgeon, Esq.
Sir Joseph Bampfylde Fuller, K.C.S.I.

LOSS OF MEMBERS DURING 1909.

BY RETIREMENT.

Lieut.-Col. William John Bytheil, R.E.
Charles Swift Delmerick, Esq.
Captain Charles Aikman Gourlay, I.M.S.
Col. J. G. Harwood, R.A.M.C.
Ernest George Hill, Esq.
Dr. Edward A. Houseman, M.B.
Babu Jadu Nath Sen.
Munshi Jwala Sahai.
George Rusby Kaye, Esq.
Harold Maxwell Lefroy, Esq., M.A.
Lala Lajpat Rai.
Lieut.-Col. Manekshaw Jamshedi Kelawala, I.M.S.
Charles Michie, Esq.
Captain John Henry Morgan, 24th Punjabis.
Sir Herbert Hope Risley, K.C.I.E.
Adolphe Shrager, Esq.
Robert Rowell Simpson, Esq.
Miss Cornelia Sorabjee.
Pandit Umapati Dutta Sharma.
The Hon. Mr. James Wilson, C.S.I.

BY DEATH.

Ordinary Members.

Babu Annada Prasad Bose.
 Dr. Theodor Bloch.
 Arthur Mason Tippet Jackson, Esq., I.C.S.
 Babu Jain Vaidya.
 Babu Mohinimohan Mitra.
 Babu Muksoodan Das.
 Babu Priyanath Sen.
 H. H. The Maharaja Radhakishore Deb Barman.

Honorary Members.

Professor M. J. DeGoeje.
 Sir George King, K.C.S.I.

UNDER RULE 38.

Kumar Ramessur Maliah.
 Babu Sanjib Chandra Sanial.

UNDER RULE 40.

Kavasjee Jamasjee Badshah, Esq., I.C.S.
 J. N. Das, Esq.
 James R. Drummond, Esq.
 Sir Arthur Upton Fanshawe, K.C.I.E.
 Major John Wemyss Grant, I.M.S.
 Alexander Cochrane Logan, Esq., I.C.S.
 Dr. Mark Aurel Stein.
 Babu Syam Sunder Das.

The names of the following members have been removed from the List of Ordinary Members as they have now been elected Honorary Members :—

William Irvine, Esq., I.C.S. (retired).
 Lt.-Col. Henry Havershan Godwin-Austen, F.R.S.

ELLIOTT GOLD MEDAL.

RECIPIENTS.

1893 Chandra Kanta Basu.
 1895 Yati Bhusana Bhaduri, M.A.

- 1896 Jnan Saran Chakravarti, M.A.
 1897 Sarasi Lal Sarkar, M.A.
 1901 Sarasi Lal Sarkar, M.A.
 1904 { Sarasi Lal Sarkar, M.A.
 { Surendra Nath Maitra, M.A.
 1907 Akshoyakumar Mazumder.
-

BARCLAY MEMORIAL MEDAL.

RECIPIENTS.

- 1901 E. Ernest Green, Esq.
 1903 Major Ronald Ross, F.R.C.S., C.B., C.I.E., F.R.S., I.M.S.
 (retired).
 1905 Lieut.-Colonel D. D. Cunningham, F.R.S., C.I.E.,
 I.M.S. (retired).
 1907 Lieut.-Colonel Alfred William Alcock, M.B., LL.D.,
 C.I.E., F.R.S.
 1909. Lieut.-Colonel David Prain, M.A., M.B., LL.D.,
 F.R.S., I.M.S. (retired).
-

[APPENDIX.]

ABSTRACT STATEMENTS
OF
RECEIPTS AND DISBURSEMENTS
OF THE
ASIATIC SOCIETY OF BENGAL
FOR
THE YEAR 1909.

1909.

STATEMENT

Asiatic Society

Dr.

To ESTABLISHMENT.

	Rs.	As.	P.	Rs.	As.	P.
Salaries	5,687	15	2			
Do. (Officer in charge for Researches in History, Religion, Ethnology and Folklore in Bengal)	4,200	0	0			
Commission	556	15	9			
Pension	420	0	0			
Grain Compensation Allowance	251	11	3			
				11,116	10	2

To CONTINGENCIES.

Stationery	197	15	3			
Taxes	1,465	0	0			
Postage	596	3	3			
Freight	101	12	0			
Auditing	100	0	0			
Lights and Fans	261	14	0			
Insurance fee	187	8	0			
Petty repairs	171	9	6			
Miscellaneous	463	2	9			
				3,545	0	9

To LIBRARY AND COLLECTIONS.

Books	633	7	8			
Binding	891	9	6			
Library Catalogue	1,329	7	0			
Manuscript Catalogue (Arabic and Persian)	369	12	0			
Copper Plate Catalogue	175	0	0			
				3,399	4	2

To PUBLICATIONS.

“Journal and Proceedings” and “Memoirs”	8,133	13	11			
To printing charges of Circulars, &c.	214	10	0			
				8,348	7	11
Interest on Government Paper purchased				11	5	10
Repairs				624	8	0
Loan				3,150	0	0
To Personal Account (Written off and miscellaneous)				123	11	4

To EXTRAORDINARY EXPENDITURE.

Royal Society's Scientific Catalogue	5,399	14	7			
125th Anniversary Entertainment Fund	1,751	13	0			
				7,151	11	7
Balance				1,93,522	13	3
TOTAL Rs.				2,30,993	9	0

No. 1.
of Bengal.

1909.

Cr.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Report	1,89,731	7	0

BY CASH RECEIPTS.

Publications sold for cash	...	...	...	947	8	0
Interest on Investments	...	...	...	6,993	0	0
Rent of room	...	...	...	650	0	0
Allowance from Government of Bengal for the publication of papers on Anthropological and Cognate subjects	...	...	...	2,000	0	0
Do. do. salary for Officer in charge for Researches in History, Religion, Ethnology, and Folklore in Bengal	...	...	...	7,200	0	0
Loan	...	...	...	1,150	0	0
Miscellaneous	...	...	...	159	5	9
				<u>19,099</u>	13	9

BY EXTRAORDINARY RECEIPTS.

Subscriptions to Royal Society's Scientific Catalogue	...	...	...	6,065	3	0
Subscriptions to 125th Anniversary Entertainment Fund	...	...	...	360	0	0
				<u>6,425</u>	3	0

BY PERSONAL ACCOUNT.

Admission fees	...	...	...	2,048	0	0
Members' subscriptions	...	...	...	11,443	0	0
Compound subscription	...	...	...	240	0	0
Subscriptions for the Society's "Journal and Proceedings" and "Memoirs"	...	...	...	1,704	0	0
Sales on credit	...	...	...	283	3	3
Miscellaneous	...	...	...	18	14	0
				<u>15,737</u>	1	3

TOTAL Rs. ... 2,30,993 9 0

D. HOOPER,

Honorary Treasurer,
Asiatic Society of Bengal.

No. 2.

Acct. with the Asiatic Soc. of Bengal. 1909.

Cr.

			Rs.	As.	P.	Rs.	As.	P.
By Balance from last Report			4,748	13	2

BY CASH RECEIPTS.

Government Allowance	...	...	8,750	0	0			
Publications sold for cash	...	...	989	7	3			
Advances recovered	...	...	72	13	6			
			<hr/>			9,812	4	9

BY PERSONAL ACCOUNT.

Sales on credit			1,218	1	3
-----------------	-----	-----	-----	--	--	-------	---	---

TOTAL Rs.	...					<hr/> <hr/>		
						15,779	3	2

D. HOOPER,
Honorary Treasurer,
Asiatic Society of Bengal.

No. 3.

Acct. with the Asiatic Soc. of Bengal. 1909.

Cr.

				Rs.	As.	P.
By Balance from last Report	...	...	...	3,325	8	0

BY CASH RECEIPTS.

Government Allowance	...	...	...	2,750	0	0
TOTAL Rs.	...			<hr/> <hr/>		
				6,075	8	0

D. HOOPER,
Honorary Treasurer,
Asiatic Society of Bengal.

STATEMENT

1909. Oriental Publication Fund, No. 3, in

Dr.

To CASH EXPENDITURE.

					Rs.	As.	P.
Printing charges	...	...	...	...	659	4	6
	Balance	...	...	...	2,340	11	6
	TOTAL Rs.	...	...	...	<u>3,000</u>	<u>0</u>	<u>0</u>

STATEMENT

1909. Sanskrit Manuscript Fund in Acct.

Dr.

To CASH EXPENDITURE.

					Rs.	As.	P.	Rs.	As.	P.
Salaries	...	...	...	...	1,638	9	0			
Commission	...	...	...	...	0	12	9			
Stationery	...	...	...	...	10	3	10			
Contingencies	...	...	...	...	234	6	3			
Grain Compensation Allowance	...	...	...	...	55	11	0			
Purchase of Manuscripts	...	...	...	...	2,793	1	0			
Binding	...	...	...	...	4	0	0			
Insurance	...	...	...	...	125	0	0			
Travelling charges	...	...	...	...	328	0	0			
Loan	...	...	...	...	1,150	0	0			
	Balance	...	...	...	<u>6,339</u>	<u>11</u>	<u>10</u>			
	TOTAL Rs.	...	...	...	<u>7,098</u>	<u>0</u>	<u>9</u>			

No. 4.

Acct. with the Asiatic Soc. of Bengal. 1909.

Cr.

	Rs.	As.	P.
By Balance from last Report	3,000	0	0

TOTAL Rs.	3,000	0	0
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D. HOOPER,

*Honorary Treasurer,
Asiatic Society of Bengal.*

No. 5.

with the Asiatic Society of Bengal. 1909.

Cr.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Report	2,718	12	9			

BY CASH RECEIPTS.

Government Allowance	3,200	0	0			
Publications sold for cash	29	4	0			
Loan (from Asiatic Society of Bengal)	1,150	0	0			
	4,379	4	0			

TOTAL Rs.	7,098	0	9
-----------	-------	---	---

D. HOOPER,

*Honorary Treasurer,
Asiatic Society of Bengal.*

No. 6.

Acct. with the Asiatic Soc. of Bengal. 1909.

Cr.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Report	145	4	7

BY CASH RECEIPTS.

Government Allowance	...	...	5,000	0	0	
Loan (from Asiatic Society of Bengal)	...	...	2,000	0	0	
			<u>7,000</u>	0	0	

TOTAL Rs.	...		<u>7,145</u>	4	7
-----------	-----	--	--------------	---	---

D. HOOPER,
*Honorary Treasurer,
 Asiatic Society of Bengal.*

No. 7.

Acct. with the Asiatic Soc. of Bengal. 1909.

Cr.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Report	2,400	0	0

TOTAL Rs.	...		<u>2,400</u>	0	0
-----------	-----	--	--------------	---	---

D. HOOPER,
*Honorary Treasurer,
 Asiatic Society of Bengal.*

STATEMENT

1909.

Personal

Dr.		Rs. As. P.			Rs. As. P.			
To Balance from last Report	3,787	2	9	
To CASH EXPENDITURE.								
Advances for purchase of Manuscripts, &c.	3,461	14	0	
To Asiatic Society	15,737	1	3			
„ Oriental Publication Fund, No. 1	1,218	1	3			
						16,955	2	6
TOTAL Rs.					24,204 3 3			

STATEMENT

1909.

Invest-

Dr.		Value.			Cost.			
		Rs. As. P.			Rs. As. P.			
To Balance from last Report	1,98,700	0	0	1,97,893	0	0
„ Purchase	5,000	0	0	4,736	13	5
TOTAL Rs.		...	2,03,700 0 0			2,02,629 13 5		

FUNDS.	PERMANENT RESERVE.						TEMPORARY RESERVE.						Total Cost.		
	Value.			Cost.			Value.			Cost.					
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Asiatic Society	1,58,000	0	0	1,56,807	13	8	44,300	0	0	44,482	9	9	2,01,290	7	5
Trust Fund	1,400	0	0	1,339	6	0	...	...	...	...	...	...	1,339	6	0
TOTAL Rs.	1,59,400	0	0	1,58,147	3	8	44,300	0	0	44,482	9	9	2,02,629	13	5

No. 8.

Account.

1909.

Cr.

	Rs.	As.	P.	Rs.	As.	P.
By Cash Receipts ...	...	...	...	...	...	...
„ Asiatic Society ...	123	11	4	18,946	0	4
„ Oriental Publication Fund, No. 1 ...	4	14	0			
	<hr/>			128	9	4

By Balance.	Due to the Society.			Due by the Society.		
	Rs.	As.	P.	Rs.	As.	P.
Members ...	3,788	9	7	103	14	6
Employés ...	30	0	0	100	0	0
Oriental Publication Fund, No. 1 ...	832	0	0	...	...	...
Arabic and Persian MSS. Fund ...	166	0	0	...	...	...
Bardic Chronicles MSS. Fund ...	500	0	0	...	...	...
Miscellaneous ...	110	8	6	93	10	0
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	5,427	2	1	297	8	6

... 5,129 9 7

TOTAL Rs. ... 24,204 3 3

D. HOOPER,

Honorary Treasurer,
Asiatic Society of Bengal.

No. 9.

ment.

1909.

Cr.

	Value.			Cost.		
	Rs.	As.	P.	Rs.	As.	P.
By Balance ...	2,03,700	0	0	2,02,629	13	5
	<hr/>			<hr/>		
TOTAL Rs. ...	2,03,700	0	0	2,02,629	13	5

D. HOOPER,

Honorary Treasurer,
Asiatic Society of Bengal.

STATEMENT

1909.

Trust

Dr.

				Rs.	As.	P.
To Pension	...	...	...	48	0	0
	Balance	...	...	1,464	11	10
TOTAL Rs.				1,512	11	10

STATEMENT

1909.

Cash

Dr.

				Rs	As.	P.
To Balance from last Report	...	...	...	5,853	6	7

RECEIPTS.

				Rs.	As.	P.
To Asiatic Society	...	...	...	25,525	0	9
„ Oriental Publication Fund, No. 1	...	...	...	9,812	4	9
Do. do. No. 2	...	...	...	2,750	0	0
„ Sanskrit Manuscripts Fund	...	...	...	4,379	4	0
„ Arabic and Persian MSS. Fund	...	...	...	7,600	0	0
„ Personal Account	...	...	...	18,946	0	4
„ Trust Fund	...	...	...	49	0	0
				68,461	9	10
TOTAL Rs.				74,315	0	5

No. 10.

Fund.

1909.

				Cr.		
				Rs.	As.	P.
By Balance from last Report	...	...	...	1,463	11	10
„ Interest on Investments	...	...	...	49	0	0
TOTAL Rs.				1,512	11	10

D. HOOPER,

*Honorary Treasurer,
Asiatic Society of Bengal.*

No. 11.

Account.

1909.

				Cr.		
				EXPENDITURE.		
				Rs.	As.	P.
				Rs.	As.	P.
By Asiatic Society	...	...	...	37,347	0	5
„ Oriental Publication Fund, No. 1	...	...	...	10,122	6	6
„ Do. do. No. 2	...	...	...	400	7	0
„ Do. do. No. 3	...	...	...	659	4	6
„ Sanskrit Manuscripts Fund	...	...	...	6,339	11	10
„ Arabic and Persian MSS. Fund	...	...	...	5,080	3	1
„ Bardic Chronicles MSS. Fund	...	...	...	683	13	6
„ Personal Account	...	...	...	3,461	14	0
„ Investment	...	...	...	4,736	13	5
„ Trust Fund	...	...	...	48	0	0
Balance				68,879	10	3
				5,435	6	2
TOTAL Rs.				74,315	0	5

D. HOOPER,

*Honorary Treasurer,
Asiatic Society of Bengal.*

No. 12.

Sheet.

1909.

ASSETS.				Rs.	As.	P.	Rs.	As.	P.	
Personal Account	..	...	...	5,129	9	7			
Investment	...	...	...	2,02,629	13	5			
Cash Account	...	...	...	5,435	6	2			
							2,13,194	13	2	
Government Pro. Note at Bank of Bengal's Safe Custody Account Cashier's Security Deposit Rs. 500	...	...	...	...		
TOTAL Rs.				...				2,13,194	13	2

D. HOOPER,

*Honorary Treasurer,
Asiatic Society of Bengal.*

No. 13A.

*International Catalogue of Scientific
Central Bureau, London.*

	£	s.	d.	£	s.	d.	Rs.	As.	P.	Rs.	As.	P.		
Remitted to Lon- don in 1902	34	0	0				509	0	0					
Ditto 1903	3	19	4				60	4	0					
Ditto 1904	357	1	5				5,330	5	1					
Ditto 1905	57	3	1				854	8	0					
Ditto 1906	368	9	6				5,494	4	4					
Ditto 1907	592	0	6				8,867	7	11					
Ditto 1908	230	8	5				3,471	7	0					
Ditto 1909	320	14	8				4,826	14	10					
				1,963	16	11				29,414	3	2		
Balance due to London				407	3	8								
				TOTAL £	2,371	0	7				TOTAL Rs.	29,414	3	2

STATEMENT

Regional

RECEIPTS.				Rs.	A.	P.	Rs.	A.	P.
Government Grants :—	1899	...	...	1,000	0	0			
Ditto	1901	...	...	1,000	0	0			
Ditto	1904	...	...	1,000	0	0			
Ditto	1905	...	...	1,000	0	0			
Ditto	1906	...	...	1,000	0	0			
Ditto	1908	...	...	1,000	0	0			
Ditto	1909	...	...	1,000	0	0	7,000	0	0
Petty receipts	...	...	...				2	9	0
Collected from Subscriptions up to 31st May									
1909	...	...	...	29,900	14	3			
Ditto	from 1st June	to 31st Decr.							
1909	...	...	...	4,640	3	0			
				<u> </u>			34,541	1	3
							<u> </u>		
				TOTAL Rs.			41,543	10	3
							<u> </u>		
Subscription overdue on fourth annual issue				104	2	0			
Subscription still due on sixth annual issue				887	3	0			
In hand from subscriptions				5,129	7	1			
				<u> </u>					
				TOTAL Rs.			6,120	12	1
							<u> </u>		

JOURNAL & PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL.

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MARCH, 1910.



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1910.

Issued 5th July, 1910.

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OF THE

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ERRATUM.

Journal and Proceedings of the Asiatic Society of Bengal,
Vol. V, No. 8, 1909.

On page 310, the dates on the coins described as Nos. 1, 2
and 3 are given as—

(V) १५४

०१५१

११५१

They should be—

(V) ०४

००१

१०१

7. The Kingdom of *gNya khri btsanpo*, the first
King of Tibet.

By REV. A. H. FRANCKE.

At present I am engaged in making a collection of Tibetan geographical names, as I find them in Tibetan works on History and Geography. These original names I try to trace on Tibetan maps compiled by Europeans, the Royal Geographical Society's map, Sven Hedin's map, or Indian Government maps. I must confess that these maps are still very incomplete. Although covered with hundreds of names, many places which are of the greatest importance from a Tibetan point of view, are entirely omitted.

When I studied the Tibetan text of Schlagintweit's 'Die Könige von Tibet,' which badly wants re-translating, I tried to trace all the places mentioned in the account of *gNya khri btsanpo*. I, however, found the maps of very little use, but my personal local knowledge of the ancient Ladakhi Kingdom, which is now embodied in the Kashmir State, made it plain to me that *gNya khri btsanpo's* Kingdom, as we find it described in the *rGyal rabs*, must be looked for in Ladakh. All the place names, with the exception of *dBus* and *Yarlung*, can be traced there.

Let me first say a few words about these two names, *dBus* and *urlung*. *dBus* means 'the middle.' It is used of a place which is of importance, the residence of some important person. Thus in the first part of the Ladakhi *rGyal rabs*, the word *dBus* is used to signify *Gāyā* in Magadha, for this town was of the greatest importance in the ancient Buddhist times on account of its connection with the founder of this religion. In the later portions of the *rGyal rabs*, *dBus* is the name of the Lhasa district, because Lhasa had become the capital of Tibet. But I can well imagine that before Lhasa was made the capital of Tibet by *Srong btsan sgampo*, the surroundings of the previous capital *Phyi dbang stag rtse* were called *dBus*, the centre. The Tibetan inscriptions of Kunawar speak of Sarahan, the old capital of the Bashahr State, as the *dBus* of that country.

As regards *Yarlung*, this name does not fit in in any case, whether we place the kingdom of the first king near Lhasa or near Leh; for the Yarlung is a river or a river valley of the Eastern Tibetan province of Khams, and even if the first king entered the country by way of the *Yarlha shambu*, as the

Lhasa accounts have it, it is difficult to see why he should have taken up his abode in the remotest part of the country. *Yarlung* means 'the upper valley.' It is a name which might well have been given in contrast to *Maryul*, 'the lower land,' the actual name of Ladakh from the remotest times. Now the Tibetans are very fond of exchanging synonyms, thus, *Maryul* is also called *Marsa* (Hiuen Tsang's Moloso) and *Markhams*; king *bkrashis rnam rgyal* is also called *bkrashis mgon* (the Tashikun of the Tarikh-i-Rashidi), lama *Mipham dbangpo* is also called *Mipham mgon*, etc. And thus the word *Yarlung* may have become exchanged in course of time for another word of the same meaning. Now we actually find that the plain below the place which is in my opinion the ancient capital of the first king, is called *Ladvags gongkhai thang*, 'the upper plain of Ladakh'; this may have been exchanged for *Yarthang* 'the upper plain,' and a valley branching off from this plain could very well be called *Yarlung*. But it is evident that *Yarlung* as a place name may occur in various parts of Tibet, and therefore I do not attach great importance to this point.

The king's original name was *Spu rgyal*, which means 'king of *Spu*.' *Spu* is a large village on the Sotlej in Upper Kuna-war with vast ruins around, and may very well have been the seat of a petty king. In the most ancient version of this tale, brought to light by Waddell in his inscription of king *Khri srong lde btsan*, the king is called '*Od lde spu rgyal*.' '*Od lde*, 'beautiful light,' is his personal name; *Spu rgyal* means king of *Spu*. The spelling *Spu* of this village is testified to by many stone inscriptions in the vicinity, the oldest being apparently written by the orders of the royal priest *Yeshe 'od* (c. 1025 A.D.) On the maps, the place is spelt *Spooch*. The name *Spurgyal* was also given to a mountain in the neighbourhood, which is now generally called *Purgyal*. This is a case of assimilation of the vowel of the second syllable to the first. As I have shown previously, the Tibetan law of assimilation is different, according to which the first syllable is modified to assimilate with the vowel of the second. However, the people of *Spu*, who have accepted only recently the Tibetan language, have a law of assimilation of their own, as appears to me. I found two inscriptions with names of modern Bashahr kings, in which the vowel of the second syllable had been assimilated to the vowel of the first. Instead of Rudar (Rudra) Singh, these inscriptions spell *Lu rdur* Singh, and instead of *Ugra* Singh they spell *Ukur* Singh. In the same way the name *Spurgyal* could be changed to *Purgyal*.

The place where the first king was found by the hunters is called *Lhari*. The name *Lhari* occurs in various parts of Tibet. It means 'mountain of the gods.' And to suit their case, the Central Tibetan historians who wanted by all means to land the first king near Lhasa, added the word *Lhari* to the

[N.S.]

name *Yarlha-shambu* and called the mountain *Yarlha shambu lhari*. (See *dPag bsam Ijon bzang*.)

The classical country of *Lhari* is, however, in the west. A river which for some distance forms the frontier of Spiti, and a village on it, are called *Lhari*. A mountain near Leh is called *Lharimo*.

The capital of *gNya khri btsanpo* which was already in existence when he arrived in the country, is called *Phyi dbang stag rtse*. As a place of this name has not yet been discovered in Central Tibet, the Central Tibetan historians (S. Ch. Das, J.A.S.B., 1881) simply said that Lhasa was built on the top of it and that it therefore disappeared. But there is a place, spelt *Phyi dbang*, only eight miles from Leh, situated in a valley which opens out on the plain *Ladvags gongkhai thang*. On the maps, the place is spelt Phayang. This, in my opinion, was the capital of the ancient king. It must be a place different from Lhasa, for we find that one branch of the descendants of *Khri bkrashis tsegs dpal*, in c. 1000 A.D., went from Lhasa to *Phyi dbang stag rtse* to reside there. *Phyi dbang* is the name of the town, and *Stag rtse* is the name of the royal palace in it. Whether the name *Stagrtse* still exists at *Phyi dbang* or not, I cannot say. The castle of *Stagrtse* in Purig was evidently called after this old royal castle of *Phyi dbang*. There are very extensive ruins in the *Phyi dbang* valley which have never been examined. When I asked the people of this place, who had once resided there, they said: "The king"! And yet, there is not a single passage in the Ladakhi portion of the *rGyal rabs* which says that any of the Ladakhi kings ever resided there. The site of this village in a warm valley opening to the south, is superb. From the lower part of it, the view up the Indus valley over a large portion of Maryul is glorious. More even than Leh, *Phyi dbang* was a suitable site as a residence of kings.

After a time, the king built the palace of *Ubu bla sgang*. There is evidently a mistake here. The nasal sign over the *U* was forgotten by the man who copied Schlagintweit's MS. From a comparison with the names in the Bodhimör and Ssanang Ssetsen it becomes evident that *Umbu bla sgang* (or *lha sgang*) is meant. *Umbu* is the Ladakhi pronunciation of *Ombu*, the tamarisk. In the form *Um* or *Om* it is found in many local names of Ladakh. The name *Umbu bla sgang* means 'the hill of the priests (or *lha* 'gods') with the tamarisks.' This name can be abbreviated in the same way as are many compound words. (See my Ladakhi Grammar.) Then only one syllable each of the two component parts is taken, and these are put together. Thus the abridged form of *Umbu blasgang* would be *Um bla* or *Umsgang*. Now a place called *Umla* actually exists at the other end of the plain on which *Phyi dbang* is situated. It is perhaps eight or ten miles distant from the

latter, and also contains ruins of a castle, as I am told. I have not yet had an opportunity to visit the place. On the maps it is called Umleh. Two other place names of *gNya khri btsanpo's* kingdom which are mentioned together are *rGod ldod* and *gYur ldod*. The word *ldod* I cannot find in the dictionaries, but it seems to mean 'district.' *rGod ldod* is the *rGod* district. Now there is a *rGod yul* (*rGod* country) within the present limits of Ladakh. It is mentioned in K. Marx's version of the *rGyal rabs*, in connection with *Sengge rnamrgyal's* reign. The *rGodyul* is the eastern part of Ladakh, or the territory of Hanle, as stated by K. Marx. All these eastern parts of Ladakh, *Shagti*, *Nyoma*, etc., were once strongly fortified against the invasions of the Turks, as their grand ruins show. Therefore it is quite in the nature of things that the first king of Tibet should have posted there a guard against outside foes.

gYur ldod means the district of *gYuru*. The name *gYuru* is the abbreviated form of ancient *gYung drung* (the Lama Yuru of the maps). When the *Ladvags rGyal rabs* was written, the ancient spelling *gYung drung* had already been replaced by the modern *gYuru*. The place *gYur ldod* was the centre of the first king's inner administration. This is quite in accordance with the central situation of the place. *gYuru* (Lama yuru is a modern invention) seems to have been a foremost place in ancient times. It is still called the ancient centre of the Bon religion, and I was so fortunate as to discover the ruined Bonpo temple in the place.

Another important place in *gNya khri btsanpo's* empire was *Rongdo* where his granaries were. There are two places called *Rongdo* within the limits of Kashmir Tibet. The western province of Baltistan is called *Rongdo*, and a village in the Nubra valley is called by the same name. I am convinced that the latter is meant. There is a convenient pass from *Phyi dbang* into Nubra, and the Nubra village of *Rongdo* is found almost on the northern opening of the *Phyi dbang* pass. On the maps it is called *Rongdu*.

The five names of chiefs given in the account, we cannot expect to find anywhere on maps. *gTso* means simply 'Lord,' *bTsan khyung* is a personal name of the Bon religion, *sNums* is a house name still extant at *Khalatse*, *Khustegs* is a family name, and *gNyara rtse* may be another house name.

As regards the general state of civilisation of the country, the description suits Ladakh very well, whilst it does not suit Lhasa. The art of writing is stated to have been known. In Ladakh it has actually been known since c. 250 B. C. going by rock-inscriptions. Agriculture has existed in the country since those remote times when the Gilgit Dards founded their colonies in Ladakh.

Now it may be said that there is nothing extraordinary

about all this. The *Ladvags rGyal rabs* was written in Ladakh, and its writer naturally contrived to make his home the kingdom of the first king of Tibet. In the same way, the Central Tibetan historians placed his kingdom near Lhasa. Quite so, and yet, the Ladakhi account strikes me as being more original. The *Lhari* was evidently added to the name *Yarlha shambu*, to make the mountain fit in the story. The name *Umbu bla sgang* was misunderstood and changed to *Yumbu gla sgang* which cannot be traced anywhere. The only other local name in the central Tibetan version is *bTsan thang* (plain of the *btsanpo* or king) which can be given to any plain near the royal residence.

Although *gNya khri btsanpo's* empire was apparently very small, it seems to have grown in extent towards the east, until *Srong btsan sgampo* made Lhasa his capital. Before he went there, he resided in Ladakh, at least according to my explanation of Tibetan history. Thus, the message to the Chinese emperor in which he asked the hand of Kongjo in marriage was sent from Ladakh, and a Ladakhi, the minister *Rigpacan*, a native of *Shargolha* in Purig, was the ambassador in this matter. The name of *Rigpacan* actually occurs in the *rGyalrabs*, but Schlagintweit in his translation mistook it for an adjective and translated it accordingly. At *Shargolha*, the house of this very same minister is still shown to travellers. Also the embassy of *Thonmi sambhota* started from Ladakh. As the *Ladvags rGyal rabs* says, it was sent to Kashmir, and to no other part of India. This was very natural, for the Ladakhi form of Buddhism which then prevailed among the *Dards* of Ladakh, was closely related to the Buddhism of Kashmir, it used the same kind of characters, a form of the Gupta character, but it had become stagnated. As the Ladakhi inscriptions of these times (700-900 A.D.) show us, the characters were used for nothing, but the *summum bonum* of Buddhism of those times, the *Ye dharma* formula.

In Kashmir, the motherland of Ladakhi Dard Buddhism, Thonmi received instructions from a Brahman called *Libyin*. This name has always been wrongly translated. It has to be translated 'Glory' (or blessing) of the land 'Li.' It is a name parallel to another name mentioned under King *Gung srong 'adu rje*. Under the latter king a priest called *Khri bdun yul byin* is mentioned. This name can only be translated by 'Glory of the land *Khri bdun*.' *Li byin* had apparently received his name, because the land *Li* had reason to be proud of him. The land *Li* is either a country near Nepal or Turkistan. I am convinced that it here signifies Turkestan; for there is some probability that it was in the Turkistan monasteries that Tibetan was first reduced to writing, and *Thonmi sambhota* simply reaped the fruit of such learning. The theory of the first origin of the Tibetan script in Turkistan was first propounded by Dr.

Barnett. I readily accepted his view. Dr. Waddell has recently repudiated it stating that it was founded on nothing better than the occasional occurrence of the *drag* in ancient documents. (J.R.A.S. October, 1909) No, it was never based on so poor a foundation.

What induced Dr. Barnett to believe in a possibly earlier introduction of the Tibetan script, was the fact that in Turkestan at Endere, on the very confines of the Tibetan empire, were found specimens of Tibetan writing in not one but two forms of script, one of which exhibited already traces of great simplification, which can be explained only with the acceptance of the theory of a long period of use of the same. And the latest date which can be assigned to these documents is c. 780 A.D., about 120 years after the asserted invention of the script by Thonmi. But the Endere relics are not all of the same type, some exhibit a more archaic type of orthography than the others, and have to be dated considerably earlier than 780.

Turkestan is exactly the country where a new kind of script and literature could most probably have originated. The Buddhists of Turkestan were more eager than any other to provide people of various tongues with Buddhist literature in their own language. Proof of this are the various MSS. in unknown languages which have come to light there. Turkestan was in possession of a form of the Gupta alphabet (the Bower MSS., etc.), and this alphabet impressed its type on the Kashgar Brāhmī as well as on the Tibetan script. When I wrote my article on "The Similarity between the Tibetan and Kashgar Brāhmī alphabets," published by this Society, I might have added a column showing the Gupta characters! The Gupta alphabet has variants, but its descendants here in the West are all sprung from one and the same type of Gupta. These descendants are the Kashgar Brāhmī and Tibetan characters, and the Indian characters used in Ladakh between 700 and 900 for writing the Sanskrit formula *Ye dharma*, etc. This formula was written in Tibetan characters as well, and at first sight, the Indian and the Tibetan variety of this formula can hardly be distinguished; for most of the characters look the same. The difference rests in this, that in the Tibetan version the aspirated mediae are written with an ordinary media furnished with a subjoined "h," whilst in the Indian version *gh*, *dh* and *bh* are written with simple characters. Besides, the Tibetan version has the Tripartite *y*, whilst the Indian version has a later form of the *y*. The west (Kashmir, Ladakh, Turkestan) is the country where the Gupta form of characters remained stationary for a longer period than elsewhere. Here is the probable home of the Tibetan script. It was invented not many centuries before *Srong btsan sgampo*, possibly one or two centuries before him. The Brahman

[N.S.]

Libyin was apparently a native of Turkestan, and it was he who initiated the Ladakhi minister into the art already practised there.

Before the introduction of Buddhism into Tibet (*i.e.*, to the Tibetan, not *Dard*, inhabitants of the country) a number of Buddhist symbols came down from heaven in the time of *Lhatho thori* when this king was at the palace of *Umbu bla sgang*, in Ladakh. One of the symbols was a *Pangkong*, a 'pātra of the lap.' The West Tibetan lake *Pangkong* was called after this symbol. This speaks again in favour of my view that *Umbu bla sgang* was situated in Ladakh, and not near Lhasa. For had it been situated there, one of the numerous lakes near Lhasa would probably have been called *Pangkong*.

As is stated in the *rGyalrabs*, *Srong btsan sgampo* conquered *rTsami* and *Shingmi* in the east. *rTsami* is pronounced *Sami* according to a Tibetan law of sound. A place *Sami* is found on the map south-west of the Manasarowar lake. In the vicinity is the *Shing lab cha* pass, probably the old *Shingmi*. If these places were conquered 'in the east,' the chronicler must have looked towards them from Ladakh. If *Srong btsan sgampo* had then resided at Lhasa, he would have said 'in the west.'

1870

Received of Mr. J. H. ...
the sum of ...
for ...

Witness my hand and seal this ...
day of ... 1870

...

8. Notes on the Pollination of Flowers in India. Note No. 7. A few observations made in the Central Provinces and Berar.

By I. H. BURKILL.

The following observations were made on tours in the Central Provinces and Berár, in 1908 and 1909. The first of the tours comprised a visit to the hill of Asirgarh in Nimár (26-28. ix. 08) and a journey by road from Ellichpur over the Sátপুরas through the forests of the Melghát to Lewáda where the Sipna valley opens towards the river Tápti, (3-19. x. 09): the second comprised a visit to Nágpur (14-22. ii. 09) and the third an excursion into the Melghát from Akot, along the Ban valley and to Jálgáon in the Buldána district (16-26. ix. 09). The weather during the last tour was unsettled.

The notes are fragmentary; but years may pass before an opportunity occurs for making them more complete. The chief point in them is connected with the cotton plant,—chief, because for those who are trying to breed out of our cottons improved races, it is essential to recognise the extent of that cross-pollination in the field which will level down what they are raising up.

The insects have been determined for me by Messrs. H. Maxwell-Lefroy, E. Brunetti and C. A. Paiva, to whom I offer my best thanks.

A Bee as a regular visitor to Cotton flowers, and some other visitors.

There is evidence that in the Ganges valley, the races of cotton, when grown mixed, are crossed naturally with some freedom. The literature is in three places. Firstly, in the *Agricultural Ledger* No. 8 of 1895, p. 10, Professor T. H. Middleton set forward his belief that seed of the Behar cottons—'Bhogila' and 'Deshi'—gave rise to hybrids in his experimental plot at Baroda. Secondly, in this journal for 1907, pp. 517-526, I called attention to the insects which visit cotton flowers in Behar in May and to the presence of apparent hybrids in the crops there. Thirdly, Mr. Martin Leake (this Journal, 1908, p. 18) felt himself justified in saying that indirect evidence exists in abundance for regarding the crossing of cottons in nature as of common occurrence: and he recorded a few observations made by himself on the variability of progeny from seed collected when precautions were not taken to prevent natural crossing.

Fyson (*Memoirs Dept. Agric.* ii, no. 6) has more recently

stated on similar grounds that in Madras at least some natural crossing occurs.

All this evidence is opposed to Gammie's view, based on observation at Poona, that cotton does not get cross-fertilised in nature (*Memoirs Dipt. Agric.* ii, no. 2). Certainly Gammie's view cannot be made a generalisation for India as a whole.

In this connection it is now interesting to record, as an apparently regular insect-visitor to cotton flowers in parts of Berár, a bee, which by reason of its large hairy body is admirably adapted for carrying pollen from flower to flower. This insect is *Megachile albifrons*, Smith. It is, however, not very active in moving from flower to flower. I first observed the bee on the afternoon of September 22nd, 1909, sheltering in cotton flowers during rain at Pingli, which is a village lying just under the hills in the north-east corner of the Buldána district. By a search through a field four more individuals were found. On the next day between Pingli and Wasáli, during the morning, nine insects were seen, and in the afternoon at Wasáli eight more.

No observations were made on September 24th owing to rain; and on the 25th between showers no bees were seen on the cotton flowers during a march from Jamod to Jálgaon; but on September 26th, four miles south of Jálgaon, two more individuals were seen on cotton flowers. This makes a total of 24 individuals seen on cotton flowers in six days. On the 26th I left the district.

The common cotton of north-eastern Buldána is the yellow flowered Jari (*Gossypium neglectum*, Tod., var. *vera*, Gammie). Grown mixed with it, is a considerable quantity of white flowered Jari (*G. neglectum*, Tod., var., *rosea*, Gammie) and a not inconsiderable amount of Dharwar American cotton (*G. hirsutum*, Mill.). No individuals of *Megachile albifrons* were seen on *G. neglectum*, var. *rosea*, and only one on *G. hirsutum*: all the others were on *G. neglectum*, var. *vera*.

From the insects' point of view these three cottons may be very unlike; for *G. neglectum*, var. *vera*, has large yellow flowers which nod as a rule and open rather widely; *G. neglectum*, var. *rosea*, has smaller rose-white flowers which generally ascend slightly from the horizontal and open but little; *G. hirsutum* has upright pale yellow flowers which open earlier than the other two, and widely.

Bani (*G. indicum*) has flowers exactly as *G. neglectum*, var. *vera*, but not a single plant was noticed in north-eastern Buldána, where the *Megachile* was seen, whereby to prove (as might well be the case) that the bee would go from *G. neglectum*, var. *vera*, to it.

G. neglectum, var. *vera*,—Jari,—in north-eastern Buldána spontaneously self-pollinates within an hour or two of opening; and the flowers are fertile to their own pollen: so that the bolls set whether insects go to the flowers or not.

It is the habit of the *Megachile* to fly into the flowers and at first to seek for honey at the base,—whether generally found or not, I was unable to ascertain: that done the insect turns round and with its head towards the light sits on the anthers and eats pollen. When caught its hairy body is always abundantly dusted with pollen: and it certainly carries it from one flower to another, and probably produces the occasional cross which seems to be the rule with so many plants.

Over the period during which the cotton was under observation, a few butterflies were observed on the flowers. *Catopsilia crocale*, Cramer, was seen at Wasáli, and again to the south of Jálgáon on *G. neglectum*, var. *rosea*, generally going to the extra-floral nectaries but sometimes to the intra-floral nectaries. Its constancy to the white flowers was marked.

Papilio polytes, Linn., was seen on two days near Jálgáon going both to extra- and intra-floral nectaries of *G. neglectum*, var. *vera*, and *G. neglectum*, var. *rosea*.

A *Terias* visited flowers of *G. neglectum*, var. *vera*, between Jamod and Jálgáon. Commoner still than any of these was *Parnara colaca*, Moore. Seven individuals were seen going to the intra-floral nectaries of *G. neglectum*, var. *vera*, between Pingli and Wasáli on September 23rd, eleven between Jamod and Jálgáon on September 25th, one on September 26th on the south of Jálgáon, and another at Nandura—making a total of 20. Further, on September 25th, between Jamod and Jálgáon, one went to the extra-floral nectaries of *G. neglectum*, var. *vera*, and six to the intra-floral nectaries of *G. hirsutum*.

Thus there were seen:—

	To <i>G. neglectum</i> var. <i>vera</i> .	To <i>G. neglectum</i> var. <i>rosea</i> .	To <i>G. hirsutum</i> .
<i>Megachile albifrons</i> .	23 individuals entering the flowers.		1 individual in flowers.
<i>Catopsilia crocale</i> .		5 individuals generally at extrafloral nectaries.	
<i>Papilio polytes</i> .	1 individual.	1 individual.	
<i>Terias</i> sp.	1 individual entering flower.		
<i>Parnara colaca</i> .	20 individuals, all but one entering the flowers: that one at extra-floral nectaries.		6 individuals entering a flower.

Parnara and *Papilio* were also seen on yellow Cotton flowers between Nandurbár and Táloda in West Khándesh on September 29th, 1909: but flower-visiting insects, except the injurious beetle,—*Glycyphana versicolor*, Fabr.,—were there exceedingly rare.

Elæodendron glaucum, Pers.

The yellow-green somewhat massed flowers have a large disc, bearing a considerable amount of honey. They open widely, facing upwards or horizontally. At first they are male, the stamens standing up as in the upper figure: then they become female, the filaments, having bent as in *Rhamnus*, and the style elongated. The lower figure represents the flower in the second stage.

A few hours of leisure spent at Wasáli, Buldána district, on September 23rd, while waiting for the carts that were bringing my camp-furniture, enabled me to collect the following visitors at honey on the flowers.

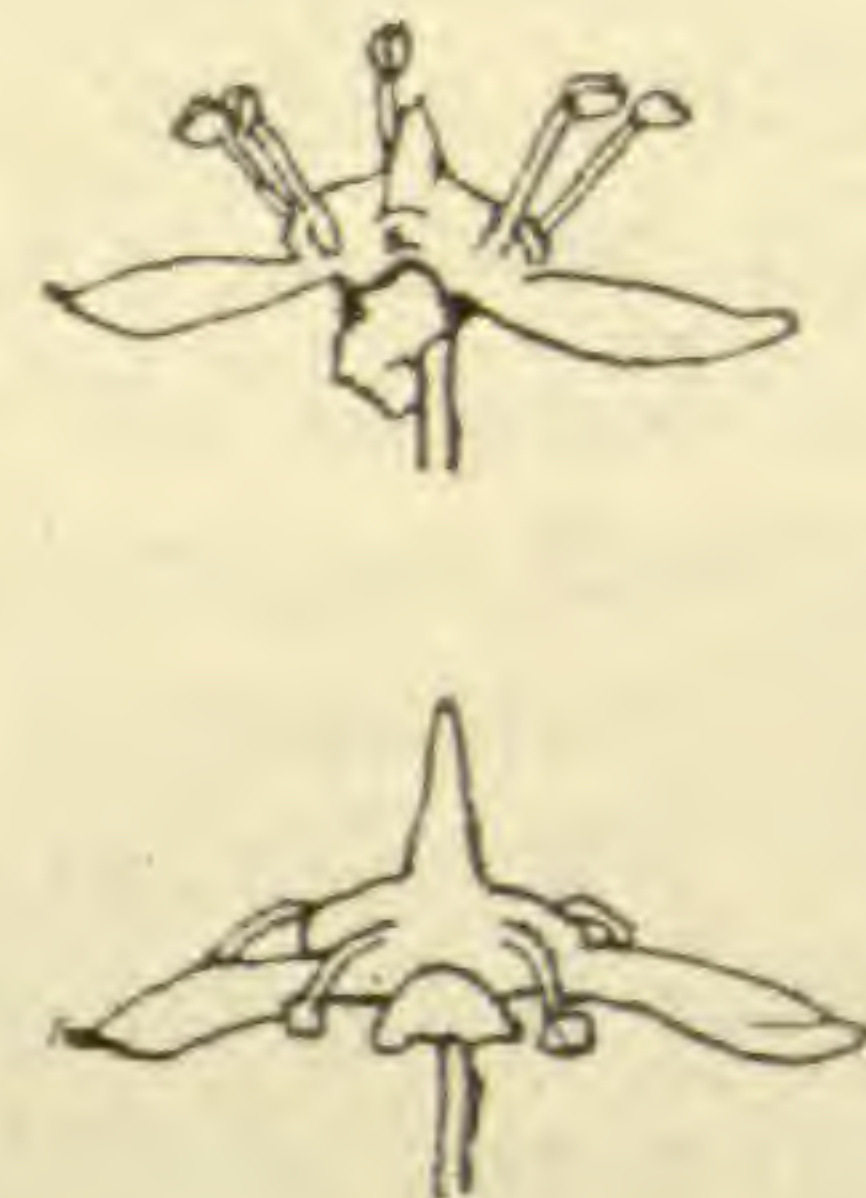


FIG. 1.—Upper flower, early or male state; lower flower, later or female state. $\times 2$.

DIPTERA.—SYRPHIDAE. *Eristalis arvorum*, F. σ and ρ plentiful. *Megaspis crassus*, F. ρ . *Syrphus* sp. MUSCIDAE. *Lucilia dux*, Erichs., plentiful. *Musca* sp. near *M. domestica*, L. TACHINIDAE. 1 sp.

Hardwickia binata, Roxb.

Hardwickia binata is an anemophilous Leguminosa, with the light foliage and flexible branchlets of a birch tree. On these thin flexible branchlets are produced in September the panicles of yellow green flowers. Apparently the flowers open chiefly at night. As the sepals part, the stigma is thrust out by the straightening of curves in the style: it straightens slowly, retaining a knee, by means of which the stigma is carried to a lateral position. After the stigma has thus been removed to a position and is no longer under the flower, the anthers emerge and dehisce.

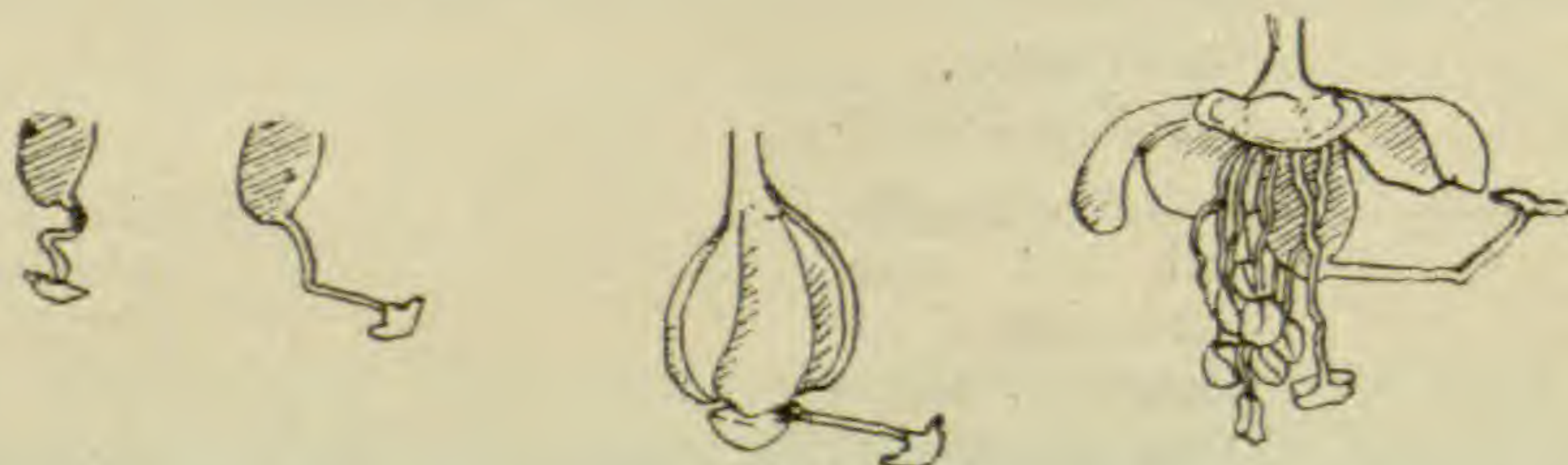


FIG. 2.—On the left younger stages—ovary and style and stigma: on the right opening and wide open flower, $\times 2$.

The sequence is sufficiently illustrated by the figures above, for further description to be unnecessary. The stigma is 5-angled, thick and raised into ridges: it is without papillae.



FIG. 3.—Stigma seen from above and in section, much enlarged.

Dalbergia Sissoo, Roxb.

In February, 1909, during nine days (14th to 22nd) spent in Nágpur, I had opportunities of making observations on *Dalbergia Sissoo*, because my tent was pitched under a tree in full flower. *Apis dorsata*, Fabr., visited this tree in great numbers, coming with the dawn, and leaving in the twilight, but not working steadily all day. That it should come in the grey of the first dawn and go in the dim light when night had nearly closed in, is interesting, for in Britain the hive bee—*Apis mellifica*, Linn.—does not leave its hive except in broad daylight; and even the longer-working wasp is never out in the twilight. Once halting in a 'ziat' (a shelter without walls) at the village of Pa-ngat, in Tenasserim, during the month of March, I heard from 4-30 A.M. into daylight a steady continuous humming overhead as of numerous bees, and when it was possible to see, *Apis* was found to be diligently visiting the white flowers of a tree of *Mesua ferrea*, Linn., overhanging the ziat. The observation does not prove that *Apis dorsata* is nocturnal at times, but suggests it: and on rare occasions in Calcutta and in other places, *Apis* has flown to my lamp as I read after dinner.

The following is the history of a Sissoo flower as exemplified on the tree in Nágpur. The flower opens in the early afternoon, between noon and 2 P.M. As more and more new flowers open, more and more bees (*Apis dorsata*) come to it, and they work diligently until night has almost closed in. All the next day these flowers are open, and through the night to the morning after, when, after sunrise—after a duration of forty-four hours—they fade, and most of them fall off the tree. The mornings are times when many bees are busy: they work hard from the time when the east is only just red until about 9 A.M.: after which they desert the trees for the most part until afternoon.

Sissoo flowers secrete plenty of honey, which *Apis dorsata* readily reaches. *Apis florea*, Fabr., visited the flowers in less numbers with the *Apis dorsata*, but at hours neither so early

nor so late. A Pierid butterfly was also seen on the flowers in the broad sunlight.

A few further observations from Asirgarh and the Melghát.

The following observations are all, additional to the above, that I could make over twenty-six days spent almost entirely in the open. They show how few insect-visitors can be observed in the Sápura hills at the season of my tours: and they suggest that the scarcity of visitors to crops like cotton grown under the Melghát is due to the poverty of the country side in flower-visiting insects. At the time of my tours in the Melghát, few trees were in flower, but under the trees occurred sporadically the large blossoms of several species of *Barleria*, a *Strobilanthes*, other *Acanthaceæ*, *Crotalarias*, etc.; and in other places an abundance of *Indigofera glandulosa*, *Tridax procumbens*, *Ageratum conyzoides*, and *Impatiens balsamina*; while on the plateaux *Linum*, *Tradescantia*, *Pimpinella*, *Senecio*, etc., were in flower—flowers sufficiently conspicuous to attract many insects in Britain, during an equal period.

Xylocopa fenestrata, Bingham, was seen in Asirgarh (25—26. ix. 08) at honey on *Celosia cristata*, Linn., and *Zinnia elegans*, Jacq.; and *X. aureipennis*, Lepel., in the Sipna valley (10—13. x. 08) on *Anisomeles ovata*, R. Br., *Crotalaria albida*, Heyne, *Sopubia delphinifolia*, G. Don, and *Celosia cristata*, Linn.

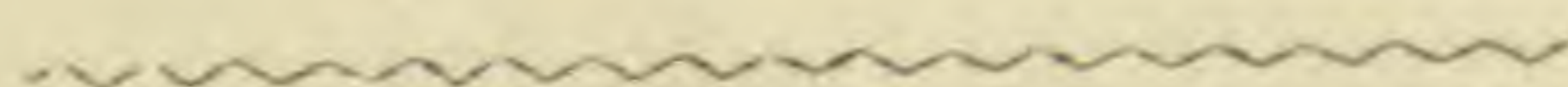
Megachile anthracina, Smith, which is a somewhat similar insect, was seen in the Ban valley (19. ix. 09) in great numbers on *Crotalaria juncea*, Linn., and also freely on flowers of *Sesbania aculeata*, Pers. *Anthophora zonata*, Bingham, was seen abundantly on flowers of *Leucas urticæfolia* just where the Ban river debouches on to the plains (22. ix. 09): the association of this insect with small labiates is noticed in Lefroy's Indian Insect Life (Calcutta, 1909, p. 222). *Apis florea*, Fabr., on the pass near Ghátáng (10. x. 08) visited in great numbers for honey the flowers of *Kydia calycina*, Roxb., and in the Ban valley (19. ix. 09) it was seen in hundreds on the greenish-white flowers of *Aspidopterys cordata*, A. Juss., which smell like those of *Sambucus nigra*, Linn.

Apis dorsata, Fabr., was seen in the Sipna valley collecting pollen on the anthers of *Andropogon contortus*, Linn. (17. x. 08). No other Apiids were seen on flowers.

Of butterflies numbers were seen on the flowers of *Celosia cristata*, Linn., in all parts of the hills north of Ellichpur and in Asirgarh (25. ix.—08. x. 18). They included species of *Papilio*, *Danais* and *Parnara*.

Papilio ? polytes, Linn., was seen also on the flowers of *Zinnia elegans* in Asirgarh (25—26. ix. 08) and a Sphingid was seen on *Ipomæa coccinea*, Linn., in the Sipna valley (17. x. 08).

Flies were very rare: except a *Calliphora* on *Kydia calycina*, Roxb., near Ghátáng (10. x. 08), and *Pangonia rufa*, Macq., in the tube of *Barleria grandiflora*, Dalz., near Kohána (5. x. 08), none were observed in the hills. The *Pangonia* had forced its way half down the 22 mm. long tube of the *Barleria*: what it—a biting fly—was doing there, it is hard to say.



9. The Rupee and Indian Prices.

By H. R. PERROTT, B.A., I.C.S.

There are perhaps few subjects which have given rise to more discussion than the subject of Indian prices and their relations to changes in the Indian monetary system. It has often been gratuitously assumed that all secular changes observable in price levels are somehow necessarily determined by the quantity of the metallic circulating medium in the country, and that only the more temporary and transient changes are attributable to the relations of supply and demand in respect of commodities. There has also been not a little confusion in language. Terms are sometimes used without a very clear conception of the ideas they are intended to connote. Such terms are "redundancy," "over-issue," "depreciation." The last is a particularly unfortunate term, for it appears to suggest that something is wrong with the currency which is described as "depreciated." This ethical colouring is probably to be traced to the time when we were first told that a certain autocratic Tudor Monarch had caused depreciation by tampering with the coinage. In its present-day use, however, the term is ethically a colourless one. It merely connotes the idea that, for some reason or another, about which nothing whatever is predicated, the currency has come to be regarded as of less value in exchange for commodities in general. "Redundancy," on the other hand, has clear reference to "quantity." It immediately conveys the idea that there is *too much* of the currency in circulation, while "over-issue" similarly conveys the idea that *too much* has been issued. But *too much* is a relative term:—*too much* in relation to what? Let us imagine for a moment a number of countries mutually engaged in trade in which the same metal circulates as full value legal tender. Let us further suppose that in one of these countries the quantity of the metallic medium becomes increased: and let us further assume that this increase results in a rise in the general level of prices. We might then term the increase in the currency which is assumed to give rise to the higher prices a redundancy of the circulating medium. When, however, we come to token coinages, such as to all intents and purposes the rupee coinage of India now is, it is the relation of the token to the standard to which our attention is naturally drawn. If we assume that an increase of the token has resulted in its depreciation with regard to the standard, we should term that redundancy. In this sense redundancy does not necessarily imply depreciation with regard to commodities in general,

because it might happen that both standard and token are appreciating with regard to commodities in general, but the token less quickly than the standard, and so we should have redundancy a concomitant of appreciation. So far then as India is concerned we would confine the meaning of redundancy to such an increase of the rupee currency as actually results in a fall in exchange. How redundancy may occur, and under what circumstances, are very difficult questions. The experience of countries which have used token coinages, and more particularly of those which have issued inconvertible paper, all goes to shew that there exists a fairly wide margin of issues, and that it is only when that margin is exceeded and public confidence is shaken that redundancy occurs.

Those who are ever ready to sound the tocsin of redundancy would do well to reflect on the case of countries like Brazil and Austria Hungary, in which large quantities of inconvertible paper have been maintained over considerable periods of time at fairly steady rates of exchange. In the case of Brazil it was only under an extraordinary increase of issues (more than £30 millions in three years, the paper issue in 1892 amounting to no less than £51,372,700) at a time of failing credit consequent on the establishment of the Republic that the exchange, the par gold value of which is 27*d.*, fell to figures ranging from 10 $\frac{1}{4}$ *d.* to 15 $\frac{3}{4}$ *d.*

Having so far cleared the way we are now in a position to outline a method of enquiry. This method consists in an analysis of the available facts as regards supply and demand in respect of commodities; secondly, such facts connected with the history and nature of the monetary medium as have a more obvious bearing on the subject; thirdly, the facts as regards prices in the concrete; and then, after a brief discussion of the present character of the rupee in relation to exchange, a résumé of the inferences and deductions which may be reasonably drawn from the facts. The present paper does not aim at finality: it is merely suggestive of methods which it is hoped may serve to throw a little light on this complicated question of prices.

We shall then proceed to the consideration of supply and demand in respect of commodities, and more particularly in respect of food stuffs. The importance of food stuffs to India is hardly capable of exaggeration. Compare for a moment agricultural India with manufacturing England. In the latter country about 23% of the population is rural and 77% urban. India, on the other hand, is more than 66% agricultural and less than 34% non-agricultural. It would be well to bear this fact in mind before generalising from the one country to the other. When, therefore, we come to the discussion of supply and demand it is natural that the food grains should absorb our attention.

Everyone whose lot has been cast for any considerable period in close touch with the rural incidents of an agricultural country like India is familiar with the manner in which the crops are grown and harvested, and then sold by the cultivator to the local dealer, a portion of every favourable harvest being retained for local consumption. Fewer are fully conversant with the later stages, with the manner in which the local dealers sell their crops to the agents of the larger dealers who control the distributing agency. A portion of the crops—a far smaller portion than is commonly supposed,—is shipped to foreign countries. The principal exports are the cereals, wheat and rice, but a certain quantity of *jawar*, *bajra*, and pulses, is now exported. This export of crops is a distinctive feature of modern industrial and commercial conditions.

When we come to review the agricultural features of India throughout the 19th century we are at once struck by the extraordinary difference between the first half and the second half of the century. About the year 1860 we cross the rubicon between the old state of things and the new. The years 1850-1860 constitute in many respects an epoch-marking decade. As we shall presently see, a great monetary change was in progress, but the changes in the general conditions of trade and commerce were not less remarkable. These changes, first noticeable about the year 1853, but held in abeyance for a brief span by the terrible events of 1857, are rendered more conspicuous in the years immediately succeeding the assumption of government by the Crown. Trunk lines and telegraphs were pushed forward, and great progress was made with roads and canals. A policy was inaugurated of which the key-note was consolidation and internal development as distinct from external acquisition and conquest. With all its marvellous commercial activity the Company had never really succeeded in materially altering the internal conditions that affected the supply of and demand for the staple food-stuffs. During the first half of the 19th century the conditions governing production and distribution remained much the same as they had been in the preceding centuries. With a very imperfect system of communications there could be little export of food-grains, and, in any case, the commercial instincts of the Company were chiefly directed to the making of large profits by quick methods. Spices and silks absorbed their attention.

But what specially characterises the first half of the century is the absence of any considerable market. Such scanty information in respect of prices as we possess, derived chiefly through the medium of Settlement reports, the laborious compilations of Crown Officers, suffices to emphasize very clearly the enormous differences that prevailed between prices at neighbouring places in the same year, and at the same place in different years. The whole of India, in fact, consisted eco-

nomically of a congeries of petty local markets, for the most part independent of each other; and there might, and did, co-exist in the same year unexampled plenty in one District with dire famine in the next.

The difference in prices from 1860 onwards is most marked. The fluctuations, whether as between one place and another in the same year, or between one year and another in the same place, are far less pronounced, but the general level of prices is decidedly higher than it was during the first half of the century. This has often been assigned to monetary causes. It appears, however, that there exist in the altered conditions affecting the food supply itself causes which would produce this result.

We have seen how in the first part of the century each locality was dependent on its own crops. There must have existed most intense local famines. The improvement in communications naturally led to the gradual linking up of the disconnected petty markets, and so rendered available a surplus, which often in former years must have rotted in the granaries, to alleviate distress in places of scarcity and famine. Supposing now we could by some mysterious means, the evolution of which we leave to the imagination of Mr. H. G. Wells, plump down the surplus exactly where it is most wanted. We should then eliminate the extreme differences of price between one place and another. The general level of prices would, however, remain unaltered. Now railways and bullock-carts actually do this, but they do not do it free of charge, and they do not always do it without delay. In fact the distribution of the surplus costs something, and that something must enter somewhere into the price. In other words the general level of prices will be raised. In this view of the matter, then, it is possible that the higher level of prices that obtained from 1860 onwards is in part attributable to the cost of moving surplus crops from places of plenty to places of scarcity.

We come then to the closer consideration of the second half of the 19th century, an era characterised, as we have seen, by the formation of large markets, mutually sympathetic, as also by the linking up of Indian with European, American, and Australian markets. India has taken her place among the nations which engage in International Trade proper. In the days of John Company there were, no doubt, large exports and also considerable imports, but the conditions of trade were for the most part monopolistic, and the risks were so great, and the profits so well proportioned to the risks, as to remove this kind of trade altogether outside the category of modern International Trade. Moreover, under the aegis of the Pax Britannica, which, for the first time in history, gave India immunity from the larger type of invasion from without, and from the internecine warrings of local chieftains—population

must have grown apace. We have, indeed, no authentic figures for population prior to the first census of 1872. From that year up to the last census in 1901 the population has increased enormously, in fact by no less than 88 millions, though the increase has been at a diminishing rate. The figures for the successive censuses are given below :—

1872	..	206,162,360.
1881	..	253,896,330.
1891	..	287,314,671.
1901	..	294,361,056.

There were, then, in 1901 nearly 90 million more mouths to feed than there were in 1872. This is a most significant fact considered in relation to the demand for food grains. But what about the supply?

Our information on crops is principally derived from two sources, (1) the 'Agricultural Statistics of India', and (2) 'Area and Yield.' The latter publication has now been incorporated in the former as Table No. 9. The value of the 'Agricultural Statistics' for years prior to 1890-91 must be to some extent discounted by the fact that it has been several times modified and recast, though since that year, when the figures for the great rice-growing areas of Bengal were first included in the series, there has been no substantial change. The 'Area and Yield' statistics date from 1891-92. The figures in this publication are really a condensation of final estimates, and are necessarily only approximate. For our present purpose the principal importance of the figures exists in the light they throw on the conditions of supply of the rice crop.

It is to be noted that the figures in 'Area and Yield' for the rice crop relate only to the great rice-growing Provinces—Bengal, Eastern Bengal and Assam, Lower Burma, and Madras, whereas the figures for area in the summary attached to Vol. I of the 'Agricultural Statistics of India' relate to the whole of British India.¹ Now while the figures for Bengal (including for convenience since 1905-06 the Districts of Eastern Bengal but not Assam) exhibit a very slight increase since 1891-92, the increase is more readily discernible in the case of the other Provinces. Again, so far as Bengal is concerned, the figures for output do not exhibit such a clear increase as the figures for area. In fact the average output for Bengal rice for the four years, 1892-93 to 1895-96, works out at about $9\frac{1}{10}$ cwt. per acre, while the average output for the four years, 1903-04 to 1906-07 is $8\frac{1}{2}$ cwt. per acre.

But we have no figures for output except for the above-mentioned Provinces. We may, however, adopt a rule-of-thumb

¹ Vol. II is for Native States. The figures are more open to question than those for British India.

method of comparison, and, assuming that the lands of the Central Provinces, Bombay, and the Punjab, which grow rice, produce the same return in the same year as the average rice-growing lands of Bengal, Madras, and Lower Burma, increase the figure for output proportionately to the increased area.

We are now in a position to collate the following figures:—

- I. Area under rice, Bengal, Lower Burma, and Madras, millions of acres, 'Area and Yield,' 1891-92 to 1905-06, p. 36.
- II. Output, millions of cwt. Do.
- III. Area under rice, whole of Br. India. 'Agric. Stat.' 1895-96 to 1899-00, p. 2; 1901-02 to 1905-06, p. 8.
- IV. Proportional output: $\frac{\text{Col. III}}{\text{Col. I}}$ of Col. II.
- V. Export. 'Stat. of Br. India,' Part II, 1908, p. 18. millions of cwt.
- VI. Balance for Indian consumption; Col. IV minus Col. V.
- VII. Total area under all food grains (Br. India). Ref. Col. III.

The grains are wheat, barley, *jawar*, *bajra*, *ragi*, maize, gram, and other grains and pulses, the figure for rice being purposely omitted.

Year.	I.	II.	III.	IV.	V.	VI.	VII.
'91-92	49.5	315	63.5	404	32.7	371	109
'92-93	48.4	420	65.7	570	0.4	570	114
'93-94	49.5	459	68.4	634	24	610	113
'94-95	50	498	69.3	690	33.7	656	112
'95-96	49.4	415	69.2	581	34.6	546	103
'96-97	48	276	66.3	381	27.8	353	94
'97-98	52.2	498	70.8	675	26.4	649	112
'98-99	52.7	506	74.8	718	37.4	681	107
'99-00	52	452	72.8	633	31.9	601	92
'00-01	48.9	414	69	583	31	552	113
'01-02	48.5	384	70	554	33.7	520	107
'02-03	51.8	469	71.6	648	47	601	112
'03-04	49.5	439	69.6	617	44.4	573	117
'04-05	51.6	448	73.5	638	48.9	589	112
'05-06	54.4	433	73.4	584	42.2	542	110
('06-07	54.5	430)					

We may notice incidentally that the export figures are much smaller than is often represented in discussions about crops and prices. In fact, if we except the extraordinarily bad years 1891-92 and 1896-97, the export has only since 1902-03 attained the percentage of 10% of the output of Bengal rice, and has never exceeded 10% of the output of the whole of India.

The years 1891-92 and 1896-97 were exceptionally bad years for rice, while the years 1897-98 and 1898-99 were exceptionally good. The figures in Col. III would appear to indicate a slight increase in the area under rice throughout British India. But the export has increased considerably, as we see from Col. V, and the figures in Col. VI, net balance of output, exhibit a more or less stationary character. If we take the average of the first five years and compare it with the average of the last five years we have an increase of 2·6 per cent. in ten years. But this is taking into account the exceptionally bad year 1891-92. If we compare the average of the four years 1892-93 to 1895-96 with the average of the four years 1902-03 to 1905-06 we have a decrease of more than 3·2 per cent. Now the census figures shew that for the ten years 1891-92 to 1901-02 the population increased by 7 millions, or about $2\frac{1}{2}$ per cent. Between 1891-92 and 1905-06 the increase in population is probably not less than ten millions, or $3\frac{1}{2}$ per cent. We thus see that while the population has increased appreciably, the output, after deducting export, has fallen off. The census figures do not really give us an adequate idea of the price effect of the difference, because there is a good deal of internal evidence to shew that the consumption of rice is increasing amongst the poorer classes.

But the volume of the export is, as we have seen, relatively insignificant, and can have but little effect in directly raising the prices in Indian markets by diminishing the supply. It is when gold prices are rising, as they have done since 1902,¹ that the export, however small in volume, exerts a powerful influence on the price of the residue. Our chief object in presenting the figures in the form we have done is to bring into prominence the fact that in spite of the stimulus afforded by an increasing export to an increase of cultivation, the area under rice has increased but little, and the balance of output given in Col. VI shews no appreciable increase in spite of an increase of about $3\frac{1}{2}\%$ in the population. This is really a most significant fact, because it indicates that when this stimulus was absent, the increase in the area under cultivation must have failed to respond to the vast increase in population prior to the period we are now considering.

But the objection may be raised that we are confining ourselves to a single crop, and that, while the net output of rice has not appreciably increased, the output of other crops has more than made up for the difference. Now we have no reliable figures for output for the other crops (except wheat), and we have no space to go into detailed figures for areas, but, by way of anticipating this objection, we have added Col. VII to our figures, which shews the area year by year under all the

¹ The Economist Index number shews a rise of 30% in gold prices between December 1902 and May 1907.

food-grains. In collating these figures, we have deducted the figures in Col. III for rice. The stationary character of the figures is at once apparent.

The comparative steadiness of the figures for area and output in these years is most significant if we consider the great increase in the population as revealed by the censuses of 1872 and 1901. It would indeed be a most extraordinary thing if the area of cultivation had increased from 1872 proportionately to the increase in population, *i.e.*, nearly 43%, and then, under the added stimulus of a rapidly increasing export throughout the period under review, with gold prices rising towards the latter part of the period, along with a further increase in population, had assumed a stationary character. In the absence of satisfactory figures for either we may say, that there exists a high degree of probability that the increase in area, and hence in output, has been considerably less rapid than has been the increase in population.

In the case of Bengal, Sir W. W. Hunter in his "Statistical Account of Bengal" has given such figures as were available about the year 1870 for the area under cultivation in some of the Districts. These figures (with the exception perhaps of those for the District of Rangpur in the new province) are not sufficiently reliable to be worth quoting. The figures more often exhibit a decrease than an increase of the net cropped area, and a comparison of the figures for eighteen selected Districts¹ with those for the same Districts according to the 'Agricultural Statistics' for the year 1905-06 discloses an aggregate decrease. The areas under cultivation were probably somewhat over-estimated, but, even if we allow a margin of 25% for error, the areas would still bear a much larger proportion to the population than at present. The figures for Rangpur are given below ("Statistical Account of Bengal," Vol. VII, pp. 257, 258):—

	1872-73.	1905-06
Total area of the District	2,360,294	2,235,520 acres.
Net cropped area ..	1,737,950	1,366,900
Rice	1,263,266	1,102,500

If we reflect for a moment first on the lesson conveyed by the figures we have tabulated, and then on the enormous increase in the population between 1872 and 1901, the wonderful thing appears to be, not that the prices of food-grains have risen during the last 20 or 25 years, but that they have not risen more rapidly than they have done. The land was there, but the people was not. We shall presently have occasion to

¹ The Districts are Burdwan, Bankura, Birbhum, Monghyr, Purnea, Cuttack, Balasore, Dacca, Backergunj, Maimensingh, Faridpur, Jessore, Rangpur, Bogra, Maldah, Rajshahi, Pabna, Dinajpur.

notice one reason why, up to the year 1896, prices have not risen more rapidly (we refer to the fall in gold prices in Europe between 1873 and 1896). Doubtless there are other reasons. Perhaps there was always food in India, enough and to spare (except in years of widespread famine), if only it could have been readily transported to the places where it was most needed.

We have now seen something of the purely Indian incidents of supply and demand so far as the food-grains are concerned. We would do well, however, to bear in mind the fact that the prices of exported as well as imported commodities are now determined largely by the supply and demand in markets outside India. In other words the influence of gold prices tends to become paramount.

Whatever be the complex factors which really go to make the prices of Indian imports and exports what they are, we are still sure of one fact,—that it is the surplus of exports over imports, which, prior to the closure of the Mints in 1893, determined the quantity of the rupee coinage. The very causes which gave rise to a higher level of prices of food-grains also gave rise, as a less proximate and obvious effect, to such an inflow of silver as enabled exchanges in food-staples to be carried on without inconvenience at the higher level of prices. The money filled the gap. Given a fixed figure for the export, and putting loans aside, the question of what India will take in exchange—whether iron, spelter, copper, cotton goods, gold and silver ornaments, or, in the last resort after all other wants which can be satisfied by imports have been satisfied, silver bullion for coinage—is after all largely a question of the tastes and predilections of the people themselves.

If we would see the facts in clearer perspective we must look beyond the great Merchant Houses which control the import and export trade, and fix our attention for a moment on the cultivator, the consuming unit in the three hundred millions.

Our reasons for going to the cultivator are twofold : first, he is representative of about two-thirds of the population ; next, he is the person who immediately profits by the higher prices of food-grains. There exist several important social classes above him, which subsist on fixed wages, or on what practically amount to fixed wages. It is clear that these classes do not profit by a higher level of prices of food-grains ; in fact they are the losers thereby. When all is said and done they have less to spend on other things after they have satisfied their most pressing needs. It is not to them that we should look for a stimulated demand.

But, if we look to the cultivator we must not idealise him ; we must not abstract him from the realm of actual facts and make of him an economic man, such as would thriftily set

aside so much of each harvest as would just tide him over to the next. This is too theoretic a method. We must make use of our experience of him to take into account his very human failings. In the first place he has been habituated to regard a good season as affording a golden opportunity for physical recuperation after the inroads caused by years of want and scarcity. It will next, perhaps, occur to him that he has had perforce to defer the marriage of Chandrabatti, his ten-year old daughter, no less than three years on account of bad seasons, and that, to avoid cause of scandal, she must be married at once. Accordingly great preparations are made. Relations to the most distant are fed and housed for many days. The nights are rendered hideous by all kinds of drumming and piping, and the net result is that much food and drink is consumed. There is, indeed, much redundancy, but not of the currency.

But all is over, and Chandrabatti happily disposed of. He may, if he be a very prosperous raiyat, and independent for the nonce of the local money-lender, have a little to spare on the purchase of commodities other than food and drink.

His tastes are, however, of the simplest—a new thatch for his house, a new padlock for the chest containing the family ornaments, a new ploughshare, a new *sari* and a new silver anklet for his wife, a new turban or loin cloth for himself, a new vessel for cooking,—these are only realisable by the thrice-favoured of Fortune. All the more complicated wants are beyond his ken,—as unthinkable as Christmas crackers to the child of the Whitechapel slums.

If we except the first, these simple wants go to make up an integral Indian demand for iron, cotton stuffs, raw silk, silver for ornaments; copper, and spelter.¹ After food-grains it is, then, to this class of commodities that we should first look for an indication of depreciation, if such existed. Now in estimating the effect of this kind of demand, we should remember that the commodities are imports, and that the Indian demand is but part of a much larger demand. On the other hand we must bear in mind the population of India. If only one man in a hundred requires a new turban, ten yards in length, or a new copper vessel for eating, there will arise a demand for thirty millions of yards of cotton fabric, or three millions of copper vessels. The Indian demand may, then, assume very considerable proportions.

We shall presently see, when we come to the consideration of the index figure for these imported commodities, that there never has occurred, except possibly between the years 1862 and 1867, such a rise in their price as might betoken depreciation of the currency. In fact from 1867 onwards the prices of these

¹ A commercial name for raw zinc.

commodities fell away rapidly along with gold prices except for a temporary rise in 1873, till 1885, and from 1887 to 1902 the general level of these prices remained fairly steady. As regards the high prices that prevailed between 1862 and 1867 we shall presently see that this may be accounted for by the cotton crisis in Europe consequent on the Civil War in America.

From whichever point of view we look at the matter, there is no indication in the prices of these imported commodities that the quantity of money that flowed into India before 1893 was more than enough to enable the food-grains to be exchanged with facility at their higher level of prices in the local marts, and the causes of this upward tendency in prices we have found, not in the quantity of the circulating medium, but in causes affecting supply and demand in the Indian markets. In order to see more clearly how the money filled the gap we will pass in very brief review the more salient features of the rupee coinage between the years 1835 and 1893.

The present rupee coinage was first made legal tender all over British India by the Company in 1835. Yearly issues were made up to the year 1893. The issues previous to 1840, bearing the date 1835, and those previous to 1862, which all bear the date 1840, are at the present moment in process of withdrawal. The volume of the currency at the beginning of the period must have been comparatively small. Probably the amount in active circulation did not exceed forty crores. The Californian gold discoveries began in 1847, and were speedily followed by the Australian in 1851. Holland, taking alarm, hurriedly changed her standard from gold to silver, but reverted to her former standard as soon as she saw that the discoveries of gold were quickly followed by large discoveries of silver. The Government of India was not altogether free from the contagion, and in 1852 Lord Dalhousie practically demonetised gold by refusing to accept it at the treasuries.

The boom in the Indian cotton trade due to the cotton famine caused by the American Civil War of 1861-65 at once occasioned a well-marked rise in prices all over Western India. We notice as a secondary result of this boom an unprecedented influx of silver, and very heavy coinages throughout the decade 1856-1865. In fact the gross coinage during that decade amounted to no less a sum than 98 crores of rupees as against 35½ crores in the preceding and 39 crores¹ in the succeeding ten years. Here then is such a vast accession to the coinage as might be expected, at any rate in theory, to cause depreciation.

Now we have already seen that there occurred about the year 1860 a marked rise in the general level of prices of the food-grains. We further traced one probable cause of this to

¹ "Statistics of British India," Part IV (a), 1908, p. 36.

the improvement in communications, and the consequent addition to the general level of prices of something representing the aggregate cost of carriage. A further cause of the high prices of food-grains is, no doubt, to be found in the cotton boom itself. There must have occurred a great and sudden displacement of capital and labour from the cultivation of food-grains to the cultivation of cotton. Such a displacement on a large scale could only result in a shortage of supply of the food-grains, and a rise in their prices, first on the Bombay side, and later throughout India.

Let us now apply our next test. Was there any marked rise in the price of imports? Yes, there certainly did occur about this time a very well-defined rise in the price of imports. But now let us look a little closer and see what are the actual commodities of which the prices rose, and what do we find? We find that it is to the cotton goods that the rise of price is confined, and what is not attributable to cotton goods is attributable to Canton silk, the price of which was no doubt affected sympathetically by the boom in cotton. We see then that it would be illogical to draw any inference from the high price of imports in those years.

Now there are at least two objections which may be urged against the preceding method of analysis. In the first place it may be said that the rise in the prices of food-grains consequent on the cotton boom was only temporary and could not be of a permanent character apart from the monetary change. Now so far as food-grains are concerned there were several causes, connected with supply and demand, which must obviously have contributed to the perpetuation of a high level of prices. In 1861 there was scarcity in parts of Agra and the Punjab, and also in Rajputana. In 1866—a year by which the Uriyas still compute their ages—the terrible Orissa famine. That famine probably forced up the prices of food-grains over the greater part of India, and the additions to the currency merely enabled a higher level of prices to be maintained after the acute distress had disappeared.

The second objection that may be taken is that it is not to either exports or imports that we should look for evidence of depreciation, but rather to such indigenous products as *ghi*, which would be altogether unaffected by supply and demand in extra-Indian markets. Now there is undoubtedly something in this contention, but unfortunately this is the very class of products about which we have least reliable information. The onus of proof is on those who assert the existence of depreciation. A great deal of course depends on the meaning we assign to the term. If we confine the meaning of the term to a general rise of prices of all commodities, irrespective of causes which may affect their relative values, then it is at least doubtful if there was any such thing as depreciation in these years,

in spite of the fact that the increase in the currency was, as we have seen, very remarkable. So far as the rise in the general level of food-grains is concerned, the increase in the currency appears rather in the nature of a concomitant condition, or perhaps we should liken it to a *mode* by which many complex causes were working out their effects.

There are no other vast movements in silver until 1872, when the increased output of the American mines began to make its effect felt on the European markets. The situation only assumed a critical aspect when Germany, by way of forestalling a further fall, bought gold heavily and sold silver, and so threw a vast quantity of silver on the markets at a most inopportune moment. France and the other countries forming the Latin League were forced to protect themselves by placing restrictions on the coinage of the depreciating metal. Thus was the crisis precipitated which, after the most careful deliberations of Lord Herschell's Committee, led the Government of India, after ineffectual efforts, to enlist the sympathies of the Home Government in favour of bimetallism, to adopt a definite policy towards silver by closing the mints to the free coinage of that metal. We shall presently endeavour to throw a little light on the intricate questions that arise from this metamorphosis of the rupee. For the present we may content ourselves with noticing that it was not the high level of prices, nor the quantity of silver brought to the mints for coinage, that induced the Government of India to enter on this memorable phase of monetary policy.

The principal cause of alarm existed in the prospects of trade disturbed by a highly fluctuating rupee, a rupee the fluctuations of which were clearly attributable to circumstances altogether beyond the control of the Government of India.

We are now in a position to consider prices more in the concrete and less in the abstract. The principal source of our information on prices is the Government publication known as "Prices and Wages." There is also another most useful Government publication compiled by Mr. J. A. Robertson entitled "Variations in Indian Price Levels since 1861 expressed in Index Numbers." We have in the latter work various index numbers mapped out on charts. These are—(1) a special index number for food-grains; (2) a special index number for imported articles; (3) a special index number for articles exported and consumed; (4) a general index number for the whole of the selected articles. The period is from 1861 to 1904. We have also an index number prepared by Mr. F. J. Atkinson for 1861 to 1901. The principal feature of this index number is the great prominence it gives by weighting to the food-grains, and particularly to rice. In fact a comparison of Mr. Atkinson's index number with the special index number for food-grains mapped on the

same chart shows at a glance the effect of this weighting. The manner in which the general index number line can by weighting be deflected from the low import index number line to the high food-grains index number line is only a graphic illustration of the difficulty that occurs in all discussions on prices to decide the degree of importance that should be attached to the food-grains. It also serves to indicate that extreme caution is needed in basing a theory on any particular index numbers, unless the system on which they have been prepared is clearly understood. The Statistical Department's index numbers are compiled on the exceedingly simple principle of calling the price of each commodity for the year 1873-100, and reducing all prices to a percentage of the price of that year and then dividing the sum of the converted prices for any particular year by the number of the commodities.

No doubt the ideal index number would be on a consumption basis, but the matter is not as simple as it at first sounds. We should first have to divide society up into typical classes, a task as difficult as forming electoral colleges: we should then have to frame for the average individual of each class a budget estimate of expenditure, a task only one degree simpler than the framing of the Imperial Budget Estimate. We should then arrive at a number of index numbers which might not help us very much on account of their mutual incompatibility. The fact is that the attempt to frame index numbers on a consumption basis seems fated to end in dissipated energy and disappointment. It is like piling Pelion on Ossa and Ossa on Pelion.

One fact, however, is obvious,—that so far as three quarters of the population of India is concerned, the importance of the food-grains is paramount. There is, in other words, a very strong case for weighting the food-grains, as Mr. Atkinson has, in fact, done. If, however, we weight the food-grains to anything like an adequate extent, we shall obtain an index line which differs little from the index line for food-grains.

But it must not be inferred that the latter line, as drawn on the principles adopted by the Statistical Department, is intended to represent in any sense the cost of living, for this is very far from the fact. If anyone were found so impatient of theoretical exactitude as to wish to frame his daily bill of diet on the proportions of the staples that enter into the food-grains index number, it would be necessary to add to that number a substantial item for medical fees. All that we can really claim for the figure is that it affords us a rough-and-ready means of comparison of the prices of food-grains in different years.

The food-grains included in this index number are wheat and rice, the two most important, and then *jawar*, *bajra*, gram, barley, and *ragi*. In this special index number the prices for the seven food-grains are retail prices, whereas, in the special

index number for commodities exported and consumed, as well as in the general index number for all the selected commodities, the prices of rice and wheat are wholesale prices, while the prices of the other five grains are retail prices. It does not appear that any valid objection can be urged to the mixing up of wholesale and retail prices in the same index number, so long as this distinction between the index numbers is clearly grasped.

Now let us see what the index numbers shew. Take first the special index number for food-grains. The first thing that strikes us, if we turn to the curve which represents this index number, is the marked amplitude of the fluctuations. At a glance we may pick out the highest points of the curve and feel assurance that these mark years of famine and scarcity—1866, 1869, 1878, 1892, 1897, and 1900. Similarly the lowest points mark the years of plenty.

Now let us for a moment “damp” the extreme fluctuations and try and see the general tendency of the curve. Between the years 1861 and 1883 it is impossible to say whether the general tendency is upward or downward. All that we can say is that grain prices in the latter year did not sink to the same low level to which they sank in 1862, 1871, and 1875. From 1883 onwards, however, there appears to be a decided upward slope, and prices never again fall to anything like the level of those of 1883, though they rise in 1897 and 1900 very much higher than they did in 1878. These remarks apply to the period 1861 to 1904. The latter year serves to mark the beginning of a new period, the predominant characteristic of which appears to be the existence of famine prices without famine. We shall revert to this later.

Now let us look at the line representing the index numbers of the imported commodities. These are iron, copper braziers, spelter (a commercial name for zinc), grey shirtings, grey yarn, coloured yarn, sugar (Mauritius), raw silk (Canton), coal, kerosine oil, and salt. We see at a glance that there is very little resemblance between the contour of this line and that of the line just depicted. The next thing that strikes us is the great rise in the import line during the sixties. We have already attributed this rise to the cotton famine due to the American War. We will now consider imports from 1873 onwards.

A comparison of the import index line with Sauerbeck's index line for gold prices is most instructive. We at once notice a striking similarity between the lines especially during the years 1873 to 1885. Both index numbers are so arranged that each stands at 100 in the year 1873.¹ Down to the year

¹ Mr. Sauerbeck's index figures have been equated to the base year 1873. The original base year selected by Mr. Sauerbeck was 1871.

1885 the lines remain very close together and singularly similar in contour. From 1885 to 1888, while a heavy fall in exchange has set in, the import line rises, and then oscillates about a level slightly lower than the level of the latter year, at a time when the prices of food-grains are subject to great fluctuations with the general level perceptibly rising.

It is a most useful exercise to convert Mr. Sauerbeck's index numbers for gold prices into index numbers for silver prices at the rates of exchange which prevail in each year.¹ The resultant line is almost coincident with the import line. Here then lies the key to the riddle. The movements in the rupee prices of imports have at all times been ruled by the movements in gold prices in Europe. We see at a glance how much steadier as a measure of value of these commodities the rupee has been than the gold sovereign. Since 1893, however, or at any rate since the rupee arrived at 1s. 4d., the steadiness of the silver prices depends entirely on the steadiness of the gold prices, and this will be the case so long as the rupee is maintained fairly steady about 1s. 4d., in fact the import line becomes almost a replica of the gold line.

Now as regards the two index lines for articles exported and consumed and the general list of selected articles, they are so close in position and so similar in contour that we may consider them together. The effect of adding imports to the articles exported and consumed is simply to bring the index line of the latter a little nearer to the import index line, the representation of food-grains being so strong as to preserve its general contour. We will now follow the index figure line for the whole of the selected commodities. These include the food-grains and the imported commodities. The remaining things (which enter into the index figure for commodities exported and consumed and have been incorporated in the general list of selected commodities) are—tea, sugar, *ghi*, hides, raw cotton, raw jute, raw silk, saltpetre, raw wool, castor oil, seeds, coal, manufactured cotton, gunny bags, dressed skins, lac, indigo. Some of these are further subdivided: for example, there are four sub-classes for tea, two for sugar, three for jute, etc., so that the weight given to all the articles is not the same. It is necessary here to repeat a warning. These index numbers are not based on the actual or estimated consumption stand-

¹ *e.g.*, we want to convert the gold index figure for the year 1897 into a silver index figure. The rate of exchange in that year was about 1-3·4, the rate of exchange in 1873 may be taken as 1-10·3. The gold index figure for 1897 is 56. The corresponding silver index figure is

$$1 \frac{10 \cdot 3}{12} \cdot 56 = \frac{223}{154} \cdot 56 = 81 \text{ approx.}$$

ards of any particular class or classes. All that can be claimed for them is that they afford a rough and ready means of exhibiting the upward or downward tendency of general prices less obscured by the heavy fluctuations of the food-grains. If we "damp" the extreme fluctuations upwards and downwards we see that there is a turn in the general tendency of the line at the year 1885. From 1866 to 1885 the general tendency is a downward one, but from 1885 to 1904 it is a rising one, though the rise is not nearly as strongly marked as some would have us believe. The reason of the extreme depression of the line in 1885 is to be found in the fact that food-grains were very plentiful in that year, and the imports fell to a low figure along with gold prices. Between 1885 and 1893 there is a certain degree of steadiness observable in gold prices in Europe. It is not surprising, then, that with silver falling heavily in those years, the tendency of rupee prices should be upward.

We are now in a position to expose the fallacy of the trite argument that the fall in prices in 1898 is attributable to a deficiency of the circulating medium brought about by the closure of the mints, and that the rise in 1900 is due to the influence of the large coinages of that year. As regards the fall in 1898, we may note in the first place that though food-grains were exceptionally plentiful in that year, still the price was high above the level of '94 and '95, in fact 25 points higher than in the former year and no less than 42 points higher than the level of '82 and '83. It was not till 1904, after very heavy coinages, that the price of food-grains came down to near the level of '94.

As regards the fall in the prices of imports in 1898 we have only to reflect that in January, 1896, demand bills in Calcutta stood at $13\frac{7}{8}d.$, whereas in January, 1898, they stood at $15\frac{1}{8}d.$ It may of course be argued that the difference in exchange is itself evidence of the scarcity of the circulation. It is probable, indeed, that the volume of the circulation had become much contracted in 1898, but to argue that the rise in exchange was due to the scarcity of the circulating medium is, perhaps, to confound what is really a concomitant circumstance with a cause.

As regards the rise of prices in 1900, it seems highly improbable, on the face of it, that the new issues could have got into general circulation so quickly as to affect prices in that year. So far as food-grains are concerned, 1900 was an exceptionally bad year, and the high prices call for no further explanation. So far as imports are concerned, we have only to look at the line of gold prices, and see what a rise took place in that year. The fact is that there is nothing either in the fall of '98 or the rise of 1900 which remains to be explained in terms of the quantity of the rupee currency.

It is a remarkable fact that the index numbers afford us little or no indication of the nature of the great monetary change that was effected in 1893. By the closure of the mints in that year the old means of settling the balance of trade between Europe and India became no longer feasible. People were deterred from sending silver to India for the purpose of coinage by the uncertainty and risk attending its ultimate acceptance by the mints. It is, in fact, essential to the maintenance of exchange that the dates and hours of the purchase of silver by Government shall not be proclaimed from the housetops. It is to this uncertainty existing in the minds of the public with reference to the time and quantity of the issues, and not to its scarcity in circulation, that the so-called *monopoly* value of the rupee is due.

So far as prices after 1893 are concerned, it is not to be surprised at that they should exhibit some fluctuation, having regard to the great rise in exchange between 1895 and 1898.¹

We have already had occasion to notice the effect of this rise on the price of imports. From December 1898, onwards, exchange has remained fairly steady at about 1s. 4d. Now let us see what was happening to gold prices. Between December 1902 and December 1906, the Economist Index number shews a rise of 25 per cent in gold prices in Europe. Also in those years the export and import trade was peculiarly brisk. These facts go some way to explain how it is that the prices of food-grains have risen, without the occurrence of famine, or at least with only such distress here and there as is clearly ascribable to local crop failure, above the level that is commonly assigned as the level of famine prices. The truth must be faced that the measure of prices as a criterion of famine seems to have failed.

To those who argue that the prices of food-stuffs would not have risen but for the great currency change of 1893, we would reply that the rise is one of the surest indications of the triumph of the policy of the closure, for it shews in a way that nothing else could shew, that trade is in a flourishing condition. Had it been possible for exchange to remain steady at 12 annas the rupee, trade would, no doubt, have exhibited just as vigorous a development, but rupee prices would have risen 33 per cent. above their present level. The partial failure of food-grains to respond to the influence of gold prices in Europe before 1893 can only be regarded as an indication of the damage inflicted on trade by a fluctuating and unstable rupee.

No doubt the change, like most secular changes in the economic world, involves a redistribution of burdens as between class and class, but, if one thing can be considered more certain than another, it is that it is not the poorer classes who

¹ Exchange on demand bills in Calcutta stood at 1s. 0 $\frac{3}{8}$ d. in March, 1895, and rose pretty steadily to 1s. 4 $\frac{7}{10}$ d. in January, 1898.

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have suffered through the rise in price of Indian food-stuffs. The whole trend of opinion of those whose relations with the cultivator and the labourer entitle their views to most respect leads to the recognition of the amelioration of the lower classes as an established fact. As regards the cultivator, nothing can be more obvious than that, taking good years with bad, he profits by the high prices of food-grains. On the other hand the labourer is, owing to railways and the demands for labour by tea, indigo, jute, cotton, coal, and other industries, in a specially favoured position as regards bargaining strength. The real burden falls on those who work on fixed wages. The *amlah* class, no doubt, suffers, but it must be remembered that this is the class which has fattened for centuries on ill-gotten gains derived from the ignorant *raiyyat*, who is only now getting back his own. Moreover, so far as Government service is concerned, the situation is largely relieved by the magnanimous distribution of largesse to clerks and menials in the form of grain compensation allowance.

Those who would by legislation stop the export of food-grains in order to lower their price in India itself are advocating a principle which strikes at the very root of our present monetary policy. Our very salvation consists at present in the free export of food-grains and raw materials. Indian manufactures are not yet in such a flourishing condition as to enable them to replace the bulk of the exported food-grains in our export sheet, and the stoppage of this class of export would inevitably endanger, if not actually reverse, the present favourable balance of trade.

The surplus of exports is, however, being more and more provided by cotton, jute, and the simpler forms of manufactures. Also India is supplying her own coal and gold to a larger extent than was formerly the case. It would, however, be idle to look for any great fall in the prices of food-grains on this account. India has now entered into full commercial relations with Europe, and she has, moreover, adopted a gold standard, and it is inevitable that the relative prices of food-stuffs to manufactures must approximate to the relative prices that obtain in the manufacturing countries with which India trades. Her efforts to establish manufacturing industries, in so far as they are seriously directed to economic results, and not misdirected to mischievous political obscurantism, are but the natural expression of the desire of every healthy country to so arrange its commercial and trade economy as to enable it to export manufactured articles and preserve its raw materials as far as possible for its own use. Most of the great countries of Europe and the United States of America have found the shortest solution of the problem in protection.

But whatever the future may contain, we may rest tolerably certain that it is gold prices which must determine the

rupee prices of food-grains, and trade interests have, in fact, become so linked up that a scarcity of the wheat crop in Canada will spell high rupee prices in India, whether India is actually exporting wheat or not. It seems superfluous to speculate about the return of rupee prices to the level of former days. High prices have come to stay, and can only be relieved by a fall in gold prices.

We may now epitomize the reasons assigned in the preceding analysis for the rise in the prices of food-grains.

The factors, then, which have principally conduced to the rise in the price of food-grains are—

(a) The improvement in communications ; roads, railways, post office, telegraphs; and the consequent addition to the general level of prices since 1860 of something representing the cost of transport.

(b) The growth of the Mercantile Marine; with which we must mention the opening of the Suez Canal in 1870, and the permanent lowering of sea freights since about 1884.

(c) The increase in population.

(d) The stationary character of the area and output of the great staples.

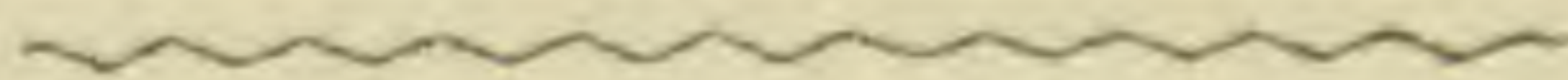
(e) The increase in effective demand owing to the interlinking of markets. The intense local famines, in which people literally died of starvation, are now warded off by the intervention of Government in either feeding the people or in supplying them with the wherewithal to feed themselves.

(f) The rise in gold prices since 1902.

(g) Closely interconnected with several of these factors—the development of Indian trade both in its internal and external aspects; resulting in the closer adjustment of the proportion of prices of food-stuffs and manufactures to the proportion which obtains in the great gold-using manufacturing countries with which India now trades.

The period 1904-1907 was characterised by unprecedented trade activity. Both exports and imports attained figures they had not attained before. Along with this exceptional trade activity we have a quite phenomenal period of rising prices; in fact between 1903 and 1907, the general index number rose 40 per cent. There is also a good deal of internal evidence to shew that the rapid expansion of the export trade was financed by large coinages of rupees issued to meet bills drawn on India by the Secretary of State, beyond his own immediate requirements, to satisfy a growing demand for private investments in India. It was undoubtedly a period of great inflation, and many unusual factors are observable. It was followed by the failure of the monsoon of 1907 with the reversal of the favourable balance of trade in the financial year 1908-09. The period is an exciting one for Indian finance, as so many new factors are in evidence. To attempt to enumerate all these factors and trace their effects

would carry us altogether beyond the scope of the present paper, in which we have merely tried to indicate the larger and more permanent forces at work. The financial crisis was overcome by the drastic action of the Secretary of State during the year 1908. The general crisis produced by the failure of the monsoon of 1907 has now passed with the favourable crop returns of the present year, and prices have accordingly become easier. There is absolutely no reason, however, to infer that the larger influences we have indicated are no longer at work, and it appears highly improbable that, even with plentiful supplies, prices will fall below the level which prevailed at the beginning of the period. Apart from all other causes—and there are doubtless many—a period of exceptional trade activity must spell rising prices of food-grains because it gives free play to that natural adjustment we have already indicated in the proportional prices of raw materials and manufactures as between the manufacturing countries on the one hand and, on the other, the agricultural countries with which they trade.



10. King Gopichandra of Rangpur.

By BISVESVAR BHATTACHARYA.

In the district of Rangpur, about 8 miles off the railway station of Domar, far from the bustle of civilized life, is the small hamlet of Pātkāpārā,—literally, the hamlet of bricks. Much of the place is now uninhabited waste land which the plough cares not to till on account of its high level and want of moisture. There are mounds here and there which are claimed by tradition to be the sites of stately mansions of old, while old people tell the pathetic story of its rich store of classic bricks having been laid under requisition by sacrilegious contractors for the Northern Bengal Railway. About $1\frac{1}{2}$ miles to the north-east lie the ramparts of what once was the fortified capital of king Dharmapāl or his deputy, and about 2 miles to the north-west are the ramparts of what tradition still declares to have been the residence of king Gopichandra's mighty mother Mayānāmatī.

To anyone acquainted with the ballad published by Dr. Grierson in the Asiatic Society's Journal under the title of 'Mānikchandra rājār Gān' (vol. xlvii, 1878) Mayanāmatī and Gopichandra are familiar names. There is, however, no mention in the ballad of the capital of king Gopichandra or his father Mānikchandra, while the ballad itself, as published, gives an inadequate idea of the great epic with its numerous episodes which the author of this paper has found to be still extant amongst some old Jugis of the neighbouring tract and has collected for publication. These Jugis are a class of indigenous bards, mostly illiterate, who supplement their earnings by singing the epic and dancing to the accompaniment of vocal and instrumental music. They are believed to be the degraded descendants of a class of Buddhist ascetics—followers of Gorakhnāth; and many of their local customs—their divergence from Brahmanical rites, their adoption of priests from their own caste, their worship of the Buddhist deity Dharma—confirm this view. The ballad published by Dr. Grierson may be said to be an abridged version of the epic as still sung by old Jugis credited with the possession of a richer lore than their compatriots. Another abridged version deviating in some respects from the story as told by the Jugis made its appearance quite unexpectedly some years ago from Western Bengal. It is the production of one Durlav Mallik, a village bard of some antiquity, though hitherto unknown to fame. From Durlav Mallik's work—the publication of which we owe to Babu Sib

Chandra Sīl of Chinsura—we get the important fact that Gopīchandra's capital was at Pātikānagar, and his grandfather and great-grandfather were named Subarnachandra and Dhārichandra respectively. From local traditions, the existence of old ruins and the vicinity to Mayanāmatir kôt, Pātkāpārā can unquestionably lay claim to identity with Pātikānagar, the capital of Gopīchandra.

Dr. Buchanan Hamilton has told us, apparently on the authority of the Jugis whom he might have come across and possibly misunderstood, that Dharmapāl was Mānikchandra's brother and had a fight with Mayanāmatī after his death over the throne which he usurped. Dharmapāl undoubtedly belonged to the great Pāl dynasty of Bengal, and if his alleged relationship to Mānikchandra can be established, Mānikchandra and Gopīchandra must also be held to have belonged to that dynasty. By sifting enquiries amongst the Jugis, however, I have been unable to find any trace of a tradition lending the least support to the theory of this relationship. On the other hand, I have come across a ballad composed some 40 or 50 years ago by a Jugi, since dead, which makes Mānikchandra the grandson of Dharmapāl. While I am ready to concede that the genealogy given in this newly-discovered ballad is devoid of any historical value, it demolishes the theory of a "universal" tradition amongst the Jugis ascribing a common parentage to Mānikchandra and Dharmapāl. If not a constructive, it has certainly a destructive value.

There are, in fact, no data for even a bare supposition that Mānikchandra and Dharmapāl were contemporaries or that the former belonged to the Pāl dynasty. It is difficult to understand either how Buchanan gathered the story of a fight between Mayanāmatī and Dharmapāl. Every Jugi questioned by me has expressed surprise at my mention of the alleged tradition, and the long tale of Mayanāmatī's achievements after her husband's death told in the great epic of the Jugis is significantly silent on the point. She fought with the infernal spirits that carried away her husband from the land of the living, she put the mighty deities of the Hindu Pantheon to various indignities, she worked numerous miracles and passed through unspeakably difficult ordeals to inspire her young and handsome son with confidence in the Jugi doctrine, but there is no mention of her rivalry with an earthly antagonist of the type of Dharmapāl. We get from the ballads extant that she was the daughter of Tilakchānd (sometimes called king Tilakchānd), that she was sent to school at an early age, that she became the disciple of Gorakhnāth when that great sage paid a visit to her father's domains and that this initiation was the secret of her extraordinary powers. The epic tells us also that after her marriage Mānikchandra took a number of other wives, and as Mayanā advanced in years and did not agree well with the younger queens,

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the king adopted the prudent though somewhat drastic course of removing her from his capital to a place called Ferushānagar where she took to working at the wheel and spinning thread. The remains of the surroundings of her residence—the earthen rampart which has defied ages and the moat below, which, though mostly dried up, is still able to bear testimony to its past glory—do not certainly indicate that their owner had to subsist on manual labour. The story told in the recent ballad that Tilakchānd reigned at Ferushānagar is entirely opposed to the spirit of the old song and the probabilities of things. The old ballad abounds in references to Buddhistic doctrines and practices, and the discovery of Buddhistic images in the neighbourhood even quite recently shows unmistakably that the faith proclaimed by the followers of Sākya-muni—albeit in a corrupt form—had its sway over the tract in days gone by. Yet it was not the universal—possibly not even the dominant—faith. The efforts of Mayanāmatī to win her husband over to her own way of looking at things and her struggles against the Brahmanical prejudices of her son show rather that Brahmanism, even though of exotic growth on the non-Brahmanical tribes of the north, had more than its fair share of hold on the popular mind.

I do not think the title of Gopīchandra to be called the king of Bengal (as he has been called here and there in the songs) rests on a solid basis, nor am I prepared to identify Govindachandra of the rock-inscription of the Terumalaya with the Rangpur king who exchanged the sceptre and the crown for an ascetic's garb under the instructions of his mother and wandered in the forest with his great spiritual guide Hā-Disiddhā. Still less am I prepared to claim kinship of Gopīchandra with king Vartrihari of Mālwā. Not only do the old songs give other account of his near relations, but their very spirit indicates that the temporal authority and the social surroundings of the king could not have been very extensive. While I am unable to agree with Dr. Grierson that Mānikchandra "reigned over half-dozen square miles of territory which constituted him a Rājādhirāj," I am also unable to hold that the extent of his dominions was greater than perhaps that of a modern Bengal district. Songs relating to Gopīchandra are, however, still sung in distant parts of India,—in the United Provinces, the Punjab, Central India, the Western Presidency, etc.,—and testify to the far-reaching fame which the self-abnegation of the young prince enabled the followers of Gorakhnāth to secure for him.

Every circumstance points to the probability that Gopīchandra and Dharmapāl belonged to two rival dynasties. Which Dharmapāl it was we do not exactly know, but an extensive village in the vicinity of Pātkāpārā still bears his name and contains the remains of his fortifications referred to above.

It is not unlikely that he was a king flourishing at a considerably later period than the celebrated father of Devapāl, but in any case he appears to have eclipsed the local repute of Mayanāmatī's son.

The main incidents of the epic which has come down to us from different sources and with more or less different versions clearly point to their origin in the pre-Mahomedan days, though, as is but natural in the case of a long ballad, transmitted from mouth to mouth and sung for the amusement of an everchanging audience, numerous interpolations have tended to give it a different colouring.



11. Review of our Knowledge of the Oriental Diptera.

By E. BRUNETTI.

In the year 1896 Van der Wulp published his Catalogue of South Asian Diptera, giving a list of 2889 species: since that date a certain number of new ones have been described, principally by Herr Kertész, Herr Meijere, Profs. Bezzi, P. Stein and myself; with a few additional ones by Van der Wulp himself, and more are at present being discovered, the majority of which will be described in the Indian Museum publications.

It is my endeavour here to illustrate the advance made in our knowledge of the diptera of South Asia during the last few years, and to review the position in which the groups stand that have not yet been recently revised.

Cecidomyiidae.—Three species only were cited by Van der Wulp. With the exception of about six described since and a very limited number in the Indian Museum collection I know of no fresh material in this family.

Mycetophilidae (including *Sciarinæ*).—Apart from 3 species of Meijere's no new species have been described; but the Indian Museum possesses a considerable number, principally from Himalayan localities, and these I am describing in a forthcoming paper. They will number about 80 species, new, except about half a dozen conspicuous ones which I have recognised with certainty as previously described.

Culicidae (with *Corethra*).—The bulk of the species of *Nemocera* recently described belong to this family, owing mainly to the indefatigable efforts of Messrs. Theobald, Leicester, Giles, Ludlow and others. From 32 species given by Van der Wulp, the number rose to about 240 in my recent Catalogue,¹ and I have compiled a list of nearly 150 additional species from the East, making a total of just on 400 species known from oriental regions.

Many of the recently created species are now being regarded as varieties or intermediate forms, so that, eventually, many present catalogue names may disappear from specific rank. Probably this family has been more extensively collected and better worked out than any other.

Chironomidae.—Only 15 species were known to Van der Wulp, to which but three have since been added. The Indian Museum possesses a peculiarly rich collection of insects of this

¹ Annotated Catalogue of Oriental *Culicidae*, Rec. Ind. Mus., i, 297-377.

family, and Prof. Kieffer has recently sent to it a monograph containing descriptions of about 90 new species, described from types in its collection. A further paper by the same author will deal with the residuum of the Museum's undescribed material.

Psychodidæ.—No species whatever were known from the East in this family till 1908, when Dr. Annandale described *Phlebotomus argentipes*.¹ Since then I have added 14 species from India,² which seems to suggest that the species must be very numerous in the East, as no other countries have apparently been collected over at all. Moreover, several additional forms of *Phlebotomus* are at present being described by Dr. Annandale. There are probably a very great number of existing species in this family throughout the world, as a considerable number were discovered in quite a limited region in England alone by Eaton, a fact which tends to support my view. A most interesting discovery in this family was made by Dr. Annandale recently; he found a living species of an extinct genus (*Diplonema*, Lw.) in the Darjeeling District,³ and he has subsequently found a second species of the same peculiar genus in South India; this latter to be described shortly.

Bibionidæ.—Only one new species has been described since the 12 recorded by Van der Wulp; but to this total I shall shortly add several others from specimens preserved in the Indian Museum or in my own collection.

Simuliidæ.—Three or four additional undescribed species in the Indian Museum are to be added to the only two recorded from the East, viz., *Simulium indicum*, Becher, and *S. nobile*, Meij.

Tipulidæ.—140 species figure in the 1896 Catalogue, to which number Herr Meijere has added a few new ones. The Indian Museum is especially rich in this family, and my own collection contains a considerable number collected by me in Mussoorie, Darjeeling and the Far East, so that my forthcoming monographic revision in this family will comprise nearly 100 new oriental species.

Rhyphidæ.—Only one species is given by Van der Wulp, but I am shortly describing three new ones, as well as a variety of the common European *Rhyphus fenestralis*, Scop.

Only one or two other species remain to be added to the *Nemocera*, additional to the one species each recorded by Van der Wulp in *Dixidæ* and *Blepharoceridæ*.

A revisionary glance of the first Suborder shows the following remarkable figures as the results of the past few years' work:—

¹ Rec. Ind. Mus., ii, 101.

² Loc. cit., ii, 369.

Journ. Asiatic Soc. Bengal. (new ser.), iv, 353.

	Species known in 1896.	At present known, including those to be described shortly.
<i>Cecidomyiidae</i>	.. 3	10
<i>Mycetophilidae</i>	.. 23	70
<i>Culicidae</i>	.. 32	400
<i>Chironomidae</i>	.. 15	100
<i>Psychodidae</i>	.. 0	20
<i>Bibionidae and Simuliidae</i>	.. 14	25
<i>Tipulidae</i>	.. 140	220
<i>Rhyphidae, etc.</i>	.. 3	10
Totals	.. 230 Species.	855 Species.

The *Nemocera* have therefore been increased by three-and-a-half times the number of species known less than ten years ago.¹ Descriptions of those included in the above table as known, but not yet actually published, will appear during the next few months at latest.

Turning to the next Suborder, the *Brachycera* (I prefer to retain, for the present, the older system of classification), the differences are not so marked, but only because many of the groups have not been dealt with, and not so assiduously collected; for those that *have* been worked out afford a high percentage of new forms.

Stratiomyidae.—This family was revised to the best of my ability² recently, only six new species being added.

Tabanidae.—Miss Ricardo has recently worked through the British Museum and Indian Museum collections in this group, and has forwarded a voluminous manuscript on *Tabanus*, which almost brings up to date our knowledge of that genus; a second paper on the remainder of the family being in preparation.³

Leptidae and *Bombylidae*.—Both were revised by me recently,⁴ and although a certain number of species were unavoidably unrecognisable through the brevity of the older descriptions, the absence of specimens of many of them, and the impossibility of examining the actual types, I believe that I have allocated the majority of those species originally placed in *Anthrax* and *Exoprosopa* to their correct genera; the kind assistance rendered me by Mr. E. E. Austen in this matter by an examination of the types that are in the British Museum, having been most valuable. In my three papers on the two families are added 47 new species.

¹ With the exception of the *Culicidae* we might say less than *two* years ago!

² Rec. Ind. Mus., i, 85-132.

³ Both to appear shortly in the Rec. Ind. Mus.

⁴ Revis. Orient. Leptidae, in Rec. Ind. Mus., ii, 417-436. Annotated and Revis. Cat. Orient. Bombyl., *loc. cit.*, ii, 437-492. New Orient. Leptidae and Bombyl., *loc. cit.*, iii, 211-230.

Nemestrinidæ, Therevidæ, Cyrtidæ.—Probably but few additions will be as yet made to these families.

Asilidæ.—Over 450 species were mentioned by Van der Wulp. The family is likely to remain in its present state for some considerable time, for until a complete examination of all the types has been made, in conjunction with a very careful study from a chætotactic point of view, it would be wholly unwise to describe new species. It has always been my desire to attack this group, there being a considerable amount of material at my disposal.

Empidæ.—Prof. Bezzi has added a score of new species¹ to the half dozen described since 1896, when 12 only were known. The few additional ones existing in the Indian Museum will be worked out by me on finishing the few papers now approaching completion.

Dolichopidæ.—In this family extensive additions are certain. Of the 100 species recorded in 1896, a great number are Walker's and must therefore be received with caution. Herr Lichtwardt is at present identifying the Indian Museum specimens, and some time ago, in separating them from the mass of undetermined material, a casual inspection caused me to estimate the number of species therein contained, at least 50.

In my own collection there are probably 20 to 30 species collected by me in various parts of India and the Far East, some of which are in all likelihood new.

Pipunculidæ, Platypezidæ.—Some few additions have been made; in the former by Herr Kertész,² and in my "New Oriental Diptera" will be described nearly a dozen more.

Syrphidæ.—Certain genera in this family were revised by me recently,³ whilst Herr Meijere has dealt with certain other genera and described over 40 new species in his studies on South Asian Diptera.⁴ Altogether, a little over 100 new species have been described since 1896, but genera like *Eristalis*, *Syrphus*, *Sphærophoria*, *Syritta*, *Bacha*, *Graptomyza*, and some others, require careful and complete revision, for the reason that a number of well-known palæarctic species occur in the east (at least in the Himalayas, some extending also to the plains), either in typical or slightly varietal form. A number of new species are still at my disposal.

Conopidæ.—Judging from the descriptions, the 14 described species appear distinct; to these will be added three or four others.

Oestridæ.—Apparently only 4 species known from the East.

¹ Ann. Mus. Hung., ii, 320.

² Ann. Mus. Hung., i, 465.

³ Notes on Oriental Syrphidæ, i, Rec. Ind. Mus., vol. i (plates only, XI, XII, XIII), vol. ii, 49-96, text, 42 sp. nov. described.

⁴ Tijd. v. Ent., li.

[N.S.]

Muscidæ.—In this great family but little revisionary work has been done, mainly owing, probably, to the impossibility of recognising species from the older brief descriptions. Mr. Austen has allocated a good number of Walker's species of *Tachinidæ* to their correct genera; Prof. Stein has described a number of species of *Spilogaster*, *Lispa*, *Cænosia*, and *Atherigona*, chiefly from Papua; whilst amongst the *Acalypterata* groups, the *Sepsinæ* have been treated of by Meijere¹ and myself,² bringing our knowledge of the group pretty completely up to date, and raising the total of known species from 20 to 51, including several European species recognised by me. In a paper shortly to be issued, the Oriental *Stomoxynæ* are fully revised by me and described (including, however, only very few new species); whilst Prof. Bezzi has nearly completed his studies on the *Trypétidæ*. Herr Hendel's revision of the world's species of *Sapromyzinæ* (as *Lauxaninæ*)³ enables us to reconstruct the oriental list of species, to which over 40 names have been added and described by Herr Kertész in the genus *Sapromyza* alone. Prof. Bezzi's revision of the genus *Dacus* disposes of most of the oriental species, but in all the other very extensive and difficult groups next to nothing has been done.

The Indian Museum possesses a very large number of undetermined species (of which a large proportion can hardly fail to be new) in *Tachinidæ*, *Sarcophaga*, *Musca*, *Lucilia*, *Anthomyidæ* and various groups of the *Acalypterata*, including a number of named but undescribed species erected by Bigot, all representing a mine of wealth to the earnest but advanced student in these respective groups.

In Van der Wulp's Catalogue, 20 pages are devoted to *Tachinidæ* and *Dexidæ*, 30 species of *Saresphaga* are given, over 60 of *Lucilia* and 45 of *Musca*; of the latter genus the author very significantly observes, "only *domestica* and *corvina* belong with certainty to the genus in its strict sense".

In the *Phoridæ* Mr. Brues has described eleven new species,⁴ whilst I am adding nearly a dozen more in my "New Oriental Diptera."

Respecting the last division of Diptera, *Pupipara*, Herr Speiser after describing 21 new species,⁵ is revising the whole of the known species.

The foregoing résumé will serve to give a general view of our present knowledge of Oriental Diptera.

It does not seem too much to state that a great part of the activity (displayed during the last 3 years at least) is due directly to the efforts of Dr. Annandale, the Superintendent of

¹ Ann. Mus. Hung., iv, 167.

² Rec. Ind. Mus., iii, 343-372.

³ Genera Insectorum, 68me, Fasc.

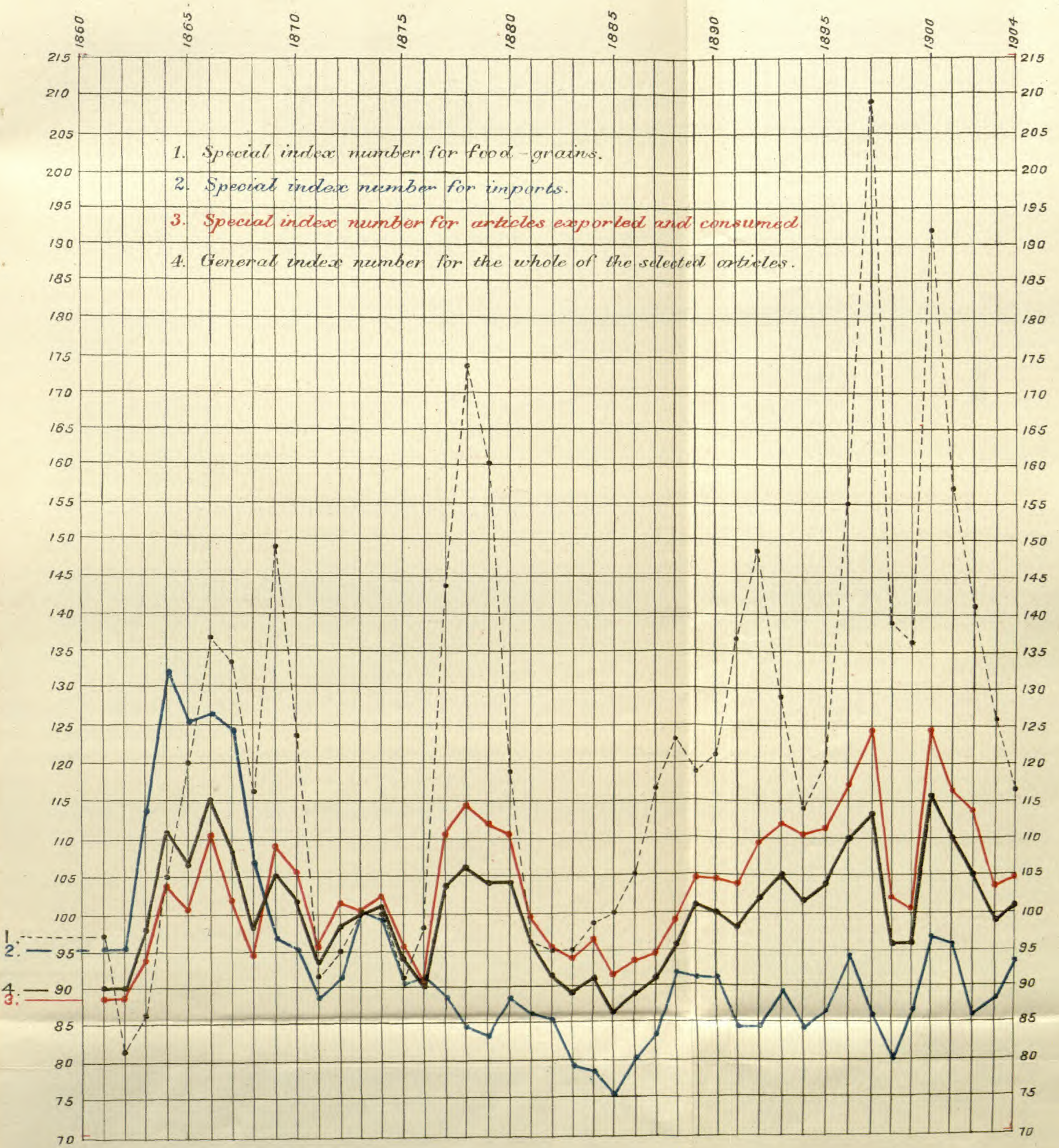
⁴ Ann. Mus. Hung., iii, 540.

⁵ In various journals.

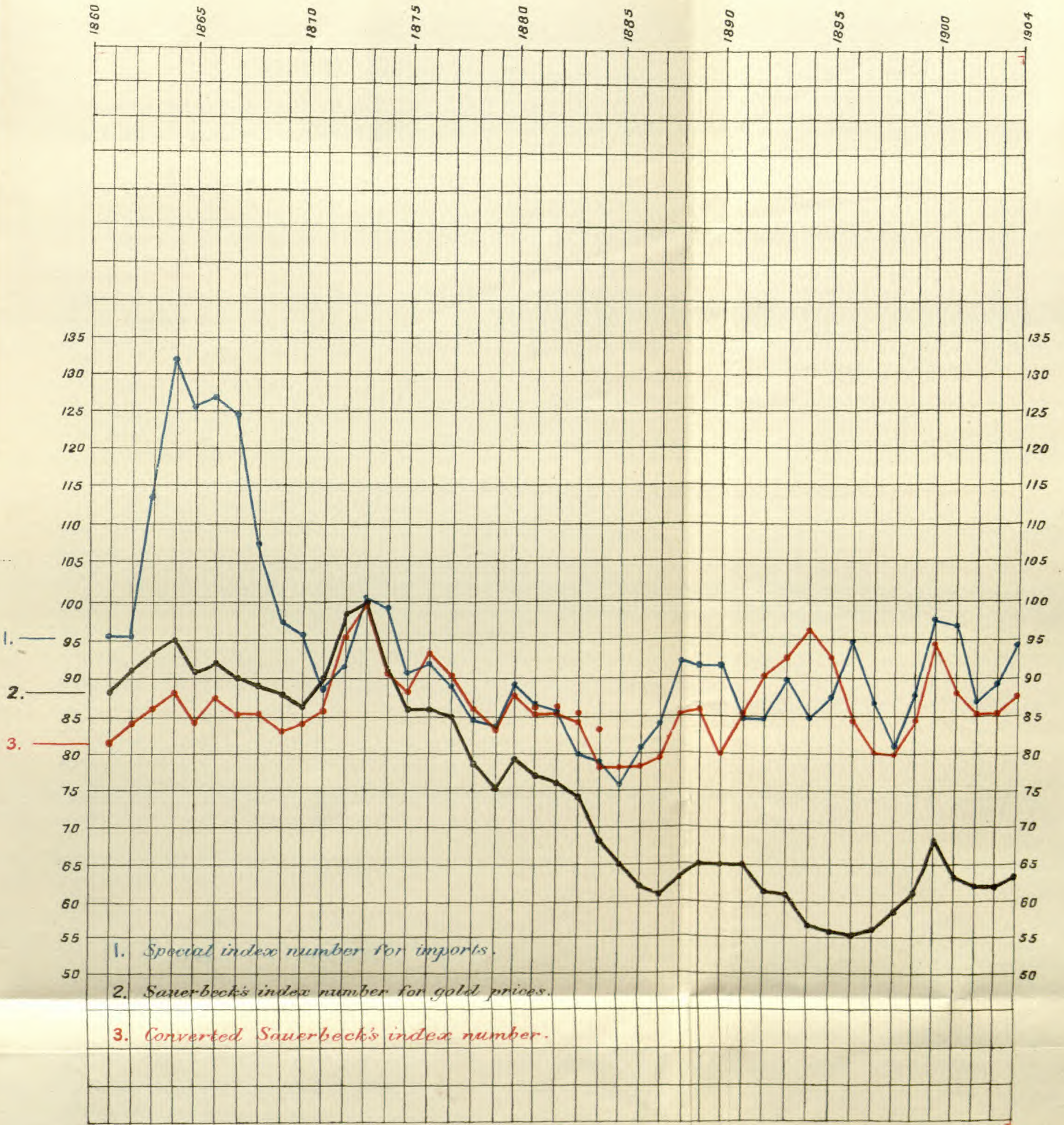
the Indian Museum, in his endeavour to get the extensive collection of these insects possessed by that Institution arranged and determined. The whole of my own work in oriental species, and the enlistment of the valuable services of Prof. Kieffer in *Chironomidæ*, Mr. Theobald in *Culicidæ*, Miss Ricardo in *Tabanidæ*, Herr Lichtwardt in *Dolichopidæ* and Prof. Bezzi in *Trypetidæ*, have had that origin. In the above groups, about 200 species will figure as new, whilst the publication of the remaining papers I have in hand will raise the total of new species described by me to about 300.

The great majority of the types of these 500 new species are preserved in the Indian Museum collection.

A.



B.



MARCH, 1910.

The Monthly General Meeting of the Society was held on Wednesday, the 2nd March, 1910, at 9-15 P.M.

The Hon. Mr. Justice ASUTOSH MUKHOPADHYAYA, M.A., D.L., Vice-President, in the chair.

The following members were present:—

Babu Rakhai Das Banerji, Babu Amrita Lal Bose, Prof. Paul Brühl, Mr. I. H. Burkill, Dr. G. C. Chatterjee, Mr. B. L. Chaudhuri, Mr. J. N. Farquhar, Mr. L. L. Fermor, Mr. H. G. Graves, Hon. Mr. Justice H. Holmwood, Mr. D. Hooper, Dr. W. C. Hossack, Mr. R. D. Mehta, C.I.E., Lieut.-Colonel D. C. Phillott, Rev. A. C. Ridsdale, Mahamahopadhyaya Haraprasad Shastri, Babu Vanamali Vedantatirtha and Rev. A. W. Young.

Visitors:—Mr. W. Burns and Mr. F. H. Gravely.

The minutes of the last meeting were read and confirmed.

Six presentations were announced.

The Chairman announced:—

1. That the Elliott Prize for Scientific Research for the year 1909 would not be awarded as the essay received in competition was not of sufficient merit to justify the award of the Prize.

2. That the Council has appointed Lieut.-Colonel D. C. Phillott to officiate as General Secretary during the absence of Mr. Tipper.

The Chairman also announced the death of Mahamahopadhyaya Chandra Kanta Tarkalankar, an Honorary Member of the Society, and called upon Mr. B. L. Chaudhuri, to read the obituary notice.

Mahamahopadhyaya Chandra Kanta Tarkalankar breathed his last on Wednesday, the 2nd February, 1910.

Sixteen years ago, on March 7th, 1894, he was elected one of our Honorary Members, the highest distinction in the gift of the Society. Among the Bengal Pundits he was the only Oriental Scholar who had been thus honoured, and the Society had sufficient justification for the same, for his position as a scholar and author of numerous original treatises was quite unique.

He was the eldest son of Pundit Radha Kanta Siddhanta-vagiç of Sherpur Town in the district of Mymensing, who also was a man of profound learning well known in his district. It was one more instance of potential intellectuality in the father having full development in the son.

Chandra Kanta was born at Sherpur in the month of Agra-hayan of 1241 B.S. (corresponding to 1835 A.D.). The beloved and revered father was the first teacher, and in the *tol* of his father Chandra Kanta had received the seeds of learning which bore such excellent fruits in later years. He completed his study of Vyakarana, Alankar and partly of Kavya and Smriti at home, and then proceeded to Vikrampur to study Smriti with Pundit Dina Nath Panchanan of Porapara, a celebrated Smarta of his time. Next his sojourn was to the renowned seat of learning Navadwipa, where he studied Smriti under Pundit Brajanath Vidyaratna, Laksmi Kanta Siromani and Hari Das Bhattacharyya, and Darsan with Madhava Chandra Tarkasiddhanta, Srinandan Tarkabagiç and Kasi Nath Sastri. It was at Navadwip that the title of "Tarkalankar" was bestowed on him.

On his return from Navadwip he opened a *tol* at Sherpur, and, as the story of his scholarship already spread far and wide, students began to flock to his house, whose number often exceeded fifty. He had not only to satisfy the intellectual craving of such a large number of students in a variety of subjects, but had also to maintain them at his house, according to the custom of the country, at his own expense, from year's end to year's end. It was while busily engaged with the teaching work at Sherpur that his first work *Probodha Çataka* saw the light, and was soon followed by *Satiparinayam* (Mahakavya) and *Tatvavali* (commentary on Philosophy). It was about this time that our Society, appreciating his deep and varied scholarship, found in him a most capable editor for the *Bibliotheca Indica*, with which he kept up his connection till his death. (It was only in January last that Fasc. 1 of Vol. II of *Bhatta Dipika*, the commentary on *Purva Mimansa*, edited by him, came out of the press.) It was while at Sherpur he edited for the Society *Grihya Sutras* of Gobhila and supplied copious commentaries to that excellent classical work on mediæval Smriti. These notes and commentaries soon made him well known to the European Savants. It was while at Sherpur that his students in Nyaya, Sankhya, Vedanta, Smriti and Kavya topped the list of successful candidates for Government Title Examination and carried off the honour and emoluments year after year; and it was also while at Sherpur that most of his works that were published afterwards were composed and perfected.

In 1882 some of the prominent members of this Society, who were attracted by the deep erudition of Tarkalankar working at a remote place like Sherpur, approached him through the late Principal Mahesh Chandra Nayaratna, and prevailed on

him to accept a Professorship in the Government Sanskrit College of Calcutta. Among others, the late Raja Rajendra Lal Mitra, one of our past presidents, Rai Bahadur Krista Das Pal, one of our past Assistant Secretaries, Babu Protap Chandra Ghosha, and Babu Prasad Das Dutt, were mainly instrumental to bring about this. It was in 1883 that Chandra Kanta joined the Sanskrit College as the Professor of Sanskrit Literature and Alankara. Soon after his appearance in Calcutta he was recognized as the leading Pundit of the metropolis and his connection with the Society became more intimate, and "in recognition of his great services in the cause of Sanskrit literature the Council placed his name in the list of distinguished persons who received the Bibliotheca Indica publications free." On the retirement of Madhusudan Smritiratna he was appointed to the chair of Smriti.

In 1887 the title of Mahamahopadhyaya, the highest literary distinction in the gift of the Indian Government, created in commemoration of the Jubilee of Her late Majesty the Empress Victoria, was bestowed on him. It was during the incumbency in the Sanskrit College that his *Vaisesika Bhashya*, annotated edition of *Kusumanjali*, *Katantrachhandaprakriya*, *Kala Parasara Madhava* among others were published, and each of these works created a sensation among the Oriental Scholars of India and Europe on their appearance. In 1897 he retired from the Sanskrit College, and the Government very gracefully came forward with a grant for the maintenance of his private *tol* which he had all along kept up with unparalleled devotion and undiminished glory.

On his retirement from the Government service, the learned Vice-Chancellor of the University, from whose searching eyes few men of merit can escape, selected him as the first lecturer to occupy the chair of Vedanta Philosophy endowed by Sri Gopal Bose Mullick for five years, and these lectures were published in book form. From 1901 with failing health he became busy more than ever to see through press all his unpublished works, but the work of the *tol* and examination work for M.A. and P.R. examinations on behalf of the University continued almost to the very end.

Without making any comment ourselves we shall conclude this short notice by a few extracts from comments of his contemporaries on his works, scholarship and character: it falls to the lot of very few mortals to be so highly appreciated during lifetime as he was.

1. An extract from a letter of Mahesh Chandra Nyayaratna as the Principal, Sanskrit College, to the Director of Public Instruction, under date 28th April, 1894. . . . "He is a most distinguished Sanskrit scholar, the like of whom cannot easily be met with in the country. He is, moreover, a most

successful teacher. His private pupils have passed the Sanskrit Title Examinations in various subjects and won the first rank from time to time. He is also a general referee on difficult points connected with Sanskrit Literature. He has written a Bhasya or commentary on the Grihya Sutras (Aphorisms of Gobhila), a work of rare merit, which the Asiatic Society of Bengal have published at their own expense. He has also published various highly meritorious works in Sanskrit and Bengali. He has been a great acquisition to the College, and the vast reputation which he enjoys for learning and erudition has naturally reflected upon it. It may also be mentioned that the private pupils of the Professor have followed him here from Mymensing. The number ranges from 10 to 20, whom he not only teaches, but also supports according to the traditions of the Tola system ' '

2. Extracts from Dr. R. L. Mitra's articles in the *Hindu Patriot* (1886):—“He knows no assumption of dignity and display of learning. Gentle as a child, shy by nature, and economic in his speech, he can nowhere produce an impression. He has, however, that in him which few of our Pundits can boast of, a thorough mastery over the ancient classics of our native land, and those who know it cannot fail to evince for him every mark of respect. His profession is the discrimination of the higher branches of Sanskrit literature. He owed a *tol* for many years, and is now employed as a professor in the Sanskrit College of Calcutta; but this occupation never satisfied his mind. His ambition has always been to contribute to the elucidation of Sanskrit learning by writing learned dissertations, and many are the works which have emanated from his prolific pen. Some years ago he published an exegesis of the Gobhiliya Grihya Sutra, which compares well with the best works of its class published by mediæval authors. It displays a thorough knowledge of, and perfect mastery over, the Smriti Literature of the Brahmans. Soon after that work he brought out an epic poem which presented in manuscript would have passed for a fragment of some ancient poet whose writings cast such a halo on Sanskrit Literature. He has just published a book which is likely to put its mark upon the year. It is an exegesis on the aphorisms of Kanada on the Vaicesika or Atomic philosophy of the Hindus our metaphysicians devoted scant attention to it; none taught it in the *toles* of the country. This is evident from the fact that, though acknowledged to be one of the six leading systems of philosophy, the Vaicesika never had a regular formal Bhasya or commentary, as the other systems have Under these circumstances the new work of Professor Chandrakanta Tarkalankara may be looked upon as supplying a want, and the learning and thorough mastery of the subject which have been brought to

bear upon it, and the manner in which the task has been accomplished, make the book one of special value to the students of Sanskrit philosophy.’’

3. Extracts from *Trübner's Record* of October, 1890, 3rd Series, Vol. II, No. 2:— . . . “There are, however, exceptions; and it is a notable one among these to whom the present notice is intended to draw the attention of Sanskritists and students of Indian philosophy in Europe. Professor Chandrakanta's Sanskrit learning is of the most varied kind. He is also a voluminous writer on a variety of subjects. But though the Mahamahopadhyaya is a varied scholar and a voluminous writer, his speciality is Hindu Philosophy, and particularly that system which is known as the Vaicesika of Kanada. It is this field in which he has shown himself to be a thinker of great independence, force and originality; and it will be his works in this branch of learning that will henceforth be classed with the standard works of old and secure to his name undying fame. The last remark applies more particularly to his work which bears the name of Bhasya, or Exposition, of the Vaicesika Sutras. The Sutras, or aphorisms, of the Vaicesika system of philosophy, as is well known, are attributed to Kanada. There are no early commentaries on these aphorisms extant. The earliest expository work known is a gloss, called Kiranavali, by Udayana Acarya,—a gloss not on the Sutras themselves, but on the work called Padartha Dharma Sangraha, generally, though not quite correctly, looked upon as a Vaicesika text-book. It is this gloss of Udayana which is accepted in Bengal as the orthodox and authoritative interpretation of Kanada's aphorisms. The object of the new Bhasya is to show that Udayana and the prevalent school in some essential matters have misinterpreted and unjustifiably amplified the teaching of Kanada, and that Udayana, being an adherent of the Nyaya system, has in fact, for objects of his own, adulterated the pure Vaicesika doctrine. The Bhasya thus claims to set forth, for first time, the doctrines of Kanada in its pure and genuine form. This is the outcome of Professor Chandrakanta's mature thought and close study of the Vaicesika aphorisms. It marks a gradually accomplished revolution in his own views. For he was not always of this mind; he commenced with an unquestioning belief in the orthodox interpretation. It was in this state of mind that he published his Tattvavali, a metrical work in the style of the old Karikas, to which he added copious notes. In this work he fully explains and still upholds with every possible argument the Vaicesika doctrines as hitherto understood and accepted in Bengal. The work, when it appeared, was received with an eagerness unprecedented in the history of recent Sanskrit publications; for it supplied the long-felt desideratum of a good text-book

on the Vaicesika philosophy for beginners as well as more advanced students. Professor Chandrakanta's latest work, the Bhasya, as will be readily understood, met with a different kind of reception, with great joy and praise by some, with much doubt and opposition by others. Whether it will win its way and revolutionize the teaching of the Vaicesika philosophy in Bengal and elsewhere, time only will show. It is on account of this original and, to a certain extent, revolutionary character of his work, that the professor calls it a Bhasya. Among Indian pundits various names are in use for expository works; we have the Bhasya, the Vritti, the Vivritti or Vivarana, the Tika, and so forth. But it is only the compiler of Bhasya, whom the rules of learning permit, after he has explained every word and part of word of his text, to put forth original reflections. Compilers of other kinds of commentaries must confine themselves to the accepted meaning."

4. Extract from Professor Max Müller's letter, dated the 12th July, 1896:— "But it is different with a work like yours. Your Katantrachhandaparakriya is an original work and must have cost you much labour. It will be useful to every Sanskritist, particularly Vedic scholars, not only in India, but in England also. A good deal has been done for Vedic grammar by European scholars, but one likes to have the authority of native scholars, such as Panini, Katyayana and others. Now unfortunately the Chandasa rules have been treated very scantily by Panini. I suppose he thought the Praticakhyas would supply the necessary information. But that is çikṣa rather than Vyakarana. I have myself published the Ripraticakhya with a German translation. There was room for work like yours, and I know I shall find it very useful in my studies."

Owing to a remark made by the late Professor Cowell about Vaicesika Bhasya it has become necessary to point out that Chandra Kanta was quite innocent of English or any other European language, nor was he acquainted with modern scientific theories, therefore his strong assertion against "spontaneous generation", his ascribing form or shape to "air", as well as his conclusion about the nature of soul—points in which he differed so much from Udayana—were entirely due to his deep study of Kanada's system and had nothing to do with "modern scientific ideas" as Cowell appeared to have suspected.

The following four gentlemen were balloted for as Ordinary Members:—

Capt. E. D. W. Greig, I.M.S., M.B., proposed by Major L. Rogers, seconded by Dr. Hossack; *Capt. A. E. J. Lister*,

M.B., F.R.C.S., I.M.S., proposed by Major L. Rogers, seconded by Capt. H. B. Steen, I.M.S.; *Mr. W. Kirkpatrick*, proposed by Lieut.-Colonel C. R. M. Green, I.M.S., seconded by Capt. D. McCay, I.M.S.; *Capt. J. C. Kunhardt, I.M.S.*, proposed by Major L. Rogers, I.M.S., seconded by Capt. R. E. Lloyd, I.M.S.

The following papers were read:—

1. *Notes on the Pollination of Flowers in India. Note No. 7. A few observations made in the Central Provinces and Berar.*—By I. H. BURKILL.

2. *Buddhist Legends of Asoka and his Times.*—By H. C. NORMAN.

This paper has been published in the Journal for February 1910.

3. *The Kingdom of gNya khri btsanpo, the first King of Tibet.*—By REV. A. H. FRANCKE.

4. *An Old-fashioned Urdu Invitation to a Garden Party.*—By LIEUT.-COLONEL D. C. PHILLOTT.

This paper will not be published in the Journal.

5. *Pramanas of the Hindu Logic.*—By VANSMALI CHAKRAVARTI.

This paper will be published in a subsequent number of the Journal.

6. *Extract on Cocking (Murgh-Nāma) from the Ṣayd Gāh-i Shawkati, an Urdu work on sport written by Nawāb Yār Muḥammad Khān of the Rāmpūr State.*—Translated by LIEUT.-COLONEL D. C. PHILLOTT, Secretary, Board of Examiners, Calcutta.

This paper has been published in the Journal for February 1910.

7. *The Katwalipara Spurious Grant of Samacara Deva.*—By RAKHAL DAS BANDYOPADHYAYA, with a prefatory note by MR. H. E. STAPLETON, B.A., Inspector of Schools, Dacca.

This paper will be published in a subsequent number of the Journal.

8. *Note on the Spreading of Croton sparsiflorus, Morung, along the Assam-Bengal Railway.*—By I. H. BURKILL.

Mr. Burkill remarked as follows:—

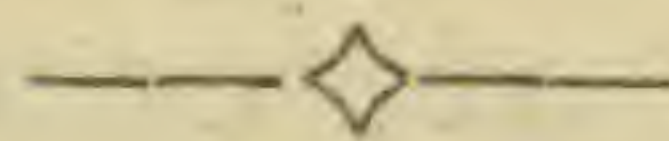
“ Since the publication of Professor P. Brühl’s paper on *Croton sparsiflorus* (this Journal, 1908, pp. 603-607) wherein he recorded the occurrence of this plant (i) near Calcutta, (ii) at Port Canning, (iii) at Chittagong, (iv) between Chandpur and Akharera on the railway embankment, and (v) on the bank of

the river Titus near Brahmanbaria, I have found the plant in several spots along the Assam-Bengal Railway. It occurs about the sidings at the stations of (vi) Shamsbernagar and (vii) Tilagaon in the district of Sylhet: (viii) on the railway embankment rather sparingly at 'mile 296'—a spot where passengers often alight for Haflong, at an altitude of about 1,800 feet above sea-level: (ix) in great abundance about the railway tracks at Lumding junction, and (x) equally in abundance about the railway goods-yard at Gauhati.

The spot where it entered India seems evident enough. As it was some years ago much more abundant at Chittagong than at Hajiganj, and as Hajiganj, Shamsbernagar, Tilagaon, Haflong, Lumding, and Gauhati are all connected by railway with the port of Chittagong, it is almost certain that it has travelled to these various stations from Chittagong, the seeds adhering probably to the gunny-wrappings of merchandise. Further, as suggested by Professor Brühl, it may be assumed that the plant came to Calcutta by ship (river-steamer probably) and by ship also to Port Canning; and it is probable that it came to both places from Chittagong, which seems to be its oldest station on Indian soil."

9. *The Vikramaditya Samvatsara and the Founding of the Kushan Kingdom.*—By THOMAS W. KINGSMILL.—Communicated by the Philological Secretary.

This paper will be published in a subsequent number of the Journal.



The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Wednesday, the 9th March, 1910, at 9-30 P.M.

LIEUT.-COLONEL F. P. MAYNARD, I.M.S., in the chair.

The following members were present :—

Dr. Arnold Caddy, Major J. T. Calvert, I.M.S., Dr. G. C. Chatterjee, Dr. H. M. Crake, Major E. D. W. Greig, I.M.S., Major W. D. Hayward, I.M.S., Dr. W. C. Hossack, Captain A. E. J. Lister, I.M.S., Dr. Indu Madhab Mallick, Dr. J. E. Panioty, Captain F. H. Stewart, I.M.S., Major L. Rogers, I.M.S., *Honorary Secretary.*

Visitor :—Major E. A. Newman, I.M.S.

The minutes of the last meeting were read and confirmed.

Capt. E. D. W. Greig, I.M.S., delivered a lecture on Sleeping Sickness, illustrated by lantern slides.

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List of Officers and Members of Council

OF THE

ASIATIC SOCIETY OF BENGAL

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Plate No. XXVIII to illustrate "Punch-marked Coins from Afghanistan," by Babu Rakhal Das Banerjee, will be issued with a subsequent number of the Journal.

12. Contributions to the History and Ethnology of North-Eastern India—I.

By H. E. STAPLETON, B.A. B.Sc., *Inspector of Schools,
Dacca Division, and Honorary Secretary to the Coin
Committee, Eastern Bengal and Assam.*

A.—THE ANTIQUITY OF DACCA.

At the recent 125th Anniversary meeting of the Society, the writer exhibited a rubbing of a mosque inscription from Dacca town, dated in the year 863 A.H. (A.D. 1459), as an indication that Dacca is considerably older than the date of its reputed foundation by Islām Khān in A.D. 1608. Since then an interesting find of coins of a Gupta type has come to light which lends a certain amount of additional support to the suggestion that Dacca is a place of considerable antiquity. The town itself stands at the southernmost point of the raised land occupying the centre of Eastern Bengal, and the shrine of its patron goddess, Dhākeswarī, is situated on the highest ground at the western side of the town, half a mile distant from the river Būrī Ganga. A mile away to the north-west is the Pīl-khāna, the former headquarters of the Kheddah Department, and just beyond this (still to the north-west) we come to a large stretch of arable land which, though now split up into fields, continues to bear the name of *Nawāb Rashīd Khān ka Bagicha*.¹ An old tank, breached at the southern end, lies close to the road leading from the Pīl-khāna, and it was here, 100 yards to the south

¹ The former owner of this garden seems to have been the Rashīd Khān who was appointed Faujdār of Kām-rūp by Aurangzeb in 1662 (Blochmann, *Koch Bihār and Āsām*, J.A.S.B., 1872, pp. 92 and 96). He accepted the post unwillingly and resigned after holding it for 3 or 4 years, being succeeded by Saiyid Fīrūz Khān who was captured and killed by the Assamese in 1667. During Shāista Khān's expedition in 1665 for the conquest of Chittagong, Rashīd Khān's brother, 'Abdul Karīm, was placed in charge of the captured island of Sondip (*Alāmgīr-nāmah*, quoted by 'Abdu-s-Salām on p. 230 of his translation of the *Riyāzu-s-Salāṭīn*). Later, in 1669, Rashīd Khān accompanied Rājā Rām Singh in his expedition to recover Gauhati from the Assamese, but he quarrelled with Rām Singh and was ordered out of the camp (Gait, *History*, p. 149). The last reference to him occurs in the *Ma'āshir-i-Ālamgīrī*, when he is found reporting (apparently from Dacca) on the expenditure incurred in connexion with the "conquest" of Gauhati in 1679 (Blochmann, *op. cit.*, p. 99). Rashīd Khān is nowhere recorded to have been given the title of Nawāb, but it is possible he may have obtained it in connexion with this temporary re-occupation of Gauhati during the Viceroyalty of Prince Muḥammad 'Āzam (1678-1679).

west of the tank and within a stone's throw of the road, that the first coin figured in the annexed Plate XXII was picked up three years ago, the finder being a son of one Jamadār 'Alī, a ryot of Munshī Akbar of Maneswar, the large village lying on the old river bank to the west and north-west of the Pīl-khāna. According to another son of Jamadār 'Alī whom I saw when enquiring about the find, there was a dispute at the time of its discovery as to whether or not it was brass, and on the coin being taken to Bābu Monohar De, a local talukdar and goldsmith, it was declared to be gold and purchased by him for Rs. 8. Last March Bābu Mohini Mohan Basu, Headmaster of the Mymensingh Zilla School, happened to be visiting this man, and having been shewn the coin, was informed that others were obtainable at a neighbouring *poddar's*. Being interested, he asked that one should be obtained for him, with the result that coin No. 2 in Plate XXII was purchased for Rs. 9 and sent him shortly afterwards. The discovery of the first coin in the earth close to Nawāb Rashīd Khān's tank is certain, having been verified by personal enquiry from the villagers concerned, and it was also ascertained from the *poddar* who sold the second coin to the Headmaster, through whom information of the find first reached me, that he had obtained it, as well as another, a few months back, from one Ghulām Nabī, a Newārī (নেওয়ারী), or dealer in old jewelry. Ghulām Nabī could not be found as he is said to be absent from Dacca in connexion with his business for most of the year, but the *poddar* informed me that he had seen several other coins of the same sort in his possession.

No. 1.—Gold (apparently cast). Weight 87.6 grains. Size .80 inch.

Obverse:—Typical Gupta king, facing right, his left hand holding a bow, and right extended over the *garūḍa* standard, grasping an arrow. The appearance of the figure on the coin resembles that of Fig. 12, Plate XV (a coin of Chandragupta II) in Mr. Vincent Smith's Indian Museum catalogue of Gupta Coins, while the bow is identical with that shewn on a coin of Samudragupta (*cf.* Mr. Vincent Smith's paper in the *J.A.S.B.* for 1884, Pl. II, Fig 6). There is, however, no halo round the head of the king nor visible lettering on the field, which is surrounded by a symmetrical arrangement of dots and dashes. The edge of the coin has been clipped.

Reverse:—Within a circle surrounded by a circle of dots, a standing Queen or Goddess, looking to the left. Behind her lines suggestive of flowing hair, while in front appear characters suggestive of Gupta letters.

Both the appearance as well as the weight (roughly half a *tola*) at first led the writer to believe that the coin was a forgery, though, from the clearness of the bow, the maker must evidently

have had a genuine Gupta coin as a model. The type seems altogether new, as nothing approximating to the reverse can be found in any paper dealing with Gupta coinage; but the rubbing of an almost identical coin (found in the possession of a ryot at Kotwālipārā) was sent me last year by Bābu Kālīpada Maitra, Assistant Settlement officer, Farīdpūr. Subsequent attempts to purchase this Kotwālipārā coin have proved unsuccessful, but as it was found in company of a Skandagupta coin with very similar type of figure of king,¹ it appears likely to be an example of a new type of Skandagupta's coinage.

No. 2.—Gold (probably struck from a die). Weight 88·3 grs. Size ·88 inch.

Obverse:—Similar to the first coin, except that a horse, standing in front of a small altar, occurs under the king's left arm, while between the king's head and the head of the *garūda* standard is the word *Srī* in Gupta characters (*cf.* *I.M.C.*, Pl. XV, No. 12, for similar letters). The bow is also smaller than in No. 1.

Reverse:—Practically the same as the reverse of No. 1, but with more detail. The edge of the coin has evidently been mechanically waved after the coin has been struck, a hollow on the obverse corresponding with a dot on the reverse. Both in this coin, as well as in No. 1, the figure on the reverse is at 90° to that on the obverse.

This second coin is evidently based upon one of a similar type to the first. It is, however, more interesting as pointing to the existence of another series of coins commemorating an *Asvamedha* (Horse sacrifice). If the identification of the first coin with one of Skandagupta's be correct, this may perhaps be the *Asvamedha* celebrated by Kumāragupta I in which his son Skandagupta may well have taken a part.

Unless these coins be genuine, it is difficult to suggest any hypothesis to account for the discovery of coin No. 1, except that the manufacture of these coins from genuine Gupta coins has been going on for some time in the vicinity of Dacca. Moreover in the absence of the *Newārī* who disposed of coin No. 2 to the *poddar*, it is impossible to say for certain whether the coins actually originate from Dacca. There is, however, nothing inherently improbable in believing the latter to be the case, as besides the Kotwālipārā find mentioned above, Gupta coins belonging to several kings have also been discovered as Muḥammadpūr in the north-east of Jessore (*J.A.S.B.*, 1852, p. 401), while the well-known Allāhābād inscription of Samūdra-

¹ A cast of this Skandagupta coin was shown at the Anniversary meeting. It resembles *I.M.C.*, No. 8, Plate XVI. From the discovery during a visit to Kotwālipārā on 30/1/10 of three more coins similar to No. 1, I am now inclined to regard them as Bengal coins of a somewhat later date than Skandagupta. On one coin a clear ₹ appears on the obverse under the king's left arm.

gupta records his suzerainty over the frontier kings of *Samātāta*, *Davāka*, *Kāmarūpa* and *Nēpāla* (Fleet, *Corpus Inscrip. Ind.*, Vol. III, page 14). Mr. Vincent Smith assigns *Davāka* to the area now covered by the present Rājshāhī Division, but he appears to have overlooked the fact that until 100 years ago the Brahmaputra ran through Mymensingh and that there was no physical obstacle between what is now Pabna and Bogra, and the present district of Dacca. *Davāka* would therefore seem to be the land lying between the Brahmaputra—from the point where it turns the Gāro Hills, down to the old junction of the Meghnā with the Ganges, north of the island of Dakhīn Shābāzpūr—and the Ganges from Gaur to the same junction (*vide* Rennell's map No. IX, from which Mr. Vincent Smith's map facing page 270 of his *Early History of India* should be corrected). If, too, Mr. Vincent Smith's identification of the famous Vikramāditya of Ujjain with Chandragupta II be correct, the district of Vikrampūr, immediately to the south of Dacca, probably owes its name to this king, who records on the iron pillar of Dihlī that he warred in the *Vanga* countries (*op. cit.*, 2nd Ed., p. 275). Mr. Vincent Smith's map also seems to need correction as regards the situation of *Vanga*, the boundary of which has long been the Karatoya on the west, Ganges on the south, the Meghnā on the east, and the Khasi Hills on the north (*vide* Cunningham, *Archæological Report XV*, page 145). In fact *Vanga* may be practically regarded as an alternative name for *Davāka*.

In this connexion, I take the opportunity to place on permanent record the two earliest mosque inscriptions that occur in Dacca town. The first is that found on a small slab of stone above the door of a mosque at Nārāyandia, the north-eastern suburb of Dacca. The mosque is a very small one and of modern appearance, but from its position at the extreme south-east point of the raised land on which the main city of Dacca stands, the stone may possibly be in its original position. Just to the south runs the *khāl*, which passes through Dacca and marks the former channel of the Burīgangā when this river ran into the Lākhyā instead of the Dhaleswarī, while beyond the *khāl* lies the *char* (island) now occupied by the *mahallas* of Islāmpūr, Patuātulī, Bānglā Bazār, Farāshganj, Sūtrāpūr, Ikrāmpūr, Shāh Ujijālnagar and Ruknpūr, on which the town of *Bāngalā*, visited by Vertomannus in 1503, seems to have been situated. (Taylor, *Topography and Statistics of Dacca*, p. 92.)

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ
لَا اِلهَ اِلاَّ اللّٰهُ مُحَمَّدٌ رَّسُوْلُ اللّٰهِ
شَدَّ مَزِيْنَ بَبَانْگِ حَيِّ فَلَاحِ
مَسْجِدِ اِيْنِ غَرِيْبِ لَيْلٍ وَ صَبَاحِ
مَسْمَاةَ بَخْتِ بِيْنَتِ دَخْتَرِ مَرْحَمَتِ

The Basmalah. The Kalimah.

“Adorned by the sound of Hayya Falah¹

At night and morning is the mosque of this humble person :
(Erected by) Musammāt Bakht Bīnat, daughter of Marhamat.

In the year 861 (= 1457 A.D.).”

(Length of the stone 1' 0 $\frac{3}{4}$ " ; height 8 $\frac{1}{4}$ ").

The inscription is somewhat curious as being in Persian, and for its omission of any reference to the reigning king. As pointed out by Khān Bahādur Saiyid Aulad Hasan (whose reading of the inscription in his *Notes on the Antiquities of Dacca* first drew my attention to it—*vide* p. 28), the name of the lady shows that she belonged to the lower class of society.

The second inscription, two years later in date, is the one referred to at the beginning of this paper. As noted by Khān Bahādur Saiyid Aulad Hasan (*op. cit.*, p. 34) this inscription, which is now in the Record room of the Dacca Collectorate, came from an old mosque in Nāswalla Gully, a street in the quarter of the town of Dacca known as Gird-i Qila' and not from the adjoining quarter of Churihāttā as reported by Dr. Wise. Owing to a defective rubbing, Dr. Blochmann was unable to give a full reading in his *Notes on Arabic and Persian Inscriptions*, (*J.A.S.B.*, 1872, page 107), but from a recent photo, reproduced in Plate XXIV, it will be seen that this important inscription runs as follows :

قال الله تعالى وان المساجد لله فلا تدعوا مع الله احدا استحكم هذا
الباب وبنى في ايام خلافة الخليفة المستعان ناصر الدنيا والدين ابوالمظفر
محمود شاه السلطان خلد ملته السبعان المخاطب بخطاب خواجه جهان
صانه عن الافات الرحمان في حد اقليم مباركباب . عصمها² الله الى يوم

¹ More properly *حي على الفلاح* (Come to Safety), a sentence in the *Azān* (call to prayer).

² I am indebted to Dr. Ross, Philological Secretary of the Society, for the reading of this word.

التناد و كان ذلك في العشرين من شعبان سنة ثلث وستين وثمانمائة من
هجرة سنن¹ صلى الله عليه وآله اجمعين *

“ Saith Almighty God; Verily mosques belong to Allāh! Do not worship any one save Allāh!

“ This gate was firmly constructed and built in the days of the reign of the Khalīfah of Him whose aid is sought (by men) Nāṣiru-d-Duniya wa-d-Dīn Abu-l-Muzaffar Maḥmūd Shāh, the King—May Allāh perpetuate his rule!—by one entitled Khawājah Jahān—May the Merciful protect him from (all) evils!—in the frontier territory of Mubārakābād—May Allāh preserve it to the Day of Judgment! And this was on the 20th of Sha‘bān in the year 863 of the years of the Hijra (of the Prophet)—May the peace of God be on him and on all his family!”

Dr. Wise, who was probably misled by Stewart’s assertion that Dacca is a modern city, suggested to Dr. Blochmann that the slab on which the inscription is found “has been removed from some other older mosque and city to Dhākā,” but from the position of the mosque on high land close to the Dhākeswarī shrine and next to the site of the old fort erected by Ibrāhīm Khān Fath Jang, the third Mughul Governor of Bengal, about the year 1620 A.D.,² as well as the facts stated earlier in this paper, there seems no reason to doubt that the inscription has always belonged to the Gird-i Qila mosque. The original building has now disappeared, the roof having collapsed in 1902 as the combined result of being struck by lightning and shaken by the 1897 earthquake, but the local people are now rebuilding another mosque on the foundations of the old one. According to Khān Bahādur Saiyid Aulad Hasan (*op. cit.*, p. 34) the original building measured inside 27' × 16½' and the walls were 4' thick. The slab (now broken in two pieces) is of slate and has the following dimensions:—

Length	..	4' 9"	Length of actual inscription	4' 6½"
Height	..	1' 1¼"	Height of ditto	11¼"
Thickness	..	5" at top decreasing to 4½" at the bottom.		

The stone originally belonged to some even older building, as the top is still covered with sculptured floral designs.

¹ As pointed out by Dr. Ross this is unlikely though apparently سنن is the reading of the inscription. Mr. Azo, to whom a photo of the slab was subsequently shown, suggests that just as in the middle of the first line the individual letters of the words باب و بدى في are fused together, so it might be possible here to read من هجرة اشرف النبيين “(in the year 863) of the Hijra of the Noblest of the Prophets.”

² Aulad Hasan, *op. cit.*, p. 17.

The Mubārakābād referred to in the inscription probably takes us back to the time of the rule of independent Kings in Eastern Bengal. After the defeat and death of the rebellious Viceroy Bahādur Shāh in 731 A.H., the Emperor Muḥammad Ibn Tughluq returned to Dihlī, leaving Bahrām Khān in his old post of Governor of Sunārgānw and Qadr Khān as Governor of Lakhnautī. Bahrām Khān died in 739 A.H., whereupon his armour-bearer, Fakhr-u-d-Dīn Mubārak, seized Sunārgānw. Muḥammad Ibn Tughluq ordered Qadr Khān to expel the rebel, and Fakhr-u-d-Dīn being defeated, “fled and concealed himself in the forests”¹ but soon after succeeded in inducing the soldiers left behind in Sunārgānw to kill Qadr Khān under promise of distributing among them the treasure which Qadr Khān had collected and was on the point of forwarding to Dihlī. This appears to have happened in 741 A.H., and Fakhr-u-d-Dīn ruled continuously as the first independent sovereign of Sunārgānw until 750. A glance at Rennell’s map No. XII will show that there is strong likelihood of Fakhr-u-d-Dīn having retreated from Qadr Khān into the Lākhyā River, from which there was easy access to the maze of waterways round Dacca by means of the Tangi and Turag rivers or the Dolaiganj creek, and his success is also not unlikely to have been commemorated by calling his place of refuge after his own name. From the phrase “Frontier Territory” it would appear probable that the district of which Mubārakābād was the chief town stretched S.E. to the Meghnā and (apart from any thing north of Dacca) included all old Vikrampūr, *i.e.*, those portions of the existing districts of Dacca and Farīdpūr, south of the Dhaleswarī, which lay in the acute angle between the old course of the Ganges, and the Meghnā on the east (*vide* Rennell’s maps Nos. IX and XVII). A relic of the *Iqlīm* seems to be the *Mubārak Ujjiyāl* mentioned in the *Ain* as a parganah of Sirkār Bāzuhā (Vol. II, Jarrett’s trans., p. 138). This still exists as a large parganah of the Dacca district, comprising much of the land south-west and west of Dacca town, between the Padma on the south and the Dhaleswarī on the north.

No coins minted in Mubārakābād have yet come to light, the series of Fakhr-u-d-Dīn’s coins from 741—750 mentioned by Thomas (*Chronicles*, p. 263) being all from Sunārgānw.

Blochmann’s suggestion (*loc. cit.*, p. 108) that Khwājah Jahān is the same person as Ulugh Khān Jahān, the founder of Khalifatābād, the modern Bāgherhāt in Khulnā, is untenable, as in the first place, a striking change in name is not likely to have taken place in the interval, June to October, 1459, nor is it likely for any one to have travelled from Dacca to

¹ Stewart, *History of Bengal* (Sect. III, under the year A.D. 1338).

southern Jessore in these three months, as the crossing of the Ganges is dangerous during the Rains. The Dacca inscription, however, enables the origin of the name “*Khalīfatābād*” to be explained, *i.e.*, it was given by *Khān Jahān* to his Sunderban settlement in honour of the reigning *Nāṣiru-d-Dīn Maḥmūd*, the king who had granted him a *sanad* to reclaim land, and who alone amongst Bengal kings styled himself “Vicar of God,” in this case *خليفة الله المستعان* or more simply *خليفة الله* as in his coin of which a figure is given by Blochmann on page 295 of the Second of his *Contributions to the Geography and History of Bengal* (*J.A.S.B.*, 1874). *Khalīfatābād* came into prominence as a mint town in the time of the *Husainī* kings, owing, it appears, to ‘*Alā’u-d-Dīn Husain Shāh* having originally settled at ‘*Alāipūr* near *Khulnā* to the north of *Haveli Khalīfatābād* (Blochmann, *Contributions*, I, 1873, p. 227, note). His son *Nāṣiru-d-Dīn Naṣrat Shāh* issued coins there in the lifetime of his father, and the mint continued to issue coins until the end of the *Husainī* dynasty with *Ghiyāṣu-d-Dīn Maḥmūd II* in 945 A.H. (1538 A.D.; *cf.* Nelson Wright’s *I.M.C.*, Bengal coins, Nos. 211, 212 and 225.)¹

A full account of all that is known about *Khān Jahān*, the earliest Commissioner of the Sunderbans of whom we have any knowledge, will be found in Chapter III of Westland’s *Jessore*, published by the Bengal Secretariat Press in 1871.

B.—THE EARLY GOLD COINAGE OF THE DIHLI EMPERORS.

According to the most recent authority (Mr. Nelson Wright, in his *Indian Museum Catalogue of the Coins of the Dihli Sultans*, p. 7), the earliest ruler to introduce gold *tankas* of the same pattern and weight as the silver *tanka* of 175 grains was *Nāṣiru-d-Dīn Maḥmūd I* (644—664 A.H.). A find of gold coins which has been slowly passed during the last year into the shops of *Calcutta poddars* enables us, however, to antedate this coinage by at least one reign. Both the coins which will now be described were purchased in *Calcutta*, the place of origin being stated in the case of the first coin to be *Tārkeswar*, the well-known shrine, a few miles west of *Chandernagar*. Little reliance, however, can be placed on the statement.

¹ Cunningham (*Report XV*, p. 46) states that he had a coin of *Nāṣiru-d-Dīn Maḥmūd I* in his possession minted at *Hazrat Khalīf[at]-ābād* in 846 A.H. If his reading was correct it shows that *Maḥmūd I* resided and minted coins in the Sunderbans as early as 1442 A.D., and that *Khalīfatābād* was probably the stronghold to which the descendants of *Ilyās Shāh* retreated after *Rājā Ganesh*’s usurpation and from which *Maḥmūd*’s successful rebellion originated.

No. 3.—‘ALĀ’U-D-DĪN MA’SŪD SHĀH.

Gold *Tanka* (unique). Weight 166·4 grains. Size ·92”.

Obverse :—In double square within circle, three dots in each segment—

- (1) في عهد الامام
- (2) المستنصر بالله امير
- (3) المومنين لله

[No margin.]

Reverse :—Area enclosed in double square, with scroll work in segments—

- (1) سلطان الاعظم
- (2) علا الدنيا و الدين ابو
- (3) شاه سلطان

المظفر مسعود بن

[No margin.]

This coin closely follows in all its details the Gauhati silver coin of ‘Alā’u-d-Dīn described by Hoernle in the *Journal* for 1881 (pp. 58 and 59), and catalogued as No. 119 in Wright’s *I.M.C.*, but the letters are much smaller and the engraving better, *e.g.*, the س of the سلطان is properly represented with the three up strokes. As regards date, the Khalif Al-Mustansir having died in the middle of 640 while ‘Alā’u-d-Dīn ascended the throne in 639, “it would seem to be limited to one of these two years.” Hoernle, however, subsequently suggests (*loc. cit.*, p. 64) that this was the standard die used throughout ‘Alā’u-d-Dīn’s reign. The mint is probably Dihlī.

No. 4.—NĀSIRU-D-DĪN MAḤMŪD SHĀH.

Gold *Tanka* (unique). Weight 166·6 grains. Size 1·0”.

Obverse :—In double square within circle, four dots in segments—

- (1) في عهد الامام
- (2) المستنصر بالله امير
- (3) المومنين لله

[No margin.]

Reverse :—In double square, with traces of ornamental scroll in segments—

- (1) السلطان الاعظم
- (2) ناصر الدنيا و الدين
- (3) ابو المظفر محمود
- (4) شاه بن سلطان

[No margin.]

The coin is almost an exact copy of the Gauhati silver coin of Nāsiru-d-Dīn described by Hoernle (*loc. cit.*, p. 59), and catalogued as No. 134 of the new *I.M.C.*; while there is also a

striking similarity between this gold *tanka* and that of 'Alā'u-d-Dīn Mas'ūd previously described. The mint is probably Dihlī and the date 644 A.H. (*idem*, p. 64). The gold coin given as No. 133 of the *I.M.C.* is altogether different in type as the areas are round and there is a marginal inscription on both sides.

Attention may also be drawn in connexion with these coins to the fact that the Gauhati find lends considerable corroboration to the statement of the *Ṭabaqāt-i-Nāsiri* regarding the invasion of Kāmṛūp by Ikhtiyāru-d-Dīn Yuzbak Tughril Khān, the Governor who assumed independence about the year 652 A.H. with the title Sulṭān Mughīṣu-d-Dīn Yuzbak, and who was killed in Kāmṛūp in 655. The find may be regarded as a relic of the expedition, either deposited by a Musalmān soldier in Gauhati or, more probably, loot captured from the Musalmāns by the then inhabitants of Gauhati in one of the engagements that led to Mughīṣu-d-Dīn's defeat and death. Mr. Gait in his *History of Assam* (p. 35) confuses this Tughril Khān, the second Bengal Governor of this name, with the third Tughril, who also, on declaring himself independent, assumed the title Mughīṣu-d-Dīn and who was killed by the soldiers of the Emperor Balban in Tippera (c. 681 A.H.); *vide* Thomas, *Initial Coinage of Bengal*, 1866, p. 34.

C.—THE FIRST BENGAL COINAGE OF SHER SHĀH.

In the June number of the *Proceedings* for 1898, pp. 169 to 173, the late Dr. Bloch described a find of 317 coins (chiefly of Husainī dynasty) which was made in December, 1897, by one Girish Chandra Aich Ray, a talukdar of Jasodal, a village 2 miles east of the Sub-Divisional headquarters of Kishoreganj in the Mymensingh District. Besides two strange coins, which have not yet been satisfactorily read (*vide I.M.C.*, Bengal coins, Nos. 239 and 240), the most interesting coins in the find were three of the Emperor Humāyūn Shāh, probably minted at Gaur, while he was in residence there in A.H. 945 (1538 A.D.) after Sher Khān had retreated to Upper India (*vide* Wright's *I.M.C.*, Vol. III, Mughal Emperors, Humāyūn, Nos. 21 and 22 and Plate i). Only a small proportion of this find seems to have been recovered by the Collector, as coins which evidently belong to the same find have been on sale ever since in the Kishoreganj Sub-Division. Most of these coins are similar to those described by Dr. Bloch, but among the ones I have been able to purchase are two typical Bengal coins minted in the name of Sher Khān after he had defeated Humāyūn at Chaṇṣā in 946 A.H. and assumed his new title of Sher Shāh. In the same year he also recaptured Gaur from Humāyūn's governor Jahāngīr Qulī Beg.

No. 5.—Silver. Size .83" and .85".

Obverse :—(In square area)—

- (1) لا اله الا الله
(2) محمد رسول الله
(3) السلطان العادل

Reverse :—(In square area)—

- (1) شاه
(2) شير
(3) السلطان خاد
(4) الله ملكه ٩٤٦
(5) श्री से र सा हौ

Margins missing save for traces of *عَدَمَان* at bottom of best coin (in the second specimen there is also trace of *علي* in the left margin).

Margins missing, but there is a slight indication on the right of the *ف* of *فريد*.

The Devanāgarī characters are very crudely represented, and the date (probably 946) is written backwards. The weight of the coin figured (Plate XXII, fig. 5) is 164·8 grains, while the second specimen (which, however, is much mutilated by shroff-marks, especially one deep cut across the Kalimah) only weighs 154·4 grains. As the coins upon which these Bengal coins are modelled (Nos. 659 and 660, *I.M.C.*—Sultāns of Dihlī—*Sher Shāh*,—946) weigh 171 grains, and similar coins minted in Fathābād (Farīdpūr) 3 years later weigh 173 grains, it would seem that the coins now described were issued at Gaur by *Khizr Khān*, the Governor who was appointed in 946 by *Sher Shāh* to rule over Bengal, and that in addition to the other reasons stated¹ for his replacement in 948 by *Qāzī Fazīlat*, speculation in the coinage may also have been included.

The following notes may be added regarding the Jasodal find-spot. The coins were discovered by *Bābu Girish Chandra* (*Aich*) *Ray* in a decorated porcelain pot about 5 feet under the ground, while levelling a mound in the precincts of the ruined home of his ancestor *Rājā Gaṇik Chandra* (गणिक चन्द्र). The *Aichs* (আইচ) state that they are *Kayasths*, who came from *Rād*, and are descended from one *Bhuban Aich*, who settled in the *Madhyadesa*—perhaps *Gaur*—nine generations before the time of *Rājā Gaṇik Chandra*. The first of the family to move to *Mymensingh* was *Devībar Aich*, 6th in descent from *Bhuban* and 14 generations from *Girish Bābu* (the finder of the coins) and the village of *Jasodal* owes its name to *Devībar's* son, *Jasomanta Khān*, one of 3 brothers who all had the title *Khān*.

¹ 'Abdu-s-Salām's trans. of the *Riyāz*, p. 145.

Rājā Gaṇik Chandra *alias* Govardhan, son of Govinda Hazrā and great-grandson of Devībar Aich, is said to have received his title from 'Alā'u-d-Dīn Husain Shāh or Naṣrat Shāh, being at the same time given the parganahs of Hazrādī and Husain-shāhī in the present Mymensingh district. These two parganahs were included among the 22 subsequently conferred by Akbar on 'Isā Khān (*vide* my recent *Note on Seven Sixteenth Century Cannon, J.A.S.B., 1909, pp. 370 and 372*); and the story goes on to say that when 'Isā Khān came back from Dihlī with the *firmān* granting him these 22 parganahs, much fighting ensued between the old and new owners, one battle being fought at a village called Kakūrdia, between Jasodal and Jangalbārī, the place from which 'Isā Khān had previously expelled a Koch Rājā called Lakshman, and where he had made his home. 'Isā Khān, however, was unable to defeat Rājā Gaṇik Chandra and finally had recourse to the same stratagem as that used by Husain Shāh in capturing Kāmatāpūr in 1494 (*vide* later in this paper), as well as by Sher Shāh at Fort Rohtas in 1538 (= 945 A.H.), while Humāyūn idled at Gaur. 'Isā Khān suggested that fighting should cease, and that as a sign of amity between the two families, his ladies should visit the zenana of the Rājā. Instead of women, however, the palanquins were filled with armed men, who, as soon as they were safely inside the walls of the Rājā's house, leapt out and killed him. The Rājā is said to have been worshipping at the time in his private temple of Bhairavī (Kālī), and it was near the ruins of this temple that the coins were found. According to the *'Ain*, 'Isā Khān is said to have returned from an expedition to Kuch Bihār in 992 A.H. (1584 A.D.).¹ If this can be interpreted as including Mymensingh, the greater part of which was then inhabited by Kochs, it is probable that the burial of the treasure and Gaṇik Chandra's tragic death should be assigned to about this date and not to 1003—1004 A.H. when 'Isā Khān returned from Dihlī, after being granted the 22 parganas by Akbar. Local tradition states that 'Isā Khān was already in possession of Jangalbārī in 1002 A.H., and advanced from there with an army of Kochs to fight Mān Singh at Egārosindhu. If, on the other hand, the capture of the Koch fort at Jangalbārī took place before 992 A.H., it is hardly likely that 'Isā Khān would have tolerated for so long the existence of a rival only three miles distant from his own house. The connexion of 'Isā Khān and the Tippera Rāj in 1587 (996 A.H.) referred to in my paper on 'Isā Khān's Cannon (*loc. cit.*, p. 369, note 1), also shows that 'Isā Khān was firmly established in the neighbourhood of south-east Mymensingh, several years before Mān Singh's invasion.

¹ *'Ain*, Vol. I, Blochmann's translation, page 343.

The evidence of the coins themselves points indeed to a still earlier date, as the latest coin belongs to Muḥammad Shāh Sūrī (960—964 A.H.), but as Eastern Bengal was for the next 40 years any one's land in which it is doubtful whether Akbar's coinage was current, the Jasodal find might have been buried at a much later date without it containing a single coin of Akbar. On the whole, the evidence can only be said to indicate some date between 965 and 990 A.H. (A.D. 1557—1582) as the time at which the treasure was buried and Rājā Gaṇik Chandra killed.

From the name of one of the parganahs, as well as the interval of time between 1520, the date of Husain Shāh's death, and 1582, it would appear that the grant of land was made by Husain Shāh's son, Naṣrat Shāh, to the Rājā's father, Govinda Hazrā, after whom the Mymensingh parganah Hazrādī seems to be named, and not to the Rājā himself.

Bābu Girish Chandra Ray also possesses a gold coin of Bijay Māṇikya, the Rājā of Tippera, mentioned in the *Ain* (Jarrett's trans., II, p. 117), who, according to the *Rājmalā*, reigned from 1535 to 1583; but up to the time of writing, I have only seen a bad rubbing of the coin on which the date is illegible. It is said to be an heirloom and not to have been one of the coins found in 1897.

D.—THE ORIGIN OF THE FULL KOCH COINS AND THEIR RELATION TO THOSE OF THE JAINTIA KINGS.

So far as I am aware no representative collection of Koch coins has yet been catalogued, and only scattered notices have appeared of the full-coins that were issued prior to the introduction of the system of half-coins described by Mr. Gait in his *Note on the Coinage of the Koch Kings* (*J.A.S.B.*, 1895, pp. 237—241). The following list epitomises our knowledge on the subject:—

- I. BISVA SIMHA—Founder of the Koch dynasty—*Circa* A.D. 1515-1540. No coins known.
- II. NARA NĀRĀYAṆ—*Circa* 1540-1584.
 - (i) Coin described and figured by R. L. Mitra—(*Proc. A.S.B.*, 1856, p. 457). Date 1477 *Sāka* (= A.D. 1555).
No measurements given.
 - (ii) Coin of the same date described by Blochmann (*J.A.S.B.*, 1874, p. 306). This slightly differs from No. (i) in reading “Nara Nārāyanashya” on the obverse instead of “Nara Nārāyaṇa Bhūpālashya,” the inscription therefore being of four lines instead of five. Weight 157·5 grains; exact size not given.

(iii) and (iv) Mr. Gait's two specimens figured as Nos. 1 and 2 in Plate XXIV of his paper on the Koch Coinage. Both are dated 1477 *Sāka*, but no measurements are given. The first is erroneously said to be a reproduction of Blochmann's coin, but it has "Bhūpālashya" inserted after Nārāyaṇ and appears to be one of those belonging to Mr. Gait. Both of Mr. Gait's coins therefore have the same, and not different, readings as he states (*op. cit.*, p. 238).

III. (a) LAKSHMĪ NĀRĀYAṆ:—1584-1622 (Western Koch kingdom, or Kuch Bihār).

(i) and (ii) Marsden, *Numismata Orientalia Illustrata*, Nos. MCCIII and MCCIV [Plate LII]. Weights: 151 and 152 grains respectively. Size (from Plate) 1.2".

(iii—v) Mr. Gait notes in the Postscript to his Koch paper (*loc. cit.*, p. 241) that the British Museum possesses in all five full-coins of Lakshmī Nārāyaṇ (including those described by Marsden), all dated 1509 *Sāka* (A.D. 1587).

(vi) Shillong Cabinet. (*Vide* Plate XXII, No. 6). Weight: 152.4 grains. Size: 1.22".

Obverse.

- (1) শ্রী শ্রীম
- (2) লক্ষ্মীনারায়
- (3) ণস্য শাক্বে
- (4) ১৫০৯

Reverse.

- (1) শ্রী শ্রী
- (2) শিব চরণ
- (3) কমল মধু
- (4) করস্য

III. (b) RAGHUDEV, 1581—1593. Son of Silarai, Nara Nārāyaṇ's brother and General, and cousin of of Lakshmī Nārāyaṇ. Ruler of the Eastern Koch Kingdom, or Koch Hajo.

(i) *J.A.S.B., Proc.*, May 1895, page 86. Coin dated 1510 *Sāka*. In this notice the *Bhūpālashya* of the 3rd and 4th lines of the obverse is wrongly given as *Pālashya*, an error which is repeated by Mr. Gait on page 238 of his Koch paper previously referred to. No measurements are given; and the coin (like all the Koch coins described from time to time in the *Journal*) has now disappeared from the combined collection in the Indian Museum.

Mr. Gait notes however in his Postscript that

- (ii) the British Museum also possesses an identical coin.
No coins of Raghudev's successors in the Eastern Kingdom are known.

IV. BIR NĀRĀYAṆ, 1622—1627. No coin known.

V. PRĀṆ NĀRĀYAṆ, 1627—1666. Marsden, *op cit.*, Nos. MCCV--MCCVII (Plate LII.)

Weights:—148, 146½ and 142 grains respectively.

The first two are both dated 1555 *Sāka* (1633 A.D.) but the date of the third coin is illegible. If the engraving of the coin is a facsimile, the size is 1.25".

This issue of coins seems to contradict the story given in Hunter's *Statistical Account of Kuch Behar* (p. 409) that Lakshmī Nārāyaṇ was allowed to return to his kingdom from Dihlī in 1618 A.D., on condition that he would in future strike coin only in halves; nor can it be accounted for by Prāṇ Nārāyaṇ being then in rebellion, as only five years later we find him accompanying a Muhammadan force as ally up the Brahmaputra against the Āhōms (Gait, *History*, p. 115). No full coin however of any Rājā subsequent to Prāṇ Nārāyaṇ is known, and as the earliest specimens in the Shillong cabinet of the half coins ("Nārāyaṇī Rupees"), described by Mr. Gait, belong to this Rājā, it would appear that Prāṇ Nārāyaṇ was the first to mint such coins.

The coin which served as a model to Nara Nārāyaṇ is that belonging to Husain Shāh of Bengal, of which four specimens ranging in date from A.H. 900—913 (1494—1517 A.D.) are mentioned in the recently published Indian Museum Catalogue (Vol. II, Bengal series). For facility of reference a specimen of the coin (found in the Murshidābād District) from my own cabinet is reproduced as No. 7 of Plate XXII. The relationship of the two coins will also be clearly evident from the following comparison.

	Koch coin No. 6.	Husainī coin No. 7.
Size ..	1.22" ..	1.28" (the <i>I.M.C.</i> examples range from 1.18"—1.25").
Weight ..	152.4 grains (but <i>vide</i> Nara Nārāyaṇ's coin, No. ii above, for weight of 157.5 grains. As time went on the weight decreased still more— <i>cf.</i> Prāṇ Nārāyaṇ's coins in the British Museum—and it was by the later standards that the weight of the ordinary Koch half-coins was fixed).	164.1 grains (in the <i>I.M.C.</i> examples, the weight ranges from 161.5—164.5 grains).
Appearance.	Identical, a 4-line inscription being enclosed in each case in a double circle with a row of dots between. The reproduction in the Koch coin of one of the groups of three dots from the Husain Shāh coin is specially noticeable. ¹	

To account for this adoption by the Koch kings of the coin belonging to the Muhammadan kings of Bengal, a brief consideration of the conquests of Husain Shāh is necessary. Husain Shāh defeated his predecessor Shamsu-d-Dīn Muzaffar Shāh either at the end of A.H. 898 (1493 A.D.) or the beginning of 899,² and from the conquest of Bengal he forthwith

¹ The inscription on the Husainī coin runs as follows:—

Obverse.

السلطان
العادل علا الدنيا
والدين ابوالمظفر
حسين شاه

Reverse.

سلطان بن
سيد اشرف الحسين
خلد ملكه و سلطانه
محمد اباد ٩١٣

² There is a mosque inscription of Muzaffar at Panduah, dated Ramazān 898 (*cf.* Blochmann, *Contributions* I, p. 291), while most of 899 must be allowed to Husain Shāh to enable him to issue the coins next referred to.

proceeded to the conquest of the surrounding countries. In A.H. 899 he is found issuing coins from Fathābād, the modern Farīdpūr, in which he proclaims himself the conqueror of Kāmrūp, Kāmatā, Jājnagar and Orissa (*I.M.C.*, Bengal coins, No. 175). Only the two former conquests need be considered here. The north of the present Rājshāhī Division as well as the modern districts of Goālpārā and Kāmrūp had then for at least two centuries been under the control of a race of Khen kings (allied to the Kachārīs of the central Brahmaputra Valley) who ruled from Kāmatāpūr, a town situated not far from the modern capital of Kuch Bihār. Subsequent to his conquest of Orissa, Husain Shāh captured Kāmatāpūr by stratagem (*vide* Gait's *History*, page 43), the date being certainly (from the evidence of the Fathābād coin) 1493 or 1494, and not 1498 as given by Prinsep (Thomas' edition, *Useful Tables*, page 273). It is possible that Husain Shāh may then have marched into Kāmrūp, *e.g.*, from the appearance of the gateway of the Kachārī fortress of Dimāpūr, which (as the illustration opposite p. 245 of Gait's *History* shows) is very similar to one of Husain Shāh's mosques: it seems possible that the Kachārīs may also have come into contact with Husain Shāh; but from the absence of any reference to Assam on his coins or inscriptions, as well as the silence of the *Buranjis*, it is certain that Husain Shāh never invaded Assam proper, which was then confined to the eastern half of the Brahmaputra valley. The constantly repeated story that he did, appears to be based on the statement of the author of the *Riyāzu-s-Salātīn* (quoting from the '*Ālamgīrnāmah*'; *cf.* Blochmann, *Koch Bihār and Āsām*, *J.A.S.B.*, 1872, p. 79). "After this (the conquest of Orissa) he planned to conquer Assam and conquering the whole of that country up to Kāmrūp, Kāmtah and other districts, which were subject to powerful Rajahs like Rūp Nārāyaṇ, Māl Kunwar, Gos Lakhan and Lachmi Nārāyaṇ and others, he collected much wealth from the conquered tracts The Rajah of Assam not being able to oppose him, relinquishing his country fled to the mountains. The king, leaving his son¹ returned to Bengal, but when the rainy season set in, the Rajah with his adherents issued from the hills, surrounded the royal army, and in a short time put all to the sword." As Mr. Gait suggests (*History*, p. 88, note) the *Riyāz* (or rather the author of the '*Ālamgīrnāmah*') here undoubtedly mixes up the accounts of two expeditions, Husain Shāh's expedition against Kāmatā in 1494 and the disastrous invasions of the Assam valley by Muhammadans in 1527 (934 A.H.) and 1531—1533, of

¹ Evidently not Prince Danyāl, as this son of Husain Shāh erected a mosque at Mongīr in 903 A.H. (Blochmann, *A New King of Bengal*, *J.A.S.B.*, 1872, pp. 334 and 335).

which Mr. Gait gives an account from the *Buranjis* on pp. 87—92 of his *History of Assam*.

On the ruins of the kingdom of Kāmatāpūr arose the Koch Power, and the fact that Nara Nārāyaṇ adopted a coin of the Husainī dynasty as a type for his own coinage, probably points to his father Bisva Siṃha having been a tributary of 'Alā'u-d-Dīn and his successors. The issue of coins by Nara Nārāyaṇ is also easily accounted for by the fact that the Husainī dynasty came to an end in 1538, *i.e.*, just prior to the date when Nara Nārāyaṇ came to the throne.

The interesting coin figured as No. 8 of Plate XXII furnishes us with the first example of a half-*tanka* of the Koch kings.

No. 8.—A silver half-*tanka* of LAKSHMĪ NĀRĀYAṆ.


Weight 85.1 grains. Size 1.18" (from the Cabinet of Mr. J. C. Higgins, I.C.S., late Sub-Divisional Officer, Jorhāt.)

Obverse and Reverse. The same as the full coin of Lakshmī Nārāyaṇ in the Shillong cabinet already described. The weight is somewhat high, but closely conforms to half the weight of the Husainī coin on which the Koch coin was modelled, which in turn was supposed to represent a *tanka* of 175 grains. The highest full coin of Husain Shāh in the *I.M.C.* weighs 167 grains (No. 181), while there is a coin of his son Ghiyāsu-d-Dīn weighing 168 grains (No. 225). As has been already noted, the weights of the ordinary half-coins in the Shillong cabinet, which are similar to those described by Mr. Gait in his Koch paper, range from 66.8 grains in the case of the present Māhārājā to 73.1 and 73.2 in the case of Prāṇ Nārāyaṇ and his successor Mada Nārāyaṇ (1666—1681), so that Prāṇ Nārāyaṇ evidently adopted for this coinage half the weight of his large coins taken as a standard, irrespective of their theoretical weight.

Under Nara Nārāyaṇ the Kochs soon came in contact with the Āhōms, who had just previously (1536) driven the Kachārīs out of the Brahmaputra valley into the present Kachār Hills, and extended their dominion west as far as Gauhati. At first, in 1547, Nara Nārāyaṇ was unsuccessful, but in 1563, a fresh conflict ended in the Āhōms suing for peace and acknowledging the Koch suzerainty (Gait, *History*, p. 51). Once the Āhōms had been crushed a rapid process of conquest of the surrounding nations ensued, the Kochs under Silarai, the brother of Nara Nārāyaṇ, successively conquering the Kachārīs, the Jaintias, the Sylhetis, and even, it is said, the Rājā of Tippera. In the case of the Jaintias, their Rājā was killed by Silarai with his own hand, and his son was placed on the throne on condition that he paid regular tribute and undertook in future not to strike coins in his own name.

This latter condition was observed by the Jaintia Rājās, at first literally and later technically, for nearly 170 years. Another sign of their dependence on the Koch kingdom is the fact that their coinage is modelled on the same type as that of Kuch Bihār. This will be seen from the coin in the Shillong Cabinet reproduced as No. 9, Plate XXIII.

No. 9.—Silver *tanka* of Jayantāpūr (probably minted by Pratāpa Simha, 1669—1678 A.D.). Weight 150·7 grains. Size 1·13".

<i>Obverse.</i>	<i>Reverse.</i>
(1) श्रीश्रीजः.	(1) श्रीश्रीशि
(2) यन्तापुरपु	(2) Gun. ब चरण क
(3) रन्दरम्य श	(3) Sword. मलमधु क
(4) के १६२२	(4) रम्य 

The coin given by Mr. Gait¹ as 1592 *Sāka*, though very similar, appears to be of 1692. The three dots on the right of the first line of the obverse are a reproduction of those that appear so prominently at the end of the first line of the reverse of the Koch coin. These dots also reappear above the first line of the reverse, just under a star and crescent which can be traced either to another Bengal coin issued by 'Alā' u-d-Din's son, Naṣrat Shāh (*vide* Pl. XXIII, No. 11) or to the undated coin of Ghiyāṣu-d-Dīn Maḥmūd referred to later on (*vide* Pl. XXIII, No. 13), on one or other of which the Assam coinage is based. The gun and two-handed sword appear to have only a local reference, while the Solomon's seal is probably taken from the coins of the later Sūrī dynasty (*cf.* *I.M.C.*, No. 805—Islām Shāh—954 A.H.; and No. 879—Muḥammad 'Ādil—A.H. 961 = 1553 A.D.). It is also a common shroff mark (*cf.* *I.M.C.*, Bengal Coins, No. 216). The number of lines on obverse and reverse are the same in both Koch and Jaintia coins, and the inscription on the reverse of both is the same. As no coins seem to have been issued from Jayantāpūr prior to 1591 *Sāka* (= 1669 A.D.), it would appear that the Jaintia Rājās, for 100 years after the conquest of Jaintia by Sīlarai, observed the orders of their conqueror literally, and issued no coins at all. The circumstances that led to their issuing coins about 1670 were probably the conquest of Prāṇ Nārāyaṇ by Mīr Jumlah in 1661 and his subsequent death in 1666, but as the Rājās of Kuch Bihār—especially Mada Nārāyaṇ, Prāṇ Nārāyaṇ's successor—continued to maintain a certain amount of local authority, the Jaintia Rājās still technically observed the condition imposed on them in 1563 by referring to themselves not by name but as the "*Purandars* of

¹ *Some Notes on Jaintia History*, *J.A.S.B.*, 1895, p. 244; and Fig. 9, Plate XXIV.

Jayantāpūr.” Gradually however the Koch dominions lessened in size and the power of the Rājās decreased (*vide* Hunter, *Statistical Account of Bengal, Vol. X*) till finally, in 1731, the pretence of submitting to the Koch kingdom ceased and we find the names of the Jaintia Rājās appearing for the first time on their coinage. The direct cause was probably the appointment in 1727 of Mīrzā Muḥammad Sa’īd to the post of Faujdār of the Chaklah of Ghoraghāt, Rangpūr and Kuch Bihār, as it is recorded by Muhammadan historians that this officer conquered the Rājās of Kuch Bihār and Dinājpur, “and acquired possession of their treasures, buried hoards, jewelleries and effects” (*Riyāz*, ‘Abdu-s-Salām’s trans., p. 306).

The section may conveniently be concluded by a reference to the coin figured as No. 10 of Plate XXIII. This coin, which belongs to Mr. E. C. Stuart Baker, Deputy Inspector-General of the Criminal Investigation Department, Eastern Bengal and Assam, was brought to him when stationed in 1896 or 1897 at Maibong in the Kachār Hills by a Kachārī who said he had found it among some bricks at the side of one of the old tanks in the neighbourhood. Maibong was established as the Kachārī capital in 1536 after their defeat by the Āhōms had caused the Kachārīs to desert their old capital at Dīmāpūr, and it remained the Kachārī headquarters until 1706 when the defeat of King Tamradhvaja by the Āhōm King Rudra Simha led to another migration to Khāspūr in the Kachārī Plains. The history of Gaur was repeated at Maibong in the ’nineties of the last century, when the construction of the Hill Section of the Assam-Bengal Railway led to wholesale removal of bricks from the ruins of the Kachārī capital, for *surki*; but numerous brick-lined tanks and other signs of human habitation still testify to the former importance of the place.

The coin is evidently closely related to the two Jaintia quarter-coins illustrated by Mr. Gait in Plate XXIV of the *J.A.S.B.* for 1895 and referred to on p. 244 of his paper of the same year (*op. cit.*). The type of coin with its marginal circle of dots and 3-lined inscription is the same, but whereas the inscription on the Jaintia coin is in Bengali characters, that on the obverse of the Maibong coin appears to be a debased Devanāgarī, while the reverse is an unknown script, somewhat suggestive of the cuneiform characters of Assyrian inscriptions. Nothing certain has yet been made of the inscription on the obverse, though it evidently begins with the usual 𑀧 𑀧. To the right appears the matchlock, which has hitherto been regarded as the characteristic sign of a Jaintia coin. Mr. Gait on p. 4 (para. 7) of his *Report on the Progress of Historical Research in Assam* states that it is doubtful whether the Kachārī Kings ever had a mint, nor has any distinctive Kachārī character survived, but from the place of discovery, there is a strong presumption that Mr. Baker’s coin is a specimen of the long-sought-for Kachārī

coinage. It may also be possible that another coin of these kings is the coin in Bengali characters bearing the name of Jaya Simha and date 1585 *Sāka*, described by Mr. Gait on p. 245 of his *Notes on Jaintia History* (*loc. cit.*), as a seal of a Rājā bearing the same name, and date 1706 *Sāka*, was discovered by a Settlement Officer at Khāspūr during the search for historical materials in Assam (*Report*, p. 4).

Mr. Gait does not give any measurements for his Jaintia quarter-coins. The Maibong coin measures .82" across and .88" from top to bottom, while its weight is 38.4 grains. This weight is approximately one-quarter the weight of the Jaintia coin No. 9, previously described.¹

E.—THE ORIGIN OF THE ASSAMESE COINAGE.

The influence exerted by the Muhammadan coinage did not extend merely over the Kochs and Jaintias, for a careful examination shows that the Assamese coinage is similarly modelled on another variety of Husainī coins. To understand this we must return for a moment to a consideration of the Muhammadan invasions of Assam in the first half of the 16th century. The *Buranjis* state that the Muhammadans in 1527 advanced up the Brahmaputra valley under command of the Great Vizier, but were defeated and fled, losing 40 horses and a similar number of cannon. The Muhammadans again advanced in 1531 and fighting continued for two years, on or near the Brahmaputra, a little to the east of Tezpūr. In the first year the Muhammadans were defeated and their commander Bit Malik slain. The following year, 1532, the Muhammadans were largely reinforced and were completely successful, the Āhōms being defeated, both in April and again after the Rains, while Sūklemūn, the son of the Āhōm King, was severely

¹ Since this paper was read the question as to whether Kācharī coins were ever struck has been settled by the receipt on loan from Mr. F. E. Jackson, C.S., Deputy Commissioner, Cachar, of a silver coin minted by Govinda Chandra, the last Kachārī King (1813-1830). The whole of the inscription, which is in Bengali characters, cannot be deciphered, but what has been made out with the help of Bābu Rakhal-das Banerji of the Archaeological Dept. is given below—

<i>Obverse.</i>	<i>Reverse.</i>
(1) শ্রীশ্রী গো	(1) হিড়িম্বপু
(2) বিন্দচন্দ্রস্য	(2) র ধা ম শ্রী র গ
(3) রাজ্ঞো [?]	(3) চ গী প দা
(4) ? ?	(4) (জ) জু ব (:)

The coin is in the possession of a descendant of Govinda Chandra's Prime Minister, and, as it is said to be the only one in existence, the owner refuses to part with it. It is .93" in diameter, and weighs 175.75 grains. As may be seen from the reproduction given at the end of this paper, it is struck from a good die. (25-1-10).

wounded and narrowly escaped capture. In the following year, however, the fortune of war changed, and after the Muhammadan leaders Bāngāl, Tāju, Turbak and Husain Khān had been one after the other slain, the Musalmān forces broke and fled. The pursuit continued as far as the Karatoya river, and before returning the Āhōm commander is said to have sent an envoy to the King of Gaur with presents and received back a princess for the Āhōm King. (Gait, *History*, pp. 87—92).

At the time in question, A.H. 934—939, Naṣrat Shāh was still on the throne of Gaur, but his brother Ghīyāṣu-d-Dīn Maḥmūd is also found issuing coins as co-ruler (*cf.* Bloch's notice of the Jasodal find—*J.A.S.B., Proc.*, 1898, page 172). Prinsep states, on the authority of the *Āsām Būranji* of Hulirām Dhaikiyāl Phūkan,¹ that Assam was invaded by Dulāl Ghāzī, son of Husain Shāh, in 1498, and immediately afterwards, in the same connexion, come the names of Musundar Ghāzī and Sulṭān Ghīyāṣu-d-Dīn. This clearly points to the Great Vizier having been none other than Ghīyāṣu-d-Dīn Maḥmūd, and the suggestion is strongly supported by two facts—(a) that (as noted below) the Assamese coinage is based on a type of coinage simultaneously in use both by Naṣrat Shāh and Ghīyāṣu-d-Dīn, and (b) that (as recently pointed out by Walsh in the *Journal of the Royal Asiatic Society* for 1908—*Coinage of Nepal*, pp. 685—688) the Nepalese under Jaya Mahendra Malla, King of Kāthmāndu from 1566 to 1576, shortly afterwards adopted Ghīyāṣu-d-Dīn's characteristic coinage, with a small circle in the middle of the coin, as a model for a new type of coin for use both in Nepal and Tibet. The pattern of coin might well have been taken to Nepal by Nara Sīmha, brother of the Koch King Nara Nārāyaṇ, who, after being defeated by his brother, fled there for refuge about 1540 (Gait, *History*, p. 48); but (on the analogy of the coin of Āvā referred to later) it is also possible that the Tibetans, in addition to supplying the silver for the new coinage, also supplied the type coin, which they could easily have obtained through their relations with Bhutān (Gait, *idem*, p. 49). In any case, however, this strange influence on the coinage of Nepal, Tibet and Assam could hardly have been exerted unless Ghīyāṣu-d-Dīn had exercised for a considerable period military influence at the base of the Himalayas.

Up to the reign of Sūhuṅmūn, the Āhōms do not appear to have needed any regular coinage, but as soon as Sūklenmūn succeeded to the throne in 1539, after killing his father Sūhuṅmūn, we find coins being issued, modelled either on a type of Naṣrat Shāh's coins minted in A.H. 927, or less probably, on a unique undated coin of Ghīyāṣu-d-Dīn Maḥmūd of a similar type, which is wrongly ascribed in the *Indian Museum Catalogue*, Vol. II, Part II, No. 217) to Naṣrat Shāh. This affiliation will be

¹ Blochmann, *Koch Bihār and Āsām*, *J.A.S.B.*, 1872, p. 79, note.

evident when a comparison is made between Süklenmün's coin of 1543 (No. 1, Plate XXIX of Vol. I of the *I.M.C.*), Naṣrat Shāh's coin (No. 248, Plate V, *I.M.C.* Vol. II), and Maḥmūd's coin given on Pl. VI of the same Catalogue. The Āhōm coins, it is true, are octagonal for the reason stated on page 97 of Mr. Gait's *History*, viz., that the *Yōginī Tantra* describes the Āhōm country as being of this shape, and the weight may also be based on the old Hindu standard of $1\frac{1}{4}$ *panas* or 180 grains (*vide* Walsh, *op. cit.*, p. 676) instead of the *tanka* of 175; but apart from these differences, the resemblance is marked.

To enable the derivation of the Āhōm coinage from that of the Husainī Kings to be readily seen, I give in the annexed Plate XXIII, obverse of one Naṣrat Shāh coin and reverse of another of the type referred to (Nos. 11 and 12, both from my own cabinet) side by side with an undescribed coin of Chakradhvaja, who ruled over Assam from 1663 to 1670 (*cf.* Mr. Gait's *History*, pp. 144—149). The coin of Ghiyāṣu-d-Dīn Maḥmūd previously referred to is also reproduced (No. 13).¹

No. 14.—Silver coin of CHAKRADHVAJA SIMHA—(belonging to Bābū Prithvindra Mohan Ray, Zemindar of Rowile, Dacca District).

Weight 174·1 grains. Size—.83". Date 1585 *Sāka*
= 1663 A.D.

Obverse—In a double octagon
with row of dots between.

- | | |
|-----|------------------|
| (1) | শ্রীশ্রী স্ব |
| (2) | গর্গ দেব চক্রধ্ব |
| (3) | জ সিংহস্য শাকে |
| (4) | ১৫৮৫ |

Reverse—Appearance as on
obverse.

- | | |
|-----|-------------|
| (1) | শ্রীশ্রী শি |
| (2) | বরাম পদা |
| (3) | রবিন্দ পরা |
| (4) | য়গস্য |

It is noticeable that in this, as well as in the coin of the Assamese Pratāpa Simha figured as No. 2, Plate XXIX of Vol. I, of the *I.M.C.*, the winged dragon is wanting, a fact which suggests that coins in Āhōm characters, without the dragon,

¹ The following are the details of coins No. 11, 12 and 13 :—

No. 11.—Naṣrat Shāh (Obverse);
927 A.H.; mint Naṣratābād.
Weight 160·3 grains. Size
(across .84"; top to bottom
.90").

- | | |
|-----|---------------------|
| (1) | السلطان |
| (2) | (بن) السلطان |
| (3) | ناصر الدنيا و الدين |
| (4) | ابو المظفر |

No. 12.—Naṣrat Shāh (Reverse) of
927 A.H.; mint Naṣratābād.
Weight 161·6 grains; Size .90".

- | | |
|-----|-------------------|
| (1) | نصرتشاه سلطان |
| (2) | بن حسين شاه سلطان |
| (3) | حسيني خلد ملكه |
| (4) | نصرتا باد ۹۲۷ |

will also be found to have been issued by Süklenmün. The form of the Bengali † is noticeable, as it is more modern than the form † employed 50 years later by Rudra Simha (*vide I.M.C.*, same Plate, No. 3, the reverse of which has been shown upside down).¹

F.—THE BURMESE COINAGE IN ASSAM.

I conclude these notes on the coinage of North-Eastern India with two Assamese coins which apparently belong to a hitherto-undescribed coinage, issued by the Burmese during their brief sovereignty over Assam, 1819—1825.

No. 15.—Octagonal silver coin—cast (in the cabinet of Mr. A. W. Botham, C.S., late Deputy Commissioner, Sibsāgar).

Weight 144·9 grains. Size ·93”.

Obverse :—Two-lined inscription, not properly oriented to two opposite sides of the octagon.

Reverse :—Representation of a pig, iguana or mongoose.²

No. 13.—Ghiyāṣu-d-Dīn Maḥmūd (no date or mint). Weight and size, according to *I.M.C.* No. 217, 163·5 grains and ·97”. Corrected reading.

<i>Obverse.</i>	<i>Reverse.</i>
(1) السلطان	(1) السلطان
(2) ابن السلطان غياث	(2) ابن حسين شاه
(3) الدنيا و الدين	(3) السلطان خلد
(4) ابوالمظفر	(4) الله ملكه
(5) محمود شاه	(5) و سلطانه

¹ An identical coin of Chakradhvaja from the British Museum Collection, recently described by Mr. J. Allan in Vol. IX of the *Numismatic Chronicle*, weighs 170·7 grains and is ·8” in diameter.

Mr. Allan's paper also confirms my suggestion that the dragon (*Simha*) was not invariably used on the Assamese coins until Hindu titles were adopted by the Assamese Kings. Süklenmün's *Muhur* figured as No. 1 of Plate XXIII (*Num. Chron.*, Ser. IV, Vol. IX) shows two rising suns, but no dragon (25-1-10).

² The image of either a Gui-samp (iguana) or mongoose appears on the pedestal of a statue of Raksha Kālī, found at the village of Paikpārā in the Munshiganj Sub-Division of the Dacca District, and although the pig is considered lucky in Persia and Europe, I can find no reference to its being considered so in India or Burma. Srījut Golāp Chandra Barua, the translator of the Ahom *Buranjis* for Mr. Gait, informs me however that the pig was essential for Ahōm sacrifices and that the Deodhāis (Āhōm priests) of Sibsāgar still keep pigs and eat pork. The reason why no food offered at the famous temple of Kāmākhyā is taken by Brahmīns is said to be that pigs were once sacrificed there by some Assamese king. The use of the pig in sacrifice probably accounts for its image being found on these Assamese coins.

Mr. Botham writes as follows regarding this coin: "I am also sending what was sold to me as a "Gahuri" Muhur (*Gahuri* being Assamese for a pig), rumours of which I have heard ever since I began to collect. All I could learn of it was that it had a rough representation of a pig on it, and that owners were very chary of parting with it, as it was considered lucky. The coin I have got seems to be a casting—but even if it is not genuine, it is I fancy likely to be a casting of the genuine coin. The inscription might be *Sri Sri Gahuri Nipra* (?). I cannot learn what king is supposed to have struck these coins."

The coin itself furnishes no indication of its origin, but another similar coin enables this to be stated.

No. 16.—Octagonal silver coin; (in the cabinet of Mr. J. C. Higgins).

Weight 190·4 grains. Size 1·0".

Obverse:—Unsymmetrical floral arrangement of lines similar to the pattern on the reverse of the coin of *Āvā* dating from 1796, of which an engraving is given by Marsden (*op. cit.*, Plate LIII).

Reverse:—Animal as in Mr. Botham's coin.

The coin is struck—not cast—and only the animal is in relief. In the plate, by an optical illusion, the floral design also appears in relief, though in reality the lines are incused. Marsden, on page 805 of his *Numismata Orientalia*, states that no coinage of *Āvā* then existed, and explains the coin he illustrates as follows:—"When Symes, however, was taking his departure from the court of *Āvā*, to which he had been sent on a public mission, he was desired by that Government to procure dies to be engraved at Calcutta and pieces of silver representing the Tycal¹ to be struck for its use, according to a pattern with which he was furnished. With a specimen of these he favoured me.... There is no evidence of its having been put into circulation in Burmese dominions."

The obverse of the coin given by Marsden is very similar to the reverse of the Burmese symbolical coin, catalogued as No. 6 of Sundry Coins on page 333, Vol. I, of the *I.M. Catalogue*. Marsden does not give any measurements of his coin, but the weight of the symbolical coin is 142·7 grains.

As their widely varying weights show, these Burmese coins of Assam are more of the nature of trial pieces than actual coinage. Their production, however, may account to some

¹ On the previous page Marsden had referred to the Arakanese coins as being current at the trading ports of Arakan and Pegu under the denomination of *Tikal*, their average weight being about 152 grains.

extent for the extraordinary dearth of coins of the later rulers of Assam, for the period 1741–1747 *Sāka* (1819-1825). Only 7 coins of this time appear to be known, *viz.*, 5 of Chandrakanta (2 full coins, dated 1741 and 1742 respectively; and undated $\frac{1}{2}$ -, $\frac{1}{4}$ -, and $\frac{1}{3\frac{1}{2}}$ -rupees); and 2 of Jogeśvara (an undated $\frac{1}{2}$ -coin in the Shillong cabinet; and a $\frac{1}{4}$ -Rupee dated 1743 in the possession of Mr. Botham). No specimen of the coinage of Purandar Simha, the last king of Assam, has yet come to light.

POSTSCRIPT.



In connexion with the annexed reproduction of the Kachārī coin described in the note at the end of Section D of this paper, the *Hidimbapūra* of the inscription probably refers to Silberband, near Khāspūr in the Cachar Plains, where Mr. Gait states that ruins of the palaces of the last three Kachārī kings are still to be found (*Report*, Appendix III, p. 69). Captain Fisher makes the following remarks on the goddess whose name occurs on the reverse of the coin:—

“The worship of irascible female spirits, and the practice of the Tantra magic ascribed by the Hindus to the people of Kamrup, are imputations which derive some countenance from the existing worship of Ramchundi [Ranacandī], the Thakoornain of Kachar, who is adored under the symbol of a sword religiously preserved in the Rajbarri, and to the possession of which the most inexpressible importance is attached.”

(Memoir of Sylhet, Kachar, and the adjacent Districts: *J.A.S.B.*, 1840, pp. 832 and 833). Ranacandī is the War-Goddess of Tantric Hinduism.

13. Rasiapaāsaṇa.

By S. P. V. RANGANATHASVAMI ARYAVARAGURU.

A short note on Rasiapaāsaṇa, an old Prakrit work, newly brought to light, by Mahamahopadhyaya Pandit Haraprasad Sastri, M.A., and deposited in the Library of the Asiatic Society of Bengal, may not be uninteresting at present when Prakrit works are rare and even the few works known are rarely studied. Rasiapaāsaṇa by Vairochana contains 400 verses ; but about 46 more verses, in the same metre, have been added at the end of the work. Being similar in nature to those of the work and probably being the composition of the same author, these were perhaps added to this work. The fact that these verses were not intended by the author to form a part of his work, is clearly seen from the colophon which is given before the commencement of these verses (*i.e.* at the end of his work) and in which it is stated that his work contains 400 gāthās. So my conclusion is that these extra verses are *Chatu Slokas* (चाटुश्लोकाः), composed by the same author, collected together and appended to the work, so that they might not fall into oblivion.

As to the work itself, it is complete with benedictory verses at the beginning and with a colophon at the end. It contains 400 verses, in one and the same metre, gāthā. It is not an anthology but an original work of the author. The following verses from the work will clearly convince us of the fact:—

सोज्ज्ण कइंदगिरं रोअइ मे विरइअं खु को सोउम् ।

हरिअ मज्जपुसपत्तं धावइ को कुसरसं पाउम् ॥ ८ ॥

[श्रुत्वा कवीन्द्रगिरं रोचते मया विरचितं खलु कः श्रोतुम् ।

हत्वा मधुपूर्णपात्रं धावति कः कुशरसं पातुम् ॥]

“Having heard the words of the best of poets, who will care to hear my composition? Having stolen a pot full of honey, who will run to drink the juice of Kuṣa?”

इंदे बंधम्मि सुए लक्खणमग्गे रसे अलङ्कारे ।

विरएमि तह वि मूढो अइ रसिअपआसणं कव्वम् ॥ १८ ॥

[क्वंदसि बन्धे श्रुते लक्षणमार्गे रसे अलङ्कारे ।

विरचयामि तथाऽपि मूढः अयि रसिकप्रकाशनं काव्यम् ।]

“Although I am ignorant of Chandas, Bandha, Sastra, Lakshanamarga, Rasa and Alankara, yet am I composing the poem Rasiapaāsana.”

कमलकरस्स ऊ सुगई बज्जलमहामोहणासणं कुणइ ।

रोअं च हरइ तह वि अ ण मणं हि हरेइ सअललोअस्स ॥ ४०० ॥

Of the above three verses the first by the phrase मे विरद्वं (= मया विरचितं) undoubtedly proves that the work was composed by the author. The second by the clause विरयमि रसिअपआसणं कअं (= विरचयामि रसिकप्रकाशनं काव्यं) asserts the above statement giving in addition the name of the work. Moreover, the fact of his professing ‘ignorance of *Chandas*, etc.’ (which is common to Oriental Poets) should only be stated when he is composing and not collecting the verses for a poem. The third verse proves the same fact in a peculiar way. By taking the initial and the last letters of each of the four pādas, we get the phrase कई बइरो-अणस्स (कतिः वैरोचनस्य) which means “the work (composition) of Vairochana.”

The last verse, of the above set, unfolds the name of the author, Vairochana. That the author of this work is Vairochana is also evident from the colophon.

कइवइरोअणरइओ विअडुवरकामिणीदइओ ।

विमलो गाहाकोसो सम्पुअचउस्सओ समत्तो अ ॥ ४०२ ॥

[कविवैरोचनरचितः विदग्धवरकामिनीदयितः ।

विमलो गाथाकोशः संपूर्णचतुःशतः समाप्तश्च ॥]

“Thus ends the work of full 400 gāthās composed by the poet Vairochana which is pure and which is dear to inflamed lovers and affectionate women.”

The work has four benedictory verses, of which the last is not clear. The first three are :

सुगओ समन्तभदो अवीअवाई अणेअवलवन्तो ।

बुद्धो अ धम्मराओ जणसरण विणाअओ चिरं जअइ ॥ १ ॥

[सुगतः समन्तभद्रो ऽद्वितीयवादी अनेकवलवान् ।

बुद्धश्च धर्मराजः जनशरणः विनायकः चिरं जयति ॥]

[N.S.]

“Buddha is ever victorious—that Buddha, who is well-bestowed, who is wholly auspicious, who teaches identity, who possesses the 10 powers, who is the enlightened, who is the king of justice, who is the defender of all and who is the remover of obstacles.”

कोमलकुसुमसरेहिं पञ्चेहिं चेअ जअइ जो भुअणम् ।

हेलामेत्तेण सअा तं रणरणअं चिरं वन्दे ॥ २ ॥

[कोमलकुसुमशरैः पञ्चभिरेव जयति यो भुवनम् ।

हेलामात्रेण सदा तं रणरणकं चिरं वन्दे ॥]

“I salute for ever that Raṇaraṇaka (Manmatha¹) who always conquers the world as sport by using only five tender flower-arrows.”

शिवाणहेउममलं भअवन्तं वञ्छित्यदाअारम् ।

विसमेसु एक्काणाहं शिच्चं लोएसरं वन्दे ॥ ३ ॥

[निर्वाणहेतुममलं भगवन्तं वाञ्छितार्थदातारम् ।

विषमेषुं एकनाथं नित्यं लोकेश्वरं वन्दे ॥]

“I constantly bow to the gods Manmatha and Lokesvara, who are both the causes of Nirvāṇa (Happiness and Moksha), who are both pure, who fulfil our desires and who are both sole masters.

The first is an invocation to Buddha in which almost all the words referring to him are given, the epithet अनेकबलवान् conveying the idea of दशबलः an epithet of Buddha. The second verse invokes Raṇaraṇaka. The third is again an invocation to both Manmatha and Lokesvara.

The verses in the work, it seems, are arranged according to subjects like Nāyaka, Nāyikā, Dūtī, etc. But as there is neither a commentary nor a complete Sanskrit Chāyā, it is difficult to point out clearly where the various portions begin or end. But it is obvious that the earlier portion of the work treats of Śṛṅgāra (e.g. Nāyaka, Nāyikā, etc.) while the latter portion treats of Vairāgya (e.g. Gurūpadeṣa, etc.). The manuscript itself of the Society's Library (which I had occasion to get on loan) is not free from scribal mistakes. The verse 59th is copied over again as the 89th, which led to the mistake of numbering the last verse as 401 instead of 400, which ought to be the case according to the colophon.

The work was written by the author at the request of his friends. This is made known to us by the author himself in his verse :

¹ “रणरणको रतिरमणः संसारगुरुर्मनोजन्मा ।” Trikaṇḍasesha.

रइअं मए वि थोअं कअं कइवरविसेसविसअं पि ।

सहअरदिठोवरोद्धा णिअमइविहवाणुसारेण ॥ ३६७ ॥

[रचितं मयापि स्तोकं काव्यं कविवरविशेषविषयमपि ।

सहचरदृढोपरोधात् निजमतिविभवानुसारेण ॥]

“ Being pressed by my friends, I compose, according to my abilities, this short poem, though really it is the pursuit of the ablest of poets.”

Excepting a few facts nothing is known about the author. That the author is a Buddhist is evident from the fact that he invokes Buddha at the very commencement of the work and also from the following two verses :

पञ्चत्तणम्मि पत्ते पंचेहिं चेअ णिम्मि ए देहे ।

बन्धु त्ति दद्वहिअआ मूढा ता कौस कन्दन्ति ॥ ३४ ५

[पंचत्वे प्राप्ते पंचभिरेव निर्मिते देहे ।

बन्धुरिति दग्धहृदयाः मूढाः तत्कृतः क्रन्दन्ति ॥]

“ When the body formed out of the five (elements) is dead (resolved into the five elements), why do foolish persons cry with inflamed hearts for their relative.”

अस्सस्समए लोए कस्स वि भावो कहिं पि ण उ अस्स ।

रंजेइ को वि केण वि सव्वं ण जिणो वि रंजितं तरइ ॥ २२ ॥

[अन्यान्यमते लोके कस्यापि भावः कुत्रापि न त्वन्यस्मिन् ।

रज्यते कोऽपि केनापि सर्वं न जिनो ऽपि रंजयितुं शक्नोति ॥]

“ In this world of different tastes, one has taste in one thing and not in another. A certain person is pleased by a certain other. Even Jina will not be able to please all.”

In the first verse the author refers to one of the most important doctrines of Buddhism, *viz.*, that the body comes into existence by the union of the five elements and not, as Hindus believe, by the creation by a Supreme power. In the second he attributes the superiority of power to Jina (Buddha) rather than to Sarveṣvara or Brahman. We naturally expect a Brāhmaṇa (like Bhartrihari) to say ‘ब्रह्मापि नरं न रञ्जयति’ or some such thing.

As to the age of the poet, the information that can be collected from this work is scanty and unsatisfactory. In the extra verses at the end of the work, the following one occurs :

गन्धङ्कट्टमत्तेहकुम्भहाडिदविघट्टसंजात्यो ।

एओईपइआऊ खोणीवालो चिरं जअउ ॥ ४१२ ॥

In the fourth pāda we have खोणीवालो चिरं जअउ (= क्षोणीपालः चिरं जयतु), i.e. 'may the ruler of the earth be victorious', which undoubtedly refers to a contemporary king, perhaps the patron of the poet himself. Unfortunately it was not possible for me to make out the name of the king in the verse, the letters being illegible. Although our poet does not refer to other poets by name, yet that he is indebted to some of them for a few of his ideas will be evident from the following parallelisms :

I. गण पुराणेत्ति पअट्टं कळं गणं ति होइ सावज्जम् ।

को मोत्तुण परिकळं भूसं गिंदं च जम्पए सुअणो ॥ १६ ॥

[न पुराण इति प्रकृतं काव्यं न नवमिति भवति सावद्यम् ।

को मुक्खा परीक्षां भूषां निंदां च जल्पते सुजनः ॥]

“ A composition is not good simply because it is old. Nor is it despicable because it is new. Who, that are noble, will praise or condemn a thing without due examination ?”

पुराणमित्येव न साधु सर्वं न चापि काव्यं नवमित्यवद्यम् ।

सन्तः परीक्ष्यान्यतरद्भुजन्ते मूढः परप्रत्ययनेयबुद्धिः ॥ २ ॥

“ Everything (composition) is not good simply because it is old. Nor is a composition unworthy of praise (or fit to be condemned) because it is new. The wise (critics) having made a due examination adopt the one or the other. The blockhead has his judgment guided by the conviction of others.”

(Kālidāsa's Mālavikāgnimitra I. 2.)

II. पत्तविसेसापाडिआ डिम्भस्स किदी वि होइ बहलत्था ।

सालिस्स तम्बकरिदा गण ऊ किस्सिअगुणा अवेक्खेइ ॥ २४ ॥

[पात्रविशेषे पतिता डिम्भस्य कृतिः अपि भवति बहलार्था ।

शालेः स्तंबकरिता न खलु कृषिकगुणान् अपेक्षते ॥]

“ Even the composition of a boy attains greater excellence when imparted to a good recipient. The well-flourishing of the crop does not surely require the good qualities of the husbandman.”

चौयते बालिशस्यापि सत्क्षेत्रपतिता कृषिः ।

न शालेः स्तंबकरिता वसुगुणमपेक्षते ॥ ३ ॥

“ Even the crop sown by an idiot in a good soil comes out flourishingly. The well flourishing of the crop does not require the good qualities of the husbandman.”

(*Viśākhadattās Mudrārākshasa. I. 3.*)

And also our poet seems to have borrowed the following from

III. चंदाहि कालऊडं दुग्न्धं चंदणा जला जलगम् ।

Dandin. (Cf. his *Kāvya-darśa* II. 39.) From these we will not be far wrong in concluding that our poet is not older than Dandin or Viśākhadatta, in the chronology of Indian poets.

Regarding the merit of his composition, I am of opinion that Rasiapaāsana stands inferior to *Gāthāsaptasati* and *Setu-bandha*. The style is not well-polished and flowery, though we find some of his verses beautifully wrought and pregnant with ideas worthy of praise. The following verses may be cited as specimens of his best production. The ideas contained in them are all new and striking.

सूईअ अग्रपच्छिमभाअं अणुहरइ दुज्जणो सुअणो ।

छिइं कुणोइ एको पूरइ इअरो गुणोहि गुणवंतो ॥ १६६ ॥

[सूच्याः अग्रपश्चिमभागं अनुहरति दुर्जनः सुजनः ।

छिद्रं करोति एकः पूरयति इतरो गुणैः गुणवान् ॥]

“The good and the wicked imitate the two ends of a needle. The one always creates defects (holes) in others, while the other fills them with his own good qualities (thread).”

एकौअरसम्भूआ सिरसा सक्करिअ धारिआ णिद्धा ।

केसा वि विरज्जन्ते जराइ किमु वंकणअणाओ ॥ ३२४ ॥

[एकोदरसंभूताः शिरसा सत्कृत्य धारिताः स्निग्धाः ।

केषा अपि विरज्यन्ते जरया किमु वक्रनयनाः ॥]

“Born of the same mother, borne on the head with reverence and combed with care, even the hairs turn grey (become indifferent) on attaining old age. And what of women?”

अनिसं जराणलेहिं अवसिअडाहम्मि डद्धदेहाओ ।

णिग्गमइ पाणुभण्णो पलिअव्वाएण जन्तूण ॥ ३२५ ॥

[अनिष्टं जरानलैः अवसितदाहे दग्धदेहात् ।

निर्गच्छति पाणुभस्म पलितव्याजेन जन्तूनाम् ॥]

[N.S.]

“The ashes of the bodies of creatures, burnt incessantly by the fire of old age, the flames having subsided, are coming forth in the shape of grey hairs.”

लङ्घिअरो णं जुसो भरिऊण गुणं सिरं धुणावेइ ।

लुक्कं जुव्वणरअणं अणुसरिउं ओणओ भमइ ॥ ३३ ॥

[यष्टिकरः ननु जीर्णः स्मृत्वा गुणं शिरः धूनयति ।

निलीनं यौवनरत्नं अनुसर्तुं अवनतः भ्रमति ॥]

“The old man having a stick in his hand, is walking, with bent body in search of the lost gem of youth, and shakes his head at the recollection of its good qualities.”

आजम्माणगअम्मि वि सरले णालम्मि पङ्कअं विमुहम् ।

पाएण हि गुणवन्ते लच्छिजुआणं इमं चरिअम् ॥ ३५ ॥

[आजन्मानुगतेऽपि सरले नाले पङ्कजं विमुखम् ।

प्रायेण हि गुणवति लक्ष्मीयुतानां इदं चरितम् ।]

“The lotus is turned away from its stalk although it is straight and accompanies it from its birth. The conduct of the rich towards the good is usually opposed.”

अहिअकलंको गोसे गअणोअहिपच्छिमंतअणुलगो ।

गूठपओ उताणो पडिहाइ ससीहु कुम्मराओ व्व ॥ ३६ ० ॥

[अधिककलंकः प्रभाते गगनोदधिपश्चिमांतानुलग्नः ।

गूठपद उत्तानः प्रतिभाति शशी खलु कूर्मराज इव ॥]

“The moon really shines like the king of tortoises by having many spots (Kalanka), by attaching itself to the western shore of the ocean of sky at daybreak and by putting forth the concealed rays (legs).”

The poet is also skilful in Chitra Kavita, as examples of which the following may be given:—

वज्जलगुणं दाहहरं वहलपरिमलं सुमंजुलं विमलम् ।

मोहमलोहं गुरुवर ते चरणसरोरुहं वन्दे । ३६६ ॥

गुरुवर मसङ्गचित्तं वज्जसरणिविवुद्धविमलवरबुद्धिम् ।

मोहकरिकुम्भदारणगुरुवलकण्ठीरवं वन्दे ॥ ३६७ ॥

संसारसिन्धुतरणे तारसुभारे वरम्बरन्देवि ।

परमे विमुद्धकरणे सेवह वज्जगण मरन्देवि ॥ ३६८ ॥

वाणासिकुन्तपट्टिसतोमरफरतूणभासुरे समरे ।

वारण तुरंग वर वीर महारवचण्डले भासि ॥ ३६६ ॥

(चतसृभिः भाषासमावेसम्)

किं वीअमणुप्याइअ सहलं किमु संगमं सुहं किं च ।

तुह गुणरुअसहाअं जाणिज्जइ चउरआ केण ॥ १५४ ॥

(पञ्चोत्तरम्)

अलिउलचिहुरे कअमुहि उप्पलणअणे मुणालकरचलणे ।

हंसजुअत्यणि कलरवतरङ्गवसणे सुकन्तिल्ले ॥ ६६ ॥

कमलिनि अमले परिमलमणोहरे फेणहारअइसिसिरे ।

जहि वर उववणमेन्ती तुज्झ गुणं किंणपज्जन्तम् ॥ ६७ ॥

(जुअलअम्)

Mahamahopadhyaya Pandit Haraprasad Sastri, M.A., has arrived at the following conclusion regarding this work in his report on the search of Sanskrit Manuscripts for the years 1895—1900. "During the period under review has been acquired a brand-new anthology in the Prakrit entitled Rasiapa-sāsaṇa. It commences with an invocation to Buddha. The second verse invokes Lokeṣvara; but the third makes an obeisance to Śiva. It speaks of another Prakrit anthology which was at the height of its popularity at the author's time, entitled Gāthāratnakōṣa by Vairochana. The MS. is incomplete, still it contains 448 verses in one and the same metre. The numbers are given sometimes in figures and sometimes in letter numerals. The author's name has not been found in the work." It is evident from my remarks given above that his surmises are not correct.

In conclusion, I have to say that I publish this article because it is not known to many that such a work exists in spite of its forming important addition to Prakrit Literature and also because Mahamahopadhyaya Pandit Haraprasad Sastri, M.A. (who brought it to light and the only one who wrote anything about it) has been misled by the following verse:—

विमलो सुवर्णघटिओ णाणालंकारभरिअवहलत्थो ।

वइरोअणेण रइओ गाहारअणस्स रेहए कोसो ॥ ७ ॥

[विमलः सुवर्णघटितः नानालङ्कारभरितवहलार्थः ।

वैरोचनेन रचितः गाथारत्नस्य राजते कोशः ॥]

In this verse the author praises his own work by comparing it to a treasury, and the Shastri thought somebody else was praising Vairochana.

14. A Discovery of a Long Metre in Prabodhachandrodaya.

By VENKATESH VAMAN SOVANI, M.A.

At the end of Act IV we have a long passage forming a magnificent hymn of Ādikeśava at Benares. It extends over pp. 162-164 of the Nirṇayasāgar Edition of the play furnished with two commentaries. It runs thus :—

अमरचय (चमू) चक्रचूडामणिश्रेणिनीराजितोपान्तपादद्वयाम्भोज
राजन्नखद्योतखद्योतकिमौरितस्वर्णपीठ स्फुरद्द्वैतविभ्रान्तिसंतानसंतप्तवन्दा-
रुसंसारनिद्रापहारैकदक्ष क्षमामण्डलोद्धारसंभारसंघट्टदंष्ट्रायकोटिस्फुर-
च्छैलचक्रक्रमाक्रान्तलोकत्रय,

प्रबलभुजबलोद्भू(ङ्)तगोवर्धनच्छत्रनिवा(र्वा)रिताखण्डलोद्योजिता-
काण्डचण्डाम्बुवाहातिवर्षत्रसद्गोकुलत्राणविस्मापिताशेषविश्वप्रभो ।

विबुधरिपुबधुवर्गसौमन्तसिन्दूरसन्ध्यामयूखच्छटोन्मार्ज्जितोद्दामधामाधिप
त्रस्तदैत्येन्द्रवक्षस्तटीपाटनाकुण्ठभास्वन्नखश्रेणिपाणिद्वयसस्तविस्ता(स्ता)रि-
रक्तार्णवामग्रलोकत्रय,

त्रिभुवनरिपुकैटभोद्गण्डकण्ठास्थिकूटस्फुटोन्मार्जितोद्दामदोर्दण्ड खण्डे-
न्दुचूडप्रिय प्रौढदोर्दण्डविश्रान्तमश्याचलक्षब्दुग्धाम्बुधिप्रोत्थितश्रीभुज-
(जा)वल्ली(स्त्रि)संश्लेषसंक्रान्तपीनस्तनाभोगप्रचावलीलाञ्छितोरस्थल स्थूल-
मुक्ताफलोदारहारप्रभामण्डल(प्र)स्फुरत्कण्ठ वैकुण्ठ भक्तस्य लोकस्य
संसारमोहच्छिदं देहि बोधोदयं देव तुभ्यं नमः ॥

As far as our knowledge goes nobody has considered this long passage to be metrical. But, to speak the truth, it is governed by the laws of metre as can be easily seen by scanning each portion of the said passage. Among these variants the first is अमरचयचमूचक्र० and the last is ०मण्डलप्रस्फुरत्कण्ठ ; the rest can be understood. Only we have to adopt the variants given in circular brackets which are chosen mostly from old MSS. of the play and are to be found in Brockhaus' Edition of the play also. They are not the readings adopted by the commentary Prakāṣa except the first variant which is

अमरचयचमूचक्र°, although generally speaking Prakāṣa adopts the old and even better readings. Still these readings have to be adopted, because they make the passage conform to the rules of metre, although no commentator or scholar, eastern or western, seems to have had the faintest idea of the fact.

The metre we find to be a variety of दण्डक, having two न gaṇas at the beginning of each foot of the stanza and an unlimited number of र gaṇas in each foot as is the case with the Ṣyāmalādaṇḍaka, a short poem attributed to Kālidāsa by popular belief. If, however, there is still any doubt about its being दण्डक at all, that can be removed by the expressions involving the words उद्दाम, विस्तार, अर्णव, वैकुण्ठ, which are designations for different kinds of दण्डक consisting all of first two न gaṇas and then consisting respectively of 13, 22, 9, and 18 र gaṇas in each quarter! Further, we find the name दण्ड (= दण्डक) repeated in the words उद्दण्ड and दोर्दण्ड !!

For such kinds of irregular दण्डक the learned editors of the Kāvya-mālā, Paṇḍit Durgaprasad and Mr. K. P. Parab (see काव्यमाला गुच्छक I, p. 8, foot-note) give the name of मत्तमातङ्गलीलाकर which is defined in नारायणभट्ट's टीका on वृत्तरत्नाकर, ch. III, § 114, as यत्र रेफान् कविः स्वेच्छया पाठसौभाग्यसापेक्षया ऽऽरोपयत्येष धीरैः स्मृतो दण्डको मत्तमातङ्गलीलाकरः (p. 57, Nirṇayasagar Edition) of वृत्तरत्नाकर.

But it seems that this मत्तमातङ्गलीलाकर consists purely of रगण and has no नगण at the beginning, as will be seen from the definition line which is in verse as well as from the illustration of the मत्तमातङ्गलीलाकर in शब्दकल्पद्रुम, Vol. II, p. 480, under the general section on वृन्दस्. But it is enough to say here that it is shown to be a variety of the दण्डक, an irregular variety like that of श्यामलादण्डक attributed to Kālidāsa in praise of the goddess मातङ्गी or श्यामला, which is irregular not only in the number of gaṇas in each quarter, but is irregular as regards the number of feet which are five instead of four, since every stanza of the Sanskrit poetry consists necessarily of four feet only. In fact, we may call such irregular दण्डक, to be rather pieces of 'metric prose,' if I may be allowed to use such an expression.

The additional instances of दण्डक metre we find in literature are—

- (1) प्रचलितकरिहन्ति° etc. in the fifth Act of मालतीमाधव ;
- (2) जय जननि सुधा° which forms the श्यामलादण्डक ascribed to कालिदास (pp. 8—11 काव्यमाला गुच्छ I) ;
- (3) जय जय विजयी भवा° (pp. 83-85 of विद्यापरिणयनम् (काव्यमाला) called महादण्डक by the learned editors ;
- (4) जय जय जगदीश (p. 103 जीवानन्दनम् - काव्यमाला) ;

In शब्दकल्पद्रुम we find on pp. 481-2 the several varieties of दण्डक illustrated. On p. 56 of वृत्तरत्नाकर of केदारभट्ट (Nirṇayasāgar Edition) an illustration composed by himself and another in the form of a rule is quoted by नारायणभट्ट in his commentary on वृत्तरत्नाकर, ch. III, § 114, p. 56.

It may be noticed that all these illustrations are in praise of some god, to which indeed it is highly suited, since it can produce a well-sustained long passage of descriptive poetry. It contains mostly long and heavy compounds and has therefore the quality of vigour. Occasionally it may contain simple sentences free from long compounds as in श्यामलादण्डक, notably in the fourth foot (p. 10 काव्यमाला गुच्छ I).

It would be a very desirable thing if some competent scholar should undertake a complete investigation into the Sanskrit Prosody and should write a comparative treatise on the subject. This meagre contribution would be more than amply rewarded if it should serve to promote such an inquiry.

NOTE.

After writing my paper on the discovery of a long metre in Prabodhachandrodaya I came across a Daṇḍaka stanza in Saṅkalpasūryodaya, a religious philosophical play by Vedāntadeçika. This new दण्डक forms the twentieth stanza in the tenth Act of the play. The poet himself makes his character विष्णुभक्ति expressly indicate that it is a दण्डक “दण्डकेन चैनमण्डजनायम् अनुनायेय” । Then follows the दण्डकः—गण्डमखिलवेदनीडाधिरुदं—कामहीनामहीनांतक ॥ संकल्पसूर्योदय, Act X, 20.

It is a regular kind of दण्डक as distinguished from the irregular one of श्यामलादण्डक and that occurring in प्रबोधचंद्रोदय, etc. This regular दण्डक has four quarters, each consisting of 108 syllables consisting of the initial pair of नगण s followed by रगण s.

This दण्डक metre, which very much resembles stately prose, was invented out of the desire to give expression to the sense of the sublime, which can be hardly adequately expressed by ordinary verse or by non-rhythmical prose. Therefore this rhythmical prose or poetic prose came into existence, which has its correspondence to the कटिवंध of the Mahārāṣṭra poet अमृतरायः. The only difference we find there is that in कटिवंध alliteration (अनुप्रास) does the work of the prosodial गण s. Now if we turn our attention to the hymn to Nārāyaṇa in the Nārāyaṇīyopākhyāna of Çāntiparva, chapter 338 of Mahābhārata by Nārada, we shall find that there is a piece of poetic prose with frequent Yamakas and Anuprāsas to give it rhythm. This exactly corresponds to the कटिवंध of अमृतराय and perhaps

throws some light on the origin of the दण्डक. From all the instances I have adduced and from examples of दण्डक given in शब्दकल्पद्रुम, वृत्तरत्नाकर, etc., we may conclude that it was often used in hymns to make them grand and sublime.

15. Palaeontological Notes on the Gangamopteris Beds of Khunmu (in Kashmir).

By HEM CHANDRA DAS-GUPTA.

During the summer of 1908 I had an opportunity of visiting the plant-bearing beds of Khunmu in Kashmir with the Presidency College Geological party. The beds were first described by Dr. Noetling¹ and then by Mr. Hayden,² while Mr. Middlemiss³ went to the locality after I had left. The fossils previously obtained from these beds have already been described by Mr. Seward and Dr. Smith Woodward.⁴ During our visit, which had to be limited to a few hours, besides *Gangamopteris kashmiriensis*, Sew., and *Psylmophyllum Hollandi*, Sew., one *Tæniopteris* sp. and a few fish fossils were obtained from these beds. The specimen of *Tæniopteris* is extremely ill-preserved; and the piscine fauna includes a palæoniscid fish and an ichthyodorulite associated with the dental impression of a fish belonging to the Cestraciontidae. A short description of the ichthyodorulite and the palæoniscid fish is given below.

The ichthyodorulite belongs to the first group of Dr. Smith Woodward⁵ and from its very close association with the cestraciontid tooth it can be very reasonably asserted that the tooth and the spine belong to the same individual. The dental impression recalls that of *Orodus* or of *Ctenacanthus*, both of which belong to the family of the Cestraciontidae and have been united into a single genus by Dr. Newberry.⁶ The ichthyodorulite is about 53 mm. in length and elongated triangular, the greatest width at the base being only 4 mm. It is striated longitudinally and the striæ seem to have been set with tubercles.

The palæoniscid fish shows a close resemblance with the lower Permian *Amblypterus eupterygus*, Ag.⁷ Two species of

¹ Gen. Rep., Geolog. Survey India for 1902-3, p. 22.

² Records, Geolog. Survey India, xxxvi, pt. 1.

³ Records, Geolog. Survey India, xxxvii, pt. 4.

⁴ Palaeont. Ind., New. Ser., vol. ii, Mem. No. 2; Records, Geolog. Survey, India, xxxvi, pt. 1.

⁵ Catalogue of fossil fishes, pt. ii, p. 93.


⁶ Rep., Geol. Survey, Ohio, ii, pt ii (1875), p. 54.

⁷ Pois. foss., ii, pt. 1, pp. 41, 56, tab. 3, figs. 5, 6. This species and a few others have all been united together by Dr. Smith Woodward under the name *Elonychthys macropterus* (Bronn.), (Catalogue of fossil fishes, pt. ii, p. 491). In his paper on '*Amblypterus, Palæoniscus, Gyrolepis and Pygopteraus*' (Quart. Journ. Geolog. Soc., xxxiii, p. 552), Dr. Traquair divides the species of *Amblypterus* into five distinct types, and of them *A. macropterus*, Ag., and *A. nemopterus*, Ag., are the types for the

Amblypterus have already been described from the Khunmu beds and they belong to the group of *A. latus*, and the present specimen perhaps indicates the existence of a different form. It is smaller than any of the specimens described by Dr. Smith Woodward, and the general outline appears to be more slender.

The portion preserved measures about 78 mm. The trunk is regularly fusiform and the dorsal contour seems to be perfectly straight. The maximum depth of the trunk is nearly 2.5 times as great as the width of the caudal pedicle which is about three-quarters the length of the space between the termination of the anal fin and the origin of the caudal fin. In the extremely anterior region there are some impressions which represent some of the bones of the head, and among them may be distinguished the clavicular impressions ornamented with ridges, rather coarse and arranged more or less zonally. Of the different fins the dorsal and the anal are the best preserved ones; and next to them are the caudal; and only traces of the pectoral and the pelvic ones are to be met with. The dorsal and the anal fins are short-based: the former are somewhat in advance of, and slightly less than, the latter in size. The interspace between the anal and the pelvic fins is less than that between the pelvic and the pectoral ones. The articulated segments of the fin-rays are longer than broad. The scales are a little longer than broad and are quite smooth; the upper and lower margins show peg-and-socket structure. The course of the lateral line is marked by a very prominent continuous ridge on the inner surface of each scale through which it passes, this being very prominent also on some of Dr. Smith Woodward's specimens.

genera *Rhabdolepis*, Troschel, and *Elonichthys*, Giebel, respectively. Dr. Smith Woodward has, however, subsequently united these two genera together with (?) *Propalæoniscus*, (?) *Ganacrodus* and *Cosmoptychus*, and has retained Giebel's term (Catalogue of fossil fishes, pt. ii, p. 487).



16. A Chemical Examination of the Butter-fat of the Indian Buffalo.

By E. R. WATSON, MONOHAR GUPTA, *Holder of the Agricultural Diploma, Bengal Government*; and
SATISH CHANDRA GANGULI, M.A.

In a preliminary note on this subject (*Journ. Asiatic Soc. Bengal, Vol. II, pp. 293—297*) one of us recorded analytical figures which seemed to show that in Indian buffalo butter-fat the volatile fatty acids were almost entirely butyric. It was pointed out that, if this were confirmed, it would serve as a method for distinguishing buffalo butter-fat from ordinary cow butter-fat, even if the former were mixed with some other oil or fat for the purpose of lowering the percentage of volatile fatty acids. This point has been further investigated, but this further examination has not confirmed the preliminary result. In fact, there can now be no doubt that the relative proportions of butyric and caproic acids are practically the same in the Indian buffalo butter-fat and in that of the ordinary cow.

Estimation of the ratio of butyric and caproic acids by Henriques' Process (*Journ. Chem. Soc., 1899, abs. 258*).—In this process the alkalimetric value of the volatile fatty acids is determined and also the weight of their potassium salts. Henriques expressed his results as the mean molecular weight of the volatile acids. It was by this method that the already accorded result (Watson, *loc. cit.*)—which is now seen to have been incorrect—was obtained. The following results have now been obtained:—

<i>Description of butter-fat.</i>	<i>Mean mol. weight of volatile acids.</i>
Fresh buffalo butter-fat (10-7-06)	.. 102
Ditto (20-11-06)	.. (1) 95
	(2) 97
	(3) 97
Ditto (17-1-07)	.. 96
Old buffalo butter-fat, 10 months' old, collected (6-2-06)	.. 99
Danish butter-fat	105
Mean for European cows (Henriques)	93·3—99·8

These results show that the mean molecular weight for the volatile acids of Indian buffalo butter-fat lies within the same limits as in the case of the ordinary European cow.

The method, however, is one very susceptible to error. It makes considerable difference whether the volatile fatty acids are filtered or not previous to titration with potash. They should not be filtered or some caproic or higher acid not very soluble in water may be removed. Again the titration with potash gives different results according as it is performed quickly or slowly. It must be performed slowly to allow the slightly soluble caproic acid to be attacked by the potash. Finally it makes a difference whether titration is stopped as soon as the red colour of the litmus changes, or whether it is continued until a blue is obtained. It seemed, therefore, very desirable to estimate the ratio of butyric to caproic acid by some other method. This has been done in the case of the European cow by Duclaux. His method was, therefore, applied to the case of the Indian buffalo.

Estimation of the ratio butyric to caproic acids by Duclaux's method.—By this process the volatile fatty acids in dilute aqueous solution are fractionally distilled and the various fractions titrated with alkali. From these titration figures a curve is drawn, and by comparing this curve with standard curves for butyric acid, for caproic acid and for definite mixtures of these two acids, the ratio of the two acids can be estimated.

Duclaux's results are given in the *Comptes rendues* (cii, 1022), but in that paper the experimental data are not recorded. A curve for butyric acid is given in Duclaux's *Traité de Microbiologie*, Vol. II, pp. 384--395, but no curves for caproic acid and mixtures of butyric and caproic were available. These curves have, therefore, been prepared (Diagram 1). Merck's purest acids were used in the preparation of these curves. Here as in all the other experiments the distillates were not filtered and were titrated slowly to allow the caproic acid to be acted on by the alkali. Owing to some initial difficulties it was investigated whether the shape of the curve for a given ratio of the two acids depended on the shape of the distilling flask, on the absolute concentration of the acids in the solution distilled or on the presence of sulphuric acid or potassium sulphate in the solution. It was found that the shape of the curve was practically the same under all these different conditions (Diagram 2). Duclaux's curve for butyric acid is practically identical with that we have obtained (see also Diagram 1).

Curves for the volatile fatty acids in buffalo butter-fat were now obtained by saponifying the fat, acidifying the product with sulphuric acid, distilling over the volatile acids in fractions and titrating. Curves closely corresponding with butyric acid alone were obtained (Diagram 3). This appeared to bear out the result obtained in the preliminary investigation (Watson, *loc. cit.*). However, a sample of Danish butter-fat was

[N.S.]

examined in the same way, and also gave a curve corresponding almost exactly with that for butyric acid alone (Diagram 3). This difficulty was finally cleared up. If we take a sample of goat-fat and saponify, and then acidify with sulphuric acid and distil, we find that the distillate is neutral, showing the absence of volatile fatty acids in goat-fat. If we add a definite quantity of a mixture of butyric and caproic acids (2 : 1) before distillation, then fractionally distil and titrate, we get a curve corresponding to butyric acid alone and not to the mixture actually taken (Diagram 3). It appears that the presence of such acids as palmitic, stearic and oleic in the distillation mixture lower the curve.

It was, therefore, necessary in the examination of a sample of butter-fat first to distil over all the volatile fatty acids and then fractionally redistil and titrate. In this way the following curves (Diagram 4) were obtained for Indian buffalo butter-fat and for Danish butter-fat, showing that in each case the ratio of butyric to caproic acids is practically 2 : 1.

Examination of the volatile fatty acids by Thorp's Process.—This is a comparatively recent process invented to distinguish between real butter-fat and margarine containing coconut-oil, depending on the different relative proportions of the volatile fatty acids in butter-fat and cocoanut-oil. For a description see J.C.S. 1906, abs. ii, 588. Indian buffalo butter-fat gave by this process figures much the same as Thorp obtained for European cow butter-fat.

Description of butter-fat.	Titration value of 2nd distillate in cc. $\frac{N}{10}$ KOH.	Titration value of insol. volatile acids in cc. $\frac{N}{10}$ KOH.
Fresh butter-fat 17-1-07 ..	2.4	5.65
European cow (Thorp) ..	2.9—4.0	5.2—8.4

Examination of the volatile fatty acids by Kirschner's Process.—This is another comparatively new process invented for the same purpose as Thorp's. For details see J.C.S., 1905, abs. II. 213. Again by this process the volatile fatty acids seemed to be present in Indian buffalo butter-fat in much the same proportion as in the case of the European cow.

Description of butter-fat.	New value.	Reichert-Wollny figure.
Fresh buffalo butter-fat (17-1-07;	25·0	30·5—32·3
European cow (Kirschner)	26·8	29·6.

It was felt, however, that much confidence could not be attached to the results obtained by these latter processes, and other chemists who have used these processes have arrived at similar results (Annual Report on Progress of Chemistry, Chemical Society, 1906, p. 217).

As already stated this further investigation has shown beyond doubt that the relative proportions of the volatile fatty acids are the same in the butter-fats of the Indian buffalo and the European cow. Up to the present, therefore, no method is available for distinguishing between cow-ghee and a mixture of buffalo-ghee and a suitable quantity of some other oil or fat, such as beef or mutton-fat.

Experimental data corresponding to the Curves.

CURVE No. 1 (DIAG. 1).

Caproic Acid alone.

One gram. of caproic acid was dissolved in water, the solution was made up to 550 cc. and 500 cc. were distilled over in 50 cc. fractions and titrated.

Fraction No.	Titration value (in terms of NaOH $\frac{N}{10} \times 0.947$).	Titration value in new units.	Ordinate value for the curve.
1	29·1	32·0	32·0
2	22·9	25·2	57·2
3	15·3	16·8	74·0
4	11·5	12·6	86·6
5	5·3	5·8	92·4
6	3·5	3·8	96·4
7	1·7	1·8	98·0
8	0·9	1·0	99·0
9	0·5	0·6	99·6
10	0·3	0·4	100·0

To obtain the figures in the third column the titration values are multiplied by such a factor that the total titration value of the ten fractions is now expressed by 100. The figures in the fourth column are obtained from those in the

third as follows:—the figure corresponding to fraction No. 2 = new titration value of fraction No. 2 + ditto for fraction No. 1; the figure corresponding to fraction No. 3 = sum of new titration values of fractions 1, 2, 3—and so on.

CURVE No. 2 (DIAG. 1).

Butyric and Caproic Acids (1 : 1).

0.50 grams. butyric acid and 0.50 grams. caproic acid were dissolved in 550 cc. water. 500 cc. were distilled over in 50 cc. fractions and titrated.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 0.947.$	Titration value in new units.	Ordinate value for curve.
1	25.4	25.6	25.6
2	19.3	19.4	45.0
3	15.4	15.5	60.5
4	11.9	12.0	72.5
5	8.9	9.0	81.5
6	6.7	6.8	88.4
7	4.6	4.7	93.1
8	3.3	3.3	96.4
9	2.0	2.0	98.4
10	1.5	1.6	100.0

CURVE No. 3 (DIAG. 1).

Butyric and Caproic Acids (1 : 2).

0.33 gram. butyric acid and 0.66 gram. caproic acid were dissolved in 550 cc. water. 500 cc. were distilled over in 50 cc. fractions and titrated.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 0.947.$	Titration value in new units.	Ordinate value for curve.
1	28.6	29.7	29.7
2	20.8	21.5	51.2
3	15.2	15.8	67.0
4	10.9	11.3	78.3
5	7.2	7.4	85.7
6	5.5	5.6	91.3
7	3.6	3.7	95.0
8	2.6	2.7	97.7
9	1.5	1.5	99.2
10	0.8	0.8	100.0

CURVE No. 4 (DIAGS. 1, 2 AND 3).

Butyric and Caproic Acids (2 : 1).

0.66 gm. butyric acid and 0.33 gm. caproic acid were dissolved in 550 cc. water. 500 cc. were distilled over in 50 cc. fractions and titrated.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 1.28.$	Titration value in new units.	Ordinate value for curve.
1	17.4	23.5	23.5
2	13.9	18.8	42.3
3	11.8	16.0	58.3
4	9.0	12.1	70.4
5	6.9	9.4	79.8
6	5.7	7.7	87.5
7	4.0	5.4	92.9
8	3.0	4.1	97.0
9	2.0	2.3	99.3
10	0.5	0.7	100.0

CURVE No. 5 (DIAG. 1).

Butyric Acid alone.

1.00 gm. butyric acid dissolved in water and made up to 550 cc. 500 cc. were distilled over in 50 cc. fractions and titrated.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 0.947.$	Titration value in new units.	Ordinate value for curve.
1	21.2	18.1	18.1
2	18.6	15.9	34.0
3	16.6	14.2	48.2
4	15.6	13.3	61.5
5	12.1	10.3	71.8
6	10.2	8.7	80.5
7	8.2	7.0	87.5
8	6.7	5.7	93.2
9	4.9	4.1	97.3
10	3.1	2.7	100.0

CURVE No. 6 (DIAG. 1).

Butyric Acid alone (Duclaux's Curve).

CURVE No. 7 (DIAG. 2).

Butyric and Caproic Acids (2 : 1).

0.66 gm. butyric acid and 0.33 gm. caproic acid were dissolved in water, 3.8 cc. strong sulphuric acid added and made up to 550 cc. 500 cc. were distilled over in 50 cc. fractions and titrated.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 1.28.$	Titration value in new units.	Ordinate value for curve.
1	15.9	22.8	22.8
2	12.6	18.1	40.9
3	10.0	14.4	55.3
4	9.2	13.2	68.5
5	6.7	9.6	78.1
6	5.1	7.3	85.4
7	3.9	5.6	91.0
8	2.8	4.0	95.0
9	1.8	2.6	97.6
10	1.7	2.4	100.0

CURVE No. 8 (DIAG. 2).

Butyric and Caproic Acids (2 : 1).

0.66 gm. butyric acid and 0.33 gm. caproic acid were dissolved in water, 5 gms. NaOH added, then 3.8 cc. strong sulphuric acid and made up to 550 cc. 500 cc. were distilled over in 50 cc. fractions and titrated.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 1.28.$	Titration value in new units.	Ordinate value for curve.
1	17.2	22.4	22.4
2	13.9	18.0	40.4
3	11.4	14.9	55.3
4	9.3	12.0	67.3
5	7.4	9.6	76.9
6	6.2	8.0	84.9
7	4.4	5.8	90.7
8	3.3	4.3	95.0
9	2.3	3.0	98.0
10	1.5	2.0	100.0

CURVE No. 9 (DIAG. 2).

Butyric and Caproic Acids (2 : 1).

1.33 gm. butyric acid and 0.66 gm. caproic acid were dissolved in water and titrated with KOH. 2.5 cc. strong sulphuric acid were then added and the solution made up to 220 cc. 200 cc. were distilled over in 20 cc. fractions and titrated.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 1.28.$	Titration value in new units.	Ordinate value for curve.
1	35.7	22.8	22.8
2	28.9	18.5	41.3
3	23.7	15.2	56.5
4	19.4	12.5	69.0
5	14.9	9.6	78.6
6	12.4	8.0	86.6
7	8.4	5.5	92.1
8	6.1	4.0	96.0
9	4.5	2.9	98.9
10	1.9	1.0	100.0

CURVE No. 10 (DIAG. 3).

Buffalo Butter-fat (Shibpur, 16-12-06).

20 gms. butter-fat was saponified by KOH as in Reichert-Wollny process, the alcohol was distilled off and residue dissolved in water; 3.8 cc. strong sulphuric acid were added and volume made up to 550 cc. 500 cc. were distilled off in 50 cc. fractions and titrated.

Fraction No.	Titration value KOH $\frac{N}{10} \times 0.87.$	Titration value in new units.	Ordinate value for curve.
1	21.9	14.6	14.6
2	22.6	15.0	29.6
3	22.7	15.1	44.7
4	19.35	12.8	57.5
5	16.55	11.0	68.5
6	13.5	9.0	77.5
7	11.3	7.5	85.0
8	8.95	5.6	90.6
9	7.6	5.0	95.6
10	6.55	4.4	100.0

CURVE NO. 11 (DIAG. 3).

Buffalo Butter-fat (Dacca, 1909).

20 gms. butter-fat treated exactly as in preparation of Curve No. 10.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 1.20.$	Titration value in new units.	Ordinate value for curve.
1	13.5	15.0	15.0
2	15.6	17.4	32.4
3	13.7	15.3	47.7
4	11.0	12.3	60.0
5	10.2	11.4	71.4
6	7.7	8.6	80.0
7	4.8	5.4	85.4
8	5.2	5.8	91.2
9	4.3	4.8	96.0
10	3.6	4.0	100.0

CURVE NO. 12 (DIAG. 3).

Danish Butter-fat.

20 gms. butter-fat treated exactly as in preparation of Curves Nos. 10 and 11.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 0.947.$	Titration value in new units.	Ordinate value for curve.
1	22.3	14.1	14.1
2	34.1	21.7	35.8
3	22.0	14.0	49.8
4	18.8	12.0	61.8
5	16.3	10.2	72.0
6	13.2	8.2	80.2
7	11.0	7.0	87.2
8	9.1	5.7	92.9
9	6.7	4.1	97.0
10	4.7	3.0	100.0

CURVE NO. 13 (DIAG. 3).

20 gms. goat-fat saponified by KOH as in Reichert-Wollny process, alcohol distilled off, acidified with sulphuric acid, then 0.66 gm. butyric acid and 0.33 gm. caproic acid added, and

volume made up to 550 cc. 500 cc. were distilled off in 50 cc. fractions and titrated.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 0.947.$	Titration value in new units.	Ordinate value for curve.
1	18.5	17.5	17.5
2	18.2	17.0	34.5
3	15.9	14.8	49.3
4	14.0	13.0	62.3
5	11.4	10.8	73.1
6	8.9	8.5	81.6
7	7.1	6.6	88.2
8	5.6	5.2	93.4
9	4.1	3.8	97.2
10	3.0	2.8	100.0

CURVE No. 14 (DIAG. 4).

Buffalo Butter-fat (Shibpur, 16-11-06).

The Reichert-Wollny distillate from 40 gms. of buffalo butter-fat was made up to 220 cc. and 200 cc., were distilled over in 20 cc. fractions and titrated.

Fraction No.	Titration value KOH, 5.289 gms. per litre.	Titration value in new units.	Ordinate value for curve.
1	51.85	22.1	22.1
2	42.4	18.1	40.2
3	36.25	15.4	55.6
4	28.10	11.9	67.5
5	23.35	9.9	77.4
6	18.9	8.0	85.4
7	13.35	5.7	91.1
8	9.95	4.3	95.4
9	7.0	2.9	98.3
10	4.15	1.7	100.0

CURVE No. 15 (DIAG. 4).

Buffalo Butter-fat (Dacca, 1909).

The distillates from the preparation of Curve No. 11 were collected together, acidified with sulphuric acid and made up to 550 cc. 500 cc. were distilled off in 50 cc. fractions and titrated.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 1.20.$	Titration value in new units.	Ordinate value for curve.
1	12.6	21.0	21.0
2	11.3	18.9	39.9
3	9.6	16.0	55.9
4	7.3	12.1	68.0
5	6.0	10.0	78.0
6	3.9	6.5	84.5
7	4.2	7.0	91.5
8	3.0	5.0	96.5
9	1.5	2.5	99.0
10	0.6	1.0	100.0

CURVE NO. 16 (DIAG. 4).

Danish Butter-fat.

The distillates from the preparation of Curve No. 12 were collected together, acidified with sulphuric acid and made up to 550 cc. 500 cc. were distilled off in 50 cc. fractions and titrated.

Fraction No.	Titration value NaOH $\frac{N}{10} \times 1.20.$	Titration value in new units.	Ordinate value for curve.
1	15.0	22.0	22.0
2	13.0	19.0	41.0
3	11.1	16.3	57.3
4	8.7	12.7	70.0
5	6.2	9.1	79.1
6	5.1	7.4	86.5
7	3.8	5.5	92.0
8	3.1	4.5	96.5
9	1.8	2.5	99.0
10	0.7	1.0	100.0

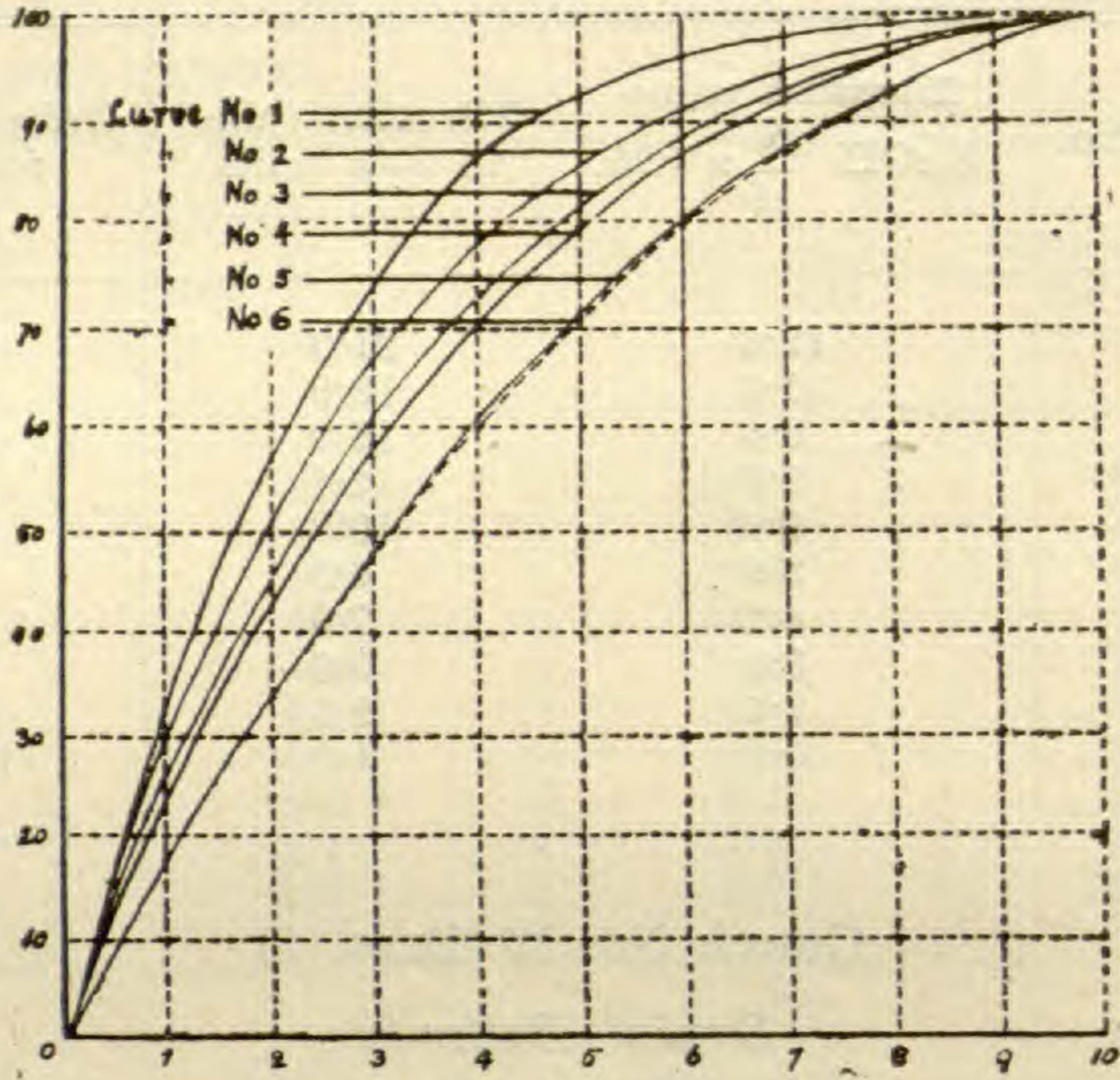


Diagram No. 1.

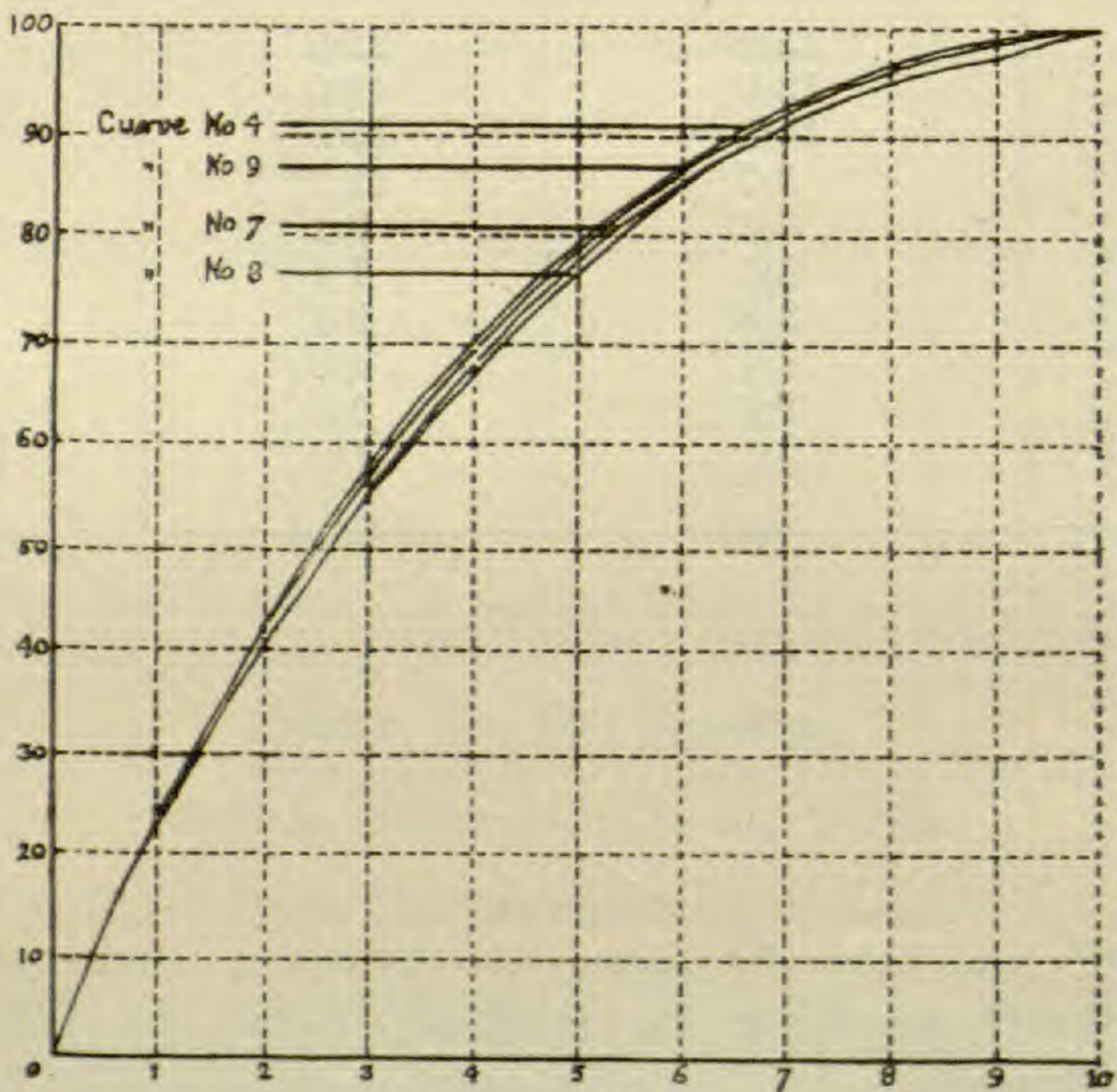


Diagram No. 2.

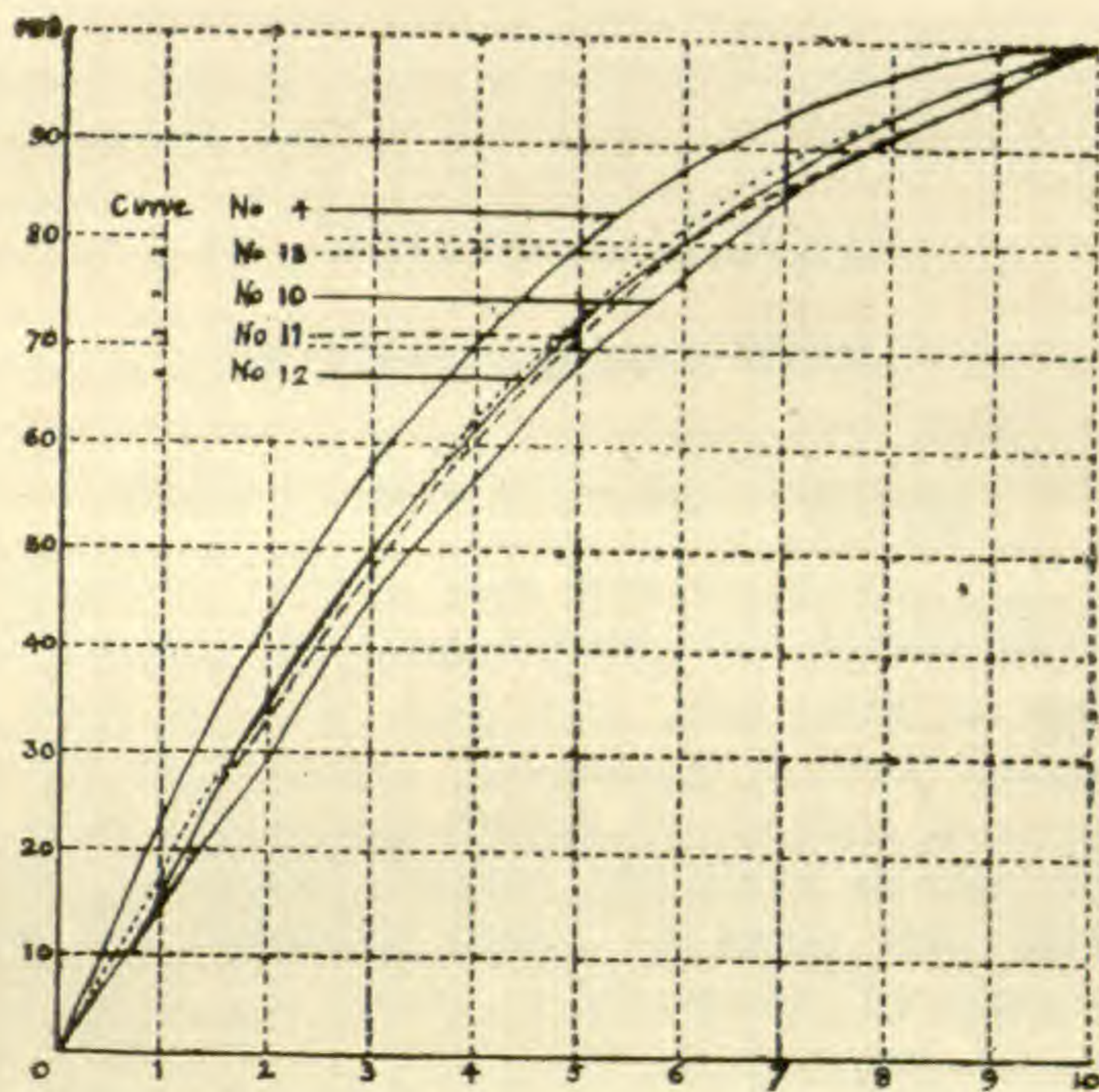


Diagram No. 3.

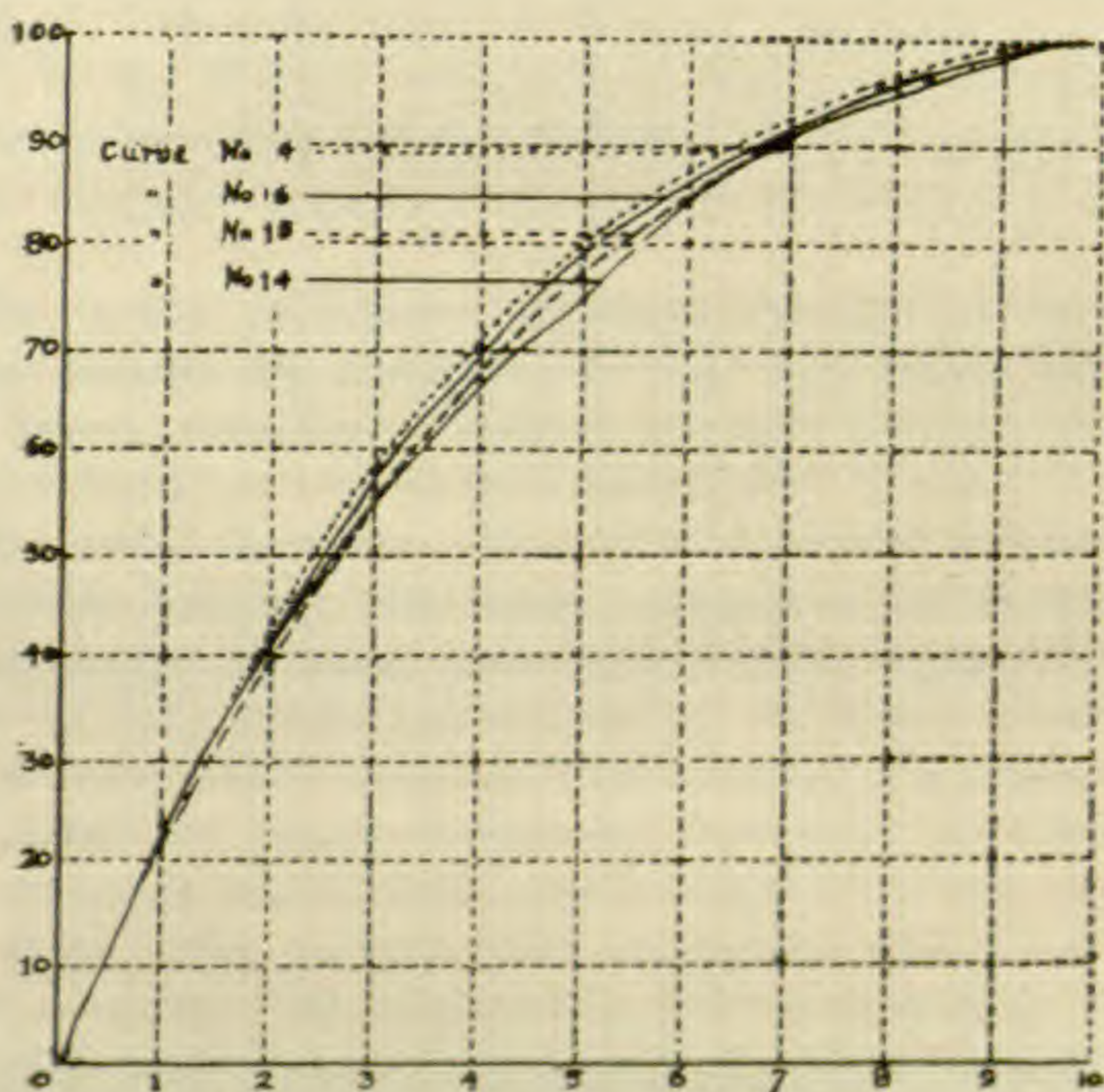


Diagram No. 4.

17. History of Kashmir.

By PANDIT ANAND KOUL.

PART I.—PRE-HISTORIC PERIOD.

The Nilamata Purána says that Kashyapa had two wives, Kadru and Vinata, the former being the mother of snakes and the latter that of birds, and they used often to quarrel with each other for supremacy. Ultimately it was decided among them that their supremacy should be decided in a wager, *i.e.*, whoever lost it should become the slave of the other. The wager took the following form: A horse was brought and Vinata was asked the colour of the animal by Kadru. Vinata said it was white, as it really was, whereupon Kadru got her sons, the snakes, to cover the horse with themselves so that it might look black. After this it was brought closer and Vinata was again asked to say what its colour was. Vinata had to say then that it was black. As this showed a failure on the part of Vinata, the wager is said to have been won by Kadru, who claimed her right over Vinata as to become her maid-servant. After this Kadru used Vinata as a conveyance, riding her in a horse fashion. The sons of Vinata were also treated in the same manner by the sons of Kadru. Kadru said if Vinata's sons brought Amrita, she and her children would be released from this bondage. Garuda, son of Vinata, brought some Amrita and gave it to Kadru, whereupon both the mother and her children were released of the bondage. To retaliate the ill-treatment, Garuda began to eat up all the snakes that came by his way.¹

Básuki, a son of Kadru, invoked the aid of Vishnu who used to be carried by Garuda, so that the latter would desist from the above practice. Vishnu advised Básuki to go to a place called Satisar, which was principally inhabited by Shiva, and thereby avoid Garuda. He was further advised in migrating thus to choose Nilanág, the most intelligent of them, as their king. Thereupon Nilanág and Básuki with many others came to Satisar to live there permanently. Nilanág chose a place which was then called Veri and now called Verinág. Another version is that the place chosen by him was the spring in the Nágám Purganah which is even now called Nilanág.

The word Nág means both a spring and a snake. All springs in Kashmir are associated with a presiding snake. It

¹ See also Mahábhárata, Ádi Parva, sections xvi to xxxvii.

is commonly believed that by removing the snake the water can be made to disappear.

Indra and his wife, Indráni, once came to Satisar for a pleasure trip, where a demon, named Somagreh, became enamoured with Indráni and ran after her. Indra, however, killed him. While the demon was excited his *virus* fell in the water which was tended by the snakes, the result being Jalodbava, which name means "produced from water." This Jalodbava began to eat up men living on the banks of Satisar.

According to Vijayeshvara Mahátma the extent of Kashmir under water when it was known by the name of Satisar (Sati meaning Párvati and Sar, lake) was 24 kos long and 12 kos wide. The Nilamata Purána says that the places inhabited were Kon-sarbal (in Deosar) and Harmukh (in Lár), the rest being under water. Both these mountains are very high.

Kashyapa Muni came from the Deccan on a pilgrimage. Hearing of this, his son, Nilanág (snake), went to receive him at Kon Khel, a place near Hardwár. Nilanág asked Kashyapa to visit Vishnupád (in Deosar), a holy place. The first place in Kashmir they reached was Maddar Desh, now known as Moh in Deosar. The father asked the son the reason of there being no habitations. The son said that Jalodbava, son of Somagreh, was the cause of depopulation and that he did not pay any attention to his request to desist from doing so. The son asked for his father's help in this. After bathing in Vishnupád, so called up to the present time, Kashyapa with his son, Nilanág, went to Brahma-loka, where were present Vishnu and Shiva, and complained to them about Jalodbava having depopulated the place. The three, *i.e.*, Brahma, Vishnu and Shiva, with Kashyapa and his son, thereupon agreed to come to the spot and do something to prevent the cause of complaint. They all came to a place called Náo Bandan (a place still so called in Deosar). Jalodbava, fearing some mischief, hid himself under water. His exit was looked for by Brahma and others with a view to kill him, but without any result. Ananta, an incarnation of Vishnu, followed and produced a chasm in the mountains near Báramulla to let out the water. After the water was let out, Jalodbava was seen. He, however, caused darkness to come over the country, whereupon Vishnu took the Sun and Moon in his hands and thereby caused the darkness to disappear. Jalodbava was again seen and his head was cut off by Vishnu. After this Brahma, Vishnu, Shiva and Ananta went back to their respective abodes.

There is, however, another story in the shape of a traditional legend as to the extinction of Jalodbava. After letting out of water as mentioned before, Jalodbava hid himself in a place which was a hollow having water in it. On this Kashyapa invoked the aid of Durga, who taking the form of a *Miná* went to the Sumira mountain and brought a portion of it

in her beak and threw it over the hollow and thereby killed Jalodbava. The present Hari Parbat near the Dal lake is said to be the place referred to above, and the hill now standing thereon is said to be the supposed portion of the Sumira brought by Durga. This hill is also called Sumira even now. The name Hari is said to have come from Shári (*Miná*), *Sha* being often replaced by *Ha* in Kashmiri language.

Kashyapa, seeing that the place had been cleared of water, prayed to Vishnu that the place be inhabited by *devas*, men and *Nágs*. Vishnu gave the permission, whereupon Kashyapa got Brahmans from the Deccan (South) to migrate here. From this time Kashmir was called Kashyappur or Kashyapmar, and latterly Kashmir.

The name "Kashmir" also implies "land desiccated from water," from Sanskrit *Ka* water, *Shimira* to desiccate, so called because the valley of Kashmir was in the beginning, as stated above, a mountain-lake subsequently drained.

In Sanskrit Puránas, Kashmir is also called *Gerek* (hill), nestled as it is in mountains. In Chapter VIII of *Avanádikosha*, the meaning of the word Kashmir is given "land, ruling in which is difficult."

Kashmir has further been shortened into Kashir by the Kashmiris in their own tongue. The Tibetans call it Kha-chal (snowy mountain) and the Dards (the inhabitants of Gures, etc.) Kashrat.

The Vijayeshvara Mahátma says that at this time the country was said to have consisted of 66,063 villages commencing from Buta Shahar to Chamba. In the Kashmiri language a unit is called hundred; a hundred, thousand and so forth; and according to this the figure 66,063 would shrink down to 6,063, which looks correct. The people, however, were being oppressed by other demons. They used to live in it in summer and pursued agriculture in the fertile valley; but in winter, for fear of cold and snow and of the demons, they used to return to other parts. In one of these annual exodus, an old Brahman, named Chandardeva, who could not return to India on account of old age, stayed in Kashmir, hiding himself in a cave. He had his provisions and other necessities for winter with him. When snow began to fall, the demons came in hoards and two of them dragged Chandardeva out of the cave and took him to Nilanág spring where they tossed him about like a ball, in course of which the old man fell down into the spring and sank down to the bottom which he found to be a vast place and where he saw a king sitting on a throne in a grand palace. The Brahman approached him and complained to him of the trouble given by the demons. The king was Nilanág himself. He took pity on the old man and, calling him nearer, handed over to him a book called Nilamata Purána and advised him to give offerings to demons at certain holy places on certain days as detailed in that book, so that the people

coming to live in Kashmir would no more be troubled by the demons. At the approach of spring the Brahman was pushed out of the water upon the dry bank of the Nilanág spring. Men, who returned as usual from India, were astonished to find the old man safe and sound whom they had thought dead long ago. They heard with much amazement the wonderful experiences of the Brahman and about the book he had come in possession of. They showed his book to their Chief, named Daryádeva. Daryádeva ordered the people to act according to the instructions contained in the book, which they did, and thereby enjoyed complete immunity from the oppressions of demons and from the inclemency of cold weather, and began to live in Kashmir all the year round.

It is said that before Kaliyuga there was in Kashmir an established form of government and many great and good kings reigned in it. One of these kings was Parasráma, the extirpator of the Kshatrava race. Some say that Ráma, the hero of Rámáyana, conquered Kashmir and visited it several times. There are four springs on a hill at Báramulla which are called Ráma-kund, Sitá-kund, Lakshman-kund and Hunumán-kund. In olden times there used to be a temple of Ráma there. In the extreme west of the Naiharai Purganah at village Milyál there are four more springs of the same names, and at some distance above is a place where there is a large sculptured stone which is called the throne of Ráma. Lalitáditya, who ruled from 697 to 734 A.D., unearthed a temple at Shira-wardan on the door of which was an inscription to the effect that it had been built by Ráma and his brother Lakshman. Running from the Kájinág range to the low-lying land near the Jhelum is a long low spur where there are two cut stones of octagonal section which stand over four feet out of the ground. The inhabitants of this place have a legend that these two stones are the arrows shot by Ráma and his brother Lakshman.

In course of time the population increased and several villages were peopled. The headman of each village became nominal ruler of his village. As the time advanced more villages sprang up, and then there were more than one village under a headman. These headmen, in order to be safe and defend themselves from one another's attacks, built fortresses on elevated spots, and these were named Kots. And each Kot was under a Kot Rája. Some names of these Kots are known up to the present time, such as Indarkot, Zainakot, Shirakot, Sudrakot, Dadarkot, Butakot, etc. The chiefs of these Kots were called Sanz. For a very long period there was this form of Kotaráj government in Kashmir. Afterwards some Kota Rájas subdued others and there was constant warfare between them. The conqueror used to sack the villages of the subdued Rájas. At last some Rájas, who had lost their Kots, went to the Rája of Jammu and entreated him to come over to take Kashmir

and deliver the country from anarchy that was prevailing, and promised to pay him the sixth part of the revenue for maintenance of peace and good government. The Rájá of Jammu sent his own son, named Dayákarana, with a large force who defeated the insurgents and became supreme ruler of Kashmir.

PART II.—HINDU PERIOD.

CHAPTER I.

Rájatarangini, the Sanskrit history of Kashmir, written by Kalhana, is one of the oldest historical records in the world. Much interest was and is being taken by many scientists in its study. This history begins with a king named Gonanda I, and continuing the accounts of his son and successor, Dámudara, and of the latter's wife, Yashovati, who reigned as Queen Regent after her husband's death until her son, Gonanda II, attained to majority, and of Gonanda II, it says that the accounts of 35 kings of Kashmir are lost and unknown, and leaving this gap continues again. Hasan, a historian of Kashmir in Persian, however, says that Zainulábdin, who reigned in Kashmir from 1423 to 1474 A.D., got a translation of the Rájatarangini done in Persian by Mullah Ahmad who was poet-laureate of his court. For this purpose Zainulábdin made a search for Puránas and Taranginis of ancient writers. The names of more than 15 different Rájataranginis were then known, but the ruthless hands of Zulchu (1323 A.D.) and Sikandar, the iconoclast (1393-1416 A.D.), had destroyed all old books of Hindus. With great efforts, however, only the Rájataranginis of Kalhana, Khimendra, Wachhulákar, and Padmamihar were obtained. Out of these, Khimendra's Rájatarangini was found replete with inaccuracies, but from other Rájataranginis the translation was completed. A few years later, some birch bark leaves of an old Rájatarangini, written by Pandit Ratnákar, called Ratnákar Purána, were, through the exertions of one Praja Pandit, obtained. From these leaves the account of 35 kings who had ruled in Kashmir in the beginning of the Kaliyuga age, whom Kalhana, owing to want of any record, had omitted from his book, was found out. This discovery gave much pleasure to all, and Zainulábdin had the facts, that were recorded in the Ratnákar Purána, inserted in his translation of the Rájatarangini.

The Ratnákar Purána is not now to be found anywhere, nor even the translation of the Rájatarangini by Mullah Ahmad, but Hasan says he has embodied the accounts of the 35 lost kings from Mullah Ahmad's translation. It is said that Hasan had obtained a copy of this translation from a Kashmiri emigrant at Ráwalpindi, but one day, when he was going in a boat in

the city of Srinagar, it so happened that his boat capsized and both he and the book were thrown into the water, he being rescued and saved but without the book. Hasan is now dead, and it is not known from which man at Ráwalpindi he had obtained the copy.

Be that as it may, the accounts given by him of these lost kings do not appear to be unfounded. There are legends current among the people which quite coincide with these accounts—legends of which there is no mention whatever in Kalhana's Rájatarangini.

For instance, the Kashmiris say that kings belonging to the Pándava dynasty have ruled over Kashmir; and 23 of these "lost" kings do belong to the Pándava dynasty. The ruins on the Mártand plateau are popularly called Pándav-Lar or the building of the Pándavas, and the king, who according to Hasan built it, is Rámadeva, one of the descendants of Pándavas.

Dr. Stein says that it was built by Lalitáditya on the authority of verse 192 of Book IV of the Rájatarangini, but I consulted several learned Pandits in Kashmir and they are unanimous in saying that he has erroneously interpreted the text.

The text is :—

सोऽखण्डिताश्म प्राकारं प्रासादान्तर्बधत च ।

मार्तण्डस्याद्भूतं दाता द्राक्षा स्फूितं च पतनम् ॥

of which Dr. Stein gives the following translation :—

“That liberal (king) built the wonderful (shrine) of Mártanda with its massive walls of stone within a lofty enclosure (*prásádántar*) and its town swelling with grapes.”

Mr. J. H. Marshall, the Archæological Superintendent of the Frontier Circle (Government of India), also acknowledges in a note on the Archæological work in Kashmir that Dr. Stein's rendering is doubtful. He says—

“Now the manifest difficulty with Dr. Stein's translation is his supplying of the word for “Shrine.” If the passage had occurred in a list of Lalitáditya's foundations or in any similar context where the word *mandiram* or some equivalent could have been drawn naturally from the preceding stanzas, its omission here would be nothing unusual and would not have constituted a difficulty. But unfortunately the stanza immediately preceding IV, 192 has nothing to do with temples, but recounts merely certain irrigation works. It is true that IV, 190 does speak of the erection of a temple, but it is at best bold to carry over the word from this stanza and supply it in 192. Again the usual meaning of the word *prákára* is “enclosure” or “rampart,” *i.e.*, a wall in the sense of a city wall or something of that sort, not a house or temple wall, whereas *prásáda*

usually means a lofty building, palace or temple. The passage, therefore, is not an easy one, and its interpretation is distinctly open to doubt.”

The best Sanskrit scholars in Kashmir fully corroborate the renderings given to Mr. Marshall by Pandit Mukand Rám (who worked on the *Rájatarangini* for Dr. Stein), which are as follows :—

(1) And that liberal (king) built Mártanda near to the temple (*prasádántar*) of the wonderful city with its wall of massive stones and a park (*pattan*) full of vines.

(2) And that liberal (king) built the wonderful Mártanda colonnade, of massive stones with the temple inside, and *also* the town rich in grapes.

On these renderings Mr. Marshall makes the following observations :—

(1st rendering).—“ This restores the word *prákára* to its more usual meaning and gives us a word for temple in *prásáda*. The objections to it are (a) the rendering of *antar* by “near,” which is not authorized meaning for the word, and (b) the omission of the second connective, the *cha* in ‘*drákshásphitam cha pattanam*’, and these objections would appear fatal, on grammatical grounds.”

But a reference to a Sanskrit *Kusha*, for instance the *Shabda-Kalpadróm*, will show that the meaning of *antar* is “near.” “Also” has been omitted in the translation by Pandit Mukand Rám, which I have now given in italics, and this disposes of the objection for *cha*.

(2nd rendering).—“ This takes both the connectives into account, and assigns the usual meanings to both *prákára* and *prásáda*, but the compound *prásádántar* as a *bahuvrihi*, meaning “having a temple in the interior,” is distinctly difficult and no parallels to it can be traced. Otherwise, and if this form of compound with *antar* can be established, there would be little or no objection to this rendering.”

But the Sanskrit grammarians in Kashmir say that such *bahuvrihis* do often occur and that there are many parallels to it.

It is clear from the above that there existed already a temple on the Mártanda plateau before the time of Lalitáditya.

The Kashmiris say that there was a city at the place where the Vular lake now rests, and recite a story which strikingly agrees with the accounts given in the above-mentioned history.

Nalsena in Kashmiri language is synonymous with a person of abominable character, and nobody knew why it was so. Nalsena is one of these 35 kings. He was a cruel and oppressive king and was, therefore, universally detested by his subjects.

“Lolare Bambro” is a favourite love-song among the Kashmiris but nobody knew its origin. Bambro was one of these

35 kings. He fell in love with a woman named Lolare and was so enamoured with her that he abdicated the throne in order to spend his life with his beloved.

Himál Nági-Arjuna is a popular love-story and its origin is traced in the accounts of one of these "lost" kings.

It is not only these 35 kings that Hasan gives full accounts of, but he mentions, on the authority of the Ratnákar Purána, seven more kings later on, whose account is not to be found in Kalhana's Rájatarangini. According to him, Ranáditya's rule did not extend over 300 years as stated by Kalhana, which is, on the face of it, preposterous (see Dr. Stein's introduction to Kalhana's Chronicle, page 86), but over only 60 years and 3 months, and that six kings preceded, and one king followed him, the account of whose rule he gives in detail, but whom Kalhana has omitted. Among these 7 kings comes Vaináditya, and it is noteworthy that even up to now his name is a household word among the Kashmiris and he is remembered as to have been a most virtuous and noble king of Kashmir. There occurs in Kalhana's Rájatarangini (Book V, 97-100) a temple by the name of Vainyá-svámin about whose founder no mention is made therein anywhere, but it shows that there had been a king of the name of Vainyáditya who had built it.

Hasan puts the date of accession of Gonanda I. as 20 years before Kaliyuga (3120 B.C.), while Kalhana puts it 653 after Kaliyuga (2448 B.C.) on the authority of Varáhmihira's Brahat Samhita. It is an admitted fact that Gonanda I. was a contemporary of Krishna, the hero of Mahábhárata. Srimat Bhágwat Ikádashskand says that Krishna in his last days told Udhava:

यर्ह्येवायं मया त्यक्तो लोकोऽयं नष्टमङ्गलः ।

भविष्यति चिरात्साधो कलिनाऽपि निरीक्षितः ॥ १ ॥

"When I shall depart from this world affliction will overtake it, and after sometime the Kaliyuga will also witness this, *i.e.*, after sometime the Kaliyuga will have begun." Kalhana says that the Munis (the Great Bear) were at the Maghah Nakshatra when Rája Yudhishthira, a contemporary of Krishna, was ruling the earth. In Srimat Bhágwat, Part XII, Chapter II, is written that when the Munis were at the Maghah Nakshatra, Kaliyuga commenced, and that when Krishna ascended heaven the same day did Kaliyuga begin. The Kaliyuga era is 3101 B.C.

Mr. Har Bilas Sarada, B.A., F.R.S.L., Member of the Royal Asiatic Society of Great Britain and Ireland, mentions in his "Hindu Superiority," page 143-44:—

"Bradghargh Muni holds that the Saptarishis were in the Maghah Nakshatra at the junction of the Dvápar and the Kaliyug. He says:—

कलि द्वापर संधौ तु स्थितास्ते पितृ दैवतम् । (मघाः)

मुनयोः धर्मनिरताः प्रजानां पालने रताः ॥

“ According to him, therefore, Yudhishtira flourished at the beginning of the Kaliyug.

“ An inscription in a Jain temple on a hill near Yahola, Kaladaggi district, Deccan, says that the temple, built by King Pulkeshi II, of the Chalukya family, was erected 3735 years after the Mahábhárata, and when 556 years of the Saka era had passed, thus proving that the Great War took place $3735-556 = 3179$ years before the Saka era ; in other words $3179 + 1828$ (Saka era) = 5007 years ago. The inscription runs as follows :—

त्रिंशत्सु त्रिसहस्रेषु भारतादाह वादितः ।

सप्ताब्दघातयुक्तेषु श(ग)तेष्वब्देषु पञ्चसु ॥ (३७३५)

यं चाशत्सु कलौ काले षट्सु पञ्चशतासु च । (५५६)

समासु समतीतासु शकानामपि भूभुजाम् ॥

“ Following evidently the view held by Bradhgargh Muni, the author of the Ayeen-i-Akbari says that Vikramáditya ascended the throne in the 3044th year of the Yudhishtira era. This also makes the Yudhishtira era begin $3044 + 1963$ (Vikrama era) 5,007 years ago.”

It is also popularly said, and even in Kalhana's time it was commonly believed, that the Bhárata war took place at the end of Dvápara Yuga (Rájatarangini, Book I, verses 48 and 49).

In the introduction to Metákshara by Bápudeva Shástri, the famous astronomer, is written that during the first century of Kaliyuga, Parikshit was born. Parikshit was grandson of Arjuna, the brother of Yudhishtira. It is also recorded in the same introduction that at the beginning of the reign of Janmejaya, only 125 years of Kaliyuga had elapsed. Janmejaya was the great-grandson of Arjuna. Tára Nátha Tarkaváchaspati, late Principal of Free Sanskrit College, Calcutta, and the well-known author of Brahatabhidhán and other books in Sanskrit, has also, after making researches, written in his introduction to Sarala, the commentary of Sidhántakaumadi, that Parikshit was born when only 80 years of Kaliyuga had elapsed.

An important confirmation of this hypothesis is added from the following: About 1,300 years ago, when the great work on astronomy, namely, Khandakhádi, was written by Brahmagupta in which its author gives authority of Árya Bat, the famous astronomer of ancient times. This book is

considered a greater authority on astronomy than Varáhamihira's Samhita, and in it occurs the following Sloka :—

युधिष्ठिरोविक्रमशालि बाहूनौ
 नराधिनाथो विजयाभिनन्दनः ।
 ततोऽनुनागार्जुन मेदिनीपति र्वलिः
 क्रमात् षट्शककारकाःकलौ ॥ १ ॥
 युधिष्ठिराद्देयुगाम्बराग्रयः
 कदम्बविश्वाम्भखखाऽष्टभूमयः ।
 यच्चायतं लक्षचतुष्टयं क्रमा-
 द्धरादृगष्टाविति शाकवत्सराः ॥ १ ॥

The total period of the Kaliyuga age is 4,32,000 years, and according to Khandakhádi it is divided into the following six eras :—

Yudhishthira	..	..	3,044
Vikramáditya	..	..	135
Sháliváhana	..	..	18,000
Vijayávinandana	..	..	10,000
Nági Arjuna	..	..	4,00,000
Balidánava	..	..	821

It is evident that down to Vikramáditya's time 3,044 years of Kaliyuga, after Yudhishthira's accession, had passed. Vikramáditya's era is now 1967, and if we add these together they amount to 5011, which exactly is now the Kaliyuga era. It therefore shows that Yudhishthira was ruling in the beginning of Kaliyuga.

Nirnai-Sindhu, another book of authority on astronomy, contains the following stanza :—

वर्षसहस्रत्रितयं शतमेकं सप्ततिर्नवाग्रा च ।
 शककालयातमिश्रं कलेर्गतं धर्मपुत्रात्तु ॥ १ ॥

It states that to find out how much period passed since Kaliyuga began and Yudhishthira lived, 3179 should be added to the Saka era. The Saka at present being 1832, it comes to 5011 years.

Professor Dunker also says (*History of Antiquity*, vol. iv, page 219) :—“The era of Yudhishthira is said to have preceded that of Vikramátditya by the space of 3044 years, and to have commenced about 3100 B.C.”

On the other hand, Kalhana's chronology has been proved at length to be inaccurate by Dr. M. A. Stein in the introduction

to his English translation of the Rájatarangini (Chapter IV, Sections II and III).

So Hasan's date does not seem to be incorrect and all that he has written seems to be based on good authority.

CHAPTER II.

1. GONANDA I—3120—3103 B.C.

Gonanda became king of Kashmir in 3120 B.C. He was one of the relations of Jarásandha, king of Magadha. He was a good and just king. When Jarásandha was at war with Krishna, on the bank of the river Jamuna, Gonanda's army fought bravely for some time, but was at last routed and he himself was killed by Balabhadra, brother of Krishna. Gonanda I. reigned for 17 years.

2. DĀMODARA I—3103—3090 B.C.

After Gonanda's death his son, Dāmodara, sat on the throne in 3103 B.C. He was always brooding over his father's death. In those days *Svayamvara* or "maiden's own choice" of the daughter of the king of Kandahár (Gándhára) was proclaimed at the banks of the Indus. Dāmodara heard the Yádavas had also been invited on the occasion, and he, therefore, left to meet them and fight with them in order to avenge his father's death. He fought but was killed by Krishna. His wife, Yashovati, who was pregnant, was, by order of Krishna, made queen regent of Kashmir. Dāmodara's reign extended over a period of 13 years.

3. YASHOVATI—3090—3075 B.C.

Ráni Yashovati was declared queen of Kashmir in 3090 B.C. As she was pregnant she gave birth to a son whom she named Gonanda II. She reigned for 15 years.

4. GONANDA II—3075—3035 B.C.

Gonanda II., when yet a boy, was, by council of the ministers, crowned as king of Kashmir in 3075 B.C. About this time the great war of Mahábhárata occurred, and as Gonanda II. was a young prince he was not invited to assist by either the Kauravas or Pándavas. He was caused to be slain by Harnadeva, his Prime Minister, having reigned for 40 years.

CHAPTER III.—PĀNDAVA DYNASTY.

5. HARNADEVA—3035—3005 B.C.

Harnadeva, the second son of Parikshit, grandson of Arjuna, the third brother of Pándavas, vainly contended with his brother,

Janmejaya, for some time for the kingdom of Hastinápura or modern Delhi. When he could not withstand his brother, Harnadeva fled with a company of his men towards the hills of Chamba. Here he found an ascetic practising austere penances in a cave. Harnadeva, who had just been defeated by his brother and was, therefore, much disappointed, went to the hermit and remained as an attendant on him. One day the holy man was pleased with him and delighted him by foretelling that he was to become king of Kashmir. Harnadeva, trusting on the holy man's words, proceeded with his men to Kashmir, travelling over the mountains in the east of the valley, and got service in the army of Gonanda II. who was then the king of Kashmir. By dint of his abilities, he gradually rose to the office of Prime Minister. He pleased the commandants of the army and the other ministers by his liberality, but, blinded with selfishness, became unfaithful to his master: On finding an opportunity, he caused king Gonanda II. to be slain by his men, and then, supported by the courtiers, usurped the throne. By his generous disposition, he won the hearts of all and was renowned for justice. He had firm control over all parts of the country, and the peace that prevailed gave the country time to grow prosperous. The treasury was full, and Harnadeva maintained a large and strong army. He reigned for 30 years and then died.

6. RÁMADEVA—3005–2936 B.C.

His son, Rámadeva, sat on the throne in 3005 B.C. He did much to maintain order and good government. Out of generosity he fixed only the tenth part of the produce of land as his share. He founded a large city, called Bábul, on the plateau of Mattan which comprised eleven lakhs of houses, and built there the temple of Mártandeshvara (the ruins of which are now to be seen) with large ornamented and beautifully carved stones, erecting it to a height of over 50 yards. The stones were hewn superfine and the joints made imperceptible, the whole building looking as if one solid block. Some stones of this temple are three to eight yards in length and one yard in thickness and one to five yards in width, and it is surprising how they have been brought here and piled up. He enclosed the compound of the temple with a wall, having on all its four sides beautiful niches and a row of one hundred and ninety couples of octagonal pillars. A stream was excavated from the mountain of Khávurpura and brought for this city. He conquered the Punjáb, Kábul and Multán, and then advanced to Márwár; took the latter country from the possession of Kachwahs and filled his harem with the daughters of Kachwah Chiefs. After this he marched to Lucknow, conquered it and ceded it to his nephew. From that place he brought a large amount of spoil and then went to Kanauj where, after staying

for two years, marched his army to Málwah and took it. Many cities were founded by him. He married the daughter of Shiva Rái, ruler of Gándhára (Kandahár), and passed two years in that country. He then proceeded towards the Shwálik mountains and made the Chief of those places give him tribute. He fought a battle with the ruler of Kumaon and subdued him, but eventually having married his daughter gave the country back to him. Then he marched to Nagarkot, a mountain fortress between the sources of the Rávi (Hydraotes) and the Byás (Hyphasis), and, after capturing it, went to Hankot, and thence proceeded to make pilgrimage of the goddess Durga. The ruler of that place made allegiance and gave him presents. He married the daughter of the Chief of Nagarkot to his son. Thence he marched to Jammu, the ruler of which place did not at first submit and rose to oppose him, but was at last defeated by him. He made many people slaves and with much wealth returned to Kashmir. After staying in Kashmir for two years he again went to India and travelled from Multán to Bengál along the shores of the Indian Ocean and made *en route* about 500 chieftains give him tribute. He then returned *viâ* Kanauj and came to Kashmir with a large amount of wealth. Here a large public assembly was held by him in which gifts were given to brave men and the third part of his booty was distributed among the people. During his lifetime he gave away three lakhs of cows in charity and used to take much care of religious men. Two ascetics, one named Háru and the other Máru, who had come from Silhet, used to accompany him wherever he was leading his army for invasion. They had power to make themselves invisible when sitting in company of people and then visible at their will, and would not eat or sleep for days together.

Rámadeva reigned for 69 years, and then, giving over the kingdom to his son, clothed himself in a stag fur and sat with his spiritual leaders (Háru and Máru) in the temple of Páartheshvara on the Bhawan spring for ten years and then disappeared with them, leaving no trace of himself behind.

7. VYÁSDEVA—2936–2880 B.C.

Vyásdeva assumed the reins of government in 2936 B.C. He was, like his father, a just and generous ruler. He invited learned men from India; promoted the learning; established the schools; and was always intent on promoting the welfare of the soldier and the ryot. The reservoir, which his father had brought through the city of Bábul, was stopping in winter owing to water being frozen, therefore the king, for the benefit of the people, constructed within the city a large and deep tank of pucca masonry with stone steps on all its sides.

He went to India in the attire of a fakir to make pilgrimages

of holy places, and spent lakhs. At that time, king Jaswant of Márwár had proclaimed *svayamvara* (maiden's own choice) of his daughter named Kálabhawáni. Vyásdeva went alone at this ceremony. The bride saw him from afar and chose him as her husband. He married her and returned to Kashmir with much wealth. He brought one thousand gold and silver images of Shiva and 99,000 *Sáligrams* (emblems of Vishnu) and placed them in the temple of Mártándeshvara and other places of worship. His reign extended over 56 years.

8. DRUNA—2880–2822 B.C.

After his father's death, Druna ascended the throne. He used to dress himself like a fakir and sit at the door of his father's temple, where he was from morning to evening attending to public affairs. He was so good and merciful that he would not fine a guilty person more than a couple of pice. In order to overawe the oppressors, however, he had erected a plough press near himself, but throughout his lifetime he pressed to death only one man; and thenceforward none dared molest anybody. He was a strict vegetarian but was not devoting his time to worshipping, saying that administering justice was more virtuous than worshipping. Theft and crime were unknown in his time, and the people were in the enjoyment of tranquillity and peace. His wife, Márgidevi, built the temple of Márgeshvara at the village of Kuther. He died after reigning for 58 years.

9. SIMHADEVA—2822–2768 B.C.

Simhadeva succeeded his father in 2822 B.C. He was a good and generous ruler. He spent his whole life in worshipping; never touched flesh meat; founded many villages and built many temples. The village Simhpur was founded by him. The population increased so much that people went to live in hills and high lands. His cousin, named Vishága, fell in love with the daughter of a farmer and forcibly took hold of the girl. The just king, on hearing this, summoned this wicked relative in his presence and put him to death. Vishága's mother, not bearing the sorrow of her son's death, burned herself alive on his funeral pile. By this horrible event the gentle heart of the good king was greatly affected, so much so that he died of grief in only four days after this occurrence. He ruled for 54 years.

10. GOPÁLDEVA—2768–2755 B.C.

Gopáldeva succeeded his father in 2768 B.C. He suffered from a painful disease, which weakened both his mind and body, and could not, therefore, take the duties and responsibilities of a ruler upon himself. He entrusted manage-

ment of public affairs to his minister, named Shashopál. At this time the Chief of Khuttan declared war with the Chief of Káshgar who was brother-in-law of Gopáldeva. The Chief of Káshgar was killed in the battle and the possession of his country was taken by the conqueror. Thereupon Shashopál went with a large army to avenge the death of his master's relation and was met by the enemy's army near a mountain called Tong. Shashopál's troops were at the foot of the mountain and were destroyed by stones rolled down by the enemy from above. On hearing this news, Gopáldeva, who was already infirm-bodied, became broken-hearted and shortly died of liver disease. His period of reign was 13 years and three months.

11. VIJAYANANDA—2755-2730 B.C.

Vijayananda, younger brother of Gopáldeva, now became king. He, after putting the government in order, went personally at the head of 50,000 cavalry and 100,000 infantry towards Káshgar and fought a decisive battle with the Chief of Khuttan, defeated him and took possession of Káshgar and Khuttan. Peace was afterwards concluded, the Chief of Khuttan giving him his daughter named Sumran Ráni in marriage, and then Vijayananda restored Khuttan to him and returned to Kashmir. He maintained peace on frontiers and managed the affairs of the country with justice. He built a grand temple of Vijayeshvara at Bijbihára, in which he had placed a cow suspending by magic power or talism. Ten lakhs of gold mohars were spent on the construction of this temple. He reigned for 25 years.

12. SUKHADEVA—2730-2686 B.C.

Sukhaddeva, son of Gopáldeva, succeeded in 2730 B.C. Being a pleasure-loving king he was always busy in sports and merriments, having entrusted management of public affairs to Ráma Nanda, son of Vijayananda. As a consequence, slackness occurred in the administration, and, by it, weakness of power. The territories belonging to the kingdom in the Punjáb were seized by Chitrath, king of Delhi, and the Province of Turkistán was also lost. The treasury, and with it the army decreased. Ráma Nanda also got disloyal and rebellious and caught Sukhaddeva while hunting in the mountains of Amarnáth and drowned him in the Liddar river; and then declared himself king of Kashmir. Sukhaddeva's rule extended over 44 years.

13. RÁMA NANDA—2686-2629 B.C.

Ráma Nanda sat on the throne in 2686 B.C. He kept the frontiers under control; subjugated the ruler of Jammu; and invaded Nagarkot. The peasant had to give one-fifth of

the produce as government share. He put to death several rebellious men and established his power all over the kingdom. The people were happy under his firm rule, which lasted for 57 years.

14. SANDIMÁN—2629—2564 B.C.

His son, Sandimán, succeeded in 2629 B.C. He was renowned for justice. He founded a big city at the place which now forms the bed of the Vular Lake, calling it after his own name Sandimatnagar, which is even to the present time popularly known by the name of Salábatnagar. The river Jhelum was flowing through this city, and he built many grand houses on its banks. He constructed 21 temples of stone, out of which the temple of Mahádeva was exquisitely fine and imposing, and placed in it 300 gold and silver images of Mahádeva, out of which two images were set with jewels. The temple of Zeshteshvara on the Sulimán hill, which is yet extant, was originally built by him. Sulimán hill, or Takht-i-Sulimán as it is popularly called, must be, from the fact that Sandimán built the temple on it, a corruption of Sandimán hill.

He marched with a large army to India; invaded countries as far as Kanauj; and after visiting many shrines and notable places returned, going to Kábul and Kandahár. The king of Kandahár solicited to be accepted under his suzerainty and gave his daughter, Pártidevi, in marriage to him. He then returned from there, but, while crossing the river Attock, his boat capsized and Pártidevi was drowned. The king became much afflicted at her loss, but the ruler of Kandahár sent his second daughter to him and thus beguiled his sorrow. Sandimán ruled for 65 years.

15 & 16. MARHANDEVA & KÁMANDEVA—2564—2509 B.C.

After his father's death in 2564 B.C., Marhandeva came to the throne and made his younger brother, Kámandeva, his minister. After some time the two brothers grew hostile to each other and eventually were at war. The nobles of the kingdom then interposed and divided the country between them, giving the South-Eastern half to Marhandeva and North-Eastern to Kámandeva. Marhandeva founded the village Marháma and built a big temple there. He was a just and generous ruler and his subjects were happy under him. Kámandeva made Sandimatnagar his capital. He was a tyrant and the people were hard pressed. He exiled many people who took refuge in the tracts governed in peace by Marhandeva. During that time a large comet appeared in the sky which was shining very bright at night. In the same year rain fell heavily and a huge snake appeared at Chakdar which, however, died in a couple of days, but his carcass did not go till one year. From

that time the tract owned by Marhandeva was called Marhan Ráj, and that by Kámandeva, Káman Ráj, and in course of time these names were shortened into Maráj and Kámráj, by which names they are at present known. Marhandeva ruled for 55 years.

17. CHANDARDEVA—2509–2457 B.C.

Chandardeva, who succeeded his father in 2509 B.C., planned a conspiracy for entrapping Kámandeva and was successful in it. He slew Kámandeva and put his son, Vargadeva, in prison. Having eased himself from fear of enemies, he fell in debauchery and indolence and in consequence anarchy ensued. He filled his harem with 360 wives and was with one each day of the (lunar) year by turn. His reign extended over 52 years.

18. ANANDA—2457–2429 B.C.

Ananda, brother of Chandardeva, succeeded to the throne in 2457 B.C. Being a cruel king he would hang men even for trivial offences. He died after ruling for 28 years.

19. DRUPADADEVA—2429–2378 B.C.

Ananda's son, Drupadadeva, ascended the throne. Unlike his father, he was generous and cherisher of his subjects. He built a temple of Jwálámukhi at the village of Shár. So strong was he that one day he saw a stone on the way which was over 100 maunds in weight, and he pushed it to one side by his left hand. His brother, Harnámdeva, rebelled against him and there was war between them, in which Drupadadeva received an arrow in his eye and was killed. His rule extended over 51 years.

20. HARNÁMDEVA—2378–2329 B.C.

Harnámdeva, triumphant from the battle, seized the throne, but soon plunged into the whirl of luxury and indolence. He was so fond of liquors that he planted vineyards in many places and started distilleries, inducing every person, whether great or low, to drink. In his own palace compound he had a pond filled, out of which the liquor was profusely distributed and drunk. While under the influence of intoxication he was sitting to administer justice and was, as might be expected, awarding most severe punishments. He was taking away by force women of the people. At last his Commander-in-Chief, named Durga, revolted and declared war against him. After much blood-shed, Durga won the field and burned the palace and a part of the city of Bábul. Thereupon the people of the city united together and fell upon Durga's army which they defeated and also killed Durga. Thus saved by his people, Harnámdeva gave manifestation to his gratitude by remitting two

years' revenue of the whole country. After some time Durga's son, named Rangu, in order to avenge his father's death, went with some of his companions and caught the king while hunting in a jungle and killed him. Harnámdeva's period of reign was 39 years.

21. SULKANDEVA—2329–2311 B.C.

After his father's death Sulkandeva sat on the throne. He was a pleasure-loving king but was administering justice impartially. Saturday he had allotted for public affairs and the rest of the week he used to spend in nothing but luxury. His rule extended over 28 years.

22. SINÁDITYA—2311–2294 B.C.

Sináditya succeeded his father in 2311 B.C. He was a foolish and a snappish king. One day he was looking his face in a mirror and his wife was unfortunately resting her head on his shoulder and her face reflected in the mirror. On this the king upbraided her, saying that she might be having intimacy with the person in the mirror, and cut off her nose there and then. It is said he ordered his minister to get for him a virgin of paradise. The minister, fearing that he would lose his life if he did not satisfy his master's wish, brought him a pretty girl, nicely dressed and wearing ornaments, and told him that she was the daughter of the lord of paradise, but ten million *dinárs* were asked for her. The foolish king at once gave the money to the minister and took the girl. The minister was the *de facto* ruler, the king being ruler only in name. Sináditya was killed by his brother after 17 years of his accession to the throne.

23. MANGALÁDITYA—2294–2255 B.C.

Sináditya was assassinated in his bed-chamber by his brother, Mangaláditya, and then the latter was, by the help of the nobles of the kingdom, installed as king of Kashmir. Mangaláditya also proved himself a bad ruler. He encouraged plantation of vineyards and had stills started in every house in the country. He was addicted to merry-makings and also encouraged gambling in the country. In his time a mist appeared in the atmosphere, by inhaling which many people died. His reign lasted 39 years.

24. KHIMENDRA—2255–2189 B.C.

Khimendra succeeded his father in 2255 B.C. He, after making his control stronger over the frontiers, also became luxurious and fond of hunting. It is said he had learnt an incantation and by its power used to enter the houses of the

people undetected and used to violate their women. One day he entered the house of his minister, Druna, and outraged his wife. There he forgetfully dropped his ring, which was afterward found by the minister. The latter recognized it to be the king's and was consequently much enraged, and at night caused the king to be slain by his own servants. The king ruled for 66 years.

25. BHIMSENA—2189–2128 B.C.

Khimendra's son, Bhimsena, was then proclaimed king of Kashmir. He was a wild, reckless prince and a drunkard. He enhanced the taxes in the country and introduced many oppressive measures. He built the temple of Koteshvara on the bank of the Jhelum and founded the village Simpur. As the Chief of Khuttan had previously invaded Káshgar, Bhimsena sent his troops to reconquer that country, but when the troops were crossing the Kurákoram mountains, they were overtaken by a snow-storm in which they all perished and not even one soul survived. During that time a magician, named Turjan, came in Kashmir from India, who used by his magic power to make people sick and then was coming before the same persons as physician and after taking money from them was curing them. One day he made the Ráni of the king sick by his magic power and took from the king one thousand *ashrafis* and then cured her. He had a pupil who disclosed his mystery. The king got to know of this, and he at last hanged that magician. It is said that the magician appeared like a swine on the gallows. The king ruled for 61 years and 7 months and then died.

26. INDRASENA—2128–2082 B.C.

Bhimsena's son, Indrasena, now sat on the throne. He also encouraged gambling and drinking. In his time the people were so far demoralized that the name of God was forgotten and the most heinous acts were perpetrated by them. The king was always busy with revelries, and the public affairs were managed by his minister, Surendra. But the king after some time got dissatisfied with his minister and dismissed him. The minister became desperate and turbulent, raised an army of his own and defeated the king in a battle, but in the meantime the minister accidentally tumbled down his horse and was caught by the soldiers of the king. The king, who was very much incensed against him, had his skin taken off his body and thus tortured him to death.

The Chief of Nagarkot also displayed a refractory spirit, and Indrasena sent a force to reduce him to obedience. The Chief of Nagarkot resisted but was killed in the battle.

Indrasena ruled for 46 years.

27. SUNDARSENA—2082–2041 B.C.

Indrasena's son, Sundarsena, sat on the throne in 2082 B.C. He indulged in debauchery, and the people also were demoralized to the highest degree. From the time of Harnámdeva, each successive ruler was a debauchee. The people had become addicted to lying, drinking, and gambling. They had no moral sense and were behaving like brutes. Then appeared a hermit, a potter by profession, whose name was Nanda Gupta. He preached to the people inhabiting the city of Sandimatnagar, exhorting them against sinful deeds, but nobody would listen to him; on the contrary, he was ridiculed and molested. The potter then took refuge on a hill which is now called Králasan-gar or potter's hill. One night a destructive earthquake occurred by which the earth in the middle of the city was rift and water gushed out in a flood and soon submerged the whole city. By the same earthquake a knoll of the hill at Báramulla near Khádanyar tumbled down, which choked the outlet of the river Jhelum and, consequently, the water rose high at once and drowned the whole city together with its king and the inhabitants. This submerged city forms the bed of the Vular Lake.

Sundersena reigned for 41 years; and with him ended the Pándava dynasty, 23 descendants of which ruled for nearly one thousand years in Kashmir. After this there was no king in Kashmir for an interval of two months. Those who had survived the deluge by taking shelter on high places on the foot of the adjacent hills, came together and elected Lava, who was a relative of the ruler of Málwah and was a Jagir holder at Loláb, as king of Kashmir.

The foregoing 23 kings of Pándava dynasty are among the 35 so-called lost kings of Kashmir. Kalhana says that after Gonanda II. to the time when Lava ascended the throne these 35 kings have ruled, but according to Hasan, on the authority of Ratnákar, it is not so. After Sundarsena, the 23rd of these kings, Lava has come to the throne, and then after the successive reigns of 7 kings, the last of whom was Sachinara, the remaining twelve kings out of these 35 ruled over the land.

CHAPTER IV.

28. LAVA—2041–1981 B.C.

Lava was crowned king of Kashmir by the burgesses of the country in 2041 B.C. He was a powerful ruler and held the frontiers quiet and free from foreign aggression. He founded a large city, named Lolau, in the Loláb valley, which contained eighty-four lakhs of houses according to Kalhana, but eighty thousand according to Ratnákar. He bestowed on the Bráhmans the village Levara now called Levar, on the Liddar river. He reigned for 60 years.

29. KUSHA—1981–1794 B.C.

Lava's son, Kusha, succeeded in 1981 B.C. He granted the village Karuhara now known by the name of Kolar to the Brahmans, and ruled for 7 years.

30. KHAGENDRA—1974–1944 B.C.

Kusha's son, Khagendra, succeeded in 1944 B.C. He founded Khági and Khonamusha, now called Kákapur and Khunmuh respectively, and died after reigning for 30 years.

31. SURENDRA—1944–1901 B.C.

Surendra succeeded his father, Khagendra, in 1944 B.C. He founded a town in the Dravad country calling it Soraka, and a village named Narendrabhavana. In his own kingdom he founded the village Saurasa which is now called Shurat in Deosar.

He ruled for 43 years and died issueless.

32. GUDHARA—1901–1864 B.C.

Gudhara, who belonged to a different dynasty, now took the throne. Being a noble-minded and pious king he bestowed on the Brahmans the villages Godhara and Hastishala, now known by the names of Godar and Hastihel, in Deosar.

His reign lasted 37 years.

33. SUVARNA—1864–1829 B.C.

Suvarna succeeded his father in 1864 B.C. He brought to Krala now called Ardavani or Advin the canal called Suvarnamani (Sunamani-kul) for its irrigation. This canal flows even to this time along the east of Zainapur plateau. Suvarna was a good and benevolent king and reigned for 35 years.

34. JANAKA—1829–1797 B.C.

Janaka succeeded his father in 1829 B.C. and was, like his father, a good king. He founded two villages, called Jalora (Zalur) in Zainagir and Vihu, and ruled for 32 years.

35. SACHINARA—1797–1757 B.C.

Sachinara, son of Janaka, succeeded in 1797 B.C. He was a strong king and of forgiving disposition. He founded the village Shamangasa (Shángas in Kuthár) and the village Shánara (Shár in Vihu). His rule extended over 40 years.

After Sachinara come successively the remaining twelve

of the 35 so-called lost kings, the first of whom is Galgendra and the last, Bhagwant.

CHAPTER V.

36. GALGENDRA—1757-1712 B.C.

Galgendra, nephew of Sachinara, succeeded. He was reputed for justice. He framed a code of laws and brought it into force. In Maráj he founded on a plateau a large city named Naunagar, which is said to have contained 13,00,000 houses, and brought from the river Rambiára a stream through the city. He built many temples in this city and reigned for 45 years.

37. BALADEVA—1712-1669 B.C.

Baladeva who succeeded his father in 1712 B.C. was a good and generous king. He founded the village Balapur Suparsuman. It is said that Bhigham, who was then king of Ujain or modern Delhi, sent a large army to invade Kashmir, which was totally routed by Baladeva. Baladeva had a daughter named Himál, and a man, named Nági Arjuna, fell in love with her. At last they were married, but soon after they became separated and suffered long the pangs of separation.

Himál and Nági Arjuna is still a popular love story in Kashmir.

Baladeva reigned for 43 years.

38. NALSENA—1669-1644 B.C.

Nalsena succeeded his father in 1669 B.C. He was a very tyrannical and cruel king. It is said that during the period of his rule this butcherly king put one lakh of people to death. This king was execrated and loathed throughout the country. Even to the present time, this name is remembered with abhorrence, and the word *Nalsen* has become synonymous with a man of abominable character. At last this terrible rule was cut short by the palace catching fire and Nalsena with all his family including three sons being burnt in the conflagration. His dreadful rule extended over 25 years.

39. GOKARNA—1644-1608 B.C.

Nalsena left no heir to the throne, they having all perished in the fire, and then the nobles of the kingdom elected Gukarna, who was from the family of the Jammu Rájas, and installed him as the king of Kashmir. This king was popular, being just and good-natured. He went to visit pilgrimages and shrines in India, and the king of Kanauj sent an army to oppose him, but eventually made peace with him. He visited many holy

places and gave lakhs of rupees in alms, and after three years returned to Kashmir. He built a grand temple of Shárkádevi at the foot of the Pradyumna-pitha, and the village Brand (Bren in Phák) was given as grant for the maintenance of this temple.

Gokarna ruled for 36 years.

40. PRAHLÁD—1608-1597 B.C.

His son, Prahlád, ascended the throne in 1608 B.C. He built the temple of Priteshvara on the Shirakut hill in Khuihama, formerly called Bu Sangri and now Bába Shukruddin hill. He became a disciple of a saint, named Druna, whose teachings produced such an effect on his mind that he retired from the world and became a Sanyási, giving the kingdom to his minister Bambru. He ruled for 11 years.

41. BAMBRU—1597-1589 B.C.

Bambru sat on the throne in 1597 B.C. He was a sagacious and benevolent ruler and everybody was pleased with his rule. But he shortly fell in love with his maternal cousin's wife, named Lolare, and used to cry out "Lo, Lo, Lo" day and night. Meanwhile Lolare also fell in love with him, but she was put under restraint by her people. Bambru died, and at the same time Lolare also breathed her last. Lolare Bambru is even to the present time a popular love song. Bambru ruled for 8 years.

42. PRATÁPASHILA—1589-1553 B.C.

Pratápashila, who was from the descendents of Galgendra, was after Bambru had abdicated the throne and become mad, elected by the nobles of the kingdom and crowned king of Kashmir. He ruled with justice. He founded the city at the foot of the hill in Vular, calling it after his own name Pratápa-Nagar, and built the temple of Pratábeshvara at Bhawan. It is said that a woman fell in love with him who eloped with him and never re-appeared. He reigned for 36 years.

43. SANGRÁM CHANDRA—1553-1552 B.C.

Pratápashila's son, Sangrám Chandra, succeeded him in 1553 B.C. He founded a village in Pattan, calling it after his own name Sangrámpura. His reign was good, but lasted only one year and 4 months, after which he died.

44. LÁRIK CHANDRA—1552-1521 B.C.

Lárik Chandra, brother of Pratápashila, now took the throne. He established order and good government. He built a large

city at the foot of the Vatargang hill, calling it after his own name Lárík-nagar (Lár), and brought a stream through it from the adjacent hill. The city was so dense and the houses were so contiguous that it is said that a kid got over the roof of a house at its eastern extremity, which went along from roof to roof and only descended at its western extremity. The stream Larkul which runs through the village Lár was excavated by him. He reigned for 31 years.

45. BIRAM CHANDRA—1521-1476 B.C.

His son, Biram Chandra, succeeded after his death in 1521 B.C. He was a good and pious king, being occupied day and night in worshipping. It is said that he used to bathe every morning at one hundred pilgrimages and worship at one hundred shrines. Whatever money came as revenue during the day he used to distribute among poor people at evening and nothing was kept by for next day. One evening, after he had distributed the day's income, a Brahman came and asked for alms. "Excuse this time," the king said, "come to-morrow and I will give you as much as you want." "It may be that Your Majesty dies during this night," the Brahman replied, "then who will supply my want?" On hearing this, the great charitable king gave himself up to the Brahman, telling the latter to sell him in the Bazar and get the money he could procure for him. The Brahman took him to the bazar where a merchant, recognizing the king, bought him for one thousand *ashrafis*. The king passed the night in the merchant's house, and the following morning, making himself known to him, offered one thousand *ashrafis* he had paid to the Brahman for him. "I have bought a king," he said humorously, "and shall I give him up without making any profit over the bargain?" The king offered ten thousand *ashrafis*, but the merchant refused it, saying that he would not part with him even for ten lakhs of *ashrafis*. "What ransom then do you want?" asked the king. "I want that Your Majesty will henceforth take the evening meal in my house all your life through," said this liberal-minded merchant, who wanted thus to make a name for himself, "then I have no claim whatever upon Your Majesty." The king consented to this, and thenceforth dined every evening in the merchant's house.

Under Biram Chandra's rule the country was most prosperous. He reigned for 45 years.

46. BABIGHANA—1476-1459 B.C.

After Biram Chandra's death in 1476 B.C. his son, Babighana, was acclaimed as king. He was not endowed with much intellect, but his wife Chakra Ráni was a very wise woman and

she maintained order in the kingdom, and directed public affairs with cleverness and sagacity. It is said that she used to make round in the city at night in disguise, in order to find out that nothing marred the peace in the land. One dark night, while on her usual night tour, she overheard an ascetic in a hut talking to his wife. The wife told him, "Chakra Ráni is a brave and wise woman and it is surprising that she goes about alone at night in disguise like a man. Had this wife been the husband and her husband the wife, she could work miracles." The ascetic replied, "May it be so." At the same time Chakra Ráni found in herself muscular power and she came to the ascetic, beseeching him that what he had just spoken should not happen. But the ascetic said that it could not be changed. She then returned to the palace and found her effeminate husband become more weak. Chakra Ráni told him all what the ascetic had said, and then the king was seized with intense grief and kept himself in seclusion for one month, after which he committed suicide by taking poison. Chakra Ráni then clad herself like a mendicant and spent her life with the ascetic by whose word all that misfortune had come about. Babighana's rule lasted 17 years.

47. BHAGWANT—1459-1445 B.C.

Bhagwant, brother of Babighana, was at the instance of Chakra Ráni, raised to the throne. His administration was good. He built three temples and died after reigning for 14 years.

With Bhagwant ends the history of the remaining twelve out of the 35 so-called lost kings of Kashmir.

18. A Passage in the Turkī Text of the Bābarnāmah.

By H. BEVERIDGE.

In the two published texts of Bābar's Memoirs in the original Turkī there is a long passage at the end of the year 908 A.H., 1502-03 A.D., which completes the story of Bābar's flight from Akhsī and his final deliverance. The passage does not occur in the Elphinstone MS. of the Turkī, nor in any of the Persian translations. All the Persian MSS. end with Bābar's being in a garden, and in imminent danger of being captured. The last words are part of a melancholy Persian verse quoted by Bābar. The two Turkī texts take up the narrative at this place and describe Bābar's deliverance, and his rejoining his maternal uncles at Andījān. A consideration of the passage seems to me to prove that the passage is an interpolation, and that in all probability it was added by some one many years after Bābar's death. Possibly it is one of the four passages which his great-grandson Jahangir added to the text (see *Tūzuk*, 2nd year, p. 52 of S. Aḥmad's edition). My reasons for disbelieving the authenticity of the passage are as follows:—

Firstly.—It is a very suspicious circumstance that the passage does not occur in the Elphinstone MS. of the Turkī, nor in any of the numerous MSS. of the Persian translation of the Memoirs. If the Alwar MS. is to be believed, the Persian translation existed in the time of Humāyūn, and at all events it existed in the time of Akbar. It is commonly said that the translation was made for Akbar by the *Khān-Khānān* 'Abdu-r-Raḥīm. He must have had access to good Turkī MSS.—We know that there was one in Bābar's own handwriting in the Imperial Library as late as the time of Shah Jahān, see *Pādshahnāmah*, I, 42 and II, 703—and it is impossible to suppose that he would pass over so important and even thrilling a passage. It occurs, so far as is yet known, in two Turkī MSS., namely, Kehr's MS. on which Ilminsky founded his edition, and the Haidarabad MS. in Sir Sālār Jang's library. The age of neither of these MSS. is known, but they do not seem to be more than one hundred and fifty or two hundred years old, and so are later than the Elphinstone. The Kehr MS., at all events, cannot be older than Jehangir's time, for it contains fragments translated from Abul-l-Fazl's *Akbarnāma*. If the passage had occurred in any early Turkī MS. it would surely have been referred to in Ferishta's long account of Bābar's reign. He makes copious use of the Memoirs, and

speaks¹ of them as being written in Turkī. He also (see the Newal Kishore's lithograph of Ferishta, p. 196) gives a translation of Bābar's comparison of his taking of Samarkand with Sultan Husain's taking of Herat, which is certainly not in verbal agreement with 'Abdu-r-Rahīm's translation, and seems to be an independent version. Ferishta was born at Astrabad on the shores of the Caspian, presumably therefore Turkī was almost, if not quite, his mother-tongue.

Secondly.—The story told in the passage in question implies the occurrence of the miraculous, and it is a generally accepted axiom that miracles do not occur. Not only does a certain Khwājah Y'aqūb appear to Bābar in a dream and announce to him, on the authority of his grandfather, his speedy deliverance, and his future greatness, but Khwājah 'Ubaid Ullah Ahrār himself appears in a dream to one of his servants at Andijān, and also apparently to his uncles, and announces that Bābar is at Karmān² or Karnān. The servants Bābā Pargarī and Quṭlūq Muḥammad Barlās are persons not mentioned elsewhere in Bābar's Memoirs, for it seems very doubtful if Quṭlūq the Barlās is the same person as the Khwājah Quṭlūq Kokaltāsh mentioned as being at Samarkand in 906. Khwājah Y'aqūb also, the alleged son of Khwājah Yaḥiā, and grandson of Khwājah 'Ubaid Ullah, is, as far as I know, an otherwise unknown person. Khwājah Yaḥiā and his two sons Zechariah and Bāqī were killed by the Uzbegs some two years before, and though Yaḥiā had a third son who survived him, his name was not Y'aqūb.³ It also seems to me very improbable that if the story of Bābar's dream were true, Khwānd Amīr should not have mentioned it. He probably never saw Bābar's Memoirs, but he heard of, and has reported, the dream which Bābar had before taking Samarkand. If the dream in the garden at Karnān really occurred, he would surely have heard of it from Shaikh Zain or others, and if so, he would probably have reported it, as it was much more important and more intelligible than the Samarkand one.

Thirdly.—The story told in the passage seems to me to

¹ Mohl, *J. des Savants*, 1840, 221, thinks he must have used the translation, but he gives no reasons for this view.

² Karnān is not marked on the maps but must be near Ghiva and to the north of Akhsī.

³ According to the *Khazīna Aṣfiyā* I, 594, Yaḥiā and his two sons Zechariah and Bāqī were killed at the village of Kasrāb in the Tāshkend district on 11 Muḥarram 906, 7 August 1500. The third son was Khwājah Muḥammad Amīn. See also the *Rashahāt-i-'ain adhayāt* of Fakhr-d-dīn 'Alī the son of Husain Wā'iz, Rieu's *Cat. I.* 353a and Ethé's *Cat. I. O. MSS.*, p. 261, which was written in 909, 1503-04. The account of the martyrdom of K. Yaḥiā and his two sons is given at pp. 277 etc. of the *I. O. MS.*, and it is stated that the life of the third son, Khwāja Muḥammad Amīn, was spared in order that one son of K. Yaḥiā might survive.

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contradict the account given by Bābar himself in the same chapter, and only a few pages previous. According to the passage, Quṭlūq Muḥ. Barlās was one of the men who fled from Akhsī at the same time as Bābar did, but got separated from him in the confusion and made his way to Andijān. He arrived there just as the Khāns, Bābar's uncles, were entering the place, and had his dream. He told it to the Khāns, who informed him that they had had a similar intimation. He then went off with a party, found Bābar, and rescued him just as he was about to be seized and murdered, and brought him to Andijān. Bābar found his uncles there, stayed with them four months, and then made up his mind to leave Farghana. With this statement the chapter ends, and the next begins with the first month of 910 and the march towards Kabul. But according to Bābar's own story, as related earlier in the chapter, the Khāns were not at Andijān at the time when he fled from Akhsī. They never had possession of Andijān fortress, but they came to the outskirts of the place (Erskine, p. 111, and Ferishta 197), and Bābar saw them there and was sent by them to Akhsī. He got possession of the fort for a short time, but when Tambal came with 2,000 or 3,000 men he had to leave the place and fly for his life. But previous to doing so he had heard that the Khāns had raised the siege and retreated to Kand Bādām, Erskine 114. They went by Margīnān and Kand Bādām, and were followed to the former place by Tambal. When Tambal saw that they were in full retreat he came to Akhsī with the result that Bābar had to fly. The reason why the Khāns retreated was because Tambal had applied to Shaibanī for help, and the latter had replied that he would come shortly, Erskine 114. It was this retreat of the Khāns which disturbed Bābar so much and made it impossible for him to hold Akhsī. If the above view of the contradiction between Bābar's undoubted narrative and the Turkī passage be correct, it must follow, I think, that the latter is not genuine.

Fourthly.—It seems to me very extraordinary that if the passage is genuine, Bābar should not have gone on to describe¹

¹ The Khāns crossed the river at Khojand, *i.e.*, I presume, they crossed from the south to the north bank. Apparently, their idea in retreating was to oppose the entry of Shaibānī into Farghāna, and perhaps, also, they thought of joining the Tāshkend army which was under Sultan Muḥammad the son of Sultan Maḥmūd, see T. Rashīdī, 158. Haidar's father was left at Uratipa. The Khāns afterwards marched back to Akhsī with Bābar. They thought, says Haidar, that Shaibānī could not pass between two armies, *viz.*, the Tāshkend army under Maḥmūd's son, and the Uratipa army under Haidar's father. But Shaibānī did pass between them, taking Uratipa on his road. Haidar's father thought he had come to besiege him, but instead of that Shaibānī went straight on in the night to Akhsī and crushed the Khāns. News was sent from Uratipa of his approach, but he went so fast that the messengers and his army reached the Khāns at the same time.

the battle which took place in 908 between himself and his uncles on the one side, and Shaibānī on the other. Bābar and his uncles were defeated, and the latter were made prisoners, while Bābar had to fly, first towards Tāshkend, and afterwards to the hills in the south of Farghana and to Hīsar. He eventually also went to Termiz on the Oxus and there got advice from the governor of that place (Amīr Muḥammad Bāqī),¹ which led him to march into Afghanistan.

It was on this occasion that he passed through Khusrau Shāh's country. See the Habību-s-Siyar, II, 318. According to the Shaibānīnāmāh, as quoted² by Vambéry in his history of Bokhara, 258, the battle was fought five miles off from Akhsī, and lasted for two days. But this latter statement as well as Vambéry's date of 911 must be incorrect, for the Tārīkh Rashīdī, while also stating that the battle was fought at Akhsī, says the conflict was a short one. Bābar marched to Kabul in 910, and was there on 911 and his younger uncle died after the battle in 909. The battle must have taken place either in the latter part of 908 or the beginning of 909. The uncle died in the winter season of 909, Tārīkh Rashīdī 123, and consequently at the end of 1503 or beginning of 1504. At p. 160, however, it is said that the uncle died at the end of 909, *i.e.*, in April or May 1504.

If the Turkī passage is genuine, Bābar has passed over the battle in which his two uncles were made prisoners, and the events of more than a twelvemonth, for there is no question here of a gap in the MS. or of a page being lost. According to the Turkī, Bābar winds up the chapter by saying that he rejoined his uncles at Andījān, stayed with them for four months, and then resolved to leave Farghāna. Nor can it be said that the apparent contradiction between Bābar's own words and the Turkī passage is the result of abridgment, and that Bābar merely means that he joined his uncles at Andījān some time before the battle. For according to the T. Rashīdī, p. 159, the uncles in marching into Farghāna (for the second time apparently) did not get as far as Andījān before the battle. They went by Akhsī and were defeated and captured before they could get to Andījān. The statement that Bābar stayed four months with his uncles at Andījān and then made³ up his mind to leave Farghāna has evidently been made by the interpolator to round off the chapter and to fit it into the begin-

¹ Bābar incidentally mentions the defeat of the Khāns in the early part of his Memoirs. See P. de Courtille, pp. 6 and 24, and Erskine, 4 and 14.

² The Bāqī Cheghānīānī of Bābar's Memoirs. He was Khusrau Shāh's younger brother.

³ Vambéry wrote his history of Bokhara before editing the Shaibānīnāmā, and apparently, before he had studied that poem. I can find nothing in his translation of it to show that the battle lasted two days.

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ning of the next one. But it is contrary to fact, and seems to indicate that the interpolator was ignorant or careless of the fact of the decisive battle between the *Khāns* and *Shaibānī*.

Fifthly.—In the Persian translation *Bābar's* account of his flight from *Akhsī* and his being in the garden at *Karmān* (or *Karnān*) ends in a very startling way with an unfinished verse. The last word is *ākhir*, "at last". It is judiciously pointed out by *Erskine*, p. 123, that the narrative breaks off in a similar abrupt fashion in the account of the year 914 (see *Erskine*, 235), and he inclines to think that in both instances the breaking¹ off was intentional. They are dramatic endings such as *Shahrzāda* made every morning to her stories. *Erskine* also says, "All the three copies which I have had an opportunity of comparing break off precisely at the same part, in both instances. This holds in the original *Turkī* (the *Elphinstone MS.*) as well as in the translation, and it is hardly conceivable that the translator would have deserted his hero in the most memorable passages of his life."

Now, it seems to me that if *Bābar* had written anything in the chapter in 908 after the verse, he would not have left the latter incomplete. And this seems to have struck the *Turkī* adapter, for in the *Turkī* the verse though in Persian is not the same as in the Persian MSS., and is a complete distich. The break off in the verse in the Persian MSS. is much more dramatic than the conventional second line in the *Turkī* text, and is like the *Quos ego* of *Virgil*, and *Bābar's* own ending in the record for 914. It is noteworthy that the first line in the *Turkī* text is also different from that in the Persian MSS., and that it is not the same in the two *Turkī* texts. It appears from a manuscript now in the *Rylands' Library* that another interpolator attempted to complete the chapter, for it says that *Bābar's* friends came up and rescued him and arranged for the care of his ladies. See *A.S.B.J.* for 1905.

For these reasons I am of opinion that the *Turkī* passage is not genuine, and that it may be one of *Jahangir's* additions. Perhaps some *Turkī* scholar will examine the passage, and say if the style is that of *Bābar*, or resembles the fragments in *Ilminsky* and *Pavet de Courtlille*, which must have been written not earlier than the end of *Akbar's* reign.

The "five miles" mentioned in his history are five *īghāch*, that is, five leagues and more. The battle took place at *Arkhiā* (?) between *Akhsī* and *Andijān*. *Bābar* was there and had the command of a thousand men. *Shaibānī*, when in pursuit of the *Khāns*, crossed the river at *Akhsī*, and apparently took the *Khāns* by surprise (p. 267 of the *Shaibānīnāma*). The battle soon ended in a victory for *Shaibānī*.

¹ It is also contrary to *Bābar's* statement in the opening chapter of his *Memoirs*. There he says that after *Shaibānī* had taken *Tāshkend* and *Shāhrukhia*, he went to the *Sukh* and *Hushīār* hill country (in the south of *Farghana*) and was there nearly a year, and left from there for his expedition to *Kabul* (*Erskine*, p. 4).

With reference to Erskine's remark at the top of p. 124,¹ and in order to prevent misconception, it is necessary for me to state that there is no doubt that Bābar eventually rejoined his uncles after his flight from Akhsī. My point is that he did not do so at Andījan, at least not within a few days after his flight from Akhsī. What happened was, apparently, that the Khans returned to Farghāna² after their retreat, and in company with Bābar were defeated by Shaibānī near Akhsī. That the Khans were not at Andījān at the time of Bābar's flight has already been shown. To that evidence may be added the indication furnished by the direction of his flight. He wanted to join the Khāns and called upon his pursuers to help him in doing so, but he did not go towards Andījān and he spoke to the men about wishing to cross the river and to proceed to Khojand,³ Erskine, p. 120. Unfortunately Bābar does not tell us the day or month when he fled from Akhsī. But at p. 121 of Erskine, we are told that it was winter and excessively cold. The flight therefore must have been in nearly the middle of 908, viz., December 1502 or January 1503. It was probably in the following spring that the battle took place between Shaibānī and the Khāns, though it may have occurred in 909.

¹ The existence of gaps containing the accounts of several years is noticed in the *Pādshāhnāma* I. 42 as occurring in a MS. in the Imperial Library in Bābar's own handwriting.

² Erskine did not know the T. *Rashīdī* when he was translating the *Memoirs*. His later work, the *History of India*, corrects some of the statements in the notes to his translation. See I. 184 for account of the battle.

³ Khojend, which is mentioned by Bābar as the place they retreated to, was often not reckoned as part of Farghana (Erskine 9). At least it is in the extreme west of it, and is, apparently, not now included in the Russian district of Farghāna, but in Samarkand. See Kostenko's *Turkistan* I. 347.

19. NUMISMATIC SUPPLEMENT No. XIII.

Note.—The numeration of the article below is continued from p. 389 of the "Journal and Proceedings" for 1909.

76. PUNCH-MARKED COINS FROM AFGHANISTAN.

Though Cunningham has stated that punch-marked coins are found all over India "from the Himalaya mountains to Cape Comorin, and from Sistan to the mouths of the Ganges," it is by no means certain that they have ever been found in large numbers in Afghanistan. At least no one has described in detail any coin of this class found to the west of Indus. The westernmost limit of recorded coins is Rawalpindi, or more properly Shah-Dheri, near the Sarai Kala railway station of the North-Western Railway.¹ Recently Dr. D. B. Spooner of the Archæological Survey has described a hoard of punch-marked coins found at Peshawar. In this connection I must record that no one of the solar symbols found on these coins are wheels. It would require an extra strong effort of one's imagination to call them so because in the majority of cases there are no rims.²

The coins described below were sent to me for examination by our President Sir Thomas Holland, who obtained them from his Majesty the Amir, when he was staying at Calcutta. The chief interest of the paper lies on the new symbols found on these coins. Mr. Theobald in his learned essay has given an elaborate account of the punch-marks on these coins. The coins from Afghanistan add no fewer than twenty new symbols to the list. These are most probably marks of the shroffs of Afghanistan. Of greater interest is the discovery of Brāhmī letters on some of these coins. New symbols have been found on three coins with blank reverses which according to Mr. V. A. Smith are to be ascribed to Taxila.³ The new symbols and letters are described below:—

I. *Letters.*—The occurrence of single letters on copper punch-marked coins has already been recorded,⁴ but their occurrence on silver coins has not, as far as I remember, been noticed as yet. The Brāhmī letter *na* occurs twice (Nos. 31 and 36). The punch-mark is elliptical in shape and bears the

¹ Cunningham, A. S. R., vol. xiv, p. 18, pl. x, J. A. S. B., 1901, pt. I, p. 64.

² Annual Report of the Archæological Survey of India, 1905-6, p. 150.

³ V. A. Smith, Catalogue of Coins in the Indian Museum, vol. i, p. 133.

⁴ Cunningham, A. S. R., vol. xxii, p. 114-16.

letter in relief. The form of *na* is that to be found in inscriptions of the Kushana period, *viz.*, with a curved base line. The letter *da* occurs only once (No. 37). There is a short knob on its head, and if this be the mark for long then the character is *di*, and belongs most probably to the later Kushana or early Gupta alphabet. The remaining letter also occurs only once. It is the oldest in the series. It is either the Brahmi *ga* or the Kharoṣṭhi *ya* (No. 12). It is very difficult to particularise as both letters are identical in shape, and both alphabets were in use in Afghanistan at this period. Anyway it is certain that the letter belongs to the Maurya period.

II. *Symbols*.—The most common symbol is the *liṅga*. Here the form is different. It occurs thrice (Nos. 5, 19 and 26). The *liṅga* as a punch-mark existed up to a very late date. It occurs on a coin of 'Alāu-d-dīn Husen Shāh of Bengal in the cabinet of one of my friends. The coin is in a very bad state of preservation. The Kalima occurs on the obverse, and on it are four or five punch-marks of which one is a *liṅga* and the other the Bengali syllable *ka*. The name "Husen Shāh" only is legible on the reverse. The coin was found in the Sunderban forests.

Another round coin bears a new symbol, a man and a quadruped; most probably the man is chasing the animal.

Another new symbol is the figure of a horse on No. 11.¹ Two new symbols occur on No. 12, a monkey and two standing human figures. No. 38 presents another new symbol, *viz.*, a sphere with four tridents. A spear-head occurs on No. 20 with a straight line and a parallel row of dots.

The collection contains an unique specimen of a cast silver coin. Cunningham has distinctly stated that cast coins are all of copper. Unfortunately punch-marks are not distinguishable on this specimen (No. 39).

DESCRIPTION OF COINS.

RECTANGULAR COINS.

Class I.—Blank Reverse.

1. *Size*—Irregular hexagon, punch-marks indistinct.
Obverse—Solar symbol and portions of three others.
2. *Size*—Oblong, corners clipped.
Obverse—Solar symbol, Hare and portions of others.
3. *Size*—Oblong, one corner clipped.
Obverse—Solar and other illegible symbols.
4. *Size*—Oblong.
Obverse—Stupa and caduceus.

¹ Cf. Theobald, J.A.S.B., 1901, pt. I, p. 71, nos. 56-64.

5. *Size*—Rectangular, one corner clipped.
Obverse—Solar symbol, crescent, taurine and *linga*.
6. *Size*—Oblong, one corner clipped.
Obverse—All symbols obscure.
7. *Size*—Oblong. In good preservation.
Obverse—Solar symbol, double crescent.
8. *Size*—Rectangular. Worn out and blank on both sides.
9. *Size*—Oblong, one corner clipped.
Obverse—Four or five obscure symbols.
10. *Size*—Oblong, two corners clipped.
Obverse—Solar symbol, Triskelis and others.
11. *Size*—Oblong. Punch-marks indistinct.
Obverse—Horse, Caduceus and others.

Class II.—One Mark on the Reverse.

12. *Size*—Oblong, corners clipped.
Obverse—Monkey, two human figures, a horned animal,
and two other symbols.
Reverse—A letter; Brāhmī *ga* or Kharoṣṭhi *ya*.
13. *Size*—Oblong, irregular. Indistinct punch-marks.
Obverse—Illegible symbols.
Reverse—Solar symbol.
14. *Size*—Oblong, irregular. In good preservation.
Obverse—Solar symbol, stupa, sphere surrounded by
ornaments, tree in enclosure and others.
Reverse—Peacock.
15. *Size*—Oblong, one corner clipped.
Obverse—Solar symbol and four others.
Reverse—Hemisphere, taurine and two stars, all on
one stamp.
16. *Size*—Oblong, one corner clipped.
Obverse—Three human figures and stupa.
Reverse—Illegible.
17. *Size*—Oblong, one corner clipped.
Obverse—Solar symbol, sphere and crescent, stupa
with crescent and others.
Reverse—Illegible.
18. *Size*—Square, one corner clipped.
Obverse—A modified form of the caduceus, solar sym-
bol, stupa and two others.
Reverse—Caduceus.
19. *Size*—Oblong, irregular, one corner clipped.
Obverse—Solar symbol, *linga* and others.
Reverse—Illegible symbol.

Class III.—Two Marks on the Reverse.

20. *Size*—Oblong, one corner slightly.
Obverse—Illegible.

- Reverse*—A spear head and a straight line with a parallel row of dots.
Obverse—Solar symbol, caduceus, sphere with crescents, triskelis.
Reverse—Caduceus and the profile of some animal (?).
22. *Size*—Rectangular, two corners clipped.
Obverse—Two solar symbols, a tree inside a railed enclosure, etc.
Reverse—Stūpa and a star.
23. *Size*—Nearly square, one corner clipped.
Obverse—Solar symbol, sphere with crescents and one or two more.
Reverse—Star and another illegible symbol.
24. *Size*—Oblong, two opposite corners clipped, injured by hammering.
Obverse—Solar symbol.
Reverse—Star and another illegible symbol.
25. *Size*—Oblong, one corner clipped off.
Obverse—Solar symbol, stūpa, etc.
Reverse—Illegible.
26. *Size*—Oblong, two adjacent corners clipped.
Obverse—Solar symbol, svastika, *linga* and three others.
Reverse—Illegible.
27. *Size*—Oblong. In good preservation.
Obverse—Solar symbol, sphere surrounded by taurines, another surrounded by crescents, etc.
Reverse—Illegible.
28. *Size*—Oblong, one corner clipped.
Obverse—Solar symbol, lower part of standing human figure, etc.
Reverse—Illegible.
29. *Size*—Oblong, two adjacent corners clipped.
Obverse—Solar symbol, front legs of a quadruped, etc.
Reverse—Illegible.
- Class IV.—Three or more marks on the Reverse.*
30. *Size*—Irregular, three corners clipped.
Obverse—Solar symbol, taurine, head of an animal, etc.
Reverse—Two boughs, bow and arrow, and four or five illegible ones.
31. *Size*—Irregular, in a fair state of preservation.
Obverse—Solar symbol, stūpa with hare, Brāhmī *na* in ellipse and four or five more.
Reverse—Stūpa with crescent, and two more indistinct symbols.

32. *Size*—Oblong, irregular, two opposite corners clipped.
Obverse—Solar symbol, stūpa, elephant, sphere with arrow heads, etc.
Reverse—Three illegible symbols.
33. *Size*—Oblong, irregular. In good preservation.
Obverse—Solar symbol, sphere with taurines and arrow heads.
Reverse—Four dots, and four other symbols, more or less indistinct.
34. *Size*—Nearly square. Both sides illegible.
35. *Size*—Oblong, one corner clipped off.
Obverse—Solar symbol, elephant, etc.
Reverse—Three illegible marks.
36. *Size*—Oblong, irregular, one corner clipped.
Obverse—Solar symbol, humped bull, sphere with taurines, Brāhmī na, etc.
Reverse—Five or six illegible marks.
37. *Size*—Oblong.
Obverse—Sphere with four crescents, stūpa with hare, a letter (Brāhmī da), etc.
Reverse—Tree in enclosure and five other marks.
38. *Size*—Oblong, two adjacent corners clipped off.
Obverse—Solar symbol, taurine, etc.
Reverse—Sphere with four tridents, and two small illegible marks.
39. *Size*—Oblong, cast silver, only specimen come to light. Both sides illegible.

ROUGHLY CIRCULAR OR OVAL COINS.

Class I.—Blank Reverse.

40. *Obverse*—Palm of the hand, sphere with crescents and etc.
41. *Obverse*—Lotus and other obscure symbols.

Class II.—One mark on the Reverse.

42. *Obverse*—Bull and another quadruped in square incuse, etc.
Reverse—Man and quadruped.
43. *Obverse*—Solar symbol, sphere with taurines tree in railed enclosure, etc.
Reverse—Illegible.

Class III.—Two marks on the Reverse.

44. *Obverse*—Four or five obscure symbols.
Reverse—Stūpa and another illegible symbol.

77. RARE MUGHAL COINS.

The following have been selected from a number of rare Mughal coins in the cabinet of Mr. W. S. Talbot, I.C.S., Settlement Commissioner, Kashmir.

1. *Æ. JAHĀNGĪR.*

Mint—Agra.
Date—1019 A. H.
Regnal year—5.
Month—Bahman.
Weight—219 grs.
Size—1.11.

Obverse.—In an octagon, each side of which is surmounted by a triple arch enclosing arabesques

در بهمن بزر ظل اله
س — — — ک — — — ه
زد باگ — — — ره ه

Reverse.—In octagon, similarly ornamented

اکبر باد
نگیر ابن شاه
ج — — — ه
نورال — — — دین ۱۰۱۹
شاه

The couplet on this coin is the same as that on the gold coin of the same king and mint described as No. 4 in the catalogue of the collection of the late Mr. C. S. Rodgers in the Lāhor Museum. The coins of the last few months of 1019 and the first few months of 1020 mark the high-water mark of beauty in design of Mughal coinage. I know of no duplicate of this particular coin.

2. *Æ. JAHĀNGĪR.*

Mint—Tatta.
Date—1027 A.H.
Regnal year—12.
Month—Dī.
Weight—174 grs.
Size—.75.

The only peculiarity about this coin is an ornament in the shape of a peacock just above *جه* on the obverse. For the legends see No. 799 of Vol. III of the Indian Museum Catalogue, 1908.

[N.S.]

3. R. SHĀHJAHĀN.

Mint—Akbarābād, Dāru-l-khilāfat.

Date—1068 A.H.

Regnal year—31.

Weight—175 grs.

Size—.94.

Obverse.—In eight-foiled circle
the *kalima*.

In margin, divided into four partitions

بصدق ابی بکر - و عدل عمر - بازم

عنهان - و علم ۱۰۶۸ علی

Reverse.—In eight-foiled circleبادشاه غاز

۳۱

شاه جهان

In margin, divided into four partitions

شهاب الدین محمد - صاحب قران ثانی -

ضرب دارالخلافه - اکبر آباد

The coinage of Akbarābād (Agra) in the reign of Shāhjahān after presenting a variety of designs during the first six years settled down to what is known as the "square areas" type in 1043 A.H., and to this type it appears to have remained constant for the remainder of the reign except for these "circular areas" coins of 1068-31, specimens of which are very rare.

4. R. AURANGZEB.

Mint—Kābul.

Date—1084 A.H.

Regnal year—16.

Weight—175 grs.

Size—.81.

Obverse.—Usual inscriptions but مهر for بدر Date to left
of middle line.*Reverse.*

جلوس

میمنت

منازوس

۱۶

ضرب

کابل

The Indian Museum Catalogue, Vol. III, 1908, figures a muhar of this type (No. 1129), and similar muhars were also found in the Bahāwalpūr Toshakhāna by Mr. Whitehead (Num. Supp. XI, art. 69). But no rupees appear to have been published previously.

5. *Æ. AURANGZEB.*

Mint—(Akbarabad) *Mustaqirru-l-khilāfat.*

Date—Absent.

Regnal year—? 49.

Weight—43 grs.

Size—·625.

This is a quarter-rupee with fragmentary inscriptions following the usual type. I have a similar one of regnal year 45.

6. *Æ. SHĀH 'ĀLAM BAHĀDUR.*

Mint—Tatta.

Date—Absent.

Regnal year—2.

Weight—174 grs.

Size—·825.

Obverse.

غازی

شاہ

شاہ عالم باد

س۔۔۔۔۔

.....

Reverse.

مانوس

میدنت

۲

سنہ جلوس

ب

ضرتقہ

Mr. Whitehead mentions finding rupees of Tatta in the Bahāwalpūr Toshakhana (N. S. XI, art. 69)—probably of this type. Those hitherto published in the Lāhor and Indian Museum Catalogues are of the couplet type on which the king's former name of Mu'azzam is given, and of the first year of the reign.

7. R. SHĀH 'ĀLAM BAHĀDUR.

Mint—Ajmer, Dāru-l-khair.
Date—1119 A. H.
Regnal year—ahd (1).
Weight—176 grs.
Size—.94.

Obverse.

غازی
شاه
عالم باد
شاه
سکه ۱۱۱۹

Reverse.

دارالخیر اجمیر
ضرب
میمنت مانوس
جلوس احد
سنة

The epithet *دارالخیر*, which clung to Ajmer during the Mughal supremacy, gave place early in this reign to the more pretentious one of *مستقر الخلافة*. I know of only one other specimen of the present type—in Dr. Taylor's Cabinet.

8. R. JAHĀNDĀR.

Mint—Ahmadnagar.
Date—Absent.
Regnal year—ahd (1).
Weight—173 grs.
Size—.94.

Obverse.—The coin is in poor condition, but the arrangement of the inscription appears to be the same as on No. 1722 of the I.M.C., Vol. III.

Reverse.

احمد نگر (بلده ؟)
ضرب
سنة احد مانوس
میمنت
جلوس

This mint appears to be unpublished for Jahāndār.

9. *Æ. FARRUKHSIYAR.*

Mint—Imtiyazgadh.
 Date—1124 A.H.
 Regnal year—Absent.
 Weight—170 grs.
 Size—.94.

Obverse.

بهر و بر فرخ سپهر
 الله ————— اه
 حق بر سپهر و زر (باد)
 فضة ————— ل
 سکه زد (از)

Reverse.

.....
 میمنت
 ما: موس ۱۱۲۴
 ضرب
 امتیاز گده

This mint seems new for Farrukhsiyar in silver. The Hijra date on the reverse is unusual.

10. *Æ. SHĀHJAHĀN II. ?*

Mint—Burhānpūr, Dāru-s-sarūr.
 Date—?
 Regnal year—2.
 Weight—169 grs.
 Size—.94.

Obverse.

شاه جهان
 —————
 بادشاهه غازا...
 ک
 سکه مبار

Reverse.

جلوس مافوس
 میمنت
 ۲
 سکه دارالسرور
 ضرب
 برهانپور

[N.S.]

The attribution of this coin to the second Shāhjahān (Rafi-'u-d-daulah) is not free from doubt, but of whichever king it is, it seems to be unpublished though Dr. Taylor has a rupee of this mint and reign of Shāhjahān II. The regnal year "2" is noticeable.

11. *R. MUHAMMAD SHĀH.*

Mint—Derajāt.

Date—1160 A. H.

Regnal year—30.

Weight—175 grs.

Size—.9.

Obverse.

محمد شاه

←

۱۱۶۰

بادشاه غاز

ی

سکه مبار

Reverse.

مانوس

میمنت

۳۰

سنة جلوس

ضرب

دیرجات

Mr. Longworth Dames writes: "The Derajāt mint has hitherto only been known on the coins of the Durrānis. The earliest I have seen of Aḥmad Shāh Durrāni is of the year 1171. Its appearance on Muḥammad Shāh's coins is remarkable as Nādir Shāh's invasion took place in 1152 and the Derajāt remained in his possession after that date. He was assassinated in 1160, the year in which this coin is dated, and it would seem that on his death the mint at Dera Ismail Khān (Derajāt) again issued coins in the name of the Mughal Emperors until Aḥmad Shāh's invasion."

Rupees of "Dera" of Muḥammad Shāh and Aḥmad Shāh were found by Mr. Whitehead in the Bahāwalpūr Toshakhāna (N.S. XI, p. 342), and a rupee of Muḥammad Shāh of the same mint is described on p. 214 of the Lāhor Museum Catalogue. This may, Mr. Dames thinks, be Dera Ghazī Khān.

12. R. SHĀH ĀLAM.

Mint—Katak.
 Date—Absent.
 Regnal year—22.
 Weight—176 grs.
 Size—1.02.

Obverse.

.....
 حامی دین
 شاه
 سایه فضل شاه عالم
 سکه
 زد بر هفت کشور

Reverse.

مانوس
 مینت
 ۲۲
 سنة جلوس
 ضرب
 کتک

The only other specimen that I know of was in Dr. White King's collection. (Catalogue of sale No. 4111.)

H. NELSON WRIGHT.

78. TREASURE TROVE (MUGHAL).

Sixty-six Mughal rupees were recently found buried in the village of Ladkhed in the district of Yeotmal and sent to me for examination. The following four coins are of special interest:—

1. R. JAHĀNDAR SHĀH.

Mint—Fathābād (Dhārūr?).
 Date—A.H. 1124.
 Regnal year—*ahd.*

Obverse.

جهاندار شاه
 ←
 چون مهر و ماه ابو الفتح غاز
 ۱۱۲۴
 سکه
 در [افاق] زد

Reverse.

مانوس
میمنت
احد
جاوس سنه فتح اباد
ضرب

The bottom line of the reverse is unfortunately obliterated. The omission may, however, be supplied by comparing the coin with the one described and figured in Numismatic Supplement II, article 15. The arrangement of the reverse is the same and there are similar collections of dots in the curves of the *س* of *جاوس* and the *ح* of *فتح*.

That coin was of Farrukhsiyar. The mint is new for Jahāndār.

2. *A. MUHAMMAD SHĀH.*

Mint—Satāra.

Date—A.H. 11. Regnal year obliterated.

Obverse.—Usual inscription. Date to right of top line.

Reverse.

مانوس
میمنت
... جاوس
ضرب
ستارا

This is an addition to the list of Mughal mints. Is the Satāra of this coin the well-known town in the Bombay Presidency, which bears the same name but is apparently spelt Sātāra (see Imperial Gazetteer)? I have been unable to identify it with any other place.

3. *A. MUHAMMAD SHĀH.*

Mint—Balwantnagar.

Date—A.H. 115 × Regnal year, 28.

Obverse.—Usual inscription. Date to right of top line.

Reverse.—Usual arrangement. Mint name in bottom line.

In Mr. Burn's list of Mughal mints (J.A.S.B., Vol. LXXIII, Part I, No. 2, 1904) is given a coin from my cabinet of this mint struck in the reign of Ahmad Shāh. This coin was

obtained at Jhānsī, and on enquiry from the Tahṣildār of that town I was informed that the old name of Jhānsī was Balwant-nagar, and that there is still a Muḥalla in the town known as "Taksāl," *i.e.*, mint, which is evidence of the issue of coins. The present coin carries the mint back to the reign of Muḥammad Shāh.

4. *R. MUḤAMMAD SHĀH.*

Mint—? Qandahār.

Date—A.H. 115 × Regnal year, 30.

Obverse.—Usual inscription in three lines. Date to right of top line.

Reverse.—Usual arrangement. Mint name in bottom line.

The first two letters of the mint name are not quite distinct, but there are traces of the top of the ق and to its left a dot over the place where the ٺ should be. If, however, the reading is correct, it is not easy to understand how a coin came to issue from Qandahār in A.H. 1159 (A.D. 1746) in the name of Muḥammad Shāh of Dehli. Nādir Shāh, the Persian invader of Hindustān, took possession of Qandahār in 1737 A.D. (A.H. 1150-1151) and built a new city. Qandahār was taken by Aḥmad Khān Durrānī some ten years later, and it is just possible that in the confusion of these troublous times, the Dehli Emperor may have seized the opportunity to renew the old Mughal claim to Qandahār by issuing coins professing to be struck there under his authority. But that there was any striking of coinage at Qandahār itself in the name of Muḥammad Shāh seems extremely improbable.

H. NELSON WRIGHT.

79. TREASURE TROVE (MUGHAL).

Out of a find of 129 silver coins discovered in an earthen pot while digging the foundation for a new building at Hanū-mān Tāl in the Jubbulpore City, and sent to me for examination, I selected the following five rupees for a note in the Numismatic Supplement:—

1. In the name of SHĀH 'ĀLAM II.

A.H.—1199.

Regnal year—26.

Mint—Deogadh?

Obverse.

شاه عالم

... ۱۹۹

بادشاه

Reverse.

.....
۲۶
سنة
جلوس
ضرب
ديو گده

This is a small thick coin (size .75") with lettering much cruder than on the coins of this mint of Shāh 'Ālam II usually met with. This fact probably indicates the loss of influence of the suzerain power. Mr. W. S. Talbot, C.S., has a similar coin dated 1198. A coin of Deogadh in my cabinet of the normal fabric is dated 1190-17.

2. SHĀH 'ĀLAM II.
Mint—Bālānagar Gadha.
A.H.—Absent.
Regnal year—36.

A coin of this type has been published by Colonel Vost in Numismatic Supplement XI, p. 326. This coin has as mint marks a *trisūl* and 12-pointed star on the obverse in the second line, and a star to the right of the regnal year on the reverse.

3. SHĀH 'ĀLAM II.
Mint—Nāgpūr?
A.H.—1227.
Regnal year—35.
Size—.85".

Obverse.

... محمد ...
فـضـل
شاه عالم بادشاه
سـكـه
مـدـنـیـاری ۱۲۲۷

Over "bādshāh" are a *trisūl* and a flower with 11 petals and a stalk.

Reverse.

.....
میدنت
سنة ۳۵ جلوس
ضرب
ناگ پوره

Below the ۳۵ سنة is a *trisūl* on its side.

4. In the name of AHMAD SHĀH.

Mint ?

A.H.—Absent.

Regnal year—56 ?

Size .82'

Obverse.

احمد شاه بهادر

Reverse......
میدان

۵۶

سنة جلوس

ضرب

گدازارت

An arrowhead to left of the گد in the lower line.

5. As on No. 4 but a smaller coin (size = .75") and the mint is written ناگرت. The regnal year is represented by the figures ۵۶.

These last two coins are evidently Mahrattā-struck. They resemble in execution the Katak coins on pages 248-250 of the Indian Museum Catalogue, Volume III, 1908. What their mint town was I am not able to conjecture.

All the above coins are in the Nāgpūr Museum.

H. NELSON WRIGHT.

80. DĀMS OF AKBAR STRUCK AT JAUNPŪR AND AJMĒR MINTS.

Jaunpūr.

On the gold and silver coins of Jaunpūr mint, Akbar is entitled ناصرالدين و الدين and Jaunpūr is ordinarily termed 'Dāru-l Khilāfat'—see Mr. Nelson Wright's Introduction to Vol. III of the Catalogue of the Coins in the Indian Museum, Calcutta. That Museum contains different types of Akbar's copper coins struck at Jaunpūr, Nos. 449 and 451. The first is of the usual type with the obverse inscription 'Fulūs Jaunpūr Dāru-l Khilāfat', and the date is in words on the reverse side. The second is a quarter *dām* exhibiting a geometrical device on the reverse, and the inscription 'Dāru-z-zarb Jaunpūr' on the obverse side.

In the Delhi Bazar I have found a third type, the inscriptions on which are as follows:—

<i>Obverse.</i>	<i>Reverse.</i>
محمد اکبر	ناصر الدنيا و الدين
جلال الدين	ابو الفتح
	فلوس جونپور

Every word of this reading on the obverse is quite clear, but possibly بادشاه formed part of the legend. Over the last letter of the word Muhammad is ornament No. 25 in the Table of Ornament found on Mughal Coins—Vol. III of the Catalogue of the Coins in the Indian Museum, Calcutta. The first and third lines of the reverse are cut, but there is sufficient to make my reading almost certain. The epithet 'Abū-l-fath' is exhibited in full, and as far as I know this is the first instance of its use on coins in connection with Akbar's name. It invariably formed the reverse inscription on the smaller copper coins of the Jaunpūr kings, and the Indian Museum possesses one of these of as late a date as A.H. 887—Catalogue of the Coins in the Indian Museum, Calcutta, Vol. II, Jaunpūr, No. 175.

Possibly the use of the epithet on the present coin is a survival.

Since writing the above I have seen Col. Vost's article 'On some rare Muhammadan Coins' published in the A.S.B. Journal for 1896. I find that this *dām* was described by him—see Plate II, No 7—but he read it as being a coin of Muhammad Sháh, Súrí. The only word legible on the obverse of that specimen is Muhammad.

Ajmér.

The Indian Museum possesses two types of *dāms* struck at Ajmér mint. On one type Ajmér is probably styled 'Dáru-l Mansúr' and the second is the common variety presenting the obverse inscription 'Zarb Ajmér sikka fulús'—Indian Museum Catalogue, Vol. III, Nos. 358 and 359. Amongst a large number of Akbar's copper coins struck at Ajmér and Chitor mints, I came across two apparently new varieties of Ajmér *dām*. The inscriptions on the first are:—

<i>Obverse.</i>	<i>Reverse.</i>
اجمير	دو
(دار الخلافة)	مشتاد...
سليم اباد	نهد و
ضرب	.....

Those on the second are :—

<i>Obverse.</i>	<i>Reverse.</i>
فلوس	هشت
سکه	... هزار
سلیمان بان	۱۰۰۸
ضرب	.....

In each case the reverse bears ornament No. 24 of the Table of Ornaments already referred to.

The first coin is a *dám* of Dáru-l-khiláfat Salímábád, Ajmér, struck in the year 982. The second is a *dám* of Salímábád, dated 1008. The style of the obverse of the first is distinct, but that of the obverse of the second follows the usual style of the copper coins of Ajmér and Chítor.

In his paper, 'The Mints of the Mughal Emperors,' Mr. R. Burn noted on a copper coin of Ajmér of mint Salíngarh, Ajmér, dated 982. On my copper coin of same date, the name is undoubtedly Salímábád. Mr. Burn remarks that this name for Ajmér is doubtless connected with Shaikh Salím Chishtí from whom Prince Salím took his name. Shaikh Salím died in 979, and Prince Salím was born in 977.

Coins of Akbar are now, therefore, known of Ajmér, of Ajmér with its name Salímábád, and of Salímábád alone. I may instance the parallel case of the issues of Shāh 'Ālam II minted at Bindrában, *alias* Múminábád. Shāh 'Ālam II struck coins bearing the names of Múminábád, of Bindrában, and of the combination Múminábád, Bindrában, the first two in copper, and the last in silver.

R. B. WHITEHEAD, C.S.

81. MUGHAL EMPERORS—RAFĪ'U-D-DARJĀT.

Gold.

<i>Obverse.</i>	<i>Reverse.</i>
(رف) يع الدرجات	مانوس
ب	میدنت
(بر) کا شاهنشہ افاق	احد جلوس
(زد) (س) — سکه	سده
(۱) ۱۱۳ با هزاران	ضرب
(بہند)	خجسته بنیان

The above muhar adds another to the list of Rafī'ū-d-darjāt's mints. The title شاهنشہ افاق in place of the usual شاهنشہ بحر و بر is also new. With these two pretentious titles

may be compared شهنشاه زمان (*e.g.*, Jahángír, I.M.C., Vol. III, 564); بادشاه بهرو بر (*e.g.*, Jahāndār, I.M.C., 1713) (Farrukhsiyar). The phrase در افاق appears in place of the usual در جهان on coins of Jahāndār (*e.g.*, I.M.C., III, 1709). The above coin is at present in a private English collection.

J. ALLAN,
British Museum.

APRIL, 1910.

The Monthly General Meeting of the Society was held on Wednesday, the 6th April, 1910, at 9-15 P.M.

T. H. D. LATOUCHE, Esq., B.A., F.G.S., President, in the chair.

The following members were present :—

Dr. N. Annandale, Babu Nilmani Chakravarti, Mr. B. L. Chaudhuri, Rai Motilal Ganguli, Bahadur, Mr. H. G. Graves, Mr. D. Hooper, Mr. W. A. Lee, Lieut.-Colonel D. C. Phillott, Mahamahopadhyaya Haraprasad Shastri, Mr. H. E. Stapleton and Mr. E. R. Watson.

Visitors :—Mr. E. Brunetti, Mr. F. H. Gravely and Mr. S. W. Kemp.

The minutes of the last meeting were read and confirmed.

Fifty-one presentations were announced.

1. The President announced the death of Pandit Yogesa Chandra Sastri-Samkhyaratna-Vedatirtha, an Ordinary Member of the Society.

2. The General Secretary reported that Mr. H. Wheeler, I.C.S., had expressed a wish to withdraw from the Society.

3. The General Secretary read the names of the following gentlemen who had been appointed to serve on the various Committees during 1910 :—

Finance Committee.

Dr. N. Annandale ; Hon. Mr. Justice Asutosh Mukhopadhyaya ; Mr. I. H. Burkill ; Mr. H. C. Graves ; Mahamahopadhyaya Haraprasad Shastri ; Lieut.-Colonel F. P. Maynard, I.M.S.

Library Committee.

Dr. N. Annandale ; Hon'ble Mr. Justice Asutosh Mukhopadhyaya ; Mr. J. N. Das-Gupta ; Mr. H. C. Graves ; Mahamahopadhyaya Haraprasad Shastri ; Mr. Harinath De ; Dr. E. P. Harrison ; Mr. H. H. Hayden ; Lieut.-Colonel F. P. Maynard, I.M.S. ; Major L. Rogers, I.M.S. ; Dr. E. D. Ross ; Dr. G. Thibaut.

Philological Committee.

Hon'ble Mr. Abdullah al-Mamun Suhrawardy; Hon'ble Mr. Justice Asutosh Mukhopadhyaya; Mr. E. A. Gait; Dr. Girindra Nath Mukhopadhyaya; Mahamahopadhyaya Haraprasad Shastri; Mr. Harinath De; Babu Monmohan Chakravarti; Babu Muralidhar Banerjee; Babu Nogendra Nath Vasu; Lieut.-Colonel D. C. Phillott; Dr. E. D. Ross; Mahamahopadhyaya Satis Chandra Vidyabhusana; Acharya Satyavrata Samasrami; Dr. G. Thibaut; Mr. E. Venis.

The following seventeen gentlemen were balloted for as Ordinary Members:—

Mr. P. S. Patuck, I.C.S., proposed by Lieut.-Colonel D. C. Phillott, seconded by Dr. N. Annandale; *Mr. Ramakanta Bhattacharyya*, B.L., proposed by the Hon'ble Mr. Justice Asutosh Mukhopadhyaya, seconded by Maharaja Jagadindra Nath Roy; *Mr. Eugen Ludwig*, proposed by Mr. E. M. Löffler, seconded by Mr. E. Toth; *Lieut. R. F. Francis*, 47th Sikhs, proposed by Lieut.-Colonel D. C. Phillott, seconded by Dr. N. Annandale; *Captain T. C. McCombie Young*, M.B., I.M.S., proposed by Major L. Rogers, seconded by Major E. Wilkinson, I.M.S.; *Dr. A. White Robertson*, L.R.C.P. and S., Edin., proposed by Major L. Rogers, I.M.S., seconded by Capt. E. D. W. Greig, I.M.S.; *Dr. Garefield Hodder Williams*, M.B., B.S. (Lond.), M.R.C.S., L.R.C.P., proposed by Major L. Rogers, I.M.S., seconded by Captain E. D. W. Greig, I.M.S.; *Dr. Cecil H. Elmes*, proposed by Lieut.-Colonel C. R. M. Green, I.M.S., seconded by Major L. Rogers, I.M.S.; *Mr. F. D. Ascoli*, I.C.S., proposed by Mr. T. H. D. LaTouche, seconded by Dr. N. Annandale; *Prof. Abdullah Abu Sayyid*, M.A., proposed by Babu Vanamali Chakravarti, seconded by Babu Muralidhar Banerjee; *Capt. B. C. Penton*, 25th Punjabis, proposed by Lieut.-Colonel D. C. Phillott, seconded by Dr. N. Annandale; *Captain F. R. Teesdale*, 25th Cavalry, F.F., proposed by Lieut.-Colonel D. C. Phillott, seconded by Dr. N. Annandale; *Captain F. T. P. Ebdon*, 73rd Cavalry, proposed by Lieut.-Colonel D. C. Phillott, seconded by Mr. T. H. D. LaTouche; *Mr. E. J. Abraham*, I.C.S., proposed by Dr. N. Annandale, seconded by Mr. I. H. Burkill; *Captain John Morrison*, M.B. (Glasgow), I.M.S., 88th Carnatic Infantry, proposed by Major L. Rogers, I.M.S., seconded by Captain E. D. W. Greig, I.M.S.; *Mr. J. C. R. Johnston*, proposed by Major L. Rogers, I.M.S., seconded by Mr. I. H. Burkill; *Mr. D. E. Grubi*, proposed by Dr. E. D. Ross, seconded by Lieut.-Colonel D. C. Phillott.

The following papers were read :—

1. *Review of our Knowledge of the Oriental Diptera.*—
By E. BRUNETTI. Communicated by DR. ANNANDALE.

This paper has been published in the Journal for March 1910.

2 *Rasiapaasana.*—By S. P. V. RANGANATHASVAMI ARYA-
VARAGURN.

3. *Vocabulary of Technical and Falconry Terms in Urdu, Persian and Arabic.*—By LIEUT.-COLONEL D. C. PHILLOTT.

This paper will be published in a subsequent number of the Journal.

4. *A Discovery of a long Metre in Prabodhachandrodaya.*—
By V. V. SOVANI. Communicated by the Philological Secretary.

5. *A Chemical Examination of the Butter-fat of the Indian Buffalo.*—By E. R. WATSON, MONOHAR GUPTA, and SATISH CHANDRA GANGULI.

6. *King Gopi Chandra of Rungpur.*—By BISVESWAR BHATTACHARJEE.

This paper has been published in the Journal for March 1910.

7. *Ladvaga rGyalrabs, the Chronicles of Ladakh, according to Schlagintweit's Manuscripts.*—Translated by REV. A. H. FRANCKE.

8. *Two Buddhist Stone Images from Malda.*—By A. K. MAITRA.

9. *Chondrodonta Bosei, a new species of fossil Lamelli-branch from the Hippurite-bearing beds of Seistan.*—By ERNEST W. VREDENBURG.

These three papers will be published in a subsequent number of the Journal.

10. *Palæontological Notes on the Gangamepteris beds of Khunmu (in Kashmir).*—By HEM CHANDRA DAS-GUPTA. Communicated by MR. C. S. MIDDLEMISS.

11. *Contributions to the History and Ethnology of North-Eastern India, II.*—By H. E. STAPLETON.

12. *Cause of the Dismemberment of the Maurya Empire.*—
By MAHAMAHOPADHYAYA HARAPRASAD SHASTRI.

This paper will be published in a subsequent number of the Journal.

The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Wednesday, the 13th April, 1910, at 9-30 P.M.

LIEUT.-COLONEL D. G. CRAWFURD, I.M.S., in the chair.

The following members were present :—

Dr. G. C. Chatterjee, Dr. H. Finck, Lieut.-Colonel H. B. Foster, I.M.S., Captain E. D. W. Greig, I.M.S., Dr. A. M. Leake, Captain J. W. D. Megaw, I.M.S., Captain J. Morison, I.M.S., Lieut.-Colonel H. W. Pilgrim, I.M.S., Captain H. B. Steen, I.M.S., Captain C. H. Stevens, I.M.S., Captain F. H. Stewart, I.M.S., Captain A. D. White, I.M.S., Major L. Rogers, I.M.S., Honorary Secretary.

Visitors :—Dr. G. C. Maitra, Dr. S. N. Mookerjee, Major B. C. Oldham, I.M.S., and Dr. S. N. Roy.

The minutes of the last meeting were read and confirmed.

Twenty-four presentations were announced.

A case of very marked cyanosis in a child due to extensive deficiency of the auricular septum was shown by Major L. Rogers for Lieut.-Colonel Calvert.

Major C. R. Stevens showed the following cases :—

1. A child in whom a large hydronephrosis had been removed by abdominal laparotomy.

2. A patient from whom a dentigerous cyst had been removed, which microscopically showed the structure of a cylindroma.

3. A patient from whom an extensive sarcoma of the soft palate had been removed.

Lieut.-Colonel Pilgrim showed a case of cyst of the epiglottis.

Captain Megaw showed a specimen of lymphocele of the spermatic cord containing an adult filarial worm.

Dr. G. C. Chatterjee read notes of a case of broncho-pneumonia in a patient of Colonel Calvert's with minute abscesses on the surface of the liver and suppuration of the bronchial lymphatic glands all due to the diplococcus of Friedlander.

The paper of Lieut.-Colonel Nott was postponed until the May meeting.



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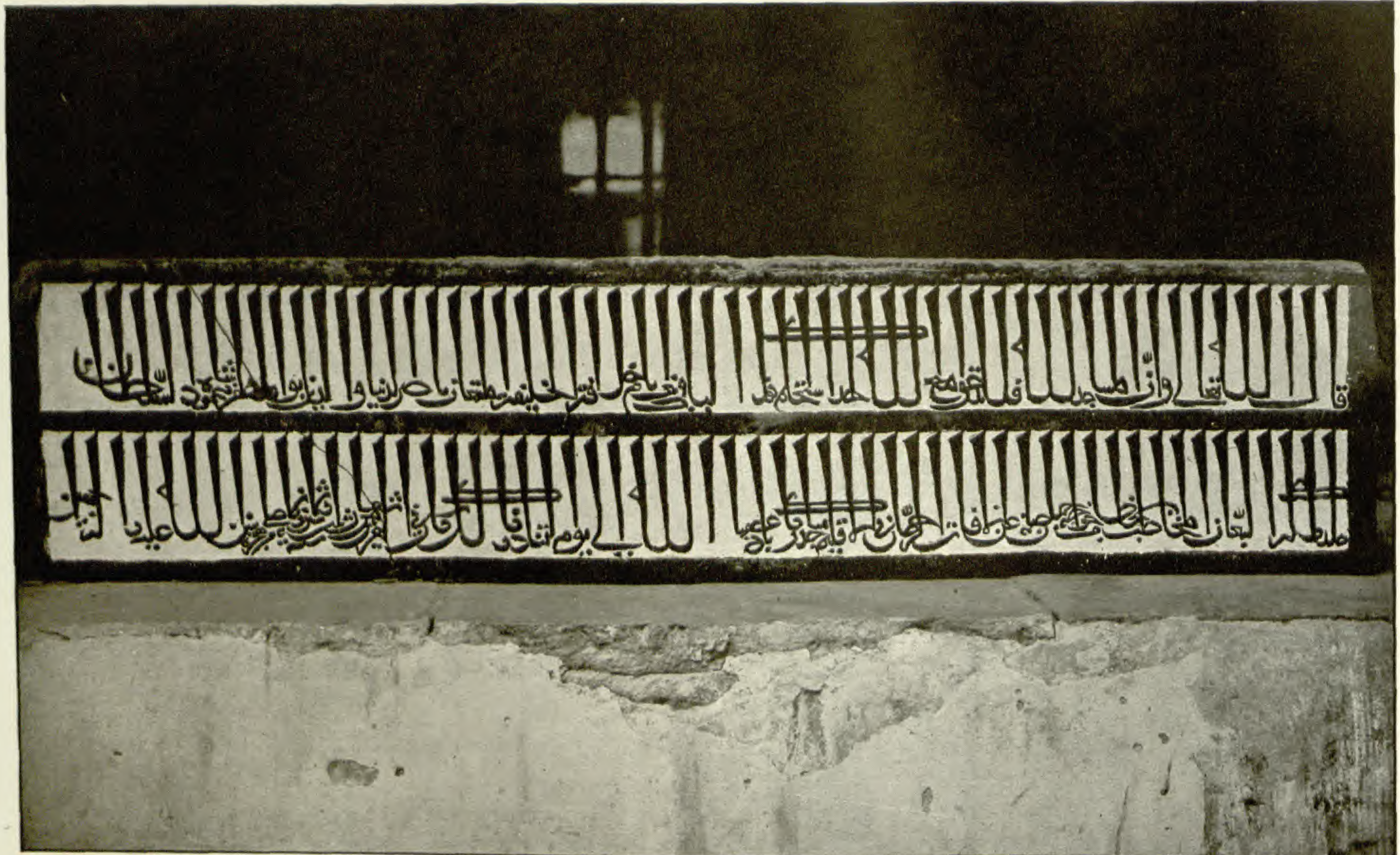
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Engraved & printed at the Offices of the Survey of India, Calcutta, 1910

Dacca Inscription of Nasiru-d-Din Mahmud Shah I, dated the 20th of Sha'ban, 863 A. H.

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List of Officers and Members of Council

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Lieut.-Colonel D. C. Phillott.

20. Some Remarks on Mundari Phonology and on its Treatment in the Records of the Linguistical Survey of India.

By The REV. C. MEHL, *G.E.L. Mission, Chaibasa.*

In my leisure hours during the last rainy season I went through vol. iv of the Linguistic Survey of India, containing the Muṇḍā and Dravidian languages. My expectations to find the volume a mine of information about subjects of comparative philology were fully realized, and I do not hesitate to pay my full tribute of acknowledgement and admiration to the scholarship displayed in handling the linguistic problems, in which we missionaries, working in the respective languages, take a lively interest. So it was gratifying to me to find the assertion of an existing connection between the Kurukh and the Muṇḍāri languages resting on so untenable grounds, finally disproved.

But turning to the Muṇḍāri dialects, I was rather struck by the manner in which parts of the Muṇḍāri phonology have been treated and Muṇḍāri sounds written. During the years I have been in Chota Nagpur, I studied the Muṇḍāri dialect of the Sonapur Pargana, that of Porāhāt, which is practically the same as the Mankipatti dialect, and that of the Hos of Singhbhum. I have been working among the Muṇḍāri-speaking population east of Ranchi, and have here to do with Bhumij and Tamariās too, but from none of these various sections of the bulk of the Muṇḍāri people, numbering about 900,000, I ever heard the semi-consonants and vowels pronounced as they are recorded in the respective language specimens and in the list of words. I showed the Muṇḍāri specimen to an educated Muṇḍā. He said, he understood it because he knew the story, but that it was not his own language.

It was a great mistake on the part of the compiler to regard the Kōḍā dialect as "almost pure Muṇḍāri," and to "correct" the Muṇḍāri, etc., specimens and list of words according to the phonetics of that dialect. This a quite superficial analysis of the Kōḍā specimen (pp. 111—113, vol. iv, L.S.I.) will show. The following Kōḍā words and bases are not used in Muṇḍāri, viz., "gam, ānsā, bisāe, kātāk, dā, dātrān, bāchā-lān, porā, lagā, rayāt, thañ, pād jāga, bagal, gārāj, kintu, jahāe, chimtit', bisi-k', layek, lāhāe. hoe, hābār, nakār, hatāk, sānāk, aṇṭi, posao, damra, baṭi hāt, rij rāñ, karān, ānāch, mahindar, ātāk, lāhār, nitit, bāchhār, daulat, nāstā, khusi." So also not the following which I could trace as Santāli words

in the specimens extant, *viz.*, “mâtâ, hä, äm, khangé, jâtâ, samtao, häräl, disom, tahas nahas, är, ubla dubla, enkhan, sän, kâl, choklak’, chätan munis, rängäch’, beṇḍak, chäk’â, khataok’, hõ, taram parâm, märâm, jämân, gate, kusmbi, bachha.”

The bases and words “hîch’, natan, ajum, lahech’, asu, hârâ, bogin, chekan, lâyân, hârmâ, jit’, narech’, rak’a, birit’, reengech’ perech’, menak’ ” may represent a corrupted or santalized form of Muṇḍâri, comp. Muṇḍâri “hiju, natin, ayum, lae’, isu, hoṛo bugin, chikan, loyôn, hoṛmo, jid’ nâre’ ra’, birid’, renge’, pere’, mena’ ”; but genuine Muṇḍâri words I find in the Kōḍâ specimen only the following, *viz.*, “sirma, lel, nam, nir, bugin, oḍôn, tusiñ.” I have omitted a few words like apu, agu, huṛiñ, haga, etc., which are the same in Muṇḍâri and Santâli. Looking on the grammatical forms, I find indeed used the Muṇḍâri suffixes ren and te, but the former is used with maṇḍi, while in Muṇḍâri it is used only with animate beings. Then the suffixes ṭak’, tet’ are not used in Muṇḍâri, and ak’ and lok’ (comp. Muṇḍâri a’ and la’) seem to be santalized. Nik’i, ani and ana occur instead of the Muṇḍâri Demonstratives ni’, ini’ and ena’, but inkin is found, and e at the end of the verb, as in Muṇḍâri. The predicate suffixes “tan” and “ken” are Muṇḍâri, “ket” is santalized, the suffix of the past time “en” is Santâli, and so are the forms tahän, tusiñ taepe and the use of the inceptive base lag and of chæ. The frequent omission of the categorical a, as in gamach’e, set’ene, sänok’ing, etc., is never met with in Muṇḍâri, nor forms as “birit’ ke tâch’, ämækëna, hoeto kañme, chekan tan ak’, at’ge tahän kenæ.” The position of the Pronoun at the end of the predicate is also a point of difference. In Muṇḍâri it is generally attached to the preceding word.

I think the result of this investigation shows that, with regard to grammar, the Kōḍâ dialect of Birbhum stands between Muṇḍâri and Santâli, containing formative elements of both. With regard to the vocabulary about seventy per cent. of the words are non-Muṇḍâri (Santâli, and Bengâli and Bihâri loan words). Of the twenty-five per cent. Muṇḍâri words only one-fourth is genuine, the rest is corrupted or santalized. The compiler writes, p. 108, vol. iv, L.S.I.—“It seems as if the Muṇḍâ Kōḍâs originally spoke a dialect of Muṇḍâri, but are gradually abandoning their old language for that of their neighbours in districts, where they are only found in small numbers.” In Birbhum 5,200 Kōḍâs are living and more than 47,000 Santâls. It is only to be expected that the Kōḍâ language was strongly influenced by Santâli and Bengâli. But this should have precluded to draw conclusions from it concerning Muṇḍâri phonetics, and to regard the specimens setting it forth as a standard, according to which the specimens of other Muṇḍâri dialects were to be corrected.

In addition to e and o Santāli has the *open vowel sounds* ä and â. *Muṇḍāri* has them not, therefore the Grammarians do not mention them and none are found in the *Muṇḍāri* specimens. Nevertheless the compiler writes, p. 83, vol. iv, L.S.I.—“ Mr. Bodding’s Kōḍā list shows that *Muṇḍāri* in this respect agrees with Santāli, and I have therefore introduced the signs ä and â in the (*Muṇḍāri*) list.” In the introduction to the *Muṇḍāri* languages he says that “ the materials collected for the purpose of this survey have not been prepared by scholars with a phonetical training ” and that “ only the specimens of Santāli and its dialects forwarded from the Santāl Parganas are quite trustworthy in this respect.” Now Father Hoffmann and Dr. Nottrott, who both have written *Muṇḍāri* grammars, are Germans, and besides them at least a dozen more German Missionaries are working in the *Muṇḍāri* language area. If anybody, then they would have been qualified to observe the difference between e and ä if it existed, because this is the case in German, and their ear from their childhood has been trained to distinguish these sounds. They all know English too, and can distinguish between the vowel sounds in “ all ” and “ hole,” in “ hot ” and “ rode ”; should they not have been able to mark the difference between o and â in *Muṇḍāri* if it existed ? But the compiler, instead of sticking by the records from men on the spot, or, in case of doubt, getting more information from them, trusted more the unauthoritative notes of a Santāl Missionary who lives 25 miles off from the area of the *Muṇḍāri* language. Now this colleague of mine may be a great Santāli scholar, but he certainly does not speak any *Muṇḍāri* dialect, else he, as proof-reader of the *Muṇḍāri* section of the volume, would have found means to prevent the creeping in of errors like the above-mentioned. The words contained in the *Muṇḍāri* list with ä and â vowel-sounds may be Kōḍā or anything, but they are certainly not *Muṇḍāri*.

About *long and neutral vowels* the compiler says that they were not “ separately marked in the specimens, but that Mr. Bodding’s Kōḍā texts show that *Muṇḍāri* also in this respect agrees with Santāli.” Of course, both kinds of vowels occur in *Muṇḍāri* and the latter are noticed in the Grammar of Father Hoffmann. But I can’t find that in the use of them *Muṇḍāri* agrees with Santāli. I give a list of words and bases marked long (—) in the Kōḍā specimen, but which are pronounced short in *Muṇḍāri*, viz., hōn, ĩnkĭn, haṭĭn, hĕrĕl, sangĭn, dĭsŭm, mārān, rengĕ’, sŭkri, bĭrid’, ĩn, nŭtŭm, ām, nĭr, bŭgĭn, tusiĭn, kăṭā, nām, lŏyŏn, dŭrān, chikān, orŏn.” On the whole I may say that the quantity of the vowels in *Muṇḍāri* words is not such a fixed matter as, for instance, in Hindi. Words, generally pronounced short, one may hear sometimes pronounced long by some people, and *vice versâ*.

Neutral vowels only few are marked in the Kōḍā specimen. The “a” in haṭiṅ, saṅgiṅ, miad, duraṅ is neutral also in Muṅḍāri. But aṭu is āṭu, ruar is ruār, aṅ is āṅ, aḡu is aḡu, aṣu is iṣu, aṅi is ini, in Muṅḍāri. The a in jad, jan, tad (predicate suffixes) is often pronounced neutral in Muṅḍāri. The sound of that Muṅḍāri neutral a is that of the short a in Hindi रङ्गा, or of the vowel pronounced in the second syllable of German “aber” or English “oral,” a negligently pronounced short a. In some words, instead of reduplication, a becomes sometimes ā, e.g., jaḡar becomes jāḡar, kaḡi = kāḡi, kāḡini etc. But words, generally pronounced with a neutral a, may in this or that locality, by this or that person, or even in sentences spoken with emotion or emphatically or jestingly, be heard pronounced with a short or even long a, and to frame rules about these changes is an impossible task. The same must be said about the laws of harmonic sequence. Traces of it are found in words like kuṛiku, ini’, hiju’. But instead of the forms inkiṅ, inku, niku, kaḡiua, baiua, etc., sometimes adduced as proof of the influence of those laws in Muṅḍāri, very frequently the forms enkiṅ, enko, niko, and nearly generally the forms kaḡioa’ and baioa’ are heard. Besides, similar changes of e into i and o into u are taking place, where no trace of the working of the laws of harmonic sequence can be found, e.g., ṛio’tana, from ēre’, banguja = banga’ia; compare Kuṛukh tingkaṅ, from tengna, kḡutkaṅ from kḡoṭṭna. All the rules about vowel changes in Santāli, laid down under the head “Harmonic Sequence,” pp. 37 and 38, vol. iv, L.S.I., do not apply to Muṅḍāri. So also in this respect a very considerable difference between Muṅḍāri and Santāli is to be stated.

The so-called *semi-consonants* are all pretty well described in the existing Muṅḍāri Grammars and have been marked there, d’ and b’ or dⁿ and b^m (for Santāli t’ and p’) and (’) or (:’) (for the equivalent of Santāli k’ and ch’) respectively. The original Muṅḍāri specimens were marked in the same way but the compiler states that he marked them as in Santāli; sometimes, however, rather wrongly, e.g. oraḡ’tiḡh’ña Ranchiriḡh’ña where no suffix iḡh’ but iṅ coalesces with te and re. He asserts, “the semi-consonants are hard and not soft sounds,” p. 84, vol. iv, L.S.I. The Rev. Srefsrud in his grammar, p. 9, indeed, says so about the Santāli semi-consonants, but I don’t think this is the case with them naturally. The process of pronouncing a consonant may be divided into two parts, (1) the putting into position the organs with which it is pronounced, and (2) the relaxing these organs and causing the air from the lungs to strike against them. Now the difference between the consonants, whether they are to be soft, hard, or aspirate, is caused solely by the second part of this process and depends on the more or less abrupt relaxation of the respective organs and on the measure of force with which the air is made to pass

over them. For instance, in pronouncing labials, the lips have first to be closed. This being done, I can pronounce a p, or b, or ph, or bh, as I like. Now *the semi-consonants in Muṇḍāri consist only of the sound produced by the first part of the process described*, and from the description of them in Screfsrud's Santāli Grammar, pp. 10 and 11, I conclude that the same is the case in Santāli. They, therefore, naturally cannot be hard, *but must be neutral*. A neutral sound, however, stands, I think, nearer to a soft than to a hard sound. In Muṇḍāri, at least, *e.g.*, ub' (Santāli up'), has not a pronunciation similar to p as in English "hoop", but rather to b as in German "hub"; and kented' in its pronunciation does not resemble that of German "kentert", but rather that of "kenternd." With some speakers who, in putting into position the respective organs, do not close their throat fully, naturally some air is escaping through the nose before they have relaxed their organs, and therefore a slight nasal sound is heard from them after the semi-consonant, which sometimes has been marked, *e.g.*, ub^m, medⁿ.

When in Santāli the semi-consonants are described as hard sounds, and I myself had ample opportunity to notice their somewhat different pronunciation among the Santāls of Dhalbhum and Morbhanj, this must have other reasons. Perhaps it is due to the pointed, jerklike pronunciation of the vowel preceding the semi-consonant, which before d' and b' in Muṇḍāri is pronounced quite in the ordinary way. Besides this, the Rev. Screfsrud in the description of these sounds in his Santāli Grammar, pp. 8 to 11, speaks of a "sharp inhalation of the breath" preceding or accompanying the closing of the organs. Nothing of this kind can be observed in connection with the pronunciation of Muṇḍāri b' and d', nor could I observe it among the Santāls in Dhalbhum. Like in Santāli, b' and d' before the passive voice suffix o' (Santāli ok') are changed into the resp. soft consonants in Muṇḍāri, *e.g.*, juṭidoa of juṭid'. The predicative suffixes jad', tad', ad' and akad' drop d', the suffixes ked' and led' even ed' before the pronominal infixes of the first and third person singular, iñ and i, *viz.*, neljajaiing, metaiñæ, emakaijai, kajikiñai nelliai instead of neljadiaing, metadiñai, emakadijai, kajikediñai nellediai, but the full forms are heard in many places too. Around Ranchi occasionally instead of the suffix ked a form ker is heard, probably due to Kurukh influence, in which language kerā is frequently added to the past tense, *e.g.*, bongā kerā (Hindi bhāg gayā). Father De Smet mentioned this form too. (His Grammar, p. 2). So also Dr. Nottrott, p. 7, of his Grammar. In the Ho dialect, the Muṇḍāri dental consonants, and likewise the dental semi-consonants, are generally pronounced as cerebrals, especially in the just mentioned predicative suffixes. In forms like nelkeded' (Muṇḍāri nelked'te) the position of the

semi-consonant seems to have been changed, but forms like *hujyaneḍ'* are heard too (Munḍāri *hijuyante*). The suffix *te* is in this form apparently weakened into *eḍ'* (neutral *e* and semi-consonant *d'*).

While the Munḍāri dental and labial semi-consonants in their character resemble to some degree those in Santāli, the case with the Munḍāri equivalent of Santāli guttural and palatal semi-consonants is rather different. The semi-consonants *d'* and *b'* are pronounced by putting the dental and labial organs, respectively, into position and closing at the same time the throat. Where Santāli has guttural or palatal semi-consonants, in Munḍāri *only the throat is closed, the guttural and palatal organs not being brought into activity*. The sound thus produced is a mere check on the preceding vowel, the same for Santāli *ch'* and *k'*. A Munḍā, who is a teacher at the Ranchi G.E.L. Mission High English School, in a Munḍāri booklet published by him in the Devanāgri character, in an introductory note describes this sound as follows: "It should be borne in mind that in Munḍāri the Bisarg (:) denotes that a similar half-sounded vowel is understood after the vowel which it follows, as "उरि:=उरि (इ)". Practically the sound is the same, as the check after the first vowel in *Kurukh* *ci'ina*, *he'ena*, *ca'ana*, *ho'ona*, *hu'utang*, but it is unquestionable that Munḍāri herein has not been influenced by *Kurukh*. The preceding vowel is pronounced in the same pointed manner as in *Kurukh*, but instead of pronouncing another sound after the check, the throat is only opened and the air allowed to pass, whereby a kind of "echo" of the first vowel is produced, as Father Hoffmann has called that aftersound very appropriately (p. 3 of his grammar). The Munḍāri Grammarians all, taking no notice of Santāli phonetics, this being not within the scope of their books, call this equivalent of Santāli guttural and palatal semi-consonants a vowel check, and rightly so from a Munḍāri standpoint, for nothing of the kind of a consonant is ever spoken or heard. In consequence thereof, they regard *g* and *j*, the guttural and palatal soft consonants, which here and there in certain grammatical forms reappear instead of the check, as euphonical. But this reappearance of *g* or *j*, which is confined to some localities, does not take place according to the fixed rules of Santāli Grammar.

Many names of places in the Ranchi District, compounds with *da'*, are pronounced *dāg* (*Ichādāg*, *Banadāg*, etc.) at least by all non-Munḍās. The Munḍāri name *Hardugan*, of the base *du'*, is also to be noted here. Monosyllabic Munḍāri bases and some dissyllabic bases too, ending in *a'* *o'* *u'* insert *g* before the passive suffix *o'*, e.g., *mago'a*, *ṭogo'a*, *giugo'a* of *ma'*, *ṭo'*, *giu'*, and also *tebaga'* of *teba'*. I noticed these forms chiefly in the Sonpur Pargana and in Porahat. Where no insertion of *g* takes place, the check on the vowel remains, that on the

passive suffix o' becoming less audible. I never noticed a g replacing the check on the Genitive suffixes a' and rea'. The emphatic forms amaga' and aiñaga' are apparently contractions of amagea' and aiñagea'. In Nagpuria, the Hindi dialect of Chota Nagpur, which many Muṇḍās of the Basiā, Palkot, and Kolabirā Thanas speak besides their own language, there is a genitive in k, *e.g.*, umanak (comp. Oriya [sehimānankar, Hindi (उन्होँका), which is, of course, a pure Aryan form of speech. But it has never influenced the Muṇḍāri Genitive in a', the latter there also being spoken only with a slight check on the a. Father Hoffmann noticed (p. 1 and 2 of his grammar, that the check of the passive suffix o' is generally transferred to the categorical a following it, if the form closes with that a', *e.g.*, baijoa'. I have noticed the insertion of a w between passive suffix o' and categorical a in Sonpur. Father De Smet mentions also such forms (p. 3 of his Grammar); *e.g.*, hobaowa', namowa'. Bases with labials seem to favour this insertion of w. Forms in g are heard likewise, *e.g.*, banoga'. A slight check is then heard on the categorical a. Pleonastic passive forms are sometimes heard like baiugoa'.

Bases ending in e' and i' (corresponding to Santali bases in ch') in Sonpur generally take j in the future, inserting an e between j and the categorical a, *e.g.* njeai of ni', rejeako of re'. Before the passive suffix this j is often too inserted, and if not, the vowel check is dropped, *e.g.* keṭejoa, of keṭe' tukujoa, of tukui'. The latter form shows, that bases ending in another vowel but i and e, when their palatal semi-consonant was lost, added i in Muṇḍāri, which then is changed into j, comp. the bases goi' lai' dubui', etc. In Porahat the bases ending in e' and i' do not insert j before the Passive suffix, but, probably in analogy to the bases in a, o, u, -g. Forms like nigoa', of ni'. regoa', of re', peregoa' of pere', are frequently heard, but of goi' gojoa' only. Father Hoffmann has also observed these forms (see his Grammar, p. 152, Rem. 2). But the inserted j is mostly heard in Sonpur in predicate forms with the infixed personal pronoun of the third person. I have told already that forms like neljadiai, emadiaiñ, dotadia kajia-kadiale, agukediako, and itulediape, etc., are often contracted into neljaiai, emajaiñ, dotajam, kajiakajale, agukijako, and itulijape respectively. In consequence of the dropped d' a slight check is sometimes heard on the preceding a, while the e coalesces with the infix i into ī. Now this infix i, corresponding to Santāli e, has never a check, and as far as I can see from the specimens in Santāli, e never has a palatal semi-consonant. But nevertheless the Muṇḍāri infix i of the above-mentioned contracted forms in Sonpur is changed into j, *e.g.*, nelnajai, emajaiñ, dotajam, kajiakajale, agukijako, itulijape, etc. I don't think this j can be due to any influence of the dropped semi-consonant d' of the predicate suffixes. But the pronouns ini'

and aw, which have the check, in Sonepur form their genitive inija', and aja', and it may be, that analogously to these forms the predicative infix i is changed into j. So this j represents rather a euphonical change, than proving the presence of a semi-consonant as the compiler would have it. All this goes to show that *the Muṇḍāri equivalents of the Santāli semi-consonants are neither uniform nor stable in their character, and that they in this respect, as well as in their pronunciation, differ widely from Santāli.*

An unbiassed examination of the grammars and original language specimens of Muṇḍāri must have led to the acknowledgment of this difference. But as it has been looked at through Santāli spectacles and no justice was done to its phonetical peculiarities, the language has been misrepresented and distorted in the records of the Linguistical Survey.

As a principle, I think, in every language only that is written what is really spoken. Nobody will find fault with the French, because they have no d in their jour (Latin *dies*), which is still preserved in the pronunciation of Italian giorno; or with the English, because they write no g in lay (Saxon leggan) as the Germans do in legen; or with Hindi-speaking people who write the Tadbhava word सावन (Sanscr. आवणः) instead of the Tatsama word श्रावण used in Bengali; or with somebody transliterating the Urdu word tarjuma (Arabic ترجمة) into Roman characters without h, because Persian has that h. So Muṇḍāri words should, and I am sure, will also in future not be written with ä, â, k', ch', t', and p', which letters represent Santāli sounds not spoken in Muṇḍāri. The letters ä and â are to be dropped altogether. For the dental and labial semi-consonants d' and b' respectively should be used and for the vowel check the sign ('), as Father Hoffmann used, them. The apostrophe is preferable to the colon (:), (visarga in Nagri), because the latter with Roman characters is an interpunction only, while the apostrophe serves to denote elisions and similar checks. I have written the Muṇḍāri words in this paper as suggested. In Devanāgri for the vowel check the visarga is used; for the dental and labial semi-consonants, at least of the roots, द् and ब् (with virāma) should be written.

I am afraid, the section on Muṇḍāri phonetics in the Linguistical Survey will disappoint all who live among the Muṇḍās and know the language, and will be misleading for beginners who use it in the study of the language, and for scholars abroad. I hope this is the only serious mistake found in the volumes of the Linguistical Survey, which should be corrected in a publication of such prominence and authority.

21. *Chondrodonta Bösei*: a new species of fossil Lamelli-
branches from the Hippurite-bearing beds of
Seistan.

By ERNEST W. VREDENBURG.

The geological period known as the Cretaceous witnessed an extraordinary development of certain ponderous marine bivalves, in which the ordinary structure of a pelecypod shell has become disguised to such an extent as to simulate frequently a coralloid growth, while the valves are apt to become so unequal in size as to bear to one another very much the same relation as the shell and operculum of a gastropod. These singular organisms were for a long time a puzzle to naturalists, and it is only quite lately that the homology of their structures has begun to be clearly understood. They grew together in shallow water forming large masses that recall a coral-reef much more than the banks built by certain gregarious mollusca such as oysters. This abnormal mode of development occurs in a number of genera which are not always closely related to one another, and must be referable therefore to certain biological conditions special to the particular geological period during which these peculiar shells flourished. They reached the acme of their development towards the close of the Mesozoic or secondary period which not a single one survived. It is very remarkable to note that a closely similar mode of growth affected an entirely different class of organisms, that of the Brachiopods, at a previous period of the earth's history, that is during the final stages of the Palæozoic or Primary era. Both during the terminal stages of the Palæozoic and Mesozoic, there occurred an exceptional spreading of the oceans which overflowed all the low-lying parts of the continents, and considerably increased the area of the shallow portions of the sea floor which are best adapted to a luxurious development of marine life. It is during these exceptionally favourable periods that the peculiar types of permanently fixed organisms above alluded to have mainly flourished. In both instances, both at the end of the Palæozoic and at the end of the Mesozoic these periods of oceanic extension were followed by a sudden regression during which the sea-level sank far below present limits, and the great sub-marine continental ledges became dry land for a short time. To this sudden alteration of physical conditions is to be ascribed, in all probability, the abrupt changes in the organic world that marked the initial phases of the secondary and of the Tertiary eras.

To this cause is due no doubt the sudden disappearance, at the end of the secondary, of the curious mollusca here referred to. Some of these singular shells belong to the extinct family of the *Rudistæ* of which the most familiar type is represented by the large shells known as *Hippurites*. Curiously enough there has not been so far a single specimen of a genuine Hippurite discovered within the present limits of the Indian Empire, though certain closely related genera, especially *Radiolites*, are frequent amongst the deposits of the age of the great banks of *Rudistæ*. In one of the lately published numbers of the *Records of the Geological Survey of India* (xxxviii, pt. 3), I gave descriptions of two species of genuine Hippurites which were discovered quite close to the Indian frontier, in Seistan.

A close study of the Rudistæ banks constantly reveals the presence of abnormal organisms in which the original characters are not disguised to such an extent as in the *Rudistæ* themselves, though they are apt to assume a very exceptional appearance. In the case of the Seistan deposits, the hippurites are accompanied by large numbers of a singular bivalve which I was unable to refer to any genus with which I was then acquainted. I published a photograph of this curious organism, and, thanks to the courtsey of Dr. Emil Böse of Mexico, I am now able to give a name to this fossil.

The following is Dr. Emil Böse's communication dated Mexico den 30 January, 1910.

“In Ihrer letzten Publikation in den Records der Geol. Survey bilden Sie eine Bivalve ab, von der Ihnen das Genus unbekannt ist. Der Abbildung nach zu schliessen, durfte es sich wohl um eine *Chondrodonta* ähnlich der *Chondrodonta Munsoni* Hill handeln, die in den Ver. Staaten im Gaultvorkemmen soll, hier in Mexico findet sich eine verwändte species in Cenoman, in Europa kommt die *Chondrodonta Joannæ* im Turon, aber nach Schnarrenberger auch Vorcenoman vor. Sie finden einen Theil der betreffenden Litteratur in der Arbeit Stanton's “*Chondrodonta, a new genus of ostreiform mollusks from the cretaceous, with descriptions of the Genotype and a new species*” (Proc. U. S. National Museum, xxiv, p. 130-307). Nicht erwähnt ist darin Z.B. die Publikationen von R. Hoernes über *Ostrea Joannæ*, die Sie aber leicht finden werden.

In der Hoffnung, dass Ihnen diese Angaben von Nutzen sein werden verbleibe ich mit dem Ausdrucke grosster Hochachtung.”

Amongst the specimens from Seistan there are several in which the hinge is slightly damaged in such a manner as to show the peculiar interlocking chondrophores characteristic of the genus established by Stanton in the work above alluded to by Dr. Böse, and thereby confirming Dr. Böse's attribution. They can be distinguished in the particular specimen already illustrated in the *Records of the Geological Survey*.

[N.S.]

After examining the literature on the subject, it seems to me that the Seistan specimens represent a new species, which I have much pleasure in dedicating to my distinguished informer.

The species may be defined as follows: large, elongate-triangular, greatly compressed, with undulating almost flat valves, of which the upper one often shows a tendency to become concave; both valves similarly decorated with uniformly crowded excessively fine angular ribs increasing by dichotomy with the increase in size of the shell.

The dimensions¹ of the figured specimen are about 160 mm. in height, 118 in length, and 20 mm. to 30 mm. in thickness. In another larger specimen, the approximate dimensions are respectively 175 mm., 129 mm., and 25 to 35 mm.

All the specimens have the valves united. Judging from fractured examples the hinge plate seems relatively much shorter than in *Chondrodonta Joannæ*, Choffat, and *Ch. Munsoni*, (Hill) Stanton. These species differ from the Seistan form by their distinctly coarser sculpture. The form from northern Italy described by Boehm² as *Ostrea* aff. *O. Munsoni* and by Fütterer³ as *Pinna ostraeiformis* seems more nearly related, though, even in this case, the ornamentation still remains somewhat coarser. The occurrence of the ribs varies somewhat in the Seistan specimens, and is in some cases coarser toward the umbo than near the margin, but still it always remains finer than in the Alpine fossils even in the most extreme cases.

The nearest relative to *C. Bösei* appears to be the form described by Choffat as *Ostrea Delgadoi* (Faune Cretacique du Portugal, i, p. 36, pl. iii, figs. 1 and 2), which does not seem to have been included by Stanton in the genus *Chondrodonta*, though referred by Choffat to the group of "*Ostrea Joannæ*." The ornamentation appears to be absolutely identical with that of the Asiatic species, only the size is much smaller. The shape of the shell is less elongate than in the full-grown specimens from Seistan, but this is a character which cannot be depended on in shells of such variable shape. Judging by the sections across the valves published by Choffat, the hinge-plate in *Chondrodonta Delgadoi* also seems relatively short, constituting another point of resemblance with the Asiatic form. Should specimens of intermediate size be described, it may become necessary to unite *C. Bösei* with *C. Delgadoi*.

When first mentioning this shell (Records Geolog. Survey of India, xxxviii, p. 223), I suggested that it may perhaps be

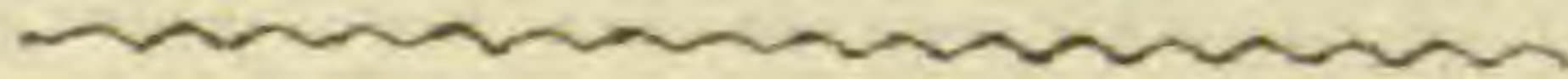
¹ I am indebted to Bankim B. Gupta, Museum Assistant, for measuring the specimens.

² Beiträge zur Kenntniss der Kreide in den Südalpen. I Die Schiosi-und Calloneghe-Fauna, *Palæontographica* xli, 1894, p. 96, pl. viii, figs. 1, 2.

³ *Palæont. Abhandl.*, Dames und Kayser, vi (new series), ii, 1896, pt. 2, p. 259.

related to the Pinnidæ, and Fütterer has described the Alpine specimens under the generic name of *Pinna*. Douvillé has also expressed himself in favour of a connection with the Pinnidæ (Comptes-rendus des seances de la Société géologique de France 5 Mai, 1902, p. 68). Stanton has suggested a relation to the group of the Pectinidæ, perhaps to *Hinnites*. R. Hoernes (Sitz. math.-nat. Cl. k. Ak. Wiss., cxi, 1902, pp. 667-684), from his own observations and those of G. Boehm, has shown that the structure of the shell in which the ribs affect only the external layers, while the inner ones are smooth, and also the absence of a distinct prismatic layer, clearly separate this genus from the Pinnidæ, while bringing into close connection with the Ostreidæ.

In all instances the shells of *Chondrodonta* whether from Europe, Asia, or America appear to accompany deposits containing shells of the Rudistæ. It may be noticed that the closely related form from the Venetian Alps occurs with an association of fossils closely similar to the Seistan species, and that the Alpine beds have been referred by several authors to the Turonian, which is also approximately the age which I suggested for the Seistan fossils, that is upper Turonian or at the limit of Turonian and Senonian.



22. Causes of the Dismemberment of the Maurya Empire.

By MAHĀMAHOPĀDHYĀYA HARAPRASĀD SHĀSTRĪ.

Vincent Smith, in his now classical work on Aśoka in the "Rulers of India" Series, regrets that the causes of the fall of the great empire of Aśoka are not known. In his 'Early History of India' he suggests that Kalinga was the first to declare its independence, and it was followed by Vidarbha and Andhra countries. The Punjab was lost to the empire on account of the invasions of Bactrian Greeks. All this is true. But why is it that the military despotism, so well-established, disappeared only forty or fifty years after the death of the greatest Indian monarch, whose memory is cherished with affection all over the Buddhist world, and who is regarded as a great and good ruler all over the world?

The causes are not far to seek. Aśoka was, to all intents and purposes, a Buddhist monarch, and a bigoted one, too. He preaches indeed full toleration to the professors of all religions. He finds fault with "Ātma-pāṣaṇḍa-pūjā" and "Para-pāṣaṇḍa-garahā," which he considers to be of no use. And we may conclude that the different religious sects of India enjoyed complete freedom of conscience in his empire. But his other edicts tell a different tale. He put a stop to all animal sacrifices throughout his vast empire, and not, as Vincent Smith says, at Pātālīputra alone, otherwise the promulgation of that edict at Gīrnār, Khālsi and Saabazgāḍi would lose all force and be useless. This is an order which was certainly directed against the Brāhmaṇas, a privileged class wherever they settled. The Brāhmaṇas of those days were very fond of animal sacrifices. In fact with the diffusion of the Aryan people in different parts of India, the number of sacrifices increased, and with it the number of victims in each sacrifice. That a sūdra ruler should, by one single fiat, put a stop to this long-established and cherished religious institution was certainly very offensive to the powerful body of the Brāhmaṇas and their followers all over the empire. This was followed by another edict in which Aśoka boasted that those who were regarded as gods on earth have been reduced by him, in a short space of time, into false gods. If it means anything, it means that the Brāhmaṇas, who were regarded as Bhūdevas or gods on earth, had been shown up by him. This also was regarded by Brāhmaṇas as casting a slur on their whole body. They had the privilege from high antiquity as the superintendents of morals of the entire community in India. If anyone offended against the rules of

caste, the rules of society, the rules of religion, and the rules of conduct, they were the persons to prescribe atonements and levy fines. Feeding Brāhmaṇas was regarded as an act of merit that would atone for many social offences. The appointments created by Aśoka of Dharma Mahāmātās, that is, of superintendents of morals, was a direct invasion of the rights and privileges of the Brāhmaṇas. And they were not the persons to brook the injury done to them quietly. And to crown all, Aśoka, in one of his edicts, insisted upon all his officers to strictly observe the principles of Daṇḍa-samatā and Vyavahāra-samatā, that is, the equality of punishment and the equality in law-suits, irrespective of caste, colour and creed. The words Daṇḍa-samatā and Vyavahāra-samatā has not been properly translated by any of the scholars that have dealt with the Aśoka inscriptions. They have not, in fact, grasped the full meaning of these words. The Brāhmaṇas have always claimed the privilege of immunity from criminal punishment. For offences, however heinous, their highest punishment was banishment with all their property and possession from the kingdom. Capital punishments were unknown to them. Corporal punishment to a Brāhmaṇa was illegal. The highest indignity that can be inflicted on a Brāhmaṇa was the cutting of his top-knot. They also enjoyed various privileges in law-suits. They could not be summoned as witnesses. If they came to the witness-box of their own accord, the Judge is simply to take down their statements without cross-examinations, and so on. Under such circumstances, the prospects of being huddled together in prison with the unspeakable non-Aryans, whipped, impaled alive, and hanged, were very offensive to the highly educated, respectable and privileged community. They tolerated these indignities heaped on them as long as the strong hand of Aśoka was guiding the empire. They were sullen and discontented. As soon as that strong hand was removed, they seemed to have stood against his successors. But they were not military people. They could not fight themselves. The Kṣatriyas, who fought for them and made them great, were all extirpated by the Nandas. They began to cast their eyes for a military man to fight for them. And they found such a man in Puṣya Mittra, the Commander-in-Chief of the Maurya empire. To what caste Puṣya Mittra belonged nobody knows. He belonged perhaps to those turbulent military spirits who had been driven away from Persia by the Greek conquest of that country. For the second half of his name, Mittra, and that of all the members of his family show his Persian origin. He was a Brahminist to the core and hated the Buddhists. At first he led the Maurya armies against the Greeks, who advanced year after year to the very heart of the Maurya empire. After a successful campaign, he returned to Pātali-putra with his victorious army, and the feeble representative

of Aśoka on the throne accorded him a fitting reception. A camp was formed outside the city and a review was held of a large army. In the midst of the festivities an arrow struck the king on the forehead. The king expired instantly. The Maurya empire was gone and Puṣya Mittra became the master of the situation, and we read in the *Mālavikāgnimitra* that he remained with his army at Pātaliputra and made his son king of Vidiśā. We clearly see the hands of Brāhmaṇas in this great revolution. For, shortly after the revolution, Puṣya Mittra planned a horse sacrifice at Pātaliputra, the very capital of Aśoka, who prohibited the slaughter of animals throughout his empire. Does not this show the Brāhmaṇas triumphant? Vasumittra, his grandson, was appointed to guard the horse in its unrestrained career through his empire. His mother, the queen of Agnimittra, invoked the blessings of Brāhmaṇas for her son, and she arranged for the distribution of 800 gold money a month to विद्याचार्य्यभ्यो ब्राह्मणेभ्यः। Eight hundred gold money a month is a very respectable educational grant.¹ In some Buddhist books Puṣya Mittra is regarded as a persecutor of Buddhism. In fact, he was entirely in the hands of Brāhmaṇas, and in two generations, the Brāhmaṇas not only made themselves actual masters of the Maurya empire as it then stood, but spread their influence far and wide, gave a new turn to Buddhist and Jaina religions, compiled and codified all branches of knowledge then known, and gave a turn to Brāhmanism which it has not lost ever since. It was this Puṣya Mittra at whose sacrifices Patañjali officiated, and it was under his patronage that he wrote his great work the *Mahābhāṣya*. The Kānvas codified the *Manu Saṃhita*, they caused *Bhāṣyas* to be written on the philosophical *Sūtrās*, they recast the *Mahābhārata* and the *Rāmāyana* to their present shape, they caused the *Nāṭya-śāstra* to be compiled from the previous literature on the subject, and they even caused the codification of the *Kāmā Śāstra* from the pre-existing materials. When not actually raised to the imperial dignity, they were the gurus of the *Suṅgas* and profoundly influenced their policy in Government. When they lost their imperial dignity, they remained for several generations at the head of the Brahminist community and gave it law. We find in the *Manu-Saṃhita* compiled under their influence all the rights and privileges of Brāhmaṇas, which Aśoka wanted to take away, fully confirmed and legalised; and their dignity raised to the highest pitch. For in several passages we find that the Brāhmaṇas were the Lords of the Universe, they are the Lords of everything “सर्वस्याधिपतिर्हि सः” Thus the gods on earth whom Aśoka proved to be false gods,

¹ In some editions it is one hundred gold money, in others the amount is not named.

again raised themselves to their former position, and even to higher position. How Aśoka's policy of dealing equal punishments to all and giving no privilege in law-suits fared in the long run, may be gathered from the *Mrcchakatika*. King Pālaka of Ujjayinī seems to have been a follower of Aśoka. In his kingdom the Brāhmaṇas fared very badly. Cārudatta, a Brāhmaṇa merchant, was reduced to penury with all his followers. Another Brāhmaṇa Śarvilaka felt so low that he had to take to thieving for his livelihood. Low, wretched people were advanced to high dignities. In the trial of Cārudatta, the Judge was obliged to find him guilty, and pointed out to the king that Brāhmaṇas should not be capitally punished. But the king insisted upon *Danda-samatā* and ordered that he should be impaled alive. Before the order could be executed, however, there was a revolution. King Pālaka was hurled down from his throne, and Cārudatta was raised to the dignity of the Prime Minister, and Śarvilaka raised to a high dignity. This Indian literature bears testimony how the great empire of Aśoka came to an end by the opposition of the Brāhmaṇas whom he wanted to reduce to the level of the common folk.

MAY, 1910.

The Monthly General Meeting of the Society was held on Wednesday, the 4th May, 1910, at 9-15 P.M.

T. H. D. LATOUCHE, Esq., B.A., F.G.S., President, in the chair.

The following members were present :—

Mr. B. L. Chaudhuri, Dr. C. H. Elmes, Mr. H. H. Hayden, Mr. J. C. R. Johnston, Rev. W. R. LeQuesne, Mr. A. C. Sen, Mahamahopadhyaya Haraprasad Shastri, and Mr. G. H. Tipper.

Visitors :—Rev. J. Bourdot, S.J., Rev. H. Hosten, S.J., Mr. H. K. Mazumder, and Rev. M. Vermeire, S.J.

The minutes of the last meeting were read and confirmed.

Forty-four presentations were announced.

The General Secretary reported that Mr. Louis Stuart and Mr. D. H. W. Ritchie had expressed a wish to withdraw from the Society.

The President announced :—

1. That Mr. G. H. Tipper has returned to Calcutta and has taken charge of the duties of General Secretary from Lieut.-Colonel D. C. Phillott.

2. That Dr. W. A. K. Christie has been appointed to act as Natural History Secretary and Secretary for the Regional Bureau of the International Catalogue of Scientific Literature, during Mr. I. H. Burkill's absence from India.

3. That Lieut.-Colonel D. C. Phillott has been appointed to act as Philological Secretary during Dr. E. D. Ross' absence from Calcutta.

The General Secretary laid on the table the following minutes of a meeting of the members of the Sub-Committee appointed to frame regulations to govern the nomination and election of Fellows among the Ordinary Members held on the 16th March, 1910, for the information of the Monthly General Meeting, under Rule 48 (a).

A Meeting of the members of the Sub-Committee, appointed to frame regulations to govern the nomination and election of Fellows among the Ordinary Members, was held on Wednesday, the 16th March, 1910, at 5-30 P.M.

Present :

The Hon. Mr. Justice H. Holmwood, I.C.S.

Major L. Rogers, I.M.S.

D. Hooper, Esq., F.C.S.

Dr. N. Annandale, F.L.S.

Business—

To frame regulations.

RESOLVED—

Method in which the Fellows shall propose to Council, and Council nominate to Society.

1. Nomination papers to be sent so as to reach each Fellow by the 1st October of the year preceding the election.

2. The nomination papers must be received back duly filled in and signed by each Fellow by the 1st November, and no paper received after this date will be considered.

3. A list of persons proposed, with their qualifications, shall be compiled from the nomination papers and printed and sent out to each Fellow so as to reach him by the end of November.

4. The Fellows shall then vote for not more than the number to be elected in the succeeding year by placing a cross against the names of those he wishes to be nominated, and no paper with more than the maximum number of crosses for the year's election will be accepted. These papers must be returned so as to reach the Society's rooms by the end of December.

5. The voting papers mentioned in Rule 4 shall be enclosed unsigned in a separate sealed envelope which shall be forwarded in an outer cover with a covering letter signed by the Fellow.

6. There shall be a meeting of Fellows in the first week in January at which the voting papers shall be opened and counted as the Chairman directs, and the names of such candidates as receive two-thirds of the votes of the Fellows voting shall be placed before the meeting.

7. If more than the maximum number to be elected have received the qualifying vote of two-thirds, those receiving the highest number of votes shall be proposed for the vacancies.

8. In the event there being a tie for the last vacancies, the Fellows present at the meeting shall decide which of the candidates receiving the same number of votes shall be proposed to the Council for nomination to the Society for a Fellowship.

9. These nominations shall be laid before the Council at the January Meeting in the fourth week, and the Council shall finally make the nominations.

10. The nominations shall be read out to the Members at the Ordinary Annual Meeting in February, and voting papers shall be provided for each member present, who shall record his

vote in the same manner and under the same conditions as for the officers and members of Council of the Society.

Resolved to report to the Council for submission to the next Ordinary General Meeting under Rule 48 (a).

The General Secretary also laid on the table the following *Report of the Standard Temperature Committee* submitted by Mr. D. Hooper, the Secretary of the Committee :—

At the Meeting of the Asiatic Society of Bengal held in July 1908, Professor P. Brühl read a paper on “Proposals for a Standard Temperature for Tropical Climates.” The author pointed out that the normal temperature of 62°F. does not serve the purposes of the chemist and physicist who work in the tropics, and the spread of science will render the choice of one or more higher standard temperatures a matter of necessity. The author’s observations led to the conclusion that the most convenient standard temperature for Calcutta is 30°C. (86°F.), at least during the period extending from the middle of March to the middle of November. During the remaining part of the year 22°C. (71.6°F.) would be more useful. During the discussion that ensued it was advanced that 25°C. (77°F.) was a suitable temperature for Calcutta. A resolution was finally passed that the question of a standard temperature for India be referred for report to a committee of scientists to be selected by the Asiatic Society of Bengal.

The Council appointed the following to serve on the Committee :—

Dr. Morris Travers, Bangalore, Chairman.
,, W. A. K. Christie, Geological Survey.
Professor P. Brühl, Engineering College.
,, J. A. Cunningham, Presidency College.
,, E. P. Harrison, ,, ,,
Mr. D. Hooper, Indian Museum, Secretary.

The Committee met in December and proceeded to discuss the form of note to be sent to chemists and physicists throughout India. It was proposed to circulate Professor Brühl’s paper and invite opinions on the proposals. In the covering letter the Committee recommended a change in the standard temperature observed in Europe and suggested 30°C. as most suitable for India. Expressions of opinion were called for, and the Committee asked to be supplied with the results of calculations or experiments connected with thermo-constants in India.

Letters were forwarded to 62 scientific workers and 50 replies were received. Analysing the replies it was found that 40 of the 50 were in favour of 30° as a temperature of reference for India. These came from the following towns and

districts : Aligarh, Assam, Bankipur, Benares, Berhampore, Bhagalpur, Bombay, Calcutta, Coimbatore, Cuttack, Dacca, Hazaribagh, Kodaikanal, Lahore, Madras, Meerut, Nilgiris, Poona, Pusa, Rajshahi, Rangoon and Sirsiah.

On the other hand five correspondents recommended 25° as a more suitable temperature, one suggested 28° , another 32.5° , and a worker in Madras informed the Committee that he had already adopted 33° . Many valuable observations and suggestions were made by the correspondents, which we have endeavoured to summarise. It is noticed that the most interesting replies are from those who do not favour the immediate adoption of the Committee's proposal ; these are from physicists. No chemist records his opinion in favour of the adoption of a lower temperature than 30° .

Professor J. J. Durack of Allahabad objects to 30° being accepted as a standard for inland stations for the following reasons :—

- “ 1. From an inspection of the tables given in Professor Brühl's paper referring to mean daily and maximum temperatures in different towns in India.
2. These temperatures are taken in open sheds (conditions laid down by the Meteorological Department), which are much hotter than our laboratories.
3. Most of our serious research work must be done during the winter months, and a mean winter temperature would consequently be more convenient than a mean yearly temperature. I would suggest 25° as a more suitable standard than 30° , but as a compromise perhaps 27° would find favour.”

Answers to these objections have been given by more than one correspondent, the general opinion being that the temperature of reference selected should be above rather than below the mean maximum temperature, so that during the day-time it should be necessary to raise the temperature of any instrument rather than to cool it to bring it to the standard. Everybody who has had practical experience of thermostatic work knows how much easier it is to keep the thermostat above than below the room temperature. Mr. J. T. Burnham, Nilgiris, confirms these remarks. He says : “ Work is more accurately carried out if the temperature aimed at is slightly above the temperature of the laboratory than below it.”

Professor Michie Smith, Kodaikanal, thus gives his experience as a physicist. “ More work of an experimental kind is done when the temperature of the laboratory is below than when it is above 30° , and it seems that it is better to have a standard which is above than one which is below the ordinary working temperature.”

Dr. Leather, Pusa, holds similar views. He says : “ It is easier to maintain a vessel at a temperature greater than the atmospheric one than below it. It is better to select a temperature near to the laboratory maximum so as to provide principally for hot-weather conditions.”

A temperature of 15° is above the mean temperature of England and Central Europe, and if what might be termed a corresponding temperature were fixed for India, that temperature should be above 28° . Since chemists and physicists have sometimes found 15° to be an inconveniently low temperature for a standard in the West, it would seem that 30° would not be found to be an inconveniently high temperature for a standard of reference in India and the Tropics.

Mr. R. Ll. Jones, Madras, advocates 28° as a standard in electrical work. He remarks :—

“ It appears to me that 28°C . is the most convenient temperature to adopt as a standard. The reasons why this value is taken are briefly the following :—

“ For accurate standardising and high precision work it is necessary to carry out the operations in a constant temperature room. It is also very desirable to secure this constant temperature without artificial means of heating and cooling, if possible. Hence in selecting a standard temperature it is advisable to fix on such a temperature as can be secured with ease and certainty and kept constant with the least amount of help from subsidiary machinery.

“ Constant temperature rooms are generally built underground in the middle of a massive block of buildings so that the daily variations in temperature are quite inappreciable. The only variations in temperature in such a room are the seasonal or annual changes. The further down the room is the less will these changes be—at 20 or 30 feet they are very small. The temperature at such depths is in India close to 82°F . or 28°C . according to the best observations. This is also approximately the mean temperature of the sea in the tropics and of India as a whole, I believe. Hence it seems natural to take 28° as the standard temperature as it appears to be the mean temperature of the equatorial belt of the globe. The fluctuations from it in ordinary work will be more evenly distributed on either side of it, and their average magnitude (irrespective of sign) will consequently be less than if any other temperature were taken as standard. The corrections to be applied will hence be smaller and the uncertainty on this account will be reduced.”

These observations are of interest, but we need hardly consider sea water, and our experience is that the majority of laboratories in India are not constructed of massive materials, nor are the usual operations conducted in underground cellars.

As regards tap water supplied to the laboratories its temperature is likely to vary considerably in some localities, while in others it is fairly constant. Professor T. K. Gajjar reports that the water temperature in Bombay fluctuates between 27° and 29° . Mr. A. W. Bishop of Trevandrum states that water from the main is usually nearer 25° than 30° . These facts favour the adoption of the latter figure as a temperature of reference. By means of an electrical resistance thermostatic arrangement the water may be kept constant at 30° . Such an apparatus has been constructed at Sibpur College for use in the calibration of burettes.

Dr. E. G. Hill, Allahabad, informs us that 25°C . is obtainable in his station from November 1st to March 15th, that is during the cold weather. From April to July the average laboratory temperature varies from 30° to 35° , in the rains it is about 30° to 33° , "consequently," he adds, "a standard of 30° would not be very useful to us in Allahabad, and 35° would not be at all too high. For Indian standards I should suggest 0° , 25° and 35° . A thermostat could be nearly always arranged to work at 35° , but it cannot for 30° in the hot weather and rains."

With regard to these proposals the Committee are not in favour of suggesting more than one temperature of reference for India. For this reason they have considered the proposal of 22° as an auxiliary temperature, and for various reasons they do not recommend its adoption. "Standards ought not to be multiplied," writes Rev. E. Francotte, and the object of the Committee is to propose one which is likely to be generally adopted and found practically useful in scientific work.

It will be noticed that Dr. Hill and Professor Durack (both of Allahabad, and therefore representative of an inland station) suggest 35° and 25° respectively. The mean of these two figures is 30° .

Two scientists in Madras, Professor R. Ll. Jones, a physicist, and Professor Erlam Smith, a chemist, advocate 28° and 33° respectively. Here again the mean is about 30° .

Further evidence in support of this temperature is given by Professor V. H. Jackson, Bankipore. He writes: "During the whole of the S. W. monsoon the temperature over the whole of the Ganges Valley is extremely uniform, about 29° , and a variation of one degree in any particular locality is exceptional. The temperature in laboratories corresponds closely to this mean, or during the daytime, in which most observations are made, is slightly higher. This renders Professor Brühl's suggestion of 30° especially suitable."

From a practical point of view Mr. R. L. Jenk's (Kasauli) remark is of considerable importance. "It is clear from records we get from distilleries and bonded warehouses all over the country that 30°C . is a more useful standard temperature than 15°C ."

Confirmatory evidence comes from Bombay. Mr. N. Q. F. Moos of the Observatory writes : " Seeing that all daily laboratory work is done during the solar hours, I incline to think that 30° would, on the average, best answer all requirements for the continent of India."

With regard to the important question of standards of length and weight which were legally adopted in 1894, " Indian standard air " being taken at 85°F. , the Committee has heard from Colonel S. G. Burrard, Trigonometrical Survey, and Lieut.-Colonel A. Milne, Assay Master, Bombay, to the effect that the change from 85° to 86° would be immaterial. The change, however, would probably have to be notified in the *Gazette*.

The advantages of having in India a temperature that serves the same purpose as 15° serves in Europe have been expressed by many writers. In all laboratories chemists will find a convenience in having flasks, burettes, pipettes and all volumetric appliances, as well as polarimeters, refractometers and the like adjusted to a definite temperature. Specific gravity table of acids, alkalis and alcohol would be more useful in India if determined at the new temperature.

For most physical purposes what is wanted is an accurate knowledge of how the physical coefficients (expansion, electrical conductivity, E.M.F., etc.) vary with the temperature over the whole range of temperature experienced during the working year. It is not a matter of very great importance what temperature is chosen for the normal provided it is higher than the mean annual temperature of the majority of laboratories.

Electrical standards for instance rarely attain their standardised value in this country, and even when the temperature coefficient has been supplied there is still uncertainty due to the fact that the temperature to which the correction is applied is usually outside the range within which the latter has been established.

The proposed temperature will probably be found suitable for appliances constructed for germinating seeds, for this process requires a higher temperature than that found in India in the cold weather. Mr. F. J. Chittenden, in charge of the laboratory of the Royal Horticultural Society's Garden at Ripley, says : " The optimum temperature for germinating most seeds of temperate climates lies about 80°F. "

It has been urged that it is difficult and expensive to obtain apparatus on whose calibration one can rely graduated for temperatures not recognised in Europe as normal ones. This is a point the Committee have not overlooked. Were the demand from most tropical countries, including India, a uniform one for apparatus graduated at a definite temperature, there would soon be little more difficulty in obtaining from stock reliable and suitable apparatus than there now is in obtaining articles graduated at 15° . The Engineering College, Sibpur, and the

Krishnath College, Berhampore, have in use complete sets of volumetric apparatus graduated at 30° made by Mueller-Uri of Brunswick. On the representation of one of the Committee the Kaiserliche Aichsamt in Berlin has consented to certify measuring apparatus for a temperature of 30° .

During the enquiry a method of standardising thermometers at the proposed standard temperature has been referred to. It is fortunately possible to obtain a point which has been fixed with great accuracy in the neighbourhood of 90°F . Professor T. W. Richards has described the transition (melting) point of sodium sulphate decahydrate by means of a mercurial thermometer which had been compared with the standard hydrogen thermometer in the Bureau International de Poids et Mesures at Sevres (*Zeitschrift für Phys. Chemie*, 1903, 43, 465). The temperature on the standard (constant volume) hydrogen scale is 32.383°C . or expressed in Fahrenheit degrees 90.288° . Hence the melting point of sodium sulphate can be used for the standardisation of thermometers at 90°F . (32.4°C .). Sodium sulphate decahydrate is easily obtained sufficiently pure for the purpose, for traces of chloride or other salts do not affect the melting point.

With regard to the future experimental work which the adoption of a temperature of reference will involve, the following suggestion made by Rev. H. Sierp, Bombay, will be of interest.

“It will ultimately be necessary to get a list of tables prepared on the lines of those of Bornstein, Lunge and similar books. Would it not be possible for the Committee to make arrangements in such a way that a laboratory is completely equipped and put aside for such determinations? The gain for chemistry in India would be enormous. Perhaps it will be possible in future years to develop such an institution into a Central Institute with a similar aim as the Physikalische Reichsanstalt or the new Chemische Reichsanstalt or Charlottenburg.” Such an institution may not be established in India in the near future, but educationists will agree that the compilation of temperature tables will provide advanced Indian students with tasks which will not only be congenial but which will constitute admirable means of training them in accurate work.”

The object of the present Committee has been in the direction of obtaining the opinion of scientific workers in India on the question of a temperature of reference for this country. While there is almost a unanimous verdict that such a temperature should be recognised authoritatively and the majority are in favour of 30° , which the Committee endorses, it remains to be discussed how this temperature would suit tropical countries in general. Dr. G. T. Walker and Dr. Simpson of the Meteorological Department have given valuable information and suggestions towards choosing a normal tropical temperature. A reference to a temperature chart of the world will show that.

excluding elevated areas with decidedly lower temperatures, the mean annual temperature in Mexico, Central America and tropical South America lies between 22° and 26° ; of the West Indies between 23° and 27° ; of Egypt between 20° and 28° (Cairo being 21°); of British and German East Africa down to Natal between 22° and 27° ; Batavia 26° ; and of tropical Australia between 20° and 29° . The only areas outside India where the mean annual temperature is above 28° are in Central Africa, and very small parts of Mexico, Arabia and Australia.

Dr. Simpson prefers the adoption of 25° for tropical countries, considering that the workers in India are few in comparison with those in other countries mentioned above. He also explains that workers in Europe and America often find it convenient to have tables and constants worked out for some higher temperature than 15° , and if the temperature of reference for tropical countries were near the temperature they require, they would no doubt adopt it, but if far removed they would rather take the temperature which is actually most useful to them. He thinks that many more tables would be calculated to 25° than to 30° .

With regard to these remarks it must be borne in mind that the mean annual temperature is in no way an expression of the temperature conditions under which scientific work must be carried out in laboratories. It is proposed to fix a temperature of reference such as will be convenient to workers who are obliged to carry out investigations during the hot months in tropical countries. Hence, although the mean temperature of the West Indies may lie between 23° and 27° , it is probable that temperatures in laboratories in that part of the world will more frequently be above than below 30° . From data furnished by Berghaus Atlas the July isotherms of the Southern United States lie between 26° and 36° , those of Mexico and Cuba are close to 28° . Khartoum has a July isotherm of nearly 36° and a January isotherm of 24° . The January isotherms of Queensland lie between 26° and 30° . The mean daily temperature of all countries coming within the radius of this discussion will probably be well above 25° during a considerable part of the year.

In conclusion we are of opinion that the temperature of reference for India generally might be accepted as 30° . The reasons advanced in the earlier part of this report are that the temperature aimed at should be above the mean air temperature and due allowance should be made for hot weather or maximum conditions. With regard to the tropics, however, we agree with Dr. Walker and believe that the matter is of sufficient importance to receive full discussion and be referred to the Royal Society for submission to the International Association of Academies, for it is only in some such manner that other tropical countries would have an opportunity of expressing their wants.

The following twelve gentlemen were balloted for as Ordinary Members :—

Mr. S. C. Williams, B.A., proposed by Dr. W. A. K. Christie, seconded by Mr. T. H. D. LaTouche; *Mr. S. B. Dhavle, I.C.S.*, Joint Magistrate, Gulzarbagh, proposed by Lieut.-Colonel D. C. Phillott, seconded by Mr. G. H. Tipper; *Lieut. W. M. Edwards*, Royal Garrison Artillery, R. A. Mess, Barian, Murree Hills, proposed by Lieut.-Colonel D. C. Phillott, seconded by Mr. G. H. Tipper; *Mr. W. F. Bolton*, Colonial Civil Service, United Service Club, Calcutta, proposed by Mr. H. G. Graves, seconded by Captain F. H. Stewart, I.M.S.; *Mr. S. Kemp, B.A.*, Senior Assistant Superintendent, Indian Museum, proposed by Dr. N. Annandale, seconded by Captain F. H. Stewart, I.M.S.; *Major Benjamin Curvey Oldham, I.M.S.*, Civil Surgeon, Alipore, proposed by Major L. Rogers, I.M.S., seconded by Lieut.-Colonel F. P. Maynard, I.M.S.; *Major Ernest Alan Robert Newman, M.D., Cantab, I.M.S.*, Superintendent, Campbell Hospital, proposed by Major L. Rogers, I.M.S., seconded by Lieut.-Colonel F. P. Maynard, I.M.S.; *Major William Wesley Clemesha, M.D., I.M.S.*, Sanitary Commissioner, Bengal, proposed by Major L. Rogers, I.M.S., seconded by Lieut.-Colonel F. P. Maynard, I.M.S.; *Captain William Frederick Harvey, M.B., I.M.S.*, Acting Director, Pasteur Institute, Kasauli, proposed by Major L. Rogers, I.M.S., seconded by Captain E. D. W. Grieg, I.M.S.; *Captain Robert Markham Carter, I.M.S.*, Pasteur Institute, Kasauli, proposed by Major L. Rogers, I.M.S., seconded by Captain E. D. W. Grieg, I.M.S.; *Captain John D. Sandes, B.A., M.B., B.Ch., B.A.O. (Dub. Univ.), L.M. (Rotánda), I.M.S.*, 3, Loudon Street, Calcutta, proposed by Major L. Rogers, I.M.S., seconded by Captain T. F. Owens, I.M.S.; *Dr. T. H. Bishop, L.R.C.P., L.R.C.S., D.P.H.*, proposed by Surgeon-General C. P. Lukis, I.M.S., seconded by Major L. Rogers, I.M.S.

The following papers were read :—

1. *Discovery of the Abhisamaya-lankara Sastra, by Maitreyanatha.* By MAHAMAHOPADHYAYA HARAPRASAD SHASTRI.

2. *An Examination of Max Müller's theory of the Renaissance of Sanskrit Literature in the Fourth Century A.D., after a lull of Seven Centuries since the rise of Buddhism.*—By MAHAMAHOPADHYAYA HARAPRASAD SHASTRI.

These two papers will be published in a subsequent number of the *Journal*.

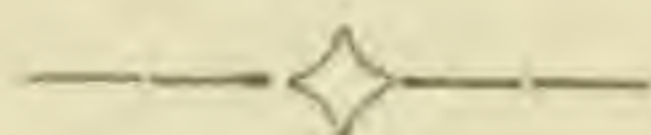
3. “*The Fight for the Cows*” in the *Rigveda*.—By A. C. SEN.
This paper will not be published in the *Journal*.

4. *Who Planned the Taj?*—By REV. H. HOSTEN, S.J.
Communicated by the *Philological Secretary*.

5. *The Marsden Manuscript in the British Museum.*—By W. R. PHILIPPS and H. BEVERIDGE. Edited by REV. H. HOSTEN, S.J. Communicated by the Philological Secretary.

6. *Note of a Visit to Kapala-Muchan.*—By ANAND KOUL. Communicated by the Philological Secretary.

These three papers will be published in a subsequent number of the *Journal*.



The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Wednesday, the 11th May, 1910, at 9-30 P.M.

LIEUT.-COLONEL A. H. NOTT, I.M.S., in the chair.

The following members were present :—

Lieut.-Colonel J. T. Calvert, I.M.S., Dr. C. H. Elmes, Dr. W. C. Hossack, Dr. A. M. Leake, Captain J. W. D. Megaw, I.M.S., Captain J. D. Sandes, I.M.S., Captain H. B. Steen, I.M.S., Captain D. White, I.M.S., Major L. Rogers, Honorary Secretary.

Visitor :—Dr. Satyaranjan Sen.

The minutes of the last meeting were read and confirmed.

Six presentations were announced.

Captain Megaw showed cases of (1) Locomotor ataxy, (2) Syphilitic paraplegia, and (3) Crossed hemiplegia due to a lesion of pons.

Captain A. D. White showed X-ray plates illustrating (1) a rubber drainage tube within a liver abscess cavity, (2) an osteophyte of the under surface of the os calcis following injury, and (3) of a tumour of the lower jaw. He also exhibited a specimen of a gangrenous twisted Meckel's diverticulum which had produced fatal intestinal obstruction in a child.

Lieut.-Colonel A. H. Nott read a paper on a case of placenta Praevia.



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OF THE

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Lieut.-Colonel D. C. Phillott.

23. The Word "Scarlet."

By GENERAL A. HONTUM-SCHINDLER, of Teheran.

[In connection with a short note by Dr. Denison Ross which was published in August, 1908, in this Journal, General A. Hontum-Schindler, the well-known authority on all that concerns the Persian people and their language, has been good enough to send us the following interesting paper for publication.]

It seems to be generally accepted that the word *scarlet* is derived from the Persian or Arabic, and dictionaries give many forms of the etymon, but it is not certain that all the forms given have the same etymology, neither that they mean the same thing. Of all the forms given I consider *sakirlāt*, or better *saghirlāt*, to be the original and fundamental one. The various forms of the word and their meanings, as I find them in the dictionaries which I possess, are as follows:—

Ferhang-i-Rashīdī.

Sakirlāt.—A well-known woollen cloth (*jāmahisūf*) made in Europe. It is not known whether the word is Persian or of another language, and some say that the Persian has *ghain* instead of *kāf*.

Siklāt.—According to the *Kāmūs* a woollen cloth used for covering howdahs of women.

Siklātūn.—a town in Rūm where *siklāt* and other stuffs are woven, and as most pieces are woven in black and blue (*kebūd*), anything black and blue was named after that town. Mulla Surūrī Kāshī is of opinion that *siklātūn* was originally *siklat-gūn* meaning blue, because in former times the colour of *siklāt* was always blue.

Ferhang-i-Surūrī.

Sakirlāt, sakirtāt, sakilāt.—My copy omits the meanings.

Ferhang-i-Jehāngiri.

My copy does not have the word at all.

Burhān-i-kātibī.

Sakirlāt—A woollen fabric woven in Europe, also in Rūm; it is also written with *t̄*.

Sakillāt, Sakallāt—Same as *sakirlāt*, a well-known stuff (pārchah) of wool; also written with one *l* and *t̄* (*siklāt*).

Siklātūn—Same as *sakirlāt*; it is also called cloth of Nakhchivān. Some are of opinion that it is a cloth woven in the city of *Siklātūn*. It is also the name of a colour, some say blue because *Siklātūn* was originally *Siklāt-gūn* and in former times the colour of *siklāt* was always blue.

Burhān-i-Jāmi.

Sakirlāt, sakillāt.—A woollen cloth made in Europe, apparently ordinary broad-cloth (*māhūt*), etc., as above.

Saklātīn—Same as *sakirlāt* and cloth of Nakhchivān.

I have a collection of letters written by Rashīd-al-dīn, the Vazīr of the Mongol kings of Persia, from circa 1290 to 1318, and in letter No. 34 to his son Khojah Majd-al-dīn, ordering various stuffs and stores to be sent to Tabriz from the different provinces, the word *saghirlāt* appears twice, once in the list of things to be sent from Rūm and again in the list of Arsinjān. The opinion of the Ferhang-i-Rashīdī that *ghain* may stand for *kāf* is here confirmed, but nevertheless the word is not Persian, but of foreign origin as the *t̄* shows.

It appears that the Persian lexicographers of the 17th century considered *siklāt*, *siklātūn*, *siklātīn* to be the same as *sakirlāt* or *saghirlāt*, viz., a blue woollen cloth made in Europe. But *siklāt* is the Arabic rendering of the Greek *kyklas* (κυκλάς), "a woman's gown cut circularly," and in the Middle Ages became to mean a heavy damask-like *silk* stuff. In the latter Middle Ages it was generally interwoven with gold. In Europe it was known as siglaton, and that made in Europe [notably at Al Maryat (Almeria) in Spain, as Edrisi relates, circa 1150] was mostly scarlet, while that made in the East, notably in Baghdad and Tabriz, was usually dark blue, as the Persian dictionaries have it *s.v.* *siklātūn*.¹ The Persian lexicographers are right as to the colour of the *siklātūn* but wrong as regards the material. *Sakirlāt, saghirlāt* (and perhaps variants of it

¹ W. Heyd, Geschichte des Levantehandels im Mittelalter, quoting Prof. Karabacek's Ueber einige Benennungen mittelalterlicher Gewebe, Mitteil. d. K. K. Mus. f. Kunst u. Industrie, Wien, März, 1879. It has *Cyclas, Kreisförmig zugeschnittenes Frauenkleid*. Pape, Griech. Wörterbuch has *κυκλάς, ein Staatskleid der Frauen mit rund herum-laufendem Saumo*.

[N.S.]

as *sakillāt*, *sakalāt*) is the Chinese sa-ha-la, a *woollen* cloth. Probably at first all *saghirlāt* was red and the word introduced into Europe became in the Latin of the Middle Ages *scarlatum*, *scarletum*, adj. *scarlatinus*, the middle high German *scharlāt*, *scharlachin*, Luther's (1522) *scharlacken*, *scharlaken*, English *scarlet* (Tyndale's N.T. 1525?), French *escarlatte*, *écarlate*, etc., and denoted the *colour* and not the stuff. The best *siklātūn* was made in Baghdad and Tabriz, and the fact of Rashīd-al-dīn's ordering for his household at Tabriz a large quantity of *saghirlāt* from Rūm and Arsinjān would also prove that it was not the same as *siklātūn*.

In the lists ordering *saghirlāt* from Rūm and Arsinjān there also appear *kimkhā*, *katījah*, *ṣūf* and *katān*. It is difficult to say what these fabrics precisely were. *Kimkhā*, also *Kimkhāb*, *camocato*, *camocas*, etc., of the Middle Ages, later, the *Kincob* of Anglo-Indian trade, was a damask silk, frequently, not always, interwoven, or embroidered with gold (Heyd), while the *Burhān-i-katī* explains it as a figured or painted cloth (*jāmah-i-munakḳāsh*) of many colours and also of one colour. *Katījah* is explained as a kind of velvet or plush (wool or silk?); *ṣūf*, originally wool, may here stand for an all-woollen cloth as specified in another letter (No. 47) "*ṣūf mansūj az pashm*," *sūf* woven of wool, or for a watered, or waved (*moire*) stuff half silk half cotton as nowadays made in India and Persia (Yezd, Kashan) and called *ṣūf*; *katān* or *kattān* is linen.

The "*skarlets* in great demand" in India in the latter part of the 16th century (Birdwood's Report on the E. I. Company's trade) were no doubt the *saghirlāt* and *sakirlāt* of the lexicographers, *scarlet woollen cloth*, broad-cloth, manufactured in England, the *māhūt* of the present day.

Kimkhā, I believe, is a Mongolian or Northern Chinese word; may not *sakirlāt* have a similar origin? In Rashīd-al-dīn's letter quoted above there is also a list of various stuffs ordered from *Khatai* (Northern China). The list has *kimkhā*, *urmak* (a woollen cloth), *at'lās* woven of wool,¹ *nakh* (*nacco*, *nacchetto*, *nacchetti de seta d'oro*, of Rubruquis, Marco Polo, Pegolotti, gold brocade), etc., etc., but neither *saghirlāt* nor *siklāt*.

NOTE.

Among the records of the Home Department I have recently come across a Portuguese letter, dated November 21st, 1787, addressed to Lord Clive by the king of Siam. In this letter occur many interesting words, among them the word *escarlata*. The king sends as a present (*sagoate*)² to Lord Clive

¹ Atlas as now made in India is, I believe, half cotton half silk.

² Another form of *Sagoate*, from the Turkish *سيوغات*.

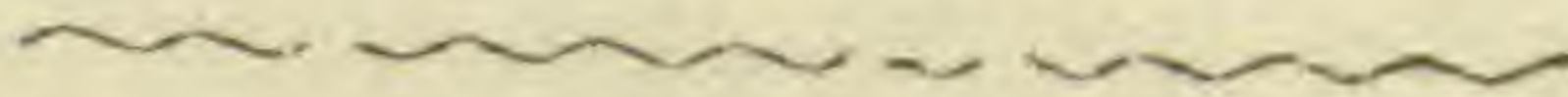
several carpets (*alcatifa de fiado*), some muskets (*espringardas*), and two pieces of vermilion scarlet (*duas peses de escarlata vermelho*).

This last phrase proves that scarlet at this time still represented a material and not a colour.

(In Jäschke's Tibetan Dictionary we find under *saq-lad* (སཀ་ལཱ་) two meanings :

- (1) fine-cloth, European broad-cloth ; and
- (2) round or twisted lace, round tape, strips of cloth set with spangles.)

E. DENISON ROSS.



24. Śrī Hemacandrācārya's Yoga-Śāstra with the author's own commentary called Svopajña-vivaraṇa published by the Asiatic Society of Bengal.

A Rejoinder by the Editor to the Review published in the Zeitschrift der Deutschen morgenländischen Gesellschaft by Dr. Ferdinando Belloni-Fillipi.

By SRI VIJAYADHARMA SŪRI.

For many years it has been my duty and pleasure to teach Hemacandra's Yoga-Śāstra to successive generations of Jaina Sādhus and Śrāvakas. The want of a critical edition of the text with the author's own commentary was keenly felt by every one engaged in the teaching and study of it. A European edition of it, that was published some 35 years ago, contained the *text only* printed in Roman character of the first four of the 12 prakāśas with a German translation. This edition, therefore, was of very little use to the class of students taking real interest in its study. There was another edition containing the text only, and a Gujrati translation both of the text and the commentary published by Bhimsi Mānik, and was, therefore, not suited to the purpose of the students desiring to follow the subject in its original as laid down by the author both with respect to text and commentary. I was every now and then requested by my students to undertake an edition containing both the text and the author's own commentary on it, but owing to the scanty leisure at my disposal I was obliged to postpone this work for a very long period. Three or four formes of the first fasciculus of my edition were already printed when I was informed of another edition being taken in hand by Dr. Ferdinando Belloni-Fillipi under the auspices of the Jaina-Dharma-Prasāraka Sabhā of Bhāvnagar. And a few days later, that Sabhā sent to me for revision the first instalment of the press copy prepared by the learned scholar. This manuscript remained with me for a period of three months. Though I am not in a position to reproduce all such points which I marked then in his manuscript, I shall quote one point which I well remember and which will clearly indicate the nature of the difficulties he had to meet with in the course of his work.

For my reading बोधि, in page 5, line 9, he gives बधि and marks it as an unsolved mystery. It would never have been the case with a Jaina who knows that बोधि is a पारिभाषिकशब्द or technical word and means सम्यक्. It would be enough to say

here, that every page of Dr. Belloni's manuscript which I examined made me more and more convinced that the Yoga-Sāstra with its commentary is a book fit rather to be edited by a Jaina than by a non-Jaina, however erudite he might happen to be. So I continued my work as energetically as ever. In the matter of adopting the text and the variants I have followed the Indian method. The Indian Pandits as a rule adopt the authoritative and the traditional readings for their text, and in this they are guided first by the reading handed down by Guruparamparā (*i.e.*, by successive generations of teachers), and, secondly, by citations of passages made in other works. For instance, many of the passages in the Yoga-Sāstra occur verbatim in the Mahāvīra-Carita (a work of great value and merit written by Hemacandra before the Yoga-Sāstra) and other works written before or after the Yoga-Sāstra by Hemacandra and various other writers. I have always adopted that reading in my text, which is both traditionally known to me as the original, and in which I had the support of the majority of works collated (these are thirteen in number as will be seen in the sequel).

समुद्मूलन, page 2, line 4 of my edition, was found invariably in all my manuscripts with the exception of the one marked ख (for the designation of manuscripts: *vide* the critical notice appended to this rejoinder) which has अपनयन—and this I have given as a variant in the footnote; both these words mean the same thing and both of them equally suit the context.

Then comes my reading सानन्दं, page 4, line 17. This is the reading to be met with even in the Mahāvīra-Carita (2nd Sarga, 67th Śloka, Trisastī-śalākā-caritra, Tenth Parva, leaf 13, Jaina-Dharma-Prasāra-kā' Sabhā's edition. As regards this work of Hemacandra, *vide* Peterson's Fifth Report on the Search of Sanskrit Manuscripts in Bombay Circle, pp. 4—7, April 1892—March 1895) where it is cited by the author from his Yoga-Sāstra. All the manuscripts which I have got of this latter book contain सानन्दं, which is happier and more sensible.

Now of बिले in the Śloka कुत्रायन्यत्र मा यासीद् दृष्टिर्मे विषभौषणा । इति तुण्डं बिले क्षिप्त्वा पयो स समतामृतम् ॥ २९ ॥ (page 15, line 11) which when translated runs thus:—“Let not my glance terrible like poison go anywhere else, with the object in view, he drank the ambrosia of quietitude putting his mouth into a hole.” The word बिले thus means “into a hole.” I cannot see what the word बले would mean in the present Śloka. Neither do I find it in any of my manuscripts of the Yoga-Sāstra and of the Mahāvīra-Carita, where it occurs in the 269th Śloka of the 3rd Sarga. It occurs also in the same Kathā by the great Hari-bhadra Sūri, in his Āvaśyaka Vṛtti in the line ताहे सो बिले तुण्डं

[N.S.]

etc., leaf 84 of our manuscript of the work. We find it again in *Āvassaga-nijuttī-chunnī* of Jinadāsa Mahattara in the line ताहे सो बिले तुंडं etc., page 70 of our manuscript, dated Samvat 1500. Everywhere I find बिले, and see no reason why the critic should introduce वले in this instance and mark बिले B. D. and वले A. B.

I need not dwell much on लोष्ट (page 18, line 20) and लोष्ट; both the forms being correct, I should simply say that all my manuscripts give the form लोष्ट. I consulted *Mahāvīra-Carita* (4th Sarga, 180th S'loka) on the point, there too I find लोष्ट.

Now for my reading एतत् (page 33, line 17): the variant एनत् which the critic finds in his manuscript A. is grammatically wrong. According to the rule त्यदामेनदेतदो - ॥ २।१।३३ ॥ (*Siddha-Hema*) with the अधिकार of नित्यमन्वादेशे ॥ २।१।३१ ॥ (S. H.) the form is inadmissible here, since there is no trace of anvādeśa in the lines बद्धिः कथञ्चिद् यद्येतत् प्ररोचेत तथापि हि etc. It is unusual for an Indian Pandit to mention the form एनत् even as a variant in the present instance.

Now षडभ, which the critic suggests in place of my दृषभ (page 49, line 3), when standing immediately after एषा, may bring in some dubious points in question, and hence better to be avoided according to the rules of poetic diction. दृषभ is synonymous with षडभ, and its use in the present case is essential in consideration of the Prasāda Guṇa of a Kāvya. I have got दृषभ in all my MSS. It occurs also in connection with the same anecdote in the line “अस्त्वेषा दृषभस्य विष्टपपतेः पत्नी द्वितीयेत्यसौ—” in the *Padmānanda Kāvya* of Amaraçandra Sūri, 8th Sarga, S'loka 171 (leaf 55, of my MS.).

Then in page 68, line 12, हारात्रीहारहरिणा नाजहाराऽतिहारिणः । चिरकालार्जितानात्मयशोराशौनिवाऽखिलान् ॥ ७९ ॥ he finds the variant राशौनिवाखिलाम् in his manuscripts A, B, and C. Manuscripts containing such a reading may be high-class ones, but the Pandits I believe, are sure to discard it as a clerical mistake. यशोराशौन् refers to हारान् by Utpreksā, and this हारान् being plural यशोराशौन् must also be plural, moreover the word राशि (and one short evident point that could be marked even by a superficial reader is that a word like राशौ ending in long ī, as the critic puts it in राशौनिवाखिलाम्, is nowhere to be found in the whole range

Sanskrit literature either in masculine or in feminine, I have taken therefore राशि which is but too patent a correction of राशौ) is never feminine according to Hemacandra and other Indian lexicographers (*vide* Hemacandra's *Lingānuśāsana*, Kevala-pullīṅga *Prakarāṇa*, 15th *Sloka*, पञ्चराशिवराशृषिः: *vide* also the *Amara*, *Kāṇḍa* 2nd, 6th *Varga*, *Sloka* 42nd, पुञ्जराशौ तूत्करः कूटम-स्त्रियाम्; *vide* also the *Vaijayantī*, Gustav Oppert's edition, page 186, line 6, राशिपुञ्जोत्करा नरि.

Again in page 83, line 5, सुरादुरनरोपाख्या प्रीतो स्त्वेष मयास्य किम् the critic has in his manuscript A मयापि in place of our मयास्य. If we consider this line in connection with the one that follows this, *viz.*, मार्ग एव क्षमः क्षम्बे रथः सज्जोऽपि भज्यते, it should be thus construed एष सुरादुरनरोपाख्या प्रीतोऽस्तु, मयाऽस्य किम्, सज्जोऽपि रथः मार्गे एव क्षमः क्षम्बे (तु) भज्यते and the meaning we have then is "he is pleased by being served by gods, demons and men; what am I to him (मया अस्य किम् translated in the active voice); even a well-equipped chariot, adequate for the road; (but) is broken in the bush."

[Here Bharat's brother compares himself with bush: he means to say that gods, etc., helped Bharat to run smoothly in the way of prosperity, whereas he may cause his destruction just as a way through the bush may lead to the destruction of a chariot. This passage also occurs in the same story of Bharat in the *Ādiśvara Caritram*, *Sarga* 5, *Sloka* 146 (*vide* the *Tri-ṣaṣṭi Śalākāpuruṣa Caritra*, *Jaina-Dharma-Prasārika Sabhā's* edition, leaf 129)].

The reading मयाऽपि which the critic has in his manuscript A in place of our मयाऽस्य fails, as far as I can judge, to give any meaning. Our explanation is simple and suits the context.

Then again page 103, line 15. I have पुत्रौ प्राणप्रिया मृता in the couplet नम सर्वस्वनाशोऽभूत् पुत्रौ प्राणप्रिया मृता । मृत्युकोटिं वयं प्राप्ता धिगहो दैवच्छ्रितम् ॥ ४६ ॥ Here the reading प्राणप्रियामृता of the critic's manuscript A is seriously objectionable, since the *Samāsa* cannot be justified in any way; if, however, we make the *Samāsa*, the word मृत in that case would be made the first member of the compound. If it be argued that प्राणप्रियामृता is a euphonic combination, that is also futile, since अमृता can give no meaning in the sentence.

Again in page 134, line 14, where I have given धान्यादिवापः, the critic finds धान्यावापः in all his manuscripts in its place.

[N.S.]

Now this धान्याबापः is, as is known to every Jaina, a defective reading. The word आदि is a necessary adjunct here. According to our Sāstras (*vide* Siddhasena Sūri's Pravacana-Sāroddhāra, Tīkā, 67th Dvāra, where the writer says यत्पुनः प्रथमत आरभ्यते स्वार्थं पश्चात् प्रभूतान् यावदर्थिनः पाखण्डिनः साधुन् वा समागतान् अवगम्य तेषामर्थायाऽधिकतरं जलतण्डुलादि प्रक्षिप्यते सोऽध्यवपूरक इति) the word आदि indicates here that in addition to धान्य, *i.e.*, तण्डुल water, grain, wheat, etc., should also be taken. This is the Sanskrit elaboration by Hemacandra of the Prākṛit gāthā which he gives at the head verbatim from the Piṇḍa-Niryukti (*vide* leaf 18 of the MS. of the work belonging to the Royal Asiatic Society of Bengal). Malayagiri Sūri in his commentary of the gāthā takes the same view as we have done.

It is to be seen from the discussion given above that I do not pass over any thing that comes on my way without examining it in all its details. I should further like to state, that many other similar things I come across in course of my work, and at every point I have to spare a certain amount of my energy before I can definitely put down anything either as text or variant. And with a man working in this way the work will multiply with the multiplication of independent MSS. of the work he is editing. But this is not disgusting to me: I take more interest in it as is always the case with a man to whom the task of editing a work is a labour of love.

Now it remains for me to examine critically Dr. Belloni-Fillipi's other remarks concerning my work. In page 4, line 10, in the Sloka अतुच्छमुच्छलन्ति स्र स्वात्रं कर्तुमिवार्णवाः । विवेपे सत्वरं तत्र नर्तनाभिमुखेव भूः ॥ ११ ॥ Here I have विवेपे, and in this connection I have the support of all the MSS. that I have got with me. On the other hand, the critic holds that the proper reading should be विवेश, since this he finds in all his MSS. and thinks it more appropriate with respect to स्वात्रं कर्तुं and to the following तत्र. But as I understand, the word विवेश means "entered", and if the word be possibly inserted here, it must have for its nominative भूः "the earth", and as a matter of common sense the earth cannot enter as a whole into anything that is situated on its own surface, as the मेरु is. My use of the word विवेपे is justified from the following considerations: The earth is trembling (*lit.*, trembled as my reading विवेपे means) in its own place, and by Utpreksā this trembling of the earth or the earthquake caused by the Lord's pressing the Meru with his thumb (since the force exerted upon any body will be conveyed to the base through its medium) has been taken to mean "dancing"

unanimously by all the commentators and translators. The word **तत्र** here means “on the occasion,” “at the time.” On this point the Gujrati translation of the Yoga-Sāstra (page 3, lines 14—17) published by Bhimsi Manik referred to above and also the Gujrati translation of the Mahāvīra-Carita (page 21, lines 15—20) (where the very same story has been given in the very same words) published by the Jaina-Dharma-Prasāraka Sabhā of Bhāvnagar, may also be consulted. And besides, all the MSS. of the Mahāvīra-Carita that I have got with me have **विवेपे** not **विवेश**, *vide* also recently published Mahāvīra-Carita, Sarga 2, Śloka 63.

Again in page 5, line 2. I read **सपयित्वाऽर्चयित्वाऽऽरात्रिकं कृत्वेति तुष्टुवे** as I find it in all my MSS. except **क ख** and **ग**. The reading of these three MSS. I have given in the foot-note. Grammatically **सपयित्वा स्यापयित्वा** are both correct according to the rule **ज्वल-दल ॥ ४ । २ । ३२ ॥** (S. H.). I have consulted the MSS. of Mahāvīra-Carita: there too I find the reading I have given in my text. “**सपयित्वाऽर्चयित्वाथ कृत्वाऽऽरात्रिकमस्तुवौत्**” I do not find in any of my MSS. of the Yoga-Sāstra.

Now **पाणिफणच्छत्रौ** which the critic has in his MS. A for my reading **पाणिफणच्छत्रौ** (page 46, line 5), does not appear to be correct, and I do not find it in any of my MSS. The reading suggested by the critic on the authority of his MS. A is wrong according to Hemacandra (*vide* his Liṅgānuśāsana, Dr. R. Otto Franke’s edition, page 13, line 16); **स्युर्वारिपणफण-फण** is never neuter, so according to the rule **विभिन्नलिङ्गवचनां नातिहौनाधिकां च ताम् । निवध्नन्ति** Vāgbhaṭālaṅkāra, 4th Pariccheda, 58th Śloka, it cannot have Upamāna and Upameyabhāva with the neuter word **इत्र**.

Now of my reading **भवनं**, page 68, line 19, which the critic also has in his MSS. B, C, and D. Again on the authority of his MS. A he suggests the improvement **भुवनं**. As the word **भुवनं** never means a “temple” or a “house,” it appears that the critic failed to find out the meaning of the lines where it comes, as is accepted by the Jaina authorities. The word in the present instance has been unanimously taken by all of them to mean the “temple of Sindhu-devī.” The same story of Bharata occurs again in Hemacandra’s Ādiśvara-carita (*vide* 4th Sarga, 216th Śloka of the edition published by the Jaina-Dharma-Prasāraka Sabhā of Bhāvnagar, oblong leaf 101). The meaning is clearly given by the line which reads **निकषा सिन्धुसदनं स्कन्धावारं न्यवीविशत्**—in the very same connection as will be

[N.S.]

evident on reading the neighbouring lines. The consultation of the Gujrati translation of the Yoga-Sāstra, page 46, lines 5—8, will make the matter at once clear.

With regard to critic's reading *त्रिदशैस्त्रिदशहारः* which he thinks to be incomparably superior to the one given by me, *viz.*, *विदशहारयोगेन*, page 43, line 22, I may say that I cannot find much difference between the two.

Again from the reading *न तातो नच विक्रमः* which he suggests as an improvement for my reading *न तातोत्तमविक्रमः*, page 82, line 13, I cannot make out anything. To me it does not give any sense whatever in spite of my utmost exertion to find one.

Then for my reading *तदा ज्ञात्वा*, page 7, line 7, he puts *तदाज्ञात्वा* (*tad ājñātvā*). The *ājñātvā* as he gets it from *तदाज्ञात्वा* by euphonic disjunction, cannot be supported in any way according to the rules of Sanskrit Grammar समासेऽनञ्पूर्वे क्त्वो ल्यप् ॥ ७ । १ । ३७ ॥ (Pāṇinīya) अनञः क्त्वो यप् ॥ ३ । २ । १५४ ॥ (S. H.); the proper form according to these rules should be *आज्ञाय* not *आज्ञात्वा* since the root *ज्ञाश्* is preceded by *आङ्*, therefore, it cannot take *क्त्वा* but it must take *यप्*. Such grammatical mistakes are unpardonable even for a tyro.

Again for my reading *दर्शनमात्रं*, page 36, line 9, he suggests *दर्शनं मात्रं*: this is clearly a mistake, since for *ekārthibhāva* the omission of *Vibhakti* is quite essential.

Now of *कपाटान्तगुहाम्* which he gives in place of my reading *कपाटां तां गुहाम्*, page 76, line 9. The reading I have given is without exception the one to be found in all my MSS. The reading suggested by the critic is not so happy as ours. This will be evident to any person knowing Sanskrit if he cares to bestow a little thought on it.

Now of my readings *दर्शितं*, page 30, line 13; *धीरं* page 7, line 9, I have to say that they are authoritative and are to be found in the majority of my MSS. Not only that, on a little consideration it will be found that they are more appropriate to the contexts than those suggested by the critic.

The form *दुर्दमः* which I find only in two of my MSS., and consequently which I have given as a variant in the foot-note, is not so happy as *दुर्मदः*, page 104, line 6, of my text; this will be evident to anybody knowing Sanskrit considering the matter deeply.

Again such of my readings as *आखुद्येष निखन्निव* (page 10, line

6), गृहणीयाद् (page 14, line 18), एवंभूतो (page 24, line 13), अधिस्तुवित (page 26, line 9), तत्सम्बलम्बिर् (page 40, line 1), ज्याभिर्घोषं (page 67, line 16), which I have got in all my MSS.,—not only that, but which are found in other works such as the Avacūri on the Yoga-Sāstra, the Mahāvīra-Carita (one of the MSS. of which that I have got with me is very old and very correct),—are the only authoritative ones. The readings suggested by the critic, I am sorry to say, are not to be found in any of my MSS.

Now we shall take up our readings अनुभाग and अनुभागो (page 114, lines 16 and 21) and consider it in some detail. It is again the ignorance of Jaina technology that leads the critic to suggest अनुभाव to be inserted in place of अनुभाग which he says to be faulty on the authority of his MSS. A, B, C and D, and strengthens his views by quoting a random authority from the Tattvārthasūtra. Both the forms are correct though ours is the one of frequent use and his is of less common use. We shall quote here a number of instances equally authoritative with the one given by the critic proving the validity of our reading. *Vide* the First Karmagrantha by Devendra Sūri. In his own commentary of the 2nd gāthā he gives the following:—

कर्मपुद्गलानामेव शुभोऽशुभो वा घात्यघाती च यो रसः सोऽनुभागबन्धः रसबन्ध इत्यर्थः उक्तं च— ताण रसो अनुभागो, अन्यत्राप्युक्तं अनुभागो रसः प्रोक्तः—It occurs also in the Fifth Karmagrantha (which we have got with the Avacūri) and in many other places. The Bhāvnagar edition of Navatatva (page 97), the commentary on Sthānāṅga-sūtra by Abhayadeva Sūri, the Dīpikā on this latter book by Megharāja (leaf 6 of our MS. of the work) and the Vṛhad-dravya Saṁgraha of Nemi-candra with the commentary of Brahmadeva (this work, belonging to the Digambara sect of the Jainas, is of great value and authority, *vide* page 80 of the Parama-Sṛuta-Prabhāvaka-Maṇḍala's edition) may also be advantageously consulted. Everywhere we find अनुभाग.

In what follows it will be proved by proper argument that I am not wrong in all those places where the critic says that I am. Let me examine critically the validity of my reading किं निमित्तं (page 32, line 3); here it is better to give the two words separately, since here is no compound as will be evident on a little consideration. It occurs in the same way as we have put it in the Triṣaṣṭi-Sālākā-Puruṣa-Carita by Hem-candrācārya (*vide* 356th Śloka of the 7th Sarga in Parva 4th of the book published by the Jaina-Dharma-Prasāraka Sabhā of Bhāvnagar).

Again our reading संक्षया in the passage प्राप्तायुःकर्मसंक्षया is

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indisputably correct according to my views. It is an adjective to मरुदेवौ, and when the Samāsa is expounded we shall have प्राप्ता आयुःकर्मणः संक्षयो यथा सा, otherwise if we put संक्षयात् then the use of the word प्राप्ता will be useless and redundant.

Now पापं फलं is the critic's correction for our reading पापफलं, page 93, line 5 : what is the objection if we expound the expression as पापं च तत् फलं चेति पापफलं ?

Again for my दुहितुः वा, page 100, line 22, he puts the other optionally common form दुहितुर्वा, blaming the former as a striking mistake. Does he not forget here the well-known Kārikā which closes with the words वाक्ये तु सा विवक्षामपेक्षते, thus defending the form we have given ?

Now for our readings सुसुमा and सुसुमाम् he suggests the forms सुंसुमा and सुंसुमाम् as correct. These are the proper names that occur also in the Upadeśamālā-Vṛtti and Bharateśvara Bāhubali Vṛtti in the Adhikāra of Cilai-putta (Cilāti-putra) in several places.

Now we have to say something in connection with the critic's remark that भास्वदंशुभिर् (page 130, line 14) the word of the text should be added before आदित्यकिरणैः in the commentary, the latter being a synonym for the former. In our opinion, it is not necessary in a commentary which aims at being didactic and not literary. In the present commentary the author first attempts to make the language of the text clear by a sort of paraphrase known to Sanskritists as *Anvaya-mukhī Vyākhyā* in which he sometimes repeats, as usual, the words of the text before their synonyms and sometimes does not (and this latter is the case in places where the words of the text naturally and unconsciously repeat themselves before their synonyms without being repeated by the commentator). This is more so because the writer's attention is not solely directed to the linguistic difficulty of the text of which he is writing the commentary and which is itself a very easy Sanskrit very often. His chief aim is to explain the text from an esoteric point of view and to enable his reader to enter deep into the mystery of the subject which is an abstruse one, and for this he takes every possible care. The most prominent features of his commentary are, as is well known to every student who has ever studied it, logical discussions, quotations from the canonized texts of Jaina Scriptures and a long series of illustrative anecdotes. The following are other instances (of course, according to my MSS.) which will clearly indicate that the author is not very particular about the linguistic difficulty of the text and that he does not strictly follow the rules of *Anvaya-mukhī Vyākhyā*, etc., as is necessary in a

commentary intended for the instruction of boys. In page 198, line 14, the words परस्य अप्रियां are the synonyms of अन्यस्य अनिष्टां in the S'loka 20 of the text in the same page. Again in page 388, line 4, निष्कलङ्कचेतोदत्तेः is the synonymous rendering of अकलङ्कमनोदत्तेः in the S'loka 101 preceding. The method which has been followed by Hemacandra in this connection may clearly be ascertained by the perusal of the S'loka 11 and the comment thereon in page 92. In concluding the present remark, I must say that to point such a mistake in such a work as the philosophic commentary on the Yoga-Sāstra is nothing but to lower its dignity.

Now I should like to say something on such of my readings as अनुमहावीरं and मनसि कृत्वा . For the first (page 7, line 8) the critic suggests the correction अनु महावीरम् and for the second (page 133, line 3) the correction मनसिकृत्वा . That is to say, he separates the two words which I have combined, and in a case where the uniformity holds, he combines the two words which I have put separately. I do not understand what he means by doing this. Are not the two cases similar ? Is it not proper to follow the same rule or rules in one connection as in the other, the two cases being of like nature ? मनसि must come separately, because the Samāsa is not possible in मनसिकृत्वा ; according to the rule मध्येपदेनिवचने—॥ ३।१।११ ॥ (S. H.) मनसि will have the Gati Samjñā optionally, but if there be Gati Samjñā, there will always be Samāsa according to the rule गतिज्ञान्यस्त-
त्पुरुषः ॥ ३।१।४२ ॥ (S. H.), and when we have the Samāsa अनञःकृतो
यप् ॥ २।३।१५४ ॥ (S. H.) we must have the form मनसिकृत्य . But since there is no Gati Samjñā in the present case, therefore we must have them separately.

Then again of my reading उवसमविवेयसंवरचिलादपुत्तं, page 106, line 7. The way in which I have read it can never violate the rules of prosody. The reading संवरं which he suggests as correct is grammatically wrong, and can give no sense at all. These Gāthās occur originally in the Sāmāyika-addhyayana of Āvaśyaka-niryukti of Bhadrabāhu Svāmi (leaf 22 of our MS.). In the commentary of these Gāthās Haribhadra Sūri, a writer prior to Hemacandra, has adopted the reading that we have given in our text. Nay ; not only Haribhadra Sūri but Malayā-giri Suri, Tilakā-cārya, the Avacuri of Āvaśyaka-niryukti (in the Cilātīputra Adhikāra), etc., etc., all give it verbatim as we have done it. While criticising our reading उवसम, the critic does not consider even for a moment what may be the sources

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of these Gāthās, nor does he attempt to think out the possible shades of meaning that may be given to them. We had consulted the *Āvaśyaka-niryukti* of Bhadrabāhu Svāmi with all the annotations thereon before we could give the reading that has been so severely condemned by the critic. We find उप-
शमादिगुणानन्यत्वाच्चिलातिपुत्र एवोपशमविवेकसंवर इति । स चासौ चिलाति-
पुत्रश्चेति समानाधिकरण इति गार्थः (*vide* *Āvaśyaka Vṛtti Cilātiputra*
Adhikāra, leaf 166 of our MS.).

Now I should like to say something upon the word *chāyā*. It is so called, because very often the Prākṛita passages that occur in Sanskrit literature contain words generally of Sanskrit origin, and the meaning of those passages can be conveyed, in the time when Prākṛita forms a forgotten vernacular and Sanskrit is still studied and remembered as a classic (I speak this in connection with the Prākṛita of the Sanskrit dramatic literature : we the Jainas have our scriptures written in Prākṛita, so we study it as a language independent of Sanskrit), by changing the Prākṛita words into their Sanskrit original, the one being the shadow of the other. But it must be remembered that the word Prākṛita is commonly used to denote three kinds of words : the first kind contains all those words which are properly Prākṛita, that is, derived from Sanskrit ; the second kind contains all those words which are not properly Prākṛita, that is, not derived from Sanskrit : they exist independently of it and have the meaning and use of their own. Such words are properly called *Deśī*. Hemachandra's *Deśī Nāmamālā* gives a tolerably complete list of all such words with their meanings. The third kind is composed of all those words which can pass both for Sanskrit and Prākṛita ; as for instance in the *Sāhitya-darpaṇa* (Bombay edition, page 62) we have उच्य णिचल — here the great commentator Rāmacarana Tarkavāgiśa (a great logician too) renders the word उच्य by पश्य and the Bombay editor quotes उच्य इति पश्येत्यर्थे देशीति नरसिंहठकुराः अच्ययमिति नागोजिभट्टाः The last two names are sufficiently authoritative to prove the validity of our assertion, and moreover the whole of the thirteenth Sarga of the Bhaṭṭi Kāvya may be advantageously consulted in this connection ; considering the nature of Prākṛita as described above, it becomes evident that it is not always possible to give the *chāyā* of Prākṛita passages in a manner indicated by the critic. It will be seen from the following examples that in dealing with the Prākṛita passages of the *Yoga-Sāstra* I have not departed from the beaten track. Take for instance the passage अन्धेअणिरिक्काओ — in Hemacandra's *Kāvya-anuśāsana* (published in the *Kāvya-mālā* series, page 54, line 3) the word अणिरिक्काओ in it has been rendered by the word परतन्त्राः by Hemacandra him-

self in his own commentary (following him the Bombay editors also give परतन्त्राः in the chāyā : *vide* line 24 in the same page), since the word is Deśī and its signification cannot be better indicated but by the word परतन्त्राः. Again in the Śloka गुप्यन्ती विवलाञ्छा which occurs in page 5 of the Setubandham (also known by the name “Ravana Vaho”) published in the Kāvya-mālā series, the commentator Sri Rāmadāsa Bhūpati gives for “गुप्यन्ती” “व्याकुला” and renders the whole line as व्याकुला विपलायिता गलित इव सनांशुके महासुरलक्ष्मीः. In this case according to the critic’s views the commentator should have put गुप्यन्ती for गुप्यन्ती, not व्याकुला. But the great commentator has not accepted the critic’s views, since the Sanskrit word गुप्यन्ती does not clearly indicate the sense of व्याकुला which is the true sense of the Prākṛita word गुप्यन्ती in the passage.

Many such examples can be quoted, unnecessarily increasing the bulk of this essay in support of our view. I shall close the present remark by stating simply that कौडीञ्चो in the verse referred to by the critic means पिपौलिकाः, and the Sanskrit word कौट्यः as suggested by the critic does not give the particular sense पिपौलिकाः. The equivalent of कौडी as given by Hemacandra in his Deśī Nāma-mālā (Bombay edition, Ṣaṣṭha Varga, 134th Sloka) is कौटिका, and कौटिका means पिपौलिका not कौटी. Of course, following the method of standard writers I have given हीनाङ्गी which also means पिपौलिका. I may add here that the critic’s view of rendering a Prākṛita word by the cognate Sanskrit word has not been strictly followed by the standard writers of olden time, even when it is possible to do so, *i.e.*, when both the Prākṛita word and its cognate Sanskrit word are exactly of the same sense (*vide* Jayavallabha’s Vajjālagga and Ratnadeva’s Chāyā thereon written in the Samvat 1393). The above remarks hold true for my rendering सार्द्धद्विभिः, since अर्धद्वितीय is not easily understood to be $2\frac{1}{2}$ (two-and-a-half) and is not much used too. Moreover this form is given by Vinaya-Vijaya-Upādhyāya in his commentary of the Kalpa-Sūtra, and Śānti Sāgaropādhyāya has also given the same form in his commentary of the same work.

Now, my rendering of मुयङ्गुलीयाहिं and this reading itself are quite satisfactory, as far as I can think of them. Moreover the reading मुदङ्गुलीयाहि, which the critic gives, is wrong according to my views, since according to the rules of Prākṛit gram-

mar, it cannot give the Sanskrit equivalent *मृदङ्गलियाभिः* as given by the critic. My reading *सुयङ्गलीयाहि* and its rendering *पिपौ-लिकाभिः* are both correct. The great Haribhadra Sūri has taken these things just in the same way as I have done.

For my reading *मिन्नेण* (page 131, line 11) the critic suggests *मेन्नेण* according to his MSS. A, B, C, and D; but in my MSS. I have the reading which I have given in the text, and this is an *Ārṣa* by the rule *ह्रस्वः संयोगे ॥ ८ । १ । ८४ ॥* (S. H.). In the glossary of the *Kalpa-Sūtra*, Prof. H. Jacobi gives *mitta* as the principal reading (*vide* Jacobi's edition, Leipzig, 1879, page 161, under the head of *mitta*. See also specimen der *Nāyā Dhamma Kahā* of P. Stenthal, Leipzig, 1881, page 76).

Again for my reading *पुई* (page 132, line 15) he says that it should be *पूइय*. This is wrong, since grammatically the form *पूइय* is never possible. The word *पूई* that I have given is also correct for the metre. The printer's mistake makes it *पूइ* instead of *पूई*.

The following is the critical notice of the materials used by me in the collation of the first fasciculus. No strict rules have been followed in naming the MSS:—

Critical Notice.

In preparing the text of the present edition of the *Yoga-Sāstra*, I have consulted the following works:—

The following are MSS. of the *Yoga-Sāstra*:—

- (क) From Muni Hansvijaya of Barodā. Fairly correct.
- (ख) From Bhaktivijayaji of Rādhanpur. Good and correct.
- (ग) From Bhāvnagar Bhandār. Though old but not correct.
- (घ) My own. Fairly correct.
- (ङ) Also my own. It is also fairly correct and similar to (4).
- (च) From Pannyās Viravijayaji of Rādhanpur. Very correct, used by the owner for his study and therefore carefully corrected one.
- (इ) From Sānand Bhandār. It is similar to (4).
- (ज) It is a MS. containing the *Avacūri* on the first four *Prakāśas*. It is old and tolerably correct. It was also received from Pannyās Viravijayaji.
- (झ) Also containing *Avacūri* on the first four *Prakāśas*. Written in the month of *Phālguna Śukla Caturdaśī*, *Somavāra*. *Samvat 1537*. Fairly correct. Received from Keśara Vijayaji.

In addition to the above I have used also—

- (ञ) *Antara Śloka*; also from Keśara Vijayaji. It is an old and good MS.

(३) Bhimsi Mānik's Gujrāti translation of the text and the commentary. This edition, as has already been stated, contains the text also (not the commentary).

(४) The Dharma Saṅgraha is a book containing many passages cited from the Yoga-Sāstra. I have consulted the MS. of this book which belongs to me.

(५) Another MS. of the Yoga-Sāstra. I have received this MS. latterly. It is old, worm-eaten and very correct.

(६) In addition to these the German edition of the first four Prakāśas was also used.

Recently I have secured from the Deccan College Library, Poona, the manuscript A of my critic. I have examined it thoroughly, but apart from its age, it has nothing to commend it to a responsible editor. The scribe, as it appears to me, had little acquaintance with the language of his script, and as far as the subject-matter is concerned he was completely in the dark.

25. Who Planned the Táj?

By REV. H. HOSTEN, S.J.

The opinion seems to be gaining ground that "the Italian or French origin of the Táj is exploded." When, where, how, and by whom was this result arrived at? What has been done to disprove that Jerome Veroneo, the Venetian, was the architect? The question, we insist, is not what workmen were employed on the Táj, but who planned it.

Let us go back to H. G. Keene's little *Handbook for Visitors to Agra and its neighbourhood* (Calcutta, Thacker, 5th Ed., 1888). "We learn from Manrique (a Spanish monk of the Augustinian Order, who was at Agra in 1641) that the plans and estimates were prepared by a Venetian, by name Geronimo Verroneo. Verroneo died at Lahore before Manrique's arrival, and long before the work was completed. The work is then believed to have been made over to a Byzantine Turk." (Cf. p. 23.)

Keene, then, did not hesitate to accept the Friar's plain statement. "Much fruitless discussion has been waged on this subject [of the origin of the Táj]," he writes (*ibid.*, p. 25); "but, the following considerations alone are likely to be of use to the general reader. The notion that the Táj was designed by an Italian is confirmed by Manrique. But, nothing can be less Italian than the general conception of the building with its simple and even stiff contour; nothing ever more in harmony with the style of Eastern feeling, which regards a white muslin tunic and an aigrette of diamonds as full dress for an Emperor. The tomb of Humáyun (A.D. 1556) seems to have been the chief model of the elevation."

Quite so, and no one thinks of denying that the Italian copied Indian models. The plan of Humáyun's tomb at Delhi "is in fact," writes James Fergusson, "that adopted at the Taje, but used here without the depth and poetry of that celebrated building." (Cf. *Hist. of Indian and Eastern Archit.*, London, 1876, p. 576.)

The conclusion, which Keene endeavours to popularize in his *Handbook*, had been arrived at by a careful perusal of Frey Manrique's writings. Of this we have sufficient evidence in his *The Turks in India* (London, Allen, 1879). There, Keene mentions Manrique in connection with a description of Akbar's tomb at Sikandra (pp. 106-107); he states that Manrique confirms the fact of Veroneo's procuring the discharge of some of the priests [?] taken prisoners at Hugli—fact noted by Manucci-Catrou (p. 121; I fail, however, to find the fact recorded by Manrique under Veroneo's name); he analyzes part of Manrique's

account of Lahore and translates his curious relation of a banquet given at Lahore by Asaf Khán to the Emperor (pp. 126—130); finally he adds a note on *Manrique's Mission and the Catholics in the time of Sháh Jahán* (pp. 251—255. Cf. also *J.R.A.S.*, Vol. X, N.S., 1879, pp. 93—98). This note makes it clear enough that Keene had before him a copy of Manrique's *Itinerario*. The best proof, however, is the testimony of Father Symphorian, a Capuchin Missionary of Agra, who, in his article "*The Chapel of Padree Santos in Agra*" (Cf. *Indo-Europ. Corresp.*, Calcutta, 1878, pp. 452—4, and *Agra Archaeol. Soc. Transactions*, 1878), states that Mr. Keene lent him his copy of Manrique's *Itinerario*.

Keene does not hesitate to call the Augustinian's narrative the best account of the Court life of Sháh Jahán that has been preserved. He found it, however, no easy reading. He complains of "archaic words and forms of spelling which interfere with the reader's ease, unless he be an unusually profound Spanish scholar." (Cf. *The Turks in India*, pp. 126, 251.)

If, instead of making only a few extracts, Keene had translated fully Manrique's account of the Táj, it is likely that less hesitation would have been shown towards accepting it as conclusive. Such as they are, the extracts in *The Turks in India* (pp. 251—255) are sufficiently cogent; and one cannot help being surprised at the off-hand manner in which certain writers, who were familiar with them, have passed them by or explained them away. Syad Muhammad Latif (*Agra, Historical and Descriptive*) studiously ignores them; Mr. E. B. Havell (*The Taj and its Designers, in Nineteenth Century and After*, 1903, pp. 1039—49) endeavours to explain them away.

Before we present the reader with the complete translation of Manrique's narrative, of which the Goethals Indian Library in St. Xavier's College possesses a copy, a short biographical sketch of the writer seems necessary. Father Symphorian's article and Keene's *A Sketch of the History of Hindustán* (London, 1885, pp. 198-199) will simplify our task.

Manrique was an Augustinian Friar who spent 13 years in the East. He came to the Convent of his Order at Hugli in 1628 and began applying himself to the languages of Bengal, Bengálí and Hindustání. On September 11, 1629, he left for Arakan, and continued his apostolic ministrations in Arakan and Bengal until 1636, leaving Pipli for Goa on February 25. His next mission brought him to the Philippines and Macao. On August 12, 1640, he was back at Balasore, and on the eve of Christmas, 1640, he arrived at Agra, where he was the guest of the Jesuit Fathers Anthony de Oliveira and Matthew de Cruz. Immediately after Christmas, he went to Biana [Bayána], passing through Fathpur-Sikrí. A rich Armenian merchant of Biana, to whom he had letters of recommendation, sent with him one of his relatives to help him in his negotiations for the release of Father Anthony of Christ, an Augustinian who had been made prisoner at the

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fall of Hugli in 1632 and was still in durance at Agra. In January 1641, Manrique was back at Agra, paying visits to his *confrère* in jail, and interviewing Subdal Khán, the governor of Agra, in his behalf; but, as the Emperor was then at Lahore, the negotiations could not proceed. Subdal Khán very courteously said that, as he himself was going to Lahore in a short time, he might join him in the journey. Manrique gladly accepted the offer, and profited by the delay to visit the principal monuments of Agra. After twenty-six days passed in expectation of Subdal Khán's departure, finding that he was not likely to move before another month, Manrique took leave of him, of Father Anthony, still in prison, and of the Jesuit Fathers, and set out for Lahore, where he arrived in 21 days. There he met Father Joseph de Castro, S.J., who invited him to his dwelling, promising to assist him in expediting his affairs. Manrique was admitted to an audience with Ásaf Khán. To cut the story short, he obtained all his requests, and proceeded from Lahore to Sind, while Father Anthony was restored to liberty.

Manrique was evidently a man of mark, having been Visitor of his Order in the East. A keen and interested observer, he notes down many curious observations in his *Itinerario delas Misiones del India Oriental* (Rome, 1653, in 4°, pp. 476, 2 col.) This work, now very scarce, was never translated into English, though, if we remember rightly, the Hakluyt Society intended many years ago preparing a translation.

In Ch. LVIII Manrique relates his experiences at Agra. In the following chapter, he describes the Mogul Court and its palaces. Ch. LX. is headed thus :

“ *In which is given an account of two Mocarabàs or Mausoleums of Emperors Achabàr and Corrombo* ”.¹

“ Among the grand buildings of the town of Agra, the chief are two Mausoleums, and, to redeem my promise, I shall begin with Achabàr's tomb, as being the first and the more ancient.” [Here follows the description, pp. 350-351.] At p. 351, col. 2, we read : “ The other Mausoleum, the work, as I have said, of Emperor Corrombo, is dedicated to the unhappy memory of his chief and cherished wife Begoma [the Begum], and is situated at the other extremity of the town. This edifice not being finished yet at the time, and a great portion being still wanting, judging from the plan which it bore and which was contemplated, I shall speak only of the portion which was finished. It consisted of a fine, very large, quadrangular and proportionately high wall of magnificent red hewn stone; at the top, in lieu of battlements, it is being adorned and embellished by thick strong spikes? (*espigones*) of the same stone. [An allusion, probably, to the balustrades. *A la qual [muralla] por*

¹ Khurram, *i.e.*, Sháh Jahán. The word *Mocarabà* must be a corruption of the Persian *Maqbará* = burial place, mausoleum.

remate en lugar de almenas la ornan y reparan gruessos, y fuertes espigones de la misma piedra.] At the four corners of this great wall rose as many other Palaces built of large slabs of beautiful and whitest marble, which from more than forty leagues are brought there for those buildings. Some, which I met on the road to Biana, were of such extraordinary length and breadth that they set all in a perspiration many yokes of strong lazy oxen and of ferocious-looking, heavy-horned buffaloes, which in files of twenty and thirty pair were dragging strong unshapely carts. This great wall enclosed a very large quadrangular space, in the centre of which stood a large, high, circular tower, from the centre of which [tower], the famous Geometer [Jerome Veroneo, as I understand it], drawing equal lines, made his perfect circumference with less trouble than Archimedes the Syracusan. This tower, too, is of shining white marble. On this, and on the other works, were generally employed a thousand men, overseers, officials and workmen. A great number of them were likewise occupied, some in laying out curious gardens, others in planting shady groves and making orderly plantations of poplar-trees (*alamedas*); others, finally in making roads and reservoirs for the liquid crystals, without which it was impossible to go on with the works. The architect of those structures was a Venetian, named Jerome Veroneo, who went to those parts in the ships from Portugal, and died in the city of Laòr [Lahore], shortly before my arrival. Emperor Corrombo gave him large salaries; but, it is thought that he profited so badly by them that, when he died, they say Father Joseph de Castro, of the Society, a Lombard by birth, found on him much less than was imagined. Of him Fame, fleet messenger of all good and evil tidings, had reported that the *Padchà*, having sent for him and manifested to him his desire of raising a grandiose and sumptuous monument to his defunct consort, and that for this he should make some designs which he should show him, Veroneo, the Architect, obeyed this order, and within a few days submitted to him in various models of the finest architecture all the perfection of the art which he knew; but that, having satisfied His Majesty in this matter, he displeased him—according to his barbarous and arrogant pride—by the low estimates which he made; they say also that, growing angry, he ordered him to spend *three krons* [*crouras*] of rupees, *i.e.*, three hundred *lákhs* [*leckas*], and that, when they were spent, he should let him know—a sum of money so great that one is surprised. But, if the sepulchral apartments (*sepulchrales estancias*) were, as they said, to be covered with plates of gold, as was the urn in which were already deposited the bones of the Agarene [Mohammedan] Empress, such large sums will not be matter for surprise,—though he, in particular, will wonder who habitually spends his limited crowns [*escudos*] after first passing many hours in sundry considerations, seeing that, in as little time as it takes to open and close one's mouth,

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fifteen millions of Spanish pesos were ordered to be spent, a sum amounting to the three krons above-said; and, for the better understanding of the curious reader, let it be known that a kror is a hundred lákhs, and a lákhs a hundred thousand rupees, and a rupee half a Spanish peso.”

This, then, is the text which must be got rid of. And why? What are the insuperable difficulties, the “wild improbabilities” militating against it?

The Táj was begun in 1630 or 1631 and completed in 1648, and here is a traveller who saw it, when the work was in full swing. He spent at least 26 days in Agra, and was the guest of the Jesuits, than whom he could have had no better informed cicerones. They knew the place; they knew its history. Since the days of Father Jerome Xavier, from 1595 to 1641, there had been no break of continuity in their stay at Agra. What was more natural than that Manrique, who must have kept a diary, should have questioned them on all matters of interest? Among the things worth recording, he noted that Veroneo had supplied the plans of the Táj and superintended the work.

Fathers de Oliveira and de Cruz were at Agra in 1641, and they could know, since fame had carried far and wide the report of Veroneo’s share in the matter, even to minute particulars of his interviews with Sháh Jahán.

One who surely knew was Father J. de Castro. He had been in the Mogul Empire since 1610, had occupied a high position of influence under Jahángír, and acted as Chaplain to Mirza Zú’l Qarnín, Court-poet under Jahángír, and Governor in Bengal, (Patna?) under Sháh Jahán (1629—32). We have letters of his dated Agra, 1633, 1637, 1638, 1640 and 1641. Finally, he was Veroneo’s executor. During his stay at Lahore, Manrique was Father de Castro’s guest. He had ample opportunities of satisfying his curiosity; but, even after his conversations with Father de Castro, Frey Manrique wrote as we have seen. What interest had he to write otherwise than he heard? Or what interest had the Jesuits, the Portuguese and other foreigners, with whom Manrique was brought into contact, to speak otherwise than they knew?

The *a priori* theories of some writers on the respective merits and the peculiar character of Indian and Western art—in appreciations of this nature a broad margin is left for the subjective—cannot weigh up against the cool testimony of a level-headed contemporary traveller. If Veroneo’s name were found in Manrique only *en passant*, there might be room for carping; but, the circumstantial evidence adduced is such as must satisfy the “ordinary” historian in matters historical.

Mr. E. B. Havell, the late Principal of the Calcutta School of Arts, has acquired some celebrity by his writings on the Táj. Viewed in the light of Manrique’s account, his opinions about its origin are found wanting all round. Let me quote only one

passage, which will show what his methods are, and how hasty conclusions can be reached. Cf. *The Táj and its Designers*, in *Nineteenth Century and After*, 1903, pp. 1039-49. [The italics are mine.]

“Before discussing Verroneo’s story, it will be interesting to analyse it in order to separate the truth which may be in it from the falsehood. It is *highly probable* that Verroneo was one of the many architects who submitted designs for the Táj.” So much is granted to Manrique, but no more.—“They were *doubtless in the style of the Renaissance*, which was then the architectural style of Italy.” Elsewhere he writes: “Neither in general conception nor *in the smallest detail* does it [the Táj] suggest the style of the Italian Renaissance, which a Venetian architect of the seventeenth century would certainly have followed.” Could Veroneo not imitate existing designs and even improve on them? *A priori*, and with as much right as Mr. Havell, we might say that Renaissance was so sure to meet with no appreciation from a Mogul Emperor, that, if Veroneo presented him with any designs at all, they must have been in the style of Mogul architecture.—“Sháh Jahán examined them [the designs] with curiosity and expressed some qualified praise, which Verroneo mistook for approval.” What difficulty was there for Veroneo to distinguish between Sháh Jahán’s satisfaction at his work, and his irritation on hearing of his low estimates?—“The anger of the Padsha on hearing of the estimates and his order ‘to spend three krors’ *clearly points to the indirect oriental method of rejecting a proposal.*” This we all fail to see; whereas little knowledge of Asiatic manners is required to understand with Manrique that Sháh Jahán posed before the Westerner as the wealthiest and most munificent of monarchs.—“It is *quite certain* that Verroneo heard nothing more of his commission, from Sháh Jahán.” Is it? All along, Mr. Havell travesties himself into one of Veroneo’s contemporaries.—“[Verroneo] returned to Lahore, and poured the garbled account of his doings into the too credulous ears of Father de Castro, who retailed it as history to his fellow-priest.” Father de Castro, as we have shown, would have been the last man to be taken in by an impostor.

Such is Mr. Havell’s analysis of the story, and we look in vain for the “discussion” of the story, which ought to have followed.

“But, we have no mention of Veroneo,” it is alleged, “in any of the Mohammedan authors!” We answer with Fergusson: “It is hardly to be expected that natives should record the names of those who surpassed them in their own arts, and needy Italian adventurers were even less likely to have an opportunity of recording the works they executed in a strange and foreign country. Had any Italian who lived at the Courts of Jehángír or Sháh Jahán written a book, he might have recorded

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the artistic prowess of his countrymen, but none such, as far as I am aware, has yet seen the light.” (Cf. *Hist. of Indian and Eastern Archit.*, p. 588.) This, Mr. Havell admits.

Another argues that one look at the Táj ought to assure any intelligent man that it owes its existence to no foreign design: the contrary is impossible from the very nature of the thing. “If that were not sufficient, we have still the name of the Moslem architect sculptured upon the building.” I suppose the name in question is that of Ustád Ísa, whose name is chronicled in the *Tárikh-i-Táj Mahal* as that of the chief architect, the *Naksha Nawis* or plan-drawer? But must the testimony of the *Tárikh-i-Táj Mahal* be taken as a denial of Manrique’s statement? Can the two authorities not be reconciled? Evidently, after Veroneo’s death, other architects were employed. And is the style of the various buildings of the Táj so uniform that we cannot recognize in them the work of different hands?

It is rather puzzling that Manrique’s story should be treated as an obscure romance, as a legend, when, on the other hand, Ustád Ísa, of whom we know rather less, should, without more ado, be proclaimed the original architect. That Tavernier, Mandelslo, Bernier, Thévenot should be silent is merely a negative argument. They must not be expected to have recorded everything. One cannot help being surprised, for instance, that Manucci should give no description of the Táj in his voluminous memoirs. “Tavernier,” writes Talboys Wheeler, “was emphatically a man of a business turn of mind, and his book of travels was written more for the information and amusement of business men than for the wits and scholars of his time.” (*The History of India*, Vol. IV, Pt. II, p. 466.) Bernier was in India between 1655 and 1667; Thévenot came only in 1666.

Though Manrique stands so far alone, we find in Manucci an indirect proof of Veroneo’s influence at the Court of Sháh Jahán. After speaking of the constancy of the priests taken at Hugli, Manucci continues: “There were also a few others—laymen who held fast to the faith, but were released through the petitions of some persons at Court, chiefly of an Armenian, who was a great favourite, or through the money paid by a Venetian, my compatriot, called Hieronimo Veroneo, a man ransomed by the Portuguese.” (Cf. W. Irvine, *Storia do Mogor*, Vol. I, p. 183.) In the absence of further information, it is, of course, difficult to account for the words I have italicised. All we know is that, at the time of the attack on Hugli, Sháh Jahán vented his wrath on the Christians of Agra. From an unpublished letter of Father Corsi, S.J. (Agra, 5 October, 1633), we learn that even the great favourite, Mirza Zú-l Qarnín, the Catholic Armenian, to whom Manucci alludes, lost all his dignities and was thrown into prison with the Jesuits of Agra. The storm was of short duration, however. The Mirza was reinstated;

the Jesuits were restored to liberty; many of the captives of Hugli were ransomed a short time after their arrival in Agra, and those who brought their influence and their gold to bear on Sháh Jahán and his grandees were chiefly Zú-l Qarnín and Veroneo. Where did Veroneo get the money from? If he was the architect of the Táj, if the lavish pay he received from the Emperor justified the opinion that he was a wealthy man, we have the answer.

Searches made in our Roman Archives for further evidence on Veroneo's work on the Táj have proved fruitless; but, it may be remarked that our Archives have been partly scattered in iniquitous times. The following passage concerning Frey Manrique's journey through Lahore occurs in an unpublished Portuguese letter of Father Joseph de Castro to the Very Rev. Father Mutius Vitelleschi, General of the Society in Rome, (Agra, 25th August, 1641): "Through a religious of St. Augustine, who passed here, coming from the Manilhas, on his way by land to Rome, as Procurator of the Province, I wrote at length to Your Paternity three months ago, when he left from here. He is called Fré Sebastião Manrique. I helped him in what I could, and obtained for his journey a goodly alms from the Lord Nawab Asafkaõ, the father-in-law of the king, our ancient and only protector in these realms."

What is more gratifying is that Mr. E. A. H. Blunt, who is revising the inscriptions on European tombs in the U. P., should have discovered Veroneo's grave during a recent visit to Agra. It is dated 1640, a date which is in perfect agreement with Manrique's statement that Veroneo had died at Lahore shortly before Manrique's arrival [end of February?, 1641]. That Veroneo should have been buried at Agra, though he died at Lahore, will not appear surprising to those who are acquainted with the times. Barring that, it would seem that even his contemporaries judged Agra the only fitting resting-place for the man. So much admiration is felt by all for the entrancing beauty of the Táj that it would be little short of a great injustice to its builder, if nothing better than a crumbling stone with a half-effaced inscription were left to mark his tomb, and that within the very shadow of the Mausoleum attesting his genius.

26. The Pramāṇas of Hindu Logic.

By PROFESSOR VANAMALI CHAKRAVARTTI, M.A.,
Vedantatirtha, Vedantarātna.

The *pramāṇas* are usually translated as “instruments of knowledge,” “channels of evidential knowledge” or “authoritative evidences.” The first of these renderings approaches nearest the original. The *Nyāyavārtika* of *Uddyotakara* defines it thus:—*उपलब्धिहेतुः प्रमाणम्, i.e.* “A *pramāṇa* is a cause or condition of knowledge or cognition.” According to this definition, a *pramāṇa* is more a thing of psychology than of logic. That which serves to give us knowledge is a *pramāṇa*. The *pramāṇas* are, so to say, the windows of the mind, through which the objective world communicates its existence to us. I have a suspicion that the philosophical consciousness of India never made any sharp distinction between this, the psychological sense of the word *pramāṇa* and its logical sense. In fact, Logic and Psychology as two separate studies, the one being conceived as a regulative and the other as a natural science, never did exist on Indian soil. The Hindu thinker asked, how do we know the world? The ordinary answer was:—(1) by observation (*pratyakṣa*), (2) by reasoning (*anumāna*), and (3) by authority (*śabda*). If now the further question be raised, “Does all the knowledge thus derived correspond to reality? If not, by what criterion or standard is true knowledge to be distinguished from the false?” one steps into the domain of Logic. The question with the logician is, not how we actually know the world, but how we know it correctly or truly. What are the instruments of right or valid knowledge? Thus *pramāṇa*, in a logical sense, may be translated “instruments of right knowledge,” and in this sense “channels of evidential knowledge” or “authoritative evidences” may be better.

That the *pramāṇas*, as ordinarily conceived, are more psychological than logical, will also be evident from the statements of the neo-logicians such as the following:—

दोषोऽप्रमाया जनकः प्रमायास्तु गुणो भवेत् ।
पित्तदूरत्वादिरूपो दोषो नानाविधः स्मृतः ॥

Bhāṣapariccheda, 131.

Translation.—False cognition is produced by the faults and true cognition by the excellences. There are various kinds of faults, such as bile, distance and the like.¹

¹ A man suffering from jaundice will perceive the white conch shell to be yellow. This is sense-perception, its defective character is

Similarly a right conclusion is not the result of merely an ordinary deduction or *anumāna*. The deduction must have the adventitious quality of what has been termed excellence, if it is to lead to a valid conclusion. The ordinary *anumāna* is an inference or reasoning in the psychological sense of the term.

The author of the *Nyāya-sūtras*, however, takes *pramāṇa* in its logical sense. His definition of perception is as follows :—

इन्द्रियार्थसन्निकर्षोत्पन्नं ज्ञानम् (१) अव्यपदेश्यम्
(२) अव्यभिचारि (३) व्यवसायात्मकम् प्रत्यक्षम् ।

Translation.—Perception is the knowledge which results from the contact of sense with its object, (1) not employing the aid of language, and (2) being such as is not contradicted by future experience, and (3) of the nature of ascertainment (as opposed to doubt).

Here mark the clause (2). It distinctly provides for what may be termed logical or valid perception. The *Bhāṣya* understands it in this sense, and observes that the cognition of the mirage would have been a case of perception, but for the clause *अव्यभिचारि* (2). The following observation of *Rādhāmohana Vidyāvācaspati* in his *Nyāya-sūtra-vivaraṇam* will substantiate the above remarks :—

इन्द्रियार्थसन्निकर्षोत्पन्नं ज्ञानं प्रत्यक्षमिति प्रत्यक्षसामान्यलक्षणम् ।
... तत् च अव्यभिचारि भवत् प्रत्यक्षप्रमा इत्यर्थः ।

Translation.—Perception in general is to be defined as the knowledge that arises from the contact of sense with its object, and when this is such as is not contradicted by future experience, it becomes valid [or logical] perception.

Gotama does not define *anumāna* or deduction. He merely states that it presupposes perception, and is of three kinds, namely, (1) *pūrvavat* (inference from cause to effect), (2) *ṣeṣavat* (inference from effect to cause), and (3) *sāmānyato-dṛiṣṭa* (inference from similarity ?).¹ It should be pointed out here, that it is not definitely known at the present day what *Gotama* precisely meant by these terms. I have given in brackets what seem to me to be the most suitable renderings. Even the old *Bhāṣyakāra*, *Vātsāyana*, gives two interpretations, which shows that in his time the precise meanings of these terms had already become a matter of conjecture. *Gauḍapāda*, in his commentary on the *Sāṅkhyakārikās*, has explained these terms in

due to what is called bile (*पित्त*), which produced the jaundice. The moon is perceived to be of the size of a small plate. Here the deception is due to another fault, namely, distance.

¹ अथ तत्पूर्वकं त्रिविधमनुमानं पूर्ववत् शेषवत् सामान्यतोद्दृष्टम् च । न्याय-सूत्राणि । २ । १ । ५ ।

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a *third* way. The interpretation of *Varadarāja* in his *Tārki-karaksā* and of the neo-*naiyāyikas* generally (e.g., of *Viçvanātha* and *Rādhāmohana*) who identify *pūrvavat* with *kevalānvayi*, *çeçavat* with *kevala-vyatireki*, and *sāmānyato-driṣṭa* with *anvaya-vyatireki*, is due to their lack of the historical sense, and is manifestly absurd. *First*, these are neither the derivative nor the ordinary meanings of these words, and we have no right to suppose that *Gotama* used them in these technical senses. If he did, he must have indicated it in some part of his work. *Secondly*, if such a neat interpretation were available, *Vātsāyana* and *Gaudapāda* would not have omitted to notice it. *Thirdly*, *Gotama* did not probably know what is called *vyāpti*, and without it there could be no division of *anumānas* into *kevalānvayi*, *Kevalavyatireki* and *anvaya-vyatireki*. The whole of modern Hindu Deductive Logic hinges on the doctrine of *vyāpti*, and it would be startling to many to be told that the celebrated founder of Indian Logic did not know what it was. Still such seems to be the truth.

Vyāpti is the relation that exists between the middle term (*hetu*, reason) and the major term (called *sādhya* by the neo-logicians) of a syllogism, justifying the inference. It corresponds to the universal major (called the sumption or ground proposition) of the perfect figure in Aristotelian Logic.

The word *vyāpti* is a very old one. It occurs in the *Vedas* and the *Purāṇas*. Its cognates such as *vyāpyamāna*, *vyāptimat*, etc., are found in such ancient treatises as the *sūtras* of *Pāṇini* and the code of *Manu*. But in none of these cases does it bear the technical sense. In *Gotama's Nyāya sūtras* the word does not occur at all. The word *vyāpti* is found in the *sāṅkhya sūtras* (v. 29), and in a discussion about its nature, the opinion of *Pancaçikha* has been cited (*sāṅkhya sūtras* v. 32). But it is notorious that the antiquity of the *sāṅkhya sūtras* is extremely doubtful.

The word *pratibandha* (प्रतिबन्ध) might have been an older term for *vyāpti* in its technical sense. The *sāṅkhya sūtras* and the *Nyāyamanjarī*, besides other books, contain the word *pratibandha*.

The detailed treatment of the subject of *jāti* (जाति) tends to indicate that the true theory of the syllogism based on *vyāpti* was unknown to the author of the *nyāya-sūtras*. The masters of the neo-logical school have amplified every logical topic treated in the original *sūtras*, but they have completely ignored the subject of *jāti*. This was so, because the treatment of *jāti* was found to be superfluous after the discovery of the *vyāpti*.

It may be said that the chapter on *jāti* was not written by *Gotama*, and that he had simply incorporated into his *sūtras* an already existing chapter of some older logician, who was unacquainted with the *vyāpti*. Quite possible. But it is

undeniable that a genius like *Gotama* would have easily perceived the incongruity, nay the childish nature, of such a chapter in a book which dealt with the true theory of the syllogism. The neo-logicians saw this clearly, and *Gotama* would have seen it, if he had known what the *vyāpti* is.

The word *sādhyā*, in neo-logic, means the major term read in connotation. In the *nyāya-sūtras*, it appears not to have yet acquired that technical sense. Thus the thesis or probandum (*pratijnā*) is defined as “the statement of the *sādhyā*”¹. Here the word *sādhyā* means simply “that which is to be proved”. *Gangeṣa* in his *Tattvacintāmaṇi* criticizes this definition of the thesis as too wide, for according to him it is equally applicable to the major term. Says he—

“ तत्र प्रतिज्ञा न साध्यनिर्देशः साध्यपदेऽतिव्याप्तेः ” ॥

This is a very good example of the want of the historical sense in the neo-logicians. *Gangeṣa* fancied that the word *sādhyā* bore the same limited technical meaning in *Gotama*'s time as in his. Again in *Nyāya Sūtras* I, 1. 38, the word *sādhyā* is used for the minor term. It is well known how the greatest thinker of the *tol* in the nineteenth century had momentarily misinterpreted this aphorism by taking *sādhyā* to mean the major term, like his great predecessor, *Gangeṣa*.

The word *pakṣa*, in neo-logic, means the minor term. *Gotama* uses it in a different sense. *Anumeya* seems to have been an older term for *pakṣa*, though these two are not perfectly identical in meaning. (Vide *Praçastapāda Bhāṣya*, p. 200, and *Yoga Bhāṣya* I. 7, and *Nyāyabindu*, p. 104.)

Thus the terms *vyāpti*, *sādhyā*, and *pakṣa* had not acquired their present technical meanings in *Gotama*'s time. These, together with the *hetu*, are the most important terms in the doctrine of the syllogism, and yet *Gotama* did not know these or anything equivalent to them. Does not this raise a pre-supposition against *Gotama*'s knowledge of the *vyāpti*? In fact, sciences do not spring, full-grown, into existence from the heads of their founders. The *Nyāya-sūtras* contain some of the earliest efforts of humanity to formulate a doctrine of *anumāna*, and as such, it is not at all surprising that the doctrine of *vyāpti* is absent therein. In the *sūtras* of *Gotama* and *Kaṇāda*, we notice the beginnings of deductive logic, which afterwards developed into the doctrine of *vyāpti*.

Kaṇāda gives the significant name *laiṅgika* (lit. derived from a mark, *nota*) to inferential knowledge. But he too seems to have been unaware of the true nature of deduction. He enumerates five marks which lead to deduction—

¹ साध्यनिर्देशः प्रतिज्ञा (१।१।३३)

[N.S.]

अस्येदं कार्यं कारणं संयोगि विरोधि समवायि चेति लैङ्गिकम् ।
वैशेषिकसूत्राणि । ६ । २ । १ ।

These five marks are (1) effect, (2) cause, (3) connected thing, (4) opposed thing, and (5) something existing in intimate relation. Thus (1) from smoke is inferred fire (effect to cause), (2) from observing the contact of the stick with the drum is inferred sound (from cause to effect) when the sound is inaudible, (3) from observation of the body is inferred the sense of touch, which is connected with the body, (4) from the crouching of a snake is inferred the presence of an ichneumon (the snake and the ichneumon are supposed to be in eternal enmity), (5) from the temperature of water is inferred the presence of heat in water. Here we notice the same defect as we noticed in *Gotama*; this is a mere enumeration of the various kinds of deduction; it does not show in what consists the essence of the process. For one acquainted with the doctrine of the *vyāpti* such an enumeration can never take its place. If *Kaṇāda* had known the *vyāpti*, he would undoubtedly have said that the *linga* (mark) is the *vyāpya* and the major term is *vyāpaka*.

Praçastapāda in his *Padārthadharmasangraha* and *Kumārila* in his *Uloka-vārtika* seem clearly to have known the true nature of deduction. There are two verses in the *Padārthadharmasangraha* which credit one *Kāçyapa* with the enunciation of the true theory of deduction—

अनुमेयेन सम्बद्धं प्रसिद्धं च तदन्विते ।

तदभावे च नास्त्येव तल्लिङ्गमनुमापकम् ॥

विपरीतमतो यत्स्यात् एकेन द्वितयेन वा ।

विरुद्धासिद्धसन्दिग्धमलिङ्गं काश्यपोऽब्रवीत् ॥

Praçastapāda Bhāṣya (Vizianagram Sanskrit Series), p. 200.

Translation.—“That mark (*linga*) which is connected with the subject of the inference (*pakṣa*), and is known to exist in what contains the major term read in connotation (*sapakṣa*), and does not exist in what is without the major term read in connotation (*vi-pakṣa*), leads to an inference. *Kāçyapa* has said that whatever is without one or two of these characteristics is not a real middle term (*hetu* or *linga*), and gives rise to the fallacies of contradiction, false minor premiss, or doubt.”

Now *Kāçyapa* is popularly supposed to be only another name of *Kaṇāda*. But a new difficulty arises here: “Why did *Kaṇāda* content himself with merely enumerating effect, cause, etc., as so many marks that lead to inference?” *Praçastapāda* had felt this difficulty and tried to solve it in his own way. He says—

शास्त्रे कार्यादिग्रहणं निदर्शनार्थं कृतम् नावधारणार्थम् । कस्मात् ।
व्यतिरेकदर्शनात् । तद्यथा अध्वर्युरोम् श्रावयन् व्यवहितस्य होतुर्लिङ्गम्
चन्द्रोदयः समुद्रवृद्धेः कुमुदविकाशस्य च शरदि जलप्रसादोऽगस्त्योदय-
स्येति । एवमादितत्सर्वम् अस्येदमिति सम्बन्धमात्रवचनात् सिद्धम् ।

Praçastapāda Bhāṣya, p. 205.

Translation.—“ In the aphorism ‘अस्येदं कार्यं कारणं संयोगि
विरोधि समवायि चेति लैङ्गिकम्’ (*Vaiçeṣika* Aphorisms ix. 2, 1), the
enumeration of effect, cause, etc., is meant to serve as mere
illustrations. It is not to be understood that these are the
only kinds of inference. Why? Because there are excep-
tions; as for instance, the uttering of Om by the *adhvaryu*-priest
serves as a sign to the *hotā*-priest, the rise of the moon is a
sign of the rise of water in the ocean and of the blooming of
the *kumuda* flower, the clear waters of the autumn is a sign of
the rise of the constellation *Agastya*. All these and similar other
cases of inference are to be treated as covered by the first two
words of the *Sūtra* ‘अस्य इदम्’, which point out a mere relation
without specifying it.”

Praçastapāda, like most other Hindu writers, was labour-
ing under the supposition that the old *ṛṣis* were infallible and
omniscient. Such a supposition is directly opposed to the
historical spirit. Hence it is no wonder that we find *Praçasta-*
pāda attributing a later theory to *Kaṇāda*, and trying to ex-
plain away the incongruity pointed out before on the gratui-
tous assumption that *Kaṇāda* was merely giving illustrations in
his treatment of deduction. *Kāçyapa* is not *Kaṇāda*; and
Praçastapāda's identification of the two must be rejected as
uncritical.

According to the Japanese tradition, *Akṣapāda* discovered
the “nine reasons and fourteen fallacies,” which contains an
analysis of the true theory of the syllogism. Hence *Akṣa-*
pāda must be credited with a knowledge of the true theory of
deduction. Is *Akṣapāda* then different from the author of the
Nyāya-sūtras?

The *vyāpti* seems to have been rather vaguely conceived
by the author of the *Nyāya bhāṣya* as well. The *Mîmāṃ-*
sāçloka-vārtika of *Kumārila* mentions the word *vyāpti* in
its logical sense. *Mahāmahopādya* Dr. S. C. Vidyābhūṣaṇa
will lay Sanskrit scholars under a great debt, if he would
point out the history of the word *vyāpti* or its equivalents
in Buddhist logic. It seems that the true history of the theory
of deduction should have to be worked out by the joint efforts
of the students of Hindu and Buddhist Logic.

It has been observed above that *Vātsāyana*'s idea of
deduction was rather vague. In commenting on the *Nyāya Sū-*
tra I, 1. 35, “तथा वैधर्मात्”, he gives the following example :—

(१) अनित्यः शब्दः (२) उत्पत्तिधर्मकत्वात् (३) अनुत्पत्तिधर्मकं नित्यं यथा आत्मादिद्रव्यम् ।¹

Translation.—“Sound is non-eternal on account of the possession of the attribute of being produced. That which has want of production as an attribute is eternal (e.g., a substance such as the soul).” Put into the syllogistic form the argument stands thus:—

Non-produced things are eternal ;
Sound is produced ;
∴ Sound is non-eternal.

As it stands, this involves the fallacy of five terms. But by taking the full inverse (i.e., the converse of the obverse of the contrapositive) of the major premise we get—

Some produced things are non-eternal ;
Sound is produced ;
∴ Sound is non-eternal.

This involves the fallacy of undistributed middle. *Vātsāyana* did not see the fallacy of this argument, because, according to him, the major premiss “Non-produced things are eternal” is a *U* proposition, admitting of simple conversion.

In fact, clause (3) of the above syllogism अनुत्पत्तिधर्मकं नित्यं यथा आत्मादिद्रव्यम् may be directly taken to mean “eternal things are non-produced, e.g., the soul,” and then partially contraposing this we get the following valid syllogism:—

No produced things are eternal ;
Sound is produced ;
∴ Sound is not eternal.

The language of *Vātsāyana* may surely yield such a meaning (making नित्यम् the subject and अनुत्पत्तिधर्मकं the predicate). But we are not allowed so easily to justify *Vātsāyana*. For under I. 1, 37, he says—

अनित्यः शब्द उत्पत्तिधर्मकत्वात् अनुत्पत्तिधर्मकं नित्यम् आत्मादि सोऽयमात्मादिर्दृष्टान्तः साध्यवैधर्म्यात् अनुत्पत्तिधर्मकत्वात् अतद्धर्मभावी

¹ Readings in the *Nyāyabhāṣya*, edited by Mahāmahopādhyaya Gangādhara Ṣastri Tailanga, in the Vizianagram Sanskrit series, are generally very unreliable. The edition of Jayanārāyana in the Bibliotheca Indica is somewhat better. Gangādhara reads here as follows:—

“अनित्यः शब्दः उत्पत्तिधर्मकं नित्यं यथा—”

The reading adopted above has the support of MSS.

योऽसौ साध्यस्य धर्मोऽनित्यत्वं स तस्मिन् न भवतीति । अत्र आत्मादौ दृष्टान्ते उत्पत्तिधर्मकत्वस्याभावात् अनित्यत्वं न भवति इति उपलभमानः शब्दे विपर्ययम् अनुमिनोति उत्पत्तिधर्मकत्वस्य भावात् अनित्यः शब्द इति ¹ ।

The first six words of this passage are almost identical with the above citation from the *Bhāṣya* (I. 1, 35). The interpretation of these words is to be determined in the light of what follows.

Translation (सोऽयमात्मादिर्दृष्टान्तः etc.).—The soul, etc., are cited here as illustrations. These (*i.e.*, the soul, etc.) do not possess that quality [non-eternality] on account of their want of producedness constituting a point of disagreement with sound. Non-eternality is an attribute of the subject of the conclusion (sound) and it does not belong to that (the soul). Here observing that *non-eternality does not belong to the soul, etc., on account of the want of producedness*, the contrary is inferred with respect to sound, namely, that it is non-eternal on account of “producedness.”

This translation, being literal, is rather cumbrous, and scholars unacquainted with Sanskrit may find it difficult to understand it. But one point is clear from the portion in italics, namely, that “want of producedness” has been taken as the reason (*hetu*) for “want of non-eternality,” or in other words

“All non-produced things are eternal,”

which is the interpretation we put upon the text in I. 1, 35 (*Nyāyasūtra Bhāṣya*), and which has been shown to involve the fallacy of undistributed middle.

I have hitherto dealt with only Observation and Reasoning. These two are recognised in Indian as well as in European Logic. In addition to these, the Indian logician deals with the word (*śabda*), analogy (*upamāna*), tradition (*aitihya*), etc. The following well-known verses bear upon this point:—

प्रत्यक्षमेकं चार्वाकाः कणादसुगतौ पुनः ।
 अनुमानं च तच्चापि साङ्ख्याः शब्दं च ते अपि ॥
 न्यायैकदेशिनोऽप्येवमुपमानं च केचन ।
 अर्थापत्त्या सहैतानि चत्वार्युक्तः प्रभाकराः ॥
 अभावषष्ठान्येतानि भाट्टा वेदान्तिनस्तथा ।
 सम्भवैतिह्ययुक्तानि तानि पौराणिका जगुः ॥

¹ Here again the reading in the Vizianagram Sanskrit series is faulty.

[N.S.]

Translation.—“The *cārvākas* admit only one source of true knowledge, namely, observation, *Kaṇāda* and *Sugata* (*i.e.*, the Buddha) admit observation and deduction, the *Sāṅkhyas* admit observation, deduction, and the word. One school of *Naiyāyikas* are like the *Sāṅkhyas* in this respect, and admit three *pramāṇas* only. Other *Naiyāyikas* admit observation, deduction, the word and analogy. *Prabhākara* admits these four and Implication (*arthāpatti*) besides. The followers of *Bhatta* and the Vedantists admit these five and also Negation (*abhāva*). The *Paurāṇikas* admit the above six and also *Sambhava* and tradition (*aitihya*).”

I had much ado in tracing this passage to its earliest known source. It occurs in *Varadarāja's Tārṅkika-rakṣā* (verses 7—10), a work which has been undeservedly consigned to oblivion by our *pandits*. It cannot be earlier than *Kumārila* and *Prabhākara*, for both are expressly mentioned in the passage. The *Mānasollāsa*, otherwise called the *Dakṣiṇāmūrti-stotra-vārtika*, of *Sureçvara* contains these verses. So they must have been either composed by *Sureçvara* himself or quoted from some author who lived during the generation that followed *Kumārila* and *Prabhākara* and preceded *Sureçvara*.

It will be noticed that the *Sāṅkhyas* and a school of the *Naiyāyikas* are here described as admitting ‘the Word,’ as an independent source of valid cognition. Now what is ‘the Word’? The *Sāṅkhyas* understand by ‘the Word’ what is now-a-days called revelation. The ancient *naiyāyikas* understood by it what might be termed ‘Authority,’ including revelation, and a passage in the *Bhāṣya* of *Vātsāyana* is often cited as proving that the Authority may be of even a barbarian or *mleccha*.¹ The neo-logicians (followers of *navya Nyāya*) have discarded this meaning partly and given it an unnatural sense.

The ordinary *Naiyāyikas* admit a fourth source of valid cognition, namely, analogy (*upamāna*). Who are the *Nyāyika-deçins*, then, that admit three *pramāṇas* only? I consulted many *pandits*, but none could give any answer. Help came from a different quarter. *Mallinātha*, the well-known commentator on the *kāvyas*, was also a philosophical writer. He wrote a very lucid commentary on the *Tārṅkika-rakṣā* called the *Niṣkaṅṭakā*. न्यायैकदेशिनो भ्रूषणौघाः (the school of *naiyāyikas* here referred to is the school of *Bhūṣaṇa*) says the *Niṣkaṅṭakā*. Who are the *Bhūṣaṇīyas* then? *Varadarāja* himself quotes *Bhūṣaṇa-kāra* four times in the *Tārṅkikarakṣā* in connection with the *nigrahasthānas* (situations of defeat). *Mallinātha* quotes *Bhūṣaṇa* once more as holding the doctrine that action

¹ साक्षात् करणम् अर्थस्याभिज्ञया प्रवर्तत इत्याप्तः । ऋषार्यज्ञेच्छानां समानं लक्षणम् ।

is a quality (कर्मापि गुणः). So *Bhūṣaṇa* must have been a very important and popular work. I would identify it with the *Nyāyabhūṣaṇa* (a commentary on *Bhāsarvajña's Nyāyasāra*) which *Guṇaratna* mentions in his commentary on the *Ṣaḍdar-ṣāna-samuccaya*. From the MSS. of the *Nyāyasāra*, preserved in the library of the Asiatic Society of Bengal, it appears that the *Nyāyasāra* admits three *pramāṇas* only, though it is admittedly a work of the *Nyāya* School of Philosophy.

There is a rather remarkable, though obscure, passage in *Gauḍapāda's* Commentary on the *Sāṅkhya Kārikās* which enumerates and explains the various *pramāṇas*. It runs thus—

षट् प्रमाणान्तीति जैमिनिः । अथ कानि तानि प्रमाणानि । अर्था-
पत्तिः सम्भवोऽभावः प्रतिभैतिह्यमुपमानं चेति षट् प्रमाणानि ।

Translation.—*Jaimini* says there are six *pramāṇas*. What are these *pramāṇas*? The six *pramāṇas* are (1) *arthāpatti* (implication), (2) *sambhava*, (3) *abhāva* (negation), (4) *pratibhā*, (5) *aitihya* (tradition), (6) *upamāna* (analogy).

It will be noticed that observation, inference and authority are not given in this enumeration. Perhaps *Jaimini* admitted these *pramāṇas* as well, but *Gauḍapāda* contented himself with the enumeration of those *pramāṇas*, which are admitted by *Jaimini* over and above the three admitted by the *sāṅkhyas*. On such an hypothesis, *Jaimini* would seem to have held nine *pramāṇas* in all. According to the verses quoted from the *Tārkika-rakṣā* and the *Mānasollāsa*, however, *Prabhākara* and *Kumārila* (both followers of *Jaimini*) are credited with five and six *pramāṇas*, respectively; it is only the *Pauranics* that are represented to have admitted eight *pramāṇas*.

The fourth *pramāṇa* mentioned by *Gauḍapāda* (*pratibhā*) is thus explained :—

प्रतिभा यथा—

दक्षिणेन च विन्ध्यस्य सह्यस्य च यदुत्तरम् ।

पृथिव्यामासमुद्रायां स प्रदेशो मनोरमः ॥

एवमुक्ते तस्मिन् प्रदेशे शोभना गुणाः सन्तीति प्रतिभोत्यद्यते । प्रति-
भा च जानतां ज्ञानमिति ।

Sāṅkhya Kārikā Bhāṣya, 4.

Translation.—“Now for the explanation of *pratibhā*. When it is said ‘The province, which lies to the south of the *Vindhya*s and to the north of the *Sahya* mountains, is the most beautiful on the whole earth,’ a knowledge arises that there are good qualities in that locality. *Pratibhā*, then, is the knowledge of those that know.”

I do not pretend to have understood this passage fully. It may, however, be usefully pointed out in this connection, that

the *Mīmāṃsaka* philosopher *Kumārila* (a follower of *Jaimini*) has expressly refuted the claims of *Pratibhā* to be regarded as a separate source of knowledge in the *Ṣloka-vārtika*.

लौकिकी प्रतिभा यद्वत् प्रत्यक्षाद्यनपेक्षिणी ।

न निश्चयाय पर्याप्ता तथा स्याद्योगिनामपि ॥

iv, 32, p. 143.

Translation.—“Just as the *pratibhā* of ordinary people is not sufficient to establish any truth without a reference to observation, etc., similarly the *pratibhā* of the *yogins* (mystics) is also insufficient to establish truth.”

Pārthasārathi Miçra, in commenting on the above verse, says—

वैशेषिकादयस्तु प्रतिभाख्यप्रमाणान्तरगम्यत्वं धर्माधर्मयोर्मन्यन्ते
... बाङ्गल्येन तदृषीणामेवेत्यार्षमित्युच्यते । तन्निराकरोति लौकिकेति ।

Ṣloka-vārtika, Chowkhamba series, p. 143.

Translation.—“The *Vaiçeṣikas* and others hold that *dharma* and *adharma* are known by another *pramāṇa*, called intuition (*pratibhā*). . . . This faculty is possessed by the seers much more than by ordinary men, and hence it is called second-sight (*ārṣa*). This doctrine is refuted in the verse beginning with the word “*laukika*.”

Thus according to *Kumārila* and *Pārthasārathi*, it is not *Jaimini* that admits *pratibhā* as a separate *pramāṇa*, but it is the opposed school of *Kaṇāda* that hold this view.

Now if we turn to the *Vaiçeṣika sūtras*, we find no mention of *pratibhā* or intuition. So *Çankara* says in his *Upas-kāra* (x. 2, 6) :—

आर्षं ज्ञानं सूत्रकृता पृथङ् न लक्षितं योगिप्रत्यक्षान्तर्भावितम् ।

Translation.—“Second-sight has not been separately defined by the author of the Aphorisms, for it is included in (what is called) *yogic-perception*.”

Praçastapāda in the *Pādārthadharmasangraha* mentions and explains *pratibhā* thus :—

आम्नायविधातृणाम् ऋषीणाम् अतीतानागतवर्त्तमानेषु अतीन्द्रियेषु
अर्थेषु धर्मादिषु ग्रन्थोपनिबद्धेषु अनुपनिबद्धेषु च आत्ममनसोः संयोगात्
धर्मादिविशेषात् च यत् प्रातिभं यथार्थनिवेदनं ज्ञानमुत्पद्यते तदार्ष-
मित्याचक्षते । तत्तु प्रस्तारेण देवर्षीणाम् कदाचिदेव लौकिकानां यथा
कन्यका ब्रवीति श्वो मे भ्राता आगन्तेति हृदयं मे कथयतीति ।

Translation.—The seers who are the authors of *Vedas* possess an intuitive knowledge revealing to them the real nature of things, such as lie beyond the ken of sense, whether present, future or past, and of duties mentioned or unmentioned in the scriptures. This is called *ārṣa* (second-sight). It is possessed largely by the angels and seers and only occasionally by the ordinary people, *e.g.*, when a girl says, “My heart says, my brother will come to-morrow.”

Bhavabhūti in his *Uttararāmacarita* mentions both *ārṣa* and *prātibha*.

अथाहतज्योतिरार्षं ते प्रातिभं चक्षुः (Act II).

Prātibha or *pratibhā*¹ is merely the philosophical term for *ātma-tuṣṭi* or *hridayānujñā* of religious literature. *Manu*, *Yājñavalkya* and *Viṣṇu* distinctly mention this as a source of moral and religious knowledge. This is to be identified with the conscience or moral reason of European philosophy. Hindu philosophy had early formulated the doctrine that God is our inner self and the self of the universe as well. The most valuable parts of the *Upanishads* contain an enunciation of this doctrine. We are not, however, ordinarily conscious of this inner and truer self. The doctrine of *Pratibhā* or conscience is a corrolary to this doctrine. It would have been quite surprising if the doctrine of an inner and truer self should not have led to the doctrine of conscience. For conscience is nothing but the voice of the inner self speaking to the outer self. Hence in Sanskrit it is called *antarātman* (*lit.* the inner self). The *antarātman* is no mere metaphor; it is a fairly explicit statement of the doctrine of personality, as it was conceived in ancient India. Thus I think I have conclusively established the identity of *pratibhā*, *ātmatuṣṭi*, and *hridayānujñā* with intuition and conscience of European philosophy.

¹ इन्द्रियलिङ्गाद्यभावे यदर्थप्रतिभानं सा प्रतिभा । प्रतिभैव प्रातिभमित्युच्यते तत्रभवद्भिः ।

Nyāyakandalī of *Ācārya* (Vizianagram Sanskrit Series), p. 258.

27. Medicinal Lizards.

By DAVID HOOPER.

In the bazars of Northern India dried lizards, in a well-preserved condition, are frequently exposed for sale for medicinal purposes. They are an article of regular consumption and are often mentioned in works on Eastern medicine. Considering that animal products are rare, compared with the large number of vegetable drugs employed in Hindu Materia Medica, I have collected a few notes on this interesting subject.

Dr. R. H. Irvine in "Materia Medica of Patna," 1848, refers the drug "Reg Mahee" to the skink (*Lacerta scincus*, Linn.), and informs us that it is imported from Kabul and is used as a restorative and aphrodisiac. He alludes to the dried and varnished state in which it is sold at Rs. 12 per pound, and gives the dose at one to two drachms (60 to 120 grains). Dr. J. M. Honigberger in "Thirty-five Years in the East" (1852) states that *Lacerta scincus* is still used by Eastern doctors and is recommended in leprosy.

Baden Powell in "Economic Products of the Punjab," under animal substances of Lahore, says: "'Reg mahi' is a small lizard from 6 to 8 inches in length found in the sands of Scind and occasionally in the dry tracts of the Multan division."

Sakharan Arjun in "Bombay Drugs," 1879, under *Lacerta scincus*, mentions "Reg-i-mahi" as a Persian name signifying a sand fish. He says: "This lizard which is brought from the Arabian deserts in a dried state is used by the Hakeems as a nervine tonic, stimulant and aphrodisiac."

Samples of the dried lizards, known as "Reg mahi," were recently procured by the Reporter on Economic Products from the drug bazar in Delhi. They were submitted to Dr. Annandale for identification, who at once pronounced them to be *Scincus mitranus*, Anderson (*S. arenarius*, Murray), a species peculiar to the plains of Sind. It is thus evident that the medicinal lizard of Northern India is this species and not *Lacerta scincus*, Linn. (*Scincus officinalis*, Gray) as given by the above quoted writers. Besides the difference in the anatomical markings *Lacerta scincus* belongs to Egypt and the Algerian Sahara, and, according to Boulenger, is not found east of the borders of the Red Sea. The genus *Scincus* is restricted to the sandy deserts of North Africa and South Western Asia from Sahara to Sind.

In Dr. Watt's "Dictionary of Economic Products" "Reg mahi" is referred to the Brahminy lizard or common skink (*Mabuia carinata*, Boulenger). This is one of the most common and widely distributed lizards of the East Indies. It is found in almost every part of the Continent, as well as of the Archipelago, from Afghanistan to China and to the Philippine Islands. Its saliva is said to be poisonous. An oil is made from this and other allied species, and is supposed to have restorative, stimulant and antisiphiletic properties. In "The Topography of Ajmere," Irvine enumerates "Sanda" as the name of a lizard which is distilled and the oil used by Mahomedans. *Uromastix Hardwickii* is the name of another lizard which is dried and sold in Calcutta.

To prepare the lizards for market they are eviscerated and dried in the sun. They retain the natural smooth and glossy appearance of the skin for a long time and have no objectionable odour if kept from damp. It has been said that the flesh of lizards is as good eating as that of fish, raw or dried.

Dr. Whitelaw Ainslie gives various references to the medicinal use of lizards in "Materia Indica" (1826). He remarks that the *Lacerta scincus*, Linn., the officinal skink of Shaw, was eaten by the Egyptians as a restorative and aphrodisiac. The flesh used formerly to be an ingredient in an old compound preparation which went under the name of *theriaca andromachi*.

Of the gecko it is said that the bruised body of the animal made into electuary in conjunction with certain aromatics was given by Hindu doctors in leprous affections. The same properties have been attributed to the flesh of the grey lizard (*Lacerta agilis*). In Europe the internal use of the common green lizard has been extolled in cases of leprosy, scrofula and cancer (*Flores Specificque nouvellement decouvert*, Lausanne, 1785). Virey, in his *Histoire Naturelle des Medicamens*, informs us that in Spain and Naples the *Lacerta agilis* when deprived of the skin, head, tail and entrails is administered in venereal cases, and quotes Florez as his authority (1782), who says of its specific virtues "especifico descubierto en el regno de quatiluana," adding that it produces salivation and sweating. Lizards were recognised in the *Materia Medica* of Europe in the 16th and 17th centuries. In a curious work brought out by J. J. Bechers in 1663 entitled *Parnassus medicinalis illustratus* the following lines referring to lizards occur:—

"Die *Aidex* (*Lacerta*) lebendig in öl man kochen tut,
Es macht ein weisz Gesicht ist vor die Röte gut."

Although at present saurians are not officially recognised in the *Pharmacopoeias*, well-known physicians for a long time justified their use, as will be found in such works as Moquin Tandon's *Medical Zoology*.

Dried lizards under the name of "Ko-tche" form an important article of trade in China. They are collected and

prepared in Nanning and Wuchow in Kwangsi and are exported from Pakhoi. Over 100,000 are annually exported to the value of about £500. They are used for making medicine called 'lizard wine', said to be a tonic and cure for eye diseases. They are also made into bouillon for the treatment of consumption. There is a great demand for them in Hong Kong and in other parts of the East.

JUNE, 1910.

The Monthly General Meeting of the Society was held on Wednesday, the 1st June, 1910, at 9-15 P.M.

T. H. D. LATOUCHE, Esq., B.A., F.G.S., President, in the chair.

The following members were present :—

Dr. N. Annandale, Mr. J. C. Brown, Mr. B. L. Chaudhuri, Mr. G. de P. Cotter, Dr. W. A. K. Christie, Mr. D. E. Grubl, Mr. B. A. Gupte, Mr. K. A. K. Hallows, Mr. H. H. Hayden, Mr. A. M. Heron, Mr. D. Hooper, Dr. W. C. Hossack, Mr. H. C. Jones, Mr. C. H. Kesteven, Babu Ramakanta Bhattacharjee, Captain J. D. Sandes, I.M.S., Mr. G. H. Tipper, Mahamahopadhyaya Dr. Satis Chandra Vidyabhusana, Mr. S. C. Williams.

Visitors:—Mr. and Mrs. C. W. Bebe, Mr. R. H. Godwin and Mr. B. A. Lindsay.

The President moved an expression of condolence in connection with the death of the late King-Emperor Edward the Seventh, and said :—

Before we proceed with the ordinary business of this meeting, I must crave your indulgence in order to allude to an event that has occupied the minds of all civilised people, and more especially of those who inhabit the British Dominions, during the last month, the death of His Gracious Majesty, our late King and Emperor, Edward VII.

In him we have lost one who ever took a deep interest in that growth of scientific and literary knowledge which guides the human race along the peaceful ways of economic and social development; in those subjects, that is to say, to which the activities of a Society such as ours are especially devoted. His Royal Parents saw to it that in his youth he was imbued with a knowledge of the importance of scientific research, and in after life he showed that these lessons had not been lost upon him. He recognised that it was no part of his duties as Prince or King to take a personal share in scientific pursuits, but that he could best promote the welfare of his subjects by making evident his active sympathy with every advancement of human knowledge.

This duty he faithfully performed. Not one of the great discoveries that have made the history of his life-time so memorable passed unheeded or unrecognised by him. But chiefly was his sympathy shown in those developments of

science which lead towards the alleviation, if not the prevention, of human suffering. In these respects King Edward VII is an example for all time to those whose destiny calls them to rule over nations of men; and it is therefore most fitting that this Society, established for the furtherance of those objects in which he showed so deep an interest, should express its sense of the loss that the world has suffered by his death.

The minutes of the last meeting were read and confirmed.

Fifty-nine presentations were announced.

The General Secretary reported that Maulavi Sakhawat Hosain had expressed a wish to withdraw from the Society.

The following gentleman was balloted for as an Ordinary Member :—

Babu Pramatha Nath Mukerji, M.A., Officiating Chief Superintendent, Finance Department, Government of India, proposed by Dr. B. N. Ghosh, L.M.S., seconded by Mr. G. H. Tipper.

Dr. Annandale exhibited a collection of Indian Earwigs and referred to the recent publication of Dr. Burr's volume on the Dermaptera in the "Fauna of British India and Ceylon."

In exhibiting the collection Dr. Annandale said :—

"The publication of a volume on the earwigs by my friend Dr. Malcolm Burr in the 'Fauna of British India and Ceylon' affords an occasion to call the attention of the Society to some peculiarities of these insects and also induces me to make a few remarks on the work of which Mr. Burr's volume forms a part. The present position of the official 'Fauna' of the Indian Empire is in many respects a anomalous one. Written and edited in England by men who have never seen India,¹ the volumes that appear from time to time claim to be authentic monographs, and most of them are valuable contributions to systematic zoology. It is casting no discredit on their authors and editor, however, to say that even a little experience in the flesh of the animals they describe, and a leisurely study of the collections preserved in India, which in many respects are by far the most complete in existence, would vastly improve the work. It is becoming increasingly difficult to send to Europe or America the whole of the rapidly increasing collections of the Indian Museum and other Indian institutions, and it would be a ridiculous situation, even from an official point of view, if, as has been practically the case in some volumes that have been published, the official collections of the

¹ Since this statement was made, the Secretary of State has sanctioned the preparation of two volumes in India.— N. A. 30-vi-10.

Indian Empire were to be ignored in the preparation of the official 'Fauna.' It is most unfortunate that English zoologists rarely visit India.

Mr. Burr's volume may certainly be described as a valuable contribution to scientific literature; indeed, author and editor have worked together to render it an improvement on any volume that has hitherto appeared in the series. It consists of far more than a mere list of short technical descriptions, including as it does a summary of all that is known both from a systematic and a biological point of view regarding the animals of which it treats. The excellence of the work makes one but regret the more the splendid addition to our knowledge of Indian biological entomology it would have formed, if only its author had had an opportunity of pursuing his investigations in this country. The plates are excellent."

Dr. Annandale then proceeded to describe the peculiarities of the insects exhibited.

The following papers were read :—

1. *Note sur les sabres hindous.* Par M. P. HOLSTEIN. Communicated by the General Secretary.

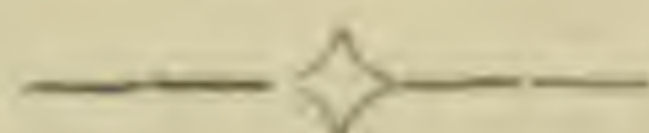
2. *A Palæolithic Implement of Manganese-ore.*—By L. L. FERMOR, D.Sc., F.G.S.

3. *An English-Turki Vocabulary.*—By R. F. AZOO. Communicated by LIEUTENANT-COLONEL D. C. PHILLOTT.

4. *Rivers of Dacca District.*—By F. D. ASCOLI.

These four papers will be printed in a subsequent number of the *Journal*.

5. *Medicinal Lizards.*—By D. HOOPER.



The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Wednesday, the 8th June, 1910, at 9-30 P.M.

LIEUT -COLONEL F. J. DRURY, I.M.S., in the chair.

The following members were present :—

Rai Hera Lal Bose, Bahadur, Lieut.-Col. E. H. Brown, I.M.S., Lieut.-Col. J. T. Calvert, I.M.S., Dr. C. H. Elmes, Captain H. B. Foster, I.M.S., Dr. Birendranath Ghosh, Major E. W. D. Greig, I.M.S., Major W. D. Hayward, I.M.S., Dr. W. C. Hossack, Dr. A. M. Leake, Lieut.-Col. F. P. Maynard, I.M.S., Dr. J. E. Panioty, Lieut.-Col. H. W. Pilgrim, I.M.S., Major J. D. Sandes, I.M.S., Major W. B. Steen, I.M.S.,

Captain F. H. Stewart, I.M.S., Major L. Rogers, Honorary Secretary.

Visitors :—Assistant Surgeon A. A. E. Baptist, and Dr. S. C. Baral.

The minutes of the last meeting were read and confirmed.

A case of Pheumatoid orthritis was shown by Lieut.-Col. Calvert, I.M.S.

A letter suggesting that either a Tropical School of Medicine or a Sanitarium for consumptives would form a fitting memorial in Calcutta in memory of the late King Emperor Edward the Seventh, which was referred to the Medical Section by the General Meeting, was brought up for discussion.

PROPOSED MEMORIAL TO THE LATE KING EMPEROR.

The proposal brought forward at the June Meeting of the Asiatic Society of Bengal that either a Tropical School of Medicine in Calcutta or a Sanitorium for the treatment of Tuberculosis in a suitable climate would form an appropriate memorial to the late King Edward was discussed at the Meeting of the Medical Section on June 8th, having been referred to them by the General Meeting. There was a full attendance, and one or both of the proposals received the support of every speaker, although some favoured one and some the other as the more suitable of the two. The following resolution covering both suggestions was proposed by Lieut.-Colonel Pilgrim and adopted by the Meeting with one dissentient :—

“ The Medical Section of the Asiatic Society of Bengal, having considered the letter on the subject referred to it by the Ordinary General Meeting of the Society, is of the opinion that in view of the great interest in Sanitoria for consumptives displayed by the Late King Emperor Edward the Seventh, and of the urgency of the provision of such Sanitoria in suitable centres in India, as pointed out by this Section last year, such Sanitoria, of an Imperial character and appealing to all, irrespective of Race or Religion, would be most suitable objects of expenditure of a portion of the funds raised in India to commemorate His Late Majesty. They are further of the opinion that if sufficient funds are available, a grant towards the recently proposed Institution for Research in Tropical Diseases and post-graduate instruction would also be most appropriate.”

A paper was read by Lieut.-Colonel H. W. Pilgrim, I.M.S., on the Ipecacuanha Treatment of Acute Hepatitis, and the discussion was adjourned until the next meeting.



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PUNCH MARKED COINS FROM AFGHANISTAN.

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Ausländische Gesellschaften welche die Asiatische Gesellschaft von Bengalen mit ihren Publicationen beehren, werden hierdurch ersucht dieselben entweder direkt an die Adresse der Gesellschaft, 57, Park Street, Calcutta, oder an den Agenten in London, Mr. Bernard Quaritch, 11, Grafton Street, New Bond Street, zu senden.

28. **Refutation of Max Müller's theory of the Renaissance of Sanskrit literature in the fourth century A.D., after a lull of seven centuries from the time of the rise of Buddhism.**

By MĀHĀMĀHOPĀDHYĀYA HARAPRASĀD SHĀSTRĪ.

It is a fact known to all oriental scholars that the earliest inscriptions yet discovered in India are all written in the vernaculars of the time. The inscription in the Piprāhā vase is in vernacular. The Aśoka inscriptions are all written in the local dialects of the third century B.C. The Daśaratha inscriptions are in the dialect of the earlier part of the second century B.C., the earlier inscriptions of the Barhat and Sānchi topes belong to the vernacular of about the same period. The Sāgāura copperplate also belongs to a similar dialect. All the Indo-Scythian inscriptions are written in a form of spoken language. Some of these are in a highly sanskritised form of the contemporary dialects.

The first inscription written in grammatical Sanskrit is the Girnar inscription of Rudradāma. But it is again followed by vernacular inscriptions. Sanskrit does not come before the middle of the fourth century A.D. as an inscriptional language.

From these facts, Sanskrit scholars, forty years ago, thought that Sanskrit disappeared as a literary language with the rise of Buddhism in the fifth century B.C., and they were justified by the utter want of chronology in Sanskrit literature. They could not accurately fix the date of any Sanskrit work whatever; while epigraphic evidence was certainly much more accurate. The theory of the renaissance of the Sanskrit literature in the fourth century A.D. found a powerful advocate in the late professor Max Müller whose authority was very great in all matters relating to Indian history, Indian literature and Indian scholarship generally. His brilliant power of expression and his fascinating style made the theory exceedingly popular both in Europe and India, and in some quarters it was regarded as a gospel truth. Though many distinguished Sanskritists did not accept the theory, none have ventured to openly refute it. The late Mr. R. C. Dutt accepted the Renaissance theory without much examination and spread it all over India in his brilliant publications. All Indian writers on history followed in his wake, and even such a discriminating author as Mr. Marsden, late of the Madras Educational Service, wrote in his History of the Hindus that with the rise of Buddhism, Sanskrit went to sleep for seven centuries.

In the interest of truth, therefore, the theory requires a thorough examination in the light of the discoveries of the last thirty or forty years, a period of great activity in the search of Sanskrit manuscripts and in giving descriptive catalogues to them. This is also the period of accurate scholarship in all matters relating to India and its literature, a period more of accurate knowledge than of theories and sweeping generalizations.

Do the facts stated in the first paragraph about the language of inscriptions justify the sweeping conclusion that Sanskrit went to sleep for seven centuries? No one would say they do. The only inference that can be drawn from these facts is that the inscription writers preferred contemporary vernaculars to Sanskrit, that is, the clerks employed by the various non-Brahminic Governments were vernacularists and not Sanskritists; and that, from 350 A.D. Sanskritists began to be employed as clerks and Inscription writers by Brahminic Governments. Beyond this they prove nothing; and the theory of the Renaissance of Sanskrit literature is not justified from these facts.

Another question may be asked to the supporters of this theory. "Where did the Brāhmaṇas go during all these centuries?" Did they also go to sleep with their favourite language? Sanskrit was pre-eminently their language. All their writings were in this language. They were very active before this period, and they were also very active after this period. And was all their activity gone between the two periods of great activity? This is impossible to suppose. It is useless to oppose arguments to arguments. The best course would be to oppose this theory by facts. If it could be shewn that many great Sanskrit works were written during these seven hundred years the theory would clearly be disproved. All controversial dates will be excluded and only such works will be mentioned whose dates have been approximately ascertained. Pāṇini's great work is said to have been compiled in the fourth century B.C. But this a controversial matter; and it is excluded, though its inclusion will prove a fatal blow to the theory.

The first work that we know of, which was composed during these seven hundred years, is Kauṭilya's Artha-Śāstra. It is a compilation from ten previous works on the subject. The author quotes earlier authorities sometimes to refute them, and sometimes, again, to support his own views. The extent of the work is 6,000 ślokas. So it may be regarded as a tolerably large work. The author Kauṭilya is the same person who is known in the Indian tradition as Cāṇakya, the Brāhmaṇa politician who destroyed the Nanda dynasty and raised Candragupta to the throne of Magadha. He belonged to the latter end of the fourth century B.C. An examination of the book will show that it really belongs to that early period.

The second book that was written during this period is Kāmandaki's Nīti Śāstra. The author Kāmandaki begins by an obeisance to his Guru Kauṭilya. He must have been a younger contemporary to that renowned author.

The third book is Patañjali's Mahābhāṣya, written during the reign of Puṣyamitra, during the middle of the second century B.C. The author himself says "Puṣyamitraṃ Yājāyāmaḥ." We officiate in the sacrifice of Puṣyamitra.

The fourth book is the Bharata Nāṭya Śāstra which in a previous paper I have placed in the earlier part of the second century B.C.

The fifth work is Manu Saṃhita, which Bühler placed between the second century B.C. and the second century A.D. But this period can be limited to the first century B.C. as the pretensions advanced in favor of Brāhmaṇas to possess all escheats and all minerals can only be tolerated when they held the imperial sway; and this the Brāhmaṇas did during the greater part of the first century B.C.

The sixth work is Vātsyāyana's Kāma Sūtras which gives the details of a scandalous deed in the family of Kuntala Śātakarṇi of the Andhra dynasty, which can be known only to a contemporary. And Kuntala Śātakarṇi's date is the beginning of the first century B.C.

The seventh work is Vātsyāyana's Bhāṣya to the Nyāya Sūtras, which has been refuted by Diñnāga during the earlier years of the fifth century A.D.

8. Praśasta Pāda's Bhāṣya to Vaeṣeṣika Sūtras comes to the same period as it belongs to the older class of Bhāṣyas which do not care, as later Bhāṣyas do, to follow the original word for word and in the same order.

9. Māṭhara Bhāṣya, now lost to the Śāṃkhya Sūtras, was written by an officer of the Emperor Kanīṣka who, whatever differences there may be about his exact date, comes clearly within the seven hundred years of the supposed inactivity in Sanskrit.

10. Within the same period also comes the redaction of the Agniveśa Saṃhita by Caraka, the physician to Kanīṣka.

11. Śavara's Bhāṣya to the Jaimini Sūtras refutes the vana-vāda of the earlier Mahāyānists, and so it clearly comes within this period.

12. The Kātantra Sūtras were written for the benefit of Śalivāhana, a king of the Andhra dynasty who wanted to learn Sanskrit in six months; and the whole period of the Andhra dynasty comes within the limits of these seven hundred years.

13. The earlier Mahāpurāṇas, Matsya, Viṣṇu and Vāya were compiled during this period, and though there are later additions, the bulk of the works were written during this period.

14. Mṛcchakaṭika, the oldest Sanskrit drama extant, has been by all authorities placed in or before the first century A.D.

15. The Mahābhārata, though based on ancient Vaidic stories, were reduced to its present form during this period.

16. The Rāmāyaṇa, too, was reduced to its present form during this period.

17. In the Māhābhāṣya of Patañjali many poems are named; such as Vāsava Dattā, Vārarucaṃ Kāvyaṃ, Jālūkāḥ ślokas and others.

18. The Garga Saṃhita, an astronomical work, still extant though very rare, was compiled during his period.

19. Yavana-jātaka was translated from Greek into Sanskrit in the year 91 probably of the Saka era in prose by Yavanā cārya, and it was reduced into 4,000 Indravajrā metre by Sphujidhvaja in 191 of the same era.

20. The Siddhāntas which have been abridged by Varāhamihira in his Pañca Siddhāntikā also belong to the latter half of this period.

21. Menetho's work on Astronomy was translated from Greek into Sanskrit during this period. It may be mentioned here, that if Sanskrit had really gone to sleep during these seven hundred years why were the Greek works on Astronomy translated into Sanskrit and not in one of the vernaculars.

22. Professor Jolly thinks that the Nārada Smṛti and the Vṛhaspati Smṛti are mere vārtikas to the Manu Saṃhitā, and, therefore they must have been compiled within a few centuries of that work. And these two works may safely be placed within our limits.

23. The Daśakumāracarita which Wilson ascribes to the sixth century may be placed within this period, as there is no geographical name which cannot be traced to these centuries. The author speaks of Kauṭilya's Artha-Śāstra as a recent work on "Politics."

Kālidās in the sixth century speaks of the Gaja Sūtras as an ancient work from the country Aṅga. Now the Pālakāppya which treats of elephants is a work in the Sūtra form and it was composed in the Aṅga deśa. So this work also may be placed within these centuries.

The Laṅkāvatāra of the Buddhists speaks of several schools of Hindu philosophy, whose works must have been written during the earlier part of this period. In fact, the work entitled "Tattva Samāsa" or the 'Kapila Sutras' has been regarded by Dr. Mitra as more ancient than Iśwara Kṛṣṇa's Kārikās written in the early part of the fifth century.

The Buddhists began to preach in district dialects. But within hundred years of the death of the master there was a split in the camp. The orthodox Theravādins continued their works in the vernaculars and at last fixed Pāli, one of the vernaculars, as their religious language. But the heterodox people gradually began to Sanskritise the vernaculars and created what Senart calls the mixed Sanskrit, just as we now say sans-

kritisised Bengali, or Sādhubhāṣā. The degree of Sanskritization increased as time went on, as is evidenced by the variety of the forms of the language found in Gāthās embodied in later Sanskrit works like the Lalitavistara and the Saddharmapundarīka. A large number of inscriptions in sanskritised vernaculars have also been found. One large work in this form of language is the Mahāvastvavadāna of the Lokattaravādins, a sect of the Mahāsāṅghikas. The process of sanskritization continued among the heterodox sects till the whole of heterodox classes were included in the newly rising Mahāyāna School, who wrote entirely in Sanskrit though their Sanskrit was a little different from that of the orthodox Brāhmaṇas. This process of sanskritization clearly indicates the presence of Sanskrit in the land in vigorous existence. Who were the great writers in Sanskrit among the Mahāyānists? Brahmanas again, who were converted into Buddhism, as Aśvaghōṣa, Nāgārjuna and Āryadeva. They were born Brāhmaṇas, received their finished education as Brāhmaṇas, they became converts into Buddhism and wrote Mahāyāna works in Sanskrit.

The first work on Mahāyāna in Sanskrit is Śrīmālā Sūtra.

The second work is Laṅkāvatāra Sūtra.

3. Then comes the great writer Aśvaghōṣa, eight of whose Sanskrit works are known in Chinese translation. One of them is the well-known epic Buddhacarita, the Sanskrit text of which has been partly recovered. Two more of his Sanskrit works are known, one entitled Vajra Sūci, and the other Saundarananda Kāvya.

4. Nāgārjuna, twenty-four of whose Sanskrit works are known from Chinese translation, is the actual author of the Prajñāpāramitā, 8000 or 10,000, though the entire Prajñāpāramitā literature is said to have been rescued by him from the nether world, नागार्जुनेन पातालदुद्धता; his Mādhyamaka-kārikā has already been twice partially printed. He was a voluminous writer, and he wrote only in Sanskrit.

5. Within 265 to 316 the Pañcaviṃśati Sāhasrikā Prajñāpāramitā was twice translated into Sanskrit. It was a recast of the Aṣṭa Sāhasrikā according to the doctrines embodied in Maitreyanātha's Kārikās entitled अभिसमयाभिलङ्कारशास्त्र.

6. This brings us to another Sanskrit writer Maitreyanātha, whose Abhisamayālaṅkāra Kārikā has been lately discovered. Nanjio credits him with the authorship of ten Sanskrit works, the Chinese translation of which still exists.

7. Āryadeva, a disciple of Nāgārjuna, whose Cittaviśuddhiprakaraṇa in Sanskrit was recovered from Nepal in 1897, and who is credited by Nanjio with having written nine Sanskrit works, the translations of which exist in Chinese.

8. Nanjio's catalogue of Sanskrit Tripatakas gives the name

of a large number of Sanskrit works translated into Chinese before 316 A.D.

The whole of the revealed literature of the Mahāyāna School in Sanskrit was composed during these centuries, and their number is very large.

Early in the second century B.C. the Jainas split into two large sections, one of which mainly used the vernaculars and the other mainly Sanskrit.

Umāsvātivācaka, orator of Pāṭaliputra, who is said to have flourished in 151 of the Vikrama era, wrote the *Tattvārthādhigama Sūtra*, an encyclopædia of Indian literature, from the Jaina point of view.

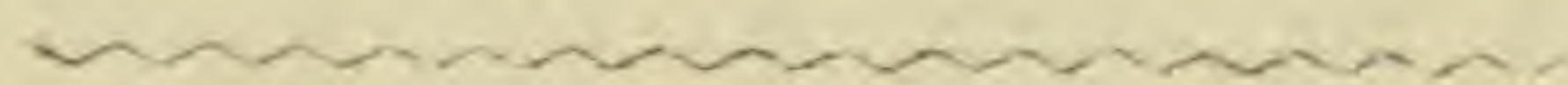
The theory of revival of Sanskrit is untenable for the following amongst other reasons :—

(1) Brahmins wielded great influence and could not have been idle in the matter of literature.

(2) Some of the non-Brahminic sects gradually Sanskritised their vernaculars and in the end took to Sanskrit.

(3) Greek works were translated into Sanskrit and not in any of the vernaculars. Sanskrit therefore continued during all these seven centuries as the language of culture, of science, and of art, though some non-Brahminic sects clung to their vernaculars.

With such a vast Sanskrit literature—Brahminic, Buddhistic and Jaina—before us, is it possible to say that with the death of Buddha Sanskrit went to sleep for seven hundred years only to awake by the middle of the fourth century A.D. ?



29. The Bhasapariçcheda.

By MAHĀMAHOPĀDHYĀYA HARAPRASĀD SHĀSTRĪ.

The Bhāṣāpariçcheda is the standard text-book of the Navadvīpa school of Nyāya philosophy. It is widely studied throughout India, from Nepal to Travancore and from Burma to the Punjab. There are 166 verses in this work, but these are learnt by heart by almost every paṇḍita who has any pretensions to scholarship. The work is generally accompanied by a commentary by the author himself, which is as widely read as the original text.

The author is Viśvanātha Tarkapañcānana, or simply Viśvanātha Pañcānana, who also wrote a vṛtti commentary on the Gautama-Sūtrās. Aufecht registers 16 other works as written by the same author. Dr. Röer translated the Bhāṣāpariçcheda and its commentary in the Bibliotheca Indica series in 1850. He says, "There is no paṇḍita of any repute who does not know it (Bhāṣāpariçcheda) well; and many know the whole of it by heart, and indeed, it is admirably adapted for the purpose of introduction into the study of the Nyāya philosophy. It is a succinct exposition of the principal topics of the whole system, and may easily be committed to memory. It is written in the well-known Anuṣṭup metre. The style, however, is not poetical at all, but that of the most sober prose, and nowhere is the attempt made to combine the graces of imagination with philosophical method."

But unfortunately we know nothing about the author,—who he was, where he lived, and the age in which he flourished. Rāya Rājendra Candra Śāstrī Bahādur in the preface to his translation of the Bhāṣāpariçcheda and its commentary, published in 1904, says that the author's age, birthplace, etc., are absolutely unknown. But his name betrays a Bengali origin. The author himself simply says that his father's name was Vidyānivāsa and that he wrote the commentary for the sake of Rājīva, who may be either a son or a pupil. From Bābu Nagendra Nātha Basu's Jātīya-Itihāsa, Vol. I, Part I, published without date, but presented to me in July 27, 1904, it is known that the author was a Banerjee, that he belonged to the family of Ākhaṇḍala, which was respected all over Bengal, that he was 20th in descent from Bhaṭṭanārāyaṇa, one of the five Brāhmanas that came to Bengal in Vedavānāṅgaśāke, that is, Śāka 654 or 732 A.D., that his father was Kāśīnātha Vidyānivāsa, that his grandfather was Ratnākara Vidyāvācaspati, that his

great grandfather was Narahari Viśārada, that through Narahari he was connected with Vāsudeva Sārvabhauma, the founder of the greatness of Navadvīpa as a place of learning, and that through Narahari's father, Keśava, he was connected with Raghunandana, the legislator of Bengal, as well as with the Princely House of the Rājās of Naladāngā in the district of Jessore. As Mr. N. Basu compiled his Jātiya-Itihāsa from the authentic genealogical records of the Brāhmaṇas of Bengal, there was little reason to doubt the facts recorded therein. But as these genealogical lists have not yet been published, scholars may not be disposed to give them the credit they deserve. So I was anxious to secure some contemporary evidence, and fortunately I got it in No. 153 of the 2nd volume of the 2nd series of the Notices of Sanskrit Manuscripts. That number describes "Bhramara-Dūtam" a poem by Rudra Nyāyavācaspati, the son of Vidyānivāsa and the grandson of Vidyāvācaspati. So Rudra, I thought, must be a brother of Viśvanātha; and referring to Nagendra Bābu's list, given in page 295, I found that Rudra, Nārāyaṇa, and Viśvanātha were three sons of Vidyānivāsa. The agreement of the statements in No. 153 with Mr. Basu's list proved the authenticity of the latter.

The foregoing considerations proved that Viśvanātha was a Banerjee, was an Ākhendala, and was connected with some of the best Brahmin families in Bengal known for wealth and culture.

But what was the age in which he flourished? The paṇḍitās assured Dr. Röer that Viśvanātha lived about 200 years ago. But this was vague and so not deserving of much reliance.

In the course of my reading through the descriptive catalogue of Sanskrit Manuscripts, I came to No. 1385 of the I.O. Catalogue, where I read:—

सर्वेषां मौलिरत्नानां भट्टाचार्यमहात्मनां
 एतद्विद्यानिवासानां दानकाण्डाख्यपुस्तकम् ।
 व्योमेन्दुशरशीतांशुमितशाके विशेषतः
 शूद्रेण कविचन्द्रेण विलिख्य परिशोधितम् ॥

That is, a Śūdra scribe, named Kavicandra, copied the manuscript for Vidyānivāsa in Śāka 1510 = 1588 A.D. That paṇḍitas of wealth and influence employed Śūdras as salaried scribes, is a well-known fact. In this case Vidyānivāsa employed Kavicandra as his scribe, and Kavicandra says that he copied the manuscript for his employer in 1588 A.D. This was the time when Bengal was ruled on behalf of Ākbar, by the Hindu princes, Todarmall and Mānasiṅha. This gives some meaning to the statement about Vidyāvācaspati in No. 153

“ योऽभूत् गौडक्षितिपतिशिखारत्नघृष्टाङ्घ्रिरेणुर्विद्यावाचस्पतिरिति ”

that is, Vidyāvācaspati, who must have been a venerable old man by this time, had the dust of his feet come in contact with the crest-gems of the ruler of Gauḍa.

But I was on the look-out for a date of Viśvanātha himself. And this has, fortunately, been furnished by a manuscript in the recent collection acquired for Government. The manuscript contains a copy of Viśvanātha's *Vṛtti* commentary on the *Gautama-Sūtras*. At the end of the work there are three verses by Viśvanātha himself. These are:—

एषा मुनिप्रवरगौतमसूत्रवृत्तिः
 श्रीविश्वनाथकृतिना सुगमाल्पवर्णा ।
 श्रीकृष्णचन्द्रचरणाम्बुजचञ्चरीक-
 श्रीमच्छिरोमणिवचःप्रचयैरकारि ॥
 कठिनार्थपदां कृतिं समेतां
 सृष्टुनि तच्चरणे समर्पयामि ।
 अपराधमिमं प्रभो क्षमेषा
 ननु नारायण देव दीनबन्धो ॥
 रसवाणतिथौ शकेन्द्रकाले
 बहुले कामतिथौ शुचौ सिताहे ।
 शकरोन्मुनिसूत्रवृत्तिमेतां
 ननु वृन्दाविपिने स विश्वनाथः ॥

The work was composed by Viśvanātha, in conformity with the teachings of Raghunātha Śiromaṇi, who was a votary of Kṛṣṇa, at Vṛndāvana, in the Śaka year 1556 = 1634 A.D.

So what Rāya Rājendra Śāstrī regretted as absolutely unknown six years ago, is now fully known. The author of *Bhāṣā-pariccheda* retired in his old age to Vṛndāvana and wrote his *vṛtti* in 1634, while residing there. This also proves that he was a direct disciple of Śiromaṇi, the founder of the Navadvīpa school of Nyāya, and that Śiromaṇi himself was a Vaiṣṇava.

That Viśvanātha was a pupil of Śiromaṇi is extremely probable. Viśvanātha's grandfather Vidyāvācaspati, and Vāsudeva Sārvabhauma, were two brothers. Śiromaṇi was a pupil of Sārvabhauma. So Śiromaṇi was an elder contemporary of Viśvanātha and probably his teacher. Śiromaṇi lived at Navadvīpa. Vāsudeva, in his old age, retired to Purī where his descendants held high offices under the Hindu Rājā. Vidyāvācaspati and his son Vidyānivāsa lived always at

Navadvīpa. All these learned men fell more or less under the influence of Caitanya, the Vaiṣṇava-Reformer of Navadvīpa in the early part of the 15th century.

From all these, the statement of Aufrecht in p. 574, that Vidyānivāsa, the father of Rudra and Viśvanātha, was the son of Bhavānanda, proves erroneous; and the source of the error is traced out in No. 2938 of Notices of Sanskrit Manuscripts, First Series, in which Rudra Tarkavāgīśa says that he was commenting upon a work by his grandfather, Bhavānanda Siddhānta-Vāgīśa. So Aufrecht has evidently confounded Rudra Tarkavāgīśa, the grandson of Bhavānanda, with Rudra Nyāyavācaspati, the grandson of Vidyānivāsa.

In pages 528 and 529 Aufrecht makes two entries as Rudra Nyāyavācaspati Bhaṭṭācārya and Rudra Nyāyavācaspati. The first is a Nyāyīyika and the second a poet. The first is the son of Vidyānivāsa and the grandson of Bhavānanda, and the second, son of Vidyāvilāsa. I believe that, with the facts before us, these two entries should be made into one. For the poet of "Bhramara-Dūta" says, that his grandfather was Vidyāvācaspati, and not Bhavānanda; and we know that he was both a poet and a Nyāyīyika. Aufrecht gets Vidyāvilāsa apparently from the printed text of Bhāvavilāsa in the Kāvya-mātā series. But the scribes of Western India often make strange mistakes in copying Bengali names, instances of which are found in abundance in the printed text of Vivādārṇavasetu, published in Bombay. In the case of Bhāvavilāsa, however, Bhāṇḍārkar mentions two manuscripts in which Vidyānivāsa is the name of the author's father and not Vidyāvilāsa. Rudra Nyāyavācaspati, the author of Bhāvavilāsa, written to please Mānasiṅhā's son, Bhāvasiṅha, is no other than the elder brother of Viśvanātha.

30. Vocabulary of Technical Falconry Terms in Urdu,
Persian, and Arabic.

By LIEUT.-COLONEL D. C. PHILLOTT, F.A.S.B., *Secretary and
Member, Board of Examiners, Calcutta.*

The English terms in this vocabulary have been taken mainly from the numerous works of Mr. J. E. Harting. The Eastern terms have been collected from Indian, Persian, and Arab falconers, as well as from MSS. As the vocabulary, however, does not claim to be exhaustive, the compiler not having lived more than thirty years in the East, English terms for which no equivalents could be found have been included. It is left to some future falconer to fill in the gaps.

A

Aggresteyne, [a disease; *vide* Boke of St. A., p. 29].

Agrum, [When thou seeth thy hauke upon his mouth and his chekis blobbed, then she hath thys sekenes calde Agrum.—*Boke of St. A.*, p. 42].

Albino, تیدغون or تیقون, *tīqūn* or *tayghūn*, T. and Pers., Class. and Mod. : *vide* also Goshawk.

Alphanet, *vide* Lanner.

Anguelles, [worms said by early writers to trouble sick hawks].

Anlet or Annulet, [small rings, *vide* Varvel].

Ant, موریاں *mūriyāna*, Mod. Pers. (White-ant) : ریشمیز *rishmīz*, Mod. Pers. (White-ant or Weevil?).

Antelope, هرن *haran*, masc., and هرنی *harnī*, fem., Hindī (the Indian Antelope or Black-buck).

Antelope-rat, *vide* Mouse.

Anus, *vide* Vent.

Apoplexy, سکتہ *sakta*, Ind. Pers. MS.

Appetite, *vide* Meat.

Arms (the legs), پاؤں *pā'ōn* Hindu., and پا *pā* Pers. : *vide* Stalke.

Arsenic, سزکھیا *sankhiyā* Hindī, مرگ موش *marg-i mūsh*, Mod. Pers., and سم الفار *samm^u'l-fār*, Ar. (white arsenic).

Artetike, [When ye se yowre hawke fat abowte the hert trust it for trouth she hath the artitike.— *Boke of St. A.*, p. 38].

Attrempe F., [neither fat nor thin—Burton's *Falconry in the Valley of the Indus*, p. 75].

Austringer, *vide* Ostrenger.

Avillons (or talons),¹ *قلاب* *qullāb*, (Mod. Pers.) : *شاه اخرون* *shāh-nākhūn*, Ind. Pers. MS.

Ayre, and Eyrie, *vide* Nest.

B

Badelynge, [a badelyng (paddling) of dokis].

Bait, *vide* Decoy.

Balai, *vide* Tail.

Barbary Falcon, *اليوصى* *al-yawaṣṣa*, Ar. MS. (apparently the Barbary Falcon; *vide* Shahin).

Barbe-feathers, (the feathers under the beak *vide* Boke of St. A., p. 15) *vide* Feathers.

Bare-headed, *قلندره* *qalandara* (Ind. Pers. MS.); without a hood.

Bastard-wing, *بچي* *bachī*, (Panj. coll.).

Basse-volerie, *خرده گيرى* *khurda-gīrī* (Mod. Pers.).

Bastarde (some kind of falcon), [“ Also ther is a Bastarde and that hauke is for a Baron ”].

Bate, Bating, Rebate, *پهرکنا* *pharaknā* (Hindu.) : *تپیدن* *tapīdan*, and *تپش دادن* *tapish dādan* (Mod. Pers.) : [Rebate is to make the hawk return to the fist after bating off it].

Bat-fowling, [A method of catching birds at night by means of a light and a bell, with or without the adjunct of nets; *vide* Bird-batting].

Bask, to, *تاپنا کھانا* *dhūp tāpnā* or *khānā*, Hindu. and Panj. : *آفتاب گرفتن* *tashammus kardan*, Mod. Pers. : *آفتاب گرفتن* *āftāb giriftan*, Vulg. Mod. Pers.

Bathe, to, *نھانا* *nahānā* (Hindu.) and *شستن* *shustan* (Ind. MS.) “ to bathe in water ” ; these terms are also applied to a certain playful action in flight in which the hawk closes its wings and shakes itself, a sign that it is not keen : *آب بازی کردن* *āb-bāzī kardan* (Mod. Pers.), and *غسل کردن* (Ind. Pers.) “ to bathe in water.”

Bawtere (A species of Eagle), [First an Egle. a Bawtere. a Melowne. The symplest of theis iii will slee an Hynde

¹ *Vide* Burton's “ Falconry in the Valley of the Indus,” p. 18.

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calfe. a Fawn. a Roo. a Kydde. an Elke. a Crane. a Bustarde. a Storke. a Swan. a Fox in the playn grownde. And theis be not enlured. ne reclaymed. by cause that thay be so ponderowse to the perch portatiff. And theis iii by ther nature belong to an Emprowre.—*Boke of St. Albans*, p. 52].

Beak, چوئچ *choñch* Hindu., gen.: *مهره muhra* (Panj. coll.): *نوی nok*, Panj., and *نول nol* Hindu., and Ind. Pers. MS.: *منسر minsar* (of hawks) and *منقار minqār* (of any bird) Ind. Pers. MS. and Ar.: *چنگ ching* (Mod. Pers.; *vide* also Claw and to Peck): *vide* Mandible.

Beak, to,¹ [“—yowre hawke colyeth and not beckyth.”—*Boke of St. A.*, p. 10. But elsewhere, p. 45, in the same book “She bekyth when she sewith: that is to say she wypith her beke]; *vide* Feake.

Beam-feathers, [And the long federis² of the Wyng of an hawke bene calde the beme federis of the Wyng.—*Boke of St. A.*, p. 15.] For the “beam-feather of the tail, *vide* Deck-feathers, and Tail.

Beasts trained to the chase, *vide* under Raptores.

Beat, to, *بالم را بروم زدن bāl rā bar-ham zadan* (to beat the wings, *i.e.*, not to sail): *جهارنا jhārñā* (to beat for game; *vide* Drive).

Bechins (morsels, mouthfuls), *چکھه chakh*, Panj. (a taste of; *vide* Feed).

Beck, fly at the, *vide* View.

Bell, *گھونگھرو ghunghrū*, Hindu.: *زیل zil* f., T., Panj., and Pers.: *زنگ zang*, *زنگوله zangola*, and *جالاجل jalājil*³ (Mod. Pers. and Ind. Pers. MS.); Indian hawk-bells should be of different tones, *nar o māda*, male and female, the latter being the shriller: *زیرا zira*, Ind. Pers. MSS. and m. c. (bells for pigeons = *پینجنی painjnī* Hindu.).

Bench, *sakū*, Mod. Pers. (bench, seat, platform, of wood or mud).

Besom-tailed, [“...the worst you can say by an hawke for their shape is, that shee is a long slender and beesome tailed hawke.—*Bert.*, p. 56, Harting's Edition.

Besrā, *vide* Sparrow-hawk.

¹ According to Halliwell “to beak” is a hawking term, as well as a term of cock-fighting.

² By the “long-feathers” the 2nd, 3rd and 4th primaries only are probably intended.

³ Prob. Ar. pl. *jalājil*, sing. *juljul*.

Bevy, [A beuy of Quaylis, Roos, or Ladies].

Bewits, [The strips of leather by which the bells are attached to the legs. In India gut is usually employed].

Big, قداور *qadd-āwar* (prop. "tall of stature"; amongst Panj. falconers and in an Ind. Pers. MS. = "big"; compare with *māsel*, etc., 'vide' Flesh).

Bile, صفراء *ṣafrāʿ*; *vide* Casting and Gleam.

Bind, [To fasten on the quarry in the air.—*Harting*. According to Burton (pp. 18-19) the French equivalent *lier* is confined to falcons; "truss" being used for short-winged hawks. According to the same writer the French *empiéter* "to trample" is used of "hawks" as they hold the game down under foot]: *vide* Wrestle and Clutch.

Bird, بگاث *bughāṣ*, Ar. MS. (birds other than birds of prey).

Bird-batting, *vide* Bat-fowling.

Bird-bolt, [A short thick arrow with flat end used for knocking over birds without outward injury].

Bird-boy, (scares bird from corn) کوا هذکنا *kawwā-hanknā*, Hindu.

Bird-catcher, Birder, چویمار *chirī-mār*, Hindu. : میرشکار *mīr-shikār*, Hindu. : شکارچی - شکاری - صیاد *shikārchī*, *shikārī* and *ṣayyād*, (Mod. Pers.): *vide* Snarer.

Birder, *vide* Bird-catcher.

Birding, (bird-catching) نرجو *narjū*, Panj., and نکا *nalka*, Hindu. (the Indian bird-catcher's long jointed bamboo; and کامپا *kāmpā* (the forked twig or strip of bamboo for the bird-lime): *vide* also Rod.

Birdlime, لاسا; *lāsā*, Hind. ; دبق *dabq*, Ar. MS. (دبق *dabbaqa* verb, to lime); غراء *ghirāʿ* in Baghdad colloquial.

Bird of prey, *vide* Raptores.

Bittern, کھوکھار *kharkhār*, in Chach, (this name is also applied to the Purple Heron): گوئی *goī*, Kashmiri (a species of Little Bittern): *vide* also Sedge.

Bittour, bittor, bitter, bitter bump, *vide* Bittern.

Blackbird, کستورا *kastūrā* and *kastūrī* (Indian Black bird; also of a species of thrush).

Blindness, *vide* Night-blindness.

Blain, [A disease of the second joint of the wing.—*Corballis*: appears to be unknown in India. Blain is also a boil and an eruption on the tongue of animals. In the *Boke of St.*

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Albans, p. 42, occurs the heading "For Blaynis i haukes mouthes cald frouches"].

Block, *اَدَدَا* *adḍā*, Hindu. (whence adj. *adḍel*): *vide* also Perch.

Block, to, *vide* Put in, (said of a hawk that instead of making her point, takes stand).

Blown, to be, *نَفَسِ سُوخْتَن* *naḥas sūkhtan* (Mod. Pers.).

Blue-eyed, *اَزْرَقِ چَشْمِ* *azraq-chashm*, Ar., Pers.; *زاقِ چَشْمِ* *zāq-chashm* (Mod. Pers., *i.e.*, with eyes like *زاج* alum, or like *زاق* a crow), *vide* Eye.

Blue-rock, *vide* Pigeon.

Bogge, (to shy, of a horse; *vide* Bert, p. 3), *vide* Fright.

Bole, *گِرو* *gerū*, Hindī, red ochre; *گلِ ارمنی* *gil-i-Armanī*, Pers. (Armenian bole).

Bolt, to fly at, (to fly straight from the fist at a quarry; of short-winged hawks): *دستِ رو (کردن و شدن)* *dast-raw (kardan and shudan)* Ind. Pers. MS., and Mod. Pers., tr. and intr.; *vide* Cast off.

Bolus, *چالْمه دَادَن* *chālma dādan* (Mod. Pers., to give a bolus stealthily, concealed in the bag-like skin of the thigh of a bird).

Bone, *دو شاخه* *dū-shākhā* (Hindu. coll., and Ind. Pers. MS.): the pubis bone *q.v.*

Booch, *vide* Botch.

Booted, *پاموز* *pā-mūz*, Panj. (feathered on the tarsus).

Borax, *سُهَاگَا* *suhāgā*, Hindī (and Ind. Pers. MS.).

Botch, (inflamed tumour).

Bouke, [body, bulk.—*Boke of St. A.*, p. 28).

Bow, *غَلِيلِ* *ghulel*, Hindu., and Ind. Per. MS. (a pellet bow).

Bowiser,¹ (a hawk that can travel from bough to bough and returns to the nest), *تَالِ تَپِ* *tāl-tap*, Hindu.; *شاخِي* *shākhī*, Panj.; *شاخِ جِهَانِ* and *شاخِ جِهَانِي* *shākh-jahān*, and *shākh-jahānī*, (Ind. Pers. MS.).

¹ Apparently a "brancher" was a hawk that had lately flown but was still following its mother, while a "bowiser" was one that could only travel from branch to branch.

Harting, in the glossary of his edition of the *Booke for Keping of Sparhawkes*, quoting the *Summary of Falconry* by Ray, 1678, states that a 'brauncher' is a young hawk that has lately left the nest and that it was also called a "ramage-hawk."

Bowse, Bouse, Booze, etc., (to drink), [Is when a *Hawke* drinketh often, and seems to be continually thirsty.¹—*Latham*. 'Vide' also Gen. Rec. ii, 61].

Bowsin or Bowsing, (drinking).

Bracelet, بلاجى *bilājak*, Ind. Pers. MS. (from بلازى *bilāzik* or *balāzik* T.).

Brahminy duck, *vide* Shieldrake.

Brail, [A narrow slip of thin soft leather, with a long slit in it, used for tying one wing of a restless hawk that bates much.—*Harting*. Eastern falconers use neither the brail nor the cadge. As a rule each hawk has its own falconer, but a spare hawk is sometimes carried on the head. A bird-catcher transporting a number of hawks carries them on the shoulder, on a long pole bound round with grass, etc.; newly-caught sparrow-hawks are done up in 'socks,' like grocer's parcels, and so transported].

Brain-fever Bird, *vide* Cuckoo-hawk.

Brancher, (a hawk that has left the nest and can fly from tree to tree, which according to the *Boke of St. Albans* takes place after St. Margaret's Day);² *vide* Bowiser.

Brayles or brail-feathers, (the long small white feathers under the tail); نيفق *nayfa* (Ind. Pers. MS.) and نيفق *nayfaq* (Ar. MS.; said to be a corruption of the Pers. نافة *nāfa*); دم ليزة *dum-līza*, Mod. Pers. (the brayle-feathers, or the Pope's nose?).

Breast, بغل *baghl* (Panj. and Ind. MS.) and كچهه *kachh*, Panj., (in a hawk, the flesh on the side of the breast, under the wing, where the wing-joint is; *vide* also Joint): سينه *sīna*, Panj. and Ind. Pers. MS. (the whole breast; *vide* also Joint): *vide* Condition.

Brood, [A brode of hennys].

Bury, [A "Bery of Conyis"; *vide* Coney].

Building, [A beldyng of Rookes].

Bush-chat, *vide* Chat.

Bustard, تگذار *tughdār*, Panj., and Ind. Pers. MS. (the great Indian Bustard): مرغ ميش *mīsh murgh*, P., and دوى داغ *dūy-dāgh* or

¹ Ignorant—or over-physicking with sal-ammoniac produces an insatiable thirst that lasts for many days.

² According to the "Boke of St. Albans," hawks should be taken when branchers. St. Margaret's Day appears to be the 10th June, in honour of a canonized queen of Scotland. However the 20th July is sacred to another saint, *Sainta Margarita*, virgin and martyr.

[N.S.]

tū, ī-dāgh or طوی *tū, ī* or تویطغلی *tūtughlī*, T. (the Great Bustard of Europe): تغداری *tūghdarī* in Kapurthala and Ind. Per. MSS.; تلور *tilūr*, خرمور *khar-mor* or خمور *khanmor*, in the Panjab; چرز *charz*, in Baluchistan; ثوزة, تازمی, or چازه *tsora, tsārasī*, or *chāra* amongst Pathans; گرائنی or گرائن *gurain* or *gurainī*, in some districts of N. India; هوبره *hubara*, in Persia; حباره or حباری *hubāra* or *hubāra*, Ar. MSS., (the Indian Houbara Bustard): الحبرج *al-hubruj*, Ar. MS. (the Houbara; in dict. said to be the male).

Button, دک *dukma*, T. (the "button" or tubercle in the centre of the nostril of a hawk).

Buzzard, سار *sār* (Mod. Pers.; for Turkī سا *Sā*?; *vide* also Starling): چوهدیمار *chūhe-mār*, Hindu. (the Long-legged Buzzard, *B. canescans*, Jer.): موش خور *mūsh-khor*, Panj. and Ind. Pers. MSS. (ditto): چکی *chukī*, Panj. and تیسا *tīsā*, in Oudh (the white-eyed Buzzard *Poliornis teesa*, Jer.): المرزة *al-murzah*, Ar. MS.; العقیب *al-'uqayyib*, Ar. MS.

C

Cadge or Cage, [A wooden oblong or square frame on which hawks are carried hooded to the field.—*Harting. Vide* Brail].

Cadger, [The person who carried the cadge; and perhaps any assistant falconer; *vide* Falconer].

Call, to, [بھون ہاتھ کرنا *bhon-hāth karnā*, Panj. (to exercise a short-winged hawk by calling it repeatedly from the ground to the garnished fist held aloft)].

Calling off, [Luring a hawk from an assistant at a distance, for exercise.—*Harting.*] 'Vide' Lure, to.

Canceleer, [Fr. *chevaucher*, to make two or three sharp turns in the descent when stooping.—*Harting.*]

Cancer, آکلہ دماغ *ākila-yi dimāgh*, said to be another name for سفید مرگ *safīd marg*, Ind. Pers. MS.

Canker, خورہ منسر *khura-yi minsar*, Ind. Pers. MS. (canker of the beak); پرخورگی or پرخوره *par-khura*, and قاشقہ *qāshiqā*, T. (Mod. Pers. and Ind. Pers. MSS., canker of the flight—or of the tail-feathers at the root).

Canvas-mail, *vide* Mail.

Cardamoms, الاچی or الاچیچی *ilāchī*, Hindu., and *alāchī* Pers.

Carriage, دست داری *dast-dārī*, Ind. Pers. MS. (keeping on the fist).

Carry, to, (a hawk on the fist), هاتھ پر لینا *hāth par lenā*, Hind. and بردست گرفتن *bardast giriftan*, Mod. Pers. (to take on the fist): بازار کی مار دینا *bāzār kī mār denā*, Panj. (to carry in the streets): *gasht dādan*, Ind. Pers. MS., and گردانیدن *gardānīdan*, Mod. Pers. (to carry a hawk about).

Carry, to,¹ صید کرتا کر آنا *ṣayd uṭhākar urjānā* (to fly away with the quarry).

Case, کھول *khol* f., H., and خول *khol*, Ind. Pers. MS., (a leather case or protection for the beak or neck of a heron that is given as a 'train'): *vide* also Tail-cover.

Cast,² (two hawks), جفت انداختن *juft andākhtan*, Mod. Pers. (to fly as a "cast"): باهم جناح انداختن *bā ham janāḥ andākhtan*, Mod. Pers. (ditto).

Cast gorge, to, قی کرنا *qai karnā*, Panj. (to vomit).

Cast off; and Cast by hand, بتولا کرنا *batolā karnā*, Panj., and بتولہ کردن *batolā kardan*, Ind. Pers. MS. (to cast off a hawk from the right fist with force, supporting its breast the while with the left hand): دست رو پورانیدن *dast-raw parānīdan*, Ind. Pers. MS. (to cast off from the fist *i.e.*, not to hold in the hand and throw; *vide* also 'to Bolt'): متھی چلانا *mutṭhī chalānā*, Hindu. (to hold a hawk in the hand and throw it like a cricket ball at the quarry): انداختن *andākhtan* or اوگری انداختن *uḡhrī andākhtan*, Mod. Pers.: هوا انداختن *havā andākhtan*, Ind. Pers. MS. (to cast off secretly): *vide* also Bolt, fly at, and Take.

Cast, to; Casting, پرموہ (ڈالنا) *par muhra (dālnā)* (a casting, sp. of feathers): صفراء *ṣafrā* Mod. Pers. (a casting, *lit.* "bile"): طعمہ انداختن *tu'ma andākhtan*, Mod. Pers., and منہ جھارنا *munh jhārnā*, Hindī (to cast; *tu'ma*, *lit.* "food"): قیافو *fatīla*, Ind. Pers. MS. (casting); تک سمک *tuk-samik*, T.: فتیلہ *fatīla*, Ind. Pers. MS. (an artificial casting of wool; *lit.* = wick, etc.): *vide* last line of 'Meat'; [Ye shall say cast

¹ In India hawks are usually trained to large quarry that they cannot "carry." There is no special word for the vice known to English falconers as "carrying."

² Only Indian falconers trained by Englishmen fly a "cast" of hawks.

[N.S.]

youre hawke to the perch, and not set youre hawke upon the perch.—*Boke of St. A.*, p. 10].

“ Catch,” *vide* Lure.

Cateract, غشاوة *ghashāwah*, Ar., and موتيا بند *motiyā bind*, Hindi, (from Ind. Pers. MS.): نزل آب *nuzūl-i āb*, Ind. Pers. MS.

Cat-gut, تانت *tānt*, Hindī. : زه *zih*, Mod. Pers. ; and روده *rūda*, vulg. coll. ; وتر *watar*, Ar. ; *vide* also Sinew.

Cawking-time,¹ (pairing-time), جفتي کا موسم *jufti kā mausim*, Hindu.

Cere or Sere, (the bare wax-like skin near the beak). [In the *Boke of St. Albans*, p. 13, the skin of the legs is called the “ Seris of hir legges and hir fete ”].

Chaff-nets, (nets for catching small birds), *vide* Net.

Chap, *vide* note to Mandible.

Charm, (flock), [A chermie of goldfinches].

Chat, دگین *dagīn*, in Chach Hazara, (a black and white chat, probably a Bush-chat, a quarry for the Merlin).

Chase, *vide* Stern-chase.

Check, checking, (to change the bird in pursuit, etc.), دورنیوالا *daurnewālā*, Panj., and رنده *ravanda*, Ind. Pers. MS., (checking at the lure and chasing passing birds).

Cheek-stripe, وچه *wāchh*, f., Panj., [*bāchh*, f., Hindi], (prop. the sides of the mouth) : موچه *mūchh*, f., H. (*lit.* moustache) : مدمع pl. مدمع, *madma*, pl. *madāmi*, Ar. MS. (*lit.* the place where the tears collect) : سیاہ یشماغلی *siyāh yashmāghlī*, Pers. T. (black-headed ? *vide* Trans. of *Bāz-Nāma-yi Nāsiri*, p. 10 and note 3).

Cheetah, چیتا *chitā*, Hindu. : یوز پلنگ and یوز, *yūz* and *yūz-pālang*, Pers. : فهد *fahd*, Ar. : ‘ *vide* ’ Leopard.

Chemise, Fr., *vide* Sock.

Chicken, چوزہ *chūza*, Hindu. : جوجه *jūja*, Pers. ; *vide* Pup.

Choffs, Chough, زاغ *zāgh* (in Kerman, Persia ; but the term is also loosely applied to jackdaws, etc.) : *vide* also Clattering.

Circle, اوی مونگوي ² Ind. Pers. MS. (a semi-circle “ like a half-

¹ However the *Boke of St. Albans* (p. 1) says, “And in the tyme of their love they call, and not kauke.”

² اوی مونگوي word not traceable ; possibly a copyist’s error. The word might mean “ hue and cry ” and be a Turki equivalent of the

moon'' in hunting or driving): *قمرغه* *qumurgha*, T., and *چرگاه* *chargāh* or *چرگه* *jargah* T., Ind. Pers. MS. (a hunting circle formed by beaters; this is apparently a complete circle).

Clap, *vide* Mandible.

Clattering, [A clateryng (flock) of choughes.—*Boke of St. Albans*, p. 86].

Claw, *ناخون* *nākhūn*, gen. ; *شاه ناخون* *shāh-nākhūn*, Ind. Pers. MS. and Panj. (the hind claw, which is the key to opening the closed foot): *قلاب* *qullāb*, Mod. Pers. (the hind claws): *vide* 'Closer,' 'Avillons,' Sengles, and Talons.

Closer or Key, *مخالب* *mikhlab*, pl. *مخالب* *makhālib*, Ar. and Mod. Pers. [Onderstond also that the longe Senclees be calde the key of the fote,¹ or the closer. For what thyng som ever it be yt yowre hawke stenyth: open that Sengle, and all the fote is oppen, for the strength therof fortyfieth all the fote.—*Boke of St. A.*, p. 13]. *Vide* Sengles: *بيچ کي انگلي* *bīch kī unglī*, Hindu., Panj.

Clutch, Clutching, [Taking the quarry in the feet in the air as short-winged hawks do (and occasionally falcons), instead of striking it down].

Clyster-stick, *شاف* or *شافه* *shāf* or *shāfa*, Mod. Pers. and Hindu. (a stick with cotton-wool at one end; dipped in oil and used as an enema).

Coat, [“*Hawk of the first coat*, a hawk in her fourth year.” See Genl. Rec.—*Halliwell*. “A Goshawke nor a tercell in thare soreaage haue nott thau mayles named. bot it is calde their plumage. and after the cote it is called theyr Maill.”—*Boke of St. Albans*, p. 12. From the latter it would appear that ‘cote’ meant the first moult, and that the breast-feathers of Goshawks were called ‘plumage’ in the immature, and ‘mail’ in the mature, bird. From the last section on p. 11 of the same author it would appear that the breast-feathers of falcons were called ‘maill,’ both in the immature and mature birds].

Cogh, (cough), *vide* Poose.

Cold, *vide* Rye.

Colon, (the largest intestine) *vide* Stomach.

Colver or Colvere, [A dove or a pigeon? *vide* Dove].

Hindī *hānk* “a drive.” Dr. Denison Ross suggests *اوي مونگوزي* “the ox’s horn,” apparently a better reading.

¹ The real “key” of a hawk’s foot, however, is the hind claw and not the “longe sengle” or middle claw.

- Coly, *vide* Beak and Feake.
- Come to, (to begin obeying the falconer), زیر تعلیم *zer-i ta'lim*, Ind. Pers. MS. ("under training," i.e., coming to the lure).
- Comerowse or Comerous, [troublesome, old English].
- Condition, بغل شناس *baghal-shinās*, adj., Ind. Pers. MS., (said of a falconer that can tell the condition of a hawk by feeling the flesh under the wings; *vide* also Breast): بگوشت شکار *bi-gūsht-i shikār rasīdan*, Mod. Pers. (to be in proper flying condition).
- Congregation, ["A Congregation of Plovers"; *vide* also Lapwing].
- Constipation, قبض *qabz*, Hindu. and Pers.: سده *sudda* Ind. Pers. MS. (obstruction in the bowels; *vide* Stoone in the fundament): خشکی *khushkī*, Mod. Pers.
- Coney or Cony, [Rabbit more than a year old, *vide* Harting's *Birds of Shakespeare*, p. 12 Intro.].
- Coo-coo, *vide* Cry.
- Coot, پولا *parlā*, T. and Mod. Pers. (coot?): قشقال *qashqāl*, T., (in Chach Hazara): [a couert of cootis].
- Coping, (cutting off the sharp points of the beak and claws), تراشنا or لینا or ناخن کاٹنا *nākhun kāṭnā* (or *lenā* or *tarāshnā*) Hindu., (of the claws): نول کاٹنا *nol kāṭnā*, Hindu., (of the beak).
- Corby, *vide* Crow.
- Cormorant, گهاگور *ghāgar*, in Derajat; هاری *hārī*, (in Chach Hazara).
- Cote, *vide* Coat.
- Cover, *vide* Case and Tail-cover.
- Covert, *vide* Coot.
- Coverts, سرپوش *sarpūsh*, Pers.: مفتاح *miṭāḥ*, Ar., lit., "a key" (a primary covert): جرک *jarka* (?), MS. (a primary covert?): *vide* also 'Deck-feather'.
- Covey, [A couy of partrichis]. گله *galla* Pers. (but in Hindustani only for cattle; herd).
- Cowardly, کم ہمت *kam-himmat*, Hindu. and Pers., (lacking in courage and also in perseverance); بودا *bodā*, Hindī: *vide* Ignoble.
- Cower, Cowering, [of young hawks when they quiver and shake their wings].

Crabbed, Crabbing, لڑاکو *larākū*, Panj., (quarrelsome, cross-grained). [“Crabbing, *i.e.*, grabbing; said of hawks when two are flown together, and one seizes the other on the quarry by mistake.”—*Harting*. “Hawks fighting with each other.—*Lascelles*”].

Cramp, تشنج *tashannuj*, Ind. Pers. MS. (violent cramps).

Crane, کونج *kūnj*, Panj., and کلنگ *kulang*, Hind., (the common crane): کلنگ or کلنگ *kulang* and *kulank*, P., and درنا or طرنا *durnā* or *turnā*, T., (are the Mod. Pers. names for the same): قرقرا *qarqara*. Turkī and Hindu. (the demoiselle crane): [گل or گله *gal* or *gala*, a flock; *vide* also Covey and Herd]: سارس *sāras* Hindu. (the Sarus, *Grus antigone*).

Gray, (the disease), *vide* Constipation.

Creance,¹ [No special words; ریسمان *rismān* in several MSS.].

Creep, to fly to the, [And yowre hawke sleeth at or to the Creepe when ye haue yowre hawke on yowre fyst and crepe softely to the Ryuer or to the pit. and stelith softeli to the brynke thereof. and then cry huff. and bi that meane nym a fowle. Then it is slayn at the crepe oder at the fer Jutty or at the Jutty ferry.—*Boke of St. Albans*, p. 48], *vide* Secretly and Stalk.

Crest, کلغی *kalghī*, Hindu. (a crest of a bird; also an artificial plume for the head): چونتی *chontī*, Hindī (of bird; also a woman's plaits).

Cricket, *vide* Mole-cricket.

Crines, Crinets, [The small hair-like feathers about the beak].

Croaks or Kecks, (the disease), تځ تځ کرنا *takh takh karnā*, Panj.: خرخر کرنا *khar khar karnā*, (*lit.* to snore; to be hoarse in the throat, etc.).

Crop, گھوگھا *ghoghā* (in Behar): پوتا *potā*, Hindī: جهجھوره *jha-jhūra*, Derawal?: اوپر کاتھ *ūpar kā tah*, Panj.: چینہ *chīna*, Pers.: حوصلہ *ḥawsala*, Ar., Pers., and Hindu.

Crossing-flight, [When another bird flies between a hawk and her quarry.—*Harting*.].

Crow, کوا *kawwā*, Hindu., and کانو or کان *kānw* or *kān*, Panj.: کارغہ *kārgah*, Pushtu; دیو کاو *dew kā,o*, Kashmirī (the Common Indian crow): گھاگھری کانو *ghāgrī kānw*, in the Derajat (the Indian Corby): کلاغ *kulāgh*, Mod. Pers.: کلاغ پيسه or

¹ In French *créance*, *filière*, and *tiens-le-bien*. ‘Vide’ also note to Reclaim.

[N.S.]

- کلاغ ابلق, *kulāgh-i-ablaq* or *kulāgh-i-pīsa*, Mod. Pers. (the Hooded or Pied Crow; perhaps also the Magpie q. v.).
- Cry, آواز طلب *āwāz-i-talab*, Ind. Pers. MS. (the luring-cry): قوقو کردن *qū qū kardan*, Mod. Pers. (ditto): *vide* also “Warning.”
- Cuckoo-hawk, پدپها *papīhā*, Hindī (the “Brain-fever Bird” *Hieroccyx varius*).
- Cunning, دزد *duzd*, Mod. Pers. (cunning and lazy, of old hounds and hawks): آسان گیر *āsān-gīr* and سبک شناس *subuk-shinās*, Ind. Pers. MS. (recognising easy flights and not trying at difficult ones; a vice).
- Curlew, بز *buza*, the Black Curlew or Common Ibis q. v.; اسپالندو *ispalandū*, in Chach Hazara (the Common Curlew): *vide* also Herd.

D

- Dabchick, *vide* Grebe.
- Dare, (to frighten), [To dare birds is to catch them by frightening them with a hawk or by other means].
- Deck-feathers, (*i.e.* the two centre feathers of the tail); طوغ or طوغی, *toghī* or *togh*, Panj. and Ind. Pers. MS. (the centre tail-feather, the “beam-feather of the tail,” from *dūgh* or *tūgh*, T. “a tail,” *vide* Beam-feathers and Tail): عمود *amūd* Ar. (ditto; *lit.* column, pillar): قاپاق *qāpāq*, T. P., (ditto; perhaps this word means “coverts”): *vide* Beam-feathers and Tail.
- Decoy, لاوا *lāwā*, Hindu. (a stale, *i.e.*, a stuffed bird as a decoy, *lit.* “bringer”); زنده لاوا *zinda lāwā*, Hindu. (a live decoy): بلارے کا لاوا *bulāre kā lāwā*, Hindu. (quails and partridges used as call-birds): ملا *mullā*, Panj. and Ind. MS. (a live bird or bait for a hawk); موہلو *mohlū*, Panj. (ditto): بھگوا, Panj., and دیو جامہ *dīv-jāma*, Mod. Pers. (a yellow screen or dress used in stalking): *vide* Stalking-horse).
- Degouted, (spotted), [Bot and a spare hawke be so Ermyned upon the brayles. or a Musket. oder ye shall say she is Degouted to the uttermost brayle. and much it betokynis hardenes.—*Boke of St. A.*, p. 14].

Deplume, *vide* Plume.

Dessert, *vide* Lapwing,

Disclosed, (newly hatched) [Now to speke of hawkys. first thay ben Egges. and afterward they bene disclosed hawkys.—*Boke of St. A.*, p. 1].

Distension, نفخ *nafakh* Ind. Pers. MS. (of the stomach).

Dog, کتا *kuttā*, Hindu. (gen.); تازی *tāzī*, Hindu. and Pers. (gen. any greyhound); لُچ or تازی *tāzī* or *luch*, Panj. (smooth-coated Indian or Arab greyhound): جهازی, *jahāzī*, Panj. (English greyhound): بریلا or بخمل, *bakhmal* or *burelā*, Panj. (long-haired Persian or Afghan greyhound): گدڑ *gadar*, Panj. (a pariah): بت *but* (the large Pawanda dog with cropped ears and cut tail): بولی *būlī*, Eng. (bull-dog) and بول دَانگ *būl-dāng*, Eng. (bull-terrier in Panjab); سگ *sag* Pers.; سگ ایلاتی *sag-i-īlātī*, P. (a large fierce breed of dog kept by the Persian wandering tribes): طولا *tūla*, Pers. (any sporting-dog except the *tāzī*; also means pup in m.c.): *vide* Trained.

Do-gaza, 'vide' Urines.

Dopping, [A dopping of sheldrakes].

Dove,¹ فاخته *fākhṭa*, Panj. and Pers. (a large species): گیره *gera*, in Derajat (a large species) and گھوگی *ghughī* or تتن *tutan* (a small species): ترتورو *turturū*, in Kapurthala (a small species, probably *Turtur cambayensis*): *vide* Duell and Flight.

Down of feathers, گدّی *gaddī*, Panj.: نرم پرها *narm-parhā* (Ind. Pers. MS., and Mod. Pers.).

Down-wind, *vide* Up-wind.

Draw, to, [And we shall say that hawks doon draw when they bere tymbering to their nestes.—*Boke of St. A.*, p. 1]; *vide* Timber.

Draw, to [said of a hawk that "will slee a Roke or a Crow or a Reuyn: uppon a londe sitting," 'vide' *Book of St. Albans*, p. 49].

Draw the hood, [to draw the braces which open and close the hood behind.—*Harting*. The Indian hoods have no braces, but a pattern used in the Persian Gulf has].

Drawer, or Lure q. v.

Drawing from the mew, (after she has moulted), کریز سے اُتھانا

¹ By Dove and Colver old English writers probably meant a pigeon.

[N.S.]

or نکالنا, *kuriz se uthānā* or *nikālnā*, Hindu. (to take a hawk out of the moult).

Drink, آب خور کردن *āb-khur kardan*, Mod. Pers. (to accustom a hawk to drink).

Drive, هانکنا *hānknā*, Hindu. (to drive a vehicle; also to drive game: subs., *hānk*, f.).

Drongo-shrike, بهیراج *bhīmrāj*, Hindu. and بهراج *bhanrāj*, Panj. (the Large Ratchet-tailed Drongo, *Edolius paradisens*, a cage-bird): *vide* King-crow.

Drops, *vide* Markings.

Dropping, [said of a hawk that mutes in drops], *vide* Slice and Slime.

Drug, to Drug, لقمه *luqma* (any drug given before flying to increase hunger and courage): کیف دادن *kayf dādan*, Ind. MS. (to drug with camphor or other intoxicant before 'unseeling' and 'manning' a new hawk).

Drum, طبل خورده *tabl khurda*, adj., Ind. Pers. MS. (said of a duck that has been alarmed and affected by the drum): *tabl-nā-khurda*, adj. (one not affected by the drum-beating).

Duck, مرغابی *murghābī*, Hindu. (any water fowl, but especially duck): اردک *urduk*, T., P., and Ind. Pers. MS.: نیل سر مرغابی *nīl-sar murghābī*, Panj. (the Mallard); شیل باش اردک *shil-bāsh urduk*, P., T., (ditto) سیخ دم مرغابی *sīkh-dum murghābī*, Pers. and Panj.; لم پوچ *lam-pūch* (in Chach Hazara) (the Pin-tail): لال سرا *lāl-sirā*, Panj. (the Pink-headed Duck) کروات and کرواچی, *kārwat* male, and *karwāchī* female; also *hārwat*, and *harwāchī*, in Kashmir (the White-eyed Duck) آب خوره *āb-khōra*, in Chach Hazara (the White-eyed, and the Tufted Duck; perhaps all diving ducks are so called): نکتا *naktā*, Hindī (the Comb Duck or Black-backed Goose): *vide* Paddling, Mallard, Teal, etc., etc.

Duel, Dule, [a Duell of Turtillis].

Dunbird, *vide* Pochard.

E

Eagle, عقاب *uqāb* Ind. Pers. MS. (a gen. term, but in Hindustani specially applied to the Tawny-eagle): مجنون *majnūn*, the Serpent-eagle (in Chach Hazara): زمج *zummaj*, Ind. Pers. MS. (a species of Eagle, probably the Golden Eagle,

formerly trained¹): قره قوش or عقاب, 'uqāb or qara-qūsh, Mod. Pers.: عقاب سنج sanj Mod. Pers. (Serpent Eagle): عقاب ماه دم 'uqāb-i māh-dum, Mod. Pers. (an Eagle with a black band on the end of its white tail; Pallas's Sea-Eagle?): عقاب کوچگان 'uqāb-i kūchikān, T., Mod. Pers., (an Eagle with the whole tail white): عقاب آئینه لی 'uqāb-i ā'ina-lī, T., Mod. Pers. (an Eagle with a few white feathers in the back; the Imperial Eagle?): کرلی karlak, Mod. Pers. (some very large Eagle): عقاب سیاه 'uqāb-i siyāh, Mod. Pers. (some species of 'black' Eagle): عقاب زرد 'uqāb-i zard, Mod. Pers. (Tawny Eagle?): عقاب سینه بازي 'uqāb-i sīna-bāzī, Mod. Pers. (the previous species in its immature plumage): بوق خوره or عقاب قرباقه چي 'uqāb-i qurbāqa-chī "the frog-eagle," or būq-khura "the refuse Eater" (a small marsh-frequenting eagle that eats frogs): شیني shīnī, Panj. (Bonelli's Eagle): دوبرا dubarā,² Mod. Pers. [apparently a corruption of دو برادران du-barādarān, Pers. and Ar. MSS.] (a species of small eagle, the male the size of a female Goshawk; hunts in couples); جور jor, in Chach Hazara the name of a species that hunts in couples but said not to be Bonelli's Eagle: گرید graid, in Kashmir (the Ring-tailed Sea Eagle); کرل kurl, Hindu. (ditto): عقاب البحر uqāb^u 'l-baḥr, Ar. (Sea-Eagle): الزمجم al-zummaj,¹ Ar. MS. (the Golden Eagle): العقاب al-'uqāb, gen., Ar. MS.: الصرارة as-ṣarrārah Ar. MS. (Short-toed Eagle); دذهل dad hil, in Derajat (the Dwarf Eagle *A. Pennata*): vide Bawtere.

Eagle-owl, vide Owl.

Egret, بگله barā baglā, in Kapurthala, and باطه bāṭa in Kohat, (the Large Egret, *Herodias alba*); رخیوی rakhīvi and نعجة الماء na'jat^u 'l-mā, or "water-sheep" (ditto in Basra and Baghdad): کلچیا kilchiyā, Hindu., and بریت brait, Kashmiri (the Little Egret, *H. garzetta*): سرخیا بگله surkhiyā baglā, (the Cattle Egret): گائے بگله gā,e baglā (ditto): اندھا بگله andhā baglā (the Paddy-bird or Pond Heron *Ardeola leucoptera*).

Electuary, معجون ma'jūn, Ind. Pers. MSS.

¹ 'Vide' Qawānīn^u 's-Sayyād, p. xxiii, note 5. In the Ḥayāt^u-l-Ḥayāwān, however, it is stated to be identical with the *Dubarā*.

² See Note 1, page 329.

[N.S.]

Embowelled, (when the crop is empty but the bowel full).
Vide Endew.

Empiéter F., (trample), [Holding the quarry on the ground; of short-winged hawks only? *vide* Bind.]

Endew, (to digest), [An hawke enduth neuer as long as his bowillis bene full at her fedyng. bot assone as she ir fedde. and restith she enduth littill by littill. And if her goorge be wide (void) and the bowell anythyng stiffid ye shall say she is embowellid and hath not fully endewed.—*Boke of St. A.*, p. 11]. *Vide* Put over.

Enew, Eneaw, or Inew, [And if it happen as it dooth oftymes the fowle for fere of yowre hawke woll spryng and fall agen in to the Ryuer. or the hawke sees hir. and so lie styll and dare not arise. ye shall say then yowre hawke hath ennewed the fowle in to the Ryuer.—*Boke of St. A.*, p. 49. *Vide* also Harting's *Birds of Shakespeare*, pp. 66-7]. *Vide* Put in.

Ensayme, [Ensayme of an hawke is the grece.—*Boke of St. A.*, p. 15]; چربی *charbī* Hindu. (lit. fat; *vide* infra).

Enseam, or Ensayme, to, Tr. and Intr., (to purge a hawk, rid her of fat, etc.), بهوکھا کرنا *bhūkh denā* or بهوکھا کرنا *bhūkhā karnā*, Hindu. Panj., صاف کرنا *ṣāf karnā*, Hindu. Panj.; اطلاق شدن *itlāq shudan*, Mod. Pers. and med.: تهیلی *thailī* Hindu., Panj., and کیسه *kīsa*, Ind. Pers. MS. (the "bag" or "purse" of fat thrown up after a strong purge): خلطه *khilṭa*, Ind. Pers. MS. (ditto): *vide* also 'Meat.'

Ensile, *vide* Seel.

Enter, باولی دیگر جنگلی صید پر چلانا *bā'olī dekar janglī ṣaid par chalānā*.

Enterpenned, [apparently said of a nestling (eyees or brancher) when the flight-feathers had not attained their full length. 'Vide' *Boke of St. A.*, p. 11].

Epilepsy, صرع *ṣar'*, subs.¹, and مسروع *masrū'*, past parti. (afflicted with—), Ar. Pers. MSS., etc.: اکمجه *akmaja*, Ind. Pers. MS. (a kind of fit).

Er [Eyrie.—*Latham*]; *vide* Nest.

Ermined, (with black spots like Ermine), *vide* Degouted.

Escaped, چٹیل *chutēl*, adj., Panj., (an escaped or lost hawk caught by another).

¹ *Vide* کوفتگی in *Qawānūr 'a-Ṣayyād*, p. xxiv.

Exalting [an Eyaltyng (flock) of Larkis.—*Boke of St. Albans*, p. 81].

Excrement, فضله *fuzla*, gen. (of any living thing; *vide* Mutes).

Exercise, *vide* Call.

Eye, گریه چشم *gurba-chashm*, adj., Ind. Pers. MS. (said of a goshawk that has blue eyes; *lit.* “cat-eyed”; *vide* Blue-eyed).

Eyer, to, (to breed) [And we shall say that hawkis doon Eyer. and not brede in the woodes.—*Boke of St. Albans*].

Eyess, or Nias, آشيانى *āshiyānī*, Pers., and Panj.; اكنى *uknī*, Ind. Pers. MS. (from اكنة Ar. a nest); الاشانيه *al ashānīyah*, Ar. MS. (from Pers.).

Eyrie, *vide* Nest.

F

Falcon,¹ سیاہ چشم *siyāh-chashm*, Pers. and Hindu. (the “black-eyed,” *i.e.*, the long-winged hawks or falcons as distinguished from the “yellow-eyed” q. v.): طوار or توار *tuvār* or *tuvār*—also *qūsh-i tuvār*—Mod. Pers. (the female of any hawk, opposed to جره *jurra* “tiercel”; also of any hawk = “large”): سنگى *sangak*, Mod. Pers. (the name of a small ‘falcon’ exactly like the *pīqū* or Indian *shikra* sparrow-hawk).

Falconer,² باز دار *bāzdār*, Panj.: دست کش *dast-kash*, Panj., and Ind. Pers. MS. (*lit.* a “stroker,” *i.e.*, an assistant falconer or hawk-carrier): مير شكار *mīr-shikār*, Hindu. (a term in India applied to any falconer or bird-catcher): قوش چي *qūsh-chī*, Mod. Pers.: قوشچي باشي *qūsh-chī bāshī*, Mod. Pers. (Grand Falconer): باز يار *bāziyār*, Ar. MS. (from Persian): شاهين دار *shāhīn-dār*, Ar. MS. (a carrier of a *shāhīn*; Pers.): چاقرجي *chāqīr-jī*, T.: باز دوست *bāz-dūst*, adj., Pers., (fond of hawks).

¹ The falcons are the long-winged as distinguished from the short-winged hawks. A ‘falcon’ is also a female of a long-winged hawk as opposed to a ‘tiercel’ or male. For some reason old falconers used to call a gos-hawk also a falcon, giving her a kind of brevet-rank.

² Also a ‘Falconer’ meant a keeper of falcons as opposed to ‘Ostreger’ a keeper of goshawks and tiercels and ‘Sperviter’ a keeper of sparrow-hawks and muskets.

Falconet, *مورچندہ* and *مورچنی*, Ind. Pers. MS.

Fall, [A fall of Woodcockis].

Fall at mark, to, [To alight on the ground and await the falconer after 'putting in' the quarry; of a goshawk]; *vide* Mark.

Fallera, [A disease in which the claws turn white and drop off. In India, giving hawks spices and unnatural food to force on the moult will cause this disease].

'False-moult,' *پیر گردان* *par-gardān*, Panj., and Ind. Pers. MS., (name of a disease; *vide* Moulting).

Fast, *تیز پیر* *tez-par*, Ind. Pers. MS. (of birds).

Fat, *vide* Enseam.

Fawken of the rock,¹ [There is a fawken of the rock. And that is for a duke.—*Boke of St. Albans*, p. 52].

Fawn, *بارہ* *barra*, Pers., (*lit.* lamb; *vide* Sheep).

Feed, to, Feeding, *طعمہ داری (کرنا)* *tu'ma-dārī (karnā)*, Panj. (understanding the correct amount of food to give; also giving a light meal after physic): *طعمہ کی آلت پالت کرنا* *tu'ma kī ulat pulat karnā*, Panj., (not giving a fixed amount of food, *i.e.*, giving more one day and less another and so getting a slack hawk into a proper condition of hunger): *سیر کردن* *sīr kardan*, Mod. Pers. (to feed up, not necessarily 'to gorge' or satiate a hawk): *شیر کرنا* *sher karnā*, Panj. (to feed up a hawk on its quarry, especially its first kill; probably a corruption of the previous though supposed to be connected with *sher* "tiger"): *آٹھ پہری طعمہ دینا* *ath-paharī tu'ma denā*, Panj., and *یک خورہ کردن* *yak-khura kardan*, Ind. Pers. MS. (to give one meal sufficient for twenty-four hours): *چکھی* *chakhī*, Hindi., and Panj. (the light morning meal): *چکھہ دینا* *chakh denā* (to give just a taste of blood or meat): *vide* also 'to Gorge' and 'Taste.'

Feake, to, (wipe the beak; also to sew, snite, beak and coly(?); these terms are said of the hawk and not apparently of the falconer), *پونچھنا نوک* *nok-ponchhnā*, Panj.: *خلال کردن* *khilal kardan*, Ind. Pers. MS.: *vide* also Beak.

¹ Probably some kind of peregrine, perhaps one that had its eyrie in a cliff. It is mentioned in the "Boke of St. Albans" between the Fawken gentile and the Fawken peregrine, q.v.

Feathers,¹ پر *par*, Hindi, Pers., (also = a wing): مو *mū*, Ind. Pers. MS. (small feathers, *lit.*, 'hair'): چهار *jhār*, Panj. (the small feathers of the breast, back, and thighs): شلوار *shalwār*, Panj., and Ind. Pers. MS. (the pendant feathers of the thigh, *vide* Thigh): پیکان *paikān*, Ind. Pers. MS. (name of certain feathers; *lit.* 'arrow'): نیفج *nayfa*, Ind. Pers. MS. (the 'brayles' q.v.; دم لیزه *dum-liza*, Mod. Pers., (the same?): یار مالق *yār-māliq*, Mod. Pers., (the two or the three large feathers that are uppermost when the wings are closed; noticeable in such species of bird as the Common Crane and the Egyptian Vulture): پر خوردها *par-khurdahā*, Mod. Pers. (small feathers): تریا *surayyā*, Ar. and Mod. Pers. (the few white spots on the back of a saker; *lit.* Pleiades); سالم تریا *sālim surrayā*, adj., Ar. and Mod. Pers. (a saker is so styled when these spots are absent): ورق *waraq*, Ar. MS. (small feathers other than tail- and wing-feathers): ریش *rīsh*, Ar.: کورپر *kūr-par*, Ind. Pers. MS., and Panj. (a diseased and stunted feather): بارانی پر *bārānī par* (a mature small feather in the immature plumage, *i.e.*, one that has appeared in place of one uprooted by accident): پر تراش *par-tarāsh*, adj., Ind. Pers. MS., (said of a bird addicted to the vice of pulling out and eating its feathers): *vide* Flight-feathers, Plumage, Quills and Tail.

Fechen, [Stoat?].

Ferme, to, intr. [to strengthen, to harden; *vide* "Boke of St. Albans," p. 28].

Fever, *vide* Phthisis.

Field-hawk, [as opposed to a River-hawk].

Filanders, or fillenders, or fylaundres, (intestinal worms), جونک *jonk*, Hindī (prop. a leech), and جونکتی *jonktī* (small); کرمه *kirma jonkī*, Ind. Pers. MS.

Flags, [The federis of the wynges next the body be calde the flagg or the flagg-federis.—*Boke of St. Albans*, p. 15. The secondary or cubital feathers of the wing.—*Harting*. The feathers in the wing next the principals.—*Salvin, Brodrick, Freeman*]: *vide* Flight-feathers.

¹ French *manteau*, the whole plumage or coat.

Flamingo, بگ هذس *bag-hans*, Hindi.

Flat-headed, خوار زمي سر ¹ *khwārazamī sar*, Ind. Pers. MS.: مار سر *mār-sar*, Panj., and Ind. Pers. MS. (*lit.* snake-headed): *vide* also Snake-headed.

Flesh, Fleshy, ماسيل or ماس والا, *māsel* or *mās-wālā*, Panj., and گوشت ناک *gūsh-t-nāk*, Ind. Pers. MS., (full of flesh, well-furnished; compare with *qaddāwar*, 'vide' Big).

Flick, to,² (to flutter out, fly off; of quarry put in), دوسري طرف سے نکل بھاگنا *dūsri taraf se nikal bhāgnā*, Hindu.

Flight, (flock), [“A flight of Doves.” The term ‘flight’ was also used of swallows and goshawks.]

Flight, تین ہاتھ چلانا *tīn hāth chalānā*, Hindu., or دست پرانیدن *si dast parānīdan*, Mod. Pers. (to give three flights); جا بند *jā-band*, adj., Panj. and Ind. Pers. MS., (said of a bird that has lost its powers of flight through confinement).

Flight-feathers, کیرکت *kirkīṭ*, Panj., and قردق or قزوق, Pers. and Ar. MSS. (the first flight-feather, spec. of a goshawk, *vide* Sercell); شاه پر *shāh-par* (according to some pigeon-fanciers and some falconers the three first feathers only of the wing are so called, but according to others the largest and strongest feather in the wing; according to others the 2nd, 3rd, 4th, and 5th are so called); بدگ *badga*, Panj., (amongst some falconers the 4th, 5th, 6th and 7th feathers); یار پر *yār-par*, Panj., (the 5th, 6th and 7th feathers of some; the 8th, 9th, 10th of others; but by others again the wing feathers from the 10th onwards are so called): بازخانہ *bāzkhāna*, Panj., (the 6th, 7th, 8th, and 9th feathers of some); نہا or نہان *nahā* or *nīhān*, Panj., (the 7th flight-feather); قینچی *qainchī*, Panj., (the longest flight-feathers, one on each side, so called from their ‘scissors’ appearance when crossed, *vide* also Warbel); القوادم *al-qawādīm*, pl. of قادمہ, Ar. MS.

Flighty, یاوا *yāwa*,³ T. (*lit.*, “wild”); in the Kapurthala State a term applied to the Shahins).

Flock, گل *gal* or گله *galla*, Pers.; *vide* also Crane.

¹ *Vide* “Qawānīnu” ṣ-Ṣayyād,” p. 12, note 6.

² This word occurs several times in Bert.

³ *Vide* Ross’s “Polyglot List of Birds”, Mem. As. Soc. Beng., 1909.

Florican, چرز *charaz* or *charz* (and vulg. *charaj*).

Flush, to, (*vide* to Rise), بُنَا اُتھانا *buna uṭhānā* (to flush quarry put in by a short-winged hawk that has fallen at mark); اُرَا دینا *urā-denā*, Hindī, *vide* Rise.

Fly, to, اُرنا *urnā*, Hindī; پَریدن *parīdan* Pers.; بوردن مردن کار کردن (to fly with difficulty, work ill); *vide* Creep, Secretly, Stalk and View.

Fly on head, to, [Miss the quarry and check.—*Harting*].

Fly at the brook, *vide* Rivering.

Fly-catcher, دودہ شکر *dūdḥ shakar*, Panj., and رنگ بلبل *rang bulbul*, in Kashmir (the Paradise Fly-catcher).

Foment, to, سینگنا *senknā*, Hindī and تکمید کرنا *takmīd karnā*, Hindu. Pers. (with hot water, hot pads, etc., or with the palms heated at the fire).

Food, *vide* Feed.

Foot, ہاتھ *hāth*, Hindu., and دست *dast*, Mod. Pers. (*lit.* hand); پنجہ *panjā*, Panj., and Mod. Pers.; پا *pā*, Mod. Pers. (also equals the whole leg); (for swollen feet, *vide* Pinne in the feet and Podagre).

Foot-track, کھرا *khurā*, Panj.; کھوج *khoj*, Hindu.; راد پا *radd-i-pā*, Mod. Pers.

Foot, to, گرفت کرنا *girift karnā*, Hindu., *vide* Clutch.

Footer, یہ پنچے کا زبردست ہے *yih panje kā zabar-dast hai*, or اسکی *iskī girift achchhī hai* (a good footer).

Foot-work, پیادگی *piyādagī*, Panj., Ind. Pers. MS., and Mod. Pers., (foot-work, of goshawk; running round a bush in which the quarry has put in).

Fowl, بن مرغ *ban-murgh*, or جنگلی مرغ *janglī murgh* (the jungle fowl).

Fowling, *vide* Bird-catching.

Fowler, *vide* Bird-catcher.

Fright, چمک جانا *chamak jānā*, Hindu. and چمک کھانا *chamak khānā*, Panj.; and جفل شدن *jafil shudan*, Mod. Pers., (said of a goshawk that has taken a fright or dislike to some special sight or sound; “to take a skunner at”).

Frog, قرباقه *qurbāqa*, T., P.

Frounce in the mouth, خناق *khunāq*, Ar., (*lit.* quinsy), and نائنی

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nanā,ī Hindi, (Ind. Pers. MSS.) ; بذرات حلق *bāsrāt-i ḥalq*, Ind. Pers. MS. ; دهن قوش جوشش کردن *dahan-i qūsh joshish kardan*, Mod. Pers.

Full-barred, [said of a hawk when the tail-feathers are fully grown or nearly so, *i.e.*, when the seventh black-bar that runs across each feather of the tail is visible. "For when she is full barrid she stonidith uppon. VII."—*Boke of St. A.*, p. 14].

Full-fermyd, *vide* Full-summed.

Full-summed, or Summed. (When a hawk, either in the nest or in the mew, has all her feathers and is fit to be taken up).

Fulmart, or Foumart, or Folmert, (a pole cat).

Fur, to fly at, (to fly at hares and rabbits), خرگوش پر چالانا *khar-gosh par chalānā*, Hindu.; *vide* Ground game.

G

Gadwell, ایرگا *irgā*, T. (in Chach-Hazara).

Gaggle,¹ (flock), [A gagle of gees].

Galbanum, (a gum), قذة *qinnah*, Ar. and بارزد *bārzad*, Pers.

Galingale, (a sweet smelling grass), ناگر موتهه *nāgar moth*, Hindī *sā'd-i kūfī*, Ar. and Pers.

Gall, زهرة *zahra*, Hindu. and Pers. ; پتا *pittā*, Hindī and Panj. ; المرارة *al-marārah*, Ar.

Gape, باجهه *bāchh*, f., Hindu. and Panj. (the sides of the mouth) ; شدق *shidq*, pl. اشداق *ashdāq*, Ar., (the sides of the mouth).

Garganey, کنیک *kanaiik* (in Chach-Hazara).

Gauntlet, *vide* Glove.

Gazelle, چکارا *chikārā*, Panj. ; آهو *āhū*, Mod. Pers. ; یک دانه آهو *yak dāna āhū* (a single gazelle) ; چرخ آهو گر *charch-i āhū-gīr*, Ind. Pers. MS. (a saker trained to gazelle).

Gentill, Gentle, or Gentil, [the falcon or tiercel-gentle, another name for the peregrine though perhaps the term was formerly restricted to the eyess, the brancher, and the bowiser; *vide* also note to Peregrine].

Gerfalcon, شنقارچه² *shunqār*, Ind. Pers. MS. and Mod. Pers. ;

¹ Also "a gagle of women", but a "scoldyng of kemsteris."

² For a full discussion of this word, *vide* JI. As. Soc. Bengal, Volume III, No. 2, 1907. The Gerfalcon and its tiercel "belonged to a kyng," *vide* *Boke of St. Albans*, p. 52.

shunqārcha, Ind. Pers. MS.; الشنقار *ash-shunqār*, Ar. MS., *vide* Jerkin.

Get in, (to reach the hawk after she has bound), پہنچنا *pahunchnā*, Hindu., and رسیدن *rasīdan* Pers., (to arrive); *vide* Make in.

Gin, کُرکی *kurkī*.

Gizzard, پتھری *pathrī*, Hindu.; سنگدان *sang-dān*, Ind. MS.

Gland, غدود *ghadūd*, Ind. Pers. MS., (the saliva gland in sheep); قدود *qadūd*, Mod. Pers.

Glaymous, (slimy; of a casting).

'Gleam,' (the substance thrown up with the casting), میل *mail*, Hindu.: صفراء *ṣafrā* (also casting *q.v.*)

Gled or Glead, *vide* Kite.

Glove, دستانه *dastāna*, Hindu. (gen.), and دست کش *dast-kash*, Mod. Pers. (gen.); بهله *bahla* Pers., (a falconer's glove; *si bahla qūsh* "three hawks or falcons"); دستبان *dastbān*, Ar. MS. (from Pers.); منقله *manqalah*, in Bahrein (the padded canvas cuff that takes the place of the glove); دستى *dastī*, Hindu. (a somewhat similar pad).

Glut, [The slimy substance that lies in a hawk's pannel. Gen. Rec. ii, 62.—Halliwell. The lower intestines.—Stonehenge's *British Rural Sports*].

Goose, منگهه *mangh* or *magh*, Panj. (the Grey-goose): قاز or قاز *qāz* or *ghāz*, P. *Vide* Gaggle.

Gorge, (the crop and also its contents). *Vide* Crop.

Gorge, to, سیر شکم کرنا *ser-shikam karnā*: 'vide' also 'to Feed.'

Goshawk,¹ باز *bāz*, Hindu., Ar., Pers., (gen., but specially the female); Ar. pl. بزاة *buzāt*: کتّه باز *katta bāz* (amongst Pathans, the female): جرّه باز or جرّه *jurra* or *jurra bāz* (the tiercel): شاه باز *shāh-bāz* (in Sindh): زنگی باز *zangī bāz* or سیاه پشت باز *siyāh-pusht bāz*, Hindu. (a dark variety of goshawk): الویحق *al-luwayhiq*, Ar. MS.: اطوغان or دوغان *tughān* or *dūghān*, T. and Ind. Pers., MS.: قارچینغه *qārchiḡha*, T. and Ind. Pers. MS.: قوش *qūsh*, T. and Mod. Pers. (any bird of prey but often by falconers used of the goshawk, as *jānwar* in India amongst falconers means "hawk"): قزیل *qizil*, Mod. Pers.,

¹ The goshawk was the hawk for a yeoman (or a servant of a rank next below a squire; a person of middling rank), while its tiercel was for a poor man.

[N.S.]

(the local race that breeds in Persia): طرلان *tarlān*, (the race or races that migrate into Persia): تيقون *tīqūn*, (the white variety of goshawk; *vide* also Albino): طغرل *tughral* (an unidentified species mentioned in MSS.; it is probably the Crested Goshawk but it is sometimes described as being "black-eyed," and sometimes as a small eagle): گور بيسرا *gorbesrā*, or *mountain besrā*, Hindī, and چريالي *churiyālī* of the Eastern Terai, (the Crested Goshawk *Lophospiza trivirgatus* Jerdon No. 22; Delmè Radcliffe calls the female *Manuk Besra* and the male *Manuk Dhoti*): *khandesara*, male, and *chatesara* (a doubtful species of short-winged hawk): لغطراف *al-ghitrāf*, Ar. MS., (the eyess goshawk): البدرى *al-badrī*, Ar. MS. (a young goshawk caught after it has left the nest): الارغوان *al-urghuwān*, Ar. MS. (a red-eyed passage goshawk, word from Pers.): زمچ *zummaj*, Ar. MS. (a haggard goshawk; but *vide* also Eagle).

Gout, نقرس *nigris*, Ind. Pers. MS., and Mod. Pers.

Grain, رتي *ratī* Hindu., and سرخ *surkh* Ind. Pers. MS., (a small scarlet seed with a black spot, weight about two grains, much used by goldsmiths: it is the seed of *Abrus precatorius*).

Grand Falconer, *vide* under Falconer.

Gravity, advantage of, ماية *māya* subs. (adj. *māya-dār*): از ماية انداختن *az māya andākhtan*, or از بلندي انداختن *az bulandī andākhtan*, Mod. Pers. (to cast off a goshawk from a height so that she may have the advantage of her weight by flying as it were down-hill).

Grebe, پادوبى *pan-dūbī*, Hindu., and پندى *pindī*, Kashmiri (the Little Grebe); توبه *toba* (in Chach Hazara).

Greedy, بهوكهپيل *bhūkheḷ*, Panj. (a greedy feeder and large eater).

Greyhound, *vide* Dog: قوش شناس *qūsh-shinās* and چرخ شناس *charkh-shinās*, adj., (said of a greyhound that is trained to act in concert with the falcon at gazelle).

Ground-game, چرنده *charanda*, Mod. Pers. (*lit.* "grazers"; opposed to پرنده *paranda*); *vide* Quarry.

Grouse, *vide* Sand-grouse.

Gurgiting, [Choking with too large a mouthful.—*Harting*. Halliwell, on the authority of Gen. Rec. ii, 62, has "Gur-

giping. Stuffed up and stiff.” Latham writes, “Gurgiting is when a Hawke is stuff or sufferoted (?) with anything, be it meat or otherwise.”]

H

- Hack, [keeping young eyesses¹ in a state of liberty. Easterns do not fly hawks at hack. Hack also once signified the place where the hawk's meat was placed, *vide* Gen. Rec. ii, 62.]
- Hack-bells, [heavy bells put on hawks flying at hawk to impede their flight; *vide* Hack.]
- Hack-board, [The board on which the meat of hawks flying at hawk is laid, *vide* Hawk.]
- Haggard, *تریناک tarīnāk*, Hindu.; and *دش طولک dāsh-tūlak*, T., Mod. Pers., (a hawk that has moulted in a wild state): *vide* also Intermewed: *جرناس jirnās*, in Bahrein Island (haggard or intermewed?).
- Halsband, *جغولي jaḡholī*, Panj.: *چلقو jalqū*, or *چالقو chalqū* Mod. Pers.
- Hand, *هاتھ hāth*, Hindu. and *دست dast*, Pers. (the hand, *i.e.* foot of a hawk): *vide* Foot.
- Handle, to, *هاتھ پھیرنا hāth phernā*, Hindu.: *دست کشی کرنا or کردن dast-kashī karnā or kardan*, Panj., and Ind. Pers. MS.
- Hang on, *vide* Wait on.
- Hard-penned, (when the young flight-feathers or tail-feathers are no longer in blood), *vide* Tender-penned.
- Hare, *سیدر or ساہا sāhā or sayyar*, Panj.: *خَرگوش khar-gosh*, Hindu. and Pers., *vide* Trip.
- Harrier, *لالہ lāh*, Panj. (hen-harrier): *سفيد لاله safed lāh* and *کاغذی لاله kāghazī lāh* (certain other species): *دشت مال dasht-māl*, Panj. (the Pale Harrier *C. Swainsonii*, Jer., and Montague's Harrier, *C. cineraceus*, Jer.): *لہا lehā* and *تہا tehā* (names of two species of harrier in the Derajat, probably the previous): *شانديل shāndel*, in Chach Hazara: *السرور as-subar* Ar. MS.: *دشت مالہ dasht-māla* (by the Kurds): *بل باقلى bil bāqlā*, T. and P.: *ابو حکب abū hikab* (?) (amongst some Arabs): the Turki word *چيلاق chīlāq* “kite” also includes a species of harrier.

¹ Intermewed peregrines can, in India, be flown at hack during the moult in the hot season.

[N.S.]

Hausse-pié, Fr., 'vide' *Tombisseur*.*Haute volerie*, کلان گیری *kalān-gīrī*, P.: vad-mārā, adj., Panj. (of a hawk trained to large quarry = *kalān-gīr*).*Hautein or Hawtyn* ['Haughty'; and also 'loud.' *Boke of St. A.*, p. 7—"bot it will make hir hawtyn and prowde"].*Hautein falcon* [A high-flying falcon.—*Halliwell*].*Havock*, to cry, [vide *Harting's Bibliotheca Accipitraria*, p. 224, and *Cry*].

Hawk, جانور *jānwar*, gen. (lit. 'animal,' in Panjabi falconers' language, a gen. term for hawks or falcons); قوش *qūsh*, Mod. Pers. (vide *Goshawk*): طيور شکاری *tuyūr-i shikārī*, gen., Mod. Pers.: گلاب چشم or گلال چشم *gulāl-chashm* or *gulāb-chashm*, Panj., and Ind. Pers. MS. (the "yellow-eyed" as opposed to the *siyāh-chashm* or "black-eyed," vide *Falcon*); زرد چشم *zard-chashm*, Mod. Pers. (ditto): کیری آنکھ *kairī-ānkh*, Hindī, ازرق چشم *azraq-chashm*, Mod. Pers., ازرق العين *azraq* "l-'ayn, Ar., and چاقور *chāqir*, T. (lit. "blue-eyed"), have all the same application: البازي *al-bāzy*, pl. البزاة *al-buzāt*, Ar. MSS. (a gen. term for all hawks but specially for the female goshawk); الباز *al-bāz*, pls. ابووز *al-abūz* and البووز *al-būzūz*, Ar. MSS. (another form of previous); الباز, *al-bāz*, pls. البيزان *al-bīzān* and ابواز *al-ābwāz* (ditto): پیش آهنگی *pesh-āhangī*, adj., Hindu. (a term applied to all hawks caught early in the season): نوروزي *nau-rozī*, adj., Panj. (a hawk caught on the return migration about the end of March, vide *Lantimer*):¹ vide *Goshawk*, and *Sparrow-hawk*.

Hawks of the fist, (short-winged hawks), vide *Hawk*.*Hawks of the lure*, (long-winged hawks), vide *Falcon*.*Hawks of the tower*, (long-winged hawks), vide *Falcon*.*Hawk-Eagle*, vide *Eagle*.

Head, سر سست کردن *sar sust kardan*, Ind. Pers. MS. (hanging the head; a disease, 'vide' *Qawānīn*'s *Sayyād*, p. xxv, note 1): vide *Scabbiness*.

Heart, دل *dil*.*Heat-stroke*, گرمای زدگی *garmā-zadagī*.

¹ From *Nau-roz* the New-Year's Day of the Persians; the 21st March.

Hedgehog, چوله *chūla*, Mod. Pers. : چہا *chahā* Panj.

Hen, مرغی *murghī*, Hindu. : ماکیان *mākiyān* Pers. ; دجاج *dūjāj*, Ar., *vide* also Brood.

Herd, [Of Swannys, Cranys, Corlewys, Wrennys, and Harlottys].

Heron,¹ بوتیمار *būtīmār* in the Kapurthala State, Panj., and in Persia, also in Ind. Pers. MSS. : بلائی *bilā,ī* in the Derajat ; نری *narī* (prop. the Purple Heron *q.v.*), in some parts of the Panjab ; چلم *chilam* in Sindh ; برگ *brag* in Kashmir ; هویزه *haveza* in the Bannu District ; کبود *kabūd*, انجن *anjan*, and بهاد *bhād* in Oudh, etc. ; چیلانگ *chīlāng*, in Kohat (a name also applied to the storks) ; هوکاره *hukāra*, in Parichinar, Kurram Valley, (all names for the Common Heron) : حقار *haqār*, اقر *uqār*, etc., for عقر *uqār* (in Persia the Common Heron, but in an Ind. Pers. MS. the Purple Heron) : واق *vāq*, Mod. Pers. (Night-heron *q. v.*) : کھرکار *kharkār* in Chach Hazara, جاه *jāh* in Sialkot, چیندخ خواری *chīn-dakh-khurai* or “frog-eater” in Bannu, جرده *jarḍa*, Mod. Pers., and نری *nārī*, Kapurthala (the Purple Heron) ; زرقی *zuraqī* (ditto in Basra, Pers. Gulf) : *vide* Night-heron, Egret and Paddy-bird : *vide* also Sedge.

Hey and Heye, (high, in good condition) چلانے کے بدن میں ہے *chalāne ke badan mein hai*— or ہوا سے بھرا ہوا ہے *baghlon mein gosht bharā hū, ā hai*.

Hern, Hernshaw, *vide* Heron.

Hobby,² دوریلی and دوری *daurī* and *daurelī*, Hindi : ریگی *regī*, Hindu., (in some parts ; a name given in the Derajat to the English Merlin, and in the Kapurthala State to the Common Kestrel) : کجل *kajal*, in Chach Hazara : دھوتی *dhotī* (of some falconers ; *vide* Sparrow-hawk) : دھڈی *dhidī* or کیوتی *ke,otī*, Panj. : لیل *layl*, Mod. Pers. : البیدق *al-baydaq*, Ar. MS. ; السقاوة *as-saqāwah*, Ar. MS.

Holde-fast⁴ [In the begynnyng of kyndli spech of the termys

¹ *Vide* Jl. Asiatic Society of Bengal, Vol. III, No. 8, 1907.

² The ‘Hoby’ was a hawk for a ‘yong man.’

³ According to an Indian writer, the Hobby in Turki is لاچین بچہ *lāchīn bachcha*.

⁴ Hold-fast. A phrase used to horses to move them from one cock of hay to the next in carting it, as well as to caution the men on the top to hold fast. *Var. dial.*—Halliwell.

that belong to hawkys here ye may fynde them. The first is holde fast at all timys. and specially whan she batith.—*Boke of St. A.*, p. 9].

Hollyhock, خطمي *Khatmī* (also Marsh-Mallow).

Hood, تويي *topī*, Hind.: کلاه *kulāh*, Pers.; طوماعه and توماعه *tūmāgha* and *tūmāgha*, T. (in Ind. Pers. MS.; obs. in India): کلغی *kalghī* (plume of a hood; also crest of a bird).

Hood off, تويي اُتار کر چالانا *topī utārke chalānā*, Hindu.; کلاه برداشته *kulāh bar-dāshṭa andākhtan*, Mod. Pers.

Hood-shy, بد کلاه *bad-kulāh*, Hindu. and Pers.

Hoo-ha-ha, قو قو ها ها ها ها *qū qū hā hā hā hā* (in parts of the Panjab).

Hoopoe, هـ هـ *hud hud*, H., Pers., Ar.; مرغ سليمان *murgh-i Sulaymān*, Pers.

Host, *vide* Ost.

Houbara,¹ (*Otis Macquenii*), *vide* Bustard.

Hound, *vide* Dog.

House, to,² *vide* Roil.

Huff! *vide* View and Creep.

Hunger-traces, ————— ?

Hunting-ground, شکار گاه *shikār-gāh*, Hindu. and Pers.: حور *ḥawr*, Ar. (dried marsh-land, full of grass and reeds).

I

Ibis, بزة *buza*, Hindu. and Panj. (the Black Ibis, *Geronticus papilosus*).

Ignoble, دل و پست فطرت *dila u past-fitrat*, Mod. Pers. (mean, cowardly).

Immature, *vide* Sore-hawk.

Imping, وصل کردن پر شکسته *waṣl kardan-i par-i shikasta*, Ind. Pers. MS.: گانتهنا *gānṭhnā*, Hindu. (also a cocking term): لوله پیوند کردن *lūla payvand kardan*, Mod. Pers.: لوله پیوند کردن *payvand kardan*, Mod. Pers. (to imp by inserting a shaft in the hollow quill).

¹ For a note on its habits, etc., *vide* Jl. As. Soc. Beng., Vol. II, No. 9, 1906.

² 'To royle and house' was said of a goshawk that wandered and sought for domestic fowl near a house; *vide* Bert, pp. 2, 50, and 74, Harting's Ed.

- Imping-needle, *سوی سویی* *sū, ī*, Hindu. (= needle; Indian falconers often imp by means of a strip of bamboo and bird-lime, not a skilful method).
- Incurable, *لا علاج* or *لا دوا* *lā 'ilāj* or *la-dawā*, Hindu. : *معالج العالج* *muḥāl 'l-'ilāj*, Ar. and Pers.
- Indigestible, *ثقیل* *ṣaqīl*, Hindu. and Ar., and *سنگین* *sangīn*, Mod. Pers. (*lit.* heavy).
- Indue, Induing, *vide* Endew.
- Inke or Ink, (the whole neck of a quarry), *گردن* *gardan*, gen., Hindu. and Pers. : *منکا* *mankā*, Hindī (a cocking term).
- Inseam, *vide* Enseam.
- Iren or Iron, [the tiercel of the golden Eagle? *Vide* Harting's *Birds of Shakespeare*, pp. 53-4].
- Iron-mail or Red-mail, *vide* Mail.
- Ispaghul, *اسفرزه* *isfarza* or *اسپغول* *ispaghūl*, Mod. Pers.
- Intermewed, (moulted indoors, in confinement), *خانگی* or *خانی* *khānī* or *khānagī*, Panj. ; *خانه کوریز* *khāna-kurīz*, Ind. Pers. MS. : *تولکی* *tūlakī* (moulted) and *خانه طولک* *khāna tūlak*, Mod. Pers. : *مربوط* *marbūt*, Ar. MS.
- Iuke, *vide* Juke and Inke.

J

- Jack, (male of Merlin), *vide* Merlin.
- Jackdaw, *کوبین* *kavīn*, in Kashmir (the Common Jackdaw).
- Jay, *سر گنگ* (?) (the Green Jay *Cissa sincrexis*; formerly trained to take small birds¹): *بلوط خور* *balūt-khur*, Mod. Pers. (the Common Jay).
- Jerboa, *یربوع* *yarbū'* or *جر بوع* *jarbū'*, Ar. : *موش دوپا* *mūsh-i du-pā*, Mod. Pers. ; *vide* Mouse.
- Jerfalcon, *vide* Gerfalcon.
- Jerkin, (male of Jerfalcon) & *شنقار* *shunqārcha*, Ind. Pers. MS.
- Jesses, *دوال* *duwāl*, f., H., and Panj., and Ind. Pers. MS. : *تسمه* *tasma*, P. ("strap"; amongst Panjabi falconers also applied to the jesses) : *پاچه بند* *pācha-band* (in the Panjab applied to jesses of silk or cotton with 'varvels'; but in Persia jesses generally are so styled) : *بند* *band* and *مشت بند* *musht-band*, Ind. Pers. MS. : *پائزہ* *pā, iza*, Ind. Pers. MS. ; term also used

¹ *Vide* Jl. As. Soc. Beng., June 1907, p. 398, note 1.

[N.S.]

by the Urdu poet Sauda : شرک, pl. شرک *shuruk*, Ar., Ind. MS. : سیاقین *siyāqayn* (?) dual of سیاق *siyāq* Ar.?, Ind. Pers. MS.; ساقین *sāqayn*, Ind. Pers. MS. (ditto) : شکاربند *shikār-band*, Panj., (*vide* also Leash) (the leather thong that attaches the varvels to the leash or to the swivel) : دوالین کرنا *duwāleñ karnā*, Panj. (to remove the créance and leash and to fly a new hawk at the lure with only the jesses on) : انوری *anūrī*, Panj., the cloth 'ring' in front of and broader than the *pācha-band*; it protects the front of the stalke and distributes the pressure on the leg when the hawk bates) : شبورق *shabūq*, Ar.

Jet up and down, *vide* Remove.

Join, [when a second hawk also 'binds'].

Joint, مفصل, pl. مفاصل *majṣal*, pl. *majāsil*, Ar. : بند *band*, Panj., (چهار بند *chahār band*, amongst falconers means the flesh of both thighs and both sides of the breast—*baḡhal*—given to a hawk; a *baḡhal* in this connection is the یک سینه *yak sīna* of Mod. Pers. and signifies the wing with all the flesh of one side of the breast) : *vide* also 'Wing.'

Jouke, Joke, [“—youre hauke Joukith. and not slepith.”—*Boke of St. A.*, p. 9].

Juke, [The neck of a bird.—*Halliwell*; and *Gen. Rec.* ii, 62. Bert has *iuke* : 'vide' Inke].

Jungle-fowl, *vide* Fowl.

Jutty, to fly to, (of short-winged hawks), [Iff yowre hawke nyme the fowle at the fer side of the Ryuer or of the pitt from you. Then she sleeth the fowle at the fer¹ Jutty and if she slee it uppon that side that ye been on as it may hap dyuerse times. Then ye shall say she hath sleen the fowle at the Jutty ferry.—*Boke of St. Albans*, p. 48].

Jutty Ferry, *vide* supra.

K

Kauke, to, *vide* Cawking-time.

Kernel, مغز *maghz* : خسته *khasta* or هسته *hasta*, Mod. Pers. (the stone of fruit).

Kestrel,² لرزناک *larzānak* Panj. : ریگی *regī* (in Kapurthala) ; شکل *shikal* and چمکل *chhikal* (in some parts of the Panjab) : بادفرخ

¹ Far.

² *Vide* Jl. As. Soc. Beng., Vol. II, No. 10, December 1906, p. 527.

bād-furukh, Pushtu (for *bād-khurak*?) the common Kestrel: *دلیجہ* *dalīja*, Mod. Pers.; *دلیجہ ناخون سیاہ* *dalīja-yi nākhūn-i siyāh*, Mod. Pers. (the “black-clawed, i.e., the Common Kestrel”; *دلیجہ ناخون سفید* *dalīja-yi nākhūn-i safīd*, the “white-clawed,” i.e., the Lesser Kestrel): *العویسیق* *al-‘uwaysiq* Ar. MS.

Key or Clofer, *vide* Sengle.

King-crow or Drongo-shrike, *کال کرچ* *kāl-kirich* or *کال کرچھی* *kāl kirichhī*, Panj.; *کلکولچی* *kalkolachī*, Hindī (ditto); *کاتھ* *kāth* (in Chachh-Hazara): *بچنگہ* *buchanga*, Hindu.; *vide* Drongo-shrike.

Kirnells, (or swellings near the eyes; contain small white ‘kirnells’ like those in cattle: *vide* Bert, p. 84), *زہرباد* *zahr-bād*, Panj. and Ind. Pers. MSS. (a name given to many ailments accompanied by swelling).

Kistress, [a kestrel.—*Halliwell* quoting *Blome*. According to the former authority ‘kress-hawk’ is in Cornwall a ‘hawk’].

Kite,¹ *چیل* *chīl* Hindu., and *ہل* *hil*, Panj. and *گانڈھ* *gānṭh*, Kashmiri (the Common Kite of India, *Milvus Govinda*): *قینچی ہل* *qainchī hil*, Panj. (a fork-tailed kite) and *پاتن ہل* *pātan hil*, Panj. (a square-tailed kite); the former is fancied to be the more difficult quarry): *چیلاق قاپاق* *chīlāq-i qāpāq* or *چیلاق قاپاق کوتاہ* *chīlāq-i qāpāq-i kūṭāh*, Mod. Pers. (the ‘fork-tailed’ kite; the Common Kite of India? *vide* also Harrier). *الحداہ* *al-hida‘ah* Ar. MS.: *بہمنی چیل* *bahmnī chīl*, Hindī (the Maroon-backed Kite).

L

Lamb, *vide* Sheep and Fawn.

Lammergeyer, *ہمای* or *ہما*² *humā* or *hunāy*, Mod. Pers.: *السنل* *as-satal*, pl. *السنلان* *as-sitlān*, Ar. MS.

Lanner,² Lanneret, (male of Lanner), [The Lanner is not found

¹ *Āsmān kī chīl, zamīn kī aṣīl* “the kite of the sky and the maid-servant of the earth (are alike bād),” Hindu. Prov. (*Aṣīl* is a free maid-servant as opposed to *laundī*). It is an Indian superstition that if a traveller comes across a kite with a white beak he will attain the object of his journey.

² *Vide* Journ. As Soc. Bengal, Vol. II, No. 10, 1906.

in India. Alphanet is said to be a name for the Tunisian Lanner¹]: *الحجر al-hurr*, Ar. MS.

Lantimer, [Young hawks caught wild before Lent.—Stonehenge's *British Rural Sports*]. *Vide* *نوروزي nau-rozī*, under Hawk.

Lapwing, [A dessert of Lapwyngs: *vide* Plover and Congregation].

Large, *vide* 'Big' and 'Fleshy.'

Lark, *اگن aggin*,² Hindu., (the Singing Bush-lark): *بگيري bagerī* (the Short-toed, or Social Lark, the ortolan of Calcutta): *چندور chandūr*, Hind. and Panj. (the Large-Crested Lark); *بودل bodal*, lit., "crested" (ditto in Chach Hazara): *کاکلی kākulī*, Mod. Pers. (the Crested Lark, *Alanda cristata*): *قندبره qumbarah*, Ar. (the same species): *قازلاغ qāzlagh*, T. and P. (the same species?). *Vide* Exalting.

Leash or Lease, *دور dor*, Panj., (also = 'the price of the leash' *i.e.*, the 'tip,' one rupee or more, usually given to a falconer bringing a present of a hawk from his master): *شکاروان shikār-rawān*, Ind. Pers. MS.: *شکار بند shikār-band*, Mod. Pers., *vide* also Jesses: *مرسة marasah* or *مرسل mirsal*, Ar. MS.: ["A lece of haukis of ye tour is iii"], *سه بهله قوش shi bahla qūsh*, Mod. Pers.

Leech, *جونک jonk*, Hindu., (*vide* also Fillanders): *زالو zālū*, Mod. Pers.; *دیوچه devcha*, Ind. Pers. MS.: *علق 'alaq'*, Ar. MS.

Leg, *پای* or *پا pā* or *pāy*, gen., Pers., (sp. the hind leg of a quadruped, the foreleg being called *دست dast*; 'vide' Hand, and Foot).

Leopard, *تیندوا tendwā*, Hind.; *پالنگ palang* P.: *vide* Cheetah.

Lice, *جون jūn*, gen.: *شپش shipish* or *shupush*, Mod. Pers.: *قمل qaml*, Ar.; *رشک rishk*, Mod. Pers. (nits).

Lights, *vide* Lungs.

Lime, *vide* Bird-lime.

Lines, or lunes, or lewnes, or loynes, [probably a long cord used as a leash (instead of a long strap), the *دور dor* of the

¹ Ther is a Lanare and a Lanrett. And theys belong to a Squyer.—*Boke of St. Albans*, p. 53.

The falconers of the *Shaykh* of Biskrah, in Algeria, knew no other name for the Lanner than *At-tayr* "the Bird."

² This lark sings on the wing as well as on the ground.

Panjab; but *vide* Harting's Bib. Acc., p. 225. "Lunys about her feet, Morte d' Arthur, i, 180."—Halliwell. In the Panjab, if a swivel is used, it is permanently attached to a long cord and the jesses are fitted with varvels. A fine leather strap is attached to the ring of the swivel, and, passed through the varvels, attaches them to the swivel. Ordinarily, however, the jesses are simple pointed straps without any hole or slit at the ends: they are knotted to the leash without any swivel].

Lion, *ببر* *babar*, in India and *شیر* *shīr*, in Persia, but *vide* also 'Tiger.'

Liquorice, *ملہتی* *mulhattī*, Hindu. (liquorice-root).

Liver, *کلیدجا* *kalejā*, Hindu.: *جگر* *jigar*, P. (*vide* Lungs).

Lizard, *سانا* or *ساندھا* *sānā* or *sāndhā* (uromastix): *سوسمار* *sūsmar*, Mod. Pers. (same species?).

Lose, *جانور کو لیجانا* *jānwar ko le-jānā*, Hindu., (said of a quarry that flies away straight, and fast pursued by the falcon, so that both get lost): *دور کش شدن* *dūr-kash shudan*, intr., Ind. Pers. MS. (said of the hawk).

Lowbelling, [the same as Bat-fowling *q.v.*].

Luggar, *لگتر* *lagar* (female), incorrectly *لغتر* *laghar*, and *جھگتر* *jhagar* (male) Hindu.

Lungs, *جگر سفید* *jigar-i safīd*, Mod. Pers. (lights): *دامه* *dama*, Hindu. and Ind. Pers. MS. (a fatal disease of the lungs).

Lure, (or 'catch' or lewer),¹ *طلبة* *talba*, vulg. *دلبة* *dalba*,² Hindu.: *قرالتغو* *qarāltaghū*, Ind. Pers. MS. (*lit.* a black scare-crow, *vide* Zenker; in the Panjab the lure is generally made of crows' wings): *قرالقو*, Ind. Pers. MS. (apparently a corruption or error for the previous word): *کشته* *kushta*, Hindu. and Mod. Pers. (a dead bird used as a lure): *طبله* *tabla*, Mod. Pers. *بفترة* *baftarah*, in Basrah and Baghdād: *ملوائح* *milwāsih*, in Bahrayn Island (root unknown): *پله* *palla*, Ind. Pers. MS. (the ordinary distance from which a hawk is lured): *گمبذ کردن* *gumbaz kardan*, Ind. Pers. MS. (*lit.* 'to dome'; said of a hawk that has, as it were, a high trajectory in its flight to the lure): *مار پیچ آمدن* *mār-pech āmadan*, Ind.

¹ *Vide* p. 52 Harting's reprint of Bert's *Hawks and Hawking*, of 1619.

² Not to be confused with the cocking term *dalbā* or *dalba*, which is an inferior cock kept for a game cockeril to bully.

- Pers. MS. and coll. (coming to the lure crookedly, in a zigzag): گرم طلب *garm-i talab*, Mod. Pers. (keen on the lure, i.e., thoroughly trained to the lure): *vide* Obedient.
Lure, to, دلبد پربلانا *dalbe par bulānā*.
Luring-ground, طلب گاه *talab-gāh*, Ind. Pers. MS.
Lynx, سیاه گوش *siyāh-gūsh*, Hindu. and Pers.: عناق الارض ‘*anāq*’-*l-arz*’ or القفہ *at-tufah*, Ar. MSS.: الغنجل *al-ghunjul* (*Hayāt*’-*l-Hayāwān*).

M

- Mad, دیوانه *dīvāna*, Pers., “mad” and مجهول *majhūl*, Ar., “ignorant” (said of a young hawk in its first season when it can be entered to any quarry).
Madness, دیوانگی جانوران *dīvānagī-yi-jānwarān*, Ind. Pers. MS. (madness in hawks).
Magpie, لاط and مهالاط *lāt*, Panj., and *mahā-lāt*, Hindi (the Common Indian Magpie): عکک *akah*, Ar. and T., and Ind. Pers. MS.; زانچہ *zāghcha*, Pers.; کراچک *karājak*, in Kirman (the English Magpie). *Vide* Titengis.
Magpie-Robin, دیال *dayāl*, Hindu.
Mail or Mailes, (breast feathers of hawks). [Hawkes have white maill. Canuas maill or Rede maill. and some call Red maill Iren mayll. White maill is soone knawe. Canuas maill is between white maill and Iron maill. And Iron maill is vara Rede.—*Boke of St. Albans*, p. 11; *vide* these terms and also Coat. According to Halliwell Mail also meant a ‘spot on a hawk.’]
‘Mail, to,’ کوچی کرنا *kūchī karnā*, Panj.: قپانچہ کردن *qapāncha kardan*, Ind. Pers. MS. and Mod. Pers.: *vide* Sock.
Maina, جاگچہ *jāgcha*, Panj. (the Common Maina); شاری *shārak*, Panj.; گتالی or گتاری *gutārī* or *gutālī*, Panj. (Murree hills); لالی (in Derajat); مینہ *maina*, Hindu.: لالی *lālī*, Hindu. (the Bank-maina). *Vide* Starling and Pastor.
Make-hawk, [an experienced, and generally intermewed, hawk, flown with a raw hawk at wild quarry; *vide* Cast and note]: قوش استاد *qūsh-i ustād*, Mod. Pers.
Make in, *vide* Get in.
Mallard, سر مرغابی نیل *nīl-sir murghābī*, Panj.: سونہ مرغابی *sona murghābī*, T., P. (in Chach Hazara): نیلچ *nīlich* male and

tuj female (in Kashmir): مرغابی سر سبز *murghābī-yi sar-sabz*, Mod. Pers., and مرغابی شل باش *murghābī-yi shil-bāsh*, T. and Pers.; *vide* Sorde.

Manage, ("to handle anything with cunning; according to the true nature thereof," *Latham*).

Man, to, Manning, دار مارنا *dar mār nā*, Hindu.: بازار کی مار دینا *bāzār kī mār denā*, Hindu., 'vide' Carry.

Mandible, (the upper was called 'beak' and the lower 'clap'¹): چوئیچ *choñch*, Hindu. (the upper mandible, and جبرا *jabrā* H. the lower; cocking terms).

Mantle, (to stretch out one leg and then extend the wing along it),² کرولی کرنا *karaulī karnā*, Panj.: داند نکالنا *dand nikāl nā*, Panj. (*lit.* a kind of gymnastic exercise): اینا or بھرنا *anğairī bharnā* or *lenā*, Panj. (for Hindu. *anğrāsī b.* or *l.*, to stretch oneself).

Mar-hawk, (of a falconer who handles hawks clumsily), اس کا ہاتھ *iskā hāth* *kharāb hai*: *uzbak* (*lit.* Uzbek, *i.e.*, clumsy and stupid and uncivilized).

Mark, بے شدن *buna shudan*, Ind. Pers. MS. and Mod. Pers.; *vide* Fall at mark.

Markings, خط *khatt*, Hindu.: لونگ *laung*, Panj. (*lit.* "cloves," the long drops on the breast of an immature peregrine).

Marlion, *vide* Merlin.

Marrow, مغز استخوان *maghz-i ustukhwān*, Mod. Pers.

Marsh-Mallow, *vide* Hollyhock.

Maw, *vide* Stomach.

Meat, بوتی *botī*, Hindu. (pieces of butcher's meat): گوشت پشت مازہ *gūsh-t-i pusht-i māza*, Ind. Pers. MS., Mod. Pers., and Ar. MS. (flesh of an animal near the back-bone, the saddle; tender): بچی *bachī*, Panj. (lean meat near the shoulder, without skin, fat, or bone): تکمه *tukma*, Ind. Pers. MS. (chopped meat, wetted and placed inside a bird and given on the lure): خصی کردن *khasī kardan*, Ind. Pers. MS. and Panj. (to pluck and bone a bird for a hawk, *vide*

¹ In Stonehenge's *British Rural Sports* 'chap'; doubtless a misprint.

² According to Lascelles, however, it is 'to sit on the perch with the wings and tail fully spread' and is a sign of ill-temper.

[N.S.]

Qawānīn^u *ṣ-ṣayyād*, p. 106, note 1): *اشتها دادن ishtihā dādan*, Mod. Pers. (*lit.* to cause appetite, is to give washed or wetted meat); *گوشت خورشیدن gūsh-khur shudan*, Mod. Pers. (to become accustomed to eat meat; of a new hawk): *گالا gālā*, Hindu. (chopped-up meat; also, by some, the purge given previously to flying, and by others a doctored casting): *گوشت گوسht*, Hindu. (any meat): *گوشت پشت مازة gūsh-i pusht-i māza*, Pers., in an Ar. MS. *بشتمازک bushtumāzak* (the tender meat near the back-bone, the saddle): *دل dil* (heart): *بز buz* (in Pers. 'goat' but amongst Punjabi falconers often 'goat's heart'): *vide* Breast and Washed meat.

Medarosis *اِتْسَاع ittisā*, Ar. (from Ind. Pers. MS.)

Meddle, or Medylle, [to mix].

Melowne, (a species of eagle), *vide* Bawtere.

Merde, (excrement), *فُضْلَة fuḏla*, gen., Hindu., Pers., and Ar.: *vide* Mutes.

Merlin¹, *طرمطي* or *ترمطي turumtī* female, and *ترمطا turumtā* male, Hindu. (the Red-headed Merlin *Hypotriorchis Chicquera*); *چیتوا chetwā*, Hindī (male of ditto): *ترمطي قزل باش turumtī-e qizil-bāsh*, Ind. Pers. MS. (ditto): *کلجال*, in Ind. Pers. MS. said to be the Turki name of the previous species: *ریتل ترمطي retal turumtī*, Panj., and *ریگی regī* in the Derajat, (the English Merlin; *vide* Hobby): *ترمطا turumtā*, T. and Pers. (the English Merlin): *اليؤ يوء al-yuayus*, in one Ar. MS. the Merlin; but in another the male Sacer: *تفولوان*, H., said to = *chetwā*.

Mew, Mews, *قوش خانه qūsh-khāna*, Mod. Pers. (place where hawk are kept): *مربط marbat*, Ar. MS.

Mew, to, *بطولک بستن bi-tūlak bastan*, Mod. Pers. (to cast to mew): *از طولک در آمدن az tūlak dar āmadan* (to come out of the mew): *vide* Moults.

Migrate, to, *یدلاق و قشلاق کردن yilāq u qishlāq kardan*, Mod. Pers.; *سرد سیر و گرم سیر کردن sardsīr a garmsīr kardan*, Mod. Pers.

Migration, *روی ravī*, Panj.

Migratory, *چال کا جائور rāh-naward*, Ind. Pers. MS.: *چال کا جائور chāl kā jānwar*, Panj. (migratory bird, etc.): *اَدَدَل adḍel*, adj., Panj.

¹ Ther is a Merlyon. And that hawke is for a lady.—*Boke of St. Albans*, p. 53.

(said of a hawk that has reached its final destination and taken up its abode in one spot).

Mites, (small parasites), *vide* Lice.

Mole-cricket, گھوان *ghūān*, Panj.

Momey, موميا *mūmiyā*: موميای انسانی *mūmiyā-yi insānī* (Egyptian).

Monaul, *vide* Pheasant.

Moorhen, جل ککر *jal-kukar*, Panj. and جل مرغی *jal-murghī*, Hindu.

من من تور *manmantor*, in Chach Hazara, *vide* Water-Rail.

Moult, کریز *kurīz*, incorrectly قریض *qurīz*, Hindu.: تولک *tūlak*, Mod. Pers.: پرگردان *par-gardān* (false moult, a curable disease; the hawk so afflicted sheds the new feathers as soon as they are grown).

Moult, to, کریز کھانا *kurīz khānā*, Hindu., (sometimes but incorrectly قریض *qurīz*): تولک گردن *tūlak kardan*, Mod. Pers.

Moulted, بوزم *bozam*, adj., Panj., in an Indian MS. بوزن *bozan*, (by some applied to any hawk of one moult; by others to an intermewed hawk of one moult): *vide* Intermewed.

Mount, to, چرہنا *charhnā*, Hindu.

Mount, to take at the, *vide* Souse.

Mounting سربالائی *sar-bālāī*, subs., Mod. Pers., (of a goshawk; mounting to obtain an extensive view when the quarry has a good start and the exact spot of its putting in might escape detection).

Mouse, چوہی *chūhī* (but چوہا *chūhā* rat) Hindu.: موش *mūsh*, Mod. Pers. (a gen. term for mice and rats and squirrels, etc.): موش خانگی *mūsh-i khānagī* (house-mouse): موش سحرائی *mūsh-i sahrāī*, Mod. Pers. (a field rat): موش دوپا *mūsh-i du pā*, Mod. Pers. (the two-legged rat, the antelope rat): یربوع or جربوع *jarbū* or *yarbū*, Ar., jerboa (applied to the previous species).

Moustache, *vide* Cheek-stripe and Gape.

Mouth, منہ *muñh*, Hindu.: دهن *dahan* P.: *vide* Cheek-stripe
تالو *tālū*, Hindu. and کام *kām*, P. (roof of the mouth):
ساق دهن *saq-i dahan*, Mod. Pers. ditto (for ساق دهن *saq-i dahan*?).

Muer des champs, or *Muer de haye*, [*vide* Harting's *Bib. Accipit-raria*, pp. 227 and 226].

Mummy, *vide* Momey.

Munia, پدري *pidri* (the Plain Brown Munia, *Munia malabarica*).

Murmuration, [a Murmuracion of stares.—*Boke of St. Albans*, p. 82].

Musket, (male sparrow-hawk) باشين *bāshīn*, Hindu. and Ind. Pers. MSS.: جرء قرغي or جرء باشه *jurra-yi qirghī* or *jurra-yi bāsha*, T., P.

Mustard سرسون *sarson*: ذوا صيرا *tārāmīra*, (black mustard).

Muster, (flock) [a mustre of Pecoockys].

Mute, to,¹ (of long-winged hawks only? *vide* Mitchell, p. 20):
بيت کرنا *bīt karnā*, Hindu. (of any birds): پيدخال مارنا *paikhāl mārnā*, Hindu. (of hawks only): چلقوز زدن *chālqūz zadan*, Mod. Pers.

Mutes, (*vide* also Excrement): بيت *bīt*, pl. بيتين *bīten*, Pan and Hindu., (of any birds): پيدخال *paikhāl* pl. پيدخالين *paikhālen*, Hindu., (of hawks only): چتا *chatā*, Panj., (large mutes): بندي *bandī* or نوچا *nochā*,² Panj., (small mutes): ذرق *zaraq*, Ar. MS. (of all birds): گنده پيدخال *ganda paikhāl*, Ind. Pers. MS. (discoloured mutes): *vide* Pannel.

Mynah, *vide* Maina.

N

Narrel, or Narell = nostril, *vide* Nares.

Nares, (nostrils), ناس *nās* Panj.; ناک *nāk* Hindu.: سوراخ ناسان *sūrākh-i nāsān*, Ind. Pers. MS.; *vide* Button.

Neck, گردن *gardan*, Hindu., Pers.: صراحی گردن *surāhī-gardān*, Ind. Pers. MS. (long-necked).

Nest, گھونسل *ghoñslā*, Hindu.: کھونٹا *khoñṭhā* (in Behar): آشیانه *āshiyāna* and لانه *lāna*, Mod. Pers. and Panj.

Nestling, *vide* Eyess.

Net, جال *jāl*, Hindu. (any large net); جالي *jālī*, Hindu. (any small net; also net-work): پٹی *pattī*, Hindu. (for catching birds in trees and hedges): تور *tūr*, Mod. Pers. (any net): *vide* Urines: دو پلہ جال *do-palla jāl*, Panj. (a doubled or clap-

¹ Mitchell in his *Art and Practice of Hawking* (p. 20), states that "mute" is proper for long-winged hawks only and "slice" for "short winged."

² *Nuch-gayā* in Derawal means "empty."

net); پوشیده *poshīda*, Panj. (a large double net, similar to preceding; when set it is 'concealed' by earth, etc.): دهجی *dhajjī*, Panj. (a doubled or clap-net set under water for water-fowl): *vide* also Snare.

Netted, *vide* Passage-hawk.

Nias, *vide* Eyess.

Night-blindness, عشاء *ashāʿ*, Ar., and شب کوری *shab-kūrī*, Pers.

Night-heron, واک *wāk* Hindī, آوانک *āwānk*, Panj.; واق or واق *vāq* or *vāq vāq*, Pers.; بور *bor* Kashmiri.

Night-jar, چھپاکي *chhapākī*, but *vide* Owl.

Nightingale, بلبل هزار داستان *bulbul-i hazār dāstān*, or *bulbul-i hazār*, or *hazār*, Pers.: عندليب, pl. عنادل, *andalib*, pl. *anādil*, Ar.: 'vide' Watch.

Noble, حر *hurr*, Ar. (noble; applied to the young of certain animals and birds): طير البحر *ṭayr^u'l-hurr*, Ar. (generally the Goshawk).

Nomme, to, or Seize a fowl, (if it breaks away?).¹

Noose, پھائي *phā,ī*, Panj.: پادام *pā-dam*, Panj. (nooses on sticks, to snare running birds): وقرة Ind. Pers. MS.: حلقه موی اسپ *ḥalqa-yi mū-yi asp*, Mod. Pers. (horse-hair noose): قل *qil*, T. (?), Mod. Pers.: ربقه, *ribqah*, Ar., gen.: فنج *fakhkh*, Ar., and Pers.

Numbed, ٹھہرا ہوا *thūtharā hū,ā*, or اکڑا ہوا *akarā hū,ā*, Hindu. کيس *kīs*, Mod. Pers.

Nut or Note, روغن دان *rūghan-dān*, Mod. Pers., and مدهن *mudhun*, Ar. (the oil-bottle).

Nyas, *vide* Eyess.

Nye, [A nye of fesaunttys].

O

Obedient, باز گردان *bāz gardān*, Ind. Pers. MS. (obedient to the lure, quickly returning to the lure).

Oil-bottle, *vide* Nut.

Oriel, پیلک *pīlak*, Hindu.; پوش نول *posh nūl*, in Kashmir (the Golden Oriel).

¹ If the quarry break away leaving feathers behind "nome or seize" and not "take," *vide* Boke of St. Albans, p. 12, reprint. Elsewhere, p. 21, 'Nomme and Nym' are used for 'take.'

Osprey, دمردز نفاک *damirdizināk* and دمردز قیناغ *damirqaynāgh*, T.,
P. (*lit.* iron-clawed): القریع *al-quray*, Ar. MS.

Ost, (Host) [an Ost of sparowis].

Ostringer, or Austringer, (keeper of goshawks and tiercels),
شکارچی زرد چشم *shikārchī-yi zard-chashm*, Mod. Pers., *vide*
Sperviter.

Over-hand, گھلانا or دینا کے گلیا *galiyāke denā* or *khilānā* (to cram
fowls or horses).

Owl, ^عالو *ullū* Hindī, gen.: مامارا or گبارا or گمارا *mamārā, gubārā,*
or *gumārā*, Panj. (a name given to both the Indian Grass-
owl, *Strix candida*, and the Short-eared owl, *Otus brachyotus*):
سُج گمارا *such gumārā*, Panj., “the white *gumārā*” (the
Indian Grass-owl): هکُو *hukkū* (in Dera Ghazi Khan the name
of a large owl that lives in ravines): روشک *roshak*, Panj.
(a species of small owl): بل بتوری *panj.* (another species of
small owl): چغد *chūghd*, Panj., in Derajat شپاکي *shapākī*,
and vulg. چپاکي *chapākī* (the spotted owlet, *Athene Brama*,
vide Night-jar): بوم *būm*, and colloquially بیف and بوف, *bīf*
and *būf*, Mod. Pers. (an owl): شاه بوف *shah-būf*, Mod. Pers.
(Eagle-owl): یا پلاق صحرائي *yāplāq-i sahrāi*, Mod. Pers., (the
Short-eared Owl): یا پلاق باغي *yāplāq-i bāghī*, Mod. Pers. (*lit.*
the garden *yāplāq*, probably the Wood Owl): عروس چاه *arūs-i chāh*
Mod. Pers. (*lit.* “bride of the well,” a light-
coloured species, said to prey on pigeons in mosques, etc.):
بايه قوش or چغد *chūghd* or *bāya-qūsh*, Mod. Pers. (a small
species, probably *Athene Brama*): مرغ شب آهنگ *murgh-i*
shab āhang or مرغ حق *murgh-i haqq*, Mod. Pers. (a small
species; the male is said to be no larger than a lark; prob.
Athene Persica).

Owl-headed, چغد سر *chūgh-sar*, Hindu. (said of a hawk).

Owl's-light, (the time just after sunset), منہ اندھیرا *munh*
andherā, subs., Hindu. and Panj., (specially of morning
time): جھپٹپٹا وقت *jhutputā waqt*, Hindu. (of evening only):
وقت گرگ و میش *vaqt-i gurg u mīsh*, Mod. Pers. (*lit.* the time
of the wolf and lamb; specially of morning twilight).

P

- Paddling, *vide* Badelynge.
- Paddy-bird, بگلا *bagulā*, Hindu. ; *vide* Egret.
- Palate, *vide* Mouth.
- Palpitations, دل هول *hawl-i dil*, Pers., and کھنہ *khinna*, Hindi, Ind. Pers. MS. (the disease of—), and خفقان *khafaqān* Ind. Pers. (temporary —), but *vide* Pantas.
- Pannel, تہ قلوبین *talvīn tah*, Panj. : چتا مارتی ہے *chaṭā mārtī hai*, Panj. = “the stomach is not yet empty” and اب بندیان پر آگڈی *ab bandiyān par ā-gaṭī* = “the stomach is quite empty,” *vide* Mutes : خزینہ *khazina* or خزانہ *khazāna*, Mod. Pers.
- Pannus, (disease), سبیل *sabal*, Ind. Pers. MS.
- Pantas, دما *dama*, Panj. and Ind. Pers. MS.; خفقان *khafaqān*, Mod. Pers. (*lit.* palpitation of the heart).
- Paralysis, لاقوا *laqwa*, Ind. Pers. MS. (— of the face) : فالج *fālij*, Ind. Pers. MSS. (of half the body).
- Partinger, (Partridge-hawk), کبک گیر *kabk-gīr*, etc., adj., Pers.
- Partridge, چکور *chakor*, Hindu., and ککلیک *kaklīk*, T., P. and کبک *kabk* Pers., (the Chakor, *Caccabis Indica*) : تیتتر *tītar*, Hindu., and جیرفتی *jīruftī*, Mod. Pers. (the Grey Partridge, *Ortygornis ponticeriana*) ; کالی تیتتر *kālī tītar*, Hindu., and دراج *durrāj*, Mod. Pers. (the black partridge, *Francolinus vulgaris*) : سی سی *sī-sī* or سو سو *sūsū*, Hindu., and تیهو *tīhū* or تایهو *tayhū*, Mod. Pers. (the See-See or Desert Partridge) ; یا حسین *Yā Husain*, Ind. Pers. MS. (said to be a species of partridge ; its cry is supposed to be “O Husain!”) : تایهو *tayhūj*, Ar. MS. (for the Pers. *tīhū*, the See-See or Desert Partridge ?) ; *vide* Covey.
- Passage-hawk, دامی *dāmī*, Hindu. and Ind. Pers. MS. (*lit.* ‘snared,’ said of any wild-caught hawk) ; توری *tūrī*, Mod. Pers. (ditto : *lit.* “netted”) ; چوز *chūz*, Panj. and Ind. Pers. MS. (any hawk in the immature plumage) ; تریٹاک *tarīnāk*, Panj. (a haggard) ; *vide* also Saker and Hawk.
- Paste, لقمہ *luqma*, Ind. Pers. MS. (any paste, intoxicating or otherwise, that artificially increases a hawk’s hunger. A minute portion is concealed in a wafer of meat and given at least half-an-hour before flying. After half-an-hour a taste of blood is given).
- Paster, (plaister) ضماد *zamād*, Ar. and Pers. ; لپ *lep*, Hindi.

- Pastor, گلای مینا *gulābī mainā*, Hindu. (the Rose-coloured Starling).
- Peacock,¹ مور *mor*, m., and مورنی *mornī*, f., Hindi ; طاؤس *tā'ūs*, Pers. ; *vide* also Muster.
- Peck, to, *vide* Beak.
- Peep, (flock), [a Pepe of chykennys].
- Pelt, (dead quarry), کشته *kushta*, Panj., Pers. (also any dead bird used as a lure). [The dead body of any fowl howsoever dismembered.—*Latham*.]
- Pelfe, *vide* Pill.
- Pendant feathers, بهوتا *bahūtā*, Panj. ; شلوار *shalwār*, Panj. and Ind. Pers. MS. (*vide* Thigh).
- Penne, (a feather q. v.).
- Perch, چکس *chakas*, Panj. ; اددا *addā* Panj. (block) پدواز or پدواز *padwāz* or *patwāz*, Ind. Pers. MS. (a high perch for pigeons or hawks, made of two uprights and a cross pole; the Arabic for this pattern is stated to be صیدقة ; طفل, in two Ind. Pers. MSS. ; نشیمن *nishīman*, Mod. Pers. (gen.) ; *vide* Migratory for *adḍel* : وکر *wakr*, Bahrayn Is. : کندرة, pl. کنادر, *kandarah*, pl. *kanādir*, Ar. MS. : العارضة *al-'arīzah*, Ar. MS. (prop. a beam).
- Peregrine,² بحری *bahrī*, and incorrectly بهیری *bhairī*, Hindu. (the female) ; بحری بچه *bahrī bachcha*, Hindu. (the male) ; بحری *bahri*, and شاهین *shāhīn* q. v., Mod. Pers. ; شاهین *shāhīna*, Ar. of Baghdad ; in an Ind. Pers. MS. the Arabic name is said to be قرس, but according to Jerdon *qarbash*.
- Petty singles, (the small toes), چھوٹی انگلیان *chhotī ungliyān* : *vide* Sengles.

¹ *Mrig bāndar tītār mor* . . . *Yih chāron khetī ke chor* ; saying : “ The black-buck, the monkey, the grey-partridge and the peacock. These are the four that rob the crops.”

In Bengal the peacock is sacred as it is the vehicle of *Kārtikiyā*, the God of War. In Hindu poetry the *kekā* cry of the peacock is an accompaniment of rain. The ruling family of Morbhanj in Orissa sprang from the egg of a pea-hen ; hence the name. The peacock calls both by night and by day and to Indian ears its discordant bawl, associated no doubt with cool days in the rains, is pleasing, just as to some English ears the harsh cry of the jay is akin to music.

² By old writers the term peregrine seems to have been restricted to the passage-hawk or the haggard ; *vide* Gentle, and Fawken of the rock. “ There is a Fawken peregrine and that is for an Erle.”—*Boke of St. Albans*, p. 52.

Pheasant, قرقاول *qirqāvul*, Mod. Pers. ; تذارو or تذارو *tazarv* or *tadarv*, Ind. Pers. MS. ; منال *manāl* (the Monal Pheasant, *Lophophorus Impeyanus*) ; مرغ زرین *murgh-i zarrīn* in Kuram Valley (ditto) : *vide* also Nye.

Pie, *vide* Magpie and Titengis.

Piece, تیکه *tika* or تیکه *tikka*, Mod. Pers.

Pigeon,¹ کبوتر *ka-būtar*, Hindu. and Pers. (gen.) : گولا کبوتر *golā ka-būtar*, Hindu. (the domesticated blue-rock) ; کبوتر خانگی *ka-būtar-i khānagī* (a domestic pigeon) ; کبوتر صحرائی *ka-būtar-i šahrā,ī*, Mod. Pers. (wild pigeon) ; کبوتر چاهی *ka-būtar-i chāhī*, Mod. Pers. (ditto ; *lit.* well pigeon).

Pill, *vide* Paste.

Pill, or Pelf, [What is left of the quarry after the hawk has been fed on it.—*Harting*. In old English, pelf signifies trash, and hence money. “Pill or Pelfe of a fowle is that refuse and broken remains which are left after the *Hawke* hath been relieved.”—*Latham*].

Pin-and-Web, (a disease of the eye), پردۀ چشم *parda-yi chashm*, Ind. Pers. MS. (a film over the eyes) ; جدری *judarī* (prop. small-pox ; explained in an Ind. Pers. MS. as a disease of excrescences or marks in the eye ; ulcer on the cornea ?) : سلاق *sulāq*, Ar., and بامنی *bāmnī*, Hindī (a disease in which the hawk's eyelashes fall out). *Vide* also Cataract.

Pincers, گاز *gāz*, Mod. Pers. (large) : منقاش *minqāsh*, Mod. Pers. (tweezers for pulling out hairs).

Pinch, to, (to reduce in condition), ایک کاغذ گھٹانا *ek kāghaz ghaṭānā*, Panj., (to reduce a hawk the thickness of a paper, *i.e.*, the least amount ; دو کاغذ *do kāghaz* to reduce it, double the previous amount, etc.) : *vide* Raised.

Pinion, to, *vide* Mail, to.

Pinne in the feet, تلی *talī* and تلیان *taliyān* pl., Panj. and Ind. Pers. MS. : میخک *mīkhak*, Mod. Pers. (when blackness is present) : حفا *hafā*, Ar., Pers. (when no blackness is present) ; *vide* also Foot.

Pintail, *vide* Duck.

¹ Some orthodox Hindus consider the pigeon a bird of good omen and will not eat its flesh. By the Hindus in some parts of India it is an unlucky bird ; it merely desires that its own race shall increase ; should a pair build in the thatch, the house will become deserted.

Pitch, (the height at which a hawk waits on).

Pitch, *زفت* *zift*, Pers.

Phthisis, *تب لازم* *tab-i lāzim*, (also hectic-fever).

Pleiades, *vide* Plumage.

Plover, *کروانگ* *karwānak*, Hindu. (the Stone-plover, *Ædicnemus crepitans*): *آبی کروانگ* *ābī karwānak* or simply *ābī*, and *شوکن* *shūkan* in Derajat (the Large Stone-plover *Esacus recurvirostris*): *بچه هوباره* *bachcha hubāra*, Mod. Pers. (the Stone-plover); *چاخروق* *chākhurūq*, T. (ditto); *کروان* *karawān*, pl. *کروان* and *کراوین* *kirwān* and *karāwīn*, Ar. MS. (ditto); *نقره پا* *nuqra-pā*, Ind. Pers. MS. (probably the Indian Courier Plover, called in the Derajat *nukal-pān*); *کم عقل* *kam 'aql*, and *علي دودو* *Alī dau dau*, in Peshawar (ditto); *زرد پلک* *zard-palak*, Ind. Pers. MS. (prob. the Yellow-wattled Lapwing): *باران طلبک* *bārān-talabak*, Ind. Pers. MS. (the Red-wattled Lapwing): *کل کاو* *kul-kāo* in Kashmir (the Red-wattled Lapwing): *روتن* *rotan*, in Chach Hazard (the Peewit and also plovers generally): *vide* Congregation and Lapwing.

Plumage, the feathers under the wing (*vide* Boke of St. A., p. 15). [The mail of goshawks in their soreage was called plumage and not mail q.v.] *Vide* Feathers.

Plumage, (feathers given as a casting). *Vide* Casting.

Plume, to, or Deplume *پر نوچنا* *par nochnā*, Hindu. and Panj. : :
پر کندن *par kandan*, Pers.

Plume, to fly at, [To fly at birds.—*Salvin and Brodrick.*]

Plume s., *vide* Hood. [Plume is the general colour or mixture of feathers in a *Hawke*, which sheweth her constitution.—*Latham.* In Hindustani this is called *رنگ* *rang* or 'colour'].

Pochard, *پدیار* *panyār*, the Red-crested (?), and *آب خوره* *āb-khorā* the Common Pochard (in Chach Hazara): *nangīr* pochard or dun-bird (in Chach Hazara): *vide* Duck.

Podagre, (gout in the feet), *نقرس* *niqris*, Ar. and Pers. (gout).
[When yowre hawkes fete be swollyn she hath the podagre.
—*Boke of St. A.*, p. 36.]

Point, make her, (of a hawk throwing herself up in the air over the exact spot where the quarry has 'put in'). *Vide* 'to Block' and 'Put in.'

Poose, or Cogh, (cough), *کهانسی* *khānsī*.

- Pope's nose, *دُمري* *dumrī*, Hindu.: *دُمچہ* *dumcha*; *دُمگَزہ* *dum-gaza*, *دُمگَازہ* *dumgāza*, *دُمغَازہ* *dumghāza*, Ind. Pers. MS. and Indian: *دُم لیزہ* *dum-līza*, Mod. Pers. (the Pope's nose or the feathers under the tail?). *Vide* Nut and Brayle-feathers.
- Popilion, or Popylyen, (cocking term). [A special kind of ointment; for receipt *vide* Halliwell's Dict. of Arch. and Prov. words.]
- Pounces, (the innermost toes), *vide* Sengles.
- Poult, to, (to kill poultry; of a hawk: *vide* Royle and House).
- Pound, to, *جَوکوب کرنا* *jaw-kob (karnā)*, Ind. Pers. MS. and Hindu. (to pound coarsely like *ardāwa*).
- Powder, *خَشکہ* *khushka* and *سَفُوف* *safūf*, Ind. Pers. MS. (med.)
- Preen, (dress and oil the feathers with the beak), *رَوغَنی کرنا* *rawghanī karnā*, Hindu.: *رَوغَن گِیرِی کردن* *rūghan-gīrī kardan*, and *رَوغَن کَشِی کردن* *rūghan-kashī kardan*, Mod. Pers. (to oil the feathers): *vide* also Reform.
- Prey, *مَار* *mār*, f., Hindu., and *صَید* *ṣayd* Pers. (quarry); *vide* Quarry and Raptores.
- Primaries, *دَسو کھا* *dasaukhā* Hindī (the ten primaries in pigeons); *vide* Flight-feathers.
- Principals, (the two longest feathers in the wing), *vide* Flight-feathers and Flags.
- Prune, to Proigne, Proine, *vide* Preen.
- Pubis bone, *دو شَاکھہ* *do-shākhā*, Hindu. and Ind. Pers. MS. (*vide* *Qawānīn-ū'ṣ-Ṣayyād*, p. xxix, note 8).
- Puff up, *vide* Swell.
- Pull through the food, (eat through it). [Not an Eastern device, as Hawks in the East get much carriage and are too tame and well-broken to need the device.]
- Pulse, *نَبض دیدن* *nabẓ dīdan*, Pers. (to feel the pulse in a hawk's wing; *vide* Trans. *Bāz-Nāmāyi Nāṣirī*, p. 153).
- Pup, *پِلَا* *pillā*, Hindu.; *سَگ بچہ* Pers. *sag-bacha* (without *tashdīd*) *tūla*, P. (a pup, and also any sporting dog; m.c.; *vide* Dog).
- Purge, *صَافی* *ṣāfī*, Panj. and Ind. Pers. MS.: *صَاف کردن* *ṣāf kardan*, Ind. Pers. MS. and Panj.: *اطلاق شدن* *itlāq shudan*, Mod. Pers. (to be moved): *vide* Enseam.
- Purge, to, *vide* Enseam and last line under 'Meat.'

Purple Heron, *vide* Heron.

Pus, *پپ* *pīp*, Hindu: *جراحت* *jarāḥat*, Mod. Pers. coll.

Put, in, *باز نے بندہ کیا* *bāz ne buna kiyā*, Hindu. (the goshawk has put in; *vide* Flush): *باز نے داب کر بیٹھی ہے* *bāz ne dābkar baiṭhī hai*, Hindu.: *رسانیدن* or *بوندن* *bi-buna burdan* or *rasānīdan*, Mod. Pers.: *vide* Quarry, Enew and Mark.

Put over, *گھوٹا دینا* *ghoṭā denā*, Hindu.; *طعمہ مرورنا* *tu'ma maroṛnā*, Panj. and Hindu.; *قوش گوشتش میسکند* *qūsh gusht-ash mīshikanad*, Mod. Pers. (the hawk is putting over); *آپارر* *āpārīr*, T.: *vide* Endew.

Puttock, *vide* Kite.

Q

Quail, *بٹیر* *bāṭēr*, Hindu. and Panj.: *لوا* *lawā* Hindu. (the Rock Bush-Quail *Perdimla Asiatica*; used for fighting): *بلدرچین* *baldarchīn*, T., and *بودنه* *būdina*, Mod. Pers.: *گھاگس بٹیر* *ghāgas bāṭēr*, Hindu. (the common European or Large Grey Quail; seldom used for fighting): *چنگ* *chinak* or *chinga* (the Black-breasted or Rain-quail *Cotumix coromandelica*): *vide* also Bevy.

Quarry, *مذبوحات* *mazbūḥāt*, pl., Ind. Pers. MS. (quarry taken by hawks); *بندہ* *buna* (quarry put in by a goshawk; *vide* Put in); *vide* Prey, and Ground-game.

Quarry, to fly to the,¹ [And yowre hawke fleeth to the querre. When ther be in a stobull tyme sordes of mallardes in the felde and When she espith theym and commyth couerte her selfe. and flie preuyli under hedges or law bi the grownde. and nym oon of hem or thay rise then ye shall say that the fowle was slayn at the querre.—*Boke of St. Albans*, p. 49].

Quarry-hawk, (an entered hawk).

Quick, (alive) *زنده* *zinda*, Hindu. (opposed to *مردار* *murdār* (an animal that has died of its own accord or was slaughtered in a manner contrary to Islam).

Quills, *پرغزہ* *par-ghaza*, Ind. Pers. MS. (probably the quill portion of a feather, the shaft): *پرهائی حلال* *parhā-yi ḥalāl*, Mod. Pers. (*lit.* lawful feathers); *بوقہ* *būqa*, Mod. Pers. (the stump

¹ Apparently in contradistinction to 'flying to the brook' or 'to the river.'

of a quill, *lit.*, bucket): ریش *rīsh*, Ar. MS. (the tail- and wing-feathers of hawks).¹

Quinsy, *vide* Frounce.

R

Rail, *vide* Water-rail.

Raise in flesh, tr., ایک پتہ چڑھانا or ایک کاغذ *ek kāghaz* or *ek patta charhānā*, Panj. (to raise a hawk in flesh the thickness of a paper or a leaf, *i.e.*, the least possible amount).

Raised in flesh, ('is when a hawk grows fat or prospereth in flesh.'—*Latham*), پیدہ گرفتن *pīh giriftan*, Mod. Pers. موٹا ہوگیا *moṭā ho-gayā*; مست ہوا *mast hū,ā*; *vide* Pinch.

Rake, to,² (to fly too wide?)—

Rake away, to, [To take off, instead of pursuing the quarry flown at, or to fly wide of it.—*Harting*].

Raked, [“—when the hawk seizes the quarry and flies away with it.—*Colonel Thornton's Sporting Tour*, p. 112 and note].

Raking, [Striking the game in the air.—*Freeman and Salvin*. Her direct pursuit without soaring is *Raking*.—*Stonehenge's British Rural Sports*].

Ramage, (said of a wild hawk, difficult to reclaim) بہت جنگلی *bahut janglī* (very wild); سخت مزاج *sakht-mizāj* (hard of temperament). [“*Ramage*, is when a Hawk is wilde, coy, or disdainful to the man, and contrary to be reclaimed”].

Ramage-hawk, *vide* Bowiser.

Rangle, (small stones given to aid digestion) [Indian and Persian falconers do not give rangle].

Raptors, شکارہ *shikara*, pl. *shikaragān*, Ind. Pers. MS. (an old-fashioned and unusual term for birds of prey; *vide* Sparrowhawk): قوش *qūsh*, P., T. (any bird of prey but especially the Goshawk; *vide* Eagle and Goshawk): طيور سبع *tuyūr i sab*, and طيور شکاری *tuyūr-i shikārī*, Mod. Pers.: جوارح, pl. of جارح *jāriḥ*, Ar. MSS. (birds of prey): الضواري *az-zawārī*, pl. of الضاري *az-zārī*, (birds and beasts trained to the chase).

Rat, *vide* Mouse.

Rat's bane, *vide* Arsenic.

Ratoner, [a rat-catcher].

¹ For other birds, *rīsh* is a general term.

² *Vide* “Falconry in the British Isles” of Salvin and Brodrick, and Halliwell's Archaic Dictionary.

- Raundon, [And if the fowle spring not bot flee a long after the Reu and the hawke nym it then. ye shall say she flew it at the Raundon.¹—*Boke of St. Albans*, p. 48].
- Raven², *دھورہ ہر* *dhodhar*, Panj.; *کلاغ سیاہ قزقون* *kulāgh-i siyāh-i quzqūn* or *kulāgh-i quzqūn*, Mod. Pers. (the Common Raven); *قاغ* *qāgh* in the Murree hills, a name also applied to the Indian Corby *q. v.*
- Raw, *کچھا* *kachchā*, gen., Hindu.: *ندانم کار* *na-dānam kār*, adj., Mod. Pers.; and *عشیم* *ghashīm* Ar. coll., from *قشم* *qashm* (of hawks, hands, etc.).
- Rebate, *vide* Bate.
- Reclaim, (from a wild condition; to tame)³, *vide* to Man and to Train.
- Recorder, (a flute to teach birds to sing).
- Red-hawk, (or Sore-hawk), *vide* Sore-hawk and White-hawk.
- Red-legged Falcon; *اللزيق* *al-luzayiq*, Ar. MS.
- Reeves, *vide* Ruffs.
- Reform, (to dress the feathers without oiling them), *پر خون کردن* *par-khūn kardan*, Mod. Pers.; *خدانگ کردن* *khadang kardan*, Mod. Pers.; *پر کشی کردن* *par-kashī kardan*, Mod. Pers. and Ind. Pers. MS.; *vide* also Preen.
- Remove, (to change position in the field, with or without quarry in the foot), *vide* Carry.
- Reume, or Rheum, Catarrh; *vide* Snurt, etc.
- Rifler, or Rifelere, [a hawk that, cluching at the quarry in eagerness, seizes hold of the feathers only, is said to 'rifle'; a hawk that habitually does so is a 'rifler'].
- Rigid, *مات شدن* *māt shudan*, Mod. Pers. (to become rigid from astonishment, etc.; said of a goshawk when she spies a quarry at a distance).
- Ring, or Ring up, (to rise spirally to a height), *چڑھائی کرنا* *charhā,ī karnā* and *چڑھنا* *charhnā*, Hindu.: *دور کردن* *dawr kardan*, Mod. Pers. (also to soar): *بدور افتادن* *bi-dawr uftādan*, Mod. Pers.
- Rise, to, (*vide* Flush) *بلند شدن* *buland shudan*, intr., Mod. Pers., (of quarry or hawk).

¹ Run down?

² *Vide* Jl. As. Soc. Beng., Vol. III, No. 2, February, 1907, p. 115.

³ One English writer naively informs us that the creance was a 'long thread by which the hawk was drawn back after she was permitted to fly, and this was called the reclaiming of the hawk.'

- River-hawk, [as opposed to a Field-hawk].
- Rivering, [flying at river-fowl; *vide* Fly at the brook].
- Robin, (male Hobby) *vide* Hobby; پدا *piddā*, Hindu. (the White-winged Black Robin).
- Rod, کانپا *kāmpā* Panj. (the limed twig at the end of the نرجو *narjū* or long jointed bamboo of bird-catchers; *vide* also Bird-lime.)
- Roil,¹ or Royle, (to wander, rove about), *vide* House.
- Roller, (Indian), نیل کنتھہ *nīl-kanth*, Hindu.: سبزک *sabzak*, Panj. چاهان *chāhān*, in Derajat.
- Rook, کاهي *kāghī* or کاگی *kāgī*, Panj. (the Common Rook): اغ *yāgn*, in Baghdad: زاغ حلال *zāgh-i ḥalāl*, Ind. Pers. MS.; *vide* Crow, and Building.
- Rope, قاطمه *qāṭima*, T., P., (a rope of black goat-hair).
- Rouse, to, (shaking all the feathers violently), پھری لینا *phuri lenā*, Panj.: پھرکارے کرنا *phurkāre karnā*, Panj.: خود را افشاندن *khud rā abshāndan*, Ind. Pers. MS.: خودش را تکان دادن *khud-ash rā takān dādan*, Mod. Pers.; پریوک کردن *par pūk kardan*, Mod. Pers.
- Rousing, or Rowysin, *vide* Rouse.
- Royle, *vide* Roil.
- Rue, اسپند *ispand*, Mod. Pers. (the seed of *Peganum Harmala*). اسپند سبز *ispand-i sabz* (used in medicine): اسپند زرد or سفروزه زرد *ispand-i zard* or *isfarza-yi zard* (for warding off the evil eye; *vide* *Ispaghūl*).
- Ruff, to, (to hit the quarry and make the feathers fly without binding.)
- Ruffs and reeves, پہاری *pāhārī* (in Chach Hazara).
- Ruffer-hood, (a plumeless hood of special construction used for newly-caught hawks only). [Easterns do not use the ruffer-hood: they seal the eyes].
- Rye², [“—A Snurt, or colde in the heede of a Hawk, or the Rye.”—*Bert.* The disease shows itself of a swelling in the head]: زهر باد *zahr bād* Hindu.; *vide* Snurt.

¹ Bert, p. 74, Harting's Ed., has “royled from marke.”

² For a Snurt or colde in the head of any hawke, it is most properly to be tearmed thus in long-winged hawkes, for short-winged hawks the Rye, and yet they differ. *Bert*, p. 92, Harting's Ed.

S

- Sacer. [There is a Sacre and a Sacret. And theis be for a Knyght.—*Boke of Albans*, p. 53] : *vide* Saker.
- Sacret, (male of Saker), *vide* Saker.
- Sails, (wings of a hawk), *vide* Wing.
- Sail, to, داشتن نگاه بال *bāl rā dar havā nigāh dāshtan*, Mod. Pers., (opposed to بال را برهم زدن to beat the wings, *vide Bert*).
- Saker,¹ چرغ *chargh* Hindu., and چرخ *charkh* amongst Pathans : چیتل چرغ *chītal chargh*, Panj. (in Kapurthala applied to the variety with white spots on its back ; *vide* Plumage) : بالابان *bālāban*, Mod. Pers., (Passage Saker) ; and چرخ *charkh*, Mod. Pers., eyess : ناعی ترن, Ind. Pers. MS. (said to a kind of *chargh* ; other varieties are stated to be called تلماج and ارغو) : خنآقه Ind. Pers. MS. (said to be a kind of *chargh*) : ایتلگو *itālgū* or ایتلگو *itālgū*, T. : جرودی *jurūdī*, Mod. Pers., (said to be a small species of Saker) ; other varieties are بالابان بدری *bālābān-i badrī*, جبالی, *jibālī*, لفیف, *lafīf*, etc. :² الصقر *aṣ-ṣaqr*, Ar. MS. : الیویو *al-yūyū*, in one Ar. MS. said to be the male Saker, but in another to be the Merlin.
- Sal-ammoniac, نوشادر *naushādar*, Hind.
- Sand-grouse, بخت تیتتر or بر تیتتر *bakht tītar* or *bar-tītar*, Hindu. and Panj. (the Large Sand-grouse) : سنگ خوار *sang-khwār*, Ind. Pers. MS. : قطا *qatā*, Ar., collec. of قطة *qatāt* (Pin-tailed) ; قرقوق *qil-qurūq*, T. (Pin-tailed) : سیاه سیند *siyāh-sīna*, Mod. Pers. (*lit.*, “black-breast” ; the Imperial Sand-grouse, *Pterocles arenarius*) ; باقرقره *bāqir qara*, T. (and باغری قره) (ditto).
- Scab, کوله *kivla*, Mod. Pers.
- Scabbiness, قرع *qar*, Ind. Pers. MS. (scabbiness of the head).
- Scale, پولک *pūlak*, Mod. Pers., (scale on toe of a hawk).
- Scare-crow, دھوکا *dhokā*, Hindu. ; مدرس *ma-tars*, Mod. Pers.
- Score [twenty yards ; a common term in ancient archery].
- Scouring, *vide* Purge.
- Screen-perch, [not used by Easterns].
- Seamed [according to *Stonehenge* the opposite of *inseamed*, or being in “good condition” : *vide* Enseam].

¹ *Vide* Jl. As. Soc. Beng, vol. iii, No. 3, 1907.

² *Vide* translation of the *Bāz-Nāma-yi Nāḡirī*, pp. 49—56.

Seare, and Sere, *vide* Cere.

Secondaries, *vide* Flight-feathers: الخوافي *al-khawāfī*, Ar. MS. (the secondaries or tertaries?).

Secretary-Bird, فرس الشيطان *faras^u sh-Shaytān*, Ar. (*lit.*, horse of Satan): الحبيب *al-ḥabīb*, Ar. (the friend).

Secretly بدزده *bi-duzda* and سلف *salaf* Mod. Pers: for اوغرى انداختن *vide* (cast of).

Sedge, at, [A corruption of "at siege"; said of a heron when at the water-side, in contradistinction to being "on passage."—*Harting*].

Sedge, or Sege, (number) [A sedge of heronnys or of betouris.—*Boke of St. Albans*, p. 81].

Seel, to, (or Ensile) آنکه سینا *ānkh sīnā*, Hindu.; چشم دوختن *chashm dūkhtan*, Mod. Pers.

Seeled, آنکه سیت *ānkh-sīt*, Panj.: چشم دوخته *chashm dūkhta*: بالا بین *bālā bīn*, adj., Mod. Pers. (able to see out of the tops of the eyes, *i.e.*, partially seeled).

Selde, to, *vide* Seel.

Sengles, or Sencles; [the long sengles = the keys or closers *q.v.*, and the pety sengles are the small toes, while the innermost toes are called pounces].

Sercell, (the pinion-feather of other birds; the feather last cast in the moult), کزدک or قراق? Ind. MS.: کرکت *kirkit* or *kirkich*, Panj. (properly of a goshawk only); *vide* Flight-feather.

Sere, and pl. Seris, *vide* Cere.

Serpent-Eagle, مچنون *majnūn* (in Chach Hazara).

Serving a hawk, (driving out from cover, quarry that has 'put in') مدد دینا *madad denā*, Hindu. and Panj.

Set, to, (make hungry) گرسنه کردن *gurisna kardan*; 'vide' Sharp-set.

Set down, to, (putting into the mew) کوریز مین بتهلانا *kurīz men biṭhlānā*, Hindu.; در طولک بستن *dar tulak bastan*.

Set on, to, راهی زدن *tūla rā hay zadan* (to set on a dog).

Sew, to, the beak, *vide* Feake.

Shaft, (of feather), قلم *qalam*, Mod. Pers., (opp. to ریشه *rīsha* web): *vide* Quills.

Shahin, شاهین *shāhīn* and کوهی *kohī*, Hindu. and Panj. (the female of *F. Peregrinator*, *Babylonicus*, *Atriceps* etc.):

[N.S.]

شاهینچه *shāhīncha* and کوهیلا *kohelā*, Hindu. and Panj. (male of ditto): شاهین *shāhīn*, Mod. Pers. and Ar. (a vague term for Shahins and Peregrines¹; Ar. pl. شاهین *shawāhīn*; 'vide' Peregrine): لاچین *lāchīn*, T.; [*kabarsh* (?) Ar., vide Jerdon]: الكوهي *al-kūhī*, Ar. MS. (from Pers.): الكرك *al-kurak*, Ar. MSS. (in one MS. said to be a small kind of Shahin and different from the *bahrī* or the *jabalī* shahins; possibly the Barbary Falcon: in another said to be the male of the *Shāhin*): vide Barbary Falcon.

Shanks, ککٹوا *kakūṣā*, in Chach Hazara (any kind of long-shanks).

Sharp-set, (very hungry), گرسنه کرده شده *gurisna karda shuda*, Mod. Pers.; vide to Set.

Sheath, vide Case.

Sheep, برة *barra*, Mod. Pers. (lamb and sometimes sheep; also fawn): برة شیر مست *barra-yi shīr-mast*, Mod. Pers. (sucking-lamb).

Sheldrake, Shieldrake, چکوا چکوی *chakwā chakwī*, Hindi. (male and female); and سرخاب *surkhāb*, Panj. (the Ruddy Sheldrake): عنقود *anqūd*, Mod. Pers. (ditto): vide Dopping.

Shikra, vide Sparrow-hawk.

Shoveller, چمچه مرغابی *chamcha mughābī* (in Kapurthala) and دبی مرغابی *dabbī murghābī* (in Chach Hazara).

Shrike, لٹورا *lātorā*, Panj., and in Derajat ممالا *mamālā* (Indian Grey Shrike); ممالی *mamālī* in Derajat and هر راجی *harwājī* in Kashmir (the Rufus-backed Shrike): آلا گوزنه *ālā gūzina*,² T., P., (a large shrike that is سرمه کشیده *surma-kashīda* or marked with a moustache); بازوری *bāzūrī*, Kurdish, (ditto): vide also Warbler, and Drongō.

Sinew, پٹھا *patthā*, Hindu and Panj.; پی *pay* Mod. Pers.

Skin, پوست *pūst*, Mod. Pers. (outer skin): پرده *parda*, Mod. Pers. (fine inner skin or membrane): vide Catgut.

¹ Vide Jl. As. Soc. Beng., vol. iii, 1907, and translation of the *Bāz-Nāma-yi Nāṣirī*.

² In Scully's list of Turki birds the Grey Shrike *Lanius Homeyeri* is given as آلا غرالی *ālā ghurālā, i*; and the Desert Shrike *Lanius arena-ius* as بوظ غرالی *boz ghurālā, i*.

Skin, to, کھلایانا *khaliyānā* or کھال اتارنا *khāl utārṇā*, Hindu. (of any bird or animal) : خیکي کردن *khīkī kardan*, Mod. Pers. (to skin a bird, etc., so that the skin forms a bag) : پوست کردن *pūst kardan*, Pers. (to flay).

Slice,¹ to, Slicing, [to cast the mutes a long way behind when muting]; *vide* Mutes.

Slight-falcon, [the Peregrine].

Slime, to, Sliming (*vide* Latham) [muting directly downwards instead of "slicing" or jerking the mutes backwards; while muting in drops is "dropping"; *vide* Mutes].

Slip, to, a grey-hound, تازی کشیدن *tāzī kashīdan*, Mod. Pers.

Sloose, (sloes), [*vide* Harting's *Bib. Accip.*, p. 229].

Slow, پرست *sust-par*, Panj. and Ind. Pers. MS., (of birds) : کند *kund*, Mod. Pers.

Smew, *babilnazat*, in Chach Hazara.

Snake, سانپ *sānp*, Hindu.; دھامن *dhāman*, Hindī (a large species of harmless snake) : مار *mār*, Pers.

Snake-headed, مار سر *mār-sar*, Ind. Pers. MS.; *vide* also Flat-headed.

Snare, دام *dām*, Hindu and Pers. (gen.) : پادام or پادام *pā-dām* or *pā,edam*, Hindu. and Panj. (nooses, sp. on sticks, to snare birds by the legs) : پھائی *phā,ī*, Hindu. and Panj. (noose, gen.): وال پنجری *wāl-pinjri* or بال چھتری *bāl-chhatrī*, Hindu. and Panj. (ribs of bamboo shaped like the top of a small open umbrella covered with a net and horse-hair nooses are affixed to the ribs: for insect-eating birds a mole-cricket is tethered to a peg and for small hawks a live sparrow): *vide* Net : چوگڈی *chau-gaddī*, Hindu. and Panj. (four thin strips of bamboo, limed, and bent in a curve, and placed crossways with their ends in the ground; the bait is tethered underneath).

Snared, دامی *dāmī*, Hindu. and Panj. (of hawks, etc.): توری *tūrī*, Mod. Pers. (*lit.* netted).

Snarer, پادامی *pā-dāmī*, Hindu. (*vide* Snare) : دامدار *dāmdār*, Ind. Pers. MS.; *vide* Bird-catcher.

Sneezewort, نک چھکنی *nāk-chhiknī*, Hindī. and کندش *kundush*, Ar. and Mod. Pers.

¹ Of short-winged hawk only? *Vide* mutes.

Snide, or Snite, the beak, (to wipe the beak after feeding), *vide* Feake.

Snipe, چاهما *chāhā*, Hindu. : نك دراز *nuk-darāz*, Mod. Pers.

Snite, or Snyte, [a snipe], *vide* Walk and Wisp.

Snow-cock, کبک دري *kabk-i darrī*, Mod. Pers. (*Tetraogallus Caspicus*): رام چکور *rām chakor*, in Kashmir (the Himalayan Snow-cock).

Snurt, (cold in the head), سر گرفته شدن *sar girifta shudan*, Ind. Pers. MS. (an ordinary cold in the head, but *vide* Rye).

Soarer, دورچي *dawr-chī*, Mod. Pers.

Soar-hawk, *vide* Sore-hawk.

Soar, to, دور کردن و پرسیه زدن *dawr kardan*, Mod. Pers. ; *dawr kardan va parsa zadan*, Mod. Pers. : *vide* also Ring.

Sock, کوچي *kūchī*, Panj. (for any bird; *vide* Mail); گددي *gaddī* (the strait-waistcoat of a sparrow-hawk, used in early training).

Soda, بوره ارمذي *būra-yir Amanī*, Mod. Pers. (crude carbonate of soda).

Sorage, (the first year of a hawk, whether eyess or brancher or passage-hawk): چوزگي or چوزي *chūzī* or *chūzagī*, Hindu. and Panj. (*lit.* chickenhood): بوزي و بوزيگري *buzīru yūrīgarī*, Mod. Pers.

Sore, Sorde, or Sute [a flock of mallards].

Sore-hawk, and Soar-hawk, چوز *chūz*, Hindu. and Panj. (a hawk in the immature plumage): بوز بوز *būzyūr* or بوز *buz*, P., T. (*ditto*): فرخ *farkh*, Ar., افراخ *afrākh* pl. (also nestling).

Souse, (blow, stoop) [If youre hawke nym the fowle a lofte: ye shall say she toke it at the mount or at the souse.—*Boke of St. A.*, p. 48. Halliwell has “ ‘ Dead as a fowle at souse ’ . . . — Beaumont and Fletcher VII, 278. ‘ To leape or seaze greedily upon, to souze downe as a hawke.’ Florio, p. 48, Ed. 1611.” Harting in his *Birds of Shakespeare*, pp. 38-9, gives the derivation of this old falconry term, and also a quotation from *King John*, Act V, Sc. 2].

Sparrow, چڑي *chīrī*, Hindu. and Panj. : گنجشک *gunjishk*, Pers., *vide* Ost; [*Sparrowfart*, break of day].

Sparrow-hawk,¹ باشه *bāsha* (female) and باشين *bāshīn* (male), Hindu. and Panj., (the Common Sparrow-hawk); باشه *bāsha*,

¹ A spare hawke was ‘ an hawke for a prest.’ while the Muskyet was for a holiwater clerke.

Mod. Pers. and قرغی *qirghī*, T., P. (ditto); الباشق *al-bāshiq*, Ar. MS. (ditto); العقصي *al-'aqṣī*, Ar. MSS. (male sparrow hawk); شكرة *shikra* (female) and چپک or چپخ *chipakh*¹ (male), Hindu. and Panj. (the Indian Sparrow-hawk *Micrastur badius*): پيقو or پيغو *pīqū* or *pīghū*, T., P., (ditto): من *mann*, Ar. (?) (by the Yemen Arabs in Haiderabad, Deccan): بيسرا *besrā*, female and دھوتی *dhotī* male, Hindu. (*Accipiter virgatus*): 'vide' Goshawk.

Sperviter, (keeper of sparrow-hawks and muskets: vide *Boke of St. A.*, p. 24), vide Ostringer.

Spleen, تلي *tillī*, Hindu.: سپرز *súpurz*, Ind. Pers. MS.; طحال *tuhāl*, Ar.

Spoonbill, بڑا چمچہ *chamcha buza*, Hindu. and Panj.

Sportsman, vide Falconer and Bird-catcher.

Spouting, (blowing water over; vide Latham B. I, Part II, Chapt. I., p. 1): پھوارا کرنا *phū,ārā karnā*, Panj.: بھ کرنا *baf karnā*, vulg., Hindu.: با دھن بھ نرم کردن *ba-dahan-baf narm kardan*, Ind. Pers. MS.: پھوئی کرنا *phū,ē karna*, Hindu. (a cocking term).

Sprain, گھٹی *ghatī*, موج *moch* f., لچک *lachak* f. Hindu.: رگ برگ شدن *rag bi-rag shudan*, Mod. Pers.

Spring,² to, (flush the quarry) tr. and intr., vide Flush and View.

Spring s., [A Sprynge of Telis].

Stale, (a stuffed bird as a decoy), vide Decoy.

Stalk, to, (an animal) سیدہ کردن *sība kardan*, Mod. Pers. and T.: گورگ شکار کردن *gurg shikār kardan*, Mod. Pers.: بدزده رفتن *bi-duzda raftan*, Mod. Pers., vide Secretly.

Stalke, نالی *nalī* Panj.: پاچه *pācha*, Ind. Pers. MS.: قلم *qalam*, Mod. Pers.: ساق *sāq*, Mod. Pers. (also leg).

Stalking-horse, شکاری بیل *shikārī bail*, Panj. (a bullock trained for use as a stalking horse): دریدہ *darīṣah*, Ar. (a camel or any animal used for stalking).

Standing, (remaining in idleness at the block), بیتھی ہے *baithī hai*, Hindu.

¹ Indian poets and consequently lexicographers have incorrectly made *chipak* feminine.

² Can this term have been confined to water-fowl?

- Stand, taking, (going to a tree or other point of vantage after putting in; by Eur. falconers considered a vice), *vide* Mark.
- Staniel, or Stanniel,¹ [Kestrel q.v.].
- Stare, *vide* Starling.
- Starling, سار *sār*, Mod. Pers. : ابلق مینده *ablaq maina*, Hindu. (the Pied Starling): کالای نلیا *kālā tiliyā*, in Derajat (the Common English Starling): *vide* Pastor and Murmuration.
- Stavesaker, (a plant used for lice), حب الراسن *ḥabbu 'r-rāsan* or زبیب الجبل *zabīb^u-l-jabal*, Ar.
- Steam, to, بخور کردن *bukhūr kardan*, med., Mod. Pers.
- Sternchase, در جلو انداخته عقب رفتن *dar-jalav andākhta 'aqab raftan*, Mod. Pers. (of a saker after a straight flying hubara = Panjabi idiom تلور چرغ کولے گئی *tilur chargh ko legā, ī* “the hubara has carried off the *chargh*”).
- Sternum, عظم زورقی *azm-i zawraqī*, Mod. Pers. (*lit.* keel-bone).
- Stomach, تہہ *tah*, Panj. : تہہ شکم *tah-i shikam*, Mod. Pers. ; معدة *ma'da*, Mod. Pers. ; بیقر (?), Ind. Pers. MS. : خزینہ *khazīna* or *khazāna*, Mod. Pers. ; *vide* Colon.
- Stone-plover, *vide* Plover.
- Stoon, the, or Stoone in the fundament, کرج *karaj*, Mod. Pers.
- Stoop, ست مارنا *saṭ mārna*, Panj. : حملہ کردن *ḥamla kardan*, Ind. Pers. MS. : سر زدن *sar zadan*, Mod. Pers. : لکد زدن *lakad zadan*, Mod. Pers. (*lit.* to kick, strike): انقض *inqazza*, Ar. MS. (of birds of prey only).
- Stork, لگ لگ *lag lag*, Hind. and Pers., for Ar. لق لق *laq laq*: حاجی لق لق Mod. Pers. (the White Stork, *C. alba*): مکسد (?), Ind. Pers. MS. (some species of stork; probably the Beefsteak bird): مانک جور *mānik jor*, Hindu. (the White-necked Stork): تُول *tūl*, in Kapurthala (the White Stork).
- Strap, تسمہ *tasma*: *vide* also Jesses.
- Streyn,² or strain, to, [“The IX. She streynith and not clithith nor cratchith.”—*Boke of St. A.*, p. 10. ‘I strayne, as a hauke doth or any other syche like fowle or beest in theyr clawes, je estrayns’; Palsgrave, 1530, verb. f. 376.—*Halliwel.*]

¹ According to Harting, *Birds of Shakespeare*, p. 73, this is a corruption of Standgale.

² Strene and strain also meant to copulate; specially of cats and dogs. “When he *strains* that lady.” *Shakespeare*; *Hen. VIII*, iv. 1.

Strike the hood, (to open the braces, previous to removing the hood). [Indian hoods have no braces.]

Stripes, *محرّمات* *muḥarramāt*, Mod. Pers. and Ar.

Stroke, to, *vide* Handle.

Succour, (help with a dog)————.

Sugar-candy, *كوزة مصري* *kūza-miṣrī* and *سنگري مصري* *sangarī* (for *sanjarī*) *miṣrī*, Panj.

Summed, *vide* Full-summed.

Sun-bird, *شکر خوره* *shakar-khura*, Ind. Pers. MS.

Sun, to, *vide* to Weather.

Sunstroke, *جهولا* *jholā*, Hindī, and *باد پشت* *bād-i pusht*, Ind. Pers. MS.

Sute, *vide* Sorde.

Swallow, *ابابیل* *abābīl*, Hindu. and Ind. Pers. MS.: *فراشقروک* *farāsh-turūk*, Ind. Pers. MS. (a swift? for *فراشقروک* *farashtūk*?): *vide* Flight.

Swan, *غو* or *قو* *qū* or *ghū*, T., P.; *vide* also Herd.

Swell, *باد کردن* *bād kardan*, Mod. Pers. (said of an houbara when it spies the hawk); *عسد براق شدن* *burrāq shudan*, Mod. Pers. (ditto; *burrāq* is *lit.* the long-haired Persian cat).

Swift, *vide* Swallow.

Swivel, *بهونر کلي* *bhanwar kalī*, Hindu.: *میدور* *midwar*, Ar. MS.

Swollen feet, *vide* Pinne in the feet, and Podagre; *تخمه* *tukhma*, and *بذوله* *banaulā*, Hindī (some kind of swelling on the feet or legs, *vide* *Qawānīn*^u 's-*Ṣayyād*, p. xxix).

T

Tabur, or Tabur-stick, *vide* View.

Tail, (*vide* Deck feathers, Beam feathers and 'Train'), *پونچھ* *pūnchh*, Hind.; *دم* *dum*, Hind. and Pers. (also a tail-feather): *دم لگور* *lagar-dum*, adj., Hind., ("tailed like a Lugger Falcon." *i.e.*, with the two centre tail-feathers void of any spot or marking); *مطلق العمود* *mutlaq^u 'l-'umūd*, adj., Ar., (ditto): *ردافی* *rudāfa*, Ar. pl. of *ردیف* *radīf* (the two outer tail-feathers, one on each side); *ماصح ردافی* *māsiḥ rudāfa*, Ar. (when the two outer tail-feathers are void of markings): *vide* Deck-feathers and Pope's nose.

- Tail-cover, *دومچي dumchī* and *پوچھل pūchhal*, Panj. (the tail cover of cloth to protect the tail of a sparrow-hawk in training).
- Taint, upon the feathers, *vide* Hunger-trace.
- Take, to, *دست رو گرفتن dast-raw giriftan*, Mod. Pers. (of a hawk; to take straight away at the first dash); *vide* also Bolt, fly at, and Cast off.
- Take the air, (to mount, said of the quarry), *چرھائي کرنا charhā,ī karnā* (to mount) Hind. ; *vide* Ring.
- Taking stand, *vide* Stand.
- Tallent, or ¹ Talons, (or hind claws), *قلاب qullāb*, Mod. Pers.
- Tame, adj., *آرام و امین ārām u amīn* (tame, *i.e.*, fearless; of gazelle, cranes, etc., in a *wild* state).
- Tame, to, *پالنا* Hindu. (to rear from the nest, or to keep in captivity or domesticity): *سدھانا sadhānā* Hindu. (to make tame): *رام کردن rām kardan*, Ind. Pers. MS. and Mod. Pers.: *مانوس کردن mānūs kardan*, or *اهلي ساختن ahlī sākhtan*, Mod. Pers. ; *vide* Man.
- Tame, Tamed, *سودھا sūdhā* (naturally tame) and *سدھا sadhā hū,ā* (tamed): *ھلیک helak*, Panj., = *ھلا hilā hū,ā*, Hindu : *اهلي ahlī*, Pers.
- Tarsus, *vide* Stalke.
- Tassel, (Shak); Tarsell (Bert), *vide* Tiercel.
- Taste, *چکھہ chakh*, subs., Panj.: *چکھہ دینا chakh denā*, (to give a taste, give a beakful of meat), *vide* also 'Feed.'
- Teal, *جلوگا jalūkā* (in Chach Hazara); *vide* Spring.
- Tender, *سیاک* Ind. Pers. MS. : *چائیدہ chā,īda*, Mod. Pers.
- Tender-penned, (with the quills still in blood), *vide* Hard-penned.
- Tendon, *رگ پا rag-i pā* (tendon of the foot): *عصب 'aṣab*, pl. *اعصاب 'āṣāb*, Ar. : *vide* Sinew.
- Teneur,² (the third hawk or grappler cast off at a heron; 'vide' *Tombisseur*).
- Tern, *کرو krū*, in Kashmir (the Small Marsh Tern): *کرنائی karnā,ī*, in Derajat (a tern).

¹ Bert (p. 69, Harting's Edition) uses "hinder tallent" in speaking of a goshawk, but Mitchell in his "Art and Practice of Hawking" (p. 20) remarks that talon is proper for the claws of a long-winged hawk only.

² *Vide* Burton's "Falconry in the Valley of the Indus," p. 61, note. Indians do not fly a 'cast' (except such natives as have served Europeans) much less three hawks together.

Tewell, *تہ تہ* *tah*.

Teyne, [a disease in which a hawk pants much, 'vide' *Boke of St. A.*, p. 26].

Thief, [Understonde ye that a Goshawke shulde not flie to any fowle of the Ryuer with bellis in no wise, and therfore a Goshawke is calde a thefe.—*Boke of St. Albans*, p. 49].

Thigh, *ران* *rān*, Hindu. and Pers. : *شلوار* *shalwār*, Panj. and Ind. Pers. MS. (*lit.* loose Panjabi trousers, peg-top shape; the term is also applied to the feathered thighs of hawks and by horse-dealers to the thighs of horses; *vide* also Pendant feathers).

Throat, *مذبحه* *mazbaḥa*, Mod. Pers. (*lit.*, the place of cutting the throat).

Throw, to, *vide* Cast.

Thrush, *mālā-gīr*, in Kashmir (the name of a species of song thrush, probably the Dusky Ground Thrush). *Vide* Black-bird.

Tiercel, Tercel, *نر* *nar*, Hindu. (male) : *جره* and *باز جره* *jurra* and *jurra bāz*, Hindn., (the male goshawk *q. v.*); other tiercels are in Hindūstānī and Panjābī distinguished by special names, *vide* under Falcon and Hawk) : *جره قوش* *jurra-yi qūsh*, Mod. Pers. (male of a bird of prey; *جره* *jurra* in Mod. Pers. is opposed to *توار* *tuvār* falcon) : *الزرق* *az-zurraq*, Ar. MS.

Tiger, *شير* *sher* in India and *ببر* *babar* in Persia : *vide* also Lion.

Timber, to, (to build a nest), *vide* Draw.

Tire, (to pull at a tough piece of a bone and so strengthen the muscles of the back and neck), *vide* Tiring.

Tiring; [It is not an Eastern custom to give tiring].

Titengis, [a Titengis of Pies.—*Boke of St. Albans*, the Company's of beestys and fowlis, p. 81].

Tobacco, *توباكو* *tambākū* (the leaf), Hindu. and Pers. : *تتن* *tutun*, Mod. Pers. (cigarette tobacco, from Syria).

Toll, to fly at the, *vide* View.

Tombisseur, Fr., [the second hawk cast off at a heron, the first being called 'housse-pié'; 'vide' *Teneur* and note].

Tone, (of bells), *vide* Bells.

Tongue, to (when feeding), *بچکار دینا* *buchkār denā*, Panj. and *بچ بچ کردن* *buch buch kardan*, Ind. Pers. MS. : [an Indian falconer 'tongues' or makes a kissing sound with the lips when feeding a newly caught hawk with seeled eyes, and the

hawk quickly learns to lower the head and feed, on hearing the sound].

Touchwood, *قو* *qū*, T. ; and *قاو* *qāv* (in Baghdad).

Tower,¹ to, *vide* Ring-up.

Toye, (whim trick).

Train, subs., *vide* Tail and Balai.

Train, subs., *باولي* *bā,olī*, Hindu. (any bagged bird given to a new hawk to enter it ; also any ' train ' given to a greyhound, a lynx, a cheetah, etc.) : *بولي* or *باولي* *būlī* or *bāvlī*, Mod. Pers. (ditto) : *بيخ بند* *mīkh-band*, adj., Mod. Pers., (when tied to a peg) ; *دست پر* *dast-par*, Mod. Pers., (a bird released by hand for a hawk) : *مرج* and *دکل* *marj* and *dakl*, Mod. Pers (' train ' of a gazelle) : *دستی* *dastī*, adj. Mod. Pers. (given by hand) : *باش قنات دادن* *bāsh qanāt dādan*, T. and Mod. Pers. (to give a ' train ' of a large bird right into the hand of a hawk) : *پرانیدن* *parānīdan*, tr. (*lit.* " to cause to fly " = showing a hawk a ' train ' in the hand and then letting it fly) ; *رها کردن* *rihā kardan*, tr., to release, (gen. = letting a ' train ' fly and then unhooding the hawk at it).

Train, to, *رسیدن* *rasīdan*, intr., and *رسانیدن* *rasānīdan*, tr., Mod. Pers., (to train a hawk) ; *سوغان کردن* *sawghān kardan*, Mod. Pers. (to train a horse for a race) ; *أضري* *azrā*. Ar. MS. (to train wild animals) ; *ادب* *adabb^a*, Ar. MS. (ditto).

Train-bound, *باولي خور* or *باولي بند* *bā^olī-band* or *bā^olī-khur*, adj., Hindu., and *باولي شناس* *bā^olī shinās*, adj., Ind. Pers. MS., (said of a cunning hawk that will only fly at bagged birds ; of one that is ruined by having been given too many ' trains ').

Trained, *چرخ شناس* *charkh shinās*, adj., Ind. Pers. MS. and Mod. Pers., (said of a grey-hound trained for the flight at gazelle) : *قوش شناس* *qūsh-shinās*, Mod. Pers. (ditto).

Trap, *کترکي* *kurkī*, Panj., and *کینچیا* *kaiñchiyā*, Hindu. (a gin) : *تله* *tala*, Mod. Pers. : *مصيده* *mişyadah*, Ar. (any trap) : *vide* Gin.

¹ Apparently " to tower " also meant to wait on in a circle at a height.

Treading, *vide* Cawking.

Trip, [a Trippe (flock) of haaris].

Truant, گویزیا *gurīz-pā*, adj., Mod. Pers., ("truant"; said of a hawk that is always getting lost).

Truss, [Fr. *trousser*, to clutch the quarry in the air instead of striking it to the ground.—*Harting*. *Trussing* is when a hawk raiseth a fowl aloft and so descendeth down with it to the ground.—*Latham*]. *Vide* Bind.

Trusty, امین *amīn*, Mod. Pers., (quiet, trusty; of a dog).

Tube, نائزه *nā'iza*, Ind. Pers. MS. and نلکی *nalkī*, Panj. (*lit.* a reed or pipe, generally the shank-bone of a crane, used to administer water to a hawk after purging).

Tubercle, (of nostril), تکمه or دگمه or دکمه *tukma* or *dugma* or *dukma*, T. and Mod. Pers. (*lit.*, button).

Turtle, *vide* Duell and Flight.

Turumtī, *vide* Merlin.

Turning-tail ———.

Tweezers, *vide* Pincers.

Tyrrit, *vide* Swivel.

U

Uneven, ماهور *māhūr*, Mod. Pers. (uneven ground, difficult to gallop over).

Unkindness, [An unkyndenes of Rauenes.—*Boke of St. Albans*, p. 81].

Unmanned, (not accustomed to man), *vide* infra.

Unreclaimed, (wild; untrained) جنگلی *janglī*, Hindu. and Panj.; وحشی *wahshī*, Hindu. and Pers.

Unseel, to, (the eyes), آنکھ کھولنا *āñkh kholnā*, Hindu.; چشم کشادن *chashm kushādan*, Ind. Pers. MS.: کافور دیکر آنکھ کھولنا *mushk kāfūr de-kar āñkh kholnā*, Hindu., (to unseel while the hawk is intoxicated by camphor): چشم کشادن بطریق کیف *chashm kushādan bi-tarīq-i kayf*, Ind. Pers. MS. (ditto).

Unstrike the hood, [apparently the same as strike *q. v.*].

Unsummed, (with incomplete plumage; the opposite of summed *q. v.*), صاف نہیں *ṣāf nahīn*, or پر باقی ہیں *par bāqī haiñ*, Hindu.: پر کچھ سے ہیں *par kachche haiñ* (ditto).

Up wind, بالا باد *bālā-bād*, Mod. Pers.; سینه قوش را بباد دادن *sīnā-yi qūsh rā bi-bād dādan*, Mod. Pers. (to fly a hawk up-wind).

Urchin, (hedgehog), *vide* Hedgehog.

Urines, دو گزۀ *du-gaza*, Hindu. and Panj., (a small hawk-catching net suspended between two light upright bamboos something after the manner of a tennis-net; a live bait is pegged down in the centre, on the far side of a wild sitting hawk); دو گزۀ قرقي گيري *du-gaza-yi, qirqi-giri*, Mod. Pers. (a 'do-gaza' for catching sparrow-hawks): *vide* Net.

V

Varvels, (small flat rings, with owner's name engraved, attached to jesses): چھلا *chhallā*, Hindu. (ordinary rings are used).

Vent, بن *bun*, Ind Pers. MS.; صفرة *ṣufrah*, Ar.; سفرة *sufra* Hindu. and Pers. MS.; مقعد *maq'ad*, Ar., and Mod. Pers.: مذرق *mazraq*, Ar. MS. (of birds only).

Verds, [A greenish colour; applied to the feet, etc., of hawks; *vide* Harting's *Hints on Hawks*, p. 128, 2nd Ed.].

Vertigo, سرگشتن *sar-gashtan* (*vide* *Qawānīn*^u 'ε-*Sayyad* and Bert I, p. 85).

View,¹ to fly to the; [A Goshawke or a tercell that shall flee to the vew. to the toll or to the beke. in this maner she is taught ye must fynde a fowle in the Reuer or in a pitte preueli. and then fete youre hawke a grete space of. uppon a mooll hill or on the grounde. and crepe softeli towarde the fowle: from youre hawke streight way and when ye come almost ther as the fowle lyeth. looke backwarde towarde the hawke. and with youre hande or with youre tabur styke: becke youre hawke to come to you. and when she is on wyng. and comyth low bi the grounde. and is almost at you. then symte your tabur. and cry huff. huff. huff and make the fowle to spring. and with that noyse the fowle will rise and the hawke will nym it.—*Boke of St. Albans*, p. 48].

Vulture, کل مرغ *kal-murgh* and سفید هل *safed hil*, in the Panjab, and سونجرا *sūnjrā*, in the Derajat (the White Scavenger or Egyptian Vulture): کچل چرکس *kachal-charkas*. Mod. Pers. (ditto); گده *gidh*, Hindu. and دال *dāl* or مردار خوار *dāl-i murdar-khur* or لاش خور *lāsh-khur* Mod. Pers. (gen.); النسر *an-nasr*, Ar. MS.; رخمه *rakhmah*, Ar. MS. (the Egyptian vulture).

1 "That is to say she flieth to the vew or to the beke, or to the toll."

W

- Wagtail, *صعوه sa'wa*, Pers. (possibly in Turki this means a sparrow): *کھنجنر khanjan*, in Bengal (the Large Pied Wagtail): *دھوبن dhobin*, Hindi, "washerwoman" (the White-faced Wagtail); *مولا* or *مولا شیخ mamolā* or *Shaykh Mamolā* in Derajat (one of the two previous species, probably the last): *چوک chūk* in the Derajat (the Grey and Yellow Wagtail).
- Wait on, or Hang on, *پرواز کرنا parwāz karnā*, Panj.; *بالا گرد کردن bālā-gard kardan*, Ind. Pers. MS.; *ایستاده کردن istāda kardan*, Ind. Pers. MS.
- Waiting on, *پردازی parwāzī*, adj., Panj., and Ind. Pers. MS.; *دوری dūrī*, adj., Ind. Pers. MS.:
- Walk (flock), [walk of Snytis *i.e.*, snipes].
- Warbile, Warbel, and Warble (to make the wings meet over the back), *قینچی رکھے بیدھنا qaiñchī rakhe baithnā* (to return the wings to the normal position after manteling and warbeling; *vide* Mantel).
- Warbler, *تسک tisk*, Mod. Pers., (a small bird, the quarry for a shrike): *تونسک* and *برادر بلبل tarnusk* and *barādar-i bulbul*, Mod. Pers. (a warbler, possibly the same as *tisk*): *پودنا podnā*, Hindi. (a Reed-Warbler): *کور کچج korkuch*, in Kashmir (a Reed-Warbler).
- Warning, *چوک chamak*, f., and *دامہ dama*, m., Panj. (the warning cry given by birds on the appearance of a hawk).
- Wart, *مسا masā*, Hindi, and *ثاليل şālil*, Ar.: *صوم* and *زکيل zakil* ('vide' *Qawānīnu's-Sayyād*, p. xxviii).
- Wash, *آب گردانیده آب تازہ انداختن ābgardānīda āb-i tāza andākhtan*, Ind. Pers. MS. (to wash meat or grain in many changes of water):
- Washed or wetted meat, *طعمهٔ آبداره tu'ma-e ābdāra*, Ind. Pers. MS.
- Watch; [A wache of Nyghtingalis].
- Watching, *جگانا jagānā*, tr. Hindu. (to keep awake): *بیداری be-dārī*, subs., Ind. Pers. MS.
- Water-bird, *دکشو* Ind. Pers. MS. (some species of water-bird that is a quarry for hawks).

Water-rail, من من توڑی *man-man-toṛī* (in Chach Hazara).

Weather, to, باہر باندھنا *bāhir bāndhnā*, Hindu. (to tie outside):
بر آفتاب نشستن *bar-i āftāb nishastan*, intr. Mod. Pers. = دم آفتاب
نشستن, vulg. (to sit in the sun). *Vide* Bask. [*Weathering*,
is when you set your Hawk abroad to take the aire, either
by day or night, in the frost, or in the sunne, or at any
other season.—*Latham*.]

Weaver-bird, بیا *bayā*, Hindu.

Web (of feather), *vide* Shaft.

Weevil, گھن *ghun*, Hindī: *vide* Ant.

White, کافوری *kāfūrī*, Mod. Pers. and Ind. MSS. (*lit.* “camphor-
coloured,” *i.e.*, white, a term applied to a certain white
varieties of goshawk, etc.; لازقی *lāziqī* Mod. Pers. and Ind.
MSS. (“white”; derived from رزقی *gul-irāziqī* a species
of jasmine, the *bel phūl* of the Hindus; a term similar to
kāfūrī).

White-ant, *vide* Ant.

White-hawk, [apparently] a hawk after the first moult, when she
is no longer a Red-hawk or a Sore-hawk; *vide* *Latham*,
intermewed].

Widgeon, مورچہ *morcha* (in Chach Hazara).

Wild, صحرائی *ṣahrāī* and دشتی *dashtī*, Mod. Pers.: *vide* also
Flighty.

Wind, *vide* Up-wind.

Wind, sink the, [To skim near the ground to a certain distance
in order to catch the wind and rise up-wind with it; *vide*
Corballis' Forty-Five Years of Sport, pp. 4 and 5].

Wind, to cheat the, (to fly low to the ground to escape the force
of the wind by taking advantage of cover).

Wing, سرتهی *surathī*, Panj.; کُند *kundā*, Panj.; بازو *bāzū*, Hind.,
Pers.; پر *par*, Hindu. and Pers. (also = feather): بال *bāl*, Pers.
(also = flight-feather): دینا *ḍainā*, in Behar).

Wing-tied, *vide* Flight.

Wisp, (of snipe = walk); *vide* Snipe.

Wood-cock, مرغ زیوک *murgh-i zīrak*, Mod. Pers. (*lit.* “the cunning
bird”¹; a Shiraz name for the Wood-cock): نک دراز *nuk-darāz*,

¹ In early English plays a wood-cock is a simpleton.

Mod. Pers. (*lit.* “long-bill”; a vague term); يلوۃ or يلوۃ قوشي *yalva*, or *yalva-qūshī*, T.: ‘*vide*’ Fall.

Wood-pecker, دار کوب *dār-kūb*, Mod. Pers.: کدردۃ *kandara*, Ind. Pers. MS.

Work, to, *vide* Fly.

Worms, کرمۃ جونکي *kirma-jōnkī*, vulg., Hindu and Ind. MS. (worms in the intestines).

Wren, *vide* Herd.

Wrestle, دوچار دو لشمۃ شدن *dūchār u du-lashma shudan*, Mod. Pers. (to have a rough and tumble, as hawk and hubara on ground): *vide* also Clutch and Bind.

Y

Yarak (in hunting condition; of short-winged hawks). [Yarak is a term much used by English falconers in England. Corballis in his *Forty-Five Years of Sport* (pp. 4 and 5), published 1891, states that the bird was introduced by the “late Mr. Barker.” It is probably the Turkish word يرق or يراق *yaraq*, which means simply “ready.”]

Yellow-eyed, *vide* Hawk.

Young, *vide* Sore-hawk.



JULY, 1910.

The Monthly General Meeting of the Society was held on Wednesday, the 6th July, 1910, at 9-15 P.M.

T. H. D. LATOUCHE, Esq., B.A., F.G.S., President, in the chair.

The following members were present :—

Dr. N. Annandale, Mr. J. Coggin Brown, Mr. B. L. Chaudhuri, Babu Durgadas Bhatta, Mr. D. E. Grübl, Mr. H. H. Hayden, Mr. A. M. Heron, Mr. D. Hooper, Dr. Indu Madhab Mullick, Mr. S. N. Kemp, Dr. Satis Chandra Vidyabhusana, Mr. G. H. Tipper and Mr. E. Vredenburgh.

Visitors :—Rev. H. Hosten, S.J., Mr. G. W. V. deRue Philipe, and Rev. M. Vermeire, S.J.

The minutes of the last meeting were read and confirmed.

Forty-three presentations were announced.

The General Secretary reported that Mr. H. G. Fitzgerald had expressed a wish to withdraw from the Society.

The President announced that Dr. E. D. Ross had returned to Calcutta and has taken charge of the duties of Philological Secretary from Lieut.-Colonel D. C. Phillott.

The General Secretary laid on the table an invitation from the International Hygiene Exhibition to be held at Dresden in 1911.

The proposal to designate Honorary Members as Honorary Fellows of the Society, of which intimation has been given by circular to all Resident Members in accordance with Rule 64A, was brought up for discussion.

Circular under Rule 64A of the Society's Rules.

Since the creation of Fellowships in the Society, the proposal to designate Honorary Members as Honorary Fellows of the Society has been made and accepted by the Council.

The Council feel sure that this proposal will meet with the approval of all members of the Society.

The following changes will have to be made in the Rules of the Society :—

In Rule 2, for "The Society shall consist of members of the three following classes," read "*The Society shall consist of Ordinary Members, Honorary Fellows and Associate Members.*"

In Rules 2(b), 13, 15 and 23, for "Honorary Members" read "*Honorary Fellows.*"

In Rule 61, for "Honorary or Associate Members" read "*Honorary Fellows, or Associate Members.*"

The following five gentlemen were balloted for as Ordinary Members:—

Mr. A. W. Botham, I.C.S., Barisal, proposed by Babu Monmohan Chakravarti, seconded by Mr. G. H. Tipper; *Major G. P. Lenox Conyngham, R.E.*, Deputy Superintendent, Survey of India, United Service Club, Calcutta, proposed by Captain E. D. W. Greig, I.M.S., seconded by Major L. Rogers, I.M.S.; *Babu Srikrishna Mahapatra*, Deputy Superintendent of Police, proposed by Babu Rakhal Das Banerji, seconded by Mr. G. H. Tipper; *Mahomad Aziz Mirza*, Honorary Secretary, All-India Muslim League, 9, Banks Road, Lucknow, proposed by Babu Rakhal Das Banerji, seconded by Dr. E. D. Ross and *Lieutenant E. W. Malyon*, 21st Punjabis, proposed by Lieut.-Col. D. C. Phillott, seconded by Mr. G. H. Tipper.

Dr. N. Annandale exhibited on behalf of Mr. B. L. Chaudhuri and himself specimens of two species of Sting-ray from the River Ganges. He said that it had been known for nearly ninety years that two species of ray inhabited the waters of the Ganges far above tidal influence. Hamilton-Buchanan's descriptions, however, of these two fish, which he called *Raja sancar* and *Raja fluviatilis* in his "Gangetic Fishes" (1822), were inadequate for their identifications, and it was only recently that Mr. Chaudhuri's investigations had proved what they really were. *Raja sancar*, as Blyth correctly stated, was specifically identical with the marine species *Hypolophus sephen* and was found breeding in fresh water, while *Raja fluviatilis* was a species of Trygon allied to *T. marginatus* but distinguished by its produced and pointed snout. A full description of this species, a specimen of which had also been taken in the Bay of Bengal by the "Golden Crown," would be published later.

The following papers were read:—

1. *The Poet Maili of Herat.*—By H. BEVERIDGE.
2. *Inscribed Guns from Assam.*—By RAKHAL DAS BANERJI.

These papers will be published in a subsequent number of the Journal.

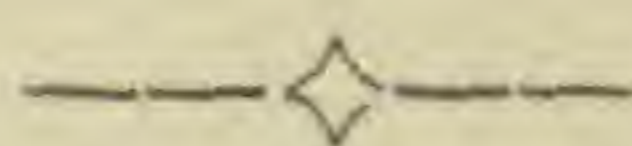
3. *Contributions to the History of the Seven Sixteenth Century Cannon recently discovered in the Dacca District.*—By KHAN BAHADUR SAYID AULAD HOSAIN.

This paper will not be published.

4. *List of Jesuit Missionaries in "Mogor" (1580-1803).*—By REV. H. HOSTEN, S.J. Communicated by the General Secretary.

5. *Yasovijaya Gani.*—By MAHĀMAHOPĀDHYAYA DR. SATIS CHANDRA VIDYABHUSANA.

These papers will be published in a subsequent number of the Journal.



The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Wednesday, the 13th July, 1910, at 9-30 P.M.

LIEUT.-COLONEL F. P. MAYNARD, I.M.S., in the chair.

The following members were present :—

Lieut.-Colonel J. T. Calvert, I.M.S., Dr. H. M. Crake, Dr. C. H. Elmes, Dr. H. Finck, Captain E. D. W. Greig, I.M.S., Dr. W. C. Hossack, Lieut.-Colonel J. Lloyd Jones, I.M.S., Dr. W. W. Kennedy, Captain G. King, I.M.S., Captain J. W. D. Megaw, I.M.S., Lieut.-Colonel A. H. Nott, I.M.S., Dr. J. E. Panioty, Lieut.-Colonel H. W. Pilgrim, I.M.S., Dr. A. W. Robertson, Major L. Rogers, I.M.S., Honorary Secretary.

Visitors :—Assistant Surgeon A. A. E. Baptist, Dr. S. N. Mukerjee, and Dr. S. K. Sen-Gupta.

The minutes of the last meeting were read and confirmed.

Twenty-two presentations were announced.

Clinical cases were shown for Major Stevens of colunar called carcinema of the jaw, and of abdominal hydrocele.

Lieut.-Colonel Maynard showed a case of Kaposi disease.

The discussion on Colonel Pilgrim's paper on the Ipecacuanha treatment of Hepatitis was concluded. Lieut.-Colonels Drury, Calvert, and Nott, Major L. Rogers, Captains Megaw, Greig, and Dr. White Robertson spoke, and Colonel Pilgrim replied.

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31. Note on a Palæolithic Implement made of Manganese-Ore.

By L. LEIGH FERMOR, D.Sc., A.R.S.M., F.G.S., *Assistant Superintendent, Geological Survey of India.*

(With Plate No. XXXI.)

Although I do not profess to be familiar with the literature of chipped-stone implements, or to be, in any way, an authority on the subject, yet I think that the palæolithic implement referred to on page 713 of my Memoir on the Manganese-ore Deposits of India, is of such interest on account of the material of which it is composed, that it is worthy of description.

It was picked up by Mr. C. E. Low of the Central Provinces Commission on the surface of the ground near Budbuda in the Balaghat district, Central Provinces, and presented by him to the Geological Survey of India (22·151).

The chief interest of the specimen lies in the material out of which it has been fashioned, *viz.*, manganese-ore. The actual mineral character of the specimen is revealed by a fracture of much younger date than the patina on the specimen. This fracture is the cause of the big bay in the middle of the left side of the specimen as shown in Fig. 1 of Plate XXXI. This fracture shows that the implement has been made from a piece of the fine-grained manganese-ore composed of an intimate mixture of braunite and psilomelane so characteristic of the manganese-ore deposits of the Central Provinces. It is the type of ore of which a photomicrograph is given on Plate I, facing page 54 of the Memoir already cited. The specific gravity of the specimen is 4·430; this agrees with the composition mentioned above.

The specimen, which is illustrated by the two figures on Plate XXXI, is 3·4 inches long. It is of palæolithic type, and seems to belong to the division of the river-drift implements designated by Sir John Evans¹ as the 'sharp-rimmed implements.'

Its general shape can be seen from the illustration,² and, perhaps, is best described as ovate-lanceolate.

The implement is not the same on the two faces: one face

¹ "The Ancient Stone Implements, Weapons, and Ornaments of Great Britain." 2nd edition (revised); p. 646 (1897).

² For the preparation of the process block, each figure of the implement was cut out along its boundary from the print and mounted; and, consequently, the edges, as represented in the plate, are not quite as angular as is really the case.

—that shown in Fig. 1—has been fashioned by chipping, as can be seen from the figure. But since it was chipped, the whole surface has become semi-polished, owing, probably, to the corrosive action of surface waters rounding by solution the sharp edges between the original subconchoidal fractures.

The specimen shows, however, three fractures that are probably of very recent age; they might almost have been made by the finder before he realised the character of the specimen. One of these (A) is at the tip, and is the cause of the light-grey area on the left side of the tip, as seen in Fig. 1; and the other two are on the left side of the implement, as viewed in Fig. 1, one of the fractures (B) forming the bay already referred to, and the other fracture (C) being situated below the one just mentioned.

The reverse side of the implement, which I have not figured, seems very much rougher: its shape may, perhaps, be partly due to chipping, but it seems almost possible that it is an original surface; in this case, the implement must have been chipped from one of the boulders of manganese-ore so common in the talus deposits lying at the foot of many of the bedded manganese-ore deposits of the Central Provinces.

On referring to the illustration, it will be seen that the specimen, as seen in Fig. 1, is not symmetrical: a portion at the lower right-hand corner is missing. I cannot be certain, from the character of the fracture here, whether this fracture is a portion of the original surface of the boulder from which, I have supposed, the specimen was prepared, or whether it is a fracture made during the course of the preparation of the implement, or shortly subsequent. It cannot, in any case, be a recent fracture, for it shows as much patina as the presumed outer surface of the boulder.

From Fig. 2 it will be seen that the butt end of the implement has also been trimmed to an edge, so that the implement comes under the section of sharp-rimmed implements, as noticed above. On comparing my implement with those figured by Sir John Evans in the book already mentioned, I find that it is most like that shown in Fig. 475 from Boscombe near Bournemouth. The similarity does not lie merely in the imperfection of both specimens at the lower right-hand corner, but also in the shape, as seen in front view, on edge, and in cross section. One point of difference, however, should be noticed in this comparison, *viz.*, that the Boscombe specimen is twice as long as my specimen, although the figures are the same size.

Although palæolithic implements have been found made of many rocks and minerals in different parts of the world, yet I am not aware that an implement made of manganese-ore has ever previously been described. In any given area the ancient inhabitants seemed to have chosen as fine-grained a rock as

could be obtained for the fashioning of their implements of stone, and in India fine-grained quartzites, trap-rocks, and various forms of agate and chalcedony seemed to be the favourite materials; and some of these, *viz.*, agate and chalcedony, are to be obtained in the very area where the implement here described was found, not *in situ*, of course, but in the form of pebbles in rivers draining down from the Satpura Hills, which are composed of the Deccan Trap basalts. But the material used for the implement here described has, also, a very fine-grained texture, and manganese-ore of this character tends to break, when hand specimens of it are prepared, with a conchoidal fracture. It is not unlikely also that the high specific gravity of the material may have imparted special value to an implement fashioned therefrom as compared with an implement made of a lighter stone. Up till the present, this is the only specimen made of manganese-ore that has been found, but I hope that district officers working in the districts of Nagpur, Chhindwara, Bhandara, and Balaghat in the Central Provinces, where ore of this type is found, may, in the future, discover other specimens of manganese-ore implements once they know of their existence. Although I know of no other record of an implement made of manganese-ore, yet Mr. V. Ball¹ has recorded the receipt from Mr. W. G. Olpherts of an implement made of magnetic iron-ore and found somewhere in the Narbada valley.

¹ *Pro. As. Soc. Beng.*, 1881, p. 120.

32. Chemical Examination of Aurvedic Metallic Preparations.

PART I.—“ SHATA-PUTA LAUHA AND SHAHASHRA-PUTA LAUHA ” (IRON ROASTED A HUNDRED AND A THOUSAND TIMES).

By PUNCHANAN NEOGY, M.A., *Professor, Rajshahi College,*
and BIRENDRA BHUSAN ADHIKARY, M.A.

The Aurvedic system of medicine has enjoined from a very early age the use of metallic preparations. The method of preparation in many cases, however, has now become out of date and in some cases appears distinctly faulty according to modern scientific ideas. It has appeared to us a very interesting study to examine chemically these preparations, to identify them, and wherever possible to suggest more improved and modern methods of preparation. In this field Dr. P. C. Rây has done some valuable pioneering work by analysing some metallic preparations and incorporating the results in his *History of Hindu Chemistry, Part I.* Many salts other than those examined by Rây have yet to be analysed, and the present investigation is meant to be the first of a series of its kind.

The principal compounds of iron used by our Aurvedic physicians are “Shata-puta” and “Shahashra-puta” lauha (iron roasted a hundred and a thousand times). From their methods of preparation we suspected them to be oxides of iron, which, however, are not much used by allopathic physicians. In order to study the degree of oxidation in the various “putas” we attempted to collect samples from one “puta” to thousand “putas,” but we have been successful in getting only a few intermediate “putas.”

The method of purification (शोधन) and roasting is given in detail in *Rasendra-shär-Shangraha.*

Method of Preparation as given in Rasendra-shär-Shangraha.

Rasendra-shär-Shangraha first mentions many different varieties of iron. “The Krouncha iron is twice better than ordinary iron, the Kalinga iron eight times better than Krouncha, the Bhadra iron again hundred times better than Kalinga, the Bajra iron a thousand times better than Bhadra, the Pandi iron a hundred times better than Bajra, the Niranga iron ten times better than Pandi, while Kanta iron is a

thousand crore times better than Niranga.”¹ So Kanta iron is the best kind of iron for medical purposes, and should be taken. [For a description of Kanta iron, *vide* Dr. P. C. Rây's History of Hindu Chemistry, Vol. I, page 60.] When the proper kind of iron is selected, it is first finely powdered and then purified (शोधित) by macerating it in a decoction of the “three myrobalans” (त्रिफला). The iron is then again immersed in the same decoction and dried in the sun. This process is to be repeated seven times. This is called “bhānu-pāka-bidhi” (भानुपाक विधि). The iron is next boiled in decoctions of various substances depending on the nature of the disease for which it is to be used. This process is called “sthāli-pāka-bidhi” (स्थाली पाक विधि). The iron thus treated is now washed in clear water and roasted inside two earthenware concave dishes with their mouths placed on each other and luted with mud. This pair of dishes is then put in a pit of suitable dimensions dug in the earth and heated by means of burning cow-dung cakes. This process is called “puta-pāka-bidhi” (पुट पाक विधि).² The iron is thus to be roasted ten, hundred or even thousand times, and it is believed that the greater the number of “putas” iron has been subjected to, its medicinal efficacy increases in a corresponding degree. The alternate maceration and heating make the powder very light, and, in fact, the test prescribed by Rasendra-shār-Shangraha by means of which the proper number of putas is to be judged is the extreme lightness of the powder. “The iron is to be roasted until, being finely powdered and thrown on to water, it will swim on the water like a duck on account of its lightness.”³

¹ सामान्याद्विगुणं कौञ्चं कालिङ्गोष्टगुणस्ततः ।
कलेः शतगुणं भद्रं भद्राद्वचं सहस्रधा ॥
वचात् शतगुणं पान्ति निरङ्गं दशभिर्गुणैः ।
ततः कोटि सहस्रैर्वा कान्त लौहं महागुणं ॥

In another place we have got “किङ्कादशगुणं मुष्टं मुष्टान्तौचं शताधिकं तौचात्लघुगुणं कान्तं etc.,” from which also we learn that Kanta iron is the best kind of iron to be used.

² For a description of a roasting pit see Rây's History, page 70.

³ दशादिशतपर्यन्तं गदे पुटविधिर्मतः
शतादिस्तु सहस्रान्तः पुटो देयो रसायने ।
वाजीकर्मणि विज्ञेयः दशादिशतपञ्चकः ॥
तावदेव पुटेऽलौहं यावच्चूर्णीकृतं जले
निस्तरङ्गे लघुत्वेन समुत्तरति हंसवत् ॥

Methods of Preparation by Modern Aurvedic Physicians.

As most Aurvedic physicians prepare their own medicines, the methods of preparing the same medicine vary considerably. So far as we have been able to collect information, there are three different methods of preparing "lauhas."

(1) Some physicians procure the best kind of iron, heat it in a blacksmith's forge and take the rust formed on the surface of the iron.

(2) Others keep steel immersed in cow's urine for years together and take the rust collected on the surface.

(3) While some are reported to prepare their "lauhas" by repeatedly heating powdered ferrous sulphate (हौराकस). Of course the method given in Rasendra-shär-Shangraha is followed by many orthodox physicians. In the methods Nos. (1) and (2) the rusts obtained are purified in the usual way and then formed into balls with cow's urine or a decoction of the "three myrobalans," dried in the sun and calcined in the pit by means of burning cow-dung cakes in the usual way. The balling, powdering and calcining in an enclosed space are repeated ten, hundred or thousand times.

Experimental.

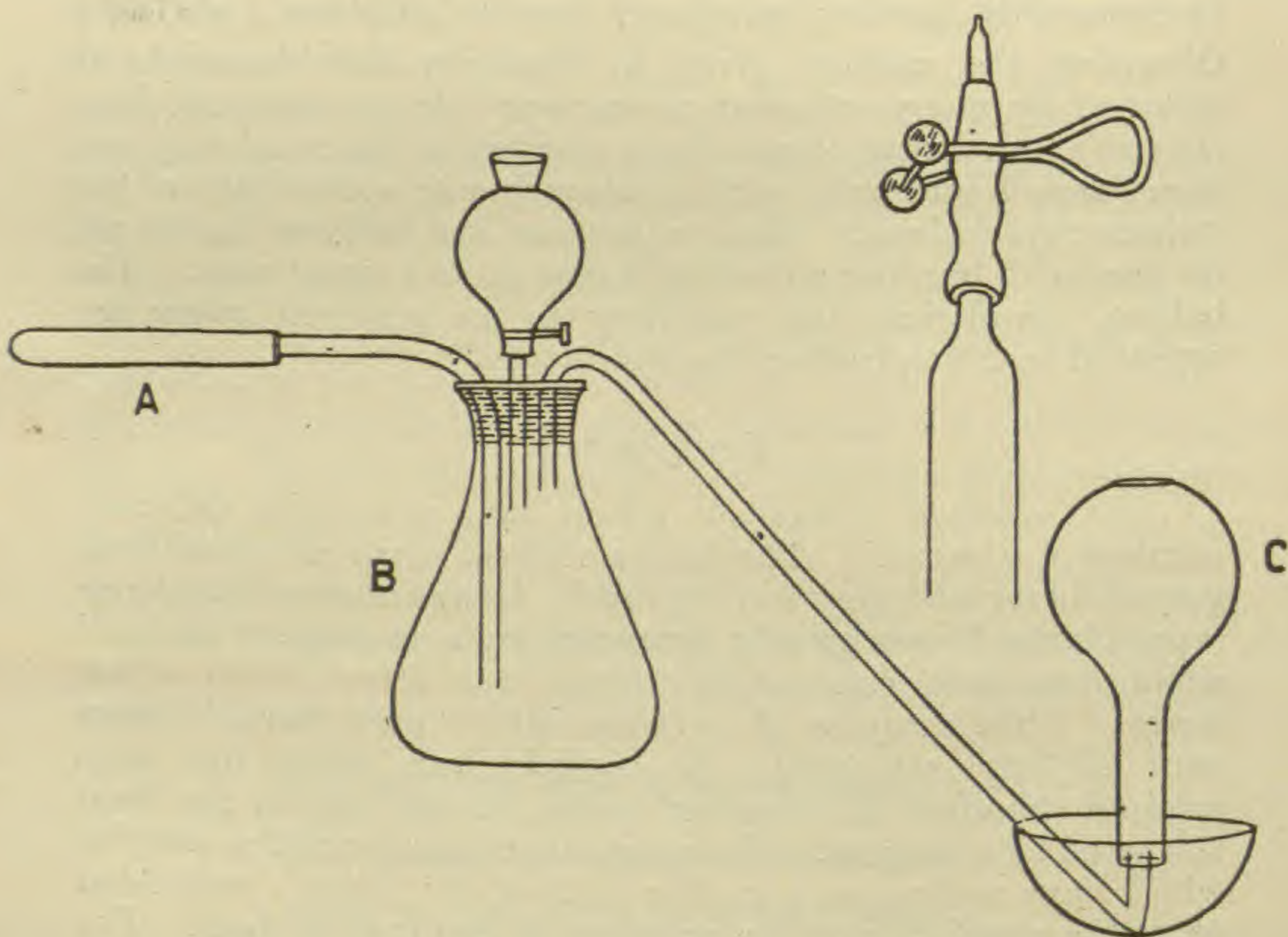
We collected "lauhas" which have undergone different number of "putas." The colour of these samples varied from greyish black and grey to rouge red. It was observed that one "puta lauha" was greatly attracted by a magnet, "lauha" which has been calcined ten times was attracted to a less degree, while samples of seventy-eight "puta lauha" were very slightly attracted. As regards iron which has been calcined hundred or thousand times, it was not in the least attracted by a magnet. The magnetic character of the samples which have undergone a smaller number of "putas" suggested to us the possibility of the presence of free iron in them. The oxides of iron, both ferrous and ferric, were also present. As we were not acquainted with any method by means of which free iron could be quantitatively determined in presence of ferrous and ferric oxides, we tried the following method which was found to be fairly satisfactory:—

Method of estimating Free Iron in the presence of Ferrous and Ferric Salts.

The quantity of iron was determined from the quantity of hydrogen evolved when acted upon by dilute sulphuric acid in an atmosphere of carbon dioxide. The total ferrous iron due to the solution of the iron in sulphuric acid and the quantity of ferrous salt present is determined by titration with

bichromate solution. The difference between the combined ferrous iron and free iron gives the quantity of ferrous iron already present. The ferric iron is then easily estimated by precipitating the total iron with ammonia and subtracting the ferrous and free iron from the total iron thus found.

In order to test how far the hydrogen method of estimating iron is successful quantitatively we carried on some blank experiments using the apparatus sketched below. The carbon dioxide was obtained by heating sodium bicarbonate in the hard glass tube A. The Erlenmeyer flask contains the weighed quantity of pure iron wire and the tap-funnel contains the dilute acid (1:4).



The hydrogen was collected in a 250 c.c. volumetric measuring flask with a long neck over strong caustic potash contained in a basin. In order to test whether all the air has been driven out by carbon dioxide, a long tube with a stop-cock at the upper end was used and the caustic potash was sucked into the tube with the help of a piece of rubber tubing. When no more bubbles collected in the tube, the measuring flask filled with caustic potash solution was substituted for the tube. The acid was then dropped in and the hydrogen evolved is driven out by the carbon dioxide and collected in the flask so long as any bubbles come out. The flask was next transferred to a deep pneumatic trough and the volume of water ascer-

[N.S.]

tained after adjusting water level. The capacity of the flask was measured once for all by filling it with water. The difference between the two volumes of course gives the volume of hydrogen. The following are the results of three blank experiments :—

Wt. of iron wire taken.	Vol. of H. at N.T.P.	Wt. of H. calculated.	Wt. of iron calculated.	Error.
·4485	178·2 c.c.	·016038	·4490	+ ·0005
·4560	181·6 c.c.	·016344	·4576	+ ·0016
·2327	92·8 c.c.	·008352	·2338	+ ·0011

Qualitative and Quantitative Analysis.

Qualitative analysis showed the presence of a small quantity of soluble salt mostly potassium phosphate, siliceous matter and iron. There was no carbon (as we expected), nor any aluminium. The results of quantitative examination are given below. The “one-puta,” “ten-puta” and “seventy-eight puta” “lauhas” are the products of heating the same sample of iron. The “hundred-puta” and “thousand-puta” “lauhas,” both marked (A), are again the oxidation products of another sample of iron. Lastly, the “thousand-puta” “lauha” marked (B) is a different preparation.

“One-puta lauha.”			“Ten-puta lauha.”		
Fe = (5 c.c. H only)	=	·012	Fe ..	=	nil.
FeO ..	=	68·1	FeO ..	=	23·1
Fe ₂ O ₃ ..	=	20·4	Fe ₂ O ₃ ..	=	40·0
Siliceous matter..	=	10·1	Siliceous matter..	=	32·1
Soluble salt (most pot. phos.) ..	=	1·3	Soluble salt ..	=	4·6
		99·912			99·8
“Seventy-eight-puta lauha.”			“Hundred-puta lauha.” (A)		
Fe ..	=	nil.	Fe ..	=	nil.
FeO ..	=	9·5	FeO ..	=	nil.
Fe ₂ O ₃ ..	=	51·2	Fe ₂ O ₃ ..	=	83·9
Siliceous matter..	=	34·1	Siliceous matter..	=	12·7
Soluble salt ..	=	5·4	Soluble salt of which		
			P ₂ O ₅ = ·9	=	3·7
		100·2			100·3

“ Thousand-puta lauha.”			“ Thousand-puta lauha.”		
(A).			(B)		
Fe	..	= nil.	Fe	..	= nil.
FeO	..	= nil.	FeO	..	= nil.
Fe ₂ O ₃	..	= 78·1	Fe ₂ O ₃	..	= 84·6
Siliceous matter..		= 17·9	Siliceous matter..		= 11·3
Soluble salt	..	= 4·1	Soluble salt of which		
			P ₂ O ₅ = 1·2.		= 3·8
		100·1			99·7

Discussion of Results.

From the above it is clear that the magnetic properties of the samples of iron which have undergone fewer number of “ putas ” are not due to free iron, which is present in minute quantities in the “ one-puta ” “ lauha,” but to ferroso-ferric oxides, the ferrous and ferric oxides being present in them in varying proportions.¹ As the number of “ putas ” increases, the amount of ferrous oxide diminishes, and at the hundred “ putas ” and above, the iron is wholly present in the form of ferric oxide. Hence “ hundred-puta ” and “ thousand puta ” “ lauhas ” are not attracted by the magnet.

2. Siliceous matter is present in very large proportions varying from 10·1 to as much as 34·1 per cent. This impurity most probably comes from the unglazed earthenware pots that are used for roasting.

3. “ Shata-puta ” and “ shahasra-puta ” “ lauhas ” have almost identical compositions. Both are impure ferric oxide, the percentage of which varies from 78·1 to 84·6. Both are non-magnetic and “ swim like a duck ” on water. On account of the very large number of “ putas,” in the course of which it undergoes maceration, powdering and roasting for a thousand times, the “ shahasra-puta ” “ lauha ” is lighter and finer than “ shata-puta.” The time taken to prepare these lauhas is very long indeed. If one “ puta ” be finished in one day, the preparation of “ shata-puta ” takes more than three months and that of “ shahasra-puta ” about three years. As the roasting is carried on in closed vessels the oxidation proceeds

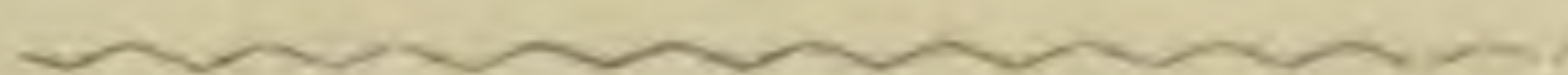
¹ Cf. Roscoe and Schorlemmer's *Treatise on Chemistry*, Vol. II, Part 2, “ Magnetic oxide of iron ” :—“ When iron is heated to redness in the air, it becomes coated with an iron scale. This is a mixture or a compound of the monoxide and sesquioxide in varying proportions. The inner layer which is blackened grey, porous, brittle and attracted by the magnet, has the composition $6\text{FeO} \cdot \text{Fe}_2\text{O}_3$ and is not magnetic. The outer layer contains a large quantity of ferric oxide, is of a reddish colour and is more strongly attracted by the magnet than the inner portion. ”

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very slowly. If, however, open vessels be employed in future, the time may be greatly curtailed.

4. The test of "swimming on water like a duck" is a crucial one with the Aurvedic physicians for "lauhas." We have seen that precipitated ferric oxide of the laboratory does not "swim like a duck." It is probable that Aurvedic "lauhas" being very light and porous are easily assimilated in the body while ordinary ferric oxide being not so light and porous is not easily taken up and hence not used by Allopathic doctors.

Before concluding we have great pleasure in thanking Kabiraj Baroda Kanta Chakrabarty of Rajshahi for placing at our disposal his knowledge of Aurveda.



33. Ladvags rGyalrabs.

The Chronicles of Ladakh, according to Schlagintweit's MS.

Translated by A. H. FRANCKE.

INTRODUCTORY NOTE.

I am presenting to the public an English translation of the first two chapters and the last page of the third chapter of Schlagintweit's 'Die Könige von Tibet.' This translation into English was not made from the German rendering by Schlagintweit. In many cases I had to abandon Schlagintweit's translation altogether and translate afresh from the Tibetan text which Schlagintweit appended to his 'Die Könige von Tibet.'

As is stated by the early Tibetan writers themselves, they made use of several historical books which were then current in Ladakh. The following titles are mentioned :—

- (1) 'aJigsrten gdagspa (in the genealogy of the Sākya);
- (2) rGyalrabs spunpo gsum khug blonpoi rgyal mthsan ;
- (3) gSangba or 'aBru bdus ;
- (4) Dangpo dbang byed rimpai dgu byung.

Of these works, the last mentioned is still known in Ladakh, where it is called *Rim dgu*. This work may possibly come to light again.

It is very probable that some of the early historians of Ladakh or Tibet took Indian Vamśāvalī as their model. The Vamśāvalī of Chamba, for instance, as published by Dr. J. Ph. Vogel, in his 'Antiquities of Chamba State,' bears a strong resemblance to the older portions of the *Ladvags rgyalrabs*. Both productions begin with an introductory hymn in which the book is called a necklace. This necklace is represented as being wound round the neck of the deity or saint to whom the book is dedicated. Then, both books contain a long list of names of mythological beings, the supposed supernatural ancestors of the race of kings, and in a third part, the names of the actual human kings are given. The Indian Vamśāvalī, even if they contained nothing but names, were written in metre, and so it also was probably with the Tibetan production. A last remnant of this Tibetan metrical Vamśāvalī we have in Schlagintweit's folios 13*b* and 14*a*, where there are ten lines of metrical verse which contain only names in line 1-6, and a few notes on that group of kings in line 7-10; and again in folio 9*a*, where a Buddhist legend is told in the same metre. As the word *rgyal mthsan* may be translated by 'royal names,' the historical book mentioned under No. (2) may have been such a Tibetan Vamśāvalī.

In addition to the Indian *Vaṁśāvalī*s, Tibetan historiography was also influenced in very early times by Chinese historiographers. I think that Rockhill is quite right when he compares the seven Tibetan *Khri* (throne) kings with the twelve celestial sovereigns of the Chinese *Sanhwang*; the six Tibetan *Legs* with the eleven terrestrial sovereigns of the Chinese; and the eight Tibetan *Lde* with the nine human sovereigns of the Chinese. Possibly, the Tibetans were not at once furnished with sufficient names to satisfy a Chinese historian. Therefore, they had to manufacture new names, or classes of names, and insert them in their lists. This may account for more than one beginning in the *rGyalrabs*, as we have it at present. Thus, we find two kings of the name of *Spu rgyal*. Of the palace of *Phyi dbang stag rtse*, which was stated in the chronicles to have been in existence during the reign of the first king, we hear again ten or eleven generations later that it was then built as the first palace of the country. Then, although the country is described as having been in a high state of civilisation under its first king, a first introduction of civilisation is attributed also to several of his successors. From the Chinese, the Tibetans probably learnt writing history in prose.

But a really intelligent and pragmatic form of prose writing was not acquired before the 15th century, when quite a new way of recording facts made its appearance. This last and best form of chronicling was probably learnt from the Mohamedan writers of the period.

The man who compiled the story of the kings of Yarlung, as we find it in the *rGyalrabs*, did not only derive his information from chronicles in prose or verse, but also made use of the folklore of his time, and thereby added a new charm to his chapter of the history. Thus, we find an old proverb on folio 11*a*, and popular ditties on folios 14*a* and *b*, and 19*b*. The first song on folio 9*a* is probably a verse from Buddhist literature which had become popular, whilst the second song once formed part of the ancient metrical *Vaṁśāvalī*, with which it has the metre in common, as stated above. It is interesting that also in Dr. K. Marx's BMS., an ancient popular song is found which it was the historian's endeavor to turn into prose. My attention was drawn to this interesting fact in the following way: I told my Tibetan assistant, *Phunthsogs* of Khalatse, to read through the third chapter of Schlagintweit's Tibetan text of the chronicles, to see if he could find poetical parts in it. He read it and said that he had not found anything, because the old song of Ali Mir, which was contained in K. Marx's *rGyalrabs*, was omitted in Schlagintweit's copy. He said that he had often heard people sing a song of Ali Mir. When I examined Marx's text, I could see at once that seven lines of the old song could be easily restored, by making only very slight alterations in the text. It then runs as follows:—

Khasang ngayis rnilamdu :
mThsonas sengge nargyis mchongs
rGyal Khatunla thimpar mthong
De dang dus mthsungs bummo 'adi
Semsan dang ni ldanpar gyur
'aDila bu zhig ngespar skye
Mingla sengge rnam rgyal thogs.

Then also, in Schlagintweit's third chapter, in the tale of the battle of Basgo, we find a little song of four lines included, as follows (with two corrections by myself) :—

rGyalpo babsgor bzhugs shing
Khachul dmag dang beas
Sogpo rnamsla brgyabpas
Sog 'abros thabssu song.

The influence of prose productions of folklore (Kesarsaga in particular) on the writing of history, is of course very distinct in the early parts of the chronicle. Let me mention only the description of the seven heroes in fol. 7b, which at once calls to mind the seven Agus of the Kesarsaga. But also passages like the description of *Lha dbang rnam rgyal's* three sons, who lived as late as the sixteenth century, look as if they had just been copied from the Kesarsaga.

Let me now review the *Ladvags rgyalrabs*, the chronicles of Ladakh, and register what has been published or translated. It consists of ten parts, some of which have headings in Tibetan, whilst others have not. Schlagintweit's MS. contains some of its parts in full, whilst others receive valuable contributions from it. Only one part is not represented in it.

1. Introductory Hymn. It is found in SMS. (Schlagintweit's MS.).

2. Cosmology and Cosmogony. This chapter is omitted in SMS. K. Marx mentions it as occurring in AMS. The first seven or eight lines of inscription No. 67 (translated in Ind. Ant., vols. xxxv, xxxvi, in my article 'Archæology in W. Tibet'), seem to be taken from this cosmology. They run as follows :—

“ The spheres [are these] : In the middle of all that grew into order, is the mountain *Ri dbang lhunpo* (Sumeru), the measure of whose glory is 400,000 geographical miles. The outlying and close-lying principal continents are surrounded by all the mountains. The four continents are in the east, south, west, [and] north; and there are eight islands. According to their order, the continents are : *Zla gam* ('New moon'; name of the continent in the east which is supposed to be of the shape of the new moon, and its inhabitants to have faces of the same shape); *Zur gsum* ('Three points,' 'triangular'; name of the continent in the south (India), the inhabitants of which have triangular faces, as men actually have); *Gru bzhi*

(‘ Four corners ’ ; name of the continent in the west which is believed to be of square shape, and the inhabitants to have square faces; *Zlum chags* (‘ Circle produced ’, ‘ full moon ’ ; name of the continent in the north which is supposed to be of circular shape, and the inhabitants of which are said to have round faces). If their (the continents’) size is measured according to their order, it is 719,000 geographical miles”

3. The Genealogy of the Sākya. It is found in K. Marx’s AMS, and in Schlagintweit’s text (SMS). It is interesting that several of the mythological names contained in it are found also in inscriptions of Ladakh and in folklore. This shows how deeply rooted is the belief of the people that the kings of Ladakh are descended from the Sākya race.

4. The Tibetan Kings of Leh and Lhasa down to Langdarma, the Apostate. This chapter is entitled in Tibetan ‘ History of the First Spread of Buddhism.’ It is found in K. Marx’s AMS and CMS, as well as in SMS. The same times we find described in Central Tibetan and Mongolian historical books, and in Chinese works. The latter were translated by S. W. Bushell, (JRAS, 1880). A most successful attempt to reconcile the Chinese with the Tibetan accounts was made by Herbert Müller in ‘ Zeitschrift für vergleichende Rechtskunde,’ Bd. xx. My chronology is based on the Chinese chronicles.

5. Langdarma’s Persecution of Buddhism. This chapter is entitled in Tibetan ‘ The Submerging of Buddha’s Religion.’ It is found in K. Marx’s AMS and CMS, as well as in SMS. The same times are described in Central Tibetan, Mongolian, and Chinese historical works. Even Alberūni speaks of *Longdherman*, Langdarma.

6. The Kings of the First West Tibetan Dynasty. This chapter is called in Tibetan ‘ The Story of the Later Spread of Buddha’s Religion.’ It is found in K. Marx’s AMS and CMS, and in SMS. The first part of this chapter was translated by myself for the first time into English, after the text of SMS. As the rest of the chapter was translated in an excellent manner by K. Marx, I shall simply review the chapter by giving names of kings, dates, and notes of interest. In the same way will be treated the following chapters:—

7. The Kings of the Second Dynasty down to *Sengge rnam rgyal*. This is probably the biography of *Sengge rnam rgyal*, compiled by his son *bDe ldan rnam rgyal*, as stated in SMS. No oriental would begin a biography with the birth of his hero. The hero’s history is given at the end of a long narrative of his ancestors. K. Marx’s AMS and SMS are probably such biographies of *Sengge rnam rgyal* furnished with the most elaborate ground work. SMS contains a few interesting additions to the history of *Sengge rnam rgyal* which are not found in K. Marx’s ‘ Three Documents.’

8. The Last Independent Kings of Ladakh. This chapter

which is not furnished with a Tibetan title, is found in K. Marx's BMS and CMS. SMS contains a few interesting additions to the text, as published in K. Marx's 'Three Documents.' K. Marx's Tibetan text being lost, I am now making efforts to recover it. And I hope that the text of CMS at least will again come to light.

9. The History of the Dogra War. Its Tibetan title is 'History of the Indian War.' It is found in K. Marx's CMS, and SMS contains only an interesting note on it. The Tibetan text as well as the greater part of the English translation by my wife were published in K. Marx's 'Three Documents.' It was written by Munshi *dPal rgyas*, the present chronicler of Ladakh.

10. Ladakh after the Dogra War. This chapter which was written by Munshi *dPal rgyas* has not yet been published. I am now making efforts to have it copied. SMS contains a single line referring to these times.

My thanks are due to Dr. J. Hutchison, of the Scotch Mission, for assisting me to find the correct English rendering of Tibetan phrases, and to my Ladakhi assistant, *Phunthsogs* of Khalatse, for helping me to ascertain the correct interpretation of many obscure passages.

TRANSLATION.

PART I.—INTRODUCTORY HYMN.

¹ With the iron hook of the wonderfully sweet and [all] Fol. 1a.
 knowing youth *Gesar*,
 And by the power of suckling at the heart of mother *Ridvags migcan* (Mṛigākshī), [who is] religion itself,
 This clear mirror of religion reflecting scenes [of people] as if moving to and fro in a dance, [has become] a reality,
 It has become a neck ornament of the naked priest *Zurphud lngapa* (Pañcaśikha).

PART II.—COSMOLOGY.

Omitted in SMS.

PART III.—THE GENEALOGY OF THE SAKYAS.

Drawing near through the blessing-pronouncing musical Fol. 2b.
 sound of the stringed tamburin, the nectar of immeasurable wisdom, the immeasurable fountain *Zamatog*, the treasure house of spiritual secrets, the king of astonishing things, the [symbol] *dPalbeu* with which this Kalpa is adorned, the Candrakānta stone in the middle of a floating rosary of a thousand [stones], the circle of power, became evident and rose like the moon.

¹ A book on history or geography is generally called a mirror. *Gesar* is a well-known deity of the Prebuddhist religion of Tibet.

Fol. 3a. As there was powerful prayer girded with might like a wave, and an eminent power of spotless truth, there arose like a white lotus *Buramshingpa* (Ikshvāku), the conqueror who continually beats throughout the three worlds the great drum of the queen of songs of praise. He is the root of the fulfilled blessings of immeasurable value which accumulated through the good works of the gods and [other] creatures [who had received] his precious teaching.

This arose and increased, and as the upwards striving accomplisher was dependent on a great king who ruled the area of the wide earth, our teacher (Buddha) looked out for a clan, a country, a time, a family, and a woman, these five, and allowed himself to be born as *Zas gtsang's* (Suddhodana's) son. Let me first relate a little of his family.

Fol. 3b. The people of India lived in an undying state, with a life of immeasurable length, with abundant [gratification] of their nine desires, and they had power, alas! over infinite accomplishments. At that time, there was a nectar which took away the consciousness of exertion, there was nutriment in the earth, fertility in the ground, and abundance of rice which grew without ploughing.

Then the accomplishments which belonged to [the state] of the gods were exchanged for other activities; the rice which grew without ploughing, disappeared entirely, [the harvest] depended on the worker, and pains had to be taken over agriculture. There arose mutual quarrelling and fault-finding, and king *Mangpos bkurba* (Mahāsammata) who decided judgment in a just way, and before whom all bowed in reverence, became the famous one of old.

Fol. 4a. Then [there reigned] successively: *'Od mdzes* (Rocha); *dGeba* (Kalyāna); *dGe mchog* (Varakalyāna); and *gSo sbyong 'aphags* (Utposhaddha). And now, to speak of the five classes of kings: The [five] sons of *gSo sbyong 'aphags*, the wheel-turning kings, were according to a presage born in this way: On the crown of [*gSo sbyong 'aphags*] head there formed a swelling, and when it broke, [out came] *Ngalalasnu* (Māndhātar); then there arose a swelling on his right thigh, and out of it came *mDzespa* (Chāru); there arose a swelling on his left thigh, and out of it came *Nye mdzes* (Upachāru); there formed a swelling on his right foot, and out of it came *mDzes ldan* (Chārumant);¹ and there arose a swelling on his left foot, and out of it came *Nye mdzes ldan* (Upachārumant). These five are called the five kings who turned the wheel [of religion].

The last four reigned in one of the four continents. They are the kings who turned the gold, silver, copper, and iron

¹ The name *mDzes ldan* is used as an epithet of the Ladakhi king *'aJam dbyangsrnam rgyal*. See my article 'Ten ancient historical songs from W. Tibet,' *Ind. Ant.*, 1909.

[N.S.]

wheels [of religion]. From these kings till *Zas gtsang* (Suddhodana), it is said, there descended 1,215,174 kings in succession, or 834,534 according to the [book] '*aJigs rten gdagspa* (Wisdom of the World). These two [different] ways of stating [the number] are the most extraordinary [statement] made by those who tell the history of the times of degeneration. As the glorious youth (Gesar) was so busy with drawing souls upwards, he did not tell them clearly; and when later on the learned who wished to write down the tale, examined him, he scoffed at them. Fol. 4b.

To the family of that same teacher (*Zas gtsang*) belong *Nyimai gnyen* (Sūryavamśa) and *Buramshingpa* (Ikshvāku) who is called *Shākya*. One hundred generations after [*Buramshingpa*], there arose king *rNabacan* (Karnika) in the country of *Gru 'adzin* (Potala). He had two sons, *Goutama* and *Bharadhvadza*. When *Goutama*, the elder one, saw that government was carried on in a religious as well as an irreligious (mixed) way, he thought: "It will be like that also, when I undertake the government." Then he was sorry and became a mendicant under priest *mDog nag* (Kriṣṇavarṇa). The younger one, *Bharadhvadza*, [therefore] reigned. At that time, there lived in that country a harlot called '*a Groba bzangmo* (Sattvabhadrā). She and a cunning youth called *Padmai rtsa log* (Mṛiṇāla) indulged in sensual pleasure. As she had also immoral intercourse at the same time with another [man, a] merchant, *Padmai rtsa log* became angry and cut off *bZangmo's* head. Then he placed the blood-stained sword [and *bZangmo's* head] at the door of *Goutama's* cavern. The executioners who pursued [the murderer, saw that] there was a blood-stained sword and the head of *bZangmo* there. Thus, the punishment for that [crime] was inflicted on *Goutama*, and he was impaled. The hermit *mDognag* knew all this, and went to *Goutama*. He said: "Boy, what have you done that you [must] suffer this?" *Goutama* answered: "Master, there is no fault in me! By the truth of my word that there is no fault in me, may the teacher's [black face] be turned into a golden face!" At once the black coloured hermit became golden and was henceforth called hermit *gSer mdogcan*. Fol. 5a.

Then the hermit saw that *Goutama's* line of religious kings (Dharmarājas) would become extinct and said to *Goutama*: "For the sake of your family you must leave a seed." *Goutama* answered: "As I am tormented with misery, I cannot rear a family!" Then the teacher produced a pleasant coolness by overshadowing clouds, and when *Goutama* was in a pleasant state, he produced two drops of semen virile mixed with blood. They were placed on two leaves of sugarcane (*Buram shing*, Ikshvāku) and ripened through the heat of the sun and the moisture of the moon, and two boys were produced. They received the names *Buramshingpa* (Ikshvāku) and *Nyimai gnyen* (Sūryavamśa). Fol. 6a.

Nyimai gnyen became a mendicant, and *Buramshingpa* reigned. The descendants of *Buramshingpa*¹ became famous and increased.

One hundred generations after him, there arose king *'aPhags skyespo* (Virūdhaka). His elder spouse bore him four sons, and the younger one four daughters. At a later (another) time, both wives having died, he married the daughter of a foreign king who said: "The sons whom you already have, must not reign. If my daughter should have a son, he must reign!" As he had said this, the ministers held a consultation, [as follows]: "We do not know if his daughter will have a son or not. If a son should be born, we do not know if he will live or not. If he should live, we must place him on the throne." As the result of this consultation, he married the princess.

Fol. 6b.

She bore him a son called *rGyal srid dgā* (Rāshtrananda). At that time, the ministers thought as follows: "If we place the elder brother on the throne, we go beyond our former promise; if we place *rGyal srid dgā* [on the throne], we have to take heed to the elder brothers. We must turn out the elder brothers by some device!"—thus thinking, a crafty one from among the ministers pronounced some calumny [against them] and turned them out.

They went to the banks of the river *bSkal ldan shing rta* (Bhāgirathā), built a hut in a forest, not very distant from the place of the hermit *gSer skya* (Kapila), and lived there. When they had attained to adolescence, they became pale and thin, and when the hermit saw this, he asked them [about it]. They said: "We have become like this, because we are tortured by passion (or: by the highest virtue)." He said: "If you are so ill, you must avoid the sister with whom you have both parents in common, but amuse yourself with the sister whose mother is in truth the sister of your own mother!" They asked him: "Great hermit, is it right to do this?" He answered: "For royalty which has renounced the throne, it is right to do this!" They took the words of the hermit as their rule, and did according to it. Many boys and girls were born, and when their father heard of it, he said: "Could the young people do such a thing?" Or in Indian language: *Shākya* (could they?). This is the origin of the *Shākyas*.

Fol. 7a.

Fifty-three thousand generations of them originated at *Grong mkhyer gser skya* (Kapilavastu).

Then king *Shing rta bcupa* (Daśaratha) arose. At the end of 25 generations after him, a king called *gZhu brtan* (Dhanvadya) came up. He had two sons, *Sengge 'agram* (Simhahanu) and *Sengge sgra* (Simhanāda). *Sengge 'agram* became famous

¹ It is interesting that the name *Buramshingpa* is found in many stone inscriptions of Ladakh. There the kings of Ladakh are asserted to be of his family. See Inscr. Nos. 65, 71, 79, 117.

[N.S.]

as a skilful archer. He is the greatest of all archers of 'aDzambu gling (Jambudvīpa). *Sengge 'agram* had four sons: *Zas gtsang* (Suddhodana); *Zas dkar* (Suklodana); *Brebo zas* (Dronodana); and *bDud rtsi zas* (Amritodana). Fol 7b.

Zas gtsang was of good form, beautiful, pretty to look at, of great strength, a hero, steadfast, clever, conspicuous for wisdom, cheerful, and of great courage. He was not lazy, and did not pursue evil passions. He was a Dharmarājā full of religion, assiduous to reign according to religion.¹

This king married the two daughters of king *Legspar rabs bsad* (Suprabuddha), *sGyu 'aphrulma* (Māyā), and *sGyu 'aphrul chenpo* (Mahāmāyā), and each of them had 500 maid-servants.

At a later time, king *Sengge 'agram* died, and *Zas gtsang* reigned. At that time, all men increased in riches, diseases of man and beast ceased, and endued with perfection, he protected them all like children.

At that time, the holy son of the gods, *Tog dkarpo* (Śveta-ketu), looked out for the tribe, the country, the time, the family, and the mother, and entered the womb of king *Zas gtsang's* wife, *sGyu 'aphrul chenpo*. After he had remained in it for twelve months, he was born from the right armpit of his mother, without being defiled by the impurity of the womb. [This happened] on the eighth day of the little spring month, when the stars were favourable. He was distinguished by the thirty-two marks of a great man, and was decorated with eighty physical perfections. Fol. 8a.

On that occasion, various miracles of happiness happened: In four great countries four princes were born. At *Magata*, *gZugscan snyingpo* (Bimbisāra), the son of *Padma chenpo* (Mahāpadma); at *Kosala*, *gSal rgyal* (Prasenajit),² the son of *Thsang sbyin* (Brahmadatta); at *Badpala* (Kauśambhī), *Sharba* (Udayana), the son of *dMag brgyapa*, (Śatanika); at 'aPhags rgyal Fol. 8b. (Ujjayinī), *Tumbu rabsnang*, (Pradyōta), the son of *Mu khrud mthā yas* (Anantanemi). And besides them, 500 [sons] of the upper classes. Together with *Grags 'adzinma* (Yaśodharā), 800 girls, and together with *mDunpa* (Chandakā), 500 maid-servants; 10,000 male and 10,000 female foals, and 10,000 elephants (or oxen) were born, 500 banana (?) gardens, and 500 treasures came into existence. In the centre, (Gayā), the Bodhi tree [began to] grow.

The son received the name of *Don thamskad grubpa* (Sarvasiddhārtha). Then the prince grew up and distinguished himself in reading (letters), arithmetic, and the five great branches of

¹ *Zas gtsang* is called an ancestor of the Ladakhi kings in inscriptions No. 38 (time of *Lha dbang rnam rgyal*) and No. 64 (time of *bDe ldan rnam rgyal*).

² King *gSal rgyal* was the father of *gNya Khri btsanpo*, the first king of Tibet, according to a statement in the following chapter.

science. As regards strength and dexterity, he was superior to *Lha sbyin* (Devadatta) and all other illustrious men, and was called [*Thubpa*], (the mighty one). Then the son was asked to marry a lady, and the youth replied :

(Verses).

Fol. 9a.

“ My highest wisdom is the understanding of desire ;
[Desire] is the root of strife, anger, suffering, and misery ;
It is like the poisonous leaf of the *'aJigs byed* tree (Bha-
yañkara).
It is like fire and like the edge of the sword.”

In this way, he enumerated many sins of the household and added : “ But, if I could find a girl like this, I should marry her !” Thus saying, he wrote down in a letter the qualities of a woman, gave it [to the king], and the king had several [copies] published and gave the following directions :—

(Verses).

“ Who among the daughters of kings and Brahmins,
Of the nobility and of citizens,
Has the qualities [enumerated] here,
That girl must be found !
She will be the proper bride
Of my flesh and blood (son and kind).
In such beautiful qualities and virtue
His heart will rejoice !”

Fol. 9b.

Such a letter he gave to a Brahman with respectful greetings, and the Brahman went to all countries to search [for a bride]. In course of time, he found *Sa thsoma* (Gopā). He smiled [saying] : “ Now I have found [all] the qualities [combined] !” He told the king, and the king said : “ I do not believe that this woman is capable of telling great lies. Assemble all the girls [here] on the seventh day ! Give the youth all the riches (household utensils ?) he wants to have !” Thus he said, and all the girls came. When the giving of household utensils [as presents] was almost finished, *Sa thsoma* arrived and smiled. She asked : “ What have I done amiss, that I am left without household utensils before them all ?” Then the youth smiled and gave her rings to the value of 100,000 ounces.

Fol. 10a.

The youth married *Sa thsoma*. Then he married also *Grags 'adzinma* together with 10,04,000 ladies. When he was 29 years old, *Grags 'adzinma* became with child. In that very same year he saw the unbearable misery of birth, old age, [illness] and death, and became a mendicant.

Then, when he was 35 years old, on the 15th of the month

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Saga, (Kumudi), he subdued the devil (Māra). On the morning (or next morning) of the same day and year, he became a perfect *Sangs rgyas* (Buddha).

Exactly on the same evening, a boy was born to *Grags 'adzinma*, and as the moon was [just then] seized by *sGra gcan*, (Rāhu), the boy received the name of *sGra gcan 'adzin* (Rāhula). Then king *Zas gtsang* said: "It is [now] six years since *Shākya thubpa* became a mendicant. This son of *Grags 'adzinma* is not a son of *Shākya thubpa*!" Thus saying, he blamed *Grags 'adzinma*, and she cried. Then he placed the boy on a stone in a pond, Fol. 10b. saying: "If he is *Shākya thubpa's* son, may the [stone] swim on the water! If he is not *Shākya thubpa's* son, may the stone sink!" The stone remained above the depth of the pond, like a leaf of a tree. When king *Zas gtsang* saw this, he entered the water with his clothes on, took [the boy] on his lap, and lovingly caressed him. He also became a mendicant, and the royal line came to an end.

Altogether, from *Mangpos bkurba* to *sGra gcan 'adzin*, there are 10,66,511 kings, or *bCom ldan 'adas* (Buddha) and *sGra gcan 'adzin* included, 10,66,513.

Notes on this chapter: Schlagintweit mentions the following books as treating of the same or similar subjects:—

Csoma, On the Origin of the Sākya Race, J.A.S.B., vol. ii.

Csoma, Notices on the Life of Sākya, As. Res., vol. xx.

Fausböll und Weber, Die Pāli-Legende von der Entstehung des Sākya-und Koliya-Geschlechtes, Ind. Stud., Bd. v.

Foucaux, rGya cher rolpa (Lalita-vistara).

Schiefner, Eine tibetische Lebensbeschreibung Sākya-muni's, Mém. des sav. étrang. de Pétersb., vol. vi.

Schiefner, Über die Verschlechterungsperioden der Menschheit. Bull. hist. phil. der Petersb. Akademie, Bd. ix.

Turnour, The Māhavaṃso.

PART IV.—THE KINGS OF LEH AND LHASA DOWN TO LANG DARMA.

The head of the line (*lit.*, lineal king) is *sPu rgyal*, the king of Tibet. There is not much material [to utilise]. Although Fol. 11a. there are [books called] *rGyal spunpo gsum khug blonpoi rgyal mthsan*, the *gSangba* or *'aBru bdus*, and many others, yet, if we compare (collect) them, the following two remarkable facts [come to light]:

(Verses).

Well known is the lineage of the gods according to Bonpo ideas;

Mysterious remains the lineage of men according to Buddhist ideas.

Now we will relate concerning the navel of 'aDzambu gling, the centre of the countries, the elevation of the earth, the crooked horn of the snow mountains, the icy Tise (Kailāśa), the root of crystal *mchod rtens*, the lake *Mabang* (Mānasarovar) with its shore like a magic circle of turquoises, the precious country of gold mines, the source of the four great rivers, the six divisions of Tibet, the pure place of *Lhasa* "the high hill"; we will relate of all this according to [the book] *Dangpo dbang byed rimpai dgu byung*.

Fol. 11b.

At the time when Tibet was troubled by the twelve little kings, the king of *Kosala*, *gSal rgyal* (Prasenajit), who was of *bCom ldan 'adas* (Buddha's) family, had five sons. The third (middle one) of them, called *Buddha shiri*, was born with his eyes turned upwards like those of birds, the [fingers and toes of his] hands and feet were connected like those of ducks, and his eyebrows were [blue] like turquoises. Along with him, a host of devils were born. He was shown to Brahman astrologers, and the Brahmans said: "This prince will get a famous name, the height of his body will also be enormous; he will reign before his father is dead!" When they prophesied like that, the father thought in his mind: "He will reign, by killing either me or his brothers! We will turn him out:" The Brahmans answered: "If we send him to the snowy northern region, he will be of benefit to living beings!" As they prophesied thus, they made a throne on the neck of four fast running men who carried him to the northern mountains and wilds, and laid him down on the [mountain?] *Lhari gyed mtho*, in the middle of Tibet. Although there are many conflicting statements with regard to this [event], he is certainly a *Shākya* of *Goutama* and *Mangpos bkurba's* family.

Fol. 12a.

Fol. 12b.

Some hunters saw him and asked: "Who are you? Tell us, O *bTsanpo* (majesty), whence you came!" As he did not understand their language, he pointed with his finger to the sky. The hunters told and confirmed this to the people, and many people went there and were shown [the boy]. When the twelve little kings saw him and considered that he was good and highly glorious, they all agreed and said: "We have no superior, we must call him with a little drum!" Thus saying, *bTsan khrung* and *sNums*, both, *gNyara rtse* and *gTso*, both, and the two *Khu stegs*, these six subjects invited him. *Ra sangs darpa* and *Khyungpo* were made governors, *Me ngaggi shes gnyen* was elected minister. Thus he was appointed king of all black-heads. (Tibetan expression for 'men'). The name of *gNya khri* (neck throne) was given him. "Great *gNya khri btsanpo!*" thus he was addressed. The land *Yarlung* was his precious and holy diadem, and he resided at the castle *Phyi dbang stag rtse*. Power and justice were his ornaments. He ruled the world according to religion, and his realm was in a happy state.

Fol. 13a.

[N.S.]

He had a fourfold bodyguard, and the outside foes were subdued by the 44 governors of *rGod ldod*. At the four extremities [of his kingdom] he appointed spies (or scouts). The enemies of the four extremities were subdued by the eight *Khromkha* (governors?) At *Rongdo*, 22 officials [called] *Khabaso* filled the barns [with grain]. From the 12 markets, riches were offered [to the king]; wise men decided about rewards for good and bad. By punishing criminals, the source of deceit was stopped. Five wise men brought fame to the country through their writings Fol. 13b. in gold and turquoise; five heroes became an ornament [to the country] through their [subduing] lions and tigers; five quick messengers rode on horses which they changed in their course. The justice of this great [king] was as [glorious] as if the sun rose over glaciers. [In course of time (?)] he built the palace of *U[m] bu bla sgang*.

Theft, deceit [was overcome]; in trade, advantage was not looked for. The whole kingdom flourished, and the government was beneficent. It was grand and excellent in all respects.¹

His son was *Mukhri btsanpo* (metrical :)

His son was *Dir khri btsanpo*.

His son was *So khri btsanpo*.

His son was *Me khri btsanpo*.

His son was *gDagskhri btsanpo*.

His son was *Srib khri btsanpo*.

[These] seven are called the seven heavenly thrones. Fol. 14a.

After seven cycles.

The tombs of the seven *Khri* were founded in heaven, Their divine bodies dwindled away like rainbows without any decay.²

¹ King *gNya khri btsanpo* is mentioned as an ancestor of the Ladakhi kings in the following inscriptions of my collection: Nos. 52, 54, 72, 75, 78, 81, 84, 111, 119. The place-names given in the account of his kingdom all seem to refer to Ladakh: see my article, 'The kingdom of *gNya khri btsanpo*' written for this journal.

As regards his date, the following attempts at fixing it have been made: 313 B.C. according to Ssanang Ssetsen; 250 B.C. according to Csoma de Körös; 50 B.C. according to Schlagintweit and S. Ch. Das; 416 B.C. according to the book *Grub mthā shelgyi melong*; before Buddha, according to the Bonpo chronicles.

Legend of his origin according to the Bonpo chronicles: He is the son of Pāndu and Krasnā (Krishnā or Draupadī). In this connection the Mahābhārata tale and many of its names occur in the Bonpo chronicles. (See Laufer, Tibet. Geschichtswerk der Bonpo, Toung Pao, Série ii, vol. ii).

Chinese legends of his origin: According to the *YtOUNG-tche*, he came from a western country and settled at *Si-tche-choui*. His name was Houi-ty-pou-tsoui-ye. In Parker, Manchu relations with Tibet, we read: a *Wutiyana Khan*, who fled eastward over the Hindu Kush, founded the Yarlung house. His name was *Nyatpo Khan*.

The Mongol versions are in close agreement with the Buddhist Tibetan versions.

² In Central Tibetan historical works, the names of the queens of

As they had the gods of light for their leaders, they lived many years, and when the sons below were fit to hold the bridle (were fit for ruling), the fathers above went happily to heaven, dwindling away like a rainbow.

The son of *Sribs khri btsanpo* was *Grigum btsanpo*.¹

He had three sons: *Sha khri*, *Nya khri*, and *Bya khri*. *Bya Khri* received the name of *sPu de gung rgyal*. He resided at the great castle of *Yarlung*. In the time of this king, the Bon [religion] of the *Yungdrung* (svastika) arose.²

these kings are given. Herbert Müller notes that all these kings were named after their mothers. (The Tibetan matriarchate). In line 7 of the above song the 'adi of the Tibetan text is superfluous.

¹ A revolution under *Gri gum btsanpo* is mentioned by S. Ch. Das. See J.A.S.B., vol. 1, p. 214.

² As regards the Bon religion, its earliest type is certainly nature worship, as represented in the ancient Tibetan inscriptions from Lhasa (8th and 9th century), and in the *gLingchos* of Ladakh. As regards *gLingchos*, see my article in Hastings's Dictionary of Religions and Ethics; also, the Ladakhi Prebuddhist Marriage Ritual, Ind. Antiquary, 1901; A Bonpo Hymnal, Ind. Ant., 1901; Kesarsage, Mém. de la Société Finno-ougrienne, No. XV; A Lower Ladakhi version of the Kesarsaga, Bibl. Ind., Nos. 1134, 1150, 1164; The Paladins of the Kesarsaga, J. and PASB., 1906, 1907; and other unedited MSS. from Khalatse, Poo, and Tagmachig.

Places of the cult of the *gLingchos* see in my article Historische Dokumente von Khalatse, ZDMG., Bd. LXI.

Illustrative rock-carvings see in my article 'Rock-carvings from Lower Ladakh,' Ind. Ant., vols. xxxi, xxxii, and our finds on the expedition of 1909.

As regards editions of *Bonpo* literature of the period when it was influenced by Buddhism and Hinduism, the following may be mentioned:—

Mdo gser mig and 'a*Duspa rinpoche*. Extracts by S. Ch. Das, in J.B.T.S., 1893. It contains the history of *gShenrabs*, of *Zhang zhung*, the legendary founder of the *Bon* religion. It is modelled on the Buddha legend. Then it speaks of *gShenrabs*' journey to China, to assist the emperor *Kongtse* in saving his castle. This tale is modelled on the tale of Kesar's journey to China.

Then in Appendix II of the same journal we hear of the highest aim of the *Bon* religion. It is to retain one's personality by seeking the welfare of all beings.

After that, a number of charms and lists of *Bonpo* deities are given. In these lists the name *khrobo*, which is so common in ancient inscriptions from Ladakh, is found. The four great *khrobo* are mentioned.

In J.A.S.B., vol. 1, p. 187 ff., S. Ch. Das gives a translation of the eighth book of *Grub mthā shelgyi melong*, in which are described the different stages of the *Bon* religion. The fact of its accepting Hindu doctrines at various times is mentioned.

The book *gTsangma klu 'abum dKarmo*, translated by A. Schiefner, contains *gShenrabs*' path of delivery from transmigration. It is half Hinduist, half-Buddhist. See Rockhill, Life of Buddha.

The book *Klu 'abum 'aduspai snyingpo*, translated by Dr. Laufer in Mém. de la Société finno-ougrienne, contains a song of exorcism.

B. H. Hodgson published several plates of *Bonpo* deities in J.R.A.S., 1861. As they look exactly like present-day Buddhist deities, the greater is the importance of my discovery of the ancient *Bonpo* temple at Lamayuru with frescoes of *Bonpo* priests and deities in blue and black dress.

Besides, the essence of burnt wood, coal, and the essence of molten leather, glue, came into existence (were found). Iron-ore, copper-ore, and silver-ore were found.

(Verses).

The three ores were melted with coal, and silver, copper, and iron showed themselves.

Pieces of wood were pierced, and ploughs and yokes were made. Fol. 14b.

Two equal [*mDzōs*] were put into the yoke, and the plains were ploughed into fields.

The water of the lakes was led into irrigation canals, and bridges were built across rivers.

Many such improvements came into existence.

His son was *Asho legs*, his son was *Isho legs*, his son was By that king the palace of *Phyi dbang stag rtse* was built. It is the first of all castles and palaces that were built. His son was *Desho legs*. During his time, singing and dancing spread. His son was *Guru legs*. His son was *'aBrong rje legs*. His son was *Thongsho legs*. These are called 'the six good ones of the earth.'

His sons were *Zinla zin lde* and *Lde phrug gnam gzhung btsan*, *Lde rgyalpo btsan*, *Se snol lam lde*, *Se snolpo lde*, *Lde lam*, *Lde snolpo*, *Sprin btsan lde*. These are called 'the eight beauties of the earth.'

His son was called *Tho tho ri long btsan*. The father was from above, the mothers were a *Lhamo* (goddess) and a *Klumo* Fol. 15a. (*Nāgī*). He was from below, as were his subjects, relations and sons who were called the lower issue of *Tho tho rilong btsan* or *Klu rgyal* (*Nāga rāja*).¹ His son was *Khri btsan*. During his time, roads (?) and bridges [were constructed]. His son was *Khri thog rje thog btsan*.

His son was called *Lha tho thori snyen bshal*. He was an incarnation of the august *Kuntu bzangpo* (*Samanta-bhadra*). He reigned for 62 years.

The blue dress of the Bonpo priests is mentioned in J.A.S.B., vol. I., p. 198 and p. 211. S. Ch. Das speaks of plates of the Bonpo pantheon in J.B.T.S., 1893, which I cannot find anywhere.

A description of the Bonpo monastery at *Shendarding* is given in S. Ch. Das, journey to Lhasa; the monastery and the monks can now-a-days hardly be distinguished from Buddhist ones.

rGyalrabs bongyi 'abyung gnas, the Bonpo chronicles, printed by S. Ch. Das; extract given by B. Lanfer in *Toung Pao*, vol. ii, No. 1. As the genealogical roll of Chinggis Khan's family shows, the chronicles were compiled later than 1328 A.D. They contain the Bonpo version of the legends of the origin of the Tibetans, and of their first king. They are of a distinctly Hinduist colouring. The story of the fall of the Bon religion under *Khri srong lde btsan* is related at some length.

¹ The Tibetan text is not quite clear here.

At the time when he dwelt at the great palace of *Um bu rdzangs mkhar* which had come into existence of itself, without being built, as an omen of the [future] spread of Buddha's teaching in Tibet, a basket came down from heaven. Accompanied by a ray of light, there came down to the king's palace the book *Zamatog* (*Karaṇḍavyūha sūtra*); the *Pang kong phyag rgyapa* (a book or a symbol); the essence [of religion], the six syllables; a golden *mchod rten*, a yard high; a *Thsindhamani thsathsa* (terracotta with Buddha's image); and all the *mudrā* positions of the fingers.

The priests of the [Bon] religion did not know what it was. They sacrificed to it with beer and turquoise offerings. Blessing resulted from it, and [the king] remained strong, till he was 120 years of age. Thus, during the time of this king, the beginning of the holy religion took place.¹

Fol. 15b.

His son was *Khri snyan bzung btsan*. During his time the outlying valleys were brought under notice and cleared for fields. The lakes were furnished with gates and drawn into irrigation canals. The glacier-water was collected in ponds, and the water [which had collected] over night [was used] for irrigation in day-time. Such like things were done in his time.

His son was *'aBrong snyan lderu*. His son was *Stag ri snyan gzigs*. During the time of this king *mDzos* and mules originated from cross-breeding. The prices of riches were determined, and the grass of the hills was plaited in bundles. Such like things were done.

His son was *gNam ri srong btsan*. During the time of this king, there came from China [the arts] of medicine and divination. The king of *gNya zhur* and others who dwelt in the west of India, and *Grugu*, were subdued. In the north, salt was found. A castle called *Khri brtsegs 'abum gdugs* was built.

His son was *Srong btsan sgampo* (600—650 A.D.), an incarnation of the Bodhisatva *sPyan ras gzigs* (Avalokita). During the time of this king, all the kingdoms on the frontier were united under his rule, and every one of the little kings sent presents and letters. Although this king made more sealed documents than can be comprehended, there were no characters in Tibet to send replies to the letters from [various] quarters. And, as [the books of] the famous sanctuary of his ancestor *Tho tho ri snyan shal* remained a mystery [as they were written] in Indian characters, he thought: "We must translate them into Tibetan writing!" Therefore he sent *Thonmi*, the son of Anu, with a *'aBre* (a measure) of gold, and sixteen fellow-students, to Kashmir,

Fol. 16a.

¹ S. Ch. Das states in this journal, Vol. L, that the reign of this king was the most flourishing time of the Bon religion. He also states that this king found a salt mine. But the Ladakh chronicles ascribe this discovery to *gNam ri srong btsan*.

A few years after the supposed descent of the Buddhist books, several strangers arrived in Tibet to explain them (Bodhimör).

to learn the characters. They learnt the characters from the Brahman *Li byin*. Pandit *Sengge sgra* (Simhanāda) taught them. Bringing them into agreement with the Tibetan language, they made 24 *gSal byed* and 6 *Rings*, [altogether] 30 [characters].

Besides, they made them to agree with the *Nagara* characters of Kashmir, and brought them into shape.¹

Then, when *Thonmi* arrived in Tibet, he met with the king who was in the garden of his wife *Uru*. The king said: "Have you learnt the letters and the language? Then you may offer praise to *sPyan ras gzigs* (Avalokita)!" As he said so, *Thonmi* Fol. 16b. wrote down the *sholoka* (śloka): *gZhal ras gsalla ngad mdangs gangba bzang* (a good and full [offering of] fresh scent to *gZhal ras gsal* (Avalokita)! and presented it to the king. The king was very pleased and erected the temple of *Byingyi khod mar rdo*, and before [the image of] *sPyan ras gzigs* these letters (the śloka) were carved on stone. These are the earliest inscription [in Tibet] and the oldest temple.

Then, the minister *Thonmi sambhota* brought from Nepal the incarnation of *Khro gnyerma* (Bhrikutī), the Nepalese spouse *Khri btsun*. Together with her were brought *Jobo mi skyod rdorje* (Akshobhya vajra); *Byamspa choskyi 'akhorlo* (Maitreya dharmacakra); and *Jomo sgrolma* (Tārā) of sandal-wood. (These are two books, and an idol).

Then, minister *Rigpacan* brought from China the incarnation of *sGrolma* (Tārā), the queen and spouse *Kongjo*. Together with her arrived [the image of] *Jobo rinpoche* (Buddha).

Besides, [the following] worldly inventions were made: Rice-beer, barley-beer; in short, all the necessaries for food; the making of curds from milk; butter and buttermilk from Fol 17a. curds; cheese from buttermilk; pots from clay; water mills; weaving looms; and many clever arts.

Then, at Lhasa, the incomparable temple of *Ramoche* and others were erected. Palaces were built on the *dMarpo ri* and on the *lCagspho ri*, and these two mountains were connected with an iron chain bridge. He built about 900 temples and castles.

In his time, the Indian teacher *Kumara*, the Nepalese teacher *Shilamañju*, the Kashmiri teachers *Tabuta* and *Ganuta*, the Brahman *Li byin*, and the Chinese teacher *Ha shang mahā dheba* were called [to Tibet]. The translators (*Lothsaba*) *Thonmi*, *Dharma ghosha*, and *dPalgyi rdorje* of *Lhalung* translated religious books in every possible manner, and arranged them.

During the time of this king, *rTsami* and *Shing mi* of the east, *bLobo* and *Zhang chung* of the south, and the *Hor* kingdoms

¹ The last sentence seems to be a later interpolation. In those days, the Nāgarī alphabet was not yet in existence.

of the north (Turkistan), and others were brought under subjection, and the customs of the holy religion were introduced into them.¹

His son was *Mangsrong mang btsan* (650—679 A.D.).²

His son was *Gung btsan*. His son was *Gung srong 'adu rje* (679—705 A.D.). During the time of this king were conquered in the east the *rGyalpoi chu* (Hoangho); in the south, *Shing khun* of Nepal; in the north, *Krakrag darchen* of Turkestan; in the west, Chunrings of [b] *Lobo*; *Nanggong* on the Balti-road,

¹ Notes on this king. *Srong btsan sgampo's* two queens, the white and the green *Tārā*, remind us of the Kesar-saga, Kesar's white wife is *'aBruguma*, and his green wife is *gYui dKon mchogmo* (see my article on *gLingchos* in Hastings's Dictionary of Religions). The Ladakhi tale of minister *Rigpacan* of Shargola in Ladakh, who was sent to fetch the princess from China, is similar to the tale of minister Gar (see S. Ch. Das' article in JASB., 1881). Both versions remind us of the Kesar-saga.

Introduction of writing. The characters were formed after the Indian *Lañthsa* (Bodhimör). The *dbu med* alphabet was formed after the Indian *Vartula* (Togbarlova). This is all phantastical. The Indian script which is most closely related to the Tibetan, is the Gupta of the fourth and fifth centuries. (See my article 'The kingdom of *gNya khri btsanpo*' in this journal).

Literature. Works by *Thonmi sambhota*: *bStan 'agyur mdo*, vol. cxxiii, *Sku gzugs kyi mthsan nyid*, by *Anui bu*; vol. cxxiv, *sGrai bstan beos sumcupa*, a grammar; *Lung du stonpa stagskyi 'ajugpa*, by *Thonmi Anu* (a grammar).

Thonmi sambhota's grammar is the same as the one which is printed in the Darjeeling School series. It is evident that this grammar was written in very ancient days, for it treats of the *drag*, a final suffix which has long disappeared even from the classical language. It treats also of the Tibetan system of tones, and is therefore more than a mere repetition of Indian grammars. (See my article in ZDMG., vol. lvii).

Buston says that the Chinese *Kechana* were the guides of the Tibetans in the commencement of Buddhism. But there are very few translations by Chinese Buddhists in the encyclopædias.

Srong btsan sgampo is the reputed author of the book *Mani bkā 'abum*, which contains a glorification of Avalokita, and his own history. Wassilieff says with regard to it that it is undoubtedly a modern book. He also wrote a book on horse breeding (Bodhimör); perhaps the one which is still circulated in Ladakh.

His lawbook. S. Ch. Das gives his 16 moral precepts in his article, J.A.S.B., vol. 1. His 'laws' are also found in the Bodhimör. From the Bodhimör we learn that his court of law consisted of four ministers and 100 officials. There were also ministers of inner and outer affairs, the *Sain* and *Berke* of the Bodhimör.

Progress of civilisation. The Bodhimör states that silkworms, mulberry trees, barley-beer, watermills, paper, ink, and the calendar, were introduced from China.

² The Chinese chronicles (Thangshu) call him *Tsanphu*. At first *Lutungtsan* (*Thonmi sambhota*) governs the country; later on *Thonmi sambhota's* son. (Major domus). Then the Thangshu speaks of a war between the Tibetans and the Tukungun. The latter as well as the Chinese were beaten by the Tibetans. Great extension of the Tibetan empire, beyond the Pamir (Thangshu).

and *Shi dkar* of the Lowland, in the direction of Lhasa (hither). From *rGya* (China or India) came: tea, *borddha mal* (?), clarionets, long trumpets, telescopic trumpets, etc.

Besides, the seven men of great skill arose [as follows]: *Khri bdun yul byin* could jump across chasms which were nine 'adom (27 feet) wide; *gDung grags* of *gSal snang* could catch a wild yak by throwing a sling at his feet; *rKod btsan* of *Athog* could seize a lion by his mane; *Klu gong* of *Cogro* could pierce with his arrow a tree which was two 'adom (18 feet) thick; *Ltag bzang* of 'aBrom could bring down castles, by leading water [below them]; and *gYag chung* of 'aGos could twirl round his head a deer's hide filled with gold. [This king] was one of the most powerful among the early kings of Tibet.)¹ Fol. 18a.

His son was *Khri lde btsun* (*btsug*) *brtan mes ag thsoms* (705—755 A.D.) During the time of this king, the castle of *Kha brag dar phu* was built at Lhasa; all the lowlands were filled [with buildings]. At *Khri rtse brag dmar* (possibly *Khri rtse* of Ladakh) of *gLing bcu* ('Ten lands') he built the temples *Ga chu shar sgo*, *Phang thang ka med*, *Ka chu pan chub*, *Brag dmar mgrin bzang*, and other [temples]. *Sudgu sho ka* of *Brag kha* and *Dzanyana kumara* of *sNyegs* became translators (*Lothsaba*) and translated the two books *gSer 'od dampā* (*Suvarṇa-prabhāsa-sūtra*) and *Las brgyapa* (*Karmaśataka*). *Pitsi tsanda shri* translated the *sMad sbyad*, the *rTsis* (divination) and others, and introduced the ceremonies of religion.²

His son was *Khri srong lde btsan* (755—797 A.D.), an incarnation of the Bodhisatva 'aJam dpal (*Mañjuśrī*). This king invited the teacher (*mKhanpo*) *Bodhisatva* from India. *Ananta*

¹ Notes on this king from the Thangshu. He is called *Chin-u-hsi-lung*; but there is no absolute certainty about the identity of the Tibetan and Chinese names. The Major domus retained his authority. In 678, a Chinese army was beaten on the Kukunor by the Tibetans. Then several Tibetan chiefs took the side of the Chinese, and the Chinese reconquered Turkestan. The Major domus was turned out, and he committed suicide together with 100 of his friends. (The *Bodhimör* mentions two Major domus during his reign).

² Notes. The Thangshu calls him *Chi-li-so-tsan*. He was married to a Chinese princess called Chincheng (the *khyimshang* of the Tibetans). The Tibetans had received the towns of *Chiu-chü* and *Kuei-te* on the Hoangho as her dowry. Continual wars about those places. Whenever treaties were concluded, a market for bartering horses was mentioned with emphasis.

The great war with the Chinese about the possession of *Gilgit*. See Stein, *Ancient Khotan*, Section ii and iii.

Gilgit is now identified with Little Poliu, Baltistan with Great Poliu. The king of Kashmir, *Muktapīda*, assisted the Chinese against the Tibetans, and the Tibetans were aided by the Arabs. The Chinese emperor of the period was *Hsüantsung*, 713—755 A.D.

The *Bodhimör* says that the Tibetan king was married to two queens, one from Yarkand, the other one from China. The latter was intended for his son who broke his neck when going to meet her. Therefore the father married her.

Fol. 18b.

of Kashmir became translator and preached on the ten virtues, the 18 regions (or 'elements'), and the 12 causes of existence.

On that account, the gods and demons of Tibet became angry and the hill *dMarpo ri* was struck by lightning, [the plain] *Phangthang* was devastated by water, and much illness came to men and animals. Therefore the teacher said: "The gods and demons of Tibet do not like my preaching. To subdue the gods and demons of Tibet, you must invite the teacher *Padma byung gnas* (Padmasambhava) from *Orgyan* (Udyāna)." He said: "We three united in prayer before the *mchod rten* of Buddha 'Od srung' (Kāśyapa)!" *sNa gsal snang* and *Coro legs sgra* were both sent, and invited the teacher. Then all the gods and demons of Tibet were exorcised. And after the model of the Indian temple of *Otantrari* (Odantapura), the eternal temple of *bSam yas* was built, although it came into existence of itself (Svayam-bhū). Many Indian pandits and seven critical translators [translated] the *sDe snod gsum* (Tripitaka). In short, by these three: the king, the dispenser [of a sacrifice], and the priest, the holy religion was made to spread over Tibet, never failing in purity, [in a country] which had been dark. [Several] of the subjects received the dignity of orders. It was made a custom [among the lamas] to carry the pebbles which are below the feet, on the crown of their heads.¹

Fol. 19a.

At *bSam yas* he built preaching halls, and at 'aChingbu meditation cells. At the palace of *rLung thsugs* he founded the towns of *Skyidpai byung gnas* and *Thsangspai byung gnas*.

At that time, the teacher *Padma* [*byung gnas*] presented to the king the water of life and wisdom; but the ministers who did not like it, said to the king: "It is a maddening drink of the Mons, and poisonous!" As they said so, the king became doubtful about it and did not drink it.

That leprosy might not enter [the country], he exorcised the Nāga kings *Madros* (Anavatapta) and *Zilchen* (Manasvin) [of the Mānasarovar lake]. He put a vajra into the water, whereupon *Zilchen* took the shape of a boy and was appointed to be an assistant to the king. He promised to fulfil every wish of the king. The king honoured the pair of Nāgas highly, and they became his tutelary deities. Then the teacher departed to the south-western country of *rNga yab*, the land of demons (Udyāna).

Fol. 19b.

At that time, all Tibet prospered and was happy, the people increased, the harvests were good, and it was a time without strife. All the provinces on the four frontiers were subdued. China in the east, India in the south, *sBalti* [*stan*] and 'aBrushal (Gilgit) in the west, *Sai cho odon Kas dkar* (Urdum Kashgar) in the north, were brought under his power. Both political

¹ A kind of lama hat is still known by the name of *gtsug rdor*, 'stone crest.'

and religious practices were firmly established. During the time of this king, the Bon religion was suppressed, and the holy religion was made to spread.

(Verses).

Then the regent of the conqueror (Buddha), the holy
Zhiba 'athso (Sānta-rakshita),
And the superior master of incantations, the ascetic
Padma 'abyung,
Kamalashila, the ornament of wisdom,
And *Khri srong lde btsan*, of surpassing thoughts ;
Through these four the sun rose in the dark country of
Tibet ;
The bright holy religion spread as far as the frontiers ;
Through these holy men of unchanging kindness
All Tibetans will for ever bow before and reverence them.

The [above] ditty was composed.¹

His son was *Mu khri btsanpo* (798—804 A.D.). To carry out to completeness the thoughts of his father, [this king made Fol. 20a. at *bSam yas* the noble sacrifice of [a copy of] the '*aDulba mngon-pa mdo sde gsum* (Vinaya, Abhidharma, Sūtra, the Tripitakam). He gave ample food to the clericals. Three times he equalized the rich and hungry. In [some] parts of both countries of *rGya* (China and India), not all those who had bowed before his father, bowed before him. Although they did not, he

¹ Notes on this king. From the Thangshu: He is called *Se-hsi-lung-lich-tsan* by the Chinese. War against China. The capital, Singan-fu, was taken by the Tibetans, and a new emperor enthroned. Then the Tibetans had to retreat. When Tai-tsung became emperor of China in 780 A.D., peace was concluded. He sent the Tibetan prisoners home. The Tibetan king did the same with the Chinese prisoners. Great oath of peace. Chinese Tibetan inscription in Lhasa, referring to it. Brought to light by Waddell, J.R.A.S., October, 1909. Then the Chinese and Tibetans were united against a rebel in Sze-chuan. As the Chinese had treated the Tibetans like barbarians, there was again war between them, and the Tibetans conquered Turkestan. The Tibetan inscription in 'Stein, Ancient Khotan, Tibetan sgraffiti at Endere, p. 569,' may refer to that war.

The *Balu mkhar* inscription of Ladakh seems to be of the time of the same king. See Ind. Ant., vol. xxxiv, p. 203 ff., and ZDMG., Bd. xli, p. 583 ff. *Balu mkhar* was a custom house in those early times.

Fall of the Bon religion. It is related in full in chapter 21 of the *rGyal rabs bongyi 'abung gnas*, translated by B. Laufer, *Toung Pao*, vol. ii. The trick by which the Buddhists were victorious, see in J.A.S.B., 1881, p. 223.

Notes on Padmasambhava. His life was translated by E. von Schlagintweit, *Abhandl. der K. bairischen Akademie der Wissenschaften*. As regards his connection with Lahoul and Mandi (Rewalsir), see my *History of Lahoul*. For his connection with other parts of Western Tibet, see my *Diary of a tour along the Tibetan frontier*, 1909.

endured it with patience. He divided the country of Tibet from the countries of *rGya* (defined the frontier). On the mountains which belonged to Tibet, all the grass grew [better than on the other side].¹

His son was *Sadna legs*. This king built the temple of *Skar chung rdo dbyings* [in the] province of *rGya*.² He invited the Pandita *Kama [la] shila* and others [to Tibet]. *Kumara* of *sNyegs* became translator and translated many religious books which had not yet been [translated].

His sons were: *gTsangma*, *Ralpacan*, *gLang darma* (by the first wife), and *Lha rje* and *Lhun grub* by an inferior queen. These five were born. The first son, *gTsangma*, loved religion. He entered the order [of lamas], admonished men to [adopt] religion, and wrote a book (*Sāstra*). *Darma* loved sin and was unworthy to rule. *Ralpacan* (804—816 A.D.), the middle one, reigned. He built the town of *Ushang rdo*, and erected the temple of *rGya phibs gyu sngon can* ('Having a Chinese roof of turquoise colour').

Although during the times of his ancestors many religious books from *rGya* (China or India), *Li* (Kunawar or Turkestan), *Zahor* (Mandi), *Kache* (Kashmir) and other countries had been translated, there were many conflicting interpretations. He said: "It is difficult to learn religion!" and invited the Indian Panditas *Dzina mitra*, *Shrilenra bodhi*, *Dhana shila*, and others [to Tibet]. The two Tibetan translators [called] *bKā cog* and the priest *Yeshes sde*, examined everything and gave it sanction.

Finally, he made the weights, measures, etc., to coincide with those of India and appointed seven households of his subjects to wait always on each lama.

The king [used to] sit in the middle and had silk streamers tied to the ends of his locks on the right and left. Then he made the clericals sit there and had the excellent ones on his right and left [hand side], and [himself] in the middle, all sitting together.³

¹ A king *Muni btsanpo*, who reigned for one year only, is stated to have preceded this king: see Bodhimör, and S. Ch. Das. The Bodhimör says that he married a younger wife of his father and was therefore poisoned by his mother. S. Ch. Das tells of his communistic experiments which in the *rGyalrabs* are attributed to his successor.

Mukhri btsanpo. His name was not known to the Chinese. Apparently during his reign Harun al Rashid (786—859) sent embassies to the emperor of China, to induce him to make war against the Tibetans. But the latter succeeded in winning him over to their plans. In 800 A.D., Arabic armies are mentioned under Tibetan command. Then Alamun concluded a treaty with the Tibetans, to guard his eastern frontier.

² This is possibly the district of the village of *rGya* in Ladakh.

³ As we know from the *Spiti Gazetteer*, the head-dress of the *rNyingmapa* monks consisted originally of streamers of silk. *Ralpacan* apparently had the ends of their streamers tied to his locks, to share in their excellence.

During the time of this king were conquered the mountains of *Pholonshan*, which look like a curtain of white silk, and which touch the frontiers of China. There a stone pillar was set up with an inscription on which was carved: "Downwards from here did I reign!" In the south, *bLo[bo]* and *Mon*, India, *Li* (Kunawar), *Zahor* (Mandi), and [the countries] upwards from the lake of the *Ganga* with its surface like a bowl of iron, were subdued; in the west *'aBrushal* (Gilgit) on the Persian frontier, and others, were conquered; and in the north, all the provinces of *Hor* (Turkestan) were subdued. He reigned over three or two [princes] of *'aDzambu gling* in the south (India), and everywhere in the friendly [province] of *dBus* he erected 108 temples. This is the first spreading of the teaching.¹

PART V. LANGDARMA'S PERSECUTION OF BUDDHISM.

Then, during the lifetime of the ruler *Darma dbyig dur btsan* (816—842 A.D.), four heretic Brahmans were unable to Fol. 21b. tolerate either the many paṇditas who had been invited to Tibet by the ruler *Ralpacan*, or the offerings of golden writ (books), nor the spread of Buddha's teaching over Tibet. To submerge the religious teaching, they prayed to be reborn in the bodies of four demons of which there were plenty (?) in Tibet. Then they precipitated themselves [from a rock] and achieved their end. The ruler *Darma dbyig dur btsan*, *Cogro legs sgra*, *Dabs* (*dbus*?) *dore stags snya*, and *'aBal 'akhor zhes legspa*, these four, entered the demons *Thugs yid phung 'agong nagpo*, *gNam rdeu dKarmo*, *Sa rdeu nagpo*, and *Byang rong*.

They dethroned the monks. As they did not succeed in throwing the [image] of the god *Shākya mune* into the water, they buried it in the earth. The [book] *Byams pa choskyi 'akhorlo* was buried in the sand. The doors of *bSam yas* and *'aPhrul snang* [monasteries] in Lhasa were closed with walls, and plaster was laid [over them]. A letter was written that the monks should drink beer. The distinctive mark of the monks Fol. 22a. was not kept up. Some were turned out; some fled; the remaining ones were sent a-hunting with a hunting drum, bow, arrows, and dogs; and some were made butchers. Religious ceremonies were not [again] introduced, and his subjects were forbidden under penalty to resent it. The [religious] customs were thoroughly destroyed. They disappeared from the

¹ Notes on this king. The great treaty with the Chinese was carved on a pillar at Lhasa. Translation from the Chinese by Bushell, see J.R.A.S., 1880. My translation from the Tibetan text in *Epigraphia Indica*, 1910. In the Chinese inscription he is called The-chili-tsan. According to the *Thangshu*, he was always ill, and the government was in the hands of his ministers. According to S. Ch. Das, J.A.S.B., 1881, under him a first history of Tibet was written. He is mentioned as a model king in the *rGyal rabs* under *Thse dbang rnam rgyal* I.

frontiers of *mNgāris*. At that time a mountain of *rGya* (India or China) which was under Tibetan rule, collapsed. And the great river *rMa chu skyad* (Hoangho), which flows from Tibet to China, flowed upwards and backwards for three days. Many bad omens of this kind appeared. Then, in course of time, *dPalgyi rdorje* of *Lhalung*, who was meditating at the old sprinkled [mountain of] *Lhari*, heard of it and conceived a very deep feeling of pity for the king (*bTsanpo*).—Rumours of murder.—That is the tale of the submerging of Buddha's religion.¹

PART VI. THE KINGS OF THE FIRST WEST TIBETAN DYNASTY.

Fol. 22b. SMS: The story of the later spread of Buddhism is as follows: *'Odsrung* (c. 842—870 A.D.) was *gLangdarma's* son. He asked *dPalgyi rdorje* of *Lhalung* [to perform] the highest sacrifice to the Medicine Buddhas, and prayed. The whole empire felt the blessing of the Medicine Buddhas. In harmony with the kindness of his ancestors he established firmly the religious ceremonies and the religious buildings. He protected *mNgāris* according to religion. Besides, when *rTsad rab gsal*, *Yoge 'abyung*, *dGeba rab gsal*, and *sBarab*, altogether ten [priests] had arrived, Buddha's teaching began to spread [again]. Then also, temples were erected like the stars of heaven.²

His son was *Lde dpal 'akhor btsan* (c. 870—900 A.D.). During the time of this king, the temple of Upper *mNgāris*, and others, [altogether] eight temples were erected. Scriptures like the *'aBum* and others were copied in great numbers. He swore an oath to build up religion (or temples).³

Fol. 23a. His sons were *Skyid lde nyima mgon* and *bKrashis brtsegs dpal*, the two. *Skyid lde nyima mgon* (c. 900—930 A.D.), when on his way to Upper *mNgāris*,—Tibet being in a state of revolution,—accompanied by a hundred horsemen under the leadership of

¹ Notes on this king. He is the *Tamo* of the Thangshu. The latter says: Tamo was fond of wine, a lover of field sports, and devoted to women; and besides, cruel, tyrannical, and ungracious.

According to S. Ch. Das (J.A.S.B., 1881, p. 230) he uttered the following words when dying: "Why was I not killed three years back that I might not have committed so much sin and mischief; or three years hence, to enable me to root out Buddhism from the country.

He figures in the devil-dances of the lamas as the enemy of religion.

The Ladakhi kings who are descended from him wear their hair in a peculiar fashion handed down from his time. (See my History of Western Tibet.)

The earliest version of the legend of the image which cannot be moved out of its position, is connected with the story of Langdarma's persecution of Lamaism.

² More notes on this king are found in S. Ch. Das' Contributions on Tibet (J.A.S.B., 1881) and in *rGyalrabs gsalbai melong*.

³ More notes on this king are found in S. Ch. Das' Contributions on Tibet (J.A.S.B., 1881) and in *rGyalrabs gsalbai melong*.

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dPal ma zug gar, *Khyung dpal ldan grub*, and the two *Aka badzra* of *Me nyag*, happened to be obliged to eat fish and eggs. [The servant] brought [the food] wrapped in a napkin. From this it came to be a custom with the kings of Tibet to use the [so-called] giant's napkin (also explained as 'napkin of eight folds'). He built *Khar dmar* of *Rala* in the horse year, *rTse tho rgya ri* in the sheep year. He caused many villages and hamlets (towns) to be built throughout the broad valleys of *Dam* and *Lag* (or *Damlag*). *Maryul* he left undisturbed.¹

As regards the rest of this chapter, K. Marx's translation of it in J.A.S.B., Vol. LX, pp. 114-123, should be consulted. In the following I give a list of royal names with notes on them.

Lhachen dpalgyi mgon, c. 930—960 A.D. He received Ladakh proper. His brother *bKrashis mgon* became vassal-king of Guge and Purang, *bKrashis mgon* probably died without issue, and his kingdom was inherited by the descendants of his younger brother *Lde btsug mgon*. The names of *Lde btsug mgon's* descendants are found in Schlagintweit's tables, in S. Ch. Das' Contributions on Tibet, and in *dPag bsam ljon bzang*.

aGro mgon and *Chos mgon*, c. 960—990 A.D. Nothing known beyond the names.

Lhachen gragspa lde, c. 990—1029 A.D. S.M.S. spells *bLachen gragspa lde*. Perhaps he was a lama.

Lhachen byang chub sems dpā, c. 1020—1050 A.D. S.M.S. spells *bLachen*. He was very probably a lama, like the contemporary kings of Guge. He is mentioned in the Tabo inscription together with *Rinchen bzangpo*, Atīśa, and king *Byang chub 'od* of Guge. He erected the Tabo and Alchi monasteries, and probably several others. His portrait is found in the Alchi monastery together with an inscription by himself. There are also frescoes of the sports of his times, notably hawk-hunting. He probably came to grief in the Turkoman gold mine wars; compare the history of *Yeshes 'od* of Guge. His name as a prince is found in an ancient document excavated at Kyelang.

Lhachen rgyalpo, c. 1050—1080. His portrait (probably) as a young man is found at Alchi where he is represented together with his father. S.M.S. spells his name *bLachen*, etc. He was probably a lama. He is mentioned in the *Māhātmya* of the Likir monastery which in its present edition, however, dates from the 18th century.

Lhachen utpala, c. 1080—1110 A.D. His conquest of Kulu is not confirmed by the chronicles of Kulu; but the *Rājātaranginī* of Kashmir is rather in favour of the statement. It says in a somewhat obscure passage that Zainu-l-abidin in 1428 A.D. found Kulu occupied by Tibetans. After the battle of Basgo, 1647 A.D., the treaty with Kulu was apparently exchanged for a trade contract. (See my History of Lahoul, written for the Ind. Ant.)

Lhachen naglug, c. 1110—1140 A.D. For notes on his connection

¹ The following inscriptions from Ladakh are probably of his time, although they do not contain his name. The Sheh inscriptions; the Alchi mkhar gog inscriptions (see my article 'Archæology in Western Tibet,' Ind. Ant., Vols. XXXV, XXXVI); and inscriptions at *Bya* in Zangskar, discovered by Rev. G. Hettasch of Kyelang.

A song of king *Nyima mgon* is found in my article 'Ten ancient historical songs from W. Tibet,' Ind. Ant., 1909.

The names of the officers as given in K. Marx's A.M.S. are different from those given here,—A.M.S. reads *rTse sho rgya ri* instead of *rTse tho rgya ri*.

with Khalatse, see in my History of Western Tibet. The last vassal kings of Khalatse were apparently *rGya zhin* and *Shirima* (Śrīmān).

Lhachen dge bhe and *dGe 'abum*, c. 1140—1170. A.D. S.M.S. spells *bLachen*. Nothing known beyond the names.

Lhachen jo ldor, c. 1170—1200 A.D. Nothing known beyond the name.

bKrashis mgon, c. 1170-1200 A.D. Nothing known beyond the name. But if *Lha rgyal*, whose name is found only in S.M.S., has to be omitted, all that is mentioned under *Lha rgyal* would refer to his reign.

Lha rgyal, c. 1230—1260 A.D. I think I had better give up the idea of identifying him with *Lhachen kundgā rnam rggal* of the Daru inscription, as I did before. See Ind. Ant., Vols. XXXV, XXXVI, Archæology in Western Tibet.

Lhachen jo dpal, c. 1260—1290 A.D. A song in honour of king *Jo dpal* is found in Ind. Ant., 1909, 'Ten ancient historical songs.'

Lhachen dngos grub, c. 1290—1320 A.D. He is mentioned in the *Māhātmya* of Likir as having come to the throne seven generations after *Lhachen rgyalpo*. Introduction of the *bKā 'agyur* which had just then been completed by *Buston*. The Mongols received the *bKa 'agyur* in 1310 A.D. If we can trust the Kashmir chronicles, he was killed by the *Kalamanyas*, people of *Kharmang*.

Lhachen rgyalbu rinchen, c. 1320—1350 A.D. See my article 'References to the *Bhoṭṭas* in the *Rājātaranginī*,' Ind. Ant. 1908. He became the first Mohamedan king of Kashmir. The Persian 'History of Azmi' tells of his conversion to Mohamedanism, of the erection of *Bulbul Lankar* in Srinagar by him, and of his erection of a mosque.

The Persian 'History of Malvi Haidar Mailik' contains a translation of a lost inscription by *Rainchana* in his mosque. According to it, he was only half Mohamedan.

The Ladakhi 'Song of the *Bodro Masjid*' speaks of the great saint *Bulbul*. A song entitled 'Prince *Rinchen*'s deparature' is found in my article 'Ten ancient historical songs,' Ind. Ant., 1909.

Lhachen shesrab, 1350—1380 A.D. See my History of W. T. His name is omitted in S.M.S.

Lhachen Khri gtsug lde, c. 1380—1400 A.D. Notes in my History of W. T.

Lhachen grags 'abum lde, c. 1400—1440 A.D. For his rock inscription at *Mulbe*, see Indian Ant., Vol. XXXV, p. 72. For the invasion of *Zainu-l-abidin* of Kashmir, see my article 'References to the *Bhoṭṭas* in the *Rājātaranginī*,' Ind. Ant., 1909. S.M.S. spells his name *gLa chen*.

bLo gros mchog ldan, c. 1440—1470 A.D. For invasions of Kashmir kings, see my article in the Ind. Ant., 1909. His name is found in the *Tarikh-i-Rashidi*, probably with reference to his descendants.

PART VII. THE EARLY KINGS OF THE SECOND DYNASTY OF WESTERN TIBET.

A translation of this chapter will be found in K. Marx's Three Documents (J.A.S.B., Vol. LX, pp. 123—135). In the following, names and notes only are given.

Lhachen gragspa 'abum, c. 1400—1440 A.D. A seal attributed to this king is still in the possession of the ex-kings of Ladakh. He was probably against *bTsongkhapa* and his reformation. Inscriptions of the time of the reformation are found in the desert between *Bashahr* and *Spiti*, and one at *Khalatse*. See my article 'Historische Dokumente von *Khalatse*,' Z.D.M.G., Vol. LXI, p. 583.

Lhachen bhara, c. 1440—1470 A.D. Nothing known beyond the name.

Lhachen bhagan, c. 1470—1500 A.D. During his reign the invasion

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of the Kashmir King Hasan Khan probably took place. It ended in the defeat of the Kashmiris. Being the founder of the *rNam rgyal* dynasty, he possibly accepted the name *Lhachen kun dgā rnam rgyal* which is found in the Daru inscription. A certain Baghan is mentioned as a *Chui (Jo)* of the provinces of Tibet in the Tarikh-i-Rashidi. Bhagan was possibly still alive in 1532 A.D.

Lha dbang rnam rgyal and *bKrashis rnam rgyal*, c. 1500—1532 A.D. An inscription mentioning *Lha dbang rnam rgyal* was found at Tingmogang. See my collection of Historical Inscriptions, No. 38. An inscription and a portrait of *bKrashis rnam rgyal* exist in the *mGon khang* temple at Leh. Another inscription of *bKrashis* is found in the *gSum rtsag* temple at Alchi which he renovated. Ladakhi Songs, No. V, refers to this renovation. The pedestal of his flag-staff is still in existence at *Phyi dbang*. He was apparently a great politician. He instigated the Turkomans to fight all his disobedient vassal-chiefs, one after another; compare the Tarikh-i-Rashidi, but he was possibly killed by the Turkomans in 1532 A.D. A Balti or Nubra chief of those times is called *Bahram* in the Tarikh-i-Rashidi. He is probably the *Bagram Mir* of the Nubra inscription (No. 41 of my collection). The Turkomans call *bKrashis rnam rgyal*—*Tashikun*, which corresponds to *bKrashis mgon*.

Thse dbang rnam rgyal, c. 1532—1560 A.D. He built the *Byamspa* monastery at Basgo where there is his portrait, together with those of his two brothers. His conquest of Kulu is confirmed by the chronicles of Lahoul. For the song of old *Bumbha*, his minister, see Indian Ant., 1909, 'Ten ancient historical songs,' No. VI.

rNam rgyal mgonpo, c. 1560 A.D., seems to have reigned for a short time, according to the Domkhar inscription, No. 103 of my collection.

'aJam dbyangs rnam rgyal, c. 1560—1590 A.D. For a song on his alliance with *Thsering malig* of Chigtan see my article 'Ten ancient historical songs,' No. VIII, Ind. Ant., 1909. In this song he is called *mDzes ldan rnam rgyal*. For Ali Mir Sher Khan's position in Balti history, see my remarks on song No. V of my collection 'Ten ancient historical songs from W. Tibet,' Ind. Ant., 1909. Ali Mir Sher Khan is probably the Balti king who was placed on the throne of all Baltistan by the Moghul emperor; compare Bernier's travels. The history of Baltistan from 1550—1839 A.D., is found in Vigne's travels. Vigne took down Raja Ahmed Shah's account. For an inscription referring to '*aJam dbyang's* marriage to a Balti princess, see my article 'Rock inscriptions at Mulbe,' Ind. Ant., Vol. XXXV. The so-called 'Song of Ali Mir' is found only in K. Marx's B.M.S. not in S.M.S.

Sengge rnam rgyal, c. 1590—1620 A.D. The accounts of the reign of this king, as they are found in K. Marx's A.M.S., and in S.M.S., agree on the whole, but S.M.S. contains the following additions:

SMS: Then also, he built a *sKu gdung* (kind of stūpa) six stories high furnished with copper and gilt wheels [on the top], and had a *bKā 'agyur* [copied] in gold, silver, and copper. At Leh he erected three *manthang* (Mendong, maṇi walls), and Fol. 30b. one in *Zangs mkhar*, with altogether 100 millions of maṇi stones. As a scent offering he erected the images of the golden chain of the *dKar brgyud* lamas, and the great *Thub [pa]* (Buddha) at *Shel* (Sheh). He caused the precious teaching of Buddha to rise like the sun over all men.

Notes on the above passage from SMS. In K. Marx's BMS the great Buddha and the great stūpa, both at Sheh, are stated to have been erected by *bDe ldan rnam rgyal*. Their construction was possibly begun under *bDe ldan's* father, *Sengge rnam rgyal*. The *dkar brgyud* lamas are the nine 'church fathers' of the '*aBrugpa* sect of Tibet. In

inscription No. 128, their names are given as follows: 1 *rDo rje 'achang*, 2 *Tili (Telopa)*, 3 *Naro*, 4 *Marpa*, 5 *Mila*, 6 *rGampo*, 7 *Tharsabpa*, 8 *gNas phugpa*, 9 *dPal ldan 'abrugpa*. The images of several, if not all, of them can be seen at the Lamayuru monastery.

General notes on this king: The image of Maitreya which he erected at Basgo is to be found at the Seljang monastery where there is also the ancient royal library. According to the chronicles, he introduced all the great deities of Hindustan. It was probably during his reign that 'the Ladakh people imbibed faith in the doctrine of Guru Nanak,' as stated in the *Dzamling gyeshes* (JASB., vol. lvi, p. 192). Even now-a-days, the Golden Temple at Amritsar is a Ladakhi place of pilgrimage. King Sengge's orders regarding the dress of his subjects are found in my MS. collection of proverbs from *rGya*. A picture of the royal household of his times is found at *Nyoma* in Ladakh. An inscription from Hemis, which gives an account of *Sengge rnam rgyal's* erection of the Hemis monastery, is reproduced in Schlagintweit's *Buddhism in Tibet*. His defeat at *Shiri dkarmo* is mentioned by Mongol writers as having taken place in 1619, see Köppen II, p. 146. The history of *Sengge rnam rgyal's* stepbrother, *Ngag dbang rnam rgyal*, is found in my history of Lahoul, written for the Ind. Ant. *Ngag dbang's* name is also connected with the Ladakhi monasteries of *Stagsna* and *Ngod*.

PART VIII. THE LAST INDEPENDENT KINGS OF LADAKH.

In the following a translation of the Tibetan text, as it is contained in SMS, will be given. With this ought to be compared K. Marx's translation from a fuller text. See JASB, vol. lxxiii, pp. 94—106. A few notes of general interest will be attached to my translation from SMS.

SMS: His son *bDe ldan rnam rgyal* (c. 1620—1640 A.D.) lived like him according to the ten virtues during his youth. He protected his subjects according to religion. He wrote a biography of his father in accordance with his [father's] character. He showed unceasing kindness to others, and his courage was as great as that of four heroes combined.

Notes: What is called a biography of *Sengge rnam rgyal*, was probably a history of Ladakh which ended with the reign of king *Sengge*, like K. Marx's AMS. Also SMS was such a biography, to which were added a few brief notes on the succeeding kings. That king *'aJig med rnam rgyal* actually did not possess a better text of the history of his country from 1620—1856 A.D., becomes evident from the following incident: When ex-king *bSod nams rnam rgyal*, on a recent visit to *Khalatse*, discovered that the *Tingdzinpa* family was in possession of a *rGyal-rabs* which contained full descriptions of the reigns of the last independent kings, he carried away all these later chapters, returning only the first part of the history to the family.

For king *bDe ldan's* war with the Turkomans, see my notes on it in my article 'Ten ancient historical songs,' song No. V, Ind. Ant., 1909.

During *bDe ldan's* reign, the Jesuit Andrada's Mission to Guge took place. It was ended by the king making his brother *Indra Bodhi rnam rgyal* king of Guge. Two inscriptions, evidently referring to the last vassal king of Guge, *Khri bkrashis gragspa lde*, and to Andrada's Mission, were discovered on my Spiti journey last year. In *Duka's Life of Csoma de Körös* we read the following: 'A work by a Romish Missionary on Tibet, the *Speculum veritatis*, dated 1678, was discovered in an obscure spot of Kunawar in the beginning of the 19th century. Dr. Gerard believed it to be connected with Andrada. It was sent to Csoma.' King *bDe ldan's* third brother, *bDe mchog rnam rgyal*, was made vassal king of

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Spiti and Zangskar. His name is found on inscriptions in Zangskar. See Mr. Howell's collection.

bDe legs rnam rgyal (c. 1640—1680 A.D.).

SMS : His son was *bDe legs rnam rgyal*. When he began to reign, the Mongol *dGā ldan thsang*, who had eyes like a bird, overran the country with an army.

(Verses).

The king resided at *Bab sgo*
And beat the Mongols
With the assistance of an army from Kashmir,
And the Mongols fled.

Again the kingdom flourished as before and partook of the holy glory of beautiful virtue.

Notes : The battle of Basgo is also mentioned in Moorcroft's Travels, vol. i, p. 336. A document with Aurangzib's seal was discovered at Lamayuru by Moorcroft. It testifies to the dependence of the Ladakhis on the Mughal emperors after the battle. Inscriptions mentioning *Mi pham mgon* as regent of Ladakh after the battle of Basgo have been found at Nyurla and rGya. After the battle, a treaty was concluded between the Tibetans and the Bashahr State. Several documents of this treaty have come to light recently. A fresco representing the treaty is to be found in a garden house of the Raja's palace at Rampur.

SMS : His son was *Nyima rnam rgyal* (c. 1680—1720). He erected also, through the prayers of the brave-minded religious kings (Bodhisatvas ?), all kinds of religious buildings and statues, according to the religious merit of all beings.

Notes : The Jesuit Desideri visited Leh in 1715 A.D. He calls the king *Nima namgial*, and testifies to the absolute independence of the Ladakh empire. The Latin Bible, found in Ladakh by Moorcroft, was probably left there by Desideri. It came from the Papal Press and was dated 1598 A.D. For a legal document and inscriptions of this king, see my article 'Archæology in W. Tibet,' Ind Ant., vols. xxxv, xxxvi.

SMS : His son was *bDeskyong rnam rgyal* (c. 1720—1740 Fol. 31a. A.D.).

Notes : For a song on little prince *bDe skyong*, see Lad. Songs, No. xvi, 'The girl of Sheh.' According to an inscription at Alchi, he restored the outer court of the *rNampar snang mdzad* temple at Alchi.

SMS : His son was *Phun thsogs [rnam rgyal]* (c. 1740—1760 A.D.).

Notes : He ordered a rock sculpture of Buddha to be carved in the *Mang rgyu valley*. The inscription below the sculpture is found in my Second Coll. of Hist. Inscr., No. 113.

SMS : His sons were *Thse dbang rnam rgyal* (c. 1760—1780 A.D.) and *Mi 'ajigs thse brtan rnam rgyal*, the two. The elder son reigned in Ladakh, and the younger in Zangskhar.

Notes : As regards the second son, there is no mention of him in K. Marx's 'Three Documents.' According to inscriptions, *Thse dbang*

restored the Likir monastery after a fire; and the restoration of the *Mangrgyu* monastery was apparently also carried out during his reign.

SMS: *Thse dbang rnam rgyal* had two sons. As the life of the first son (*Thse brtan rnam rgyal*, c. 1780—1790 A.D.) was not firm (he died soon), the younger one, *Thse dpal mi a'gyur dongrub rnam rgyal* [reigned],—(c. 1790 1841).

Notes: As regards *Thse brtan*, his reign was compared favourably with that of his younger brother in the seditious placard at Leh in Moorcroft's time. A song treating of his playing polo in the *Murtse* garden at Leh has not yet been published. As regards *Thse dpal's* reign, the country was visited by Moorcroft during that time, 1820—1822. Moorcroft mentions a war between Ladakh and Baltistan, vol. I, p. 336. He was asked to interfere. A Tibetan document referring to this war was published by myself in my article: *Historische Documente von Khalatse*, ZDMG, vol. lxi. A tender of allegiance from the Ladakhis to the British Government was communicated by Moorcroft, but not accepted by the East India Company. A letter from the Czar of Russia to the King of Ladakh was shown to Moorcroft. Trebeck witnessed a war between Kulu and Ladakh, see Moorcroft, vol. i, p. 456, vol. ii, pp. 63, 64. As regards the army of *Rastanpas* which I explained as an army from Lower Ladakh, Dr. Hutchison points out to me that it was in reality the army of *Ratanu of Padar*. I also made a mistake when I treated *Rabstan rnam rgyal* and *mChog sprul rnam rgyal* as two different princes. They seem to be different names of the same person. *Rabstan* probably received the name *mChog sprul* when he was found out to be an incarnation of *Bilva rdorje*.

PART IX.—THE HISTORY OF THE DOGRA WARS.

SMS: During the time of his (*Thse dpal's*) son *mChoggi sprul sku*, the army of the *Sing* (Dogras) tampered with his minister (*Ngos grub bstan 'adzin*), and robbed the king of his dominions.

Notes on SMS: As we know from *Thse brtan's* account of the Dogra war, prince *mChog sprul* was made regent of Ladakh a short time before Zorawar overran the country. It is interesting to see that in the mind of the writer of SMS it was the faithlessness of the minister that brought on the ruin of the Ladakhi kingdom.

General Notes: An interesting song on 'minister *Ngos grub bstan adzin* in prison' is among my collection of historical folklore. A Sanskrit inscription in the Chigtan monastery evidently refers to the Dogra war. It speaks of an army and the crossing of a river on inflated skins. *Rayim Khan* of Chigtan, the hero of the 'Polo Song,' Ladakhi Songs, No. III, is probably identical with *Rayim Khan* of Chigtan, of whose tragic fate we hear in the history of the Dogra wars. The raja of Baltistan, Ahmed Khan, who was taken to Lhasa as a prisoner, evidently returned to Kashmir State territory. His grave is shown in Kishtawar. A portrait of Ahmed Khan is found in Vigne's Travels. In Sherring's 'Western Tibet' is reproduced a photo called 'Zorawar's grave,' taken near Taklakar. As Dr. Longstaff points out, the ruin at Taklakar looks far too old to be Zorawar's grave. He connects the ruin with Haidar's Tibetan campaign in 1532 A.D. According to the most recent edition of K. Marx's CMS, Zorawar was actually accompanied by his wife on his Tibetan campaign. A full account of the Dogra wars, 1834—1842 A.D., is found in my 'History of Western Tibet.'

PART X.—LADAKH AFTER THE DOGRA WARS.

SMS : His (*mChog sprul's*) son *a'Jigsméd choskyi sengge mi 'agyur kun dgā rnam rgyal* is this one (the present *ex-king*).

Notes: This last sentence means that the *ex-king* of Ladakh, who was alive in Schlagintweit's time, was in possession of the long name '*aJigsméd*, etc. It was he who, as a boy of seven years, reigned at Leh for six weeks, after Zorawar's death. It was he who in 1856 refused to let Schlagintweit have a copy of the *rGyalrabs*, until valuable presents had been made to him. If I am not mistaken, '*aJigsméd* is the father of the present *ex-king* *bSod nams rnam rgyal*.



34. Discovery of Abhisamayālamkāra by Maitreyanātha.

By MAHĀMAHOPĀDHYĀYA HARAPRASĀDA SHĀSTRĪ.

Rājā Rājendra Lāla Mittra edited the Aṣṭa Sāhasrikā Prajñāpāramitā from six manuscripts. I have also examined a score of manuscripts of this work, ancient and modern, some of them written during the reigns of the Pāla kings of Bengal. In all of them twenty-one verses precede the prose and we, all of us, thought that the twenty-one verses are a part and parcel of the work, but in 1907 when in Nepāla I got a very dilapidated old manuscript on palm-leaf of this work in which the prose is preceded by कतिरियं राजल भद्रस्य । This for the first time opened my eyes to the fact that the Prajñāpāramitās are all in prose, the verses are different works. But I wondered what Rāhula Bhadra's Kṛti could be. All previous leaves of this manuscript were gone, and so I began to look more carefully and found four letters preceding the statement " कतिरियं राजलभद्रस्य " । These letters are " सुनिर्दिता " । And I found in R. Mittra's edition, those to be the last letters of the twentieth verse. So the first twenty verses in Rajendra Lāla Mittra's edition are a work by Rāhula Bhadra in praise of P. P. The twenty-first verse is a mere ' फलश्रुति ' and can be composed by any one but the author.

This encouraged me to examine the manuscripts of other recensions of Prajñāpāramitā, and I took up the Pañcaviṅśati-sāhasrikā Prajñāpāramitā, which, in Rajendra Lal's and Bencdall's descriptions, begin with verses. The verses continue for many pages, and there are colophons indicating chapters. That increased my wonder. It cannot be a hymn like that of Rāhula Bahadra, and I continued turning over the pages, till I came to the last colophon of the versified portion. इति श्रीमैत्रेयनाथविरचिते अभिसमयालङ्कारशस्त्रे प्रज्ञापारमितोपदेशे अष्टमोऽध्यायः । Then the prose began एवं मया श्रुतमेकस्मिन् समये भगवान् etc. Evidently the versified work was "अभिसमयालङ्कार" which was designed for interpreting Prajñāpāramitā, and it was by Maitreyanātha. I turned over the leaves, and when I came to the last leaf I found a statement to the effect that 25,000 Prajñāpāramitā is a recast according to the teaching of Abhisamayālamkāra, and, according to the numbers of the chapters of that

work, was divided into eight chapters. Of what recension of the Prajñāpāramitā it is a recast cannot be positively stated; but in all probability it is the Aṣṭasāhasrikā recension in thirty-two chapters or parivartas which has been recast. I have not compared the two recensions, and that I leave to future explorers.

Referring to Nanjio's catalogue of the Chinese Tripitaka, I find that the Pañcaviṅśatisāhasrikā Prajñāpāramitā was twice translated into Chinese between 265 and 316 A.D., and in both these cases, Nanjio notes "with the first chapter on." The book is in eight chapters. What does Nanjio mean by that statement? If it means anything it means that the translation included Maitreyanātha's work. The next translation by Kumārājīva was made some time before Huientsang's translation between A.D. 384 and 417. But in the description of that translation, the statement "with the first chapter on" does not appear. Kumārājīva was an Indian Paṇḍita. He knew where to commence a translation of Prajñāpāramitā, while his predecessors, being Chinese, translated the work from the manuscript placed before them, which had Maitreyanātha's work added to it.

The antiquity of the translation shows the antiquity of the work. The Prajñāpāramitās are written in the form of a dialogue between Buddha and his followers. They begin in the traditional form:— एवं मया श्रुतमेकस्मिन् समये भगवन् etc. But they are really the works of Nāgārjuna. It is said that he had recovered them from the nether world. In some Prajñāpāramitā manuscripts it is written at the end नागावर्जनेन पातालाद्दुर्गता, as if they were lost to this world and Nāgārjuna recovered them.

Nāgārjuna is said to have flourished 50 years after Kaṇṣka's great council, that is, about the middle of the second century A.D. Maitreyanātha, therefore, must have flourished between 150 and 265 A.D.

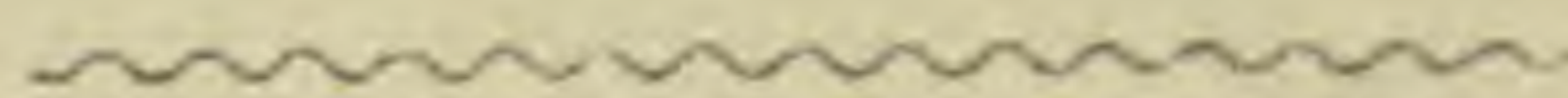
My friend Mr. Yamakami tells me that many scholars in China and Japan consider Maitreyanātha to be a hypothetical person, like Avalokiteśvara and others, and not a historical person; and that he was brought to being by Asaṅga in the beginning of the fifth century, and that the works attributed to him are really the works of Asaṅga. This is clearly disproved by the existence of this work and of its translation into Chinese, at least 100 years before Asaṅga. The statements made in Sadajiro Sigiura's book entitled Hindu Logic also disprove this theory. For, he says that Nāgārjuna believed in four pramāṇas, namely—(1) Pratyakṣa, (2) Anumāna, (3) Upamāna, and (4) Sabda. Maitreyanātha discarded Upamāna, and Diṅnāga discarded Sabda, leaving only two pramāṇas in the later Buddhist philosophy. This statement shows that Maitreyanātha was a historical personage.

In Nanjio's catalogue, ten works are attributed to Maitreya-nātha. The fact that Pañcaviṅśatisāhasrikā was so early translated into Chinese, coupled with the fact that it was so often translated, shows the popularity of the school founded by Maitreya-nātha in China. In India, too, his doctrines seem to have been very popular, as even so late as the reign of Dharmapala in Bengal the Aṣṭasāhasrikā Prajñāpāramitā was commented upon by Haribhadra in the light of the teachings of Maitreya, and the commentary is entitled Abhisamayālamkāra-valoka. In the second or the third century Aṣṭasāhasrikā was recast according to the teachings of Maitreya ; but in the ninth century a commentary was written for the same purpose. In the commentary it is stated that the division in chapters of the original is preserved in the commentary, implying that the commentary is intended to replace the Pañcaviṅśati Sāhasrikā.

In noticing the manuscript of Pañcaviṅśatisāhasrikā, Dr. R. Mitra could not find that another work was embodied in it. Professor Bendall noticed that there was another work. But he thinks it is an introductory work. He didn't grasp that it was according to this small treatise that P. P. has been recast.

But he did not grasp why the strange colophon is given there. So the Abhisamayālamkāra eluded the research of two such eminent scholars for nearly 30 years.

The word Abhisamaya is the same as Abhidharma. The Hīnayānists used the latter word, while the Mahāyānists used the former. The word 'alamkāra' in Buddhist literature meant exposition. So Abhisamayālamkāra means the exposition of philosophy.



35. The Koṭwalipārā Spurious Grant of Samācāra Deva.

By RAKHAL DAS BANERJI, *with a Prefatory Note by MR. H. E. STAPLETON, B.A., Inspector of Schools, Dacca.*

NOTE.

The principal feature of the *bil* country lying in the S. W. of Faridpur district is the finely preserved fortification of Koṭwalipārā, the mud walls of which are each about 2 miles long and 20 to 30 feet high. Early in 1908, in the course of a tour of inspection in Bakarganj and Southern Faridpur, I had the opportunity of visiting the locality in company with an Assistant Settlement Officer, Babu Kālipada Maitra, and as the result of my request that he should look out for coins, and copper plates similar to the one described in the Journ. Asiatic Soc. Bengal for 1896, pp. 6—15, by Babu Nagendranath Basu, that is alleged to have come from the village of Piñjurī close to and outside the south-west corner of the fortification, Kalipada Babu forwarded to me later, in 1908, the rubbings of two Gupta coins, and the copper-plate that forms the subject of Babu Rakhal Das Banerji's note. A cast of one Gupta coin now in my possession, belonging to Skanda Gupta, was exhibited with the copper-plate at the Society's Conversazione last January, and the other coin is dealt with in a recent paper on Eastern Bengal and Assam history (Journ. Asiatic Soc. Bengal, 1909, Contributions 1, p. 142). The copper-plate was at first entrusted to Mahāmahopādhyaya Haraprasad Sastri who, with the help of Pandit Nilmani Chakravarti, roughly deciphered it and read the date as being 44 of the Sri Harsha era (= 651 A.D.). He added, however, that, in the opinion of the late Dr. Bloch, the plate was a *leuta śāṣana*, or forgery. Babu Rakhal Das Banerji subsequently undertook to make a more thorough study of the plate, with the result that Dr. Bloch's opinion seems to be confirmed.

The plate is said to have been recently discovered about 9 inches under the surface of the ground by a cultivator while digging his holding at Ghāgrāhāti, a mauzā close to Piñjurī on the Ghāgar River which runs from north to south along the western *pār* of the fortification. The names of the mauzās in the immediate vicinity bear no relation to the names given at the end of the fortification, but 2½ miles north, near the north-west corner of the fort, occur four mauzās, *Ferdhara* (to the south of the village and thana Ghāgarhāt), *Koakha* (to the north-east of the same village), *Parkunāhāt* (within the fort at the

N.-W. angle), and *Kujbon* (a large mauzā, of which the southern boundary is the northern *pār*). The first two appear to be the modern representatives of *Vidyādhara Jogikā* and *Chandra Varmma Kogaka* respectively, and indicate that the original deposit-spot of the copper-plate under consideration was, near the place where the old road from Ghāgrāhāt to Gaurnadi (in N.-E. Bakarganj) still passes through the western *pār*.

The plate is interesting as dating from before the time of the Sena Kings, though it is disappointing that no light is thrown on the question as to who was the builder of the *pārs*. The discovery of the Gupta coins in villages lying close to the western *pār* may be taken, however, as proof that the fortification dates back to at least Gupta times, as, apart from the *pārs*, there is nothing in the surrounding *bil* country to induce invaders from the N.-E. to visit the place. The history of the locality will form the subject of a later paper.

H. E. S.

The plate was sent to me at Mussoorie by Mr. H. E. Stapleton in September, 1908. It was sent back in November from Lucknow for the Society's *Conversazione*. The plate was finally handed over to me for publication in July 1909. Mr. Stapleton has recorded the *provenance* in the prefatory note. The discovery of the copper-plate and the gold coin in the mounds of the outskirts of Koṭwalipārā is of great interest, as it proves beyond doubt that there was an ancient settlement at this place centuries prior to the Mussalman conquest. Koṭwalipārā or Koṭālīpādā is at present known as one of the oldest Brahmaṇa colonies in Bengal. Prof. Nilmani Chakravartti wrote to me while I was at Lucknow that the late Dr. Bloch had pronounced the grant to be a forgery. Dr. Bloch himself told me a short time before his death, that he considered the grant to be a forgery. Nothing seems irregular in the script or the date at first. The script belongs to the period when acute-angled characters were beginning to be used in North-Eastern India, and the ancient Gupta alphabet of the Eastern variety was gradually becoming out of date. The date also is not irregular, the year 34 of the Harsa era = 640-41 A.D. also suiting the palæography. After prolonged examination I found some of the minor irregularities in the script:—

(1) In all cases, the letter *ha*, when it occurs singly, is of the form generally to be found in early Gupta inscriptions of the Western variety and shows *no* acute angle at the bottom. But when it is used in a compound letter it has the form to be found in early Gupta characters of the Eastern variety, which is to be found in the Allahabad Asoka-pillar inscription of Samudra Gupta¹ and the Dhanāidaha grant of Kumāragupta I.² In

¹ Fleet's Gupta Inscriptions, p. 1.

² See *ante*, vol. v, p. 459.

[N.S.]

a previous number of the Journal I have tried to establish that the Eastern variety of the early Gupta alphabet was dying out in the early decades of the fifth century. The Paṭiākellā grant of Śivarāja¹ and the Bodh-Gayā inscription of Mahānāman² prove that the elimination of the Eastern variety of the fourth century alphabet was complete by the end of the sixth century A.D. This conclusion is further borne out by the Mūṇḍeśvarī Inscription of Udayasena³ and the Ganjām plate of the time of Śaśāṅkarāja.⁴ Moreover the *ha* of the Western variety occurring singly and that of the Eastern variety occurring in compounds (*hma* in *brāhmaṇa* in line 11 and line 14), are hardly in keeping with the general tone of the characters of the inscriptions. But I shall have to dilate on this point later on.

(2) In all cases, the long *ī* has the form generally to be found in the Eastern variety of the early Gupta alphabet. The most conspicuous case is the *ī* in *Jivadatta* in line 4 and to some extent *ī* in *Kesav-ādīn* in line 15. But in a genuine inscription of the Harṣa year 34 one expects long *ī* of the looped form to be found in the Mūṇḍeśvarī Inscription or the Ganjām grant.

(3) There are two cases of the occurrence of the short *i* in its single form, and in each case it has a different form. The *i* in *icchāmy-aham* in line 9 consists of two dots, one above the other, and vertical straight line to the proper left. The *i* in *icchato* in line 14 consists of two dots, placed side by side with a horizontal straight line below them. The usual form of *i* in inscriptions of the first half of the seventh century is to be found in the two copper-plate grants of Harṣavarddhana and the Ganjām plate of the time of Śaśāṅkarāja. This consists of two dots or circles placed side by side and a curved line below them.

(4) Many of the characters of this inscription exhibit fourth century or early Gupta forms. In the majority of cases the letter *ma* has the hooked form to be found in the *Bhāradi Dih* Linga inscription. The *bipartite ya* looks ill side by side with *sa*, *ja* and *ha* (when it occurs alone), in which no acute angle can be traced.

(5) *La* as a subscript letter occurs only once and resembles the hooked *la* of the Eastern variety. In this inscription *la* in all other cases resembles the *la* of the Western variety of the Gupta alphabet.

(6) *Da* has two forms when occurring in the same compound *ṇḍa*:—c.f. *Suvarṇḍa* in line 3 and *maṇḍale* in line 4 with *Vatsakuṇḍa* in line 7 and *Janarddaka-kuṇḍa* in line 8. In

¹ Ep. Ind., vol. ix, p. 285.

² Fleet's Gupta Inscriptions, p. 274, pl. xlii.

³ Ep. Ind., vol. ix, p. 289.

⁴ *Ibid.*, vol. vi, p. 143.

the last two cases the compound has the form to be found in all Northern Indian inscriptions from the second to seventh century A.D.

(7) The scribe has made a serious mistake in using some eighth century characters of the Northern variety in the word *Parkkatī* in line 19. The letter *pa* in the word does not resemble the remaining ones, which are usually rectangular in form, seldom showing an acute angle. In this letter, the right-hand vertical and the horizontal straight lines of the letter have merged into a single curve. The earliest occurrence of this form of *pa* is to be found in inscriptions of the seventh and eighth centuries A.D. But the more important piece of evidence is to be found in the second syllable *rkka*. This consists of two looped *kas* and a superscript *ra*. But even in the Bānskhera and Madhuban plates of Harsavarddhana, which are inscribed with characters so cursive and at the same time the execution is so very beautiful that they may be taken to represent the current script of the period, the looped form of *ka* in the sixth century A.D. are to be found in the Bodh-Gayā Inscription of Mahānāman and the Ganjām plates of the time of Śaśānka.¹

This form of *ka* becomes fairly common from the last quarter of the seventh century A.D. and afterwards.

Thus, we find that the characters used in this copper-plate inscription were collected from alphabets in use in three different centuries :—

(1) The alphabet of the third and the first half of the fourth century A.D., c.f. *ha* in *hma* and *la* in *śloka*. The form of *ma* shows that it was copied from the early Gupta alphabet of the Eastern variety.

(2) The alphabet of the last half of the fifth century and the first half of the sixth century A.D. of North-Eastern India. The absence of acute angles in *ja*, *pa*, *ha* and *la* shows that the alphabet of the period of the Mūṇḍeśvarī inscription was also included.

(3) The regular alphabet of the sixth century with its profusion of acute angles is also very conspicuous. This alphabet came into general use in North-Eastern India in the earlier part of the seventh century A.D.

Apart from the palæographical evidence, the wording of the inscription itself is sufficient to prove that it is a forgery.

The formula of a regular grant of land as is to be found in majority of copper-plate inscriptions may be divided into three separate parts :—

(1) The first portion may be either in prose or verse and generally gives the genealogy of the king or eulogium on him.

¹ Fleet's Gupta Inscriptions, p. 274, pl. xlii; Epi. Ind., vol. vi, 143.

[N.S.]

In shorter grants this portion is written in prose and gives the titles of the king.

(2) The second portion is invariably written in prose and contains the announcement of the grant to the various officers concerned. This portion also contains the details about the grant, *e.g.*, the particular division, district or sub-division in which the land or village granted was situated.

(3) Some imprecatory verses generally taken from some of the Dharma Śāstras are added at the end. In some cases the date is given after these imprecatory verses.

This grant differs from the majority of copper-plate grants discovered up to date in the following particulars:—

(1) The king does not seem to be the donor, or to have consented, or to have sanctioned the grant.

(2) The name of the donor cannot be made out from the wording of this grant.

(3) The officers concerned in a particular grant are never mentioned by name: at least no such instance has been discovered up to date.

(4) Supratīkasvāmī seems to be the agent by whom the various officers mentioned in lines 4 to 8 are informed about the grant. But the very same man is again mentioned in line 17. The construction of this line is ambiguous, but it seems that he is the man to whom the grant was made. For example, compare the statement in lines 9 to 12, where he says, “By your grace I intend to settle for ever in order to spread the sacrificial rites in this world.” The wording of this line too is also very ambiguous, and I am not quite sure as to the exactness of the above translation. Such a statement, *viz.*, the expression of the grantee’s intention, is very odd in the wording of a copper-plate grant and, so far as I know, has not been met with before. The employment of the recipient of a grant as a *Dūtaka* is again extremely unusual, and I believe no such case has been met with up to date.

The wording of the copper-plate, as I have already stated, is very ambiguous, and it cannot be made out who is the real donor. It is quite certain that the king mentioned in line 2 is not the donor. The grant may have been made by the officers mentioned on the obverse, but this is not certain. In any case, when a subordinate officer, or a number of officers, or a private personage makes a grant, it is absolutely necessary to obtain the royal sanction to it. Similar cases have already been met with: compare the Kamauli grant of the Singāra Chief Vatsarāja of the Vikrama year 1191 = 1134 A.D.¹

The contents of lines 12 and 13 are quite unintelligible. Here and there words of Sanskritic origin are to be found

¹ Epi. Ind., vol. iv, p. 131.

mixed up with what seems to be unintelligible gibberish. The scribe's object most probably was to create an impression by using high-sounding words. Dr. Bloch seems to have deciphered these two lines in a different manner, but I do not think he succeeded in interpreting them. We have a mention of a forged grant in the Madhuban grant of Harṣavarddhana, in which we find that the king, finding that a Brāhmaṇa named Vāmarathya was enjoying a village named Somakuṇḍaka in the Śravasti bhūkti by holding a forged grant, confiscated the village and granted it to another man in the 25th year of his reign, *i.e.*, 631-32 A.D. The wording of the 10th line of the plate is quite clear.

“Somakuṇḍakagramo Brāhmaṇa Vāmarathyena kūtaśa-
sanena bhuktāka iti vicārya yatas-tac-chāsanam bhaṅktvā
tasmādakṣipya ca.”¹

The inscription is incised on a thin plate of copper measuring $8\frac{1}{4}'' \times 4\frac{3}{4}''$. There is a projection to the proper right of the inscription to which the seal was attached. The seal itself has now disappeared revealing a triangular slit, the object of which is inexplicable to me. Round holes are to be found in grants which are incised on two or more plates, and the ring holding together these plates passes through these holes, but these holes are always round, and I do not remember having ever seen or heard of an angular hole in a copper-plate. The average height of the letters are $\frac{3}{8}''$. The record is incised on both sides of the plate, the obverse bearing 12 lines and the reverse 11. The orthography scarcely needs any comment, but the following forms should be noted:—

(1) The *Suvarṇa* in line 3 was most probably meant to be *Suvarṇa*.

(2) *Vyavahānaścha* is most probably equivalent to *Vyavahāriṇaś-ca*.

(3) The word *Patacca* in line 16 seems to be the *Prakrit* form of *Pratīcya*. The use of this word is another argument against the genuineness of the grant. The language of the grant is incorrect Sanskrit. Another strong argument against the genuineness of the grant is that the scribe wanted to put extra stress on the word *Tāmrapatā*. It has been used at least thrice, and it seems that the owner of the plate was over-anxious to get the plate established as a regular grant; compare line 11 ताम्रपट्टीकृत्य, lines 15—16 प्राक्ताम्रपट्टीकृत्य and line 17 सुप्रतीकस्वामिनः ताम्रपट्टीकृत्य प्रतिपादितः ।

Nothing is known at present about Samācāradeva, the king in whose reign the grant purports to have been issued. The date at the end of the grant is 34, and this should be re-

¹ Epi. Ind., vol. vii, p. 158.

ferred to the Harṣa era and not to the Gupta era. It must be admitted that a large number of letters of the Eastern variety of the early Gupta alphabets has been used in this grant, but the general tendency of the characters show that the scribe intended to use the acute-angled alphabets of the sixth and sixth century A.D. If this supposition is correct then the date of the grant is the 1st of Kārtika of the Harṣa year 34, *i.e.*, 640 A.D. I may note in this connection that the date has been differently read by two different scholars.

Prof. Nilmani Chakravarti of the Presidency College read this date as 44, but this can hardly be the case, as the letter *la* has always been used to denote the numeral 30. In another grant I have noticed that any other compound formed with the letter *la* also denotes the same numeral.¹

The late Dr. Bloch read the date to be 14, but I believe I have already adduced sufficient proof to establish my reading. In the year 640 Emperor Harṣavarddhana of Thaneśvara was alive and was in undisputed possession of Northern India from the Panjab to Assam. At this time the existence of an independent monarch, as is indicated by the title Mahārājādhirāja, in Eastern Bengal can hardly be credited unless substantiated by epigraphs. I edit the inscription from the original plate.

TEXT.

Obverse.

- १ । स्वस्त्यस्याम्पृथिव्याम्प्रतिरथे नृग-नङ्ग-यथात्यम्बरीष सम-
- २ । धृतां महाराजाधिराज श्रीसमाचारदेवे प्रतपत्येतच्चरण करल
- ३ । युगलाराधनोपात्त नव्यावकाशिकायां सुवर्ण वाश्याधिकृतान्त-
- ४ । ङ् उपरिक जीवदत्तस्तदनुमोदित कवारकमण्डले विषय-
- ५ । पति पवित्रको यतोस्य व्यवहारतः सुप्रतीकस्वामिना जेष्टाधि-
- ६ । करणिक दामुक प्रमुखमधिकरणम्बिषयमहत्तर वत्स-
- ७ । कुण्ड महत्तर शुचिपालित महत्तर विहितघोष शूरद
- ८ । महत्तर प्रियदत्त महत्तर जनार्दनकुण्डादय अन्ये च
- ९ । बहवः प्रधाना व्यवहा[रि]णश्च विज्ञाप्ता इच्छाम्यहं भवता['] प्रसा
- १० । दाक्षिरो वसन्नखिल भूखण्डलक बलि चरु सच प्रवर्त्तणीय
- ११ । ब्राह्मणोपया गायत्र ताम्रपट्टीकृत्य तदहं [य]था प्रसाद कत्र
- १२ । मिति यत धनदभ्यर्थनमुपलभ्य सं थो परिलिखिता

Reverse.

- १३ । न्य व्यवहारिभिः समन्य (?) सापटौ (?) श्वापदौ (?) जे (?) छा
राज्ञी धर्मार्थं निर्मल
- १४ । इच्छतो व्या(?)कृता भूमिं नृपस्यैवार्थधर्मं कृतदस्मै ब्राह्मणादायतामि
- १५ । व्यवहृत्य करणिक नयनागकेशवादीन्कुलचारान् प्रकल्प्य प्राक्ताम्रपट्टौ
- १६ । कृत्य चित्र कुल्य (?) वापत्रयं मपास्य व्याघ्रचोर कोयच्छि पतच्च
मुःसीमा
- १७ । लिङ्गा निर्दिष्टं कृत्वास्य सुप्रतीकास्वमिनः ताम्रपट्टीकृत्य प्रतिपादित
- १८ । सीमालिङ्गानि चात्रः पूर्वस्यां पिशाचपर्काट्टी दक्षिणेन विद्या-
- १९ । धरजोगिका पश्चिमायां चन्द्रवर्म्मकोगकेनः उत्तरेण गो
- २० । पेन्द्रचोरक ग्रामसीमाचेति ॥ भवन्ति चान्द्र श्लोकाः षष्ठिम्बर्ष सह
- २१ । खाणि स्वर्गं मोदति भूमिदः आक्षेप्ता चानुमन्ता वा तान्येव नरके
वसेत [॥]
- २२ । स्वदत्ताम्रदत्ताम्बा यो हरेत वसुन्धरां स्वविष्टाया(°) कृमिभूत्वा
पिटभि ।
- २३ । सह पच्यति ॥ सम्बत् ३०, ४, कार्ति दि १ ॥

36. The Marsden MSS. in the British Museum.

By W. R. PHILIPPS and H. BEVERIDGE.

Edited by REV. H. HOSTEN, S.J.

The importance of the Marsden MSS. for the history of the Catholic Missions in India will strike anyone who studies Mr. E. D. Maclagan's *Jesuit Missions to the Emperor Akbar*.¹ In 1896, Mr. E. D. Maclagan published some of the original letters of the Jesuit Missionaries in the Mogul Empire (1580-1605),² though it is a matter of some regret that he did not translate them fully, but only in so far as he considered them specially significant from a historical point of view. By way of compensation, we were given to understand that the Marsden MSS. contained much that is of interest for the subsequent period of the Jesuit Missions in North India.

Curiosity prompted us to find out what other documents the Marsden collection contains, and Mr. H. Beveridge was kind enough to send us a short report, which he obligingly allowed us to publish. This was three years ago, and we have lost little in delaying the publication of his note; for, learning the interest we took in the matter, the Right Rev. Bishop A. E. Medlycott now places at our disposal some notes made for him by Mr. W. Rees Philipps in June 1892.

Our share in the present work is therefore quite a modest one, all the honour of it redounding on Mr. W. R. Philipps and Mr. H. Beveridge. As the two writers break ground in different directions, their parts in this memorandum will easily be distinguished.

We begin by examining Mr. W. R. Philipps' report. The foot-notes are ours.

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¹ Cf. *Journ. As. Soc. Bengal*, 1896, No. 1, pp. 38—115. From notes recorded by his father, Gen. R. Maclagan.

² E. D. Maclagan published: (a) an original letter of Fr. Jerome Xavier (Agra, Sept. 1604), *Brit. Mus. Marsden MSS.* 9854, foll. 7-19; (b) a letter of Fr. Emmanuel Pinheiro to Manuel da Veiga, Provincial at Goa (Lahore, Aug. 12, 1605), *Brit. Mus. Marsden MSS.* 9854; (c) extracts from a letter of Fr. Anthony Botelho, *Brit. Mus. Marsden MSS.* 9855; (d) a *farman* of Akbar to the Provincial at Goa (in the Moon of Febr. 1583), *Brit. Mus. Marsden MSS.* 9854, fol. 5.—None of these documents is noticed by Fr. C. Sommervogel, S.J., in his *Biblioth. de la Comp. de Jésus*, Bruxelles, O. Schepens, 10 vols., 1890—1909.

The Marsden MSS. consist of 10 folio volumes numbered from 9852 to 9861 in *Catalogue of Additional Manuscripts* (Brit. Mus.), Vol. I (1828—41), Nos. 6666—12,229.

No. 9852 bears as title : *Sumario de las cousas que pertencen a la Provincia de la India Oriental y al gobierno della, compuesto por el Padre Alexandro Valignano, Visitador della, y dirigido a R. Provincial general Everardo Mercuriano en al año de 1579.* Folio.

Summary of the things pertaining to the Province of East India and its government, composed by Fr. Alexander Valignano, its Visitor, and sent to the Rev. Everard Mercurian, Provincial General, in the year 1579.¹

No. 9853 is :—*A Collection of Annual Reports relative to the state of the Portuguese Jesuit Missions in the East Indies ; of various dates, from 1601 to 1659.* Portuguese. Folio.

Nos. 9854 and 9855 are :—*A Collection of Letters and Papers relative to the state of the Portuguese Missions in the East Indies ; of various dates, from 1582 to 1693.* Portuguese. 2 Vols. Folio.

No. 9856 :—“ *Apologia e resposta feita pello Padre Valentim Carvalho, da companhia de Jesus, provincial nesta provincia de Japão e China, a hum tradado do Padre Fr. Sebastião de S. Pedro, da ordem de S. Francesco, que se intitula Recupilacã das causas porque o Emperador de Japão desteron de seus reinos todos os padres.*” Folio.

Apology and answer by Father Valentine Carvalho, of the Society of Jesus, Provincial in this Province of Japan and China, to a treatise by Father Fr. Sebastian de S. Pedro, of the Order of St. Francis, entitled : Summary of the reasons why the Emperor of Japan banished all the Fathers from his dominions.²

No. 9857 :—“ *Libro primero del principio y progresso de la Religion Christiana en Jappon, y de la especial providencia de que nuestro Señor usa con aquella nueva Iglesia : compuesto por el Padre Alexandro Valignano, de la compañía de Jesus, en el año 1601.*” Folio.

Book the first of the beginnings and progress of Christianity in Japan, and of the especial care taken by Our Lord of this

¹ Fr. C. Sommervogel, S.J., mentions among Fr. Valignani's MSS. one with the same title, the year being 1580, and “ *Provincial general* ” being replaced by “ *P. General.* ” (Evora Library, *Catal. dos MSS. I*, pp. 327-8). Cf. *Biblioth. de la C. de J.*, Vol. VIII, Col. 406, D.

² Mentioned by Fr. C. Sommervogel, S.J. (*Bibl. de la C. de J.*, Vol. II, Col. 792, A.), as in the British Museum.

new Church : composed by Fr. Alex. Valignano, of the Society of Jesus, in the year 1601.¹

No. 9858 :—“ *Certidão do Senhor Dom Pedro, Bispo de Japão, acerca do estado da quella nova igreja, 17 Nov. 1597 ;—Outra certidão do Capitão mor da viagem de Japão, 1597 ;—Relação do triste successo e perda da naõ S. Phelipe ;—Relação da morte de seis religiosos descalços do ordem de S. Francesco e outros 17 Christãos Japoes que Taicosama mandou crucificar e Nangasaqui ;—Relacion de las cosas de Japon, 1597 ;—Apuntamentos sobre o remedio da Christandad de Jappaõ para se apresentare ao Señor Visorey ;—Tratado que os religiosos de S. Francesco espalharaõ em Goa e em Baçaim no anno de 1598, contra os padres da Comp^a de Jesus que andaõ na conversão de Jappaõ ;—Certidão que o Bispo de Jappaõ, Dom Pedro Martinez, passou acerca da morte dos religiosos e Christaos que foraõ crucificados em Japão no anno de 1597 ;—Apollogia en la qual se responde a diversas calumnias que se escrivieron contra los padres de la Companhia de Jesus de Japon y de la China, hecha por el Padre Alexandro Valignano.*” Folio.²

1. Memorandum by His Lordship Dom Pedro, Bishop of Japan, concerning the state of that Church, 17 Nov. 1597 ;—
2. Other memorandum by the Captain-Major concerning the voyage to Japan, 1597 ;—3. Relation of the sad fortune and loss of the *St. Philip* ;—4. Relation of the death of six Discalced Friars of the Order of St. Francis, and 17 other Japanese Christians whom Taicosama had crucified at Nangasaqui ;—5. Relation on the affairs of Japan, 1597 ;—6. Notes concerning the help to be given to the Mission of Japan, to be presented to His Excellency the Viceroy ;—7. Tract which the Religious of St. Francis spread at Goa and Baçaim in 1598 against the Fathers of the Society of Jesus who labour for the conversion of Japan ;—
8. Memorandum sent by Dom Pedro Martinez, Bishop of Japan, concerning the death of the Religious and Christians crucified in Japan, in 1597 ;—9. Apology by Fr. Alex. Valignano in answer to divers calumnies written against the Fathers of the Society of Jesus in Japan and China.

No. 9859 is :—“ *A Collection of Annual Reports relative to the state of the Jesuit Missions in Japan ; of various dates, from 1585 to 1625.*” Partly Spanish, partly Portuguese.

¹ *Id.* Cf. *Ibid.*, Vol. VIII, col. 406, A. The second part is in the Ajuda Library, MS. 25/12 from foll. 244 to 420.

² References to Fr. C. Sommervogel, S.J., *op. cit.*, X, Coll. 1545-1549, and Fr. A. Carayon's *Biblioth. Historique de la C. de J.*, Paris, 1864, will show that several of these documents have appeared in print. Nos. 4 and 8 are probably reproduced in No. 4, Col. 655, of C. Sommervogel, *op. cit.*, Vol. V, editions of which appeared at Madrid in 1599 and 1601, at Rome in 1599 ; No. 9 is B of Col. 406, C. Sommervogel, Vol. V.

No. 9860 :—*A Collection of miscellaneous Papers and Letters relative to the Portuguese Jesuit Missions in Japan and the East Indies ; of various dates, from 1593 to 1686. Partly Spanish, partly Portuguese. Folio.*

No. 9861 :—“*Historia de Ethiopia a alta, ou Abassia, imperio do Abexim, cujo Rey vulgarmente hecha mado [Read : he chamado] Preste Joam ; composta pelo Padre Manoel de Almeida da Companhia de Jesus, natural de Viseu.*” Folio.¹

Below the above entries are the words :—*Presented by William Marsden, Esq.*

Mr. P. was anxious to know how Marsden became possessed of these papers, many of which appear to be originals. In many cases they bear the original seals and the addresses, so that one can see exactly how they were originally folded up and fastened, when despatched. He examined carefully *A brief Memoir of the Life and Writings of the late William Marsden, D.C.L., F.R.S., &c., &c., written by himself : with notes from his correspondence, London, 1838 ;* but, no reference is found in it to these MSS.

W. Marsden, born in 1754, was appointed writer to the E. I. Co., and landed at Fort Marlborough, Bencoolen, May 30, 1771. He returned to England in 1779, having spent all his time abroad in Sumatra. In 1785, he and his brother, who had also been in the service of the E. I. Co., opened an East India Agency business in London. Ten years later, William was appointed 2nd Secretary to the Admiralty, 1st Secretary in 1804, withdrawing from the service in 1807. In 1823, he joined in founding the Asiatic Society, London. He busied himself much with Indian coins and collecting Oriental Dictionaries and Grammars. On p. 171 of his *Memoir*, he mentions for the first time his collection of books and Eastern MSS., and adds : “The nature of this collection had already been made known by the publication of my Catalogue in the year 1827.” Marsden died in 1836. The year before, he had presented the whole of his collection to King’s College, London, where it is still kept apart under the title of “The Marsden Library.” Why he made an exception in the case of the ten volumes of MSS. now in the British Museum, Mr. P. could not discover, even though he referred the matter to King’s College. It may be remarked that they are not entered in his Catalogue of books and MSS. published in 1827. They appear in the

¹ C. Sommervogel, S.J., *op. cit.*, Vol. I, Coll. 193-194, mentions the MS. as at the British Museum. The work appeared at Coimbra in 1660. Cf. also Father Carayon’s notes in *Bibl. Histor. de la C. de J.*, Paris, 1864, No. 990.

Catalogue of Additions to the British Museum, printed in 1835.¹

To come to particulars. As Mr. P.'s object was chiefly to find documents bearing on the history of the Syro-Malabar Church in the seventeenth century, he did not examine in detail No. 9852. The documents in it must be mostly Spanish. He only remarks pertinently that *R. Provincial general* must be a mistake for either *R. Preposito general* or *R. Padre general*.

No. 9853 is the volume with which Mr. P. was chiefly concerned. It is a bound volume of about foolscap size. The back is lettered as follows: *Reports of the Jesuit Missions in India. 1601—1659 / Mus. Brit. / Presented by W. Marsden, Esq. / 9853 / Plut. CXXXIII, G.* / At the beginning of the volume there is a table of contents, in Portuguese, with references to the pagination. This Mr. P. copied faithfully. The pagination requires, however, a word of explanation. There is a double numbering of the leaves or sheets, one in pencil from 1 to 173; another in ink. But, it is to be remarked that, besides foll. 1 to 173, there are a few blank ones which, though they bear old numbers in ink, are not numbered in pencil. Mr. P. went through part of the volume comparing the two paginations. We reproduce here the result of his labour.

Pencil Nos.	Old ink Nos.	Titles of Documents.
1.	None.	<i>Index dos papeis que estão neste livro.</i> Index to the papers which are in this book. ²
2 to 12.	423 to 433.	<i>Anua da Vice Pra do Sul de 601.</i> [P. 423 in Index.] Annual [Letter] of the Vice-Province of the South [<i>i.e.</i> , Cochin] for 1601.
None.	434 to 436.	Three blank leaves belonging to preceding document.
13 to 16.	471 to 474.	<i>Anua de Maluco e Amboino de 602.</i> [P. 471 in Index.] Annual [Letter] of the Moluccas and Amboyna for 1602.
17 to 20.	475 to 478.	<i>Algũas cousas de edificaõ do Pe. Nuno Roiz, Pr. que foy desta Prou. e faleceo</i>

¹ We find that he possessed three rare Persian works of Fr. Jerome Xavier, S.J. Cf. *Uri. Bib. Bodl. Cod. Cat.*, p. 270, and *Bibl. Marsdeniana*, p. 305. Quoted by Maclagan, *Journ. As. Soc. Beng.*, 1896, p. 113.

² We copy below the fuller headings of the documents themselves rather than the entries in the Index on fol. 1.—Notice the gap between 436 and 471, to be partially filled in by foll. 461—470 below. Notice also that the old ink numbering after fol. 482 starts again from 471 and runs on continuously to the end. The volume seems then to contain portions of two collections.

sendo R^{or} deste Colleg^o de S. P^{lo} a 2^a ves [?] em o p^{ro} de Março de 604.

[P. 475 in Index.]

We translate: Some edifying particulars concerning Fathers Nuno Roiz [Rodriguez], who was Provincial of this Province and died on March 1, 1604, while for the second time Rector of this College of St. Paul.¹

None.	479 to 481.	Three blank leaves belonging to preceding document.
21.	482.	Last or outside sheet of preceding document.
22 to 31.	461 to 470.	<i>Anua do Sul de 602.</i> [P. 461 in Index.] Annual Letter of the South for 1602.
32 to 35.	471 to 474.	<i>Relação da cristandade de S. Thome feita pello R^{mo} Sor D. P^e Francisco Roz, da Cop^a de Jesus, pri^{ro} Bispo Latino da q^{ta} 2^a Xandade.</i> [P. 471 in Index.] Account of the Christian Community of St. Thomas written by the Lord Bishop Father Francis Roz, of the Society of Jesus, first Latin Bishop of that Christian Community. ³

Mr. P. did not go further in his comparison of the pencil and ink numberings. He gives us a copy of the remainder of the Index on fol. 1.

<i>Anua do Sul do anno de 1603.</i>	P. 475.
Annual [Letter] of the South for the year 1603.	
<i>Anua do Sul de 1604 e 1605.</i>	P. 501.
<i>Relação da Christandade da Serra de 1604.</i>	P. 525.
Account of the Christian Community of the Serra for 1604.	
<i>Anua do Sul de 1615.</i>	P. 537.

¹ Born at Evora; entered St. Roch's Novitiate, Lisbon, Jan. 7, 1560; sailed for India with Fr. Valignano and 37 other companions in 1574; was twice Rector of St. Paul's College, Goa, the first time for seven years, the second time for five; went as Procurator to Rome with the Japanese ambassadors in 1583; acted for a time as Socius to the Visitor, Fr. Nich. Pimenta; was five years Provincial of the Province of India; was proposed to the dignity of Bishop of Japan by Fr. Alex. Valignano; died at Goa, March 1, 1604, and was buried on the Gospel side of the principal chapel of St. Paul's Church, in the same grave as the former Provincials, Antonio de Quadros and Ruy Vicente. Cf. A. Franco, S.J., *Imagem da Virtude em o Noviciado de Lisboa*, Vol. II, pp. 332—36. Franco utilized a necrological notice sent from Goa by Fr. Francis de Sousa.

² *Qsta* (?) = *questa*.

³ The heading is not easy to read, the document being much damaged. It looks as if it had been in water. The ink has run. This *Relação* is dated: 1602. [Mgr. A. E. Medlycott.]

<i>Annua do Sul de 1619.</i>	P. 545.
<i>Annua de Madure de 1656, the [for athe, ate, till] 1659.</i>	P. 561.
Annual [Letter] of Madura for 1656 to 1659.	
<i>Annua do Sul de 1613.</i>	P. 577.
<i>Annua do Sul de 1612.¹</i>	P. 597.

“ It will be seen from this Index what an important collection of papers is contained in this volume. . . . The reason why I referred to the double numbering of the leaves, in pencil (a complete series), and in ink (an incomplete series which corresponds with the Portuguese Index), is that a comparison between the latter series and the Index shows that

¹ The documents at foll. 471 [*i.e.*, 32—35 Pencil Nos.] and 525 relate entirely to the Syro-Malabar Christians.

Taking the above materials chronologically, we find in Vol. 9853 the following documents: Annual Letters of the South [Cochin] for 1601, 1602, 1603, 1604, 1605, 1612, 1613, 1615, 1619; an Annual Letter of the Moluccas and Amboyna, 1602; Bishop F. Roz's Relation on the St. Thomas' Christians, 1602; a Relation about the Christians of the Serra, 1604; Fr. Nuno Rodriguez' necrological notice, 1604; Relations about the Madura Mission, 1656—59.

Fr. Aug. Carayon's *Biblioth. Historique de la C. de J.*, Paris, Durand, MDCCCLXIV, pp. 2—5, will show that the *Annuae Litterae Soc. Jesu* were for many years printed regularly in a variety of places; 1601, 1602 (Antverpiae, 1618); 1603, 1604, 1605 (Duaci, 1618); 1606, 1607, 1608 (Moguntiae, 1618); 1612 (*read*: 1608, Lugduni, 1618); 1609, 1610, 1611 (Dilingae?); 1612 (Lugduni, 1618); 1613, 1614 (Lugduni, 1619). Then comes a break from 1615 to 1649, when the publication of the Annuals was resumed from 1650 to 1654 only. The editions referred to by Carayon are, of course, extremely scarce nowadays. For the matter contained in them we must turn to the great histories of the Society (cf. Carayon, *op. cit.*, Nos. 3—14), *e.g.*, to de Jouvancy's *Historiae Soc. Jesu Pars V, Tom. posterior, ab anno. . . 1591 ad 1616.* Romae, 1710. Unfortunately, collections of these great histories (1540—1632) are very rare and fetch fabulous prices. We must have recourse, then, to more accessible works for comparison with the contents of the Marsden MSS. Du Jarric's *Troisiesme partie de l' Histoire des choses plus memorables advenues tant ez Indes orientales qu' autres pais* (1600—1610), Bourdeaux, 1614, into which materials up to 1612 have been embodied, should be found in the greater libraries. We must remark, however, that du Jarric merely translates and condenses the Portuguese collection of Fr. Fernand Guerreiro, S.J., the five volumes of which comprise a decade of Indian history, from 1600 to 1609, inclusively. But, where could a complete set of Guerreiro's be found? Its exceptional rarity is seen from the fact that D. Suarez de Figueroa's Spanish translation of the last volume in the series (1607, 1608) is quoted by Harrassowitz, Leipzig, at 960 Mks. (cf. *Catal.* No. 348, 1908), and that no copy of any of Guerreiro's Relations appeared on the English book-market between 1887 and 1906. Mr. E. D. Maclagan's search for a collection of Guerreiro's Relations revealed the presence at the British Museum of Fr. Antonio Colasso's Spanish translation of the *Relação* for 1600 and 1601 (Lisbon, 1604), and of the Portuguese *Relação* for 1602 and 1603 (Lisbon, 1605), at All Souls' College Library, Oxford. A reference to Vol. X of C. Sommervogel's *Biblioth. de la C. de J. (sub: Hist. Comp de J., Généralités, and, Missions des Indes Orient.)* may help to show what other papers in the Marsden MSS. have appeared in print.

“ the collection must have been bound up in its present form
 “ while it was still in Portuguese hands.”

Mr. P. next analyses carefully the Annual Letter of the South for 1603. It occupies foll. 36—61 (pencil) or 475—501 (ink), *i.e.*, 52 closely written pages.

The letter is headed : *Annua da V. Provincia do Malauar da India de 603 oriental* pera se ler na provincia de Goa. The non-italicised words seem to have been added by another hand. “ The original heading was, I think, *Annua da V. Provincia do Malauar da India oriental*, ‘Annual Letter of the Vice-Province of Malabar in the East Indies’. Then, at Goa, someone added : *de 603*, which he carelessly inserted before, instead of after, the word *oriental*. He added the further endorsement *pera se ler na provincia de Goa*,¹ ‘for perusal in the Province of Goa.’ I presume, after being so endorsed, it was passed round for perusal among the members of the Society of Jesus in the Province of Goa. It may have been a copy made specially for such perusal, but it looks to me, from the signature and other indications, to be an original.

“ The letter begins :

Muito R^{do} em Xto Padre.

Pax Christi.

“ Then follow the numbers of the members of the S.J. labouring at each place in the Vice-Province. Next, the various houses are passed under review. The headings are :

Collegio de Cochim.

Residencia de Santo Andre.

Residencia de Calicut [i.e., Calicut].

Missão de Todamalã.

Collegio de Vaipicotta, e suas residencias.

Residencia de Porca.

Residencia de Paliporto.

Collegio de Coulaõ [i.e., Quilon] e suas residencias.

Collegio de Tutturim [*sic* ; read : Tuticorin] e suas residencias.

Casa de Ceilão [i.e., Ceylon].

Casa de Negapatão.

Collegio de pouvação de S. Thome e sua Residencia de Chandegri.

Residencia de Chandegri.

Residencias de Bengala.

Copia de hũa do Padre Andre Boves p^a. o p^e Vice Pr^ovincial [i.e., Copy of a letter from Father Andrew Boves to the Father Vice-Provincial.]

Collegio de Malacca.

Residencias de Malluco e Amboino.

¹ I am doubtful of the reading. It is not very legible. [W. R. P.]

“ This Annual Letter ends as follows : *De Cochim* 15¹ *de*
“ *Janeiro de 1604*. Then follows the signature, which is
“ illegible. I can only make out the name *Manoel*, but not
“ what precedes or follows. I think, however, that the signa-
“ ture is † *P. Manoel Roz, S.J.*, which seems to be the signa-
“ ture of the next document in the volume, *viz.*, the Annual
“ Letter of the South for 1604 and 1605. It was very likely
“ written and signed by the same Father.²

“ There is an endorsement on the back of the last page
“ of this letter : *Annua da Proua do Malauar de 1603*, and a
“ further endorsement : *Gau. No. 42*. A great many of the
“ documents in this volume (9853) and in volume 9855 are
“ endorsed in the same way. Sometimes, we have : *Gaveta*.³

“ Though all or nearly all the letters in volume 9855 are
“ certainly originals, as shewn by the signatures, addresses,
“ folds and seals, and all or many of them are addressed to the
“ Provincial S.J. at Goa, between 1648 and 1684,⁴ it is not
“ the same in the case of volume 9853. I have seen enough
“ of it to notice that it consists of Annual Reports or Letters
“ addressed, in many cases, to the General S.J. at Rome, not
“ to the Provincial at Goa. One, for instance, is headed
“ *Carta Annua da Prouincia de Malauar de anno de 1613 p^a*
“ *N. R. P. geral Claudio Aqua Viva*. Further, though the signa-
“ tures in many cases appear to show the documents to be
“ originals, there are not the other proofs, such as folds, seals
“ and addresses at the back or outside sheet. There are marks
“ of folding, but from the position of the endorsements, which
“ I referred to, it seems that the documents were folded up
“ somewhere, endorsed on the back, and then tied up in bundles.
“ Moreover, it seems unlikely that Annual Letters or Reports
“ addressed to the Father General S.J., should have been in Portu-
“ guese ?⁵

¹ The second figure in the date is not clear.

² Manoel Roiz [Rodriguez] : born at Alemtejo, Diocese of Evora ; came to India in 1597 ; at S. Thome, 1601 ; Socius to the Vice-Provincial of Cochin, 1602 ; Professed, 1602 ; Rector of S. Thome (Sept. 13, 1606) ; Rector of Cochin, 1607—11 ; Rector of Malacca, 1611—? ; Socius to the Provincial, 1619 ; Provincial, ?—1623 ; died at Cochin, on the Sunday in the Octave of Corpus Christi, 1623. Aet. 62 ; Soc. 44. [Fr. L. Besse, S.J.]

³ *Gaveta* = drawer : a reference to the drawers in which the papers were kept.

⁴ The presence of these originals goes far to show that Vol. 9855, at any rate, came from one of the Jesuit houses in Goa.

⁵ “ Latin was the official language to be used. If the letter was written in Portuguese, on reaching Rome it had to be translated into Latin or Italian, for the purpose of reading it publicly, and giving it a wider circulation. Italian being the language of the Curia, it was used preferably to Portuguese, wherever it was possible. There was at Tuticorin, for several years, an Italian Father who had taken upon himself the somewhat tedious task of translating into Italian the Portuguese letter of the Madura Mission. . . . All this accounts for the fact that copies of such

“ This is a convenient place for mentioning another point.
 “ Some of the earlier documents in Vol. 9853 are Reports of
 “ the Vice-Provincial of Malabar. Later ones are from the
 “ Provincial of the Province of Malabar.”¹

The special interest which Mr. P. attached to the Annual Letter of Malabar for 1603 lay in the fact that it contains the earliest known account on the Todas of the Nilgiris. His researches in this line have been given unexpected actuality by a recent discussion on priority of publication. In 1907, Fr. L. Besse, S.J., Rector of St. Joseph's College, Trichinopoly, published in *Anthropos* (Vienna), pp. 970—5: *Un ancien document inédit sur les Todas* (two documents). Mr. Herbert Mueller hastened to observe that the two documents had appeared in Mr. W. H. R. Rivers' *The Todas*, Macmillan, 1906, pp. 719—730.² Mr. P.'s notes show that Mr. Rivers' document—one of the Marsden MSS.—was utilized at a much earlier date. It was published by Mr. Joaq. Heliod. da Cunha Rivara in *O Chronista de Tissuary*, Nova Goa, 1868, pp. 135—142.³ da Cunha Rivara tells us in the preface to his edition of the paper how he obtained it. Here is a translation of part of his preface.

“ The document which we produce here is, in its original,
 “ among the important collection of Portuguese papers preserved
 “ in the Library of the British Museum, where it was copied by
 “ the Reverend Whitehouse, an Anglican minister, a man very
 “ studious and well informed about the affairs of India, who,
 “ after residing some time at Cochin, lived for years at Ootaca-
 “ mund, the principal English town on the top of the celebrated
 “ mountains and the native country of the Todas. Here in

letters have found their way into the British Museum and other public libraries. I should add that several copies were made at head-quarters, and despatched by two or three different ways, in order that, in those days of long and perilous navigation, at least one copy should reach its destination.” Cf. Fr. L. Besse, S.J., *Anthropos*, Vienna, 1908, pp. 799-800.

¹ The Province of the Indies (*Provincia Indiarum*, with headquarters at Goa) was split into the Province of Goa and the Province of Malabar in 1610. Malabar had become a Vice-Province in 1601. Cf. L. Carrez, S.J., *Atlas Geographicus Soc. Jesu*, Parisiis, 1900. The latter division, writes Fr. L. Besse, S.J., had been negotiated in Rome by Fr. Alb. Laerzio, who returned to India in 1602.

² Cf. *Anthropos* (Wien), 1908, pp. 294—296, with: *Another word about the Todas*, by Fr. L. Besse, S.J., *ibid.*, pp. 799-800.—Mr. Rivers' first document on the “Mission of Todramala” (pp. 719-20) was translated from the Portuguese (*Add. MSS.* 9853, ff. 464—5). The second: “The Mission of Todamalâ” was translated from *Add. MSS.* 9853, f. 479 *sqq.*, and occupies 9 pp. of close print in Mr. Rivers' *The Todas* (pp. 721—730). Fr. Yacomo Fenicio wrote his account on his return to Calicut, and addressed it on Apr. 1, 1603, to the Vice-Provincial “at Calicut.” The Annual Letter for 1603 in which it is embodied is dated: Cochin, Jan. 15, 1604.

³ From: *O anno passado to no comer etc., etc.*

“ Ootacamund we had the pleasure of knowing in 1863¹ the
“ Reverend Whitehouse, who did us the favour of communicat-
“ ing to us the MS. and, at his request, we translated it into
“ English. After he had read the version, he wrote to us the
“ following: ‘The MS. I read with great interest. And from
“ what I know of these hills and the tribes inhabiting them, I
“ should say that the narrative, in all its parts, bears the impress
“ of truth. It is a most interesting document.’

“ For us the document has yet another quality, which
“ makes it more interesting, and it is that it proves that the
“ Portuguese Jesuits were the first who, in the beginning of the
“ seventeenth century, penetrated into the steep mountain-
“ ous regions, which to-day are the *sanitarium* and recreation
“ grounds of Southern India, where only in the year 1820 the
“ English built the first house.

“ Finally, it is proper to observe that as the MS. was
“ copied by a foreigner, who was ignorant of the Portuguese
“ language, there are in various places, principally where the
“ original has abbreviations, some gaps and mistakes which it
“ was impossible for us to restore to their true reading.”

Subsequently, in 1873, the Rev. Thomas Whitehouse used and commented on da Cunha Rivara's translation in his: *Lingerings of Light in a dark land* London, 1873, pp. 134—44.² da Cunha Rivara and Whitehouse call the author of the expedition into the Nilgiris and of the letter on the Todas “Fr. Jacome Ferreira,” and Mr. P. took considerable pains in trying to decipher the name from the Marsden MSS. It is now agreed that the name should be read “Fenicio.” It appears under the form “Fenicio” in du Jarric.

Fr. Jacome Fenicio's letter is copied into the text of the Annual Letter of 1603.³ Mr. P. collated da Cunha Rivara's text—a faulty one in some matters of detail—with the original in the British Museum and sent his corrected copy with notes to the Right Rev. Bishop A. E. Medlycott. The Bishop found in it, however, no materials for his *India and the Apostle Thomas* (London, David Nutt, 1905). Mr. P. also sent the Bishop a complete transcript and a tentative translation of *Relação sobre a Serra feita em 1604*. The document is full of interest. [Marsden MSS. 9853, foll. 525—538 (old numbering) or foll. 86—99 (modern pencil numbering).]

¹ I suppose when he went there with Archbishop Saba, da Cunha Rivara had been appointed in 1862 Portuguese Royal Commissary to carry out with Archbishop Saba the delimitation of the dioceses under the Concordat of 1857.

² At p. 135 of his work, Mr. Whitehouse refers the document to Marsden MSS. No. 9855. Read 9853.

³ Mr. P. remarks that the document from fol. 475 to 501 is in different handwritings, the writing and the form of the abbreviations changing where the word *Acentadas* begins a new leaf. The signature is in the writing of a third person.

“ No. 9855 which extends from 1648 to 1684 ought to be one of general interest. It is chiefly concerned about the Missions of Bengal, or rather Hindústán, the Jesuits at the Court of the Mogol, etc. There are geographical and political descriptions, in particular about the Nepal Mission. It contains also particulars concerning a projected Mission to Kafiristan.”

Mr. P. has recently sent us the notes he made in 1892 on the contents of Vol. 9855. He noted that the volume is about foolscap size and that the leaves were numbered in pencil from 1 to 170. It contained some 32 documents, including three Persian ones, for an examination of which we are indebted to Mr. H. Beveridge, as will be seen further on.

1. *Summa memorandarum rerum, quae [sic] apud Magni Mogoris regnum vidit, et obseruauit Pater Antonius Botelho Societatis Jesu Goanæ Provinciæ Præpositus Provincialis, intrâ sexennium quò illic Superior uixit, et Missionarius.*

A new section begins on the top of leaf 14, entitled “ *De Christiana apud Mogorem Religione.*” This ends at the back of leaf 16.—Leaves 1-16 are in Latin; leaves 17-46 in Portuguese. Both seem to be versions of the same. The writing appears the same throughout. Neither date nor signature.

46-51. Is headed, in another hand, apparently:—

Relacao do que aconteceo no Reino do Mogor depois do P.^e [illegible] de Sousa [illegible] feita por elle na ver [vez ?] de como quem lá estava.[?]

The second paragraph begins: *Em quinze de Fev.^o de 620 parti de Goa.*¹

Seems incomplete. No date nor signature.

52-76. Heading: *Annua da missam do Mogor do anno de 1650.*

No signature. Early pages much stained.

77-82. Heading: *Carta Annua da missão de Mogol do anno de 1668. Que escreueo o P. Manoel da Valle.*

No signature.

83-103 (followed by 2 blank leaves).

Carta annua da Missão do Imperio do Graõ Mogol do anno de 1670 até o de 1678 pera o nosso M. R. P. Joam Paulo Oliua Preposito geral da Companhia de Jesus.

¹ One Father Gonsalvus de Sousa was in Mogor in 1620, 1621, 1624. (Catal. of Goa Prov.). He went to Thibet with Fr. A. de Andrada in 1625.

96-97. Reference to "Cafrastan."

End : *Goa 27 de Dezembro de 1678.*

De V. P^e

Filho em Xpo, e m^{to} umilde seruo

Joseph Freyre.

Endorsement on a large blank page : *Carta annua da Missão de Mogol.*

Gaveta. No. 34.

In 1894 Father Goldie, S.J., had a MS. copy of this letter, bound in leather, small size, formerly belonging to Mr. H. Tolbort. It was a very neatly written copy.

104—111. Apparently a Tamil document, endorsed on back of 111 : *Gaveta N. 18.*

112.

113—118. Portuguese. Concerning the canonization of St. Francis Xavier. Undated.¹

119-120. Portuguese. Date : 26 June, 1674. The pencil date "Apr." seems wrong.

121-122. *Julho 5 d'75.* [Pencil heading : 5 July, 1675.] An original letter in Portuguese addressed apparently to the Provincial "da Provincia de Goa." The seal is still there. In the endorsement there is something about Agra. "Mogor" appears at the end of the address.

123-124. Portuguese. The date at the end is : 29 *de febr. de 676.* The pencil date at the head : 19 *Feb. 1676* seems wrong. Seal still there. This letter is very similar to the preceding one. "Mogor" appears at the end of the address.

125-126. Heading : *Apontamentos de hũ caso de edificação succedido na Missão de Mogol, tirados de huã carta do P^e João Leitão, escrita em Agra a 12 de Dezembro de 1677.*

The back of 126 is endorsed : *Agra, Bengalla, Nacpur, Nepal*; also : *Apontamentos da Missão de Mogol p^a a Carta Annua.*

127-128. Pencil heading : 7 Oct. 1678.

Endorsed at the end :—*Treslado da Carta do P^e Fernão de Queiros, ao P^e Proual de S. Agust^o sobre a Missão noua de Bengala. Gau. [damaged] N. 34.*

This ought to be interesting. Compare with what Manucci says in *Storia do Mogor* (Vol. II, p. 90) edited by W. Irvine.

129. Endorsed at the end :—*Treslado da Carta do P^e [2 or 3 illegible names] de Bengalla p^a (?) o P^e Prov^{al}. Gau. N. 34.*

¹ Francis Xavier was canonized 12 March 1622.

130-131. Heading :—*Regimento p^a os P^{es} Missionarios das Missões de Napál, Pataná e Bengala.*

Date at the end : *Goa e de Abril 29 de 1680.*

Endorsement on back of leaf 131 :—*Gau. N. 34.*

132-134. Begins :—*P^e Fernão de Queyros.*

P. C.

Ends :—*Ugoly 26 de Nouembro 1680.*

Marcos Ant^o Santucci.

In the beginning Fr. Mark Anthony Santucci refers to his arrival from “*Napal.*”

135-136. Pencil heading : *20 Mar. 1681.*

Begins :—*Muito meu amado Pre Visitador Pre Antonio de Magalhaens.*

Begins by referring to three letters sent by the writer about what had happened at “*Nacpur.*”

Ends : *Chapora—Patana 20 Março 1681.*

137-138. Pencil heading : *21 Jan. 1682.*

139-140. *De Busna*

Date at the back of leaf 139 : *Dez^{bro} de 683.*

The seal and address at back of 140.

141-142. Date at the end : *Busna 17 de Dez (?) de 1683.*

A letter from Bengal addressed by Ignacio Gomes, S.J., to Father Simão Martins, Prov. S.J. at Goa.

The seal and address at back of 142.

143-144. Pencil date at top : *21 Jan. [Jun. ?] 1682.*

145—148. Pencil date at top : *15 Sept. 1682.*

Appears to be dated from “*Patana*” and to be about “*Nacpur*” or “*Nagpor.*”

149-150. Pencil date at top : *26 Jan. 1684.*

From “*Pattana.*” —The seal and address are intact.

151-152. A Portuguese translation of a Persian document. The pencil heading is : *20 July 1684.*

153—156. Appears to be a Portuguese translation of a letter written by one *Xa alandin Mamede* [Sháh 'Aláu-d dín Muḥammad] from Agra to the Father Superior S.J. It is endorsed : *Gau. N. 34* and is followed by the original in Persian characters, which is folded and spotted with gold.

The date endorsed on the back appears to be : 1638.

157. From Agra, July 16, 1684.

158. A Portuguese translation from the Persian. Date [of translation ?]: Agra, 23 July, 1684.

159. A folded document in Persian characters.

160—163. Pencil date at top : 20 Aug. 1684.
Written from : *Ugoly*.

164. Pencil date : 20 Aug. 1684.
Written from : *Ugoly*.

168. A folded document in Persian characters.

169-170. A letter written from : *Ugoly*. Date : 20 Dec. 1684.
The seal and address intact.

Mr. P. wrote in 1892 that, as far as he knew, the Marsden MSS. had never been referred to except by Whitehouse and Hough. Whitehouse used only the document about *Todamalâ*, and Hough, though he mentions the Marsden MSS. on p. 209 of his *History of Christianity in India*, London, 1839, Vol. I, does so in such a way as to show he did not use them, even if he ever saw them.

Before bidding farewell to Mr. Philipps' excellent memorandum, it is interesting to hear under what conditions research work is done at the British Museum. English MSS. of early in the seventeenth century have difficulties for Englishmen, "much more Portuguese MSS. faded and damaged, often badly written and full of old spellings and abbreviations. The difficulties are somewhat increased by the conditions under which we work at the British Museum. We are not allowed to put a MS. flat on the table. It is placed on a book-stand in front of one, but must not be removed from it. Nor are we allowed to touch the MS. except to turn over the pages. Under these circumstances it is difficult sometimes to get the eye near enough, when the writing is small or bad, or the day is cloudy, and in the large pages of closely written matter one often loses one's place, when one cannot keep the hand on the MS. as a guide. Then again, as in the case of Vol. 9853, the letters or reports in it were not written with the idea that they would ever be bound up : consequently, some of the writing is so close to the binding that it is difficult to open the volume far enough to read it all."

* * *

Mr. H. Beveridge's remarks relate to Nos. 9853—55 of the Marsden MSS. We reproduce them integrally, adding some foot-notes.

The Marsden MSS. are not in the Oriental MSS. Room, but in the General MSS. Room.

The MSS. are not known by the name of Marsden MSS. in the Museum Catalogue, though Marsden's name is printed on the backs of the volumes.

No. 9853 consists entirely of Portuguese documents. In some cases, the ink has become very dim, and only a Portuguese scholar, an expert in the deciphering of old handwritings, could make anything of them.

No. 9854 begins with the well-known letter from Father Rudolph Aquaviva, which General Maclagan gives in translation at p. 56 *sqq.* of his paper. It appears also, along with the Portuguese original in Father Goldie's book.¹ It is signed *Rodolphi*,² and is dated "*Fattepur*". The date I could not make out this time.³ There is something like: *2^a carta*. The Father signs himself: *D. V. R. servo ē xpo.*⁴

No. 9855 was the most interesting to me of the three volumes, as it contains three Persian documents and also Father Botelho's account in Latin of what he observed during his six years in India.

The first Persian document is a petition from one Sháh 'Aláu-d dín Muḥammad to the Signor Padre Superior Jíú,⁵ and refers to a disturbance at Chaul in connection with an attack on that town by the Deccanis (?) and the plundering of 'Aláu-d dín's house. He complains that his house was looted and that property placed in it (by Feringís ?) and deposited with him was carried off. He says also that he was warned to fly for his life, and that he came to Agra and was asked by the Portuguese to become surety for the Portuguese prisoners taken at Húglí. No one else would become surety for them; so he had several interviews with 'Aṣaf Jáh, the *Khán-Khánán*, and procured the release of the prisoners. On this account he asks for favour and the return of his goods. This petition could not have been written earlier than 1633, as it appears from a paper of Mr. W. Irvine that Húglí was taken at the end of September 1632.

The second document is a petition of the Fathers to Aurangzeb to be excused the payment of the *jizya* or poll-tax. It is headed with the titles of Akbar, Jahángír and Sháh Jahán, in order to show how long the Mission had been connected with

¹ Cf. Francis Goldie, S.J., *The First Christian Mission to the Great Mogul*. Dublin, Gill, 1897, pp. 97—103, and App. A, pp. 171—178.

² Father Goldie read: *Rodolfo*, noting that the last *o* may be merely a stop. Cf. *op cit.*, p. 177.

³ Father Goldie read: *Futtepur, oje 27 de zbro 1582*, "At Futtepur, to-day, 27 Sept. 1582."

⁴ "Your Reverence's servant in Christ."

⁵ Mr. W. Irvine suggests that "Jíú" is a dialect form, still current in the United Provinces, for the Hindí honorific "Jí."

the Mogul Court. It recites the favour with which the Fathers had been treated by His Majesty's predecessors. Both the above documents are very clearly written in Nastaliq.

The third document, the oldest of the three, is in Shikasta and harder to read. It refers to a young man's having been wounded by a musket-shot and speaks of the English ships. It is a petition for redress. At the foot is an impression of a private seal with the words *Bádsháh Sháh Jahán* on it. The name of the owner of the seal is illegible; but, apparently, the seal was made in the first year of Sháh Jahán's reign, 1628.

The Marsden MSS. contain exclusively accounts of the Missions. There is a petition of Joam Leytam,¹ dated 16 July, 1684; another from Father Corsi,² dated: Agra, 25 October, 1619; another from Father Santucci.³

The long report by Father Botelho⁴ appears both in Latin and Portuguese. It is quoted by Mr. Maclagan (*J.A.S.B.*, 1896) at pp. 93 and 107. In the latter place, a conversation between Father Botelho and 'Adil Sháh of Bijápúr is reported, but, the reference should be to *Add. MSS.* 9855, not 9853. The Portuguese, I believe, is the original; the Latin, a translation and abridgment. The Portuguese is almost double the size of the Latin.

I could not find the exact date of Father Botelho's letter; but, it must have been written after Aurangzeb's accession, and so after 1658. At the end of the report he speaks of Father Sebastian de Almeyda being just about to arrive at Goa.⁵

¹ One Father John Leitam, S.J., a Portuguese, sailed from Lisbon to the East in 1670. Cf. A. Franco, S.J., *Synopsis Annal. S.J. in Lusitania* (1540—1725), Augustæ-Vindeli, 1726, Appendix. Our catalogues of 1678 (Dec.) and 1681 (Dec.) place him in the Mogul Mission. The next catalogue belongs to 1694.

² Francis Corsi came to India in 1599. da Camara Manoel gives his name as: "*P. Francisco Corse, Italus Theologus.*" Cf. *Missões dos Jesuitas no Oriente*, Lisboa, 1894, p. 154. He must be the "*P. Franciscus Locce, Sard.*" of A. Franco, as only one of the party was called Francis. Corsi is often referred to as a Florentine and appears for the first time in the Mogul Mission-field in 1600. He died at Agra, Aug. 1, 1635. Cf. Maclagan, *op. cit.*, passim, and for his epitaph, *Transactions of the Archæol. Soc. of Agra* (Jan. to Jun. 1876), Agra, 1876, p. x.

³ Father Mark Anthony Santucci, S.J., died at Agra, Aug. 1, 1689. Franco mentions one "*Marcus Antonius, Italus,*" who came to India in 1668. The two names may safely be identified. The catalogues of 1674 and 1681 (Dec.) place him in Mogor, that of 1678 (Dec.) stations him at Patna.

⁴ His name is not in Franco's list. Father Anthony Botelho came from Goa to Surat at the end of 1647 on his way to Agra, where he was to act as Visitor and Rector of the College. Father Alex. de Rhodes, S.J., describes him as a man of great merit and influence. Cf. *Voyages et Missions du P. Alex. de Rhodes*, Lille, Desclée, 1884, pp. 292-3. The Catalogues of the "Mogor" Mission mention Anthony Botelho (*Senior*) as Visitor (1648, 1649). The next catalogue is of 1653.

⁵ Father Sebastian de Almeida left Lisbon, a first time, in 1665; a second time in 1668, having been sent to Lisbon as Procurator. H.

At fol. 15v of the Latin, Father Botelho speaks of Father Mathew de Payva as having been greatly respected by the natives for his purity of life.¹ Elsewhere he alludes to writings of Sir Thomas Roe's being preserved in the Library of St. Paul's College at Goa: "*Si haec et plura alia legeret quae in annotatis scriptis a Thoma Roeus continentur et servantur in Bibliotheca Collegii D. Pauli Goae vetitos inter libros.*" I fear this only refers to Purchas' volumes; but, it might hint to some MSS. of Roe which have disappeared.

An interesting point mentioned by Father Botelho is that he saw several statues or figures sculptured at Akbar's tomb at Sikandra, and that among them were the heads of several of the Catholic Pádrís. There is also an account of the Táj Mahal, but no allusion to European artists having been employed on it. Here are some of the more interesting passages.

Summa memorandarum rerum quas [sic] apud Magni Mogoris Regnum vidit et observavit Pater Antonius Botelho Societatis Jesu Goanae Provinciae Praepositus Provincialis intra sexennium quo illíc Superior vixit et Missionarius.

"Juste, ut cupidis Europæ animis morem gererem, rogatu
 " P. Sebastiani de Almeyda Societatis Jesu in Japoniæ episco-
 " pum electi, aliqua Magni Mogoris mira in lucem edere statui;
 " eo tamen pacto, ut solum quae viderim et visa demiratus
 " fuerim, exponerem. Quippe si vellem, quidquid fama et
 " annales referunt, scribere, nec meum esset, nec pauca fierent
 " probae magnitudinis volumina, in Europæ Regum admira-
 " tionem; a quibus me promptius expedirem, ni adnotata,
 " quae, dum memoria erat praesentior, scripsi, non injucun-
 " da, excidissent. Memoriam tamen iterùm cogam ut quaeque
 " meminerit, exponat. Faxit Deus ut scribendarum rerum
 " magnitudo fidem quàm verissimis precor scriptis, non obs-
 " curet. Dicam de vario incolarum genere, de civitatum, quas
 " sum expertus, naturâ; de Regum, Principumque et moribus,
 " et amplitudine; ad calcem, postremò, operis de re Christiana
 " libabo praecipua.

" Ab Aquilone ad Austrum per nongentas circiter leucas
 " protenditur Magni Mogoris Regnum; longitudine quam
 " latitudine majus; tredecim dividit Regna, quorum Regimen
 " propinquius agunt quinquaginta Rajàs, purpurati omnes ad

embarked on April 22, 1668, and reached Goa only on March 30, 1669. (Cf. A. Franco, S.J., *Synopsis... op. cit.*, p. 345). Now, as Father Botelho alludes to his nomination as Bishop of Japan, which nomination had taken place before his second departure from Lisbon, and as, on the other hand, Father Botelho wrote his report at the Bishop's suggestion, 1669 or 1670 is the earliest possible date. From a note by the late Fr. J. B. Van Meurs, S.J., I learn that, while Provincial at Goa, he wrote in 1670: "*De moribus et natura regionis Mogoris.*"

¹ Matthew de Payva was in Mogor, according to our Catalogues of Goa, in 1620, 1621 and 1624. In 1633, he was superior of the Mogor Mission, and was then aged 41. He died the same year, 2nd (?) August.

“ nutum Mogori haud segniter obtemperantes. Regnum hoc,
“ uti magnum corpus est, ita multorum alitur sanguine.
“ Egregie fallitur quisquis Mauros tantum credit Mogoris incolas,
“ cum major sit Gentilium numerus qui frequenter¹ terras in-
“ colunt et ignobilioris nominis vicos habitant. Maurorum
“ verò minor, penès quos arbitrium civitatum et arcium est,
“ utpotè qui vi armorum gentem illam suo imperio subdidere.
“ Soli Reges gentiles, genere Rajaputi (et hoc primum gentis
“ illius genus) jus retinere dominandi, quorum quisque terris
“ imperat, quinque aut sex dierum itinere non peragrandis;
“ solumque terras Rajà Rannâ inter alios principis reguli, octo
“ magnis dierum itineribus non percurres. Hic est qui alios in
“ scepra evehit et regales capitibus imponit coronas. Terris
“ dominantur majori ex parte montosis et magnae molis saxis
“ insitis, inter quas suas urbes, et arces habent. Unde evenit
“ ut munitione et naturâ locorum confisi saepe in Mogorem
“ insurgant, haud ignari, fore, ut nullis equitum copiis exagit-
“ entur. Idque jurè merito metuens Mogol alacriores quosque
“ et bellorum cupidos non sine magnis stipendiis in muneribus
“ praeficit exercituum. Viri sunt admodum strenui et Regiæ
“ militiae nervus, quodque illi bello non effecerint consequi
“ desperant Mogoles milites Facile possent, si in unum
“ coirent in Mogorem, inter se regem creare; quod nunquam
“ eveniet, sunt enim perquàm invidi et aliena bona impatienter
“ ferentes, nullusque sibi majorem sustinet, nisi quem longe
“ disparem, et dignitate et potentiâ suspiciat. Armorum
“ queis utuntur in bello Rajaputi (hi fere sunt equites) quatuor
“ sunt genera: Berchî,² quod est non longum hastile, in ulnam
“ et dimidium extentum,³ Arcus et sagittae, Harpe³ et sica,
“ vulgo gemedâr,⁴ lato in tres digitos ferro. Mos illis est
“ omnino barbarus, sed magnae virtutis indicium, ut quae
“ primùm rapuere in conflictu arma, cum his, reliquis ferienti-
“ bus, aut vincant aut pereant; quod si, fortè primo in con-
“ gressu harpen tenuerint, his armis, aut de vitâ aut de vic-
“ toriâ ad extremum praeliantur. Inter pedites funiculati
“ quoque sclopi⁵ usus est, in pugnando faciles adeo et deliber-
“ ati, ut vel ipsi Mogori metum incutiant, multaque Rex
“ prudenti silentio dissimulat ne regiam auctoritatem et caput
“ in belli discrimen cum Rajaputis exponat.

¹ *Frequentes* (?).

² *Barchhî* = a long, slender spear, a javelin.

³ Scimitar.

⁴ *Jamdhar* or *jamdhar* = a dagger (*lit.*, death-bearer); a large dagger resembling a *katâr*, but having a kind of basket-hilt protecting the hand. (*Forbes*).

⁵ Apparently, a musket or arquebus. Compare the Italian *sciopetto* and the French *escopette*. Du Cange has: “*tormentum bellicum manuale.*” The expression *armati funiculatis sclopiis* occurs lower down, on fol. 9v of MS. [H. B.]

“ In civitatem Laor¹ ubi per id temporis Regia erat, in-
 “ gens equitum numerus convenerat, in expeditionem civitatis
 “ Cahandar² quae cum Persia partiebatur,³ profecturus; ad-
 “ eratque inter alios Principes Raja Jai Singh cum suis do-
 “ minatûs equitibus pro Rege arma capturus. Accidit sub
 “ idem tempus, ut vir quidam, gentilibus ritibus abdicatis,
 “ Maurorum sectam amplecteretur, fueritque error hominis
 “ pejor priore. In magnos titulos a Rege evectus, uxorem
 “ cogebat, ope Maurorum fultus, ad Mahometis quoque sectam
 “ accedere; ad quod, nullis precibus, nullis artibus induci
 “ potuit, immo sui juris vindicem quaerens, rem omnem
 “ significavit Regulo Raja Jai Singh, qui, morâ nullâ interpo-
 “ sitâ, quinquaginta dimisit equites qui feminae domum circum-
 “ siderent et asservarent ne, dum res agebatur, aliquam à
 “ Mauris vim de religione pateretur. Ipseque cum omni
 “ equitatu regem adiit allocuturus. ‘ Huc adsum, inquit, o
 “ Rex, in oppugnationem accitus civitatis Cahandar, sed, ut
 “ res aguntur, hîc tecum, hercule, oppugnatio erit.’ Tum
 “ Rex ‘ se, quid illa verba vellent, haud satis intelligere.’
 “ Cui Jai Singh: ‘ Quod ille nequissimus sponte suâ et
 “ quaestu ductus, a parentum suorum desciscat fide, quis vetat?
 “ Voluntatis suae arbiter, in quam malit viam deflexerit.
 “ Quod vero tu Cassisesque⁴ omnes invitam illius uxorem in-
 “ famas mariti sequi passus adigant⁵ hoc egon⁶ patiar? vel
 “ propriâ ematur vitâ. Jube ergo protinus mulierem
 “ indemnem dimitti.’ Ut Rex, ira percitum hominem ad-
 “ vertit, metu percussus et adhuc majestatem simulans,
 “ ‘ solenne, ait, apud Mauros esse uxores eandem quam mariti
 “ amplexari fidem, se tamen in eo morem gerere, a nemine
 “ cogendam mulierem, quin potius se regem suae voluntatis
 “ propugnatorem habituram.’ Quandoquidem Raja ille tantum
 “ in ea re gaudium deprehenderet, e Regis praesentia egressus
 “ est Jai Singh de Cassisibus ipsoque de Rege triumphans,
 “ Maurorum nemine mussitante.’”

Follows a story about a Hindu Rajah's having in the same city had a Muezzin flung down from his minaret for annoying him during his illness by the loudness of his calls to prayer. Next there is an apparently apocryphal story of a Rajah's son having killed an officer in the King's presence. There are also some remarks about eunuchs, and a story of how a eunuch, whom Father Botelho knew, rose to high rank. Hearing this,

1 Lahore.

2 Qandahâr.

3 *Partiri* = to side with (?).

4 Not *qâzî* = a Muhammadan judge, but from the Persian *kashîsh*, in Arabic *qâsîs* = a mullâ, a Muhammadan doctor or priest. [H. B.]

5 *Adigatis* (?).

6 *Ego non* (?).

his father came from Bengal to see him. The son received his father, but ordered him to be severely bastinadoed, and warned him not to treat his other children as he had treated him. Then, returning to more filial feelings, he bestowed on his father a large sum of money and sent him back to Bengal. The eunuch's name was Aghá Khán, and he had charge of Mumtáz Maḥal's tomb.

Speaking of Akbar's tomb, he says:—

“Gemina ad ingressum jacent magna vestibula ex mar-
“more ubi mille daedaleae manûs finxere figuras, quas inter
“novi ego Patres nostrae societatis qui primi Christianam rem
“illius regis tempore condidere.”¹

He also describes a dust-storm, which he calls *Andi*,² and relates how Father Henry Busi, while sleeping on the terrace, was surprised by a hail-storm, of which the stones were so big that he shouted out that he was being stoned by someone.

He gives of Sháh Jahán the following description:

“Hic ego per otium vidi regem: sexaginta oculis monstro-
“bat annos, barba usque ad pectoris deducta medium, formosi
“oculi, totusque talem prae se ferens majestatem ut vel
“nescienti regem proderet.”

He speaks of the personal beauty of Murád Bákhsh, and describes his appearance. There is a long description of Sháh Jahán's leaving Agra in order to establish himself at Delhi, his new capital. Father Botelho witnessed this departure, in company with Father Francis Morando. He then goes on to describe Delhi. He describes the Karnal Canal, and the shady avenue from Delhi to Lahore. The avenue, he says, was constructed by Jahángír.

“Hoc opus sub rege Janguir non imitabili labore effectum,
“vel sibi indulgente, nam hoc crebrò peragrabat iter, vel
“viatoribus, qui hinc et inde frequenter transvehunt com-
“meatus, mercesque. Adde quod in via hác, leucas duas vix
“peragres, quin erectum videas pyramidem, mox aliam atque
“aliam paria inter spatia, et puteum scaturientis aquae.”

¹ For similar pictures near the tomb of Jahángír, cf. *Travels in India*, by Jean B. Tavernier, Ed. V, Ball, London, Macmillan, 1889, Vol. I, p. 111: “When you reach Agra from the Delhi side, you meet a large Bazaar, close to which there is a garden where the King Jahángír, father of Sháh Jahán, is interred. Over the gate of this garden you see a painting which represents his tomb covered by a black pall, with many torches of white wax, and two Jesuit Fathers at the ends. One is much astonished at seeing that Sháh Jahán, contrary to the practice of the Muhamedans, who hold images in abhorrence, has allowed this painting to remain, and it can only be in consequence of the fact that the King, his father and he himself had learnt from the Jesuits some principles of mathematics and astrology.” Manrique noticed (1641) a picture of Our Lady within the portico leading to Akbar's tomb. Cf. *Itinerario Oriental*, Rome, 1653, p. 350.

² *Andhi* = a storm.

Then he describes Qandahár, and says that the king wittily called this city the royal courtesan, because she admitted sometimes the Persian, sometimes the Great Mogul. At the time the Father was writing, Qandahar belonged to Persia.

Father Botelho describes Dára Shikoh as being a great friend of the Fathers: "*Nobis summa familiaritate conjunctum.*" Aurangzeb he calls "*fervidus juvenis et martialis animi.*" But he wrongly states that Dára Shikoh was taken off by poison.

Speaking of the Catholic College of Agra, he writes:—

"Nostrum Agrense Collegium erexit P. Antonius de Andrade¹ geminis in altum pergulis in litterae Z speciem. Egoque dum visitatoris munus obirem duo addidi cubicula aulamque satis amplam quo aliquos in nos benevolos viros sospitio exciperemus, in quod opus Olandi Anglique septingentos aureos liberaliter erogarunt

"Armenius quoque institor praedives duo supra decem millia aureorum quondam obtulit, queis magnificum exstructum fuerat templum, quod funditus eversum est eâ quâ dicam occasione. Aegre ferebant Cassises, vehementerqueangebantur quod plurimi adeo Christiani fluxè in templum convenirent, ingentemque moverunt tumultum prae nimia multitudine; erant enim, ut dixi, IX² ex Bengala captivorum millia, et ad templi ingressum talem excitabant strepitum ut in seditionem aliquando cresceret."

The Mullahs complained, and the King ordered that the Church should be destroyed, and if 'Asaf Khán had not interfered, the Fathers would have been put in chains and expelled. They had to remain in retirement for a time. Afterwards, a small house was allowed them.³

¹ The College was built, I believe, in 1621.

Anthony de Andrade: born at Oleyros, Province of Beyra in 1580; entered the Society at Coimbra on Dec. 15, 1596; was sent to Lisbon in 1597; embarked for India in 1600; made his studies at Goa; Rector of the College of Goa; sent as superior to Mogor, where he was from 1621; left Delhi for Thibet [16 May ?] 1624, arrived at Tsaparang in Guge, and on his return to Agra dated his first account of Cathay; 8 Nov. 1624. Leaving Agra again for Thibet on June 17, 1625, he reached the first Thibetan city on August 28, 1625. On April 12, 1626, Easter-day, the King of Tsaparang himself laid the first stone of a Church to be dedicated to Our Lady of Hope. One of de Andrade's letters is dated: Chaparangué, at the Court of the King of Great Thibet, August 15, 1626. On his return to Goa, he became Provincial and Rector for the second time of the College. He died at Goa from poisoning, March 19, 1634.

² Should it not be IV? Father Francis Corsi, S.J., in a letter from Agra (October 5, 1633) announces that 4,000 prisoners have arrived at Agra from Húglí in July 1633.

³ Father Joseph de Castro writes from Agra (April 16, 1637) that, after having been for more than a year banished from their College, they were allowed through 'Asaf Khán to return to their College on the day of the Immaculate Conception [1636?]. Their Church at Lahore

Father Botelho also expatiates on the virtues of a certain Mirzá Zú-l Qarnín.¹

“Sed quoniam quidquid in Mogore felix habuimus, quidquid
“Christiana floruit Religio, quidquid Agrense Collegium habet
“vectigalium, totum (si Deum excipis) Mirsæ debetur Zulcarnem,
“in fratrem Societatis adoptato, in ejus justis laudationibus juvat
“paululum immorari. Hic vir, hic est, Mirza Zulcarnem,
“natalibus nobilis, factis illustris, titulo Umbraus, Christiana
“fide notissimus, in pace Numa, in bello Alexander, Caesar in
“utroque, qui in bello fortis, in pace mitis, in vita justus, for-
“titudinis fuit exemplum, mansuetudinis typus, religionis
“assertor, cujus venerati sunt Mogores magnitudinem, orbis
“famam, et virtutem religio; cui Reges Mogores mille referunt
“victorias, mille proceres beneficia, mirum Societas Jesu debet
“amorem, quem Mogul habuit ducem strenuum, Fides pro-
“pugnatores, amicum fratremque Societas, quo floruit Martia
“virtus, crevit Christiana religio, exultavit Societas. Hic vir,
“hic est, qui licet in cunis lustrali ablutus lymphâ, Regis
“Janguir extitit delictum, peregrinâ præditus forma, adeo ut
“Rex ipse, quod in Mogoribus rarum, eâdem secum mensâ
“deferret puerum; hic est qui duobus supra decem expletis
“annis, Regis amorem in iras degenerem sustinuit, pluri-
“maque et acerba pertulit flagella, quod Romanam abjicere
“Religionem pertinax nollet, in tantum, ut pater Franciscus
“Morando² gloriosum Christi martyrem appellaret; subtili
“juvenis plane ingenio, qui Patriâ linguâ metra pangebatur
“tantâ cum elegantia, ut regem mire recrearet; in remune-

and Agra had been destroyed; but they had now been allowed to erect a new “house” on the site of their former Church at Agra.

¹ “But, as all the success we have had in Mogor, the flourishing condition of the Christian religion, all the revenues possessed by the Agra College, are (after God) due entirely and solely to Mirsa Zulcarnem, whom the Society adopted as one of its brethren, it behoves us to dwell a while in just praise of him.” The Mirzá had been granted by the General of the Society the title of founder, which gave him a share in the merits of the Society. “This man, I mean Mirza Zulcarnem, was as noble in birth as he was illustrious by his deeds and renowned for his Christian piety. An Amír in dignity, he was a Numa in peace, an Alexander in war, a Cæsar in both, brave in warfare, meek in peace, upright in his conduct, a model of valour, a pattern of gentleness, a champion of religion; the Moguls honoured him for his greatness, the world for his renown, and religion for his virtues. The Mogul Kings owe him a thousand victories, a thousand nobles thank him for his benefits, while the Society of Jesus returns to him exceeding gratitude.”

Zú-l Qarnín, the Mirzá’s name, means Alexander; but there is more than a mere play on the name.

² Francis Morando, S.J., a “Bolognese,” came to India in 1629. (*Franco*). He was sent to Thibet in 1631, according to Abbé A. Launay and Padre J. M. D. Aguiar. About 1649, Father J. Maracci said that he was at Agra, where he was copying the works of Father Jerome Xavier. He was a great Persian and Hindústání scholar. Our Catalogues of 1641, 1649, 1653 mention him as one of the Mogor Missionaries.

“ rando cantores adeo liberalis, ut vel equum, vel elephantem
 “ crebro donaret in praemium, aureae totus conditionis, ad
 “ condonandum injurias facilis; et aliorum flexus ad arbitria. Hic
 “ est, qui ad maximos à rege invitatus honores, et ad millionem
 “ annui redditus, si veram abjiceret Religionem, affligi cum popu-
 “ lo Dei maluit, et vitam agere minus divitem, dummodo coeli
 “ divitias potiretur, fieretque regni non perituri particeps et
 “ haeres; hic est, qui cujusdam in dignitate constituti Ecclesias-
 “ tici venenata tela in Societatem emissa repulit in authorem,
 “ Mogoresque missionarios à gravi poenæ vulnere liberavit.
 “ Hic denique est qui Patrem Henricum Buseum¹ immeritis
 “ e vinculis dissolvit, Regemque Christiana libertate sic est
 “ allocutus, ut caput ferro promitteret, si aliquando, quod
 “ Patri impositum fuerat, pro vero haberetur.

“ Nupsit vir iste D. Dominæ Helenæ illustri feminæ, tres
 “ accepit ex eâ filios; Mirsam Observam [?], Mirsam Eres [?],²
 “ Mirzam Daniel; quos omnes vivus adhuc in magnis vidisset
 “ constitutos honoribus, Mancebedares et Umbraos si Maho-
 “ metis legem amplecterentur, uti Rex firma fide pollicebatur.”

So far the Latin. The Portuguese seems to say much more about Zú-l Qarnín. We learn, for instance, that he was an Armenian, that he had three sons and one daughter, and that his wife Helena was buried at Lahore (Fol. 45v). Fol. 44 states that he was for many years in charge of the pargana of Sámbar. Zú-l Qarnín is referred to by Coryat as in charge of the salt works of Sámbar. Jahángír, too, refers to him and to his skill in Hindí melodies. Cf. Syad Ahmed's edition of *Jahángír's Memoirs*, p. 324, in the account of the 15th year.

The Cotton MSS. (Brit. Mus.) *Vespasianus* F. XII, 141 and 143, and *Titus* B. VII, 118, contain Anthony Machado's letter in Portuguese and English, but I could not read them.³

Mr. H. Beveridge's extracts from Father Botelho's report are of exceptional value for us. We knew already that Mirzá Zú-l

¹ Fr. Henry Busi, an alias for Henry Uvens, came to India in 1647 and was at Agra in 1648. He died at Delhi on April 6, 1667. Cf. W. Irvine, *Storia do Mogor*, Vol. IV, Index.

² The name of the second may be Irij or Irich. This was the name of Faridun slain by his brother Iūr. It was also the name of the eldest son of the Khān-Khānān Abdu-r Rahīm. Cf. Blochmann, pp. 339, 491. [H. B.]

³ The letter consists of 2 pp. and was sent by Fr. Anthony Machado, S.J., to Fr. Claudius Aquaviva, the General of the Society in Rome. It is dated: Agra, 7 Apr., 1615. There is also among the Cotton MSS. an English translation of a letter of Fr. Joseph de Castro, S.J., addressed to Claudius Aquaviva and dated Agra, 10 Apr., 1615. (Cf. Cotton MSS. *Vespasianus* F. 7., XII). The original is in codex *Titus*, 8, VII. Cf. C. Sommervogel, *Bibl. de la C. de J.*, under A. Machado and J. de Castro.

Qarnín was the founder of the Agra College¹ and Governor in Bengal, presumably at Patna, between 1627 and 1633.² We can now identify him as, indeed, a great Christian hero, and we hope that, when we shall have collected all the scattered references to him, much of Father Botelho's high-sounding encomium will be found justified.

The whole account of Mirzá Zú-l Qarnín's confession of the faith, at the age of eleven or twelve, can be read in du Jarric and Guerreiro.³ It is most pathetic and carries us back to the days of the early martyrs.

¹ Cf. S. Noti, S.J., *Joseph Tieffentaller, S.J., a forgotten Geographer of India*, Bombay, 'Nirnaya-Sagar' Press, 1906, p. 8. His name does not appear in Mesroub J. Seth's *History of the Armenians in India*, Calcutta, 1895.

² From MSS. letters of Fr. J. de Castro, S.J., in the writer's possession.

³ Cf. *Troisiesme partie de l' Histoire des choses . . . advenues . . . ez Indes Orientales . . .* 1614, pp. 107—111; p. 115. The narrative is found in Fr. Fern. Guerreiro's *Relação* for 1606 and 1607, Lisboa, MDCIX, Pedro Crasbeeck, pp. 152—155.

AUGUST, 1910.

The Monthly General Meeting of the Society was held on Wednesday, the 3rd August, 1910, at 9-15 P.M.

T. H. D. LATOUCHE, Esq., B.A., F.G.S., President, in the chair.

The following members were present :—

Mr. W. F. Bolton, Mr. A. M. Heron, Mr. D. Hooper, Mr. S. W. Kemp, Dr. Indumadhab Mallick, Major L. Rogers, I.M.S., Capt. J. D. Sandes, I.M.S., Mr. G. H. Tipper, Dr. Satis Chandra Vidyabhusana, and Mr. E. Vredenburg.

Visitors :—Rev. J. Comerford, S.J., Rev. H. Hosten, S.J., and Mr. G. W. Oliver.

The minutes of the last meeting were read and confirmed.

Twenty-two presentations were announced.

The General Secretary reported that Mr. H. P. Duval had expressed a wish to withdraw from the Society.

The General Secretary also reported that Babu Hanuman Prasad was dead.

The President announced that Dr. E. P. Harrison has been appointed to act as Natural History Secretary during Mr. I. H. Burkill's absence from India.

The General Secretary laid on the table an invitation from the Institut International de Bibliographie, Bruxelles, to take part in the International Congress of Bibliography and Documentation, to be held at Brussels on 25-27 August, 1910.

The Council reported that there were three vacancies in the list of Honorary Members, and two in the list of Associate Members, and the Council, therefore, recommended Acharyya Satyavrata Samasrami, now an Associate Member, for election as an Honorary Member; and Khan Bahadur Shams-ul-Ulama Moulvie Ahmed Abdul Aziz Nayati of Hyderabad, and Mr. L. K. Anantha Krishna Iyer, B.A., L.T., Superintendent of Ethnography, Cochin State, for election as Associate Members at the next meeting.

Acharyya Satyavrata Samasrami is the recognized leader of Vedic Pandits in Northern India. His contributions to the advancement of Vedic learning have been both numerous

and important, as is indicated by his editions of the Nirukta, Aitareya Brahmana, and Satapatha Brahmana, with commentaries and valuable introductions and notes. His Nirukta-lochanam and Aitareyalochanam indicate a study of Vedic literature with a critical attitude of mind, of which we find little evidence in the ordinary orthodox Pandit. A complete list of his numerous works—more than 75 in number—will be found on pages 30-33 of the pamphlet published by Pandit Devavrata Vidyaratna in 1896.—[ASHUTOSH MOOKERJEE].

Khan Bahadur Shams-ul-Ulama Moulvie Ahmed Abdul Aziz Nayati on account of the contributions to literature, *viz.*, (a) Siak-i-Deccan, (b) Tarikh-ul-Navayat, (c) Mahboob-us-Sier, (d) Atyat-i-Sultani, (e) Falahatul Nakl, (f) Kasht-i-Angoor, (g) Kasht-i-Tarkari, (h) Hayat-ul-Hamam, and (i) Gharaib-ul-Jummal. He has besides published Manuals on the Revenue, Imam and Financial regulations of the Nizam's Government, which have passed through 17 editions.—[D. C. PHILLOTT].

Mr. L. K. Anantha Krishna Iyer, B.A., L.T., Superintendent of Ethnography, Cochin State, is the author of "Cochin Tribes and Castes," an ethnographical work of considerable value.—[G. H. TIPPER].

The following three gentlemen were balloted for as Ordinary Members :—

Lieut. G. M. Routh, R.A., Ferozepore, proposed by Lieut.-Colonel D. C. Phillott, seconded by Mr. G. H. Tipper; *Babu Padamraj*, Merchant, 9, Juggo Mohun Mullick's Lane, Calcutta, proposed by Mr. R. D. Mehta, seconded by Mr. G. H. Tipper; *Captain A. C. Tancock*, 31st Punjabis, proposed by Lieut.-Colonel D. C. Phillott, seconded by Mr. G. H. Tipper.

The following papers were read :—

1. *Note on a Miniature Temple.*—By RADHA KANTA GHOSE. Communicated by the General Secretary.

2. *A System of Indian Scientific Vocabulary.*—By MANINDRA NATH BANERJEE. Communicated by the General Secretary.

These papers will not be published in the Journal.

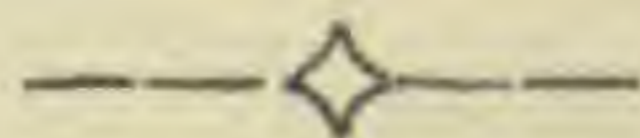
3. *On the preparation of Phenyl-Nitro-Methane by the interaction of Mercurous Nitrite and Benzyl Chloride.*—By PANCHANAN NEOGI and BIRENDRA BHUSAN ADHIKARY. Communicated by Dr. P. C. RAY.

4. *Notes on the History of the District of Hughly or the ancient Rada.*—By NUNDOLAL DEY.

5. *Materia Medica Animalium Indica.*—By D. HOOPER.

6. *Old Guns in Bengal.*—A note by Rev. H. HOSTEN, S.J.
Communicated by the General Secretary.

These papers will be published in a subsequent number of the Journal.



The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Wednesday, the 10th August, 1910, at 9-30 P.M.

LIEUT.-COLONEL F. P. MAYNARD, I.M.S., in the chair.

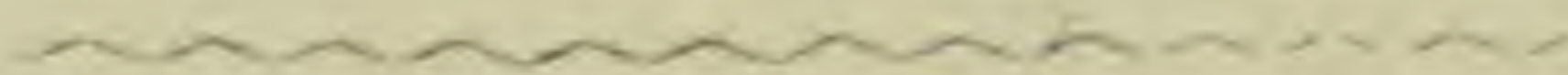
The following members were present :—

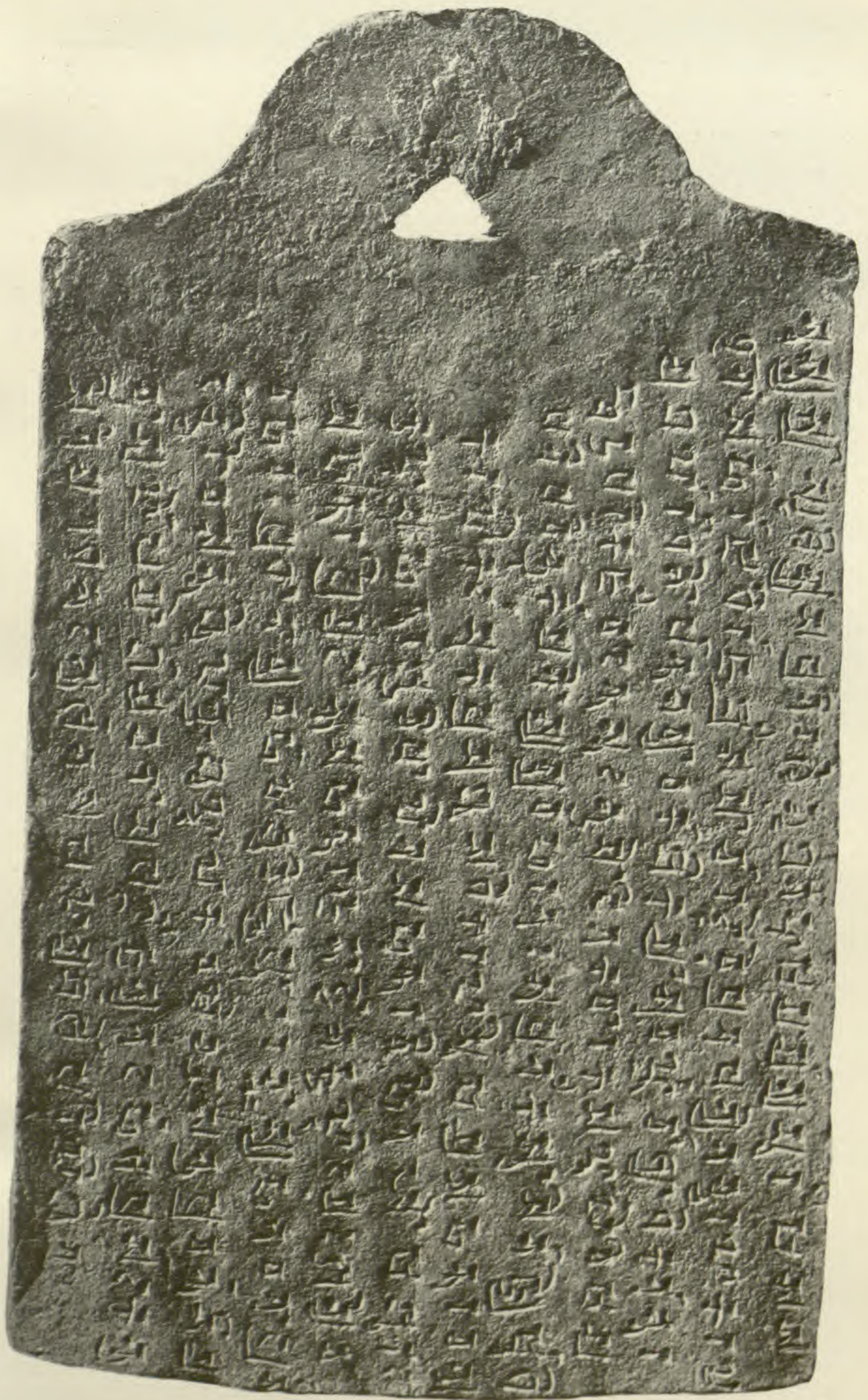
Dr. H. M. Crake, Dr. Girindra Nath Mukerjee, Dr. Gopal Chandra Chatterjee, Capt. E. D. W. Greig, I.M.S., Dr. W. C. Hossack, Dr. Indumadhab Mallick, Dr. W. W. Kennedy, Capt. R. E. Lloyd, I.M.S., Capt. J. W. D. Megaw, I.M.S., Lieut.-Colonel A. H. Nott, I.M.S., Capt. F. F. Owens, I.M.S., Dr. J. E. Panioty, Capt. J. D. Sandes, I.M.S., Major L. Rogers, I.M.S., Honorary Secretary.

The minutes of the last meeting were read and confirmed.

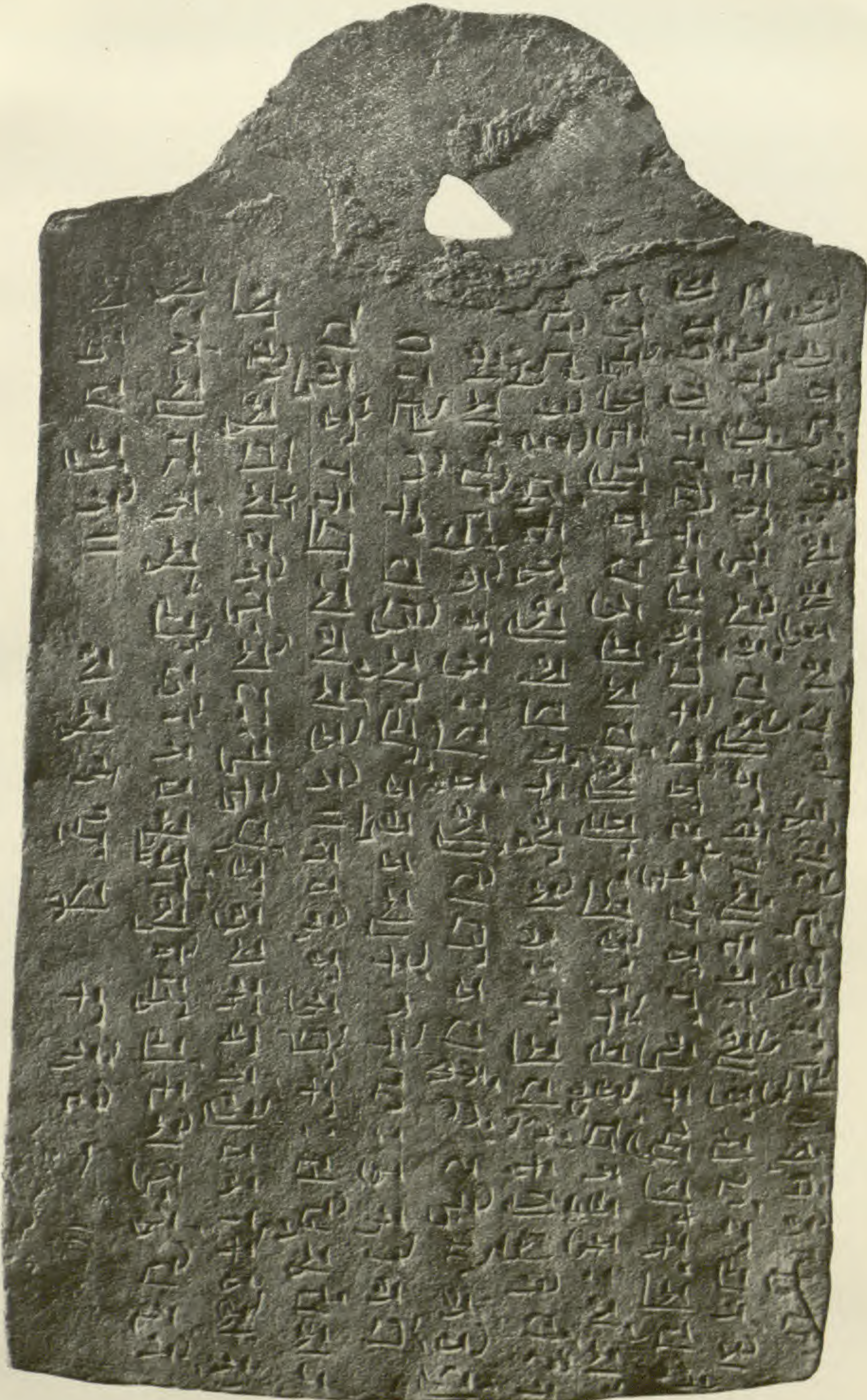
Captain Megaw showed a case of Locomotor atony with optic neuritis.

Captains Greig and Lloyd, I.M.S., gave a demonstration on Pathogenic and non-Pathogenic Amoeba.





The Kotwalipara grant.—Obverse.



The Kotwalipara grant.—Reverse.

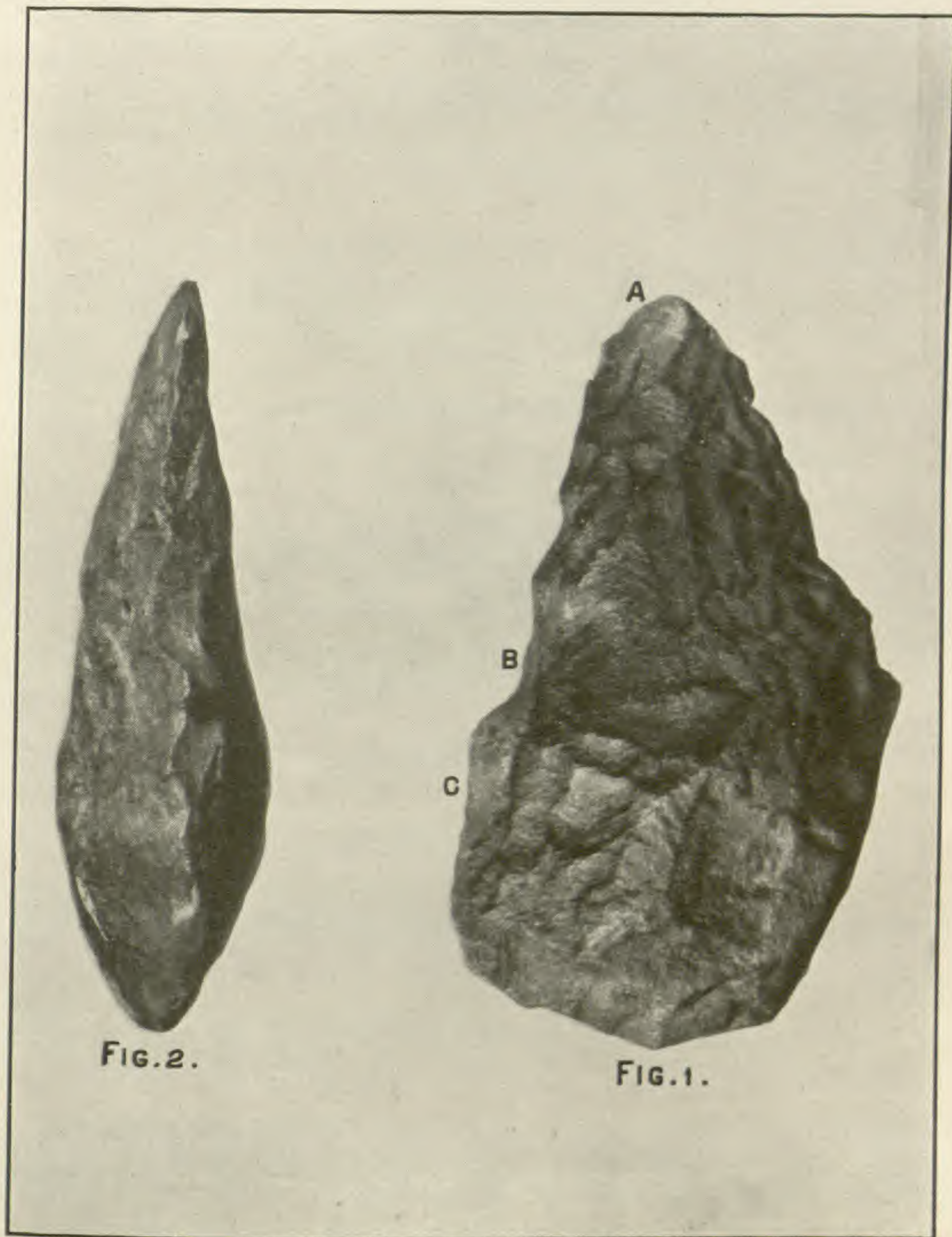


FIG. 2.

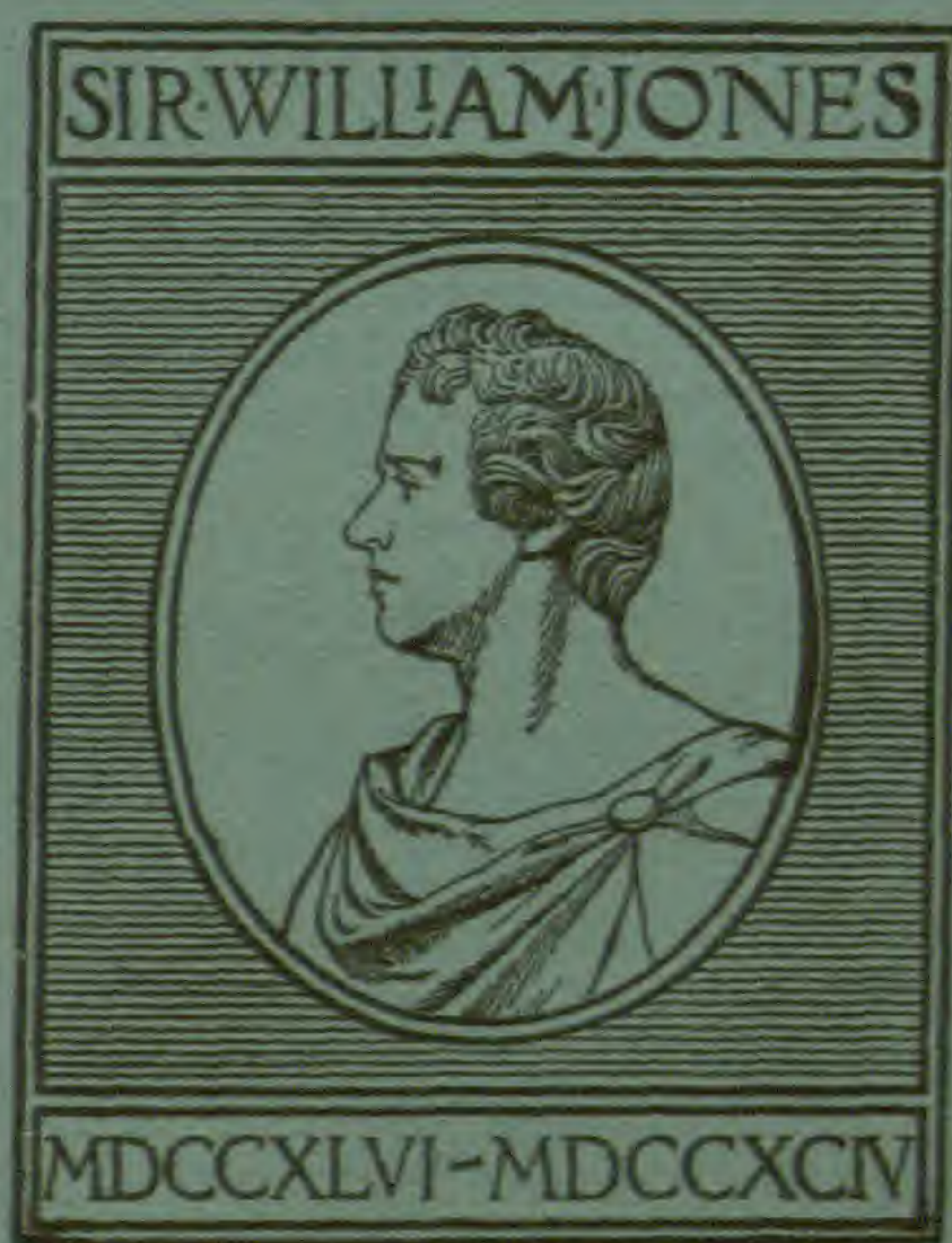
FIG. 1.

A PALÆOLITHIC IMPLEMENT OF MANGANESE-ORE
NATURAL SIZE.

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Ansländische Gesellschaften welche die Asiatische Gesellschaft von Bengalen mit ihren Publicationen beehren, werden hierdurch ersucht dieselben entweder direkt an die Adresse der Gesellschaft, 1, Park Street, Calcutta, oder an den Agenten in London, Mr. Bernard Quaritch, 11, Grafton Street, New Bond Street, zu senden.

37. Yaśovijaya Gaṇi (about 1608-1688 A.D.).

By MAHĀMAHOPĀDHYĀYA SATIS CHANDRA VIDYĀBHŪṢAṆA,
M.A., PH.D.

Yaśovijaya Gaṇi (mentioned in Peterson's Catalogue, part VI) was a distinguished Jaina author who flourished at Dabhoi in the Baroda State (Guzerat) approximately between 1608-1688 A.D. At about 1626 A.D. he came to Benares where he studied the higher branches of Sanskrit in the disguise of a Brāhmaṇa ascetic. By about 1638 A.D. he confessed that he was a Jaina and was asked at once to leave the Sanskrit academies of the Brāhmaṇas. Going back to Guzerat he wrote more than one hundred works (in Sanskrit and Guzerati) in which he has preserved a detailed criticism on the Logic of Nadia (Bengal) and Mithilā (Behar) as taught in the Benares academies in the 17th century A.D. He died in 1688 A.D.

Yaśovijaya Gaṇi was born in a well-to-do Vaiśya family in Guzerat. He lost his father while he was still a little boy. His mother used every day to go to a Svetāmbara High-priest of the Tapāgaccha to listen to the hymn called Bhaktāmarastotra. Owing to rain she could not one day go out, but the hymn was recited to her from memory by Yaśovijaya himself. The High-priest being told of this was pleased to observe that the little boy, whose memory was so sharp, would certainly turn out to be a great man in the future. He immediately received him as his disciple and ordained him to be a Jaina monk. The High-priest of the Tapāgaccha referred to here was named Nayavijaya, whose genealogy is given below:—

Hiravijaya Sūri
(the well-known Jaina priest of Akbar's time,
born 1526 A.D. and died 1595 A.D.)

|
Kalyāṇa vijayopādhyāya

|
Lābhavijaya

|
Nayavijaya

|
Yaśovijaya.

Having mastered the Jaina Sāstras under Nayavijaya,

Visit to Benares in
the disguise of a Brāh-
maṇa ascetic.

Yaśovijaya came to study Logic (Nyāya) at the city of Benares where he lived for twelve years. It is stated that the Brāhmaṇa with whom he studied Logic

possessed a valuable philosophical work containing seven hundred verses which was not available with any other person. The book was carefully concealed and was never shown to any man. Once while the Brāhmaṇa had gone abroad, his wife was persuaded to show the book to Yaśovijaya who together with Vinayavijaya read it through and committed the same to memory in one night. Next morning he returned the book but reproduced a similar one. The Brāhmaṇa came home and was surprised to learn that Yaśovijaya possessed duplicate copy of a work which was so long considered to be his own exclusive property. His suspicion was roused and on inquiry it was found that his pupil was an adherent of the Jaina religion. The Brāhmaṇa told Yaśovijaya to leave Benares at once as it would not be to his advantage if people were aware that a Jaina monk in the disguise of a Brāhmaṇa ascetic studied the Brāhmaṇic science. Yaśovijaya left the city and at his departure regretted that as a monk he did not possess any wealth to give to his Brāhmaṇa teacher. He, however, invited the Brāhmaṇa to go to Guzerat if he ever fell in want. Some years later the Brāhmaṇa visited Guzerat and looked out for "Yaśā" which was a pet name for Yaśovijaya. At Cambay (Khambhat) he met with his distinguished pupil who received him with honours and introduced him to his numerous pupils and followers. They collected a sum of 36,000 rupees (2,400 pounds) which they gave to the Brāhmaṇa as a present. In the Mandharastuti, a work in Guzerati, Yaśovijaya alludes to his visit to Benares as follows:—

"Staying in the academy at Benares, I well acquired a wide knowledge of Logic (Nyāya)." ¹

On his return to Guzerat Yaśovijaya engaged himself to correct the manners of the Jaina priests. This is evident from the Mandharastuti in which he observes:—

Reform of the Jaina
priests.

"Agreeably to the good advice of Vijayasimha Sūri, the High-priest, I have adopted this path and have succeeded in saving the priests from utter ruin." ²

Yaśovijaya received the title of Upādhyāya (Assistant Pro-

¹ रहिया काशीमठे जेहथी मे भले ।

न्यायदर्शन विपुल भाव पाया ॥ (Mandharastuti).

² पाटतस् गुरु विजय सिंह धोरि ।

वास हितशिखथि मार्ग ए अनुसरयो ।

येहथी सवि टली कुमति चोरौ ॥ (Mandharastuti).

Academic distinctions.

fessor) from his teacher Nayavijaya, while the title of Nyāyaviśārada¹ (expert in Logic or Philosophy) was conferred on him by the Paṇḍitas at Benares. As an author of a hundred works on philosophy and religion he obtained the much-coveted title of Nyāyācāryya² (Professor of Logic or Philosophy).

Yaśovijaya died at Dabhoi in modern Baroda State (in Guzerat) in Saṃvat 1745 or A.D. 1688. He appears to have come to Benares at the age of eighteen and did not leave the city until he was thirty years old. Vijayasimha Sūri at whose suggestion he undertook to reform the Jaina priests was the High-priest of the Tapāgaccha from Saṃvat 1682 to Saṃvat 1708. Yaśovijaya must have engaged himself in the work of reformation some time between these two dates, or roughly in Saṃvat 1695. At that time he was about thirty years old as he had then just returned from Benares. This places the date of Yaśovijaya's birth approximately in Saṃvat 1665 or A.D. 1608.

Yaśovijaya wrote numerous valuable works on Logic such as Nyāyapradīpa, Tarkabhāṣā, Nyāyarahasya, Nyāyamṛtataraṅgiṇī, Nyāyakhaṇḍanakhādyā, Nyāyāloka and Aṣṭasāhasrīvivarāṇa. These works treat of miscellaneous topics and do not strictly belong to the Ancient, Mediæval or Modern school alone. Nevertheless, the last three works, viz., Nyāyakhaṇḍanakhādyā, Nyāyāloka and Aṣṭasāhasrīvivarāṇa bear all the characteristics of Modern Logic. The phraseology used in them resembles that of Gaṅgeśa Upādhyāya and Raghunātha Śiromaṇi, and in the subtlety of argument their author stands on the same footing with the logicians of Nadia.

The works reflect the greatest credit on Yaśovijaya whose range of knowledge in Logic was indeed very wide. They show that he mastered the logical treatises of Gaṅgeśa Upādhyāya, Vardhamāna, Pakṣadhara Mīśra and others of Mithilā, and did not neglect to study and

His criticism on Logic as taught in Benares academies.

1 यस्य न्यायविशारदत्व विरुदं काश्यां प्रदत्तं बुधैः ।

(Nyāyakhaṇḍanakhādyā).

2 पूर्वं न्यायविशारदत्व विरुदं काश्यां प्रदत्तं बुधैः

न्यायाचार्यपदं ततः कृतशतग्रन्थस्य यस्यार्पितम् ।

शिष्यप्रार्थनया नयादिविजयप्राप्तोत्तमानां शिष्युः

तत्त्वं किञ्चिदिदं यशोविजय इत्याख्याभृदाख्यातवान् ।

(Jaina Tarkabhāṣā).

criticise the treatises of Guṇānanda, Raghudeva and other logicians of Nadia who were, so to speak, his contemporaries. He must have been a man of extraordinary talent, or else he would never have ventured to attack Śīromaṇi, the greatest exponent of modern Logic in Nadia. Yaśovijaya frequently refers to Śīromaṇi whose inordinate pride he tried to humble down. Once he quotes the satiric remark said to have been well known in Nadia, viz., “Cursed indeed is the province of Bengal, where there is Śīromaṇi blind of one eye.”¹ Yaśovijaya was confident that his intellect could penetrate the obscurities on the texts of Logic cast by the commentaries of Śīromaṇi. So he observes:—“The ocean of Logic is hard to approach owing to the uproar of waves of the argument of Dīdhitikāra (Śīromaṇi): yet, is not the water even of that ocean capable of being drunk by the cloud of genius of intelligent men?”² Some of Yaśovijaya’s works on Logic are mentioned below:—

The Nyāyāloka begins³ with a salutation to Mahāvīra as Paramātman (the Supreme Spirit) and ends⁴ with an entreaty that its author may be freed from affection and aversion which are the causes of all sufferings. The work discusses the nature of soul (ātman), emancipation (mukti), inference (anumāna), testimony (āgama), direct knowledge (pratyakṣa jñāna), indirect knowledge (parokṣa jñāna), validity of external things (vāhyārthasiddhi), inherence (samavāya), negation (abhāva), ether (ākāśa), substance (dravya), etc. The undermentioned philosophers, philosophical treatises and systems are quoted:—

Naiyāyika, ucchrīṅkhala-naiyāyika (unbridled logicians), Sāṃkhya, Cārvāka, Tautātita, Vedāntin, Nyāya, Yauktika

1 अभाग्यं गौड़देशस्य यत्र काणः शिरोमणिः ।

(Khandanakhādyā, leaf 43).

2 न्यायाम्बुधिर्दीधितिकारयुक्तिकल्लोलकोलाहलदुर्विगाहः ।

तस्यापि पातुं न पयः समर्थः किं नाम धीमत्प्रतिभाम्बुवाहः ॥

(Aṣṭasāhasrīvivarāṇa, leaf 82).

3 प्रणम्य परमात्मानं जगदानन्ददायिनम् ।

न्यायालोकं वितनुते श्रीमान् न्यायविशारदः ॥ (Nyāyāloka),

4 कृत्वा न्यायालोकं प्रवचनरागाद् यदर्जितं पुण्यम् ।

तेन मम दुःखहेतुं रागद्वेषौ विलीयेताम् ॥ (Nyāyāloka).

[N.S.]

Bauddha,¹ Aupanīṣada, Digambara, Syādvāda-rahasya, Syādvādaratnākara, Sammatīṭikā, Jñānārṇava, Bhāṣyakāra (Jinabhadra Gaṇi Kṣamāśramaṇa), Bṛhaspati, Dharmakīrti, Ācāryya, Cintāmaṇikṛt, Maṇikṛt, Miśra, Vardhamāna and Pakṣadhara Miśra.

The Nyāyakhaṇḍanakhādyā² is otherwise called Mahāvīrastavana. It consists of 108 verses composed in eulogy of Mahāvīra and at the same time embodying solution of the deepest problems of Logic. There is an elaborate commentary in prose by the author himself elucidating many intricate points couched in the precise style of modern logicians. The work opens³ with a salutation to Mahāvīra who is called Sāmbhu and ends⁴ with a reference to the author himself. The topics treated in the work are:—Soul (ātman), emancipation (mukti), momentariness (kṣaṇikatva), origination (utpatti), destruction (dhvaṁsa), syādvāda, kind and individual (jāti and vyakti), space and time (deśa evaṁ kāla), middle term and major term (vyāpya evaṁ vyāpaka), knowledge and external world (vijñānavāda evaṁ vāhyārthavāda), etc. The undermentioned philosophers, philosophical treatises and systems are referred to:—

Sāṁkhya, Kaṇabhakṣa, Akṣapāda, Naiyāyika, Bauddha, Mādhyamika, Prabhākara, Mīmāṁsaka, Bhāṣya, Vārtika, Ṭikā, Samantabhadra, Gandhahasti Sammati, Miśra, Bhaṭṭa, Srīdhara,

1 यदुक्तं बौद्ध प्रधानेन —

चित्तमेव हि संसारो रागादिक्लेशवासितम् ।

तदेव तैर्विनिर्मुक्तं भवान्त इति कथ्यते ॥

(Nyāyāloka, leaf 13, printed at Ahmedabad).

2 The Nyāyakhaṇḍanakhādyā has been printed in Bombay.

3 रेङ्गारजापरमाप्य कवित्ववित्त्ववाष्कासुरद्रुमुपगङ्गमभङ्गरङ्गम् ।

सूक्तैर्विकासिकुसुमैस्तव वीरशम्भोरम्भोजयोश्चरणयोर्वितनोमि पूजाम् ॥

(Nyāyakhaṇḍanakhādyā).

4 प्रबन्धाः प्राचीनाः परिचयमिताः खेलतितरां

नवीना तर्काली हृदि विदितमेवत् कविकुले ।

असौ जैनः काशीविबुधविजयप्राम्बिरुदो

मुदो यच्छ्रुत्यच्छः समयनयमीमांसितजुषाम् ॥

(Nyāyakhaṇḍanakhādyā).

Udayana, Nārāyaṇa, Nārāyanācārya,¹ Śiromaṇi,² Dīdhitikāra, Vardhamāna and Guṇānanda.³

The Aṣṭasāhasrīvivaraṇa which is a gloss on the Aṣṭasāhasrī of Vidyānanda opens with an obeisance to Indrabhūti Gautama.⁴ The work makes reference to the undermentioned philosophers, philosophical treatises and systems:—Vācaspati, Naiyāyika, Maṇḍana Miśra, Prajñākara, Bhāṭṭa, Prābhākara, Hemacandra, Vācakacakravartī (Umāsvāti), Vaidānti-paśu, Kusumāñjali, Gurumata, Murāribhāṭṭa, Murāri Miśra, Gautamiya, Udayanācārya, Bhāṭṭācāryya, Jarannaiyāyika, Raghudeva⁵ Bhāṭṭācāryya, Bhūṣaṇasāra,⁶ etc.

Other works of Yaśovijaya wrote many other works, some of which are mentioned below:—

Original works in Sanskrit :

1. Adhyātmasāra, 2. Adhyātmopanīṣad, 3. Ādhyātmikamata Khaṇḍana (saṭīka), 4. Adhyātmamata-parīkṣā (saṭīkā), 5. Nayarahasya, 6. Nayapradīpa, 7. Nayopadeśa (with the Tikā called Nyāyāmṛta-taraṅgiṇī), 8. Jaina Tarkabhāṣā, 9. Jñānabindu, 9. Mārgapariśuddhi, 10. Upadeśa-rahasya

1 सत्त्वेनैव क्षणभङ्गो वक्तव्य इत्ययमभिप्राय इति नारायणाचार्यः ।

(Nyāyakhaṇḍanakhādyā, leaf 3).

2 जातेर्हि वृत्तिनिगमो गदितः स्वभावा-
ज्जातिं विना न च ततो व्यवहार सिद्धिः ।

उत्प्रेक्षितं ननु शिरोमणिकाण्डदृष्टे

स्तदाकमबोधरहितस्य न किञ्चिदेव ॥

(Nyāyakhaṇḍanakhādyā, leaf 42).

3 यत्त्वेवं सति तन्नये भावभूत स्थूलकालाप्रतिसिद्धावपि प्रागभावस्य कालतया असम्भववारणाय क्षणेत्यपि प्रयोजनवदिति गुणानन्देनोक्तं तदसत् । (Nyāyakhaṇḍanakhādyā, leaf 2).

4 ऐन्द्रमहः प्रणिधाय न्यायविशारदयतिर्यशोविजयः ।

विषमामयुसाहस्रीमयुसाहस्रग विवेचयति ॥ (Aṣṭasāhasrīviva-

raṇa, MSS. belonging to munis Vijayadharmā Sūri and Indravijaya).

⁵ Raghudeva is referred to in leaves 4, 22.

⁶ The Bhūṣaṇasāra is more fully called Vyākaraṇabhūṣaṇasāra. It is a grammatical treatise by Kaṇḍa Bhāṭṭa. This work is referred to in leaves 34, 35, etc.

(saṭika), 11. Vairāgyakalpalatā, 12. Dvātrimśadvātrimśikā (saṭikā), 13. Jñānasāra, 14. Devadharmā-parīkṣā, 15. Yatīlakṣaṇasamuccaya, 16. Gurutattva-nirṇaya (saṭika), 17. Samācārī, 18. Pratimāśataka (saṭika) and 19. Bhāṣārahasya.

Commentaries in Sanskrit.

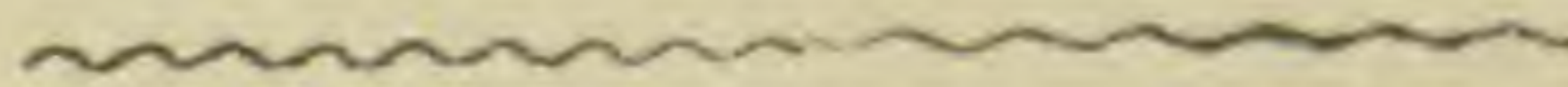
20. Śāstravārtāsamuccaya-ṭikā, 21. Syādvādakalpalatā, 22. Karmaprakṛtiṭikā, 23. Soḍaśakavṛtti.

Works not available.

24. Adhyātmopadeśa, 25. Syādvādarahasya, 26. Pramāṇarahasya, 27. Siddhāntatarkaparīkṣā, 28. Anekāntamata-vyavasthā, 29. Patañjali yogaśāstra caturthapadavṛtti, 30. Ātmakhyāti, 31. Jñānārṇava, 32. Vicārabindu, 33. Tri-sūtryāloka-vidhi, 34. Maṅgalavāda and 35. Śaṭhaprakaraṇa.

Works in Guzerati.

36. Śrīpāla rājānā vāsano pāchalo bhāga, 37. Digpaṭa corāsībol, 38. Jambusvāmino rāsa, 39. Dravyagūṇa paryāyano rāsa, 40. Samādhiśataka, 41. Samatāśataka, 42. Tattvārthano tabbo, 42. Jñānasārano tabbo, 43. Jasavilāsa, 44. Samyak-śāstra vicārasāra, etc.



38. Note on the Strength of Sulphuric Acid Solution used in Secondary Cells in India.

By E. P. HARRISON.

A very important factor in the maintenance of a secondary cell is the strength of the dilute acid used to cover the plates.

The right strength is that which is indicated by experience as giving the best results with the type of cell in question, and is usually made up of 4 parts of acid in 20 parts of water, or 20%. Any serious deviation from this strength is sure to shorten the life of the cell and will probably also reduce its output while it lasts. Manufacturers of secondary cells in Europe almost always send out with the "formed" and dry plates instructions as to the density which the dilute sulphuric acid should possess when poured into the cells before charging, while in addition to this they usually supply some form of hydrometer for testing the density of the solution during the various stages of charging and discharging. It is, in fact, well known that careful attention to the density of the solution in the cell is a matter of the first importance. The present Note is intended to draw attention to the fact that a large number of cells charged in India (and probably also in other countries where the average temperature is 30° C. or more) are now, owing to the comparatively high temperature in this country and the consequent reduction in the density of the correct mixture, being filled with solution which contains too high a proportion of acid.

In places where the temperature is 30° C. or over, the deviation from the correct *percentage mixture* (which is what really matters) is so considerable as probably to affect seriously the efficiency of the cell.

Experimental.

In order to determine quantitatively the errors in the percentage mixture which it is believed are usually made by those who fill cells in India, it was necessary to make two sets of measurements:

(1) Of the variation with temperature of the density of dilute pure sulphuric acid of some fixed strength.

(2) Of the change in density of the dilute acid as the percentage composition changes, keeping the temperature constant.

A specific gravity bottle of 50 cc. capacity was used in both sets of measurements and the temperature of the solution in the bottle was allowed to remain constant for at least 10 minutes in each case, before cooling and weighing. The balance used was capable of giving a much greater accuracy than was actually required.

The acid employed in these tests was a specimen taken from a jar of pure acid recently sent out from England by Messrs. Crompton & Co., for filling a new storage battery.

Method of calculating the density.

Let Δ_{θ} be the density of the solution at θ° C.

Let M_{θ} be the mass of liquid which fills the bottle at θ° C.

Let V_{θ} be the capacity of bottle in cc. at θ° C.

Then

$$\Delta_{\theta} = \frac{M_{\theta}}{V_{\theta}}$$

But if 0.000024 be taken as the cubical expansion coefficient of glass, we have,

$$V_{\theta} = V_{15} \{ 1 + 0.000024 (\theta - 15) \}$$

Now the bottle used contains 50 cc. at 15 C, so that

$$\begin{aligned} V_{\theta} &= 50 + 0.0012 (\theta - 15) \\ &= 49.982 + 0.0012\theta \end{aligned}$$

Therefore

$$\Delta_{\theta} = \frac{M_{\theta}}{49.982 + 0.0012\theta}$$

Results.

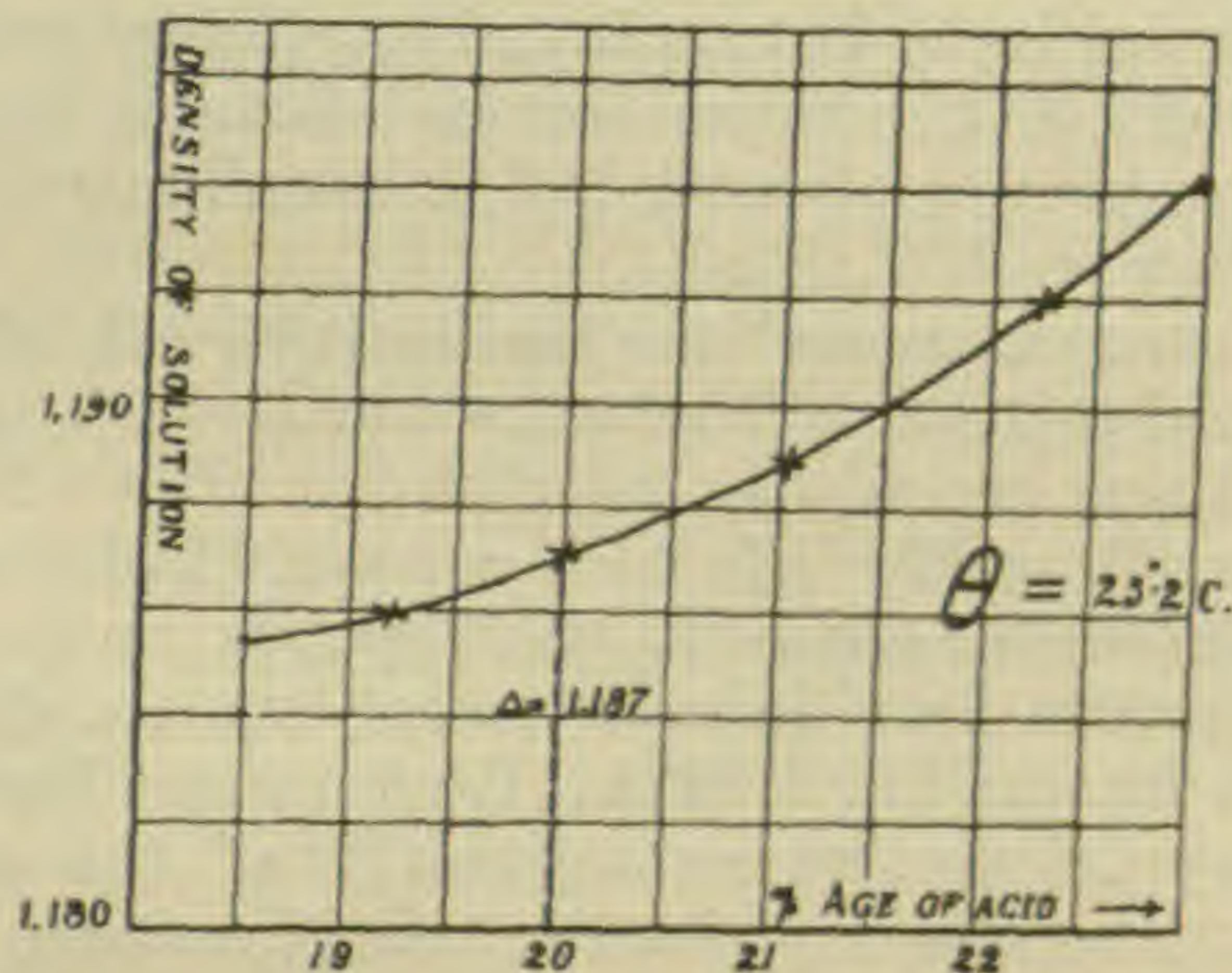
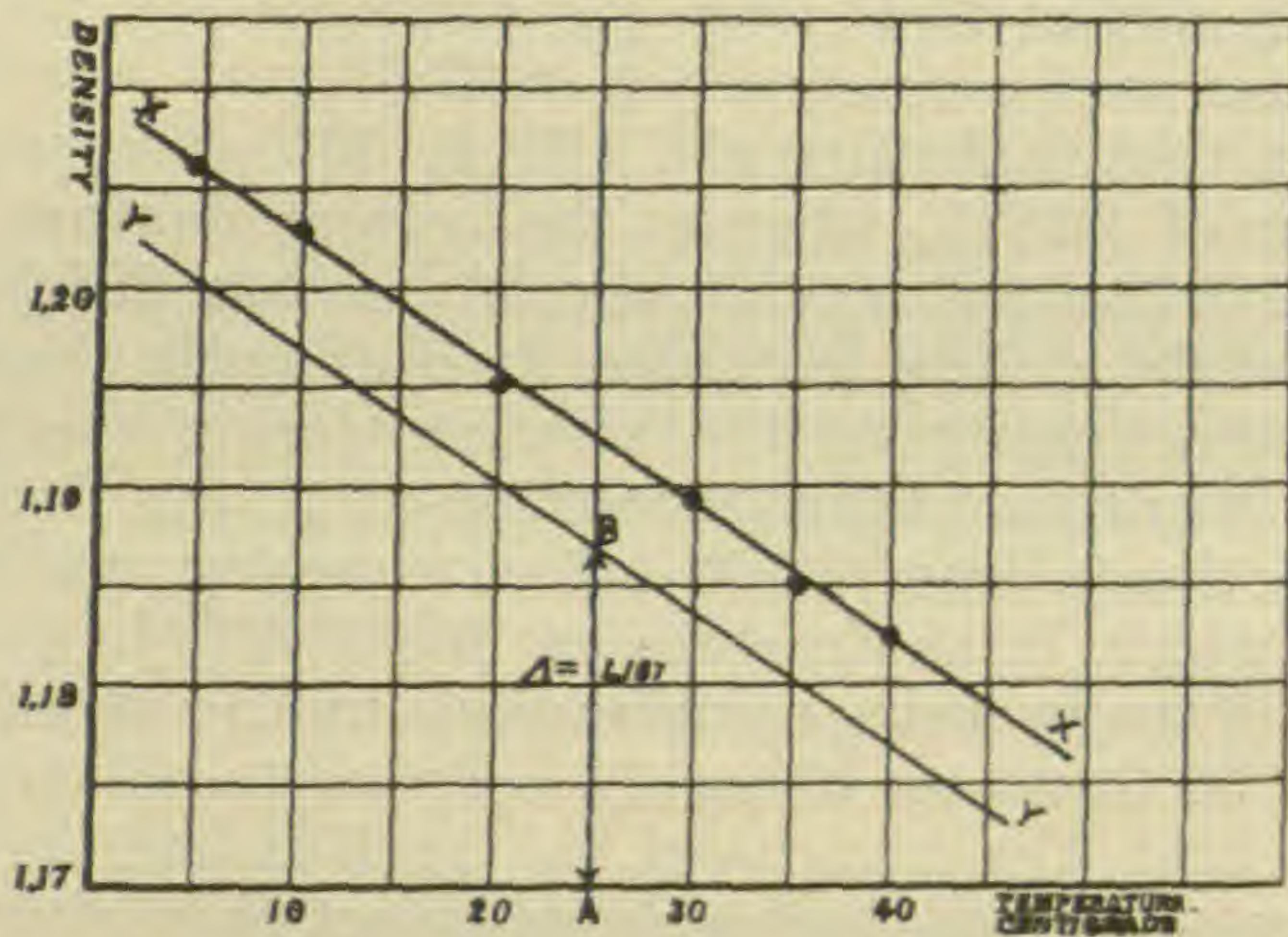
Since the actual numerical values obtained are of little interest in themselves, curves have been constructed which exhibit the results clearly and at the same time allow corrections to be made graphically for any temperature within the range of 0° C. to 40° C.

Figure 1 shows the variation of density with temperature for a 22.2% solution of acid.

Figure 2 shows how the density of an acid solution at 25.2° C. varies with the percentage composition.

Numerical values for the density.

Density.	Temperature.	Density.	% age Composition.
1,206	4.5° C.	1,192	22.22
1,203	10° „	1,189	21.05
1,195	20° „	1,187	20.00
1,182	25.2° „	1,186	19.05
1,189	30° „	1,850	100.00
1,185	35° „		
1,182	40° „		



A numerical example will probably best explain the method of treating the curves.

The object is to obtain graphically at any temperature that value of the density which corresponds with the correct percentage mixture of acid and water. Taking the correct mixture to be 20%, and assuming the European temperature to be 20°C. and the Indian temperature to be 30°C,—

1st. Read off on curve 2 the density corresponding to a 20% mixture: this is seen to be 1,187, and the temperature corresponding is 25.2°C.

2nd. Set up on curve 1 at a temperature of 25.2° an ordinate AB of value 1,187. Through B draw a curve (practically a straight line) parallel to the original 22.2% curve XX. This new curve will represent the variation with temperature of the correct 20% mixture. Reading off from the curve YY Fig. 1 the density corresponding to a temperature of 30°C., we obtain 1,183.

Now, in India, with cells at the assumed temperature of 30°C. the practice is to use acid solution of density 1,190.

A density of 1,190 at 30°C. is, however, equivalent to a density of 1,1935 at 25.2° (Fig. 1.), and from Fig. 2 this is seen to correspond with a composition of 22.8%.

Finally then, a density of 1,190 at 30° corresponds with a composition of 22.8%, whereas the correct mixture on which the welfare of the cell depends should contain 20% of acid: a difference of 3%. Now consider the automatic changes which go on in the density of the solution during the process of charging. The total change in solution-density in Europe due to chemical action is from 1,190 before charging, to 1,220 after charging, which is an increase of about 6% in the solution-strength. Thus by using solution made up to a density of 1,190 in India at 30°C. we are filling the cells with a mixture which is too rich in acid, the error being as much as half the total density change in the cell due to chemical action.

It is clear from the above reasoning that the solution density which ought to be employed for filling secondaries at a temperature of 30°C. (in so far as changes in temperature affect density alone) is about 1,183, a number which is read off directly from curve YY, Fig. 1.

Further experiments on the output of different cells filled with acid solution of the same density but kept at different temperatures would be interesting. The effect of wrong solution-strength on the *life* of a cell would obviously be more difficult to determine since the life depends on so many factors which it is hard to fix. In conclusion, my thanks are due to Babu Rabati Raman Dutt, M.A., Government Research Scholar of Presidency College, by whom nearly all the actual experimental measurements described in this Note were made.

39. A Preliminary Note on the Use of Storage Cells in Bengal.

By SATISH CHANDRA MUKERJEE, M.A., B.Sc.

In connection with our work on "The Electrical State of Nascent Gases" [Journ. Asiat. Soc. Beng. Vol. iii, 1907], Professor Cunningham and I have, for the last five years, been using a battery of small storage cells, supplied by G. Pye & Co. Though we strictly followed the directions given by the Company, we found that the cells were rapidly becoming useless owing to the corrosion of the top parts of the plates (mostly, the positive plates). The average life of an individual cell varied from three months to one year. Many precautions having proved unsuccessful I at last thought of using acid of less concentration than what is recommended for use in England, *viz.*, acid of sp. gr. 1190.

After several trials I found acid of sp. gr. 1150 to give the best results. The cells filled with acid of this specific gravity were charged in November, 1908. As the cells are still in good order, it is too early to state the period of their life under the new conditions; but evidently it is much longer than when acid of sp. gr. 1190 or 1180 was employed.

The reason of the above experimental result is most probably this. The velocity of chemical reaction of dilute sulphuric acid on metallic lead and lead peroxide, to which the current of the secondary cells is due, increases with temperature and is, therefore, greater at temperatures of 30° to 35°C. which obtain in Bengal¹ than at temperatures 15° to 20°C. which obtain in England. This greater velocity is injurious to the life of the cells, giving rise to too much lead sulphate at the expense of lead and lead peroxide of the plates. As a matter of fact, the breaking of the plates was preceded by the appearance of a white deposit of lead sulphate at the point of breakage. Thus to bring down the velocity of reaction it is necessary to decrease the concentration of the acid employed.²

Professor E. P. Harrison has recently shown that to use acid of the same concentration as in England, *viz.*, 20% acid, we must take acid of sp. gr. 1183 instead of that of sp. gr. 1190. The better results I have obtained with acid of even less concentration is probably due, therefore, partly to a temperature density effect, and partly to the increase in the velocity of chemical reaction with rise in temperature as has been pointed out above.

Further investigations on this subject are in progress.

¹ It was observed that the breakage of the cells was quicker in summer than in winter.

² Refer to the current number.

40. Mahārāja-Kanika-lekha.

By Mahāmahopādhyāya SATIS CHANDRA VIDYABHUSANA,
M.A., PH.D.

Mahārāja-Kanika-lekha is the title of a letter the Sanskrit original of which is now lost but a Tibetan version is embodied in the Tangyur, Mdo, Gi. This version was prepared by the Indian Paṇḍita Vidyākara-prabha¹ and the Tibetan Lama Rinchen-mchog, and was edited by teacher Dpal brtsegs. The original letter was written by a Buddhist monk named Maticitra to a king named Kanika.

I have lately brought a copy of the letter from the monastery of Pamiangchi in Sikkim. But our esteemed friend, the well-known Tibetan-Sanskrit scholar Mr. F. W. Thomas, already published the text of the letter with English translation and a learned introduction in the Indian Antiquary for September 1903. So it is hardly necessary here to enter into details of the letter, and I shall content myself with offering only a few observations on Maticitra and Kanika—the two important historical personages mentioned in it.

Maticitra—There are two authors each bearing the name Maticitra mentioned in Tibetan books. The later Maticitra² was the spiritual preceptor of King Buddha-pakṣa, while the earlier one was a contemporary of King Candra Gupta.³ The earlier Maticitra was known under various names⁴ such as Ācārya Kṛṣṇa, Mahāvira,

¹ Orig. has བིར་ར་བྲ་བླ་, which is transcribed as Viryara-prabhā, and

may stand for Vīrya-prabha or Vidyākara-prabha.

² Vide Pag-sam-jon-zang, edited by Rai Sarat Chandra Das, C.I.E., p. 92, 14. King Buddha-pakṣa is called in Tibetan སངས་བྱུང་ཕུགས་།

³ Vide Pag-sam-jon-zang, p. 91.

Candra Gupta is called in Tibetan རྩེ་བ་སྤུམ་པ་། This Candra

Gupta appears to me to be the king of that name who founded the Gupta era in 319 A.D., though he is described in the Pag-sam-jon-zang and by Lama Tārānātha to be a contemporary of Cāṇakya.

⁴ རྩེ་བ་དཔོན་ནག་པོ་ སངས་དཔའ་བོ་ཆེ་བ་དེ་ལྷང་གིས་ཟིན་ཚུལ་

Aśvaghōṣa, Piṭṛceta, Māṭṛceta, Durdharṣa, Dhārmika and Subhūti. He was, on the supposition of his being the same as Piṭṛceta, born in a Brāhmaṇa family and was converted to Buddhism by Deva or Ārya Deva, as is evident from the following story¹ :—

“The King (Candra Gupta) built a monastery called Kusumālaṅkāra, and his brother’s son, King Śrī-Candra, built a temple of Avalokiteśvara as well as 14 chapels in Nālandā and worshipped Ācārya Piṭṛceta and Upādhyāya Rāhula the junior. Regarding Piṭṛceta it is said that in a certain eastern city there was a merchant who had given his youngest daughter in marriage to the family of a Brāhmaṇa named Sargha-guhya. Her offspring called Kṛṣṇa was *siddha* of Mahādeva and by his grace became a great master of the Tīrthika lores. Engaged in controversies with the Buddhist Paṇḍitas in Orissa, Gauḍa and the Tirhoot provinces, he defeated every one of them. His victories filled him with an overweening pride. But his mother, who was a Buddhist, told him that the Buddhists in the above countries were only as many as the hair contained in a horse’s ear, but that towards Magadha they were as numerous as the hair upon the entire body of the horse. He set out for Magadha but was defeated thrice in three controversies by Ācārya Ārya Deva. He was thereupon converted to Buddhism.”

According to the Chinese pilgrim Hwēn-thsang² too, Maticitra *alias* Aśvaghōṣa was a contemporary of Deva or Ārya Deva. Perhaps there is a covert allusion to Ārya Deva in the following lines of Maticitra’s letter to Kanika :—

ལྷ་ཁྱེད་ཡོན་ཏན་དོན་གཉེར་བས།

ཡོན་ཏན་ལྷ་བཞིན་ཁོ་ནར་མཛོད།

ལྷ་ཁྱེད་སྐྱོན་རྣམས་མཁྱེན་པ་ཡིས།

ལྷ་བཞིན་ཉེས་མེད་ཁོ་ནར་མཛོད། ॥

(Mahārāja-Kanika-lekha, verse 44).

གོང་དུ་སྐྱོས་ལྷར་ཡོན་ཞིང་མཚན་གྱི་རྣམས་གྲངས་ལ་དཔའ་བོ་དྲ་དབྱངས་
པ་ཁོལ་ས་ཁོལ་ཐུབ་དཀའ་ཚོས་ལྷན་རབ་འབྱེད་མ་དེ་ཙྴ་དྲ་ཞེས་

གྲགས་སོ། ॥ (Pag-sam-jon-zang, p. 91).

¹ Pag-sam-jon-zang, p. 91.

² Watters’ on Yuan-Chwang, Vol. II, pp. 101-102.

“ O Deva (king), having acquired talents use them really like Deva (a god or Ārya Deva); O Deva (king), having known all faults be really faultless like Deva (a god or Ārya Deva).”

From the above it is evident that Maticitra *alias* Aśva-ghoṣa was a contemporary of Ārya Deva and Candra Gupta. If we suppose Candra Gupta to be the king of that name who founded the Gupta era in 319 A.D., we cannot resist the conclusion that Maticitra and his patron Kanika lived at the end of the third and beginning of the fourth century A.D.

Kanika—Is stated in the letter to have belonged to the Kuśāna family, which though foreign was at the time of the composition of the letter so far Hinduised that it was described as a section of the solar race. So we read :—

རབ་བྱུང་¹ རྣམས་ཀྱི་རྗེས་བརྒྱབས་པ།

ཀུན་ཤེས་² རིགས་སུ་འབྱུངས་ཁྱོད་ཀྱིས།

ཡབ་མེས་འཕགས་རིགས་ཉི་མ་ཡི།

གཞུང་ཀྱུང་ཚོས་ལུགས་ས་ཉམས་མཛོད།

(Mahārāja-Kanika-lekha, verse 49).

“ Trained by *Pravrajita* (monks) and born in the race of Kuśāna thou shouldst not defile the creed of the family whose ancestors descended from the noble line of the sun.”

Kanika was not the founder of the Kuśāna dynasty. That his ancestors reigned in India and professed Buddhism is evident from the following verse of the letter :—

ཡབ་མེས་བཞིན་ཏུ་བདག་ཉིད་ཀྱིས།

ཚོས་ཀྱིས་ས་སྤྱང་བསྐྱུང་བ་དང་།

¹ Mr. Thomas reads: རབ་བྱུང་།

² ཀུན་ཤེས་ is evidently the same as ཀུ་ཤེས། Mr. Thomas reads

ཀུ་ཤེས་ but agrees in interpreting it as ཀུ་ཤེས།

ཡབ་སེས་བཞིན་དུ་སྒྲུབ་པར་གྱི།

དུས་སྡོད་འཕེལ་བར་སེམ་དུ་གསོལ།།

(Mahārāja-Kanika-lekha, verse 46).

“Do thou like thy ancestors rule the earth by righteousness; and do thou advance the religious observances in temples like unto thy ancestors.”

Regarding Kanika we further read:—

“Again, at that time there was a king towards the west—Delhi and Palwa¹—called Kanika, who opened 28 mines of precious metals and worshipped more than 30,000 priests of the Mahāyāna sect. He invited Aśvaghōṣa, who being too old could not go, but sent a letter through his disciple Jñānayaśas.”²

Kanika who was king of Delhi and Palwa must be distinguished from Kaniska who reigned in Jālandhara, though both were descended from the Kuśāna race. It was during the reign of Kaniska that the third³ Buddhist Council was held in the Kuśāna’s monastery at Jālandhara. So we read:—

“Hearing that he held the third Buddhist Council in the Kuṇḍalavana Vihāra: the Kāśmīrians tell this story. But the general belief is that there assembled in the monastery of Kuśāna in Jālandhara 500 Arhats above the rank of Srotāpanna and about 5000 ordinary monks. The teachings of Buddha, as prophesied in Kṛki’s dream, were arranged. The last council was held. The Tripitakas, particularly the Vinaya which was formerly not put in writing, were now codified, and such scriptures as were formerly in writing were now revised.”⁴

Kaniska’s son too, in his palace called Rgas-ldan, maintained 10,000 monks headed by 100 venerables for 5 years, and helped in the preparation of many volumes of the Buddhist scripture.⁵

Kuśāna—The Kuśāna race to which both Kanika and Kaniska belonged is the same as Kwei-shwang, a branch of the Yuechi stock. The Kwei-shwangs were also called Tukhāras or Turuṣkas,⁶ as for instance, Kaniska the

¹ Palwa is the same as Palhava. Mr. Thomas has Malwa (*vide* Ind. Ant. for September 1903, p. 348).

² Pag-sam jon-zang, p. 91.

³ According to Lama Tārānātha too, Kanika is different from Kaniska, as is noticed by Mr. Thomas himself. According to the Tibetans there were only two councils up to the time of Aśoka.

⁴ Pag-sam-jon-zang, p. 83.

⁵ Pag-sam-jon-zang, p. 83.

⁶ Beal’s Buddhist Records of the Western World, Vol. I, p. 56 n.:

Kuśāna is expressly designated in the *Rājatarāṅgiṇī* as descended from the Turuška race.¹ The Kuśānas rose in power on the Oxus about 126 B.C., when Tahia was conquered. After subduing the Se or Śakas, the Kuśānas entered India about the middle of the 1st century B.C. Leaving a normal space for the reigns of Kadphisēs I and II, we may assign their successor Kaniska to the 1st century A.D. The later Kuśānas are said to have reigned up to the 4th century A.D. Kanika was very probably a king of the later Kuśānas, and if we suppose him to be a contemporary of Aśvaghōṣa and Candragupta I, he lived about 319 A.D. This leads us to conclude that the Kuśānas reigned in various parts of Northern India during the first four centuries of Christ, even in some instances contemporaneously with the Guptas. Even supposing that Kanika and Kaniska were the variant forms of the same name, we cannot but admit that there was a king named Kaniska at the end of the 3rd and beginning of the 4th century A.D. This view tallies well with the statement in the *Rājatarāṅgiṇī* that 12 reigns intervened between Kaniska (or Kanika) and Mihirakula (515 A.D.).²

and Notes on the Indo-Scythians by Sylvain Levi in *Ind. Antiq.* for November 1903.

¹ *Rājatarāṅgiṇī*, I, 170.

² Watters' on Yuan Chwang, Vol. I, p. 290.

The date of Kaniska I, if we suppose him to be different from Kanika, has not been definitely fixed. The Śaka era (78 A.D.), which is generally ascribed to him, was perhaps a mere device for practical reckoning received from the Greeks. Vide Dr. F. J. Fleet's communication on "the Saka Era," *J.R.A.S.* for July 1910.

41. A Note on "Old Guns in Bengal."

By REV. H. HOSTEN, S.J.

The frequent finds of old guns in Bengal will surprise less, when we remember how large a number the native chiefs had at their disposal.

In a letter of Father Nicolas Trigault, dated Goa, the eve of Christmas, 1607, we read :

"It is now time that we should pass on to the kingdom of Pegu, formerly one of the most flourishing, and now so desolated and depopulated, because of an infinity of evils and calamities which it has suffered, that it is but a desert and uninhabited forest. The king of Bengala¹ was lord of Pegu, who had bestowed the government of it on a certain Portuguese Captain called Philippe Brittus.² He at once built there a fortress and, collecting the remnants of the Pegans roaming, and wandering in the woods, he assembled them in a small town.

"However, the king began to suspect the Portuguese [Captain] and called him to his Court. He defended himself as best he could, and finally withdrawing with great protestations of obedience to the king (*tout à plat de l'obeyssance du roy*), he placed the kingdom into the hands of the king of Portugal. And having received help from the viceroy of the Indies, he bravely defended the citadel,³ and finally, after having with a very few men gained several battles against the king, he destroyed a great naval army which the son of the king had brought to besiege the citadel, and took him prisoner, before he could set foot on land. Great were the spoils then taken : among other things he seized *nine hundred pieces of artillery, I say nine hundred again, lest you should think that I am making a mistake in writing.*

"The father ransomed his son with a large sum of money and made peace with the king.⁴ But, perfidious as he was, this barbarian, after recovering his son, broke his word at once, and, on that occasion, arming a bigger fleet than before, came with his son to exterminate wholly the Portuguese. But, he met with the same fortune as heretofore, except that he escaped by flight, while his son was once more taken by the

¹ Arakan.

² Filippe de Brito Nicote. Cf. Index of Vol. 2 in Danvers' *The Portuguese in India* (s. v. Nicote).

³ Of Pegu.

⁴ Of Portugal.

Portuguese. We do not well know yet all the circumstances of that so celebrated victory, considering that it was gained quite recently.' (Cf. ABBÉ C. DEHAISNES, *Vie du Père Nicolas Trigault de la Compagnie de Jésus*, Tournai, Casterman, 1864, pp. 235-36.)

Father du Jarric, quoting Father Fernão Guerreiro, S.J., who held his information from the Jesuits then in Bengal, writes that in the first engagement, in 1605, a thousand ordnance pieces, big and middling ones, were taken. On the second occasion, in 1607, the King of Arakan armed 75 large galiots, each bearing at least 12 large guns. He disposed in all of 3,500 pieces of artillery, "large and small." But, to make good his escape, after his defeat near Siriam, he was obliged to bury the greater part of his artillery along the coast. (Cf. DU JARRIC, *Troisiesme partie de l'Histoire des choses plus memorables* Bordeaux, 1614, pp. 870, 874, 884.)

When Chittagong was taken by the Moguls in 1666, 1,223 pieces of cannon, of different calibres, were found in the place. (Cf. STEWART'S *History of Bengal*, p. 300.)

42. Catalogue of Inscriptions on Copper-plates in the
Collection of the Asiatic Society of Bengal.

By RAKHAL DAS BANERJI.

1. *The Sohaurā plate.*—This plate was discovered by a man while digging for a foundation of a house in the village of Sohaurā, district Gorakhpur, in the United Provinces. The man gave the plate to his landlord, from whom it was obtained by Dr. W. Hoey, I.C.S. (*Retd.*) and presented to the Society in 1894. The inscription is of considerable importance, being the oldest Brāhmī record on metal. The Proceedings of the Society for June 1894 contains three notes on this plate, by Messrs. Hoey, V. A. Smith and Hoernle, and a full-size facsimile of the inscription.¹ The late Dr. Georg Bühler published it in 1896 in the Vienna Oriental Journal. He translated the inscription as follows:²—

“The order of the great officials of Śrāvastī, (*issued*) from (*their camp at*) Mānavasitikāṭa:—These two store-houses with three partitions, (*which are situated*) even in famous Vaṃṣagrāma, require the storage of loads (*bhāraka*) of Black Panicum, parched grain, cummin-seed and Āmba for (*times of*) urgent (*need*). One should not take (*anything from the grain stored*).”

Dr. J. F. Fleet, the latest writer on the subject, translates it as follows:³—

“Notice for all the three great roads for vehicles! At the junction, (*named*) Manavasi, of the three roads, in actually (*the villages*) Daṣilimata and Usagāma, these two store-houses are prepared for the sheltering of loads of commodities of (*i.e.*, from and to) Tiyaṇi, Mathulā, and Chamchu, to meet any case of urgent need, but not for permanent use!”

The inscription is in four lines of Maurya Brāhmī (B.C. 320—230) with a row of symbols at the top. The symbols are, from the left,—(1) A tree inside a railing or in a box. Dr. Fleet takes this to be “the mark of the town Tryavani.” (2) A store-house with a roof on four posts. (3) A javelin or arrow. (4) A stūpa, as the numismatists call it, or a representation of Mount Meru according to Dr. Bühler. Dr. Fleet is, however, of opinion that the arrow, which he understands to be a spoon, and the stūpa are “the arms of Mathurā.” (5) The Taurine symbol of numismatics. (6) Bare tree inside a railed enclosure. (7) Another store-house, similar to no. 2.

¹ Proc. A.S.B., 1894, pp. 84-88.

² Vienna Oriental Journal, Vol. X, p. 147.

³ J.R.A.S., 1907, p. 522.

There are four holes near the four corners; and whatever the correct interpretation of the inscription may be, there is no doubt about the fact that it was a notice intended to be hung in a prominent place. The plate measures $2\frac{5}{8}$ " by $1\frac{5}{8}$ ".

2. *The Sue Vihār inscription of Kaniska.*—The inscription was discovered at Sue Vihār which is about sixteen miles from Bahāwalpur. It was found imbedded in the floor of a ruined tower of sunbaked bricks. An account of the tower and the surrounding ruins was published by Mr. E. C. Bayley, C.S.I., in the Society's Journal,¹ who gave his version of the inscription also. It was published by Hoernle in 1881² and Bhagwanlal Indraji in 1882.³ It was discovered by the Rev. G. Yeates in 1869 and forwarded by Major Stubbs to Mr. E. C. Bayley, who is supposed to have presented it to the Society.⁴ The inscription consists of a single line of Kharoṣṭhi incised along the edge of a thin plate of copper. The inscription records the erection of a staff which belonged to a mendicant named Nāgadatta, learned in the Saṃkhya philosophy, the disciple of Damatrāta and the disciple of the disciple of Bhava, by an abbess who was the wife⁵ of Balanandi and the mother of Balajaya, on the 28th day of the month of Daisios in the 11th year of Kaniska. This is the only dated Kharoṣṭhi record in the collection.

3. *The Taxila plate.*—This inscription is incised on a thin strip of copper which was broken into four pieces at the time of its discovery. Of these four only three have been found in the Society's collection. They were discovered inside a small stupa at a village named Shah Dheri in the Rawalpindi district.⁶ According to Cunningham these strips of copper were given to Major Pearse in or about 1855. Nobody knows how or when they came into the possession of the Society. The inscription records the erection of a stupa by a certain metiakha, an inhabitant of Taba, together with his wife, for the worship of his father and mother and for the destruction of sin.⁷ The total length of these strips is 8" and the mean breadth $\frac{3}{4}$ ".

4. *The Gorakhpur grant of Jayādityadeva I.*—The plate was discovered near the river called the little Gandak in the Gorakhpur district of the United Provinces. It was brought by Mr. John Ahmuty, the then Magistrate of the district, who communicated it to Captain Wilford, by whom it was presented to the Society. The inscription was first edited by H. T. Colebrooke

¹ *J.A.S.B.*, Vol. XXXIX, pt. I, pp. 65-67: see also *J.R.A.S.* (N.S.), Vol. IV, pp. 497-99.

² *Ind. Ant.*, Vol. X, pp. 324-31.

³ *Ibid.*, Vol. XI, pp.

⁴ *Ind. Ant.*, Vol. X, p. 324.

⁵ English version of Bühler's Indian Palæography. *Ind. Ant.*, Vol. XXXIII, App., p. 28.

⁶ Cunningham, *A.S.R.*, Vol. II, pp. 124-25.

⁷ *Journ. and Proc.*, *A.S.B.*, Vol. IV, p. 363.

in 1807 in the *Asiatic Researches*,¹ and was subsequently reprinted in his *Miscellaneous Essays*.² The late Dr. Kielhorn edited it from an ink impression supplied to him by Dr. J. F. Fleet.³ The record is incised on one side of a single plate of copper measuring $16\frac{1}{4}$ " by $12\frac{1}{4}$ ". On the proper right side of the plate is "an oval projection with a raised rim . . . on which is rivetted a disc of the same shape, similarly with a raised rim, which contains a flat button about an inch in diameter; on the countersunk surface of this button there is some emblem which may perhaps be an animal" The record commemorates the grant of the village of Dummuddumāka to the service of the goddess Durgā, by Madoli the minister of King Jayāditya. The *praśasti* was composed by the Kāyastha Nāgadatta, and the verses about Nāgadatta were composed by his younger brother Vidyādatta. According to the closing verse of the inscription either the *praśasti* was composed on the grant made at Jivanapalli. The use of such adjectives as *Bodhisattva*, *Sugata*, in connection with proper names shows that the persons mentioned in this grant were inclined towards Buddhism. The approximate date of the grant is 9th century A.D. Kielhorn's no. 604.

5. *The Gorakhpur grant of Jayādityadeva II.*—This plate was made over by Dr. W. Hoey, I.C.S., to the Society in 1899. It was discovered by "some men employed to dig *kankar* at the north-east corner of the large sheet of water covering over thirty acres at the village Gurmhā.⁴ The inscription was deciphered and published by the late Dr. T. Bloch, Ph.D., then Philological Secretary of the Society.⁵ The inscription records the grant of the villages of Kumāraṣaṇḍikā together with the *pallikās* Patraṣaṇḍā, Śaṅkusaṇḍā, Gāddhī and Deulī in the Leddikā *viśaya* and the Daddaraṇḍikā *maṇḍala* by the *Parameśvara Parama-bhaṭṭāraka-mahārājādhirāja* Jayādityadeva II, the son of Dharmādityadeva and the grandson of Jayādityadeva I of the Malayaketu family, to a Kāyastha named Keśava. The document is signed by the minister (*Mahāmantri*) Māhaka, and the Mahāsāmanta Grahakūṇḍa acted as *dūtaka*. The inscription was written by the Kāyastha Valadduka in the Vikrama year⁶ 927, *i.e.*, 870 A.D. The record is incised on one side of a single plate of copper measuring $12\frac{3}{4}$ " by $12\frac{3}{4}$ ". "On the top there is a oval projection, upon which we find the representation of a full-blown lotus, the centre of which consists of a raised disc bearing the image of some animal, perhaps a boar, with *Srī-Jayādityadevaḥ* written below in raised characters."⁷

¹ *As. Res.*, Vol. IX, pp. 406-12.

² Colebrooke's *Miscellaneous Essays*, Vol. II, pp. 247-54.

³ *Ind. Ant.*, Vol. XXI, pp. 169-71.

⁴ *J.A.S.B.*, 1900, pt. I, p. 88.

⁵ *Ibid.*, pp. 88-92.

⁶ *Ep. Ind.*, Vol. VIII, App. I, p. 4, note 2.

⁷ *J.A.S.B.*, 1900, pt. I, p. 90.

6. *The grant of Vināyakapāladeva.*—Nothing is known about the finds of this plate except that it was presented by General J. C. Stacy about the year 1848. The Secretary of the Society published Dr. Rājendra Lāla Mitra's version of the text in the same year.¹ Later on Dr. F. E. Hall gave his version in 1862.² In 1864 an eye-copy of the last line was published by Dr. Mitra.³ The plate was fully edited by Dr. J. F. Fleet in 1886.⁴ The inscription records the grant of the village of Tikkarikā, in the Pratiṣṭhāna *bhūkti*, and attached to the Kāsipāra *pathaka*, in the Vārānasī *viṣaya* by the Mahārāja Vināyakapāladeva, to the Bhaṭṭa Bhullāka, after bathing in the Ganges, on the 9th day of Phālguna of the Vikrama year 988 [= 931 A.D.] The charter was drawn up by the illustrious Harsha. The inscription is incised on a massive plate of copper and consists of seventeen lines. In the place of the seal a large panel with a raised border is attached to the right of the inscription bearing the genealogy of the Pratihāra kings in sixteen lines of raised letters. At the top of these a four-armed erect female figure stands in relief. The plate measures 1' 9 $\frac{3}{4}$ " by 1' 5 $\frac{7}{8}$ ". Kielhorn's no. 544.

7. *Jhusi grant of Trilocanapāladeva.*—This plate was discovered in the village of Jhusi in the Allahabad district of the United Provinces. It was presented to the Society by Mr. R. Brown⁵ and was edited by the late Dr. Kielhorn in 1889.⁶ The inscription records the grant of the village of Lebhunḍikā, in the Asurabhāka *viṣaya*, to six thousand Brāhmaṇas of Pratiṣṭhāna, after having bathed in the Ganges, on the occasion of the *dakṣiṇāyana-samkrānti*, the fourth day of the dark half of Śrāvana of the Vikrama year 1084 [= 26th June 1027 A.D.]. The record is incised on a single plate of copper measuring 1' 5 $\frac{1}{2}$ " by 1' 2 $\frac{1}{4}$ " with a projection at the top, most probably, intended for the seal. Kielhorn's no. 60.

8 and 9. *Ashrafpur grants of Devakhadga.*—These two copper plates, together with a *chaitya* of the same metal, were discovered at Ashrafpur, police station Raipur, in the Dacca district, in 1884 or 1885. Inscription No. 8, called by the late Babu Gaṅgā Mohana Laskar "Plate A", was published by Dr. R. L. Mitra in 1885.⁷ It was the property of a certain Babu Pratāpa Candra Banerji. Inscription No. 9 called "Plate B" was received five years later and was purchased from Babu Tārak Nāth Rāya.⁸ Both inscriptions have recently been edited by the late Babu Gaṅgā Mohana Laskar.⁹

No. 8. measures 10" by 6·5" and bears eighteen lines of writ-

¹ J.A.S.B., Vol. XVII, pt. I, p. 70, ff.

² *Ibid.*, Vol. XXXI, p. 1.

³ *Ibid.*, Vol. XXXIII, p. 321.

⁴ *Ind. Ant.*, Vol. XV, p. 138, ff.

⁵ *Asiatic Researches*, Vol. XVII, p. 621.

⁶ *Ind. Ant.*, Vol. XVIII, p. 33. ⁷ *Proc. A.S.B.*, 1885, p. 49.

⁸ *Proc. A.S.B.*, 1890, p. 242, and 1891, pp. 119-20.

⁹ *Memoirs A.S.B.*, Vol. I, p. 85, pl. vii.

ing in acute-angled characters of the 9th or 10th centuries A.D. A circular seal with a beaded rim is attached to the top of the plate bearing the figure of a bull couchant in relief, and below it the name of the king, in raised letters. The plate has suffered very much along the borders and is covered with verdigris. It records the grant of certain villages and portions thereof to a Buddhist monastery under supervision of the spiritual preceptor Saṅghamitra by the King Devakhaḍga in order to secure the longevity of his son Rājarāja-bhaṭṭa. It mentions the queen (*Mahādevī*) Prabhāvatī and was written at Jayakarmānta-vāsaka by Pūradāsa in the month of Vaiśākha of the regnal year 13. Inscription no. 9 measures 7½" by 6" and records the donation of six *pātakas* and ten *dronas* of land to the monastery of Saṅghamitra. The donor seems to have been Rājarāja-bhaṭṭa. The *dūtaka* was Yajñavarmman and the scribe Pūradāsa. Both plates are incised on one side only. Plate no. 9 was sent to Gangā Mohan Babu several years back and has not yet been recovered. Kielhorn's no. 651.

10. *The Bhagalpur plate of Nārāyaṇapāla.*—This plate was sent by a certain Mr. Smith of Bhagalpur. A line runs along the edge of the plate and at the top is a massive seal consisting of a raised disc with a row of dots along the circumference and foliage on each side. The disc bears the representation of the wheel of law (*dharmacakra*) in the centre with a deer couchant on each side. Below the disc is the name of Nārāyaṇapāla in raised letters. The inscription was published by Dr. R. L. Mitra in 1878¹; a more correct version was published by Dr. E. Hultzsch, then Government Epigraphist in 1886.² The inscription records the grant of the village of Makutikā in the *Tirabhūkti Kakṣa viṣaya* to the congregation of Pāsūpata teachers at Kalaśapota for the adequate worship of the lord Śiva by Nārāyaṇapāladeva in the 17th year of his reign. The *dūtaka* was Gurava, probably the same man mentioned in the Buddal pillar inscription,³ and the engraver was Maṅghadāsa, an inhabitant of Eastern Bengal (*Samatata*). The inscription is incised on both sides of a single plate measuring 1' 3·5" by 1'. Kielhorn's no. 638.

11. *The Amgāchi plate of Vighrahapāla III.*—This plate was discovered by a peasant while digging for earth near his hut for the repair of a road in 1806. He gave it to the police, who sent it to Mr. Pattle, the then magistrate of Dinajpur, by whom it was forwarded to the Society. The discovery was announced by Colebrooke with his reading and translation.⁴ Dr. Hoernle took it up about eighty years later and published the text twice.⁵ Finally, Dr. Kielhorn gave his version of the

¹ J.A.S.B., Vol. XLVII, 1878, pt. I, p. 384, pl. xxiv-xxv.

² Ind. Ant., Vol. XV, p. 304.

³ Ep. Ind., Vol. II, p. 161.

⁴ Asiatick Researches, pp. 434-38.

⁵ Centenary Review of the A.S.B., pt. VI, pp. 210-13 and Ind Ant., Vol. XIV, pp. 162-68.

first twenty lines in 1892.¹ A complete version with a plate would still be welcome. The inscription records the grant of some land in the *Koṭivarṣa viṣaya*, and *Paundravarddhana bhūkti*, to a *Brāhmaṇa*, by *Vigrahapāladeva*, after a bath in the Ganges, on the occasion of a lunar eclipse, in the 13th year of his reign. The record was incised by *Sāśideva*, an artizan of the village of *Pośali*. The inscription is incised on both sides of a single plate measuring 1' 2½" by 1' 1". At the top of the inscription is a seal similar to that on No. 10 bearing the name of *Vigrahapāladeva* in raised letters. The inscription is in a bad state of preservation. Kielhorn's no. 643.

12. *The Mānahāli grant of Madanapāla*.—This plate was found in a park adjoining the village of *Mānahāli* in the district of *Dinajpur* and was forwarded by the late Mr. N. K. Bose, C.S., then magistrate of *Dinajpur*. The inscription records the grant of the village of *Kāsthāgiri* in the *Koṭivarṣa viṣaya* and the *Paundravarddhana bhūkti* to a *Brāhmaṇa* named *Vaṭeśvara-svāmin* as *dakṣiṇā* for having read the *Mahābhārata* for the benefit of the Queen, by *Madanapāla* in his 15th regnal year. The metrical portion of the grant is very important as it gives a complete list of the *Pāla* kings. The record is incised on both sides of a single plate measuring 1' 3¾" by 1' 4". The seal is similar to those on Nos. 10 and 11. The *dūtaka* was the *Sāndhivigrahika* *Bhimadeva*, and the scribe was the artisan *Tathāgatasara*.²

13. *A grant of Madanapāla of Kānyakubja*.—Nothing is known about the *provenance* of this inscription. It was edited by Dr. Fitz-Edward Hall in 1858, who believed it to be the property of a certain Major R. R. W. Ellis.³ It was subsequently re-edited by Dr. Kielhorn in 1889.⁴ The inscription records the grant of the village of *Ahnāma* in the *Dhanesaramauā pattalā*, to a *Sāmavedi Brāhmaṇa* named *Vāmanasvāmiśarmman*, by *Candradeva*, the father of *Madanapāla*, after bathing in the Ganges at the *ghaṭṭa* of *Trilocanadeva*, at *Benares*, on the occasion of the *Uttarāyana saṁkrānti*. Evidently the grant was issued by *Madanapāla* immediately after his father's death. The date is Monday, the 3rd of the white half of *Māgha* of the *Vikrama* year 1154, i.e., 19th January 1097 A.D. The grant was incised by the *Karaṇika-thakkura* *Sahadeva*. The inscription is incised on one side of a plate of copper to which seal is attached by means of a ring which passes through a hole at the top. The plate measures 1' 9" by 1' 2". The devices on the seals of the grants of the *Gahadavala* kings of *Kanauj* consists of the figure of *Garuda* kneeling at the top

¹ *Ind. Ant.*, Vol. XXI, pp. 97-99.

² *J.A.S.B.*, Vol. LXIX, 1900, pt. I, pp. 66-73.

³ *J.A.S.B.*, Vol. XXVII, pp. 220-41.

⁴ *Ind. Ant.*, Vol. XVIII, p. 9.

and a conch (*śaṅkha*) at the bottom and the name of the king between them. Kielhorn's no. 76.

14. *Rāhan grant of Govindacandra of Kanauj.*—This plate was discovered by a person digging in a field at Rāhan, a village in the Etawah district. It was presented to the Society by Mr. F. Growse of Mathurā. The inscription was published by Babu Durgārām Basu in 1876¹ and subsequently by Dr. Kielhorn in 1889.² The inscription records the grant of a part of the village of Ramaitha in the Siguroḍha *pattalā* to a Brāhman named Gunacandra, an emigrant from Bhatakavāḍa by the *Rāṇaka* Lavarāpravāha. The *Mahārājaputra* Govindacandra, evidently acting on behalf of his father, makes it known by means of this grant. The land was granted to Lavarāpravāha after bathing in the Yamunā at the *ghaṭṭa* of the god Muraitha, on the occasion of a solar eclipse on Sunday, the 15th of the black half of Pauṣa of the Vikrama year 1166, which comes to about 3rd January, 1109 A.D. The grant was written at the request of the Mahattaka Gāngeya by Tribhuvanapāla, the son of the *thakkura* Devāṅga, and incised by Sunarakkudaṇa, the son of Satehara. The inscription is incised on one side of a single plate measuring 1'7 $\frac{3}{4}$ " by 1'1". The seal is missing, only a ring is attached to the top by means of a hook. Kielhorn's no. 83.

15. *The Varuṇā grant of Jayacandra.*—This plate along with the four following ones (nos. 16-19) were found near the confluence of the Varuṇā or Varāṇa with the Ganges near Benares in 1823.³ This inscription records the grant of the village of Godanti in the Paścima Ichapana *pattalā* in the Antarvedī together with the *pātakas* Ghaṇṭiāmauyī and Nītāmauyī to a Kṣatriya named Rāuta Rājyadharavarman after bathing in the Ganges at Benares on Saturday the 10th day of the bright half of Vaiśākha of the Vikrama year 1233, *i.e.*, 9th April, 1177 A.D. The donee of this and the following grants are the same, and they were written by the *Mahākṣapatalika*, the *thakkura* Śripati. The inscription is incised on one side of a single plate of copper with seal and ring measuring 1'8 $\frac{5}{8}$ " by 1'4". Kielhorn's no. 168.

16. *Another Varuṇā grant of Jayacandra.*—This inscription records the grant of the village of Koṭhāravandhuri in the Kosamba *pattalā* to the Rāuta Rājyadharavarman by Jayacandra on the same date as No. 15.⁴ The inscription is incised on one side of a single plate of copper with seal and ring measuring 1'9" by 1'4 $\frac{9}{16}$ ". Kielhorn's no. 169

17. *Another Varuṇā grant of Jayacandra.*—A translation of this inscription was published with some remarks by H.H.

¹ Proc. A.S.B., p. 130.

³ Asiatic Researches, Vol. XV.

² Ind. Ant., Vol. XVIII, p. 15. ⁴ *Ibid.*, p. 136.

Wilson in 18.¹ It records the grant of the village of Deūpāl together with the *pātakas* of Vavaharādiha, Caṭagelanāpāli, Saravatātaliā and Naugamā, in the Ambuālī pattalā on the banks of the Daivāha, by Jayacandra, after bathing in the Ganges at Benares on the occasion of the *Uttarāyaṇa saṁkrānti*, on Sunday, the 4th of the bright half of Pausha of the Vikrama year 1134, *i.e.*, the 25th December 1177 A.D.² The inscription is incised on one side of a single plate of copper measuring 1' 8 $\frac{1}{4}$ " by 1' 5 $\frac{3}{4}$ ". Kielhorn's no. 171.

18. *Varuṇā grant of Jayacandra, 1136.*—This inscription records the grant of the village of Dayadāma in the Dayadāmī pattala by Jayacandra to Rājyadharavarman, when residing at Raṇḍavāi, after bathing in the Ganges on the full moon of Vaiśākha, *i.e.*, on Friday, the 15th of the bright half of Vaiśākha of the Vikrama year 1136, *i.e.*, 11th April 1180 A.D.³ The inscription is incised on one side of a single plate of copper measuring 1' 8" by 1' 3 $\frac{1}{4}$ ". Kielhorn's no. 173.

19. *Varuṇā grant of Jayacandra, 1136.*—This inscription records the grant of the village of Soletī in the Jaruttha pattalā by Jayacandra to Rājyadharavarman on the same place and date as No. 18.⁴ The inscription is incised on one side of a plate of copper measuring 1' 6 $\frac{1}{8}$ " by 1' 1 $\frac{3}{4}$ ". Kielhorn's no. 174.

20. *Varuṇā grant of Jayacandra, 1136.*—This inscription records the grant of the village of Abhetavaṭu in the Jaruttha pattalā with its five *pātakas*: Maniārī, Gayasaḍa, Vatavaṇa, Asiāma, and Sīrīma by Jayacandra at the same time and place as nos. 18-19 to the same donee.⁵ The inscription is incised on a single plate of copper, with ring and seal, measuring 1' 5 $\frac{1}{2}$ " by 1' $\frac{3}{8}$ ". Kielhorn's no. 175.

21. *Orissa plates of Vidyādharaḥhanjadeva.*—Nothing is known as to the *provenance* of these plates. In 1887 they belonged to Mr. C. T. Metcalfe, Commissioner of the Orissa Division. In the same year the inscription was published by Dr. R. L. Mitra.⁶ Subsequently the plates were presented to the Society by the Commissioner of Orissa through Mr. C. L. Griesbach. Dr. Hoernle sent the plates to the late Dr. Kielhorn, and his version was published immediately after his death.⁷ "They are three substantial copper plates, the edges of which are slightly raised, and of which each measures between 6 $\frac{1}{16}$ " and 6 $\frac{1}{8}$ " long by between 3 $\frac{3}{8}$ " and 3 $\frac{1}{2}$ " high. They slide on a copper ring, which passes through a hole, which is about $\frac{5}{8}$ " distant from the middle of the proper right margin of each plate. . . . The seal

¹ Asiatic Researches, Vol. XV, pp. 447-69.

² Ind. Ant., Vol. XVIII, p. 137.

³ *Ibid.*, p. 139.

⁴ *Ibid.*, p. 140.

⁵ *Ibid.*, p. 142.

⁶ J.A.S.B., Vol. LVI, pt. I, p. 154, ff.

⁷ Ep. Ind., Vol. IX, p. 271, ff.

bears in relief on a countersunk surface, in the upper half, a couching lion facing to the proper right, and in the lower half the legend :—

1. *Srī-Vidyādhara.*
2. *bhañjadevasya.*¹

The plates had already served for another grant before the present record was incised, like the Buguda grant of Mādhava-varman.² The inscription records the grant of the village of Tuṇḍurāva in the Ramalavva *viṣaya* by Vidyādhara-bhañjadeva. The grant was sealed by the queen of Trikaṅga and the minister Stambhadevabhaṭṭa, brought to the donee's home by the messenger Keśava, written by the *Sāndhīvigrahika* Khambha and incised by the goldsmith Kumāracandra. The record is incised on one side of the first plate and on both sides of the other two plates.

22. *The Orissa grant of Gayāḍa-tuṅgadeva.*—This plate was found in a glass case in the Library of the Asiatic Society of Bengal labelled “copper plate grant dated Śaka 1165 bearing an inscription in Bengali characters.” Recently Prof. Nilmani Chakravartti³ has published it. It is incised on a small but very thick plate of copper with a seal attached to its top. It measures 6" by 5". The inscription records the grant of the village of Toro in the Veṇḍuṅga *viṣaya* and the Yamagarta *maṇḍala* to a number of Brāhmaṇas, who emigrated from Ahichattra and settled in the village of Kuruvābhata in the Odra *viṣaya* by Gayāḍatuṅgadeva. The seal is elliptical and bears the figure of a bull couchant and below it the name of the king in raised letters.

23. *The Mādhāinagar grant of Lakṣmaṇa Sena.*—This copper plate was discovered thirty to thirty-five years before by a peasant named Raghunath Buniā in the village of Madhainagar on the border of the Nīmgāchi forest in the Pābnā district of Bengal. It was brought to Pabna by Bābu Durgānātha Tāluqdār, where it was translated by Kavirāja Gopichandra Sena and Babu Prasanna Nārāyaṇa Chaudhuri. The last-named gentleman published his account of the discovery in the *Aiti-hāsika Citra*, where he incidentally stated that the copper plate will be forwarded to the Asiatic Society of Bengal. In 1904 Babu Umeśa Candra Gupta saw this plate in the house of Mahāmahopādhyāya Haraprasād Śāstri, in the possession of the late Babu Gaṅgā Mohana Laskar.⁴ Subsequent inquiries which I caused to be made of Babu Prasanna Nārāyaṇa Chaudhuri elicited the fact that this copper plate had been sent to the Society, and the Society's receipt for it was still in the Pābnā

¹ Ep. Ind., Vol. IX, p. 272.

² *Ibid.*, Vol. III, p. 41.

³ Journ. and Proc., A.S.B., Vol. V, p. 347, pl. 17 & 18.

⁴ বঙ্গালমোহি মুদ্রার by Pandit Umeśa Chandra Gupta, pp. 96-97.

collectorate. In 1907, while I was searching for the Tippera grant, sent to the Society by Mr. McMinn, then one of the Vice-Presidents, which also was issued to Gangā Mohana Babu, I was informed by Mahāmahopādhyāya Hara Prasad Sastri that Babu Gangā Mohana Laskar's father had sent one of the plates to him. On careful examination I find that this was the Madhainagar grant, and I edited it in the Society's Journal.¹ The grant is a very important one for the history of Bengal, and specially for that of the Sena dynasty. The inscription records the gift of the village of Dāpaniyā *pāṭika* in the Paundra-Vardhana *bhukti* to Dāmodaradeva Śarman by Lakṣmaṇasena-Dēva. The inscription is incised on both sides of a single plate of copper measuring $1'3\frac{1}{2}'' \times 12\frac{1}{2}''$. In the place of the seal a ten-armed male figure is attached to the top of the grant by a hook.

24. *Spurious bronze plate from Hamirpur.*—According to a label on its back in the hand-writing of Mr. V. A. Smith and signed by him, this plate was obtained by him through Pandit Muralidhar from an old Bhar woman living in Chaubepur near Citrakot, who said that she originally came from *mauja* Siuni in Pargana Jalālpur in the Hamirpur district. The grant was obtained by the Pandit in 1875 and was forwarded to the Society by Mr. Smith. In 1877 Dr. Rajendra Lāla Mitra pronounced it to be a forgery,² which verdict was adopted by Mr. Smith. The inscription is in Maurya Brāhmī and records the defeat of the tribe of Bhars by Lodhas in the Vikrama year 1404, *i.e.*, 1447 A.D.³ The date is given in modern Nāgari numerals. The inscription is in nine lines and has been incised on a thin rectangular plate measuring $9\frac{3}{4}''$ by $7\frac{1}{2}''$. The two upper corners are clipped.

The following eleven copper plates bear short inscriptions, in very modern Nāgari characters and Hindi language, recording grants of land made by the princelings of Rajputāna and Central India during the period of the dissolution of the Mughal Empire. The dates on these inscriptions cover a period of about sixty-five years (1726—1790), the earliest of them being a grant by the famous freebooter, Rāja Chatrasāla or Chhattarsāl of the modern historians. There are three grants by Raja Gumāna Singh of Kota, three more by Rājā Hindupati Singh of Bundi, single ones of Mahārāja-Kumāras Udota Singh and Kīrti Singh, and Rājā Sikhēt Singh of Kalimjara. The era used on these inscriptions is the Vikrama era.

25. *Grant of the Mahārāja-Kumāra Udota Singh.*—This inscription records the grant of certain lands to Pandit Śaragasura [*Svargaśūra*] and Giradhāri [*Giridhārī*], on Monday the 30th of the dark half of Māgha of the year 1783 [= 1726 A.D.], by the

¹ Journ. and Proc., A.S.B., Vol. V, p.465, pl. 23 & 24.

² Proc. A.S.B., 1877, p. 266.

³ J.A.S.B., Vol. XLVI, 1877, pt. I, p. 236.

Mahārāja-Kaumāra-divāna Udotasīṅgha [*Udyotasimha*]. The word *mujahim* occurs twice and the main inscription ends with the words *mukāma Parihara*, which might mean that *Parihara* was the residence of the prince. To the left of the inscription is the "seal" [*chāpa*], as it is called, on the majority of these inscriptions, which consists of a circle scratched on the plate containing the titles of the prince. In this case the seal contains five lines. It measures 8" by 6½".

26. *Grant of Rājā Chatrasāla*.—This inscription records the grant of two hundred bīghās of land in *mauja* Kahaba to Pandit Jagan Dube [*Dvivedin*], on Monday, the 30th of the dark half of Phāguna [*Phālguna*] of the year 1784 [= 1727 A.D.], by Rājā Chatrasāla. The *mukāma* is *Uhobā* or *Hebā*. The main inscription consists of five lines and the "seal," which in this case is to the left of the inscription, of three lines. It measures 7½" by 5½".

27. *Grant of the Mahārāja-Kumāra Kīrtti-Simha*.—The inscription records the grant of the village of Pataurā in *praganē* [*parganē*] Saihadāka to Tivārī Hiraderāma [*Trivedī Hrdayarāma*] by the Mahārāja-Kumāra-Kiratisīṅghadeva [*Kīrttisīṅghadeva*] in the year 1800. The inscription is incised on a circular plate with a line above the main inscription along the circumference. The main inscription consists of four lines. Below this, two lines run diagonally, after which come six more lines containing the names of two *maujās* Ekasukā and Jaitapura. The seal consists of six lines. The full titles are:—

1. Śrī-jagateśa
2. nareśa-vodh[ā]dit[y]a
3. dinesa-pratāpa Ki
4. ratisīṅgha divāna
5.
6. chāpa.

Below the seal and so to the right is an endorsement consisting of six lines, while four shorter endorsements are incised on the left. The diameter of the inscription 1¾".

28. *Grant of Rājā Hindupati Singh of the year 1816*.—The inscription begins with an invocation to *Kamatānātha* and records the grant of 180 bīghās of land to Mahanta Govindāsa [*Govindadāsa*] in *maujā* Aharauli of pargana Gahorā on the 13th of Saona [*Srāvana*] of the year 1814 [= 1757 A.D.], by the Rājā Hindupati Simgha. The *mukāma* was Madh. The seal consists of five lines and there is a single endorsement on the reverse. The plate measures 10" by 6½".

29. *Grant of Hindupati Singh of the year 1816*.—The inscription begins with the name of Śiva [*paramēśvara*] and records the grant of fifty-one bīghās of land to Pandit Gaṇasusā-lala [*Gaṇasukhalāla*] by Rājā Hindupati Singh in the year 1816 [= 1859 A.D.] The main inscription consists of six lines and the

“seal” of five lines. The *mukāma* was Kāli[m]jara. One corner of the plate is clipped and it measures $9\frac{1}{6}$ " by $8\frac{9}{16}$ ".

30. *Grant of Hindupati Singh of the year 1817.*—This inscription records the grant of some land to Mahanta [*i.e.* abbot] Hirā-Lāla in *maujā* Adhabe, pargana Angāsi, on the 15th of Vaisākha of the year 1817-1760 A.D., by Rājā Hindupati Singh. The main inscription consists of twelve lines and the “seal” of five lines. It is incised by dots on a thin plate of copper measuring $1\frac{1}{4}$ " by $4\frac{1}{4}$ " and is in a very badly mutilated state.

31. *Grant of Hindupati Singh of the year 1827.*—The inscription begins with the name of Gaṇeśa and records the grant of some land in *maujā* Karauli, pargana Augāsi, to Mahanta Garivadāsa, on the 14th of the dark half of Caitra of the year 1827[=1770 A.D.], by the Rājā Hindupati Singh. The word *mujāhima* occurs once and the *mukāma* is Paṭanā. The main record consists of eight lines and the “seal” of five lines below the word *Gaṇeśa*, at the top are the words *Sanadhasahī*. “The signature to the grant” and to the left the endorsement of *Vakasi* [*bakhshī*] Harakisana. There are two more endorsements on the reverse. The plate measures 9" by $9\frac{1}{2}$ ".

32. *Grant of Gumāna Singh of the year 1818.*—The inscription records the grant of some land in *maujā* Vāripāri in pargana Doje Gatapehadhetī to Tivārī [*Trivedin*] Jagidhar on the 11th of the dark half of Aḡaṇa [*Agrahāyana*] of the year 1818[=1761 A.D.]. The main inscription and the seal consist of six lines each and the plate measures $8\frac{1}{2}$ " by $9\frac{1}{4}$ ".

33. *Grant of Gumāna Singh of the year 1818.*—The inscription records the grant of certain land, in *maujā* Mirajāpur [*Mirzāpur*] in pargana Sejatā, on the 5th of the bright half of Māha [*Māgha*] in the year 1818[=1761 A.D.]. The main inscription consists of seven lines and the seal of six lines. The *mukāma* is Marajāpur [*Mirzāpur?*]. The reverse bears three endorsements *viz.*, Rāu Savadalasingha, Bagasī [*bakhshī*] and Valaju. The plate measures $7\frac{3}{4}$ " by $6\frac{5}{8}$ ".

34. *Grant of Gumāna Singh of the year 1835.*—The inscription records the grant of fifty *bighas* of land in *maujā* Loharā to Pandit Harīvamsa duve [*divedin*], on Monday the 30th of the dark half of Vaisāṣa [*Vaisākha*] of the year 1835[=1778 A.D.], by Rājā Gumāna Singha. The *mukāma* was Śrīnagara. The main inscription consists of eighty lines and the seal of five lines. The reverse bears three endorsements and the plate measures $7\frac{1}{2}$ " by 5".

35. *Grant of Rājā Sikheta Singh of the year 1847.*—The inscription begins with the name of Rāmacandra and records the grant of some land, in the village of Burdapai in pargana Gahorā, to Śrī-Vaisnodāsa Rāmadāsa on the third of the dark half of Pauṣa of the year 1847, by Rājā Sikheta Singha. The seal consists of five lines and the main inscription of seven lines. The *mukāma* was Kali[m]jara. The corners of the plate are round and it measures $9\frac{1}{4}$ " by $8\frac{1}{2}$ ".

43. *Triacanthus weberi*, sp. nov.

By B. L. CHAUDHURI.

(With Plate XXXII.)

D. V, 22-23; P. 13-14; A. 18-19; C. 13-14.

Height of body slightly greater than the length of head and both contained about 3 times, the distance of cloacal opening from the root of caudal contained $2\frac{1}{2}$ times, and the length of caudal peduncle 4 times in the total length excluding caudal fin. Length of snout is contained $1\frac{1}{3}$ to $1\frac{1}{2}$ times in the length of head.

Eyes more elliptical than circular, major axis of the ellipse almost coinciding with the direction of the length of the fish, and is about $1\frac{1}{2}$ times of the breadth of the eye. In the young, however, the eye is more round. Length of eye is contained 3— $3\frac{1}{2}$ times in the length of head, 2 times in the length of snout and one time in intra-orbital space which consists of two lateral convexities with a shallow fossa in the middle. The distance between the upper edge of the eye and the base of first dorsal spine is almost equal to the length of eye, and the post-orbital part of the head is very much shorter than the length of eye, the former length being contained $2\frac{1}{2}$ times in the latter.

Fins.—The first dorsal spine is twice as long as the second ray of the spinous dorsal and is slightly longer than the ventral spine but shorter than the length of head. The ventral spine is contained nearly $1\frac{1}{2}$ times and first dorsal spine about $1\frac{1}{4}$ times in the length of head. Length of base of anal fin is contained $1\frac{1}{2}$ times in length of base of the soft dorsal fin. The pelvis between the ventral spines is moderately broad and posteriorly terminates tapering to a point.

Shape.—Dorsal profile of the head shows two concavities which are separated by the slight convexity in front of the eye. The concavity above the eye is slight; sub-orbital concavity is in the superior side of the snout and is more prominent than in any other species of this genus; this concavity is still greater in the young. The ventral profile of the head shows a convexity anterior to ventral spine which ends in a shallow concavity in front which again merges gradually in the ventral profile of the prolonged portion of the snout. The convexity in the ventral profile of the head just described gives a distin-

guishing shape to the species and makes it appear as it were possessed of a double chin. The upper edge of the occipital crest is always in the same straight line with the snout.

Teeth.—Eight incisors in each jaw, the lower jaw being slightly prominent and prolonged.

Colour.—Upper part of the body glaucous grey with deeper coloured margin and some deeper blotches interspersed in the upper part of the body, lower part being silvery white; there is a blurred blackish spot in front and around the base of the first dorsal spine; the portion of the membrane between the first dorsal and the rest of the rays of the spinous dorsal is immaculate, but the portion of the membrane that is above the level of the second ray of the spinous dorsal and is attached to the upper half of the first dorsal spine is intensely black. The upper half of first dorsal spine itself is also blackish. From below the eyes to almost end of the snout (that is, excluding upper lip and premaxillary portion), the front of the snout with its bevelled edges to the extent of one-fourth of the length of eye is coloured blackish, which suddenly loses itself in the silvery white colour of the buccal area which is similarly coloured as the lower part of the body. Soft dorsal, pectoral, anal, and caudal fins, ventral spines and lips are all dull white. There is no black spot in front of ventral spine as in *Tr. biaculeatus* (Bloch).

The principal points in which the new species differs from the rest of the known species belonging to the genus may be more conveniently stated in a tabular form as follows:—

In <i>Tr. brevirostris</i> , <i>Tr. indicus</i> , and <i>Tr. nieuhofi</i> —the snout is straight.	}	In the new species—the snout is concave.
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In <i>Tr. strigilifer</i> —the second ray of spinous dorsal is more than half as long as the first.	}	In the new species—the second ray of spinous dorsal is normally half as long as the first dorsal spine.
In <i>Tr. blochi</i> and <i>Tr. biaculeatus</i> and all the rest—the second ray is more than half as long as the first.		

Length of head in total length excluding caudal—	}	In the new species—length of head three times in total length excluding caudal.
In <i>Tr. blochi</i> , $3\frac{1}{2}$ — $3\frac{4}{5}$ times.		
In <i>Tr. biaculeatus</i> , $3\frac{1}{2}$ times.		
In <i>Tr. brevirostris</i> , $3\frac{1}{2}$ — $3\frac{3}{4}$ times.		
In <i>Tr. indicus</i> , $3\frac{1}{4}$ — $3\frac{1}{2}$ times.		
In <i>Tr. nieuhofi</i> , $3\frac{1}{2}$ — $3\frac{3}{5}$ times.		

[N.S.]

Height of body in the total length excluding caudal—

In *Tr. biaculeatus*, $2\frac{4}{5}$ times.

In *Tr. oxycephalus*, $2\frac{1}{3}$ — $2\frac{1}{2}$ times.

In *Tr. brevirostris*, $2\frac{1}{2}$ — $2\frac{3}{4}$ times.

In *Tr. indicus*, $2\frac{1}{3}$ — $2\frac{2}{3}$ times.

In *Tr. nieuhoi*, $2\frac{1}{3}$ times.

In the new species—height of body in total length excluding caudal is three times.

Length of caudal peduncle in the total length—

In *Tr. strigilifer*, $4\frac{1}{2}$ —5 times.

In *Tr. blochi*, $4\frac{1}{2}$ — $5\frac{1}{2}$ times.

In *Tr. biaculeatus*, $4\frac{1}{2}$ —5 times.

In *Tr. oxycephalus*, $6\frac{1}{2}$ —7 times.

In the new species—length of caudal peduncle in the total length is four times.

Length of eye in length of head—

In *Tr. biaculeatus*, $3\frac{1}{2}$ —4 times.

In *Tr. oxycephalus*, 3—4 times.

In *Tr. brevirostris*, $3\frac{1}{2}$ —5 times.

In *Tr. indicus*, $3\frac{1}{4}$ — $4\frac{1}{4}$ times.

In the new species—length of eye in the length of head, 3— $3\frac{1}{2}$ times.

Intra-orbital space—

In *Tr. strigilifer*, concave without distinct median ridge.

In *Tr. biaculeatus*, concave with median ridge scarcely distinct.

In *Tr. oxycephalus*, flat.

In *Tr. brevirostris*, with distinct ridge with a groove on each side.

In the new species—the intra-orbital space consists of two lateral convexities with a shallow fossa or depression in the middle of the space.

The occipital crest—

In *Tr. blochi*—upper edge of occipital crest forms an angle of about 160 with that of snout.

In *Tr. biaculeatus*—upper margin of occipital crest forms an angle of 170 with that of the snout.

In *Tr. oxycephalus*—upper edge of occipital crest is convex.

In the new species—the upper edge of the occipital crest is almost in the same straight line as that of the snout.

- | | |
|--|---|
| In <i>Tr. oxycephalus</i> , <i>Tr. strigilifer</i> , <i>Tr. blochi</i> , and <i>Tr. biaculeatus</i> —the first dorsal spine is <i>longer</i> than the head; and in <i>Tr. indicus</i> the first dorsal spine is as long as the head. | In the new species—the first dorsal spine is shorter than the length of head. |
| In <i>Tr. biaculeatus</i> — distance from posterior margin of eye to base of first dorsal spine, $1\frac{2}{5}$ — $1\frac{3}{5}$ times as long as eye length. | In the new species—distance from upper posterior margin of eye to base of first dorsal spine is equal to eye length. |
| In <i>Tr. brevirostris</i> — length of post-orbital part of head equal to or greater than eye diameter. | In the new species—length of post-orbital part of head is contained $2\frac{1}{2}$ times in the eye length. |
| In <i>Tr. strigilifer</i> , <i>Tr. blochi</i> and <i>Tr. oxycephalus</i> — the membrane of spinous dorsal is immaculate; in <i>Tr. biaculeatus</i> , the membrane between first two rays of spinous dorsal is blackish; in <i>Tr. brevirostris</i> , <i>Tr. indicus</i> and in <i>Tr. nueihofi</i> , the entire membrane of spinous dorsal blackish. | In the new species—the portion of the membrane of spinous dorsal which is within the rays of the spinous dorsal and lower half of the first dorsal spine is immaculate but the portion which is above the level of the second dorsal ray and only attached to the upper half of the first dorsal spine is coloured intensely black. |

There were altogether 11 specimens collected from the Bay of Bengal by the steam trawler "Golden Crown." One from the mouth of the River Hugli, 4 in the Arakan coast, and 6 off Gopalpur in the Madras coast during 1908-9. Ten of these have been used as types for this description and they are in the collection of the Indian Museum. Their total length including the caudal fin and their numbers in the register of the Museum are given below: $F. \frac{4072}{1} = 15$ C.M., $F. \frac{4078}{1} = 14.6$ C.M., $F. \frac{3507}{1} = 14.3$ C.M., $F. \frac{3511}{1} = 13.9$ C.M., $F. \frac{4080}{1} = 13.8$ C.M., $F. \frac{4058}{1} = 13.2$ C.M., $F. \frac{4079}{1} = 13.2$ C.M., $F. \frac{4081}{71} = 12.5$ and $F. \frac{4082}{1} = 10.2$ C.M.

The remaining specimen was submitted to Professor Max Weber for examination, and we are very much indebted to him

for his kindly taking the trouble of comparing that specimen with authentic specimens of Bleeker as well as with the original drawing of Bloch's *Triacanthus biaculeatus*. The observations and remarks made by Professor Max Weber in his reply have been very helpful in drawing up this description.

SEPTEMBER, 1910.

The Monthly General Meeting of the Society was held on Wednesday, the 7th September, 1910, at 9-15 P.M.

T. H. D. LATOUCHE, Esq., B.A., F.G.S., President, in the chair.

The following members were present :—

Dr. N. Annandale, Mr. B. L. Chaudhuri, Dr. E. P. Harrison, Mr. A. M. Heron, Mr. J. C. R. Johnston, Mr. H. C. Jones, Dr. Satis Chandra Vidyabhusana, and Mr. E. Vredenburg.

Visitors :—Babu Hem Chandra Das Gupta, Mr. F. H. Gravely, and Rev. H. Hosten, S.J.

The minutes of the last meeting were read and confirmed.

Thirty presentations were announced.

The General Secretary reported that Mr. W. B. MacCabe and Pandit Durga Das Bhatta had expressed a wish to withdraw from the Society.

Acharyya Satyavrata Samasrami was balloted for and elected an Honorary Member.

Khan Bahadur Shams-ul-Ulama Moulvie Ahmed Abdul Aziz Nayati and Mr. L. K. Anantha Krishna Iyer were balloted for and elected Associate members.

The proposal to designate Honorary Members as Honorary Fellows of the Society, of which intimation had already been given by circular to all members in accordance with Rule 65, was brought up for final disposal.

The majority of members being in favour, the proposal was carried.

The following seven gentlemen were balloted for as Ordinary Members :—

Kumar Sarat Roy, Zamindar, Dayarampur P.O., Rajshahi, proposed by Babu Rakhal Das Banerji, seconded by Mr. G. H. Tipper; *Mr. E. R. Preston*, Officiating Inspector of European Schools, Bengal, United Service Club, Calcutta, proposed by Lieut.-Colonel D. C. Phillott, seconded by Mr. G. H. Tipper; *Mr. S. R. Kumar*, Rais, Zamindar and Banker, P. O. Thakurdwara, District Moradabad, U.P., proposed by Mr. G. H. Tipper, seconded by Lieut.-Colonel D. C. Phillott; *Major W. G.*

Grey, proposed by Lieut.-Colonel D. C. Phillott, seconded by Mr. G. H. Tipper; *Mr. L. P. Watts*, proposed by Mr. D. Hooper, seconded by Mr. G. H. Tipper; *Mr. F. H. Gravely*, proposed by Dr. N. Annandale, seconded by Mr. T. H. D. LaTouche; *Captain A. Fortescue*, R.A.M.C., proposed by Mr. T. H. D. LaTouche, seconded by Dr. N. Annandale.

The President gave a brief description, illustrated with diagrams and lantern slides, of the Lonar Lake, situated in the Berars, near the northern limits of Hyderabad State. The lake basin is a circular depression, a little over a mile in diameter and some 300 feet deep, in the surface of the Deccan trap, the expanse of basaltic rock that covers so wide an area in the central and western portions of the Indian Peninsula. This formation is built up of practically horizontal flows of lava which are supposed to have welled out from fissures in the underlying rocks in early Tertiary times, when the old continent of Gondwana land, of which the Indian Peninsula and South Africa are remnants, was being broken up; for nothing of the nature of a volcanic cone has been discovered. The origin of the Lonar Lake basin has been attributed to a sudden and violent explosion, which is supposed to have blown out the surface layer of trap, leaving the present hollow, but there are serious objections to the acceptance of this theory. If such an explosion had occurred, we would expect to find accumulations of the rocks and scoriæ blown out in the neighbourhood of the hollow, but nothing of the kind exists except a slightly raised rim of loose blocks which may be merely weathered fragments of the solid lava. Moreover, we would expect to find some indication of a deep crater in the centre of the depression, whereas the floor of the basin is practically level, and the water of the lake no more than two feet deep at any point in the dry season.

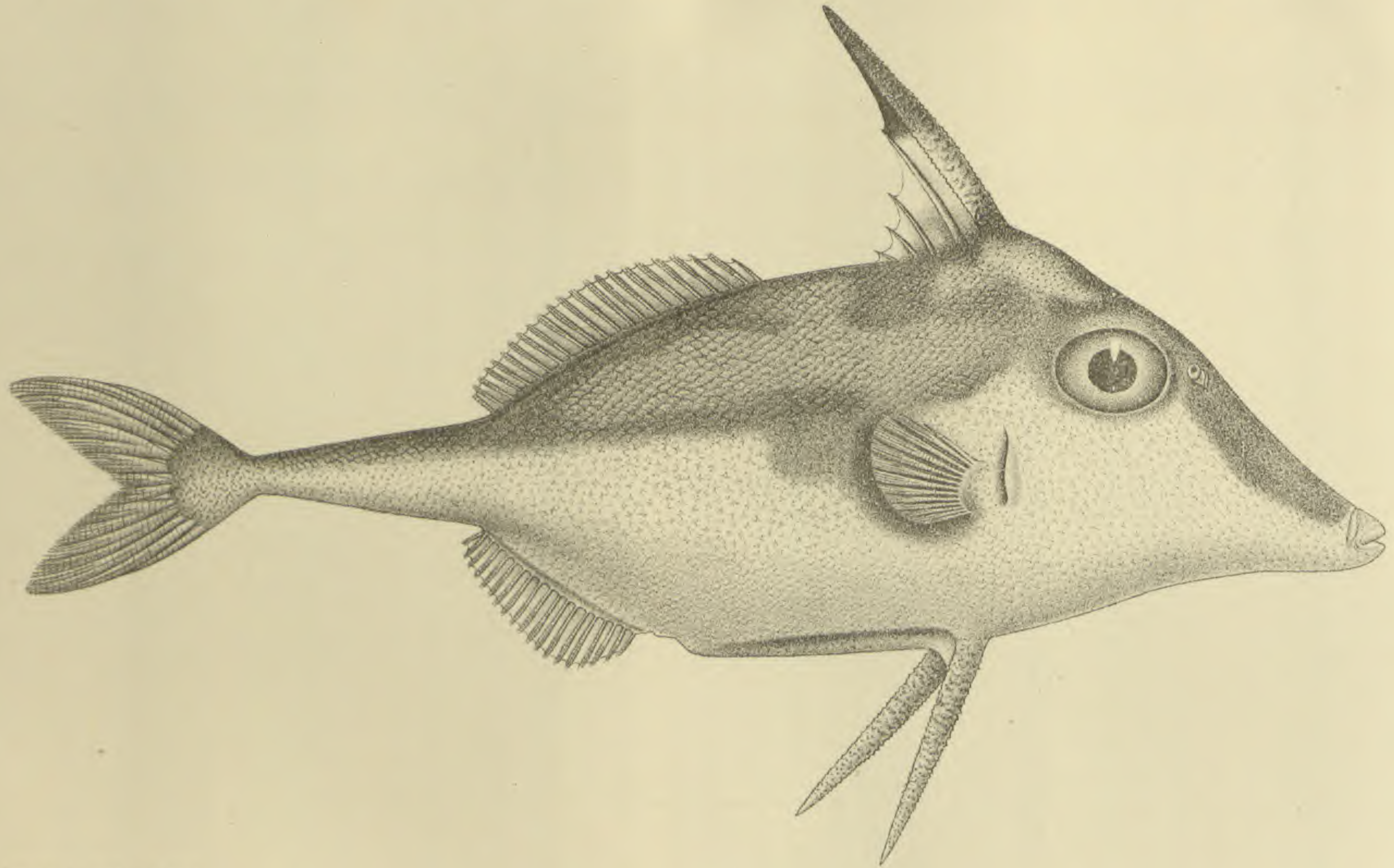
The theory advanced by the President suggests that a previously existing layer of lava at this spot was raised bodily by the injection of molten rock from below, forming a huge "blister" on the surface; and that before this fresh lava was cooled and consolidated, a fissure opened through which it escaped, and that the crown of the dome then broke down and subsided, forming a circular pan-shaped hollow with a level floor. Some confirmation of this suggestion is afforded by the fact that the lake is surrounded by a series of springs, indicating that the rock beneath is traversed by vertical fissures parallel to the encircling walls.

The lake has no outlet, and the water is strongly impregnated with salts, mainly carbonate of soda, which was formerly in great request for the manufacture of a cheap glass used principally for the making of bangles, but the industry has now been ruined by the superior quality and low price of imported soda ash.

The following papers were read:—

1. *Triacanthus weberi*, sp. nov.—By B. L. CHAUDHURI.
2. *Note on a Shrine in the Koh Si Hah, Talé Sap, Lower Siam.*—By Dr. N. ANNANDALE, F.A.S.B.
3. *A description of a Lisu Jew's harp.*—By J. COGGIN BROWN.
4. *JĀTŪ. Being some Grammatical notes and a glossary of the language of the Rohtak Jats.*—By E. JOSEPH, I.C.S. Communicated by the Philological Secretary.

These three papers will be published in a subsequent number of the *Journal*.



S. C. Mondul, del. et lith.

TRIACANTHUS WEBERI, Chaudhuri.

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The maps illustrating Mr. Ascoli's paper on "The Rivers of the Delta" will be issued in a subsequent number of the Journal.

44. On the Preparation of Phenyl-Nitro-Methane
by the interaction of Mercurous Nitrite and
Benzyl Chloride.

By PAÑCHĀNAN NEOGI, M.A., *Professor of Chemistry, Rajshahi
College*, and BIRENDRA BHUSAN ADHIKĀRY, M.A.

The Aliphatic Nitro-Compounds were originally prepared by Victor Meyer (B. 5,399; A. 171, 1; 175, 88) by the interaction of Silver Nitrite on the Alkyl Iodides. Attempts were made to replace Silver Nitrite by means of Lead Nitrite, but without success. Rây has, however, shown that by the interaction of Mercurous Nitrite and Ethyl Iodide both Nitro-Ethane and its Isomer, Ethyl-Nitrite are formed in equal quantities (*Annalen*, Bd. 316, 253). Rây and Neogi (Proc. Chem. Soc., 1907, 246) have also succeeded in preparing considerable quantities of many Aliphatic Nitro-Compounds by using Mercurous Nitrite in the place of the Silver Compound. Rây and Neogi (Trans. Chem. Soc., 1906, 1900) have also prepared Aliphatic Nitro-Compounds by the interaction of the Alkali Salts of Ethyl Sulphuric Acid and the Alkali Nitrites. Phenyl-Nitro-Methane, the aromatic analogue of Nitro-Methane, was prepared by Gabriel (1885) by the interaction of Silver Nitrite on Benzyl Chloride. Gabriel and Kopp (B. 18, 1254; 19, 1145) have also prepared the same compound by the action of acids upon the Di-Sodio-Derivative of Nitro-Benzylidene phthalide. In this paper we have prepared Phenyl-Nitro-Methane by the interaction of Mercurous Nitrite on Benzyl Chloride. Experiments are progressing for the preparation of Phenyl-Nitro-Methane by the interaction of the Alkali Salts of Toluene-exo-Sulphonic Acid and Alkali Nitrites.

Experimental.—In order to compare the yields of Phenyl-Nitro-Methane formed by the respective use of Silver and Mercurous Nitrites we have prepared the compound by both the methods.

INTERACTION BETWEEN SILVER NITRITE AND BENZYL
CHLORIDE.

70 grams of dry Silver Nitrite were mixed with about 30 grams of white sand and heated with 56 grams of Benzyl Chloride on a water-bath in a flask with an upright spiral condenser. Large quantities of nitrous fumes due to the formation of Nitric Oxide were evolved and a lighted match presented to the exit end of the condenser did not cause the

ensuing gas to catch fire. The reaction was vigorous and after some time the evolution of nitrous fumes ceased. The contents of the flask were next stirred and heated gently in an open flame. The resulting Phenyl-Nitro-Methane with excess of unchanged Benzyl Chloride was distilled in vacuo. The liquid thus obtained was then fractionally re-distilled under reduced pressure. The results of one typical operation with the substances taken in the proportions noted above are given below. The fraction (120° — 160°) gives very readily the characteristic test of Nitro-Compounds of solidifying *en masse* on the addition of alcoholic caustic soda on account of the formation of the sodium compound.

Pressure 20 m.m. liquid boiling		
	below 100°	.. 11.3 grams.
„	between 100° — 120°	.. 5.9 grams.
„	„ 120° — 155°	.. 3.2 grams.

The liquid boiling between 120° to 155° is practically pure Phenyl-Nitro-Methane, which was found by Gabriel to boil at 160° at 35 m.m. and at 216° at atmospheric pressure with decomposition, that boiling between 100° — 120° also gives the test of Nitro-Compounds but to a less extent. The fraction below 100° consists mainly of unchanged Benzyl Chloride.¹

INTERACTION BETWEEN MERCUROUS NITRITE AND BENZYL CHLORIDE.

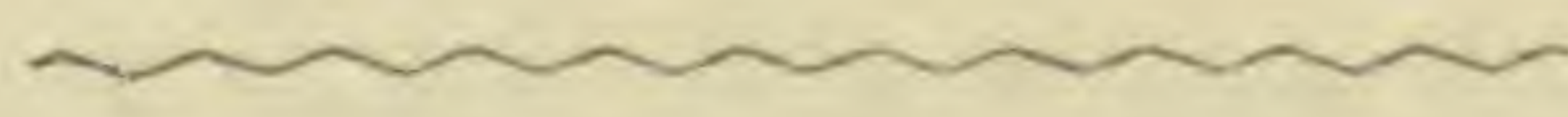
Mercurous Nitrite was prepared on the large scale according to Rây's method (Annalen, II. 649, 1898; Annalen, II. 452, 1901), using Nitric Acid diluted in the ratio of 1 to 3. We have found that the same acid may be used two or three times for the preparation of two or three crops of the yellow crystals of the compound. When used for the fourth time, the acid being very weak, the yellow crystals were largely mixed with large colourless crystals of Mercurous Nitrate. 75 grams of dry Mercurous Nitrite mixed with about 25 grams of clean white sand were taken in the apparatus described above and 36 grams of Benzyl Chloride added. No heat was at first developed, which was also the case with Silver Nitrite. When, however, the flask was heated on a water-bath, very violent reaction took place with a copious evolution of nitrous fumes. The contents of the flask were next submitted to vacuum distillation and the liquid thus obtained was fractionally redistilled as described

¹ It was found that pure Benzyl Chloride boils at about 100° at 20 m.m. and that Nitro-Benzene which resembles Phenyl-Nitro-Methane in odour but does not give the sodium salt test boils at about 110° C. under the same pressure.

under Silver Nitrite. In the case of Mercurous Nitrite, the reaction is much more vigorous than in the case of Silver Nitrite.

Pressure 20 m.m. liquid boiling		
	below 100°	.. 5.2 grams.
„	between 100°—120°	.. 3 grams.
„	„ 129°—155°	.. 9.6 grams.

From the above results it is seen that the yield of Phenyl-Nitro-Methane is much greater with Mercurous Nitrite than in the case of Silver Nitrite, while in the case of pure Aliphatic Nitro-Compounds the yield is much less. It is also to be noted here that the reaction of Mercurous Nitrite with Alkyl Iodides is much slower than with the Silver Compound, while with Benzyl Chloride the reverse is the case.



45. *Materia Medica Animalium Indica.*

By DAVID HOOPER.

Workers on Indian *Materia Medica* have paid more attention to drugs of vegetable origin than those of the animal kingdom. One reason for this neglect is because drugs of the latter class form a small proportion of those in general use. The present paper is an attempt to bring these materials together in a classified form, to state their properties as far as they are known, and to give their composition where this has been ascertained. The following works among others have been consulted in compiling the list, and notes from correspondence in the Office of the Reporter on Economic Products, Indian Museum, have been utilised:—

Ainslie's *Materia Indica*, 1826. Irvine's *Topography of Ajmeer*, 1841. Honigberger's *Thirty-five Years in the East*, 1852. Baden Powell's *Punjab Products*, 1868. *Pharmacopœia of India*, 1868. Sakaram Arjun's *Bombay Drugs*, 1877. U. C. Dutt's *Materia Medica of the Hindus*, 1900. Khory's *Materia Medica of India*, 1908. Watt's *Dictionary of the Economic Products*, 1889-1893, and *Commercial Products of India*, 1908.

Many substances such as the flesh of animals and charms worn on the person to prevent disease are omitted from the list. Galls produced by insects have not been enumerated as it is considered more appropriate to deal with them as vegetable structures under the name of the trees upon which they are formed. The present list of animal drugs therefore includes, as far as possible, those that are recognized by Hindu and Muhammadan physicians and sold in the bazar. I have to acknowledge the valuable help I have received from Dr. N. Annandale in identifying specimens and for supplying information on many of the products.

PROTOZOA.

NUMMULITES ATACICUS.

These button-like fossils are sold in the drug bazar of Lahore under the name of *sangh nadh*.

In Baden Powell's "*Punjab Products*" the following fossils are enumerated:—

Sang-i-khurus, a fossil encrinite (Echinodermata).

Sang-i-irmali, a fossil (Echinodermata).

Hajr-ul-yahudi, encrinite.

Sang-i-shadnaj, a fossil nummulite.

Sancha, a nummulite from Mazari hills.

These fossils have no other virtue than what they derive from calcium carbonate, but on the strength of the doctrine of similitudes they are administered on account of their resemblance to the products of disease.

Spongida or Porifera.

SPONGIA Sponge.

Vern. :—*Mua badal*, Hind. ; *Vādatū*, Guz. ; *Abar murdah*, Pers. ; *Isfanj*, Arab.

The name seems to be given from the idea that this substance is allied in its nature to the clouds, and hence its property of holding water.

The antacid properties of burnt sponge and its tonic and deobstruent qualities have been much extolled. It is given internally in cases of dropsy, dysentery and bowel complaints. Its efficacy is supposed to depend upon the iodine it contains. Sponge consists of an organic body, spongin, and 3 to 4 per cent. of ash.

ACTINOZOA.

Alcyonaria.

CORALLIUM RUBRUM, Lam. Red coral.

Vern. :—*Mungki sakh*, *sang-i-marjan*, Hind. ; *Pravala*, Mar. ; *Kya ve khet*, Burm. ; *Bussud*, Arab. ; *Marjan*, Pers. ; *Prabala*, *birbat*, Sans.

Obtained from the Red Sea and Persian Gulf and Arabian Coast.

This coral is digested in lime juice and reduced to powder, or calcined in covered crucibles and then powdered. It is used as a tonic, and to check vomiting and acidity depending on dyspepsia. Dr Honigberger says, the Hakims use it externally for weakness of vision, and internally for spitting of blood, and suppression of urine. Coral consists principally of calcium carbonate, the red kind has been said to contain about 4 per cent. of ferric oxide. My specimens are free from iron and the colouring matter is organic. Baden Powell refers to *Kushta sang-i-marjan*, from Sirmur, as a pink powder not effervescing with acids.

TUBIPORA MUSICA, Cham. Organ pipe coral.

Vern. :—*Mungay-ki-jar*.

Composed of a number of bright red tubular cylindrical thecæ united together. It is used in the same manner as red coral. The colouring matter is organic.

ECHINOIDEA.

CIDARIS sp.

Vern. :—*Sang-yahudi*, *Sanj-jahud*, *Sung deraz*, *Surkoola*, *Pathar-ka-ber*, Hind. ; *Dugre bore*, Bomb. Jews' stone.

This fossil echinoid consists of the petrified spines of a sea urchin. Extravagant ideas prevail as to the origin of this drug which some suppose to be a petrified fruit. Pathar-ka-ber, the name it has in Delhi, signifies stones or petrified fruits of *Zizyphus jububa*. It is described in "Taleef Shereef" under the name of Sungjerahut and is said to be useful in wounds and internally in flatulence and diarrhoea. It is sold in Bombay and the Punjab. Samples in the Indian Museum came from Delhi, Amritsar and Lahore. Mr. G. H. Tipper of the Geological Survey informs me that they come from the Jurassic of the Salt Range, Punjab. They contain 95 per cent. of calcium carbonate.

OLIGOCHÆTA.

Kharatin-khushk. According to Baden Powell's "Punjab Products," this is the name given to earth-worms collected in the rains, dried and sold in Lahore.

HIRUDINEA.

LEECHES.

Jok, *jonk*, Hind. ; *Drik*, Kashmir ; *Jala*, Guz. ; *Attai*, Tam. ; *Jelagalu*, *altalu*, *jeriku*, Tel. ; *Jigani*, Kan. ; *Atta*, Malay ; *Miyon*, *minyion*, Burm. ; *Kudallu*, *pundal*, Sing. ; *Jalukaha*, Sans. ; *Aalag*, *zalo*, Arab. ; *Zalo*, *zalok*, Pers.

Leeches have long been known and recommended by Sanskrit writers. Those used in Bengal come chiefly from Baraset. The best are said to be obtained from Shekoabad in the United Provinces. Large numbers are caught at Patiala in the Punjab. The species of Indian leeches have not been scientifically determined.

CRUSTACEA.

CRAB.

The carapace shells of crabs are employed medicinally at Lahore under the name of *Kekra* (Baden Powell).

The so-called "crab's eyes," sold in oriental bazars, are the opercula of gasteropod molluscs. (See *Turbo sp.*)

PENEUS MONODON, Fabr. Dried Prawn.

Vern. :—*Mahi rubian*, Hind.

These dried crustaceans of a pinkish colour come from the coast of Sind and are sold in the bazars of the Punjab.

Baden Powell catalogues another animal under the name of *Mahi rubian ka kism*, which comes from the sea coast. He says, "The sample is not a shrimp as the first is, the dried pieces having a grey colour."

ARACHNIDA.

TROMBIDIUM GRANDISSIMUM, Koch.

Vern. :—*Birhoti*, *bhir buti*, *birbavati*, Hind. ; *Indrabovum*, *tumble puchi*, Tam. ; *Kirmie aroosl*, Arab. ; *Endra boga crimie*, Sans. The Scarlet Mite or Rains' Insect.

This mite has been referred to *Bucella carniola* (Platt's Dictionary), *Mutella antiguensis* (Honigberger), *Mutella occidentalis* (Ainslie), and to species of *Tetranychus* and *Aranea*. These insects are of a bright scarlet colour, velvety in appearance. They are found nearly all over India and Burma where the soil is sandy, and are very common at the commencement of the rainy season in July. They are dried and kept for sale in the bazars. The mite and the expressed oil have a great reputation among Muhammadans as an aphrodisiac. The oil is also used as an external application for various complaints. In Bengal it is considered to act as a nervine tonic. In Lahore according to Dr. Honigberger the mites are used against snake bites and in colic of horses.

Dr. E. G. Hill of Allahabad in 1905 examined the oil expressed from the insects and communicated the results to this Society. He found the principal constituents to be myristo-diolein, with small quantities of stearin, cholesterol, colouring matter and butyric acid. It does not possess the properties of a counter-irritant which had been ascribed to it by older writers. (*Journ. As. Soc. Beng.*, 1905, 74.)

INSECTA.

Hemiptera.

COCCUS CACTI, Linn. The Cochineal Insect.

Vern. :—*Kirmaj*, *kirmdana*, Hind. ; *Karmiz*, Per. Cochineal.

The female insect dried. Used as a colouring agent and as an adjunct to expectorant mixtures. The Hakims consider it destructive to the generative faculty. The supply comes from Bombay ; that used in Afghanistan is said to come from Persia and Bokhara.

TACHARDIA LACCA, Kerr. The Lac Insect.

Seed lac is officinal at Lahore and is used in enlargement of the liver, dropsy, ulcers and wounds.

HYMENOPTERA.

APIS DORSATA, Fabr.	..	..	The Hill Bee.
APIS INDICA, Fabr.	..	..	The Tree Bee.
APIS FLOREA, Fabr.	..	..	The Flower Bee.

The properties of wax and honey are too well known to need description.

An account of the sources, preparation, trade and composition of the Bees' wax of British India will be found in "The Agricultural Ledger," No. 7 of 1904.

The honey of *A. florea*, as well as that of *Melipona sp.*, is reputed in some districts to have medicinal properties.

In Mandalay the comb (*Pahtok pani*, Burm.) is sold in the bazars at 2 annas a piece. It is mixed with oil and heated until a thick ointment is formed, which is applied to the heads of children.

Dr. Honigberger states that wasp or hornet's nests are recommended as antispasmodic.

LEPIDOPTERA.

BOMBYX FORTUNATUS, Hutton.	..	..	The Silk Moth.
and other species.			

Vern. :—*Abresham*, Arab. ; *Pat*, Beng. ; *Reshm-ki-keri*, Duk

The cocoons of the silk moth are said to be styptic and tonic.

Burnt, they are given internally in profuse menstruation and chronic diarrhœa.

Under this name in Ajmir white silk cut into small pieces is given as a remedy for impotence (Irvine).

Silk contains two albuminous substances, fibroin and sericin.

COLEOPTERA.

MYLABRIS CICHORII, Fabr.	..	..	The Teleni Fly.
and other species.			

Vern. :—*Telni*, *telni-makkhi*, Hind. ; *Bad-bo-ki-yirangi*, *zirangi*, Dec. ; *Pinsttarin-i*, Tam. ; *Blishtering-igelu*, Tel.

These beetles are of common occurrence throughout India, especially in Hyderabad, Deccan, and Central India.

This blistering beetle was first brought to notice in 1809 by General Hardwicke (in *Asiatic Researches*, Vol. V), and has since been recommended by Drs. Adam Burt (1809), W. Hunter, Fleming and George Bidie.

In the rainy season from June to December the beetles are found feeding upon species of *Hibiscus*, *Sida*, and plants of the Cucurbitaceæ. They are recommended to be gathered in the

morning or evening and immediately killed by exposing them to steam. They are then thoroughly dried in the sun and kept in bottles to preserve them from moisture. The beetles consisting of several species of Mylabrideæ are collected for commercial purpose at Gwalior, and are used in all the Government Medical Store Depôts as a substitute for Spanish fly (*Cantharis vesicatoria*).

The natives recognize their anti-hydrophobic properties and employ them in cases of bites of mad dogs. As a blistering agent they are not well recognized, the *cauterium actuale* or burning with a hot iron being preferred.

The Telini fly yields a larger quantity of cantharidin than Spanish blistering fly. Mylabris beetles have been found to contain from 0.73 to 1.92 per cent. of cantharidin, while the average yield of active principle in commercial cantharides is 0.6 per cent. Eldred and Bartholomew in 1908 found 1.24 and 1.36 per cent. of cantharidin in Chinese blistering flies. The ash varies from 3.8 to 5 per cent.

LARINUS MACULATUS, Falderm. The Cocoon.

Vern.:—*Schakar tugal*, *tréhala*, *tricala*, Pers.; *Sakar-el-tighal*, *shakarti-fál*, Hind.

The cocoons are formed by this curculionid beetle on a species of *Echinops*. The cocoons are ovoid or globular in form, about $\frac{3}{4}$ inch in length, their inner surface is composed of a smooth, hard, dusky layer, external to which is a thick rough tuberculated coating of greyish-white colour and earthy appearance. Some of the cocoons have attached to them the remains of the tomentose stalk or spiny leaf of the plant. The drug is brittle and sweetish to the taste. Dr. Honigberger states that these insect nests were imported into Lahore from the Peninsula. The cocoons are figured in Hanbury's "Science Papers," p. 161, and in Honigberger's "Thirty-five years in the East."

The saccharine principle was examined by Berthelot (*Compt. Rendus*, 28 Juin 1858, 1276) and named by him trehalose, a body possessing distinctive properties which separate it from other sugars. By means of a ferment, trehalase, obtained from cultivation of *Aspergillus niger*, P. Harang has obtained from 23 to 30 per cent. of trehalose from the cocoons. (*J. Pharm. Chim.*, 1906, 23,471.)

MOLLUSCA.

MELEAGRINA MARGARITIFERA, Lam. Pearl Oyster.

UNIO MARGINALIS, Lam. Freshwater Pearl Mussel.

Vern.:—*Mukta*, Sans.; *Mootie*, Hind.; *Moothoo*, Tam.; *Juhur*, *lulu*, Arab.; *Mirwareed*, Pers.

Pearls have been used in medicine from a very ancient period and are mentioned in Sanskrit literature by Susruta. They are purified for use by boiling with the leaves of certain plants, calcining them in covered crucibles and reducing to powder. The powder is esteemed in urinary diseases and consumption, and is said to increase the strength, nutrition and energy of weak patients. Arabian physicians suppose powdered pearls to have virtues in weak eyes.

The only value possessed by the gem is doubtless that of an antacid, a property for which it was used in former times in European medicine. The supply of pearls for this purpose, no doubt, came from India. Linschoten wrote in the sixteenth century of seed pearls: "They are sold by the ounce, and used by Potticaries and by Physitions, and to that end many of them are carried into Portingall and Venice, and are very good and cheap." Irvine records that small seed pearls, called *Motibuka*, were brought from Bombay and prescribed in Ajmir for impotency. They cost Rs. 7 per tola in 1841.

PLACENTA ORBICULARIS (PLACUNA PLACENTA, Linn.) Window Oyster.

The pearls from this species besides being used to some extent for ornamental purposes, are supposed to possess invigorating properties and are used as a medicine. In South India the lime prepared from these shells is used by the rich in mixing with *pán-supari*.

AVICULA sp.

Vern. :—*Kha-ya-kama*, Burm.

The shells from Tavoy and Mergui are sold in Moulmein. Price, 15 annas each. A paste is made of the shell and water in conjunction with other articles and is given for diabetes.

OSTREA sp. Oyster.

Vern. :—*Sipi*, Hind.; *Kalu*, Guz.; *Teram*, Malay.

These shells are sold in Mandalay under the same name as that of the *Avicula*. They come from Moulmein. They contain about 90 per cent. of calcium carbonate.

UNIO spp. Freshwater Mussels.

Vern. :—*Yauk-thwa*, Burm.

The shells of two of these species are sold in Mandalay. In combination with other drugs they are said to be useful for coughs. *Concha fluviatilis* mentioned by Dr. Honigberger is probably of this genus. It is said to be used by the hakims at Lahore as a medicine. The shell with the common people serves for a spoon out of which they take their medicine.

CYPRAEA MONETA, Linn.

Vern. :—*Cowri*, *sipi*, Hind.; *Codi*, Guz.; *Beya*, Beng.; *Kywepek*, Burm.; *Sadaf*, *wuda*, Arab.; *Khar mahra*, Pers.; *Varatika beya*, Sans.

A species of *Cypræa* is collected on the sea shore, and the shells are sold in Mandalay as a remedy for venereal diseases.

FASCIOLARIA spp. The Operculum.

Vern. :—*Nakh*, *Sita-nuk*, Hind.; *Nakhla*, Mar.; *Nakhun*, Pers. and Punj.; *Azfar-ut-tib*, Arab.; *Unguis odoratus*, *Unguis daemoni*, Lat.; *Onyx*, Greek; *Schecheleth*, Heb.; Scented nails, Eng.

The operculum of *Fasciolaria trapezium* and other species of tulip shells and perhaps of other Muricidæ is a perfume and medicine of very ancient use. It is now recognized as the origin of onychia, one of the ingredients of the sacred incense of the tabernacle (Exodus xxx. 34). It was the *Blatta Bizantia* of Eastern Europe, and was quoted by Dioscorides as *Onyx* "quod in India nardiferis paludibus invenitur," and described their properties. Avicenna in his Canon describes several varieties of *Azfar-ut-tib*. Linneus ascribed the origin to *Strombus lentiginosus*. Rumphius enumerates ten kinds of odoriferous onyx which serve as the basis of the principal perfumes of the Indian Islands (*Herb. Amb.*, 11, C. 17). The perfume is developed by heating. The nails are powdered and mixed with oil and fried, and the mixture is applied to the body or head as a cosmetic. In medicine the operculum is prescribed by Hakims in epilepsy and hysteria.

Azfar-ut-tib as sold in the bazars is a thick horny dark-brown, claw-like, ovate opercule, one inch broad by $1\frac{1}{2}$ inch long, on its outer face are many concentric lines surrounding a sub-apical nucleus, in the inner face the concentric lines are finer with a broad smooth glossy swelling along its outer margin. *Chamra nuk* is the bazar name for the operculum with a part of the flesh of the mollusc attached. The opercula are very albuminous and contain about two per cent. of ash; they evolve pyrrhol when submitted to destructive distillation.

The drug is imported into Bombay from Aden and Zanzibar and is valued at one rupee per pound.

PTEROCERAS LAMBIS, Linn. Spider Claw.

Vern. :—*Khaya-thin*, Burm.

These shells obtained from Mergui and Tavoy are sold in Moulmein. They are given in the form of a paste mixed with other articles in diabetes.

TURBINELLA RAPA, Lam. The Conch shell.

Vern. :—*Shankha*, *shenkham*, Sans.; *Sukk*, Duk.; *Sankha*, Guz. and Tam.

[N.S.]

In Patna the shavings of conch shells are sold as medicine under the name of *Sunk-choorum*. They are considered ant-acid and alterative.

Conch shell lime (*Sankha bhasma*) is a favourite caustic in Hindu medicine: it is prepared from the refuse shells left by the bangle-makers of Dacca.

FUSUS sp.

Vern. :—*Khayu-thin*, Burm.

This is sold in Mandalay under the same vernacular name as the conch shell. It is brought from Moulmein.

TURBO sp. The Operculum.

Vern. :—*Navi sankha*, Beng.; *Chesm sirtan*, Pers.

Ainslie informs us that the Persians employ crab's eyes or crab's stones as an absorbent. They were procured in abundance from Astracan. In Calcutta they are used as a charm for rheumatism and other complaints. The stones are white with brown patches, weighing less than one gramme each. The inner surface is plane with a spiral groove in the centre, the outer surface is convex. They contain calcium carbonate.

SEPIA sp. Indian Cuttle Fish.

Vern. :—*Samundar jug*, *samundr-phen*, *samudrafena*, Hind.; *Dirya-ka-kuff*, Dec.; *Keddelnuray*, Tam.; *Samudrapu-nurugu*, Tal; *Kaf-i-daria* (the foam of the water), Pers.; Cuttle fish bone, Eng.

The internal calcareous skeleton of the cuttle fish is frequently used in medicine. It is the *Os sepia* of old pharmacopeias. The fine scrapings of the bone boiled in oil are dropped into the ear in ear-ache and otorrhœa. Sometimes the powder is placed in the ear, lime juice being added to produce effervescence which relieves the pain. It is usually brought by returned pilgrims from Mecca and hence is looked upon as a very important medicine. In Burma a species of *Sepia* is called *Ye-jiet* or "Water-hen." *Sepia* bone is considered refrigerant, absorbent and ant-acid. In Ajmir it is used in eye ointments.

The Indian cuttle fish bone has the following composition: calcium carbonate 88·7, calcium sulphate ·76, organic matter and water 9·3, iron oxide and alumina ·46, magnesia and alkalis 1·7, silica ·1, phosphoric acid ·02.

PISCES.

The oil from the livers of certain fish is palatable and has a similar composition to that of cod-liver oil, and has been recommended as a substitute. Some of the oils were prepared

in the Indian Museum in 1909 and submitted to analysis. The liver of the white Sting Ray (*Trygon microps*) for instance weighed $89\frac{1}{2}$ pounds. It was composed of 71·6 parts of oil, 17·7 parts of water and 10·7 parts of hepatic tissue. The oil deposited an amount of white fat, chiefly palmitin, at the cold weather temperature, and possessed a not unpleasant odour and a yellowish colour. The following constants were obtained: Specific gravity at 50°C. 0·914; melting point 22°; acid value 0·98; saponification value 194·0; iodine value 124·7; Reichert-Meissl 0·26; Fatty acids per cent. 93·2, melting at 37·5°, neutralisation value 203·4. The oil contained a cholesterol affording a rose-red colour with sulphuric acid.

The spiney tails of a species of *Trygon* (*Nga-leit-kyant*, Burm.) are brought from Mergui and Tavoy to Moulmein and sold for medicine at 8 as. for 2 ticals. A paste of these is given to patients suffering from urinal disorders and diabetes.

Otoliths or bones from the head of certain fish are sold in the bazars as an aphrodisiac. They are small, hard, whitish-grey, oval shaped, shell-like bodies, consisting of calcium carbonate. The vernacular name is *Sang-i-sarmahi* or *Sung-surmaiye* (white surmaiye). They are sold at Delhi, Patna and Ajmir at 8 as. per tola.

The bile (*pitta*) of the rohitaka or Rohu fish (*Cyprinus Rohita* or *Labeo rohita*, Day) is used in medicine by the Hindus and is considered laxative.

CHELONIA.

CHELONE sp. Turtle.

Vern. :—*Kachra*, Hind.; *Kachbo*, Guz.

Mr. Hughes Buller has drawn attention to the peculiar use of the turtle shell in medicine. The people of the Mekran coast have the habit of tying a piece of the shell 4 by 2 inches to any animal having a stoppage of urine.

The oil of turtles is nutritive and demulcent.

In Assam turtles' eggs are eaten and used medicinally.

OPHIDIA.

The author of the *Ulfaz Udwiye* quotes the medicinal qualities of the flesh and skin of various snakes. The cast-off coat or slough under the names of *Exuvia serpentis* and *Spolium serpentis* was formerly used as a ligature in intermittent fevers. The skins are still sold in the bazars as a remedy for epilepsy.

LACERTILIA.

SCINCUS MITRANUS, Anders. The dried lizard.

(Syn. *S. arenarius*, Murray.)

Vern. :—*Reg mahi, reg-mae*, Hind. ; *Sarado, kakida*, Bomb.

Honigberger, Baden Powell and Sakharam Arjun refer this "sand fish" to *Lacerta scincus*, Linn., but this species is peculiar to Egypt and Algeria, and does not extend beyond the shores of the Red Sea. *S. mitranus* occurs only in the sandy region of Sind. The lizard is eviscerated and dried and in this state is sold in the bazars of Northern India. It is beaten into a paste and administered with spices. It has a reputation as a nervine stimulant, tonic and aphrodisiac.

An oil is sometimes prepared from this and other lizards, and used by Muhammadans as an aphrodisiac. Irvine speaks of *Sanda*, a kind of lizard which is distilled and the oily product used in Ajmir.

MABUIA CARINATA, Boulenger.

According to the *Dictionary of Economic Products* this lizard, the common Indian skink, is used medicinally.

MAMMALIA.

SIRENIA.

HALICORE INDICUS, Desm. The Dugong.

This species is distributed throughout the Indian Ocean, on the west of Ceylon, and in the Eastern Archipelago. From 6 to 14 gallons of oil is yielded by each animal. The oil which is free from odour is highly valued in medicine and cookery. It is said to be an admirable substitute for cod-liver oil.

CETACEA.

PHYSETER MACROCEPHALUS, Linn. The Sperm Whale.

Vern. :—*Abr-i-amber*, Arab. ; *Sahabula*, Pers. ; *Ambana*, Guz. ; *Ambergris*, Eng.

A morbid excretion found in the intestine of the whale, found in the sea and on the coasts of India, Africa and Brazil. A single piece has been known to weigh 750 lbs. It was introduced into medicine by the Arabs, and is prescribed for its stimulant and antispasmodic properties. It is mostly used in perfumery. It contains about 85 per cent. of ambrein, balsamic extractive and a minute quantity of ash.

PLATANISTA GANGETICA, Gray & Harder. Gangetic Dolphin.

Vern. :—*Sus, susa*, Hind. ; *Susuk, sishuk*, Beng. ; *Sisumar*, Sans. ; *Bhulan, sunsar*, Sind. ; *Hiho, seho*, Ass. ; *Huh*, Sylhet.

This dolphin is common in the tidal waters of the Indus, Ganges and Brahmaputra. The flesh is eaten by particular castes and the oil has a great reputation as an embrocation.

The oil has the following constants:—Specific gravity at 15°·921; Acid value 21·36; saponification value 198·8; iodine value 106·9; Reichert-Meissl value ·71; Fatty acids per cent. 94; melting at 25·5°; neutralisation value 205; iodine value 116·5. The solid fats consist chiefly of palmitin; no spermaceti is present.

UNGULATA.

RHINOCEROS UNICORNIS, Linn. The Rhinoceros.

Linschoten devotes a chapter to the value of the various parts of this animal. He says: "Their horns in India are much esteemed and used against all venime, poyson, and many other diseases: likewise his teeth, claws, flesh, skin and blood, and his very dung and water and all, whatsoever is about him, is much esteemed in India, and used for the curing of many diseases and sicknesses, which is very good and most true, as I myself have found." In *Taleef Shereef* (translated by Playfair, 1833) rhinoceros flesh and smoke from the horn are highly praised. The horn, assumed to be that of the unicorn, had virtues ascribed to it in Europe up to the seventeenth century.

The urine from the animal preserved in the Zoological Gardens, Calcutta, is in great demand to the present day as a tonic for the treatment of enlarged spleen. It was analysed by Col. L. A. Waddell in 1893 (*Indian Medical Gazette*, May), who found it to be alkaline in reaction to have phosphates in abundance.

The dried blood of the Rhinoceros (*R. sondaicus*) is used in Moulmein as an important medicine under the name of *Kyan thwe*. The blood is dried in the gut of the bowel and resembles black pudding. The price is one rupee per tical or one rupee in weight. It is valued by Burmans and Chinese. In the Mandalay drug shops a substance similar to congealed blood is sold as a substitute for the more costly rhinoceros blood. Its origin could not be ascertained.

BOS INDICA The Cow.

Vern.:—*Gao-lochan*, Hind.; *Korashanum*, Tam.; *Hejr-ul-bucker*, Arab.; *Gowzerch*, Pers.; *Gorochana*, Sans. The biliary calculus of the cow or ox.

These secretions are found in the gall bladder of cows and oxen in India. They are of the size of a large marble and of a bright yellow colour. They are considered valuable in certain indispositions of young children, accompanied with acidity and deficiency of bile; they are besides reckoned cordial and alexipharmic, and useful in abortion and diseases supposed to be caused by evil spirits.

The bile (*Safra*, Hind., *Pitta*, Sans.) of the buffalo, wild bear, goat, peacock and rohitaka fish (*Cyprina Rohita*) is used under the designation of *pancha pitta* or five biles. According to Dr. Honigberger it is considered laxative.

Dr. Aitchison says that in Afghanistan the dung of sheep and goats is converted by destructive distillation into a tar or pitch called *sia-roghan* which is used to protect the sores on cattle from flies.

BEZOAR STONE.

Vern. :—*Padzahr*, Pers.; *Bazahr*, Arab.; *Vishik kulloo*, Tam.

This substance appears to have been first used as a medicine by the Arabians, Avenzoar gives a wonderful account of it; and Ragis in his *Continens* describes it fully, and extols its good qualities as a sudorific and alexipharmic. In India it is still supposed to possess sovereign virtues as an external application in cases of snake bite or scorpion stings. Linschoten devotes a chapter to the description of "Bezar stones and other stones good against poyson," and he quotes De Orta's account of the origin of this biliary concretion. He says: "The Bezar stone commeth out of Persia from the land or Province called Carassone (Khorasan), and also out of other places in India: they grow within the maw of a sheepe or goat, about a little straw, that lyeth in the middle of the maw: the stone is very slicke and smooth without, of a darke greene colour." Similar stones are obtained from the cow, goat, wild boar, antelope, porcupine and camel. That obtained from the camel is the cheapest, but that from the Persian wild goat (*Capra aegagrus*) is considered the most efficacious.

Two specimens are shown in the Indian Museum. The larger one, about the size of a small hen's egg, is dark green in colour and made up of concentric layers surrounding a central straw. The substance of the stone is almost entirely soluble in spirit. The smaller one from a Persian goat is dark brown in colour, cylindrical, one inch long by one-third of an inch in diameter.

CAMELUS Camel.

Mai-sutr-arabi is the name given by Irvine ("Topography of Ajmere") to the blood which has congealed in the body of a young camel. The camel after being overfed is driven about violently, and then killed, when the blood is extracted. It is brought from Bombay to Delhi and costs three rupees a tola. It is administered in cases of impotence.

Ainslie says the rennet of the camel, which the Persian term *puneer mayeh-shooter*, is placed amongst their aphrodisiacs.

Dr. Honigberger calls the substance *Camelinum coagulum*, and says it is highly esteemed by Arabian doctors.

Baden Powell says *Maya shutr arabi* is the rennet from the stomach of the camel. The genuine article is brought from Arabia and sells at Rs. 8 for 4 oz.

I have not met with this article in Calcutta.

CERVUS DUVAUCELI, Cuv. The Barasingha.

Vern.:—*Mrigasringa*, Sans.; *Sambaracinga*, Mar., Hartshorn.

The antlers of the *bara-singha* stag, incinerated in closed vessels, is used in painful affections of the heart, pleurodynia, sciatica and lumbago. Powdered in water or rubbed on a stone in conjunction with other ingredients it is used as an application in headache and rheumatic pain. It is given in doses of about twenty grains in clarified butter. It is officinal in Lahore, the supply being received from Kashmir (Honigberger). In Bombay transverse sections of the horn of Sambar (*C. unicolor*) are sold as a medicine under the name of *Sambar singh*.

Hartshorn contains 57.5 per cent. of ash consisting chiefly of calcium phosphate.

MOSCHUS MOSCHIFERUS, Linn. The Musk Deer.

Vern.:—*Kastura*, Hind.; *Mushka*, *mriganabhi*, Sans. The Pod.

Musk is the unctuous grain found in the pod or abdominal gland of the animal. The Bharaprakasa describes three varieties of musk: Kamrupa, the best; Nepala, of intermediate quality; and Kashmiri, inferior. Modern trade recognises three kinds: 1. Russian, 2. Assamese, 3. Chinese or Tonquinese.

India receives her supply of musk from Tibet, Nepal, Sikkim, Bhutan, and the Naga and Mishmi hills.

Musk is used as a stimulant, antispasmodic and expectorant in low fevers, chronic cough or general debility. Its chief use, however, is in perfumery. The price of Tibetan musk is about Rs. 40 per ounce and that of Bhutan Rs. 32. In 1841 it sold in Ajmir at Rs. 12 per tola (Irvine).

CARNIVORA.

URSUS TORQUATUS, Wagner Himalayan bear.

Vern.:—*Barlu-ke-cherbee*, Hind. The Fat.

Bears' grease is appreciated for its medicinal properties and is an article of commerce in Northern India. It is prepared in Kangra, Mussoorie and Kumaon by heating the fatty tissue, as in rendering lard from the leaf of a pig, and straining while hot through a cloth. It is an emollient in rheumatism, and is used as a heating application to wounds, bruises and sores.

The fat has been examined by the author (*Journ. Asiatic Society Bengal*, Vol. IV, No. 2, 1908, 33). It has a yellowish white colour, a rancid odour, and a soft granular and pasty consistence at 21°. The following constants were obtained from two samples: Specific gravity at 50° 0.9013, .9007; melting point 37.5, 34.5°; acid value 13.8, 33.19; saponification value 203.8, 204.25; iodine value 52.77, 62.8; Reichert-Meissl value .93, .86; fatty acids per cent. 94.78, 93.81; melting point 42°, 40°; neutralization value 205.6, 207.3; iodine value 57.2, 62.9. The fat consists chiefly of olein and palmitin with a small quantity of stearin.

VIVERRA ZIBETHA, Linn. Civet Cat.

Vern. :—The animal: *Khattas*, Hind.; *Pullregghu puney*, Tam.; The pouch *Ladana*, Beng. and Hind.; *Pullughu shuttam*, Tam.; *Zabad*, Arab.; *Gandhamayara*, Sans.

The Civet cat is found throughout India from Assam to Malabar, and in Burma, Nepal and Arabia. The glandular receptacle contains an unctuous, odorous secretion used as a substitute for musk and castoreum. In Travancore there was once an establishment maintained at the expense of Government in which these animals were kept and reared for the sake of their secretion.

Civet is chiefly employed in perfumery and in scenting medicinal oils; it is also considered to possess anodyne and anti-spasmodic properties.

RODENTIA.

CASTOR FIBER, Linn. Beaver.

Vern. :—*Janda-bidastar*, Hind.; *Ghenda*, Sans. Castoreum.

Castoreum is a fatty substance secreted by peculiar glands of this animal, and used as a therapeutic agent. It is obtained from North America and Siberia. It is reported to be sold in the Indian bazars under the above vernacular names, but I have never met with the article. Col. Phillott in "Baz-namayi Nasiri" speaks of it under the Persian or Arabic name of *bachagan*, or, more correctly, *ash-i-bachagan*, so called from the fact that it is a medicine given to infants.

CHEIROPTERA.

HIPPOSIDERUS, sp. Bat.

Vern. :—*Tai-klawa*, Malay; *Kam yaft*, Baluch. The dung or guano.

Masson in his "Journey to Kalat" (1843) speaks of bats' dung being held in high repute for its properties in ailments of

the eye. Mr. Hughes Buller says that it is used in Baluchistan, taken in the form of a draught for gonorrhœa.

MUMMY.

Vern.:—*Mumiai*, *silajit*, Hind.; *Silajatu*, Sans.; *Khalmolt*, *mashana churro*, Baluch.; *Arkuljibbal*, *mumiyai*, Pers.; *Osteocolla*, Lat.; Rock sweat, Eng.

This is one of the most remarkable of all Hindu medicines. There is still some obscurity surrounding its origin. It is apparently not derived from the vegetable kingdom. Although it exudes from rocks it cannot be claimed as a mineral product. Its peculiar unctuous and nitrogenous nature and its long association with Egyptian mummies locate it therefore among the animal materia medica. Mummy was a medicine of great repute in Europe during the Middle Ages, and was no doubt a preparation made from embalmed bodies although often subject to adulteration. The *mumiai* obtained as a secretion from the mummy mountain in Persia and described by Chardin, Kaempfer Ouseley, Le Brun and other old travellers appears to be the same substance as the black variety of *silajit* obtained at the present time from the Himalayas and so much appreciated in medicine. The occurrence and composition of *silajit* were described by the writer in a paper read before this Society in 1903 (*Journ. Asiat. Soc. Beng.*, Vol. LXXII, pt. II, No. 3, 99-104). From further samples chemically examined and fuller information on its origin and distribution it must be admitted that while it is an interesting relic of primitive medicine it has little claim to possess any valuable therapeutic properties.

46. Note on a Shrine in the Koh Si Hah, Talé Sap,
Lower Siam.

By N. ANNANDALE, D.Sc., F.A.S.B.

The Koh Si Hah are a group of five rocky islands of limestone that rise from the shallow waters of the Talé Sap ("Great Lake"), a lagoon on the east coast of the northern part of the Malay Peninsula that closely resembles the Chilka Lake in Orissa and Ganjam in many respects.

The photograph here reproduced was taken in the chief of these islands in 1899 while I was a member of the Skeat Expedition, and is, I think, worth publishing as an illustration of the primitive religion of the people of those parts.

The people are probably of mixed Siamese, Chinese and Malay descent and obtain their living, at any rate for a part of the year, by collecting the edible nests of a swift (*Collocalia innominata*) which breeds in large numbers in the caves that honeycomb the islands. The nest-collectors live themselves in the smaller caves, in which they erect platforms of bamboo whereon to sit and sleep. Their occupation is a hazardous one, for the approach to many of the bird-caves is dangerous and there are yawning cavities to be avoided. It is, moreover, pursued under very strict regulation, the right to collect the nests being leased out to a Chinaman for a considerable sum every year. The inhabitants of the islands are his servants or hirelings, but judging from their offerings at the little shrines in their village, if it can be called a village, they have some interest in the take.

The shrine figured was the larger of two situated in natural cavities in the rock above a platform of stone or bricks that had been built near the landing place. The other shrine contained as an object of worship a stone naturally of conical shape. Offerings of edible nests, most of them dirty, contaminated with feathers and of little value, but a few clean and of the pale yellow colour that delights the Chinese epicure, were made before this shrine. It was approached by several little steps, which were for ornament or for the use of the spirits only, for it was situated only a few feet above the ground. The larger shrine was in a cliff at right angles to that in which the smaller one had been constructed and was situated rather higher above the platform. It had been formed, so far as it was otherwise than of natural formation, by placing a rough wooden frame of oblong shape at the entrance to the cavity. To this frame were attached, in the Chinese fashion, oblong pieces of

paper on which squares of gold-leaf had been stamped and longer pieces of paper on which pseudo-Chinese characters were printed. I say pseudo-Chinese characters advisedly, for although they were doubtless copied directly or indirectly from some Chinese prayer, they had become so degenerate in the process that they could no longer be recognised as characters at all. Advertisements from tins of canned fruit and other like commercial products were fixed up with the squares of gold-leaf and the sham Chinese prayers.

The object of worship in this shrine consisted of an upright figure carved in wood and gilt. It had probably been intended by the sculptor for an image of Buddha, but a wooden sword had been inserted in one hand, and it was recognized by the people of the islands as representing the guardian spirit of the caves. The figure stood on a rhinoceros skull, and round it was piled a most heterogeneous collection of natural curiosities, rude clay images of cattle, vases containing incense sticks and Buddhist reliquiaries. The natural objects included crocodiles' skulls, sharks' jaws, sawfishes' "saws" and stones of peculiar natural shape, especially pieces of stalagmite or stalagmite that had assumed a vague resemblance to the human form.

The shrine is interesting as illustrating the bastard Buddhism, or rather the animism disguised under a thin veneer of Buddhism, that prevails among the more primitive population of Lower Siam. The advertisements offered at it have perhaps peculiar interest as illustrating the belief that a spirit cannot distinguish between the real and the ideal. The man who offered the covering of a tin of canned lichis, offered, in virtue of the pictures on the paper, not only the fruit in its glorified presentiment, but also the factory in which it had been prepared.



Shrine in the Talé Sap, Lower Siam.

47. List of Jesuit Missionaries in "Mogor" (1580—1803).

By REV. H. HOSTEN, S.J.

This list contains the names of the Jesuit Missionaries in North India as found in the Catalogues of the Province of Goa preserved among our Archives in Europe. It was kindly forwarded to the writer by the late Fr. J. B. Van Meurs, S.J., and cannot but render great service in all questions connected with the history of our North India Missions. Many of our Catalogues having been lost in troublous times, our list is not exhaustive, nor is it our intention, at present, to fill in the many gaps or to discuss the moot-points involved. This is a task from which other occupations may keep us for long debarred.

Let it be borne in mind that our Catalogues are not always an infallible guide. They represent the missionary personnel at a given period, a status with which stress of circumstances might interfere even before it came into operation, or soon after. Such as it is, this list will work as a ready means of checking numerous historical data.

Fr. J. B. Van Meurs' notes do not go back to the very origin of the "Mogor" Mission, but only to 1593. It is well known that the first Mission to Akbar (1580—83) consisted of Bl. Rudolph Aquaviva, Fr. Anthony Monserrat and Fr. Francis Henriquez. The second (1590-91) was composed of Frs. Christopher de Vega, Edward Leitão, and a Companion, perhaps Fr. Francis Cabral, "not yet in priest's orders." The third Mission, according to our Catalogues, would date from 1593; but, Mr. E. D. Maclagan (*Journ. As. Soc. Bengal*, 1896, p. 64) shows that it left Goa only on December 3, 1594.

We have refrained from interfering with the orthography of the proper names in the original. We simply insert in [] the more likely forms. As for the biographical data inserted here and there, they are mostly from the pen of Fr. Van Meurs and supplement or modify what we wrote in *Jesuit Missionaries in Northern India and Inscriptions on their Tombs, Agra (1580—1803)*, Catholic Orphan Press, Portuguese Church Street, Calcutta, 1907.

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1593.—They are three in the Mission, Father [Jerome] Xavier, Father [Emmanuel] Pinheyro [Pinheiro] and Brother [Benedict] Goes, who is in charge of the house.

“*Fr. Jerome Xavier*: born at Buro, in the Diocese of Pampeluna, was Rector of the College of Bassein and Cochin during 8 years; Superior of the Professed House, Goa, 2 years; Master of Novices, 1 year; professed, Jan. 15, 1584; died at Goa, June 27, 1617. In 1605, he is said to have been 12 years Superior of the Mission and to be in the 56th year of his age, and the 37th of his religious life.”¹

“*Fr. Emmanuel Pinheiro*: born in 1544 at Pontadelgado in the Island of St. Michael; entered the Society, March 6, 1573; took the simple vows, June 15 [13?], 1598; was in the Mogor Mission from ‘1594.’”

“*Bro. Benedict de Goes*: born in the Island of St. Michael; took his last vows, June 13, 1598; was in the Mission from ‘1593’; died ‘*in insula Cathayo*’, Apr. 11, 1607. In Dec. 1599, he was in the 37th year of his age and the 11th of his religious life.” He joined the Order in India.

1594, '95, '96, '97, '98, '99.—The same.

1600.—At Agra: Fathers J. Xavier, Sebastian Barreto and Bro. B. Goes.

At Lahore: Fathers E. Pinheiro and [Francis] Corci [Corsi].

Fr. Sebastian Barreto: born at Aveiro, in the Diocese of Coimbra, in 1567; entered the Novitiate in 1584; went to India and laboured in the Missions of the Province of Goa; was Rector of the College of Diu, and died at Goa in 1625. To these details given by Sotwel, Fr. de Backer substitutes the following:—“born in 1587 and died at the age of 41.” Barbosa, on the other hand, states that he was born in 1585 at S. João do Loure. Cf. SOMMERVOGEL, *Bibl. de la C. de J.*—Fr. Van Meurs writes that he was born in 1566 at Aveiro in the Diocese of Coimbra, had entered the Society in 1584; was Superior of Diu in 1605, and made his profession on Feb. 5, 1606.

“*Fr. Francis Corsi*: an Italian; came to Goa in 1599; was in the Mission [of Mogor] from 1599; professed in 1612; died in Mogor, Aug. 1, 1635.” He is the *Padre Atash*, the Florentine, mentioned by Bernier. Cf. W. IRVINE, *Storia do Mogor*, I, 161; IV, 421, and *J.A.S.B.*, 1910, pp. 453, 458.

1601, '02, '03, '04.—Nothing is changed.

1605.—Fathers J. Xavier, [Anthony] Machado, E. Pinheiro, F. Corci, and Bro. B. Goes.

¹ The “ ” contain notes from first-rate sources by Fr. J. B. Van Meurs, S.J.

“*Fr. Anthony Machado*: born at Serpa, in the Diocese of Evora; professed, Jan. 17, 1595; Professor of Philosophy, 3 years; Superior at Chaul, 1 year; at Bassein, 2 years. In 1614, he was 53 years old, of which he had spent 36 in the Society.” Cf. *J.A.S.B.*, 1910, p. 459.

1606, '07.—Nothing is changed.

1608.—[This Catalogue seems to be missing.]

1609.—Fathers J. Xavier, A. Machado, F. Corci, E. Pinheiro.

1610.—At Agra: Fathers J. Xavier and F. Corci.

At Lahore: Fathers A. Machado and [Joseph] Castro [de Castro].

“*Fr. Manoel Pinheiro* is gone to Goa with the ambassador of the King of Mogor.”

“By order of the King of Mogor, *Fr. Manoel Pinheiro* was sent to the Portuguese Viceroy at Goa, in company with the ambassador, to undertake and transact some business. Arriving in Cambay and finding circumstances changed, he left the Mogor ambassador, went to Goa, and returned with ample powers to make either war or peace. The ambassador, on receiving orders from his master, returned to the Court, and entrusted the whole matter to *Fr. Manoel Pinheiro*. *Fr. Manoel Pinheiro* returned to Goa, transacted the affair and came back to the Mission.”

“*Fr. Joseph de Castro*: of Turin, born in 1577; entered the Society in 1596; professed of three vows in 1612; died in Mogor on December 25, '1648.'” Cf. W. IRVINE, *Storia do Mogor* by Manucci, Vols. I, 161; IV, 424, *sub* Costa da, J. Manucci calls him by mistake Joseph da Costa. This name applies to another missionary, who came much later. Cf. also *J.A.S.B.*, 1910, pp. 458, 460. The date of his death must be 1646, the Annual Letter of Mogor for May 1648—Aug. 1649 stating that he was disinterred in 1648, more than a year after his burial, and found incorrupt. In Febr. 1648, *Fr. Christopher da Costa* conveyed the remains from Lahore to Agra, where they were honourably buried “in the Cemetery of our defunct Fathers.”

1611.—Fathers J. Xavier, E. Pinheiro, J. Castro, A. Machado, F. Corci, and Nicolas Cautero.

“*Fr. Nicolas Cautero*, born at Cea in 1580; entered the Society in 1601.”

1612.—Fathers J. Xavier, E. Pinheiro, A. Macchado, F. Corci, J. Castro.

1613.—As above.

1416.—Father John “de Sena”, a Frenchman, is added to the number.

“In the 3rd Catalogue we read:—‘They are scattered in various stations, and will await patiently the opportunity of preaching. No one comes to be enlightened, nay, those who appeared to be enlightened (I speak of the King’s relatives) have rejected the light and have returned to their vomit, at the King’s order. Because of a ship seized by the Portuguese, Ours are molested. They lived at the King’s expense; now, they live on alms.’”

Fr. John “de Sena.”—Cf. *The Voyage of François Pyrard de Laval*, by A. Gray, in 2 Vols. (3 pts.), London, Hakluyt Society, 1888, Vol. II, pp. 36, 270, 281, 282. At p. 36, Pyrard, who knew him at Goa, writes his name *Jan de Seine* and describes him as a Lorrainer from Nancy; at p. 270, his name is spelt *Jan de Cenes*, and he is a Lorrainer of Verdun. Fr. Van Meurs writes:—*Mofaensis*; born in 1574; entered in 1596; was a Missionary in Salcete. A. Franco, S.J., mentions one Fr. John Sene as leaving Lisbon for the East in 1602; da Camara Manoel fixes his departure in 1598 and calls him “P. João Sena”; both describe him as an Italian.

1615.—Father E. Pinheyro, broken down with age, is gone to Goa, where he is Confessor in the Professed House.

1616.—Fathers A. Macchado, F. Corci, J. Castro, J. [de] Sena.

1617.—Catalogue missing.

1618.—Fathers A. Macchado, *Superior*; F. Corci, J. de Crasto.

1619.—Catalogue missing.

1620.—Fathers Francis Corci (professed of 4 vows); Joseph de Castro (professed of 3 vows); Matthew de Paiveta [*elsewhere*: Payva], *preacher*; Gonsalvus de Souza, *preacher*.

“*Father Matthew de Payva*: of Lisbon; born in 1592; entered the Society in 1603 [?]; made his profession on May 3, 1626.” Cf. *J.A.S.B.*, 1910, p. 454.

“*Father Gonsalvus de Souza*: “Matuzinus”; born in 1588; entered in 1604; in the Mission since one year.” Professed in 1623. Cf. *J.A.S.B.*, 1910, p. 448.

1621.—At Agra: Fathers Gonsalvus de Souza, and Matthew de Payveta [*also*: de Payva].

Father Francis Corci, in the King’s suite.

Father Anthony de Andrada, Visitor and Superior of the whole Mission.

Father Joseph de Crasto, at Sambar [Sámbhar]; Father Didacus Rodericus [Rodriguez], at Amadabad [Ahmadabad].

“*Fr. Anthony de Andrade*: born at Olivios in 1581; entered in 1597; made his profession on October 14, 1612.” Cf. *J.A.S.B.*, 1910, p. 458.

1624. *January*.—Brother Manoel Marques is added to the Agra personnel.—From another source: Father A. de Andrada; at Agra: Fathers M. de Payva and J. de Castro; at Sambar: Father G. de Souza; in the King's suite: Father F. Corci.

Brother Manuel Marques: Pietro della Valle mentions him, though not by name, as passing through Surat in the March of 1623. Cf. *De' Viaggi di Pietro della Valle*, Roma, MDCLXIII, Vol. III, p. 85. (*Lettera da Surat, de' 22. di Marzo 1623*, XVII, XVIII.) Brother Manuel accompanied Fr. de Andrade to Thibet in 1624.

“In a letter from Mogor (Aug. 15, 1627) to Fr. Claudius Francis Septalio of Como, Upper Italy, Father J. de Castro speaks of Jahángir's intimate friendship with two of the Fathers, whom he always keeps in his Court.”

No Catalogues are at hand for the period between January 1624 and 1641. A batch of old unpublished letters from Mogor will help us to bridge the gap. From a letter of Father J. de Castro, dated 20 Nov. 1631, Bengal, we learn that he is in the service of Mirza Zú-l Qarnín, at a place 250 miles away from Agra, and 300 miles from Hugli. This I take to be Patna. Writing from ‘Mogul’ [Patna?], on 8 Aug. 1632, he states that Father Francis Morando is with him, pending his departure for Thibet. On 28 Aug. 1632, he writes once more from Bengal [Patna?], and notes that there are five Fathers in Thibet, and two others in Agra who are intended for Thibet. His next two letters are from Agra, 24 Nov. 1632 and 6 Febr. 1633: in the latter he speaks again of five Fathers in Thibet. So does Father Francis Corsi in a letter from Agra, 5 Oct. 1633, adding that they are in two or three different places. There is another letter from Father de Castro dated Agra, 8 October 1633, and one of Father Morando, 15 Oct. 1633, Agra, dealing like that of Father Corsi (Agra, 5 Oct. 1633) with the arrival at Agra in July of 4,000 Portuguese prisoners from Hugli.

From some other source, Father J. B. Van Meurs sent the following extract:

“In 1633, the following are in the Mogor Mission: Father Matthew de Payva: from Lisbon; aged 41; has been 28 years in the Society; professed of 4 vows on 3 May, 1626; has been

already 11 years a missionary. Rector of Agra and Superior of the whole Mission.

“Father Francis Corsi: a Florentine; aged 58; 40 years of Society, professed of 4 vows on 1 Jan., 1612; has spent 32 years in this Mission.

“Father Joseph de Castro: from Turin; aged 55; 36 years of Society; professed of 3 vows on 10 Jan., 1612.

“These are the chief ones. There are, besides, 4 Fathers in Thibet: “*Juniores Patres manent in hac Missione: 4 Patres.*”

Father de Castro writes from Agra, 16 April 1637, that there ought to be four priests at Agra, because one always accompanies Mirza Zú-l Qarnín. In 1636 and 1637 they have been only three at Agra: Francis Morando, John d' Oliveira and himself. In June 1636, Father Anthony Pereira came from Goa on his way to the new Residence of Xirinagar [Srinagar in Garhwál]. Father Alano dos Angios [Alain de la Bauchère] went with him, but died at Srinagar shortly after his arrival. Father Stanislas Malpica arrived at Agra in Jan. 1637, and went to Srinagar.

Father de Castro's next letter (Agra, 29 Oct. 1637) states that Stanislas Malpica and Anthony Pereira are at Srinagar, the former being Superior.

1641.—Fathers Joseph de Crasto, *Rector*; John de Oliveira, and Francis Morandus [Morando].

Fray Sebastian Manrique, the Augustinian Friar, arrived at Agra on December 24, 1640, and met there Fathers “Anthony” de Oliveira, and Matthew “de la Cruz.” In Lahore, he found Father Joseph de Castro. Cf. *Itinerario Oriental del P. Maestro Manrique*, Roma, 1653, Ch. 58 and 63. Our Roman Archivist tells me that the Catalogue of 1641 (Sept.) places at Agra only Fr. John Oliveira, and that the name of Fr. Matthew de la Cruz is not traceable in the Catalogues of Goa.

1648.—Fathers Anthony Botelho (senior), *Visitor and Superior*; Francis Morandus, *Paimensis*; Anthony Chesque [Ceschi], of Trent; Henricus Busaeus [Busi].

Father Anthony Botelho: “During his Provincialate in 1670 he wrote ‘*De Moribus et Natura regionis Mogorensis.*’” Cf. *J.A.S.B.*, 1910, p. 453 *sqq.*

Father Anthony Ceschi di Santa Croce: Cf. W. IRVINE, *Storia do Mogor*, I, 223, 381, 381 *n.* 1; IV. 427. Fr. Ceschi died on June 28, 1656, in the arms of Fr. Anthony de Rego, S.J.

Father Henry Busi: his real name, as we had occasion to point out to Mr. W. Irvine, was Henry Uvens. Cf. W. IRVINE,

Storia do Mogor, Index, *sub* Buseo.—On this identification, we have prepared a special paper.—Fr. Busi wrote three times the Annual Letter at the beginning of his stay in Mogor.

1649.—The same.

1653.—Fathers Henry Busæus, *Rector* (in another paper he is given the title of Superior); Anthony Chesque, Francis Morando, Dominic Dias, *Algarbiensis* [of Algarve].

1655.—Fathers Henry Busæus, *Rector* (elsewhere: *Superior*); Dominic Dias, *Procurator*; Anthony Chesque (Chesques); Henry Roth, *Dilinganus* [of Dilingen];
Father Stanislas Malpica is in the Station of Xiranagar [Srinagar in Garhwál].

Fr. Henry Roth: Cf. what we wrote on him in *Catholic Herald*, Calcutta, 1907, pp. 171—2. He wrote three times the Annual Letters. Cf. W. IRVINE, *Storia do Mogor*, Vol. IV, Index, *sub* Roth.

Fr. Stanislas Malpica: born in 1600, at Cantazarro (Naples); entered the Society in May 29, 1623; Doctor of Theology and of Civil and Canon Law; Professor of Moral Theology; Prefect of Studies at Goa; Superior of the Professed House of Goa (1646); Provincial of Goa in 1662 and 1664; Rector of the College of Rachol in 1667; Rector of the New College of St. Paul's in 1673; died before 1676. He had left Lisbon for India in 1635, in company with the illustrious Martyr, Marcellus Mastrelli, and became a professed of 4 vows on February 2, 1646. In December 1653, he is said to be 52 years old, of which he had spent 30 in the Society." Cf. W. IRVINE, *Storia do Mogor* I. 223; 223. n. 1; 381; 381 n. 1; IV. 423.

1656.—Fathers Peter Jusarte (Juzarte, Zuzarte), *Rector*; Henry Busæus; Anthony Cesques (Chesques); Henry Roth; Francis de Souza, *Lamecensis*; Stanislas Malpiqua (Malpica).

"*Fr. Peter Juzarte*: born in 1616 (elsewhere: 1617) at Loures, in the Diocese of Lisbon; entered in 1632 (elsewhere: 1634); professed on September 8, 1652, at Goa; taught Humaniora for 3 years in Portugal and 1 year at Goa; Professor of Philosophy, 3 years; of Moral Theology, 3 years; of Speculative Theology, 3 years; Rector of the Seminary of Santa Fe, Goa; Visitor of Mogor and Rector of the College of Agra; Superior at Damaun and Macao; in 1663, he was elected to proceed to Rome as Procurator of the Japanese Province, and, in 1667, he was making preparations for that journey. In 1667, he is said

to be in the 49th year of his life, the 35th of religious life, and the 15th of his profession." He died at Lisbon in 1688. Cf. W. IRVINE, *Storia do Mogor*, I. 223; IV. 424.

"*Fr. Francis de Souza* died in Mogor on December 2 (*sic*), 1657."

1659. *January*.—Fathers Peter Jusarte, *Rector*; Henry Busaeus (Busaeo); Henry Roth; Stanislas Malpica.

1659. *November*.—Fathers Henry Roth; Henry Busaeus (Buzaeo); Stanislas Malpica.

1660. *November*.—Fathers Henry Roth, *Rector*; Henry Busæus; Emmanuel Verri (*elsewhere*: Veira), of Lisbon.

1662. *September*.—Fathers Henry Busaeus, *Vice-Rector*; Henry Roth.

1646. *September*.—Fathers Henry Busaeus, *Rector*; Peter a [de] Mattos, of Lisbon.

"Fr. Roth, who had been 10 years in the Mission, went to examine into the possibility of establishing a Mission in Nepal; but, on the death of Fr. Peter de Mattos (September 10 [*sic*], 1664), he returned to Agra, where he died in 1668."

1674.—Fathers Anthony de Magalhães, *Rector*; Gregory Roiz [Rodriguez], *Visitor*; Mark Anthony Santuchi [Santucci].

"*Fr. Gregory Rodriguez*: born at Villa da Ponte di Barca (Portugal) in 1616; entered the Society in 1630; became professed on June 4, 1656; taught Grammar, after which he became a Missionary in Cafraria, Mozambique, Tana, Agra; lastly, Superior of the Professed House, Goa, in 1679; there he died on June 6, 1682, while Provincial."

"*Fr. Mark Anthony Santucci*: born at Lucca (?) on March 22, 1638; entered at Rome, April 22, 1656; taught Humaniora for four years; was Professor in *Collegio Interamnensi* of the Roman Province; his studies finished, he went to India in 1668; was professed of 4 vows at Agra, August 15, 1675; in 1673, he is said to be 33 years old, having spent 17 in the Society; in 1677, acts as Procurator to the College of Agra, "in the North" [*i.e.*, Salsette of Bombay]; in 1679, gone to found a 'new' Mission in Bengal; is Superior of the Patna Mission in 1689, 'still hale and hearty.'" He died on August 1, 1689. Cf. W. IRVINE, *Storia do Mogor*, Index, *sub* Padre Santus, and *J.A.S.B.*, 1910, p. 450, 453.

1678. *December*.—Fathers Anthony de Magalhaes, *Rector and Visitor*; Martin de Souza, *Rector by order of the Visitor*; Joseph da Costa; Mark Anthony Santuchi, at Patna; John Leitão.

Fr. John Leitão: Cf. *J.A.S.B.*, 1910, pp. 449, 453.

1681. *December*.—Fathers Anthony de Magalhães (senior), *Rector and Visitor*; Mark Anthony Santucchi; John Leitão; Joseph da Costa.

1694.—Fathers Anthony Pereyra, *Rector* (from March 1, 1694); Joseph de Payva, *Confessor and Consultor*; Anthony de Magalhães, *Missionary at Dely* [Delhi].

1695.—Fathers Anthony Pereyra, *Rector*; Joseph de Payva, *Father* [*i.e.*, in charge] of the [native] Christians; Anthony de Magalhães, *Missionary at Delhi*.

1697. *October*.—Fathers Anthony de Magalhães, *Rector* (from November 20, 1695); Joseph de Payva.

1698. *November*.—Fathers Joseph de Payva, *Vice-Rector*; Anthony de Magalhães, *Missionary at Deli*.

1700. *November 11*.—Fathers Anthony Rodriguez, *Rector*; Joseph de Payva, *Procurator*; Anthony de Magalhães, *Missionary at Deli*.

1705. *November*.—Fathers Joseph de Payva, *Rector ad April 1705* [1706?] *designatus*; John d'Abreu (whose *Rectorship* expires in April 1706); John Monteyro, *missus ad Thibetanam Missionem investigandam*, "sent to report on the Thibetan Mission."

"*Fr. John d'Abreu*; born at Odivellas in 1669; admitted into the Society at Goa in 1684; made his profession on February 2, 1702; taught Grammar 2 years; was twice *Vice-Rector* of the Seminary of Bassein; *parochus Aquilonaris, i.e.*, Parish-priest to the North of Goa; *Rector* of the Agra College, next a *Missionary (operarius)* at Agra; *Vicar* of Salsette; *Rector* of Chaul in 1719; died before 1722.—His three years' *Rectorate* expiring in April 1706, he must have been *Rector* at Agra during 1704 and 1705. His successor was *Fr. Joseph de Payva*; but *Fr. de Payva* must have left shortly after, since *Fr. Emmanuel Monteyro* was *Vice-Rector* in September 1706, and *Fr. John de Abreu* was again *Vice-Rector* in January 1708." The true reason of *Fr. Joseph de Payva's* short *Rectorate* is that, as *Fr. Van Meurs* discovered later, he died in 1706, on August 20 [*Fr. J.B.V.M.*]; on August 7, says his epitaph at Agra. Cf. *W. IRVINE, Storia do Mogor*, IV. 143 n. 1; IV. 229.

1706. *September.*—Fathers Emmanuel Monteyro, *Vice-Rector*; John d'Abreu, his companion.
1708. *January.*—Fathers John d'Abreu, *Vice-Rector*; Simon Monteiro, *Procurator*; Francis Nogueira.
1710. *January 2.*—Fathers Emmanuel Durão, *Vice-Rector* (from June 1, 1708); Emmanuel Freire; Joseph Anthony Martinelli; Francis Borgia Koch; John d'Abreu; Emmanuel Cardoso.
1716. *December.*—Fathers Melchior dos Reys, *Rector*; Francis Ribeiro, his companion; Emmanuel Durão, at Deli.
1718. *December.*—Fathers Alvarus de Albuquerque, *Rector* (since March 1718); Emmanuel Freyre; Emmanuel Durão, at Deli; Hippolytus Desiderii [Desideri].
1719. *November.*—Fathers Alvarus d'Albuquerque, *Rector*; Emmanuel Freire, *Operarius*; Emmanuel Durão, at Deli.
1724. *December.*—Fathers Emmanuel de Figueredo, *Rector*; Alvarus d'Albuquerque; Hippolytus Desiderii [Desideri], at Deli.
1727. *November.*—Fathers Valentine Govea, *Rector*; Anthony de Fonseca; Emmanuel de Figueredo, at Deli.
1728. *December.*—Fathers Valentine de Govea, *Rector*; Anthony a [de] Fonseca, at Deli.
1731. *November.*—Fathers Emmanuel de Figueredo, *Visitor*; Emmanuel Sardinha, *Vice-Rector*; Matthew Rodriguez, at Deli.
1735. *January.*—Fathers Matthew Rodriguez, *Rector*; Francis Xaverius [Xavier]; Francis da Cruz.
1740. *December.*—Fathers Matthew Rodriguez, *Rector*; Francis Xaverius; Francis da Cruz; Anthony Gablsperger [Gabelsperger]; Andrew Strobl.
1752. *December.*—Fathers Andrew Strobl; Joseph Tieffenthaler [Tieffentaller]; Francis Xaverius.
1756. *December.*—Fathers Andrew Strobl; Joseph Tieffenthaler.

Concerning the last three Jesuits in the Mogul Empire, Fr. S. Noti, S.J., Bombay, communicates to us the following passage from his MS. *Life of Tieffentaller* (German): "From a letter of Fr. Joseph, O.C., Prefect of the Mission of Patna, dated January 3, 1778, and addressed to the Cardinal Prefect of Propaganda (*Archiv. della Propag. Ind. Orient. e Cina* (1776-78), *Scritt. refer. nei Congr.* 35, p. 1031), we obtain the following particulars on the three ex-Jesuits in the Mogul Empire: 'I received last year Your Excellency's letter of March 1776, in which Your Excellency charged me with appointing as Vicar of Chandernagore the ex-Jesuit Gavez [*read*: Garret]. Last December I received a letter from Fr. Wendel, also an ex-Jesuit,

residing in the wide dominions of the Nawab [of Oudh] to the W. of Patna, in which he communicated to me that, during the last rainy season, he believed himself near death. He feels better now, but thinks that his days are numbered.'

"In another letter from Patna, dated July 15, 1778, and written to Fr. Gregorio, O.D.C., the then Prefect of the Mission, Fr. Charles, O.C., says among other things: 'Fr. Wendel has had fever during five days. He had lost all consciousness. Now he neither talks sensibly again, nor does he wander, as he did before.'¹

"Another of them [of the ex-Jesuits], Fr. Tieffentaller, a broken-down old man (*vecchio cadente*), is at present in Agra, where there is also a Church and a numerous Christian community. I have not neglected to recommend many times to the watchful zeal of the Sacred Congregation the needs of the numerous Christians scattered over so many lands, and to remind them that they will soon have no Father left to minister to them the consolations of Religion.'"

The subsequent history of Fr. Tieffentaller and Fr. Wendel is known well enough. We are able to trace some of Fr. Garret's later movements in Adrien Launay's *Histoire des Missions de l'Inde*, Tome I, Paris, 1898. In a Memoir of Fr. Vernet (May 13, 1777) he is mentioned as residing at Chandernagore with Fr. Possevin (Vicar), Fr. Garofalo, and Bro. Broquet, who teaches piloting (p. 61). In 1778, the Prefect Apostolic, Fr. Sebastian de Nevers, O.C., urged the three ex-Jesuit Priests to join the Foreign Missions of Paris. All three quitted Chandernagore, leaving it to the care of the Capuchin Fathers. The little ship that was bearing them to Pondichery was driven on to the coast of Ceylon, whence they wrote (Dec. 20, 1778) to Mgr. Bigot that they were at Trincomali. One of the three, Fr. Possevin, was 76 years old and infirm, "the other two could still work, *Deo juvante*." Possevin preferred to remain at San Thome; the other two arrived at Pondichery in April 1779 and joined the Foreign Missions (pp. 75-78). Fr. Garret laboured at first at Pondichery (1788. Cf. pp. 113, 160, 161). In 1807, he was involved in difficulties at Karikal, owing to some of his Christians wishing, in spite of the opposition of the Hindus, to have a theatrical representation (pp. 189-90). He died [at Pondichery?] on December 2, 1817, aged 75 years and some days. "His zeal, his union with God, all his virtues and the care with which he had long prepared himself for death," wrote Mgr. Hébert, "give us every reason to hope that his death, though sudden, was not unprovided for" (p. 441).

¹ I understand that he could not speak at all. He recovered, however.

We subjoin an alphabetical Index of the "Mogor" Missionaries, with the years during which *our Catalogues* testify to their sojourn in the Mogul Empire.

- Abreu de, John, 1704, '05, '06, '08, '10.
 Albuquerque de, Alvarus, 1718, '19, '24.
 Andrade de, Anthony, 1621, '24.
 Anonymous, 1591-92.
 Aquaviva d', Rudolph Bl., 1580-83.
 Barreto, Sebastian, 1600-04.
 Botelho, Anthony (*senior*), 1648, '49.
 Busi, Henry. *Cf.* Uwens.
 Cardoso, Manuel, 1710.
 Castro de, Joseph, 1610-16, '18, '20, '21, '24, '33, '41.
 Cauro, Nicolas, 1611.
 Ceschi di Santa Croce, Anthony, 1648, '49, '53, '55, '56.
 Corsi, Francis, 1600-07, '09, '16, '18, '20, '21, '24, '33.
 Costa da, Joseph, 1678, '81.
 Cruz da, Francis, 1735, '40.
 Desideri, Hippolytus, 1718, '24.
 Dias, Dominic, 1653, '55.
 Durão, Manuel, 1710, '16, '18, '19.
 Figueiredo de, Manuel, 1724, '27, '31.
 Fonseca da, Anthony, 1727, '28.
 Freyre, Manuel, 1710, '18, '19.
 Gabelsperger, Anthony, 1740.
 Goes de, Brother Benedict, 1593-1607.
 Govea de, Valentine, 1727, '28.
 Henriquez, Francis, 1580-81.
 Juzarte, Peter. *Cf.* Zuzarte.
 Koch, Francis Borgia, 1710.
 Leitão, Edward, 1590-91.
 Leitão, John, 1678, '81.
 Machado, Anthony, 1605-07, 1609-16, '18.
 Magalhães de, Anthony (*senior*), 1674, '78, '81, '94, '95, '97, '98, 1700.
 Malpica, Stanislas, 1655, '56, '59.
 Marques, Brother Manuel, 1624.
 Martinelli, Joseph Anthony, 1710.
 Mattos de, Peter, 1664.
 Monserrat, Anthony, 1580-82.
 Monteyro, John, 1705.
 Monteyro, Manuel, 1706.
 Monteyro, Simon, 1708.
 Morando, Francis, 1641, '48, '49, '53.
 Nogueira, Francis, 1708.
 Oliveira de, John, 1641.
 Payva de, Joseph, 1694, '95, '97, '98, 1700, '05.
 Payva de, Matthew, 1620, '21, '24, '33.

- Pereyra, Anthony, 1694, '95.
Pinheiro, Manuel, 1593-1607, '09, '10 (?), '11-14.
Reys dos, Melchior, 1716.
Ribeiro, Francis, 1716.
Rodriguez, Anthony, 1700.
Rodriguez, Didacus, 1621.
Rodriguez, Gregory, 1674.
Rodriguez, Matthew, 1731, '35, '40.
Roth, Henry, 1655, '56, '59, '60, '62.
Santucci, Mark Anthony, 1674, '78, '81.
Sardinha, Manuel, 1731.
Sena de, John, 1614, '15, '16.
Souza de, Francis, 1656.
Souza de, Gonsalvus, 1620, '21, '24.
Souza de, Martin, 1678.
Strobl, Andrew, 1740, '52, '56.
Tieffentaller, Joseph, 1752, '56.
Uwens, Henry (*alias* Busi), 1648, '49, '53, '55, '56, '59, '60, '62, '64.
Vega de, Christopher, 1590-91.
Verri [Vieira?], Manuel, 1660.
Xavier, Francis, 1735, '40, '42.
Xavier, Jerome, 1593-1607, '09-'15.
Zuzarte, Peter, 1656, '59.

If we add Alain de la Bauchère (died in Garhwál, 1636?), Anthony Pereira (in Garhwál, 1636, 1637), Matthew da Cruz, mentioned by Manrique under the year 1640, Christopher da Costa (1648) and Anthony de Rego (1656), our list gives a total of 71 names of Jesuit Missionaries in Mogor between 1580 and 1756. Adding to it another 10 mentioned in our *Jesuit Missionaries in Northern India*, which help us to fill in the gaps in the above Catalogues, we have a total of 81 for the period 1580—1803. The additional names are: Barros de, Thomas (cf. *Jesuit Miss. in N. I.*, pp. 17, 24); Boudier, Claude (p. 38); Cabral, Francis [?] (p. 13); Garet, — (p. 40); Grueber, John (p. 32); Lanfranki, Francis (pp. 3, 24); Orville d', Albert (pp. 3, 32); Pons, John Francis (p. 38); Silva da, Joseph (p. 36); Wendel, Francis Xavier (pp. 4, 41). Were we in possession of the complete series of our Catalogues, the total number of Jesuit Missionaries in Mogor should we believe rise to over a hundred. We have not taken into account Andrew Boves and Ignatius Fialho, who laboured in Bengal exclusively, nor do we include the names of some 13 others who, together with another 10 mentioned above, are known to have attempted the evangelization of Thibet (cf. our brochure, pp. 14, 17, 19, 23).

Thanks to the labours of Father A. Franco, S.J., *Synopsis Annalium S.J. in Lusitania ab anno 1540 ad annum*

1725 (Augustae-Vindel., 1726, Appendix), we can determine the year of departure from Lisbon of many of the Mogor Missionaries. In the case of some, the identification is certain; in the case of others, it must remain tentative. We place in brackets Franco's spelling. "Fr." indicates that the Missionary was a priest at the time of departure.

- Fr. Andrade de*, [Andrada], Anthony, *Lusitanus*, 1600.
Fr. Aquaviva d', Rudolph, *Italus*, 1578.
Fr. Barreto [Barretto], Sebastian, *Lus.*, 1599.
Castro de, Joseph, *Lus.*, (*sic*), 1602.
Fr. Ceschi, Anthony, appears in Franco as "P. Joannes Ches-pue, *Germ.*, 1645."
Fr. Corsi, Francis, is Franco's "P. Franciscus Locce, *Sard.*, 1599." Compare with J. P. A. DA CAMARA MANOEL, *Missões dos Jesuitas no Oriente*, Lisboa, 1894, p. 155, where, under 1599, his name is "P. Fr^{co}. Corse, *Italus Theologo.*" *Fr. Van Meurs* notes, however, above that *Fr. Corsi* came to Goa in 1595. [*Lus.*, 1717.]
Cruz da, Francis, quoted by Franco as "Francis Crus,
Fr. Desideri [Desiderio], Hippolytus, *Ital.*, 1713.
Fr. Dias, Dominic, *Lus.*, 1647.
Figueiredo de, [Figueiredo] Manoel, *Lus.*, 1690.
Fr. Koch, Francis Borgia, appears in Franco as "P. Franciscus Borgia, *Germ.*, 1709."
Fr. Lanfranki [Lanfranque], Francis, (a Portuguese?), 1632.
Fr. Leitão [Leitam], John, *Lus.*, 1670.
Machado, Anthony, *Lus.*, 1586.
Fr. Magalhães de [Magalhans], Anthony, *Lus.*, 1665. Another of the same name, also a Portuguese and not yet a priest, is mentioned by Franco under 1696.
Fr. Malpica, Stanislas, *Ital.*, 1635.
Fr. Monserrat [Monserrate], Anthony, *Valent.*, 1574.
Fr. Morando, Francis, *Ital.*, 1629.
Pereira, Anthony, *Lus.*, 1673. Another Portuguese Jesuit of the same name, a priest, appears under 1680. (Franco.)
Fr. Pinheiro, Manoel, *Lus.*, 1591.
Reys dos (Reys), Melchior, *Lus.*, 1699.
Fr. Ribeiro, Francis, *Lus.*, 1657.
Fr. Rodriguez, Didacus, *Lus.*, 1607.
Rodriguez, Matthew, *Lus.*, 1717.
Fr. Santucci, Mark Anthony, appears in Franco as "P. Marcus Antonius, *Italus*, 1668."
Fr. Sardinha, Manoel, *Lus.*, 1720.
Fr. Sena de [Sene], John, *Ital.*, (*sic*), 1602. de Camara Manoel's list also describes him as an Italian. Cf. *op. cit.*, p. 155.
Silva de, Joseph, *Lus.*, 1673.
Souza de [Sousa], Francis, *Lus.*, 1647.
Souza de [Sousa], Gonzalvus, *Lus.*, 1611.

Fr. Vega de (Viega), Christophorus, Castellanus, 1583.

Xavier, Francis. Three Portuguese Jesuits of this name, none of them in Priest's Orders, appear in Franco under the years 1712, 1717 and 1723.

Fr. Xavier, Jerome, Navarr., 1581.

Fr. Zuzarte, Peter, Lus., 1645.

Fr. A. Huonder, S.J., states in *Deutsche Jesuitenmissionäre des 17 und 18 Jahrhunderts* (Freiburg, 1899, p. 179) that *Fr. Francis Wendel* entered the Novitiate at Florence at the age of 21 years (1751), and was in the College of Diu in 1656.

Barros de, Thomas, entered at Goa in 1610; *Boudier, Claude,* came to India about 1718; *Cabral, Francis,* entered at Goa in 1554. (Cf. *C. Sommervogel, S.J., Bibl. de la C. de J.*)

Gabelsperger, Anthony, left for India in 1736; *Strobl, Andrew,* in 1736, *Roth, Henry,* in 1650. (Cf. *A. Huonder, op. cit.*); *Tieffentaller, Joseph,* arrived in India in 1743. (Cf. *S. NOTI, S.J., Joseph Tieffentaller, Bombay, 1906, p. 4.*)

Finally *Orville d', Albert,* and *Grueber, John,* arrived in China in 1659. (Cf. *Catal. Patrum ac Fratrum S.J. qui .. in Sinis adlaboraverunt, Chang-Hai, 1892*), and *W. IRVINE, Storia do Mogor, IV. Index, sub Dorville and Grueber.*)

In *Jesuit Missionaries in North India* (1907), we gave copious directions towards the bibliography of the Mogor Missions, and notes on the biography of many of the Missionaries. (Cf. *ibid.*, p. 42). Since then has appeared the 10th volume of *Fr. C. Sommervogel's Bibliothèque de la Compagnie de Jésus*, a volume of Indices, which will be found very handy for the bibliography of the subject. See, in particular, under "*Histoire de la C. de J., and Missions de l'Inde.*" Valuable information is to be found in the Marsden MSS. of the British Museum. On these, we have published a special memorandum (Cf. *J.A.S.B.*, 1910, No. 8, pp. 437-461.)

Finally, besides *Fr. Anthony Monserrat's* Latin Account of the First Jesuit Mission to Akbar, the original of which was discovered in Calcutta by the Rev. W. K. Firminger in 1907, we have before us a short list of unknown original letters preserved in our Archives in Europe. This list was drawn up by *Fr. Van Meurs* up to 1642 only; but, if we add to it what the Hon'ble *E. D. Maclagan, I.C.S.,* has published for the years 1580—1605 (cf. *J.A.S.B.*, 1896, pp. 38-113), and consider that, from 1642 up to the suppression of the Society, we are equally well supplied with unpublished documents, it will be seen what wealth of hidden lore awaits the scholar and historian of the future.

Letters of Fr. Jerome Xavier.

A letter of 1595 (Sept.), missing; another of Sept. 8, 1596;

Lahore, Aug. 1, 1598; *ibid.*, Aug. 13, 1598; *ibid.*, Aug. 26, 1598; Agra, Oct. 21, 1603; Lahore, Sept. 24, 1607; *ibid.*, Dec. 18, 1607; *ibid.*, Dec. 21, 1607; Fremona [Abyssinia?], July 30, 1608; Agra, Sept. 4, 1610; *ibid.*, Sept. 20, 1611; *ibid.*, Sept. 25, 1613; *ibid.*, Sept. 25, 1613.—I have some difficulty in accounting for Fr. Jerome Xavier's journey to Ethiopia in 1608.

Letters of Fr. Manoel Pinheiro.

Lahore, Sept. 9, 1602; *ibid.*, Sept. 18, 1603; Sept. 27, 1607; a letter from the king of Portugal, Lisbon, Jan. 31, 1612, thanking him for his kind offices while acting as ambassador from the Emperor of Mogor to the Viceroy of India; Annual Letter, dated Dec. 24, 1613.

Letters of Fr. Francis Corsi.

Agra, Aug. 10, 1604; Lahore, June 18, 1607; from the Emperor's Court and Camp, Oct. 18, 1616; Fathepur, Apr. 3, 1619; Quaximi [Kashmír], Sept. 28, 1620; Sambar, Sept. 17, 1624; Dinduana, Oct. 15, 1626; Agra, Oct. 5, 1633.

Letters of Fr. Joseph de Castro.

From the kingdom of Cahil [Kábul], Aug. 24, 1626, and July 26, 1627; from the kingdom of Casimir [Kashmír], Aug. 15, 1627; from the kingdom of Bēgela [Bengal], Nov. 24 [20?], 1631, and Aug. 28, 1632; Mogol, Aug. 8, 1632; Agra, Nov. 24, 1632; Agra, Febr. 6, 1633; Agra, Sept. 17, 1633; Agra, Oct. 8, 1633; as Superior of the Mission, he wrote on Apr. 16, 1637, and Oct. 29, 1637; Agra, Aug. 20, 1638; *ibid.*, Sept. 1, 1640; *ibid.*, Oct. 3, 1640; *ibid.*, Aug. 15, 1641; *ibid.*, Aug. 25, 1641; *ibid.*, Jan. 1, 1642.

Letter of Fr. Francis Morando, Agra, Oct. 15, 1633.



48. The Rivers of the Delta.

By F. D. ASCOLI.

Almost a century and a half have elapsed since Major Rennell commenced his survey of the rivers of Eastern Bengal, and in so young a country, where the century yields to the decade as the measure of antiquity, it is not unnatural to suppose that nature should afford some striking examples of change due to fluvial action. I do not mean to imply that within this space of time the wider laws of potamology can be proved by actual evidence of change,—changes due to the natural raising of the levels of the banks and the beds of rivers and to diminution in the slope of the deltaic lands. I would in fact hazard the suggestion that such changes, which I would describe as the strategy of river action, are not of paramount importance in so young an area; it is the tactics of river action—the changes due to the natural oscillation of rivers and the tendencies which cause them to cut their banks and depart from their original courses, which alone can be traced out in so short a period—the smaller and more intricate changes which largely condition the execution of the wider laws. It is these less general laws which are seen at work in the actual delta, laws which appear to supersede the wider principles. Granted that the slope of the delta is gradually diminishing owing to the large deposits at the mouth of the Meghna, the change is nevertheless so small that its effect is incalculable in the stretch of river from Goalundo to the sea. Granted again that in the older lands of the actual delta, *e.g.*, the south of the Dacca district and the Palang *thana* of Faridpur, the river banks are considerably higher than the interior, still the changes are due to the actual cutting of these high banks; the high bank is not a permanent feature. It may be admitted that there are instances of the raising of a river's bed, as in the S. Dacca rivers, *e.g.*, the Issamutty; but one is compelled to acknowledge that these changes are due to external causes, that the rivers in question are dying rivers which can point to no new course to compensate for the loss or shrinkage of the old. The two main factors of change are the cutting bank of the river and the formation of new *chars*, not throughout the bed of the river, but in some specific place. There are three means by which these changes may be followed out:—

(a) *Local Information.*—This requires very careful sifting owing to the tendency to exaggeration and mythologization—if I may use the word.

(b) *Old Maps and Papers.*—This is a mine of much value

but its working is very difficult; while showing the actual facts of change, it is seldom that it even hints at the cause.

(c) *Actual Observation of the Locality.*—This method sounds simple, and indeed it does not require much practice for the eye to distinguish between old land and new: but the path has its thorns. If one could merely behold and say: "Here is a low-lying hollow; it is clearly the old bed of a river," the work would be easy. In the area under observation, south and east of the Garai and Chandina rivers, conditions are very different. The passenger from Calcutta to Goalundo may observe the banks of the latter river, well-set and high, with no trace of cutting at all; were the river to dry up even by raising its bed, he would have little difficulty in tracing its course. He may behold the Garai, its eastern bank high and consolidated, its western bank lowlying new land—all that remains of the river's attempt to open out its course as noted by Mr. Fergusson and Sir William Hunter: but the eastern bank will still be sufficient to locate the old course of the stream when the present railway bridge can give place to an embankment. Let the observer travel further east, along the Padma, the Kirtinassa and the eastern series of rivers in Faridpur. In most cases he will find a high bank and a low; but the high bank is cutting fast; as it recedes the low bank throws out its tentacles, and as this low bank advances, its elevation increases, leaving no trace, beyond the newness of the land that a river ever flowed over the spot. The result is that in an area like the Sibchar *thana* of Faridpur, where practically the whole of the land is *char* land, mere observation will only lead one to the general conclusion that the whole of the area has formed the course of some river at some time or other. In the most favourable circumstances where a small stream remains, high Mara Padma (Dead Padma), one is merely brought to the negative conclusion that this was certainly not the actual original course of the river but that it is the actual position to which the dying river ultimately cut its course. In fact in many parts of the area, the old river courses (*i.e.*, the present *char* land) are considerably higher than the old "*asli*" land. Further difficulties arise where a river (as is frequently the case) opens out its course by cutting both banks. It will thus be understood that in this area we have not to deal with the deserted beds of rivers, nor again with the self-raised beds of rivers which have spilled over into the adjoining lower lands to find a new course; in our area the process is a continual state of cutting supplemented by a corresponding process of accretion which effectually hides the actual workings of the river; and to discover the real course of the changes, our local observation must be tempered by the use of old maps and documents, supplemented by the core of truth to be found in local traditions.

[N.S.]

On this basis I venture to point out some of the important changes which have occurred in the courses of the Ganges and Brahmaputra since the date of Major Rennell's survey, more especially in the Ráj Nagar area; while pointing out the sequence of changes due to the oscillation of the rivers, I shall endeavour to point out their mutual connection and to show that a synoptical view of the river action of the last century and a half will show the connection of cause and effect; and the cause of the great changes will be found far away to the north in the River Teesta.

When Major Rennell surveyed the Delta, he found the Brahmaputra flowing into the Meghna, north of Dacca, a course which (there is evidence in the *Ain-i-Akbari* to show) was the main channel of the Brahmaputra in the 16th century. Within 50 years of this survey the main stream of the Brahmaputra was flowing west of Dacca down the old Jenai River, forming a junction with the Ganges near Jaffierganj; the combined streams deserted the old course of the Ganges between Panchar and Nulluah of Rennell's maps and joined the Meghna not far south of the big "pagoda" of Rájabári, about 45 miles in a straight line north of the junction of the Ganges and Meghna as surveyed by Rennell. The course of the river, roughly 120 miles long from near Nullua to Mehendiganj, was forsaken in favour of a course from Nullua to Chiddypur (Chandipur), approximately 20 miles in length, the direction of the stream changing from S.S.E. to almost due E. There is only one other change of importance to which I would call attention at present, *viz.*, the formation of an entirely new river, the Nayabhangani, through the isthmus at Serámpur in Rennell's maps (latitude 23°), joining the Meghna with the old course of the Ganges, a river which now forms part of the main steamer route from Calcutta to Cachar and Assam *viâ* Barisál. This stream, which at present has an average breadth of over $\frac{1}{2}$ a mile, worked its way through from the Meghna into the old Padma, some years previously to 1800. Now these great changes, which appear to be merely the arbitrary workings of a young and violent river, are, I think, attributable entirely to one cause,—a cause the importance of which has been recognized, but the effects of which have never been adequately observed.

It has been admitted by more than one authority that the change in the course of the Brahmaputra was due to the fact that, owing to an abnormal flood in the year 1787, the River Teesta changed its allegiance from the Ganges to the Brahmaputra, which found a fresh outlet through the Jenai, the present main stream of the Brahmaputra (or Jamuna, as it is here called) This abnormal flood was felt far to the south down the Meghna and the Ganges, and the evidence afforded by old correspondence of the period, leads one to the inference

that the Teesta's flood waters were divided between the old Brahmaputra and the Meghna on the one hand, and the Jenai and the Ganges below Goalundo on the other hand. The correspondence of those years, which still exists, proves conclusively that the ravages of the flood were particularly felt in the Pergannahs (or fiscal divisions) of Ráj Nagar, Idilpur and Srirámpur. Now the Idilpur and Srirámpur Pergannahs form the area through which the Nayabhangani River worked its way from the Meghna to the old Ganges or Padma; and the evidence to prove that this change was due to the flood of 1787 is almost incontrovertible. The old course of the Brahmaputra and the Meghna (its continuation) was violently affected by the flood. Mohanpur, which Rennell surveyed in 1764 on the east bank of the Meghna, somewhat to the north of Chándpur, was left in 1793, as old correspondence proves, on the west bank of that river, which was swinging violently in its course (it may be added, the river has now resumed its former course). In 1787, the year of the great flood, a block of 10 square miles of the Tipperah bank of the Meghna was reported as having been washed away, while on the Faridpur or Western bank, the correspondence of the period teems with references to the diluvion and inundation of the Idilpur and Srirámpur Pergannahs, commencing from the year 1787; the river in fact was cutting so violently that the Collector of Dacca expressed his fear, in a letter to the Board of Revenue, that the whole of these pergannahs would be swept away. The correspondence moreover actually locates the area, where the destruction was most widespread; and the *mouzahs* thus located form the very spot where the Nayabhangani River was flowing, 7 years later at the utmost, with its destructive stream, across the Isthmus of Srirámpur, connecting the Meghna with the Ganges at or near Monerpour (now called Char Manpura). From the north of Dacca to the south of the present district of Faridpur, the damage caused by the flood can be traced distinctly and the evidence to prove the formation of the Nayabhangani River from the date of the flood is so strong, as to substantiate the hypothesis that the Teesta River was directly responsible for this remarkable change.

Now the third pergannah in which the flood of 1787 was so severely felt, *viz.*, Ráj Nagar, an area untouched by the River Meghna, lies mainly in the angle formed by Rennell's Calliganga River, at its meeting with the Ganges; and it was by the opening up of this Calliganga River, that the Ganges had by the year 1818 found for itself a new exit into the Meghna. The new stream was called the Kirtinassa (the Destroyer of Glories). That the consummation of this change required a period of 30 years from the date that the Teesta and Brahmaputra commenced sending the bulk of their water down the Jenai River to meet the Ganges at Jaffierganj above Ráj Nagar,

is not a matter of surprise.¹ It is true that the flood of 1787 was sudden and severe; it spread its ravages even so far south as Rennell's Baugebary (Bansgari); but it is equally certain that the Brahmaputra acquiesced in its new course down the Jenai slowly, almost imperceptibly. Even so late as 1840, the old river to the north of Dacca was still known as the main stream of the Brahmaputra. Changes in the lower deltaic plains do not show themselves by sudden outbursts, but by a process whereby the river shifts by cutting its own banks or by gradually entering into and opening out the banks of some smaller stream. The period of 30 years is not surprising. At the same time the swing of a river within the area of its oscillation appears to be so confined (the example of the Ganges before its junction with the Jamuna will be noticed later) that one feels practically compelled to search for some external cause to account for a change of such a nature as is seen in the Ráj Nagar area; that the change is still in actual progress may be accounted for by the magnitude of the change; the progress of the changes will be recounted below.

A more detailed analysis of the evidence would, I aver, definitely prove that these two enormous changes, the formation of two entirely new rivers, are due solely to the convulsion caused by the change in the course of the River Teesta. It is here that the battle of the rivers was renewed, and it is here that the fight is being maintained even at the present date. The Brahmaputra, disturbed by the irruption of the River Teesta, was unable to hold its own against the Meghna at the point of junction north of Dacca; driven into the Ganges, it has renewed its attack with the aid of that river through the Kirtinassa.

It may be urged that I have neglected the changes that have occurred at the present junction of the Ganges and Brahmaputra Rivers. One hears of a Goalundo that now lies some miles from the situation of the place that at present bears that name; during the period of flood one sees the place actually changing before one's eyes beneath the swirl of the current of the united streams; *chars* in mid-stream form and disappear with a tantalizing fickleness; the location of the deep water channel causes the marine surveyor many an anxious moment. One remembers that in 1838 the Ganges was

¹ The year 1818 (*i.e.* 1225 B.S.) is the date assigned by local tradition: since writing the above, I have found amongst the correspondence of the Board of Revenue a letter written in March 1794, dealing with *thana* boundaries. In this the Naya Nadi Rathkhola (the real name of the Calliganga) or Kirtinassa is mentioned. There is no doubt as regards the identification, and the name Kirtinassa implies that the river had already attained a considerable size. This takes us within 7 years of the big flood, though it is clear from the size of the original stream as late as 1840, that the change was not by any means consummated by 1794.

fordable at several places above the junction, its waters finding a fresh outlet through the River Garai. It must be granted that when two big rivers meet, their junction must present a continuous series of changes; but in the present instance the changes are strictly local and temporary; the main swing of the river has not been materially affected; the fears expressed by Ferguson have not been realized; the Garai, so far from having assumed the greatness prophesied, is now a sluggish stream, only navigable in the rains; the Chandina is not only fordable, but dry in places; the Ganges still flows on despite the Brahmaputra, in fact at the point of junction the stream of the Ganges occupies practically the identical bed through which it flowed when Rennell surveyed it. There have been changes, great and destructive, but only such as one would expect from the natural disturbance where two great rivers blend into one; there has been no radical departure from its course, such as is seen further to the south and east. The place of battle has been transferred to the Ráj Nagar area, where the old fight between the Meghna and the Brahmaputra has been resumed, and, despite the additional attack of the Ganges, the Meghna is again proving victorious. It is over this area that one is able to discern and trace out the radical changes due to the great convulsion; and it is this change of the battle field from the old junction of the Brahmaputra and Meghna to the Ráj Nagar area that lends conviction to the view that the cause which terminated the former fray is identical with the cause which has reopened the battle on a fiercer scale in a new area.

In dealing with the changes in the course of the Ganges in greater detail, I may be excused perhaps if I confine myself in the main to the scenes of the most importance in order to show the changes which are relevant to the arguments which have been advanced; the other changes could be shown more clearly and more shortly by a comparative map. The important areas are the junction of the Ganges and Brahmaputra, the Ráj Nagar area and the Nayabhangani River.

Omitting the area from Rennell's Comercally to Moddapur, where the channel has certainly shifted northward at the Moddapur bend to the extent of over two miles, the long W.E. reach, and the subsequent N.S. reach may be treated jointly, as forming the area most liable to be affected by the junction of the two streams.¹ The majority of the places shown by Rennell in his map can still be traced, *e.g.*, Bailgutchy, Ragánauthpur, Calkapour, Bowanypour, Maldo, Notypour,

¹ Rennell shows two channels in the E.W. reach at the junction. I only deal with the more southerly channel. The N. channel is now quite dry: it is impossible to say which was the deep water channel in 1764. It may be that at times the N. channel has been the important one, but at any rate the S. channel is the survivor, and must demand our attention.

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Bettury and Panchsurya, though many of them are merely reformations *in situ*; this naturally prevents a visual comparison with complete accuracy, but it may be assumed that their position is approximately the same; the local cultivator has a genius for identifying a lost site. To explain this reach, I attach a rough sketch map to show the course which the river has taken. This map shows the line of Rennell's map (roughly plotted), the line of the river 1787-8, the line in 1858, and the present river bank, together with the limit to which the river has cut, so far as can be judged, within this period. It will be observed in the easterly reach that after a short period of cutting soon after Rennell's survey, the whole river had shifted N. by 1858 except at the actual junction with the Jamuna where the course lay slightly to the South; subsequently the river has shifted further north throughout the reach, with the result that the present junction of the rivers is practically identical with the junction as surveyed by Rennell; Maldaha (Maldo) and Char Natibpur¹ (Notypour) have both reformed in original site; rounding the bend, it may be noticed that between 1763 and 1787-8 (the line of which can be plotted accurately from an interesting old *rubokari*) the W. bank had cut to the extent of about 1 mile; this line curiously happens to correspond with the limit of river action; from that date, the tendency of the river has been to move in an easterly direction, the present W. bank being in places as much as 4 miles from the bank of 1787-8; it may be added that this bank is at present cutting, but it is difficult to say whether this process is more than temporary. The E. bank has cut in a corresponding manner; Rennell's Jamalpur, Allachypour, Soalto have all disappeared; the river bed has opened out to the breadth of $3\frac{1}{2}$ miles, a large part of which is occupied by Coronation Char, a low-lying mass of sand, the predecessor of which may be noticed in Rennell's map. Such are the facts; it remains for us to draw the inferences. It is not improbable that in the Easterly reach, the limit of river action was reached soon after Rennell's survey; it is a definite fact that in the southerly reach, the limit was arrived at by 1787-8. This date happens to correspond with the date of the big change in the River Teesta, *i.e.*, the date at which the Brahmaputra probably commenced sending its waters down the Jenai; from this date we find that the river began to move away from its Faridpur bank (*i.e.*, the S. and W. bank), except at its actual junction; in other words the general tendency of the river since 1787 has been to deposit its silt on the Faridpur bank, the tendency having

¹ These two villages partly exist on the North or Pabna bank of the river, but this would not affect the argument, as a variation of a mere half mile in a river course is not a discrepancy of much importance in the rapidly changing deltaic lands.

changed immediately after the irruption of the Teesta.¹ The point of junction of the two rivers, however, remains identical. The facts prove that in this area the changes that have occurred are no radical changes but merely the outcome of a continuous altered tendency to cut in one direction, while what may be termed a big settling pool has formed opposite Goalundo, a not unnatural result of the union of the rivers.²

This north-easterly tendency of the river, the innovation introduced by the River Teesta, is not peculiar to this locality; the tendency is clearly seen the whole length of the Padma as far as the Ráj Nagar area, and it is quite apparent that the enormous changes which have occurred there, are the direct result, the final expression of this tendency; the changes at the junction are merely ancillary to the Ráj Nagar changes—a means to an end.

The proof of this argument is the lie of the river from the Goalundo reach as far as the Noorpour and Nulluah of Rennell's Map XVI. Throughout the whole of this stretch the river has shifted N. E.; of the places marked by Rennell on the N. E. bank not one remains. Noorpour has vanished leaving no trace behind it; Nurilapour is now represented by a new formation Char Nurullapur, one of the few accretions on the N.E. bank in this stretch. East of Nurilapour in Rennell's map, at the junction of two roads, will be found the name Mynehaut; this place (Moinat³) has recently sunk beneath the Padma's waters; the extent of the cutting can thus be realized. Panchar which Rennell evidently intended to plot on the S. W. bank is now some 5 miles from the main stream; and a strip of char land along the whole of this S. W. bank, at least $3/5$ miles in breadth shows clearly the old southern course of the river.

I would not assert so much that the actual cutting has been continuous, as that the tendency has remained operative. In 1858, for example, the Padma had divided into two branches south of Goalundo, the S. branch flowing by Faridpur, a bed which is now completely dry in the cold weather⁴; efforts of the

¹ It is a curious fact that north of the junction the Jamuna has displayed the opposite tendency and has deposited its silt on the East bank; it appears that below the junction the Ganges has been able to maintain its own tendency against that of the Jamuna.

² The floods of the present year (1910) appear to bely the above paragraph. The river has cut violently along the Faridpur bank, and has tended to resume its course of 1858 hard by Faridpur (see below). I would add, however, that the river has also been cutting away the opposite bank, the result being an enlargement of the settling-pool. The violent cutting on the Faridpur bank is doubtless largely due to the abnormal flood of the Brahmaputra, before the Ganges had risen.

³ It is claimed that this place has reformed in situ on the South-West or Faridpur bank; this however requires careful proof.

⁴ See previous footnote; the coming cold weather may see a change; this would not, however, prove an altered 'tendency' in the river.

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river to break south have continually been checked by this counteracting north-eastward tendency.

It is not unnatural to suppose that this tendency should incline the river to break away from its original course wherever the first vulnerable point offered itself, and it is obvious that this inclination would assert itself in the strongest degree where the old course commenced to curve away to the south; both these conditions happened in 1787 to exist at the same place, namely, at the point where Rennell's Callyganga River flowed east from the Padma to join the Meghna at Chiddypour, where the north-eastward tendency would incline the river to force its way into the smaller stream (see Map XVII of the Bengal Atlas). It does not appear from his journal that Rennell actually surveyed this stream; he has at least omitted an important town of the name of Serripur (Sripur), a town mentioned by Jao De Barros (1553), Nicholas Pimenta (1599), Pierre du Jarric (1610), Ralph Fitch and others as a town of much importance and which certainly had not disappeared in Rennell's day. He has also given the river a wrong name. Calliganga was the name of the stream flowing from Ganganagar¹ through Luricool and Mulfatganj to Chiddypour. Be that as it may, the main stream of the Padma was flowing through Rennell's Calliganga by the year 1818. The change was clearly a gradual one; there is no local tradition, as is so commonly the case even when unwarranted by the facts, of a sudden irruption of the river, and even so late as 1840 a large mass of water was still finding its way through the old course by Ganganagar, which still retained the name Ganges or Padma as against the Kirtinassa of the new stream. The new course was in origin a widening of Rennell's so-called Callyganga River. The interesting aspect of the struggle now commences, for the Kirtinassa was the weapon with which the Brahmaputra armed its ally the Ganges against the Meghna. The river had broken entirely new ground; Rennell's Callyganga, the real name of which was the Naya Nadi Rathkhola,² had but a few years previously been a sacred road, and for 200 years at least before that date, no river had crossed the isthmus. The struggle which ensued must be described briefly.

The current of the Kirtinassa was exceedingly strong, perhaps due to a difference in the level of the Ganges and Meghna Rivers; the Meghna, at least, appears to have been taken at a temporary disadvantage; the big *char*, Pommanarra, shown

¹ The Kaliganga Mahál near Ganganagar still marks the site of this old and forgotten river.

² New river of the car path. In former days it is said that the sacred car was drawn along this road in the Sripur Ráthjátra (Car festival). It is said that the weight of the car hollowed out the path and this formed a khal by the influx of water from the Ganges to the Meghna.

by Rennell S.E. of Rájabári, was swept away and the Meghna was forced to deposit what silt it held, on the islands to the north, forming a large peninsula, while the Kirtinassa proceeded to cut away the W. bank of the Meghna. But the new river was an unstable adversary, and in the violence of its swing about the year 1830 Rennell's Mulfatganj was swept away, the river bank lying a mile to the South. By 1840, however, the Meghna had begun to assert itself, and the north-eastward tendency of the Ganges was clearly seen in a northern shift of the course of the new river, which at the same time was compelled to deposit a large amount of silt to the south down the West bank of the Meghna in the shape of an extensive reach of island *chars*. So great was the deposit, that the Kirtinassa, its mouth practically blocked up, attempted to find for itself a fresh outlet. From Noorpour it swept south again in its old bed by Pánchar almost to Badrasun; there the north-eastward tendency again asserted itself and its oscillation sent it back to Khagootia which it carried away with its pagoda at the junction with the original Kirtinassa, opening up in addition a small stream north of Rájnagar to Mulfatganj. By this date (1858-1860) the *chars* which the Meghna had forced the new river to deposit at its junction down the western bank had assumed very large proportions. The attempt of the Padma to find a new outlet had failed; the new channel commenced to silt up rapidly and the original channel of the Kirtinassa resumed its former importance. The Meghna, however, was still insistent, and the Kirtinassa was again defeated in the effort to keep open its mouth. In 1869 it strove for a fresh outlet with remarkable success down the new channel just to the north of Rájnagar. Such was the force of the new attack which concentrated again at Chiddypour that the history of the original irruption of the Kirtinassa was repeated, and the new stream carried away in its course the *chars*, which it had been compelled to deposit on the W. bank of the Meghna. In 1871 Rájnagar with all its glories was swept away; but the southward cutting of the stream did not augur well for ultimate success; in 1880-1 Luricool and Jopsha vanished with their buildings and pagodas. Between 1873-1883, the old main channel of the Padma (Kirtinassa), about two miles in breadth, was often fordable. But its force was spent; the north-eastward tendency again asserted itself, and in ten years' time the new stream had given place again to the original channel¹ and the Padma was depositing its silt more extensively than before down the Meghna *chars*.

The battle appears to be based on a recurring principle; the Padma strives to maintain its north-eastward tendency;

¹ I do not mean that the original channel was in identically the same position. After each rebuff, it appears to have shifted slightly to the N.E.

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the Meghna refuses and compels the Padma to silt up its mouth; the Padma breaks away to the south, until arrested by its natural tendency; it clears its mouth and then proceeds again on the N.E. tack; then the Meghna in its turn comes to the fore and the process is repeated with a considerable amount of destruction in the battle area. The fight has been fought twice and it is not unlikely that a similar recurrence will be seen within a short time; but prophecy over so short a period with regard to so complicated a force, the intensity of which depends largely on two varying and independent factors, the floods of the Brahmaputra and Ganges, is a difficult task.

Suffice it to say that at present a transition stage appears to have been reached in the third encounter; the Padma has striven to move its stream further to the north right up to the base of the great Rájabári pagoda; but neither has the Meghna been idle. Near Lohujang (Tarpasha) steamer station the Padma has been compelled to carry its main channel from the northern to the southern bank, by the formation of an extensive *char* on the Dacca bank stretching from Lohujang with one short break to the Meghna. The Padma is cutting hard again for an exit to the south in the Ráj Nagar area; but at present the channel rebounds to the N. bank at the break in the *char* at the Rájabári *Moth*, but a short distance from the junction of the rivers, where the *chars* on the north bank again appear. The junction of the rivers during the flood is a memorable sight as the brown waters of the Padma meet the clearer resisting water of the Meghna; for some miles the waters remain distinct without mingling, and it is along this line that a long spit of *char* land is forming as a bar to the passage of the Padma. When this bar is complete, it is difficult to see what is to prevent the Padma from carrying Ráj Nagar away once more and repeating the process of which it has already enjoyed a double experience.

Leaving the Ráj Nagar area and following Rennell in his journey southward from Pánchar, we find but little trace of the old main stream until Takya is reached. Ganganagar island still exists as Rennell saw it, a solitary patch which has survived in the area of the great struggle, while all the surrounding lands have disappeared and reformed. A narrow *khal*, the Mara Padma (Dead Padma), lying west of a larger and newer river, is all that remains of the once mighty stream. Near Diggarypara the old course is completely dry, but traces of a course, earlier than that shown by Rennell, can be seen for a distance of some 25 miles; in fact in one place the broken bank of a very old tank shows the exact limit of the river action. Near Bhadrachap and Rannysar (which are, by the way, misplaced by Rennell) the old course of the east branch of the river appears again in the shape of a narrow *khal*, passing round Nagerpara where the old bed may be easily distinguished, as far as Char

Manpura (Monnerpour). South of Char Manpura the old eastern branch can be traced in a series of *char mouzahs* but is completely dried up; the west channel *viâ* Gournadi still exists in a somewhat abated form slightly west of its original course, but it now carries the waters of the Kumar (Coomar) and Ariel Khan rivers. The network of rivers shown by Rennell between the E. and W. channels have now completely changed, and are filled with the waters of the Meghna which has broken through the isthmus of Srirâmpur in the shape of the Nayabhangani River and of the Ariel Khan, a young and problematical river flowing from above Pánchar and meeting the old course of the Padma near Takya.

As regards the Nayabhangani it is unnecessary to add to what has already been said. This extraordinary new river has kept alive the lower courses of the old Padma but at present it is showing a strong tendency to silt up. This tendency appears to be due to the success of the Meghna in damming back the Padma some 25 miles to the north at Rájabári and compelling it to deposit its silt along the west bank of the Meghna. So extensive are the *chars* thus formed that they have thrust the mouth of the Nayabhangani so far south as to make it appear to be a feeder of, rather than a dependent on, the Meghna.

To enter into a detailed description of the changes that have occurred between Rennell's Panchar, Habibganj and Tockya would be an Augean task. Even within the last few years the usurping river, the Ariel Khan, which now holds the field, has changed its course completely over a long reach, moving 5 miles to the east; of the 250 square miles in this area, not twenty can claim continuous existence since Rennell's day, the changes in the area are as rapid as they are extraordinary. Madaripur which 50 years ago lay on Rennell's Comar River is now washed, and is in imminent danger of being washed away by the Ariel Khan. It would require a Delphic oracle to prophesy the future.

Of the more southerly reaches of the river, the branch to Sewtalury (Jhalakati) has practically maintained its old course; it is however interesting to note that the opening up of the Kirtinassa in 1818 resulted in the stretch of river below Gournadi almost drying up, until opened out again by the Ariel Khan. Further south the volume of water which flows into the Meghna, approximately through the mouths surveyed by Rennell as the mouths of the Ganges, is still immense; but the water is that of the Nayabanghani and the new and vigorous stream of the Ariel Khan—a stream the effect of which in the near future it is difficult to estimate.

Rennell's Journal does not deal with the area lying further south, and it would be out of place to attempt to describe the extraordinary changes which have taken place in the series of

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massive *chars* shown in Rennell's maps. It will suffice to say that they have become consolidated into the immense island of Bhola, a subdivision of the Bákarganj district; the changes afford a valuable object lesson of the method by which this backward part of the delta is being developed, and its land face being brought into line with the more westerly consolidated portions.

Conclusion.

These notes deal with a small aspect of the geography of the delta, but it is none the less an aspect of some importance which has not suffered in the past from an exuberance of investigation. I have attempted to describe the influences which have led to the most important changes and to show that what may appear to be a mere arbitrary change is in reality one of a series of direct, perhaps natural, effects of a single cause. The absence of a really modern map will doubtless render the task of following these changes somewhat difficult; the maps at present available are the result of a survey some 50 years old, and until the maps of the present survey are published those maps can only show the changes in progress and not the result achieved; I attempt to supply the deficiency in some degree by rough sketch maps.

The object of this paper is not merely academic; it attempts to show that a certain definite order obtains in an area, the nature of which appears at first sight to be one of chaotic change; that a definite tendency has been operative for a period of over 120 years, that this tendency has been accompanied by a systematic, if complicated, method of change. Granted (and I admit that it is a big hypothesis) that no such convulsion occurs again among the hill rivers as the change in the course of the river Teesta, I see no reason to suppose that the system and tendencies above described will suffer any material alteration. Considering the interest that is at present being shown in the waterways of this area and the attempts that are being made to open out channels as a means of communication, I feel that this paper may possess some practical value. An appreciation of these principles might at least have prevented the ineffectual attempt to open out what is known as the Naria channel between Rájabári and Madaripur and would have shown the greater possibilities of the Maynakata¹ Khal and Kristanagar

¹ The Maynakata Khal (*viá* Panchar) is roughly the bed of the Ganges as surveyed by Rennell, and through which the Kirtinassa came again when it first broke south. The Kristanagar channel is the remnant of the second attempt to break south. The Naria channel (which is now almost dry) is the place where the Kirtinassa after breaking S. was driven back by the Meghna; it has enjoyed a continuous process of silting up ever since its formation—obviously owing to the damming influence of the Meghna.

channels where work is now proceeding, either of which may form the main stream of the Kirtinassa, if it again proceeds to break south.

Finally I would close this descriptive paper by a question of potamological theory. Do not the changes described above militate against the theory of the rivers of the lower delta building up ridges on which to run until they finally drop over the edge and commence to raise for themselves a fresh ridge and so on *ad infinitum*? It is a fact of some note that in the area under discussion, the oldest lands which the rivers must have deposited several centuries ago, are considerably lower than many of the new char lands which have been formed by the gradual recession of a river; and it is a fact still more worthy of note that none of the great changes described can by the widest stretch of the imagination be ascribed to this ridge theory. The theory does not afford a satisfactory explanation of the method by which the mouth of the Meghna is being filled up, nor of the formation of the new lands and rivers in the remainder of the area.

49. NUMISMATIC SUPPLEMENT, No. XIV.

Note.—The numeration of the article below is continued from p. 245 of the "Journal and Proceedings" for 1910.

82. SOME RARE INDO-GREEK AND SCYTHIAN COINS.

In the Journal of the Asiatic Society of Bengal for the years 1897 and 1898, Mr. Vincent Smith published an interesting series of papers on some coins of ancient and mediæval India, entitled 'Numismatic Notes and Novelties.' I have written the following brief notes on similar lines, descriptive of a few coins which have come into my hands during the last four years. The references are all to Volume I of the new 'Catalogue of the Coins in the Indian Museum, Calcutta,' by Mr. Vincent Smith. The British Museum Catalogue is that of the coins of the Greek and Scythic Kings of Bactria and India.

1. ARCHEBIOS.

Silver, round. Weight, 35 grains. Size, .75 inches.

Obverse.—Bust of king r., diad. Legend, ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ ΝΙΚΗΦΟΥ, below ΑΡΧΕΒΙΟΥ.

Reverse.—Zeus standing, facing, holding sceptre in l. and hurling thunderbolt with r. hand; mon., l. Pl. VII, 16; r. similar to Pl. VII, 28. Kharosthi legend, *maharajasa dhramikasa jayadharasa*, below *Arkhebiyasa*.

This hemidrachm of Archebios is a variety of the common type as illustrated at B. M. Cat., Pl. IX, 2. The bust is different, and apparently depicts the king as a man of more mature age than he appears on the usual variety. On the reverse are two monograms similar to those on coin B. M. Cat., Pl. IX, 5.

2.

Copper, square. Weight, 123. Size, .85.

Obverse.—Bust of Zeus r., diad.; sceptre on shoulder. Legend on three sides as on 1.

Reverse.—The caps of the Dioscuroi, and two palms. Mon. below, similar to Pl. VII, 67. Legend on three sides as on 1.

This has been published in the B. M. Cat., Pl. XXXI, 5, but is a rare type. The monogram of this specimen is different.

3. APOLLODOTOS.

Copper, square. Weight, 145. Size, .8.

Obverse.—Apollo facing undraped but shod, holding arrow in r. and bow in l. hand. Legend on three sides ΒΑΣΙΛΕΩΣ ΑΠΟΛΛΟΔΟΤΟΥ ΣΩΤΗΡΟΣ.

Reverse.—Tripod of peculiar form on stand, in square of dots; mon. Ψ . Kh. legend on three sides, r. *maharajasa*, top *Apaladatasā*, l. *tratarasa*.

This is a rare variety of a very common type of the copper coinage of Apollodotos. Not only is the tripod strikingly different in shape from that usually occurring, but the attitude of Apollo is distinct. The issue has been recognized as a separate variety by Cunningham in his 'Coins of Alexander's Successors in the East,' and he says that all the specimens of this variety are of inferior execution, which I think is open to question. He only knew of one weight, the chalkons, and the specimens in the British and Indian Museums are of this weight. The coin now published is a dichalkon. I also possess a lepton.

4. ZOILOS.

Copper, round. Weight, 230. Size, .85.

Obverse.—Apollo r., clad in chlamys and boots; holds in both hands an arrow; quiver at his back. Legend, ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ, ΖΩΙΛΟΥ below.

Reverse.—Tripod; l. Kh. figure 4; r. figure 1. Kh. legend, *maharajasa tratarasa*, below *Jhoilasa*.

This is a thick and dumpy coin. It is similar in type to the coins of Apollodotos illustrated at Pl. IV, 7, and bears the same relation to the usual variety with the small elephant in the l. field of the obverse, that this coin of Apollodotos bears to the common Apollodotos medallion of the same type depicted at Pl. IV, 6.

5. MENANDER.

Silver, round. Weight, 35. Size, .6.

Obverse.—Bust of king l., helmeted, thrusting with javelin. Legend, ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ, below ΜΕΝΑΝΔΡΟΥ.

Reverse.—Pallas l., holding aegis in l., and hurling thunderbolt with r. hand; mon. Pl. VII, 86. Kh. legend, *maharajasa tratarasa*, below *Menadrassa*.

A very rare variety of the common type in which the king is depicted as diademed and hurling the javelin. It is not described in the existing Brit. Mus. Cat., but is illustrated

in the 'Ariana Antiqua' and in Cunningham's 'Coins of Alexander's Successors in the East.' As both these works are difficult of access, I illustrate a specimen in my possession.

6.

Copper, square. Weight, 60. Size, .6.

Obverse.—Helmeted bust l. Legend, l. ΒΑΣΙΛΕΩΣ, top ΣΩΤΗΡΟΣ, r. ΜΕΝΑΝΔΡΟΥ.

Reverse.—Niké r., holding palm and wreath; mon. illegible. Kh. legend, top *tratarasa*, l. *Menadrassa*.

The only specimen of this common type of Menander's copper coinage known to me in which the bust is turned to the left, instead of to the right.

7. DIONYSIOS.

Copper, round. Weight, 260. Size, 1.1.

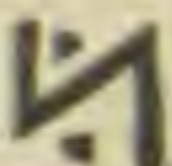
Obverse.—Apollo to r., clad in chlamys and boots; holds arrow in both hands, quiver at back. Legend on three sides, l. ΒΑΣΙΛΕΩΣ, top ΣΩΤΗΡΟΣ, r. ΔΙΟΝΥΣΙΟΥ.

Reverse.—Tripod; r. trident, l. Kh. letter *ji*. Kh. legend, r. *maharajasa*, top *tratarasa*, l. *Dianisiyasa*.

A round copper coin of Dionysios is a novelty. It is a counterpart of a well-known copper coin of Apollodotos, as might have been expected, since all the known types of the issues of Dionysios are taken from those of Apollodotos.

8. PHILOXENOS.

Copper, square. Weight, 110. Size, .75.

Obverse.—Deity standing facing with r. hand resting on hip, and cornucopiae in l.; mon. to l.  Legend, l., and top illegible but presumably ΒΑΣΙΛΕΩΣ ΑΝΙΚΗΤΟΥ. To r. apparently ΗΛΕΞΛΟΥ or ΦΙΛΕΞΛΟΥ.

Reverse.—Humped bull standing r.; below Gr. letter Σ. Kh. legend, r. *maharajasa*, top *apadihatasa*, l. probably *Philasinasa*.

When I first acquired this coin, which is obviously genuine, I thought that I had found a specimen of a new Indo-Greek king. The coin is of passable workmanship, and the figure of the deity on the obverse is quite distinct from that found on the usual copper coins of Philoxenos. On the latter she is shown as standing l. with r. hand advanced. Here she is facing with her r. hand on her hip. Also the style of the design is quite distinct. Although the name of the king is almost

certainly Philasinasa on the Kharosthi side, it is not $\Phi\Lambda\omicron\Xi$ $\text{EN}\omicron\Upsilon$ on the Greek side. In support of the possibility of its being some other name, perhaps new, I may instance the copper coin exhibiting the joint names of Lysias and Antialkidas—Br. Mus. Cat., Pl. XXXI, 2. But the probabilities are that an ignorant engraver blundered the name $\Phi\Lambda\omicron\Xi$ $\text{EN}\omicron\Upsilon$. Still the coin is a new and interesting one.

9. HIPPOSTRATOS.

Copper; round. Weight 240. Size, 1.

Obverse.—Conventional design of Apollo standing r. holding arrow in both hands, and clad in chlamys and boots. Legend gone but probably $\text{B}\Lambda\text{S}\text{I}\Lambda\text{E}\Omega\text{S}$ $\text{S}\Omega\text{T}\text{H}\text{P}\omicron\text{S}$, below $\text{I}\Pi\text{P}\omicron\text{S}\text{T}\text{P}\text{A}\text{T}\omicron\Upsilon$. The first five letters of the name are just visible.

Reverse.—Tripod; mon. r. Kh. letter m; mon. l. Plate VII, 110. Kh. legend *maharajasa tratarasa*, below (*Hipathratasa*).

Round copper coins of Hippostratos are very rare, and have so far never been figured. Dr. White King had two, see White King Sale Cat., Part I, No. 161, and supplement to Parts I and II, No. 4549. Of No. 161 it is remarked in the Catalogue that till the time of its publication, such round pieces were unknown. Yet they are mentioned by Cunningham in his 'Coins of Alexander's Successors': see coins of Hippostratos the Great, No. 5a.

10. ARTEMIDOROS.

Copper, square. Weight, 20. Size .45.

Obverse.—Artemis l. wearing short chiton and holding out bow. Greek legend worn and illegible.

Reverse.—Humped bull standing to right. Kh. legend r. *maharajasa*, top *apadihatasa*, left probably *Artemi*

This small coin is a novelty. In weight and size it corresponds with the hemi-lepton of Menander, B. M. Cat., Pl. XII, 7.

11. STRATO.

Billon, round. Weight, 45. Size, .6.

Obverse.—Diademed bust to r. surrounded by barbarous Greek inscription.

Reverse.—Pallas to l. with aegis, hurling thunderbolt. Mon. r. Plate VII, 142; l. Kh. letter. Kh. legend *maharajasa tratarasa*, below *Stratasa*.

Professor Rapson has seen this coin and describes it as a

new variety of Strato. It belongs to the types attributed to Strato II. This coin and another like it were found by me in the Ambala District of the Punjab.

12. TELEPHOS.

Copper, rectangular. Weight, 120. Size, .85.

In No. III of his paper 'Numismatic Notes and Novelties' (Journal A. S. B. for 1898), Mr. Vincent Smith published a copper coin of Telephos, the description of which was as follows:—

Obverse.—Zeus (or king) seated l. on throne with back; his r. hand advanced; in his l. sceptre.

Greek legend, ΒΑΣΙΛΕΩΣ (l.), ΕΥΕΡΓΕΤΟΥ (top), ΤΗΛΕΦΟΥ (r.).

Reverse.—Figure to r., seated in crouching attitude, with r. arm extended; l. arm not visible.

Kharosthi legend, *Maharajasa* (r), *Kalinakrama* (top), *sa Téliphasa* (damaged, on left).

Mr. Vincent Smith remarked: 'The coinage of Telephos is of extreme rarity, and has heretofore been known in silver only. The Elliot hemidrachm in the Bodleian Cabinet was considered unique until Von Sallet identified two duplicates of it among the unnamed coins of the Guthrie collection at Berlin.'

The copper coin of Telephos now described was sent to me four years ago. The obverse is the same as that of the coin described by Mr. Vincent Smith, but the reverse is new.

Reverse.—Soldier (?) walking to r., wearing short cloak which floats behind his shoulders. His right arm is extended, and over his left shoulder he is carrying a spear or long staff. On his head is a Phrygian cap. To r. is the monogram peculiar to the coinage of Telephos, and to the biga type of the silver issues of Maues. Below the monogram is a peculiar object, possibly a stone or an altar. Kh. legend on three sides, r. *ma-harajasa*, top, *Kalonakrama*, l. *sa Téliphasa*.

The reverse design is unique, but resembles that of the unpublished hemidrachm of Strato I and Agathokleia in the British Museum.

Every letter of the Kharosthi word corresponding to ΕΥΕΡΓΕΤΟΥ is distinct. The first character is *ka*, and the second is *l*, but the short vertical stroke only extends below the horizontal line of the *l*, converting the character into *lo*. The third character is a hook turned to the right, and according to Mr. Vincent Smith is either the cerebral, or the dental *n*. The fourth letter appears to be clearly *kr*, but there is a dot below and to the left of the character.

13. HERMAEOS.

Silver, round. Weight, 150. Size 1.

Obverse.—Bust of king l., diad. Legend, ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ, below ΕΡΜΑΙΟΥ.

Reverse.—Throned Zeus l. radiate, with r. hand advanced, sceptre in l. Mon. Pl. VII, 72. Kh. legend, *maharajasa tratarasa*, below *Haramayasa*.

The didrachms of Hermaeos are well known, but I illustrate this specimen as it is in fine condition, and exhibits an unusual monogram.

14. AZES.

Copper, square. Weight, 50. Size .75.

Obverse.—Male figure striding to l., chlamys flying behind; holds club in r., and trident in l. hand. Legend on three sides ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ ΑΖΟΥ.

Reverse.—Female figure to r., peplum flying; holds out long fillet or garland; mon. Pl. V, 10. Kh. legend on three sides, *maharajasa rajarajasa mahatasa Ayasa*.

This is a rare variety of the copper coinage of Azes, and has not been figured before. It is identical with B. M. Cat., p. 89, No. 185.

15.

Copper, rectangular. Weight, 70. Size, .8 × .5.

Obverse.—King on horseback r. carrying whip and bow; mon. r. similar to Pl. X, 18. Legend on three sides ΙΛΕΩΒ ΜΕΓΑΛΟΥ ΑΖΟΥ.

Reverse.—Zeus standing l., holding Nike bearing wreath and palm in extended right hand, and long sceptre in l. hand; mon. Pl. X, 3, 1.; Kh. letter *sm* and another character r. Kh. legend on three sides *maharajasa mahatasa Ayasa*.

A square copper coin of Azes bearing the presentiment of the standing Zeus Nikephoros, so common on this king's silver coinage, is a novelty. I know of no other specimen.

16. AZES AND AZILISES.

Copper, rectangular. Weight, 165. Size 1 × .75.

Obverse.—Herakles standing facing; holds in l. hand club and lion's skin; and with r. crowns himself; mon. l. Pl. VII, 72. Legend on three sides, ΒΑΣΙΛΕΩΣ (ΒΑΣΙΛΕΩΝ ΜΕΓΑΛΟΥ) ΑΖΙΛΙΣ (ΟΥ).

Reverse.—Horse walking r.; mon. r. illegible. Kh. legend on three sides (*maharajasa rajarajasa mahatasa*) *Ayasa*.

[N.S.]

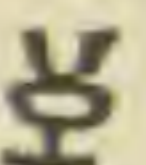
This type of copper coin is neither new nor extremely rare, but the fact that it bears the joint names of Azes and Azilises has not been previously recognized. Professor Rapson, who has seen the specimen now described, agrees that the type should be ascribed to Azes and Azilises jointly. The B. M. Collection contains four examples of this type, two of which has been attributed to Azes—Pl. XIX, 11—and two to Azilises—Pl. XXI, 5. But there is no vestige of the name on the obverse of Pl. XIX, 11, while on Pl. XXI, 5, the name on the Greek side is Azilises, while it is assumed that the corresponding name on the reverse is *Ayilishasa*. But only the first two characters are visible, and these are not *Ayi*, but *Aya*, *i.e.*, the first two syllables of *Ayasa*.

Silver coins of Azes and Azilises jointly are known—see B. M. Cat., Pl. XX, 3, and Pl. XXXII, 9. See also Cunningham's 'Coins of the Indo-Scythians, Sakas and Kushans.'

17. GONDOPHARRES.

Copper, round. Weight, 65. Size .6.


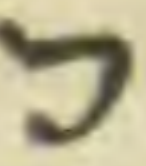
Obverse.—Conventional presentiment of Apollo standing r. holding arrow in both hands, and clad in chlamys and boots; design in area surrounded by raised beading; no legend.

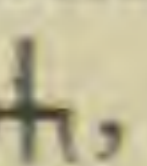
Reverse.—Area filled by Gondopharrian symbol . Kh. legend extant but rubbed and illegible.

This interesting coin was brought to me from Mathura. An Apolline type of the issues of Gondopharres is a novelty. With regard to the reverse design, compare coin B. M. Cat., Pl. XXII, 12.

18. GONDOPHARRES AND ASPAVARMA.

Copper, round. Weight, 150. Size .8.

Obverse.—The king on horseback to left holding whip. In front of the horse is the Gondopharrian symbol  and . The Greek legend is corrupt and illegible, resembling that on the coins ascribed to Azes II—Plate IX, 6, or on those of Gondopharres with inscription Sasasa.

Reverse.—Zeus, naked to the waist, standing r., with r. hand raised, and long sceptre in l.; to right symbols Kh. letter *a*, , and monogram, Plate X, 11; to left mark Plate X, 33, and symbol Θ . Kh. inscription reading from the bottom up towards the left from the outside of the coin—*Aspavarmasa (putrasa) Indravarma strategasa*; then returning to the bottom and reading up towards the right from the inside of the coin—*Jayatasa tratarasa*.

This coin is No. 274 in the first part of the White King Catalogue. It is there described as unpublished, and it is pointed

out that the coin possibly shows that Aspa Varma was connected with Gondopharres, and Wema Kadphises, as well as with Azes.

The usual variety of Azes and Aspa Varma copper coin is illustrated at B. M. Cat., Plate XX, 2, and it will be seen at a glance that the present coin is very different from it. The king on horseback is to the left, and in front of him is the symbol of Gondopharres. On the ordinary Aspa Varma coins the name Azes on the obverse can be plainly read, but the Greek inscription on the specimen now discussed is quite barbarous and illegible. The name Azes cannot be read either on the coin illustrated in the White King Catalogue, or on any of the three specimens in my possession.

The figure of Jupiter on the reverse is identical with that on the coin of Gondopharres illustrated at Plate IX, 9. It seems invidious to call the mark Plate X, 33, the symbol of Wema Kadphises. A symbol with at least an equal claim to that title would appear to be Plate VII, 154. The mark Plate X, 33, or a modification of it, is found on the coins ascribed by Mr. Vincent Smith to Azes II (Plate IX, 6); on those of Azes II and Aspa Varma (Plate IX, 7); of Gondopharres (Plate IX, 9); of Zeionises; and of Wema Kadphises.

The arrangement of the Kharosthi inscription on the reverse is peculiar. Then in addition to the words on the ordinary Aspavarma coins, there is the term *tratarasa*. I have filled in the word *putrasa* on the analogy of the usual Aspavarma inscription, but am not sure of it as there is a gap in the same place in all my three specimens, and the White King coin at this place is indistinct.

The marks on the coin are almost identical with those on the coin of Gondopharres, Plate IX, 9, already referred to. Instead of Kh. *pra* is Kh. *a*. The other symbols are the same. So are the obverse and reverse designs and their positions. It seems to me that the coin provides strong evidence to show that Aspavarma was the governor or satrap of Gondopharres as well as of Azes. This is consistent with Mr. Vincent Smith's view that Azes II was succeeded by Gondopharres.

19. KADPHISES II.

Gold, round. Weight, 245. Size 1.

Obverse.—Within square frame bust of king to l. wearing diadem; r. hand grasps thunderbolt or twig, l. hand rests on bottom edge of frame; his coat buttons at the neck. Above and below dotted circle, and over top edge of frame is mon. Pl. VII, 154. To r. and l. legend ΒΑCΙΑΛΕΥC ΟΟΗΜΟ ΚΑΔΦΙCΗC.

Reverse.—Siva standing front, head r.; holds trident in r.

[N.S.]

hand, round body and over l. shoulder necklace; body radiate; flames arising from head. He is leaning with his left arm on the hump of a bull standing behind him to r.; to left symbol Pl. VII, 152. Kh. legend, *maharajasa rajadirajasa sarvaloga iṣvarasa mahiṣvarasa himakapiśasa tratara.*

This is a new type of double stater of Wema Kadphises, and is a superb specimen. The obverse resembles that of the coin B. M. Cat., Pl. XXV, 10, while the reverse is the same as that of the double staters in the British Museum, except that Siva is facing right instead of left. The coin has been purchased for the Indian Museum.

20. HUVISHKA.

Copper, round. Weight, 240. Size 1.

Obverse.—King seated to front cross-legged on clouds, head r.; l. hand raised. Greek legend illegible.

Reverse.—Wind-god running l., his hair loose; both arms raised; to r. $\circ A \Delta \circ$.

The presentment of Oado, the wind-god, is common on the copper coins of Kanishka, but very rare on those of Huvishka. In his 'Coins of the Indo-Scythians, Sakas and Kushans' Cunningham published copper Oada coins of Huvishka, but with the elephant-rider obverse only, and remarked 'Very rare; only two specimens.' The coin now described is No. 444 of the first part of the White King Catalogue, but has not been previously figured.

21. INDO-PARTHIAN.

Copper, round. Weight, 110. Size .85.

Obverse.—Bust of the king to l., wearing tiara. Kh. (?) legend.

Reverse.—Winged Nike facing, holds wreath. Kh. legend.

This is a new Indo-Parthian coin, but I cannot read the fragmentary inscriptions.

DALHOUSIE :

R. B. WHITEHEAD.

3rd June, 1910.

83. SOME RARE COINS OF THE PATHÁN SULTĀNS OF DEHLI.

The following seven coins of the Dehli Sultāns are, to the best of my knowledge, so far unpublished, with the exception of that of Shamsu-d-Dīn Maḥmūd Sháh, but this does not appear to have been adequately described. All but the gold coin were found by me in the Dehli bazar within the last two years. The gold coin came from Rāwalpindi.

I. *Ghiyásu-d-Dín Balban.*

Copper.

Weight—30 grs. Size—.6.
Mint—Fakhrábád.

Obverse.
In double circle.

عدل
غيدانى

Reverse.
In circle.

بفخر
اباد

The only mint of Balban published by Thomas was Dehli. Subsequently silver coins of Lakhnautí mint became known, and specimens are in the Indian Museum. Then in the first Numismatic Supplement to the *Journal of the Asiatic Society of Bengal*, Mr. Nelson Wright published a rupee and a copper coin of Balban struck at Sultánpúr. The copper coin was an 'adli of the usual type, but on the reverse it bore the words *بحضرت دهلي* instead of *بسلطان پو*.

The 'adli now published adds a fourth to the three known mints of Balban. It is not a good specimen, but the inscription *Ba Fakhrábád* appears to be quite clear. Fakhrábád was presumably some place in or near the province of Bengal.

II. *Shamsu-d-Dín Maḥmúd Sháh.*

Billon.

Weight—50 grs. Size—.65.
Date—718.

Obverse.
السلطان الا
عظم شمس الد
نيا و الدين

Reverse.
ابو المظفر
محمود شاه
السلطان ۷۱۸

This remarkable coin was picked out of a large number of silvery billon coins of the Dehli Sultáns covering the period from Mu'izzu-d-Dín Kaiqubád to Muḥammad Tughlaq. It is of a common Dehli type, but the king's name is new. I could find no reference to Shamsu-d-Dín Maḥmúd in any of the usual standard works and catalogues, but ultimately I found a paragraph in Mr. C. J. Rodgers' "Coin Collecting in Northern India," which I proceed to quote verbatim.

"During the reign of Mubárah Sháh a coin was struck bearing the name of Shamsu-d-Dín Maḥmúd Sháh. We do not know who he was. In the second year of his reign the Emperor

went a tour in the Dekkan. He took a cousin with him and left Dehli in the hands of one of his creatures. When returning, he suddenly ordered his cousin to be executed, and when he arrived in Dehli the same fate was measured out to the man who had been left as governor of that city. It is surmised that the cousin and the governor were plotting for the throne. The coin was evidently struck in Dehli. The king probably saw it, and as it bore on it the year of his absence, he imagined that either the governor, or his cousin, or both, were plotting against him. No mention is made of Shamsu-d-Dín Maḥmúd in history. His name and date are found only on one known coin. "If more coins could be obtained, we might get to know more about him."

In the Introduction to his "Catalogue of the Coins in the Government Museum, Lahore," Mr. C. J. Rodgers gives a list of the Dehli Sultáns which includes Shamsu-d-Dín Maḥmúd. The date of his accession is given as 718 A.H., and it is stated, that only one billon coin is known.

These two references are all the information I have been able to find. I cannot ascertain whether the coin was ever described, and to whom it belonged, or now belongs. If it was the property of Mr. Rodgers, he probably disposed of it to the British Museum, yet it is not published in his Supplements.

Possibly the present notice will stimulate further enquiry, but Shamsu-d-Dín Maḥmúd can have been nothing more than the figure head of an obscure palace conspiracy.

III. *Muḥammad-bin-Tughlaq.*

Gold.

Weight—170 grs. Mint—Tughlaqpúr *alias* Tirhut.
 Size—.85. Year—735.

Obverse.

In circle, Kalima.

Marginal inscription within outer circle.

ضرب هذه السكة اقليم تغلق پور عرف ترهت
 في سنة خمس و ثلاثين و سبعمائة

Reverse.

In centre of coin

المجاهد في
 سبيل الله

محمد بن تغلق

On four sides names of the four *imāms*; all within outer circle.

This mohar is in fine condition. It is a gold coin of Tughlaqpúr *alias* Tirhut mint, and as such is a novelty. Previously the only known coins of Muḥammad Tughlaq struck at

this mint were forced currency issues of the design common to it and to Dehli, Dár-ul-Islám, Lakhnautí, Daulatábád, Satgāon, and Darra Dáhár or Dhár. The date of the coin now published is 735, while the only date so far known to exist on the forced currency issue of Tirhut mint is 731.

IV.

Billon.

Weight—50 grs. Size—.6.
Date—734.

Obverse.

In circle.

محمد بن

تغلق سده

٧٣٤

Reverse.

In double circle.

الراجي

رحمة الله

الكرام

This is a variety of a common billon type of the issues of Muhammad Tughlaq, in which the date is always expressed in words. In one respect the coin is a freak because the word سده (year) when used on the coinage of the Dehli Sultáns, is invariably followed by the date in words. Otherwise it is a normal, well-executed specimen. Two of this variety were found in the same lot from which I got the coin of Shamsu-d-Dín Maḥmúd.

V.

Billon.

Weight—52 grs. Size—.7.

Obverse.

In circle

محمد بن

تغلق شاه

السلطان

Reverse.

In circle.

المجاهد في

سبيل الله

Like the preceding coin, this is a variety of a common billon type of Muhammad Tughlaq's coinage. Instead of the date in figures appear the words السلطان. The coin is thin, and the lettering is distinct in style.

VI. *Fíroz Shāh with Zafar.*

Billon.

Weight—75 grs. Size—.5.
Mint—Dehli.

Obverse.

فیدروز شاه
ظفر سلطان

Reverse.

In circle.
دارالملک
دهلی

VII. Muḥammad bin Fīroz.

Billon.

Weight—120 grs. Mint—Dehli.
Size—·7. Date—790.

Obverse.

In circle.
سلطان
فیروز شاه
محمد شاه

Reverse.

In circle.
دارالملک
دهلی
۷۹۵

The last two coins are novelties as they are both of Dāru-l-Mulk Dehli. The first of the two belongs to the dateless varieties, and is a dumpy piece of poor workmanship; the second is well executed and in fine condition.

LAHORE :

R. B. WHITEHEAD, C.S.

1st April, 1910.

84. SOME COINS FROM THE LIMBDĪ TREASURY.

In June last (1909) it was my good fortune to spend six delightful days at Limbdī, the capital of the State of that name in the Province of Kāthiāwād. Mr. Jhaverbhai Nāthābhai Amīn, the capable and trusted diwān, had suggested to His Highness the Thākor Śāhib that a hoard of coins which long had been lying untouched in the State Treasury should be examined, and it was on this welcome errand that I visited the place. Every facility was afforded me for the inspection of the coins, each one of which passed through my hands. Numbering some 6,500, they were all, with the exception of a few Native State coins, either rupees or half-rupees of the Mughal Emperors of India. The Great Mughals, Akbar, Jahāngīr, and Shah Jahān were but poorly represented, the large majority of the coins ranging from Aurangzēb to Muḥammad Shāh. The Thākor Śāhib very kindly presented me fifty that were new to my collection. A description of these will perhaps be of interest, the more so as several of them have till now remained unedited.

Aurangzēb.

Of the rupees of Aurangzēb's reign four in the hoard issued from mints hitherto unregistered, but on two of these the mint-names still defy decipherment. One of the new mints is Jinjī, جنجی (Fig. 1, Obv. and Rev.). The obverse of this Jinjī rupee displays the ordinary چو بخر صذیر legend, while the Hijrī year 1109 appear in the *gāf* of اورن زیب. The reverse reads quite distinctly—

مانوس
میهدت
سنه ۱۱۰۹ جلوس
ضرب
جنجی

Eighty miles south-west of Madras, “the fortress of Jinjī occupies seven adjacent hills, on each of which stands a fort bearing a distinct name”, Elliot (Dowson), VII, 348. In his “History of the Mahrattas” Grant Duff tells at some length the story of the siege of Jinjī. It appears that in 1693 the place was invested by the Mughal troops under the prince Kām Bakhsh, but so languidly were operations conducted that not till January, 1698, was the fortress carried by escalade. The Jinjī rupee must have issued from the mint but a few months after this success, for the year of its issue, 1109 H., closed on July 9th, 1698.

Another new mint that now falls to be registered is Maḥmūdbandar, محمود بندر (Figs. 2 and 3, Rev. only). Two duplicate rupees, each dated 51-1119, mutually help to reveal the mint-name, one containing its earlier letters Maḥmūdbanand the other its later lettersūdbandar. Where this Maḥmūdbandar was situated is unknown to me.¹

Yet two other rupees, one dated 30-1098 and the other 4x-1109, are of the ordinary type, but in each case I have failed to read the mint recorded. In the hope that some coin-collector may be able to suggest the correct reading of these names, the two Reverses are shown in Figs. 4 and 5.

Of Aurangzēb's Mailāpūr rupees one was described fourteen years ago in King and Vost's article entitled “Novelties in Mughal Coins.” A rupee from this rare mint is also in Mr. Burn's cabinet. At Limbdī two specimens came to light, on one of which the mint-name is entered as Mahīlāpūr with an ‘h’, مهیلا پور, and on the other as simple Mailāpūr, without the

¹ My cabinet has long held an Aurangzēb rupee of the regnal year 4x that was struck at Islāmbandar. This “bandar” too baffles me.

[N.S.]

‘h’, ¹ صيلا پور (Figs. 6 and 7, Rev. only). “Mylapore” lies on the left bank of the river Adyar, and forms with St. Thomé the southern suburb of the present town of Madras.

Other rare Aurangzēb rupees were two from the mints at Zafarpūr and Dāru-l-mulk Kābul.

A‘zam Shāh.

It was an especial pleasure to light upon an Aḥmadābād A‘zam Shāh in mint condition. The only other specimen known to me is in the British Museum, No. 850.

Shāh ‘Ālam I.

Shāh ‘Ālam I was represented by rupees from the following mints, all of them rare for that Emperor’s reign: Ajmēr, Aḥmadnagar, Akbarnagar, Purbandar, Ḥīnāpattan, Sholāpūr, and both Dāru-l-jihād and Farkhunda bunyād Haidarābād. Of two Ajmēr rupees, each of the first regnal year, one, probably the earlier issued, bears the mint epithet Dāru-l-Khair, but the other Mustaqirru-l-Khilāfat. This latter title is also present on the rupee No. 866 in the British Museum, which coin, however, differs from the Limbdī rupee in the arrangement both of the Obverse and of the Reverse legends. Evidently then during Shāh ‘Ālam’s first year three several dies were designed and used in the Ajmēr mint.

Jahāndār.

The Jahāndār rupees included a very early Arkāt (1-1124)² and a good specimen from the exceedingly rare mint Bahādurgarh. This latter displays the صاحب قران *bait*, but a second rupee, already long in my possession, of the same Emperor and mint, bears the ابو الفتح *distich* (Figs. 8 and 9, Obv. and Rev.).

The situation of Bahādurgarh is not known for certain. It was somewhere in the Deccan, and “perhaps the place was on the Mān river”, E.D., VII, 383, note 2.

¹ Having these two coins in hand for reference, I have no hesitation in affirming that the muhr and rupee, Nos. 860, 874, in the British Museum catalogue, there attributed to Sholāpūr (with ‘short o’), really issued from the Mailāpūr mint. On coins Sholāpūr is written fully (*scriptio plena*) with a *wāw* present in the first syllable, thus not ^{شلا} پور but ^{شولا} پور

² In his “Old Coins in the Bahāwalpūr State Toshakhāna,” Mr. Whitehead mentions a rupee struck at the Arkāt mint still earlier by two years. He says, “If my reading is correct, the Arkāt coin of Shāh ‘Ālam Bahādur I is new. It is dated 1122 (*jālūs* 4).”

Farrukh-siyar.

Of Farrukh-siyar's reign one rupee I am inclined to assign, though somewhat doubtfully, to the new mint Gulshanābād (Fig. 10, Obv. and Rev.). It displays the normal legends, but on this specimen the mint-name itself is not very clear. The fort of Gulshanābād, in Baglānā near Junīr, is mentioned in the history of the operations conducted by the Imperial forces against the Marāthās in the early years of the twelfth century after the Hijra (E.D., VII, 337, 345); but I have not succeeded in discovering what connexion the Emperor Farrukh-siyar may have had with this place.

Another rupee of this reign issued from the mint of A'zamnagar (Fig. 11, Rev. only). The lowest line of the Reverse contains several incomplete letters, which may perhaps have served to indicate that the mint's full name was A'zamnagar Gokulgarh. The specimen in the British Museum, numbered 936, seems to be without this supplemental line.

Fig. 12, Rev. only, represents a puzzling rupee. Though its mint-name has not yet been deciphered, enough of its letters are present to render probable the inference that this coin issued from some town hitherto unregistered in any mint-list.

Other noteworthy rupees of Farrukh-siyar were those from Dāru-l-Khair Ajmēr, Dāru-l-Fath Ujjain, Islāmābād, Bankāpūr, Chīnāpattan, and Mustaqirru-l-mulk 'Azīmābād. The Bankāpūr rupee (Fig. 13, Obv. and Rev.), dated 7-1130, differs in the arrangement of its Obverse legend from King and Vost's No. 32.

Rafī'u-l-Darajāt.

Of Rafī'u-l-Darajāt's short reign rupees bearing this Emperor's distinctive couplet were in evidence from the Dāru-l-Fath Ujjain, Ahmadābād, and Lakhnau mints. There was also a Multān rupee bearing, as indeed seems to be usual in the case of this mint, not the couplet but the simpler legend that is present too on the Multān muhr. The Ahmadābād rupee, a broad specimen and in perfect condition, is the first one I have seen *without* the Zīnatu-l-bilād epithet. Just the plain name Ahmadābād is entered at the bottom of the Reverse. It would be interesting now to discover gold pieces of this simpler type, corresponding to the well-known Zīnatu-l-bilād muhrs.

Shāh Jahān II.

Shāh Jahān II's rare mints at Burhānpūr, 'Azīmābād, and Korā were represented by their rupees. Also a rupee from Dāru-l-Khair Ajmēr was found, which, though wanting the Hijri year, may be confidently assigned to this Emperor rather than to Shāh Jahān III.

Muhammad Shāh.

Two noteworthy coins of Muhammad Shāh were from the Ausā and Sironj mints (Figs. 14, 15, Rev. only). Unfortunately neither of the two shows the Hijrī year, but on the Ausā rupee the regnal year is 12, and on the Sironj 4 (or possibly $x4$). Also of this reign were two Machhlipattan rupees, dated 2—1132 and 8—1139, of the type already described in Numismatic Supplement VIII, 592, and XII, 383.

The Plate illustrating this article exhibits the following rupees :—

No. 1.	Aurangzēb	:	Jinjī : 41—1109 : Obv. and Rev.
„ 2.	„	:	Maḥmūdban[dar] : 51—1119 : Rev.
„ 3.	„	:	[Maḥm]ūdbandar : 51—1119 : Rev.
„ 4.	„	:	Mint unknown : 30—1098 : Rev.
„ 5.	„	:	Mint unknown : $4x$ —1109 : Rev.
„ 6.	„	:	Mahīlāpūr : R. Y. $4x$: Rev.
„ 7.	„	:	Mailāpūr : $5x$ —1118 : Rev.
„ 8.	Jahāndār	:	Bahādurgarh : 1—1124 : Obv. and Rev.
„ 9.	„	:	Bahādurgarh : R. Y. 1 : Obv. and Rev.
„ 10.	Farrukh-siyar	:	? Gulshanābād : R. Y. 2 : Obv. and Rev.
„ 11.	„	:	A'zamnagar : No date : Rev.
„ 12.	„	:	Mint unknown : R. Y. 4 : Rev.
„ 13.	„	:	Bankāpūr : 7—1130 : Obv. and Rev.
„ 14.	Muhammad Shāh	:	Ausā : R. Y. 12 : Rev.
„ 15.	„	:	Sironj : R. Y. 4 : Rev.

AHMADĀBĀD :

GEO. P. TAYLOR.

9th May, 1910.

85. A POSTSCRIPT TO THE ARTICLE ON "SOME COINS FROM THE LIMBDĪ TREASURY."

Note.—May Maḥmūd Bandar be Porto Novo on the Coromandel Coast? Only yesterday I had the good fortune here in Bombay to pick up a copy of that rare book Alexander Hamilton's "New Account of the East Indies" (1727), and turning over its pages I lit upon the following relevant passage :—

"The next Place of Commerce is Porto Novo, so called by the Portugueze, when the Sea-coasts of India belonged to them; but when Aurangzeb subdued Golcondah, and the Portugueze affairs declined, the Mogul set a Fouzdaar in it, and gave it the Name of Mahomet Bander. The Europeans generally call

it by its first Name and the Natives by the last ”
(I, 350).

It is, of course, quite true that Mahomet and Maḥmūd are different names, and that thus this “ Mahomet Bander ” is not necessarily to be identified with the mint-town Maḥmūd Bandar. But it would be surprising if the distinction between the two names had been observed by Hamilton, a rough, plain-spoken “ Captain ”, who by his own telling was at Madras officially declared “ a rank Pirate ”. He disavows any claim to exact scholarship. “ We Britains, who either go voluntarily or are sent to Neptune’s Schools in our Youth, to learn Politeness and Eloquence, very rarely meet with Apollo’s bright Sons or Disciples to instruct us in the knowledge of Languages.” He openly admits that what he has recorded in his book “ came posting through a weak and treacherous Memory with little Elegancy.” It thus may well be that on occasion his memory played him false, and that from this cause he has handed down in a form slightly altered a name that originally read Maḥmūd Bandar.

BOMBAY :

GEO P. TAYLOR.

21st May, 1910.

86. ON THE SYMBOL ‘ ŠĀḤIB QIRĀN.’

It is well known that the ‘*alāmat* Šāḥib Qirān is present as a royal title on many of the coins of the Mughal Emperors of India, and it may be helpful to have on record just when and where and by whom this title was used. But first a word as to its meaning. The term *qirān*, *قران*, indicates in the astrology of Persia a conjunction of two or more planets. Now not all conjunctions are held to be auspicious, for while some planets, such as Venus and Jupiter, are supposed to shed a beneficent influence, others, such as Mars and Saturn, are deemed to exert a malignant power. A pair of planets, each of good omen, is expressed in Arabic by the dual *سعدین*, *sa’dain*, but if the two import bad luck the term employed is *نحسین* *nahsain*. Hence the full form *قران سعدین* means definitely an auspicious conjunction, but *قران نحسین* a conjunction as definitely inauspicious. It would seem, however, that *قران* when used absolutely can carry with it *سعدین* understood, and accordingly it admits of interpretation as a conjunction presaging happiness.¹ By consequence the title Šāḥib Qirān comes to

¹ As is well known, “ the horned moon with one bright star ” is at the present day the felicitous emblem of the ‘ Öthmānlī Sultāns of

[N.S.]

mean 'Lord of the (happy) conjunction,' whence arose the derivative meanings, 'a favourite of Fortune,' 'a great Emperor,' 'a Kaiser,' 'an Augustus.'

Tamerlane is said to have been the first monarch to have borne this title, but the epithet has not been found on his coins. The late M. Ed. Drouin in his paper on "Les Symboles astrologiques sur les monnaies de la Perse" mentions that Tīmūr in his desire to foster the prosperity of his capital city Samarqand invited thither astrologers and other men of learning. During his reign (A.H. 771-807) a remarkable planetary conjunction took place, and the astrologers, availing themselves of the occasion, fashioned as an adulatory tribute to their imperial patron the title *Ṣāhib Qirān*. Inasmuch as the celestial phenomenon then observed recurs but once in thirty years, they foretold that Tīmūr's reign would last for at least that period of time, and as a matter of fact it did cover the thirty-five years from 1369 till 1404. The title thus assigned to Tīmūr seems to have become for a while a term distinctive of that Emperor. The *Tūzuk-i-Jahāngīrī* expressly states:

"In these Memoirs whenever *Ṣāhib Qirānī* is written it refers to Amīr Tīmūr Gūrgān."³

In the Preface to the Persian translation of the *Mulfūzāt-i-Tīmūrī* the translator, Abū Ṭālib Ḥusainī, says:

"I saw in the library of Ja'far, Governor of Yaman, a book in the Turkī language, dictated by His Majesty who now dwells in Paradise, *Ṣāhib Qirānī*."²

In Jahāngīr's time the Royal Signet of the Great Mughal bore, inscribed in the topmost of its nine circles, the words:

امیر تیمور صاحب قران

None of Tīmūr's successors on the throne of Samarqand bore the title of *Ṣāhib Qirān*, but in that later Empire of the Great Mughals, founded in Hindūstān by Bābar, sixth in descent from Tīmūr, the coins of no less than nine of the Emperors (or Claimants to the throne) exhibit the title either

Turkey. Its origin dates so far back as B.C. 339. In that year Philip of Macedon, while besieging Byzantium, attempted in the early night hours an escalade of the city; but it is said a sudden silver gleam flashing from the western sky revealed the advancing enemy, and thus Byzantium was saved. In commemoration of the Divine aid so wonderfully vouchsafed, it was forthwith decreed that the city's badge should be a crescent, its light reinforced by a star, and that both star and crescent should be graven on the city's coins. This emblem was adopted by the Turks after Constantinople fell to Muḥammad II in 1453, and since then it has come to be popularly regarded as the distinctive symbol of Islām. To the Muḥammadans of India, however, it is a foreign ensign, in no way associated with their religion.

¹ The *Tūzuk-i-Jahāngīrī*, translated by Rogers and Beveridge, page 5.

² The *Mulfūzāt Tīmūrī*, translated by Stewart, page 1.

unchanged or in a slightly varied form. The nine Emperors are—

Shāh Jahān I, Shāh Shujā', Murād Bakhsh,
Shāh 'Ālam Bahādur I, Jahāndār, Farrukh-siyar,
Muhammad Shāh, Shāh 'Ālam II, and Akbar II;

and the variant titles are the following four:

Sāhib Qirāni, Sāhib Qirān Thānī, Thānī Sāhib Qirān,
and Thālith Sāhib Qirān.

I. Sāhib Qirān, صاحب قران.

The simple term Sāhib Qirān is present, unaltered, on the coins of Murād Bakhsh and Jahāndār.

- (a) Murād Bakhsh caused rupees of two different types to be struck at Sūrat in A.H. 1068. Of the rarer type the legend on the Obverse reads:—

مراد شاه غاز

محمد سکندر ثانی

ز صاحب قران جهانی

گرفت

ارث احد

سنه

Muhammad Murād, the victorious King, the Second Alexander,

Took the heritage from (Shāh) Jahān, Lord of the Conjunction.

- (b) Jahāndār approved two distichs for his coins, of which the one given below contains his title Sāhib Qirān.

بؤد سکده بر صده (or زر) چو صاحب قران

جهاندار شاه بادشاه جهان

This legend, with occasional slight variation, is present on both muhrs and rupees struck at Khujista Bunyād, and on the rupees that issued from Etāwā, Dāru-l-Fath Ujjain, Dāru-s-Sarūr Burhānpūr, Barēli, Sūrat, Dāru-l-Khilāfat Shāhjahanābād, and Lakhnau.

[Nādir Shāh is not included among the Emperors of India, but it may here be noted that, during his sanguinary invasion of the country in A.H. 1152, he caused coins to be struck in his name at Dēhli and Ahmadābād, on which he too is styled Sāhib Qirān. They bear the legend:

ہمت سلطان بر سلاطین جهان
شاه شاہان نادر صاحب قرون

II. *Sāhib Qirānī*, صاحب قرانی.

The title 'Lord of Conjunction' with the mere change of قرون to the adjectival قرانی occurs on the coins of *Shāh 'Ālam I* and *Shāh 'Ālam II*.

- (a) Mr. Whitehead in his report on the "Old Coins in the Bahāwalpūr State Toshakhānā" (Num. Supp. XI, p. 333) mentions three muhrs of *Shāh 'Ālam Bahādur I* from the mint *Mustaqirru-l-Khilāfat Akbarābād* bearing the following inscription:—

[مبارک سکہ] صاحب قرانی بہادر عالم گیر تازی

Instead of the first two words مبارک سکہ Mr. Rodgers would read بزر زد سکہ.

The same epithet *Sāhib Qirānī* also occurs on the *Akbarābād rupee*, No. 3, on page 220 in the *Lāhor Museum Catalogue*, which, as Mr. Whitehead points out, has been there erroneously attributed to *Ālamgīr II*. It is, one may confidently affirm, a coin of *Shāh 'Ālam Bahādur I*.

- (b) On both muhrs and rupees of *Shāh 'Ālam II* from *Ahmadnagar-Farrukhābād* and *Dāru-l-Khilāfat Shāhjahanābād*, and on that Emperor's rupees from *Mustaqirru-l-Khilāfat Akbarābād*, *Barēli Qaṭ'*, *Muzaffargarh*, and (perhaps) *Jodhpūr*, we meet with the following legend:

سکہ صاحب قرانی زد زقائید الہ
حامی دین محمد شاه عالم بادشاہ

III. *Sāhib Qirān thānī*, صاحب قران ثانی.

This title, 'the Second Lord of Conjunction,' was adopted by the four Emperors, *Shāh Jahān I*,¹ *Shāh Shujā'*, *Muhammad Shāh*, and *Akbar II*.

¹ *Shāh Jahān I* was the first of the *Mughal Emperors* to have the title *Sāhib Qirān thānī* entered on his coins, but M. Ed. Drouin has adduced interesting evidence which goes to prove that the title was as a matter of fact borne by *Shāh Jahān's* father *Jahāngīr*.

"Les poètes persans contemporains qui étaient à la cour de ce sultān (*Djehān Gīr*.) et célébrèrent son avènement en 1605, disent bien qu'il monta sur le trône au moment où avait lieu la seconde con-jonction (ce qui est faux astronomiquement), mais *Djehān Gīr* n'a jamais pris ce titre sur ses monnaies ni dans ses protocoles. Je dois

- (a) From the very first year of his reign Shāh Jahān I introduced this epithet on his coins, and it is to be seen on nearly all the muhrs, rupees, and nithārs that were issued prior to his death. The area of the Reverse of the famous 200-muhr piece exhibits the legend which, with variations as to the arrangement of its constituent words, continued throughout this Emperor's reign to be the normal legend for his coins in gold and silver.

شہاب الدین محمد صاحب قران ثانی
شاہ جهان بادشاہ غازی

- (b) The two rupees of Shāh Shujā', Nos. 690 and 691 in the British Museum Catalogue, very probably bear in their margin the epithet Ṣāhib Qirān thānī. The Catalogue itself gives the words قران ثانی as the reading of the right margin of the Reverse of No. 690; and in Num. Supp. VI, pp. 265, 266, Mr. Burn has shown reason for rejecting, as to No. 691, the extremely doubtful rendering "Jal ūn-ābād," which Mr. Lane-Poole had ventured to suggest, and for accepting in its stead the reading Ṣāhib Qirān thānī.
- (c) On the coins of Muḥammad Shāh stood the severely simple legend

سکہ مبارک بادشاہ غازی محمد شاہ

but it would seem that some two years after this Emperor's accession the words صاحب قران ثانی were inserted after مبارک on the coins, both gold and silver, that issued from the Shāhjahānābād mint, a change which was maintained till the close of the reign. The legend as thus altered reads—

سکہ مبارک صاحب قران ثانی محمد شاہ بادشاہ غازی

- (d) Akbar II's Shāhjahānābād muhrs and rupees bear a legend identical with the one last recorded, save

“cependant mentionner ce fait que, en 1896, il a été présenté au cabinet de France (qui n'en a pas fait l'acquisition) un rubis rapporté du Turkestan, et sur lequel était gravée une inscription que j'ai cru pouvoir lire de la manière suivante: *Djehān Gīr shāh Akbar shāh ṣāhib-qirān tsāni*, 1019, ce qui prouverait, si la pierre est authentique, que ce souverain aurait pris, avant son fils Shāh Djehān, le titre de 'deuxième maître de la conjonction.' ”

Les Symboles astrologiques sur les monnaies de la Perse (Gazette belge de Numismatique, Bruxelles, 1901).

[N.S.]

only that the name Akbar is added after Muḥammad. They thus read—

سکه مبارک صاحب قران ثانی محمد اکبر شاه بادشاه غازی

IV. Thānī Sāhib Qirān, ثانی صاحب قران.

This variant form, in which ثانی comes first instead of last, appears on two gold coins of Shāh Jahān I, both of them from the Shāhjahanābād mint. One of these is the 200-muhr piece, on which in the left margin of the Reverse the Emperor is styled

ثانی صاحب قران شاه جهان دین پناه

The other is the beautiful muhr, No. 568 of the British Museum Catalogue, dated 30—1066, which in the margin surrounding the circular area of the Reverse bears the distich

سکه شاه جهان اباد رائج در جهان
جاودان بادا بدام ثانی صاحب قران

V. Thālith Sāhib Qirān, ثالث صاحب قران.

I have seen but a single coin exhibiting this epithet, a Tatta rupee of Farrukh-siyar, dated 1—1125. It is one of the treasures in the cabinet of my kind friend Mr. Framji Jamaspji Thanawala.

The ordinary legend on Farrukh-siyar's coins proclaims the Emperor's title of 'بادشاه بحر و بر', 'Bādshāh of sea and land,' but on this Tatta rupee he is styled instead 'ثالث صاحب قران', 'the Third Lord of Conjunction.' The whole legend reads—

سکه زد از فضل حق برسدیم و زر
ثالث صاحب قران فروخ سیر

NOTE.—In several of the Native States of Rājputānā their rulers have at one time or another issued coins more or less closely resembling those of the contemporary Mughal Emperors. Of these Native State coins the following exhibit the Emperor's name associated with the title Sāhib Qirān thānī:—

Muhammad Shāh rupees from the mint at Jaisalmēr; Shāh 'Ālam II rupees from Būndī, Bīkānēr, and Qaraulī; and Akbar II rupees from Būndī, Bharatpūr, Dholpūr, and Sawāi-Jaipūr.

GEO. P. TAYLOR.

AHMADĀBĀD :

10th June, 1910.

P.S.—Through the kindness of Mr. R. B. Whitehead, I.C.S., I am able to add a reference to another coin on which the title *Ṣāhib Qirān Ṭhanī* is ascribed to the then regnant Emperor. *Shāh Jahān II* issued from the Tatta mint a coin bearing a couplet which Mr. Whitehead reads as follows:—

سکه زد بر زر با امن امان
صاحب قران ثانی شاه جهان

The Second “Lord of the Conjunction,” *Shāh Jahān*,
Struck coin in gold with security and tranquillity.

G. P. T.

87. MOGHAL MINT TOWNS—FĪROZNAGAR.

In the list upon page 174 of his “Manual,” Dr. O. Codrington places a mark of interrogation against the name of Fīroznagar. I find that it is the new name by which ‘Ālamgīr Aurangzeb disguised Rāechor (Nizām’s Territories), as he did so many other places. In the *M‘āṣir-i-‘Ālamgīrī* (Bibl. Ind.), p. 332, line 2 from foot, we have an entry headed “Capture of Rāechor,” which states that on the 26th Ṣafar [1101 H. Dec. 29, 1689 N.S.], 33rd year, the *Bakhshī-ul-mulk*, Rūḥullah *Khān*, took the fort of Rāechor, which received the name of Fīroznagar. In 1117 H. (1706), year 50, Chīn Qīlich *Khān*, Bahādur, was appointed *faujdār* of Fīroznagar *vice* Yūsuf *Khān*; *ibid.*, p. 513.

WILLIAM IRVINE.

88. THE QANDAHĀR RUPEE OF MUḤAMMAD SHĀH.

Dr. G. P. Taylor of Ahmadabad writes:—“Just a couple of days after reading your description of a rupee, doubtfully assigned by you¹ to the Qandahār mint, and dated the 30th regnal year of Muḥammad *Shāh* (N.S. 13: 240), Mr. Qadri, the Oriental Translator to the Bombay Government, very kindly gave me a rupee—normal type—of the same Emperor, on which the mint-name Qandahār is quite clearly written. Its date is the 27th regnal year. It would thus appear that in the 27th and the 30th years of the reign of Muḥammad *Shāh* (A.H. 1157-1159; A.D. 1744-1746), and presumably from the 27th till the 30th year, coins were issuing from Qandahār in the name of the Dehli Emperor. How is this fact to be explained, if throughout that period the city was under Persian rule? There is another Qandahār, a taluq of Nānder District in the


¹ Numismatic Supplement XIII, J.A.S.B., Vol. VI, No. 4, 1910, p. 240, article 78.

Haidarābād State (Imp. Gaz. XIV, 377). Can this be the true home of these coins?"

The suggestion that the coin described by me may have issued from the South Indian Qandahār was made to me by Mr. R. Burn before I wrote my note, but as I could only find Qandahār given as the name of a talūq, I thought the probability of that source doubtful. Dr. Taylor's rupee of the 27th year of Muḥammad, however, is against the theory I put forward in my note, and I have since had the opportunity of reading Major J. S. King's "History of the Bahmanī Dynasty," on pp. 8 and 122 of which are references to the "Fort of Kāndhār" and "the town of Kāndhār and its dependencies." In the map attached to this history the town of "Kāndhār" is located on the Manāda River, longitude 77°, latitude 19°. Qandahār was evidently a place of some importance on the border between the Ahmadnagar and Bidar principalities, and I am disposed to agree that the rupees of Muḥammad Shāh of the Qandahār mint more probably issued from the Qandahār of the Dakhan and not from the Qandahār of Afghānistān.¹

H. NELSON WRIGHT.

¹ Since writing the above Dr. Taylor has written: "In Rogers and Beveridge's Translation of the Tūzuk-i-Jahāngīrī, page 179, occurs a reference to Qandahār as a fort in the Dakhan, and a footnote adds 'Sixty miles north of Bidar, *Elliot* VI. 70.'"



NOVEMBER, 1910.

The Monthly General Meeting of the Society was held on Wednesday, the 2nd November, 1910, at 9-15 P.M.

MAHAMAHOPADHYAYA HARAPRASAD SHASTRI, M.A., F.A.S.B., Vice-President, in the chair.

The following members were present:—

Dr. N. Annandale, B. De, Esq., Mr. F. H. Gravely, Mr. H. H. Hayden, Mr. A. M. Heron, Mr. D. Hooper, Mahamahopadhyaya Satis Chandra Vidyabhusana and Mr. G. H. Tipper.

Visitor:—A. B. Gosvami, Esq.

The minutes of the last meeting were read and confirmed.

Ninety-three presentations were announced.

The General Secretary reported that Dr. Arnold Caddy, Mr. H. C. Woodman, Mr. H. C. Turner, Major Norman, R. J. Rainier and Babu Gogonendra Nath Tagore had expressed a wish to withdraw from the Society.

The Council reported that there was one vacancy in the list of Associate Members, and therefore recommended the Rev. H. Hosten, S.J., for election as an Associate Member at the next Meeting.

The Chairman announced that Mr. I. H. Burkhill had returned to India, and has taken charge of the duties of Natural History Secretary from Prof. E. P. Harrison.

The following gentleman was elected an Ordinary Member during the recess in accordance with Rule 7:—

Mr. Syed Abdus Salek, B.A.

The following gentlemen were balloted for as Ordinary Members:—

Capt. William Ernest McKechnie, M.B., I.M.S., Civil Surgeon, Etawar, United Provinces, proposed by Major L. Rogers, I.M.S., seconded by Capt. E. D. W. Greig, I.M.S.; *Dr. W. A. Murray*, Chief Medical Officer, Assam-Bengal Railway, Chittagong, proposed by Major L. Rogers, I.M.S., seconded by Capt. E. D. W. Greig, I.M.S.; *Mr. H. D. Graves Law*, I.C.S., Gopalgunj, Saran, proposed by Lieut.-Colonel D. C. Phillott, seconded by Mr. G. H. Tipper; *Mr. J. E. Friend-*

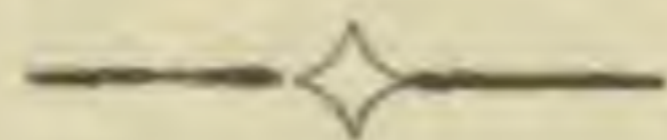
Pereira, Sub-divisional Officer, Goalpara, proposed by Major C. J. R. Milne, I.M.S., seconded by Dr. N. Annandale.

The following papers were read :—

1. *A dubious passage on the Ilminsky edition of the Babarnama.*—By H. BEVERIDGE.

2. *Re-actions in presence of nickel. (a) Inability of nitrogen and hydrogen to combine in presence of iron and nickel. (b) Reduction of the oxides of nitrogen, sulphur and phosphorous in presence of nickel.*—By PANCHANAN NEOGI AND BIRENDRA BHUSAN ADHICARY.

These papers will be published in a subsequent number of the *Journal*.



The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Wednesday, the 9th November 1910, at 9-30 P.M.

LIEUT.-COL. F. J. DRURY, I.M.S., in the chair.

The following members were present :—

Dr. Adrian Caddy, Lt.-Col. J. T. Calvert, I.M.S., Dr. C. H. Elmes, Dr. H. Finck, Captain E. D. W. Greig, I.M.S., Lt.-Col. F. P. Maynard, I.M.S., Captain J. W. D. Megaw, I.M.S., Captain J. G. P. Murray, I.M.S., Lt.-Col. A. H. Nott, I.M.S., Captain J. D. Sandes, I.M.S., and Major L. Rogers, I.M.S., Honorary Secretary.

Visitors :—Dr. Bijitendra Basu, Dr. Cyril H. Flory, Dr. F. A. Windsor.

The minutes of the last meeting were read and confirmed.

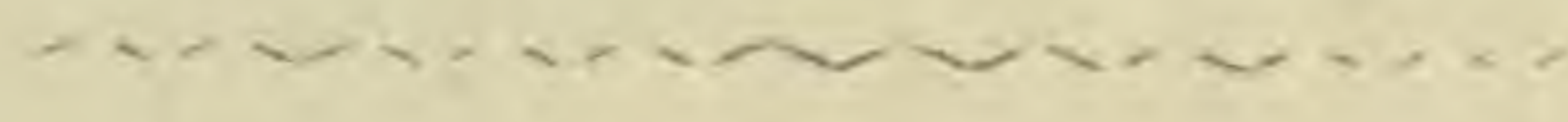
The presentation of 28 volumes of the *British Medical Journal* by Dr. H. G. Waters and of certain journals by Dr. Kennedy was announced. The Secretary also reported that about one hundred pounds worth of standard medical works selected by the special library committee had been received and could be taken out by members under the library rules.

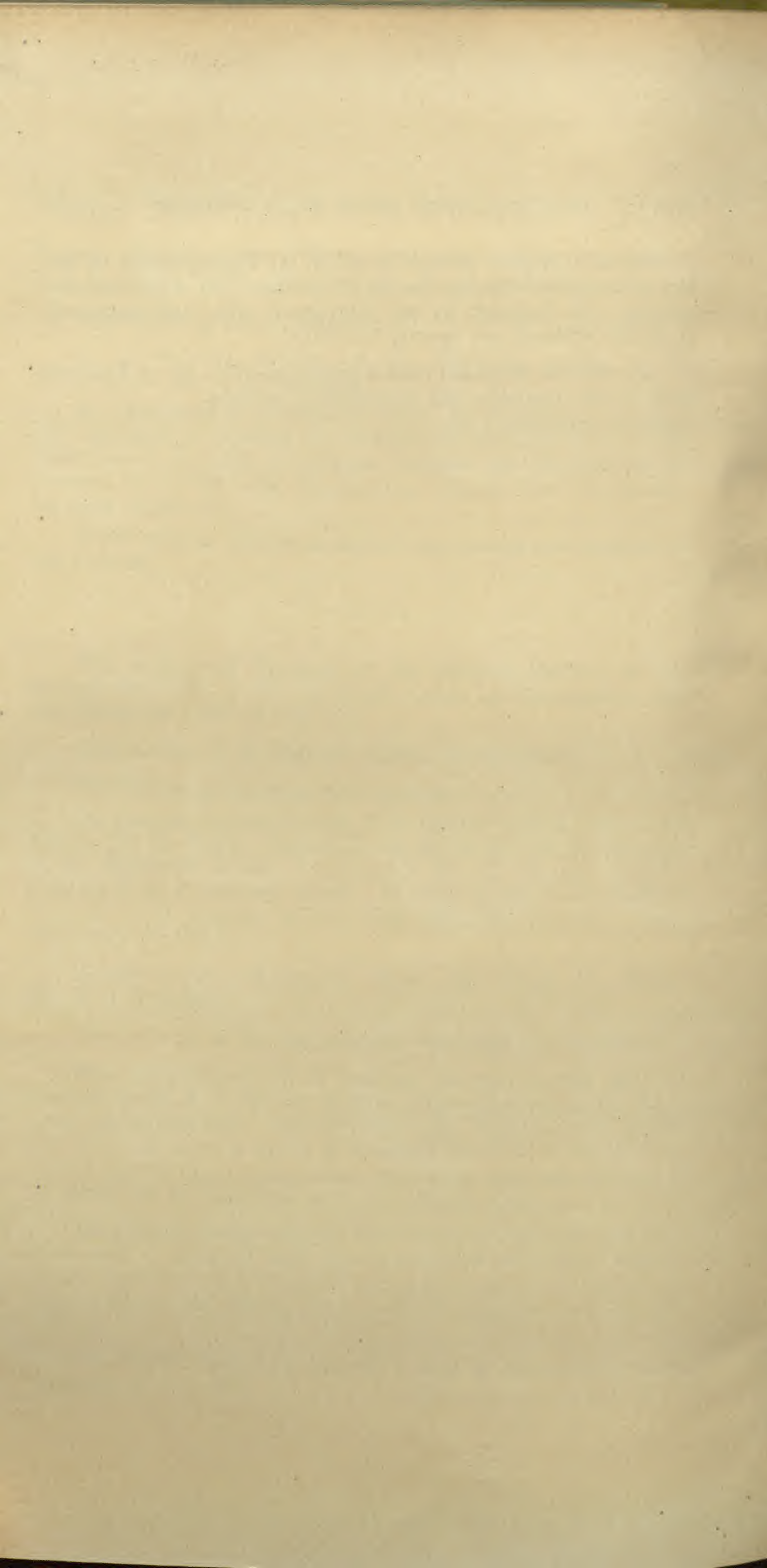
Lt.-Colonel Drury showed two brothers with enlarged thyroids and a cretinoid and myxoedematous condition, respectively, together with coloured drawings of their condition before improvement had taken place under treatment with thyroid extract.

Lt.-Colonel Maynard showed a case of cavernous venous angioma of the orbit.

Captain Megaw showed cases of (1) Pigmentation of the face and hands following the use of quinine. (2) Angioneurotic œdema. (3) Leprosy in an European, who had improved markedly without any special treatment.

Lt.-Colonel Maynard read a paper on—The use of Bismuth paste in the diagnosis and treatment of sinuses.







SOME RARE INDO-GREEK AND SCYTHIAN COINS.



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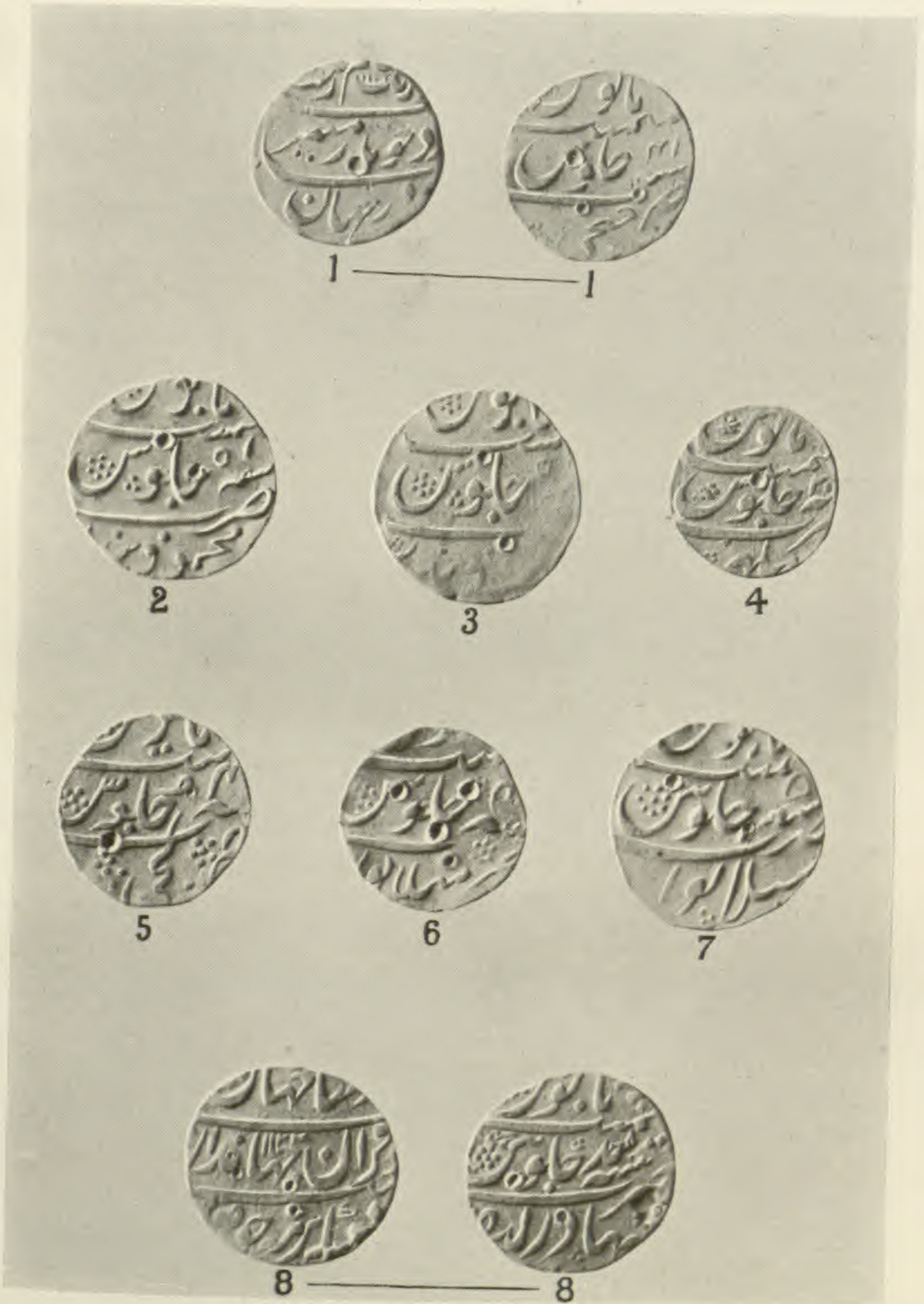


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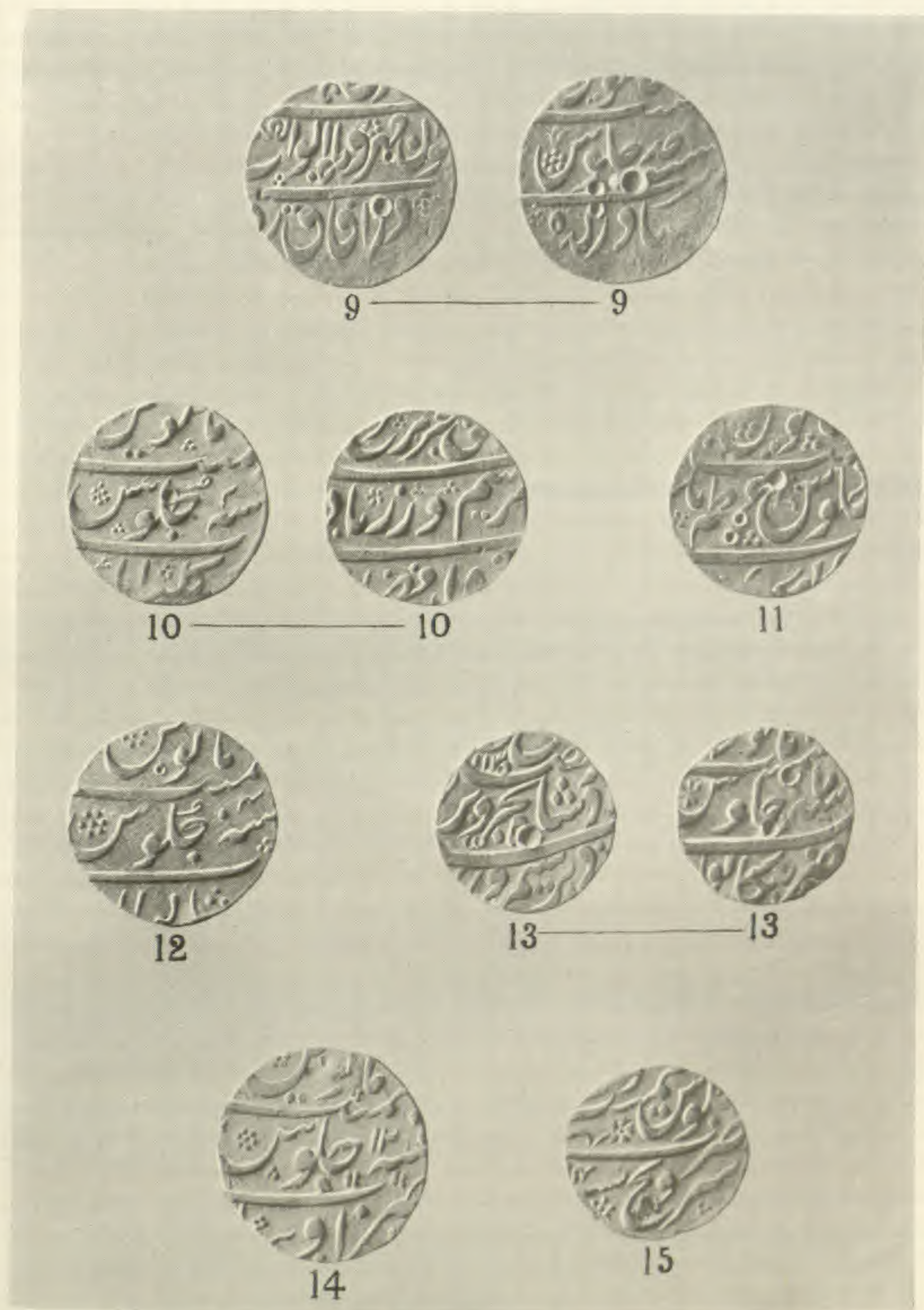
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SOME RARE INDO-GREEK AND SCYTHIAN COINS.



SOME COINS FROM THE LIMBDI TREASURY.



SOME COINS FROM THE LIMBDI TREASURY.

JOURNAL & PROCEEDINGS
OF THE
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The six plates illustrating Mr. R. B. Whitehead's paper on "Notes on Some Mughal Coins," published in the Numismatic Supplement No. XV., will be issued in a subsequent number of the *Journal*.

50. The Poet Mailī of Herat (مایلی هروی).

By H. BEVERIDGE.

The life of this poet is but little known, and there are several mistakes and discrepancies in the accounts of him which occur in various Persian anthologies and in catalogues of Persian manuscripts. Mailī is only a *takhallas* or pen-name, and there were two poets who adopted the sobriquet, besides a third who called himself Māilī and was a native of Kāshān and is mentioned in the *Ātishkada* (Bombay lithograph, p. 252). The Herat Mailī was by far the most celebrated of the two Mailīs. According to some authorities he was a native of Mashhad, and is buried there, but he was brought up in Herat, and is generally known as Mailī Haravī. The other was a native of Hiṣār Shādman in Transoxiana, a town which is also known as Hiṣār Kuhistānī. He was chiefly a composer of riddles, and only two lines of his verses were known to the anthologists.

The best account of Mailī of Herat is that given in the anthology called the *Khulasatu-l-Asha'ār u Zabdau-l-Afkār*, a title which was englished by Dr. Sprenger as the "Butter of Poems and the Cream of Conceits." It was composed by Taqīu-d-dīn of Kāshān between 985 and 1016 A. H. (1577-1608) and is one of the oldest and most valuable of all the anthologies. There are only fragments of it in the British Museum (see Rieu III. 1046*b*, and Supplement No. 105), and the best copy¹ in this country seems to be that in the India Office and entered in Dr. Ethé's Catalogue under the numbers 667 and 668. No. 667 is a modern copy, in three volumes, of the abridged second edition of the anthology and formerly belonged to John Leyden. But No. 668 is a very valuable and apparently unique copy of the Supplement or *Khātima* of the first edition, and was made as early as 993 A.H. (1585), which was the year in which Taqī completed the original. See Ethé's Catalogue No. 668, where Fitzedward Hall, the eminent American Sanskritist and former

¹ There is a good account of the anthology in Bland's paper in the R.A.S.J. IX, O. S., p. 126. I presume that his copy is now in the Rylands Library, Manchester.

Librarian to the India Office, is, in imitation of Dr. Sprenger, oddly described as "Mr. Hall of Benares." The volume is rightly described by Dr. Sprenger as a splendid folio of 622 pages of 24 lines each. There are some differences in the accounts of Mailī given in the Supplement, p. 260 *et seq.*, and in the second edition, p. 1233*b et seq.*, owing to Taqī's having afterwards obtained some additional information. Though the Supplement was finished eight years after the first edition of the anthology, it is earlier than the second edition, which Taqī was working at in 997 (1589) and apparently down to 1016 A.H. (1607-08). According to the Supplement, Mailī, whose real name was Mīrzā Qulī, was a native of Herat, but according to the second edition, he was born in Mashhad, though some persons said that his father was a native of Herat and had afterwards lived in Mashhad. Both accounts state that Mailī left Herat for Sabzawār and attached himself to Sultan Ibrāhīm Mīrzā, who was the son of Bahrām Mīrzā and a grandson of Shāh Ismāīl. Mailī in some way displeased his patron and so resigned and came to Qazwīn. There too he could not stay, and went off to Gīlān to Khān Ahmad Mīrzā, the ruler thereof. But he and Mīr Jahāngīr, who was Khān Ahmad's prime minister, could not agree and so Mailī had to leave Gīlān. This must have happened not later than 974 (1566-67) for Khān Ahmad was dispossessed and imprisoned by Shāh Tahmāsp in that year (Maasīru-l-Umarā I, 558). The Supplement of Taqī contains, among many other verses of Mailī's, a satire by him upon Mīr Jahāngīr. From Gīlān Mailī went back to his native country of Khurāsān, but he did not find residence there congenial to him and so departed to India where Akbar was reigning. According to Dr. Sprenger's Catalogue, p. 43, which is the foundation of the remarks in other Catalogues, Taqī says that Mailī died on the road. But Taqī does not say so. What he says is that Mailī "had not settled in that country (*hinoz darān diyār rahl-i-iqāmat niyandākhta*) when Death, the Summoner, rolled up the carpet of his life." This is not inconsistent with Badayūni's statement that Mailī was for years in the service of Naurang Khān, one of Akbar's officers, and which statement is corroborated by the fact that his diwān contains an ode to Akbar and two to Naurang Khān (Rieu, Persian Cat. II, 666*b*). Taqī's Supplement also, p. 264*a*, contains a panegyric by Mailī on Akbar, and it is not likely that this would be written until Mailī had arrived in India. Taqī does not give the date of Mailī's departure for India, but the Nafāisu-l-Maasīr, an early authority, says, Sprenger 54, he went there in 979 (1571-72). As according to Taqī, and Khūshgo, Mailī did not die till 984 (1576-77), this would allow of his having resided in India for five years. Both of these anthologists give the chronogram of his death, and Taqī, p. 1234*b*, gives the whole verse, which he says was made by Mīr Tārīkh (?) of Mash-

[N.S.]

had. The chronogram, which is also quoted in Pertsch's Catalogue, is

آه ملی جوان ز عیالم رفت

“ Alas, Mailī left the world when young ”

which yields 984.

Rieu has been hampered in his account of Mailī (Cat. II, 666) by his only knowing Taqī's account through Sprenger's Catalogue. He says that Mailī went to India after Sultan Ibrāhīm's death, but, as a fact, Sultan Ibrāhīm survived Mailī, not dying till the end of 985 (1578). This appears from the 'Ālam Ārāī, lithograph, p. 150, and from the very full and interesting account of Sultan Ibrāhīm, who was also a poet, and used the *takhallas* of Jāhī (ruined?), given in Taqī's Supplement, p. 174b, under the 5th Aṣal, which gives the notices of the poets of Qazwīn. The date of his death given there is Zī-l-ḥajjā 985 (February 1578). It is clear too that Sultan Ibrāhīm could not have died earlier than 984, for he was put to death by his cousin Shāh Isma'īl II after his accession to the throne, and this did not happen till after the death of his father Shāh Tahmāsp, which occurred in Ṣafr 984 (May 1576). Sultan Ibrāhīm was strangled by the bow-string, and eleven other princes were put to death at the same time. His widow, Gohar Sultan, who was Isma'īl II's sister, did not long survive him, dying, says Taqī, in the beginning of 986 (1578).

The other Mailī, that is, the Mailī of Hiṣār Shādmān, is not mentioned by Taqī, a circumstance which perhaps indicates that he flourished subsequently to 993. He is mentioned by 'Alī Qulī Dāghistāni, Riyāzu-sh-Sha'arā B.M. MS. Add. 16,729, p. 436a, and by Luṭf 'Alī in the *Ātishkada*, p. 345 of Bombay lithograph and 340 of Calcutta lithograph. Both speak of him as a clever composer of riddles, but acknowledge that they only know two lines of his poetry, which they quote.¹ Badayūni and Abul Faḥl, Blochmann 577, only speak of the Mailī of Herat. Abul Faḥl evidently knew little about him, and his remark that he lived in the society of gay people seems merely an inference from his having the *takhallas* of Mailī, *i.e.*, sociable. Mailī of Herat was a Turk by origin and he is called Mailī Turk in the list in the *Ātishkada*. See also Calcutta lithograph of *Ātishkada*, p. 34, five lines from foot. His name was Mīrzā Qulī or Mīrzā Muḥammad Qulī (Bankipore Library Catalogue II, 169), and it occurred to me that he might be the Muḥammad Qulī Moghal who was a servant of Akbar and of Naurang Khān, and was employed by the latter to continue Payinda Hasan Ghaznavī's translation of Bābur's Memoirs. See Rieu's Catalogue II, 799b, and the correction at p. 1094b of vol. iii. But Muḥammad

¹ There is a curious resemblance between the two lines that they quote, and two lines of Mailī of Herat in Badayūni *l.c.*, 330, nine and eight lines from foot.

Qulī was a native of *Hiṣār Shādmān* and he translated the second part of the *Memoirs* in or after 994 (1586), that is, ten years after the death of *Mailī* of Herat, as given by *Taqī* and others. It seems impossible then to identify him with the more celebrated of the two *Mailīs*. It is possible, however, that he is the *Mailī* of *Hiṣār Shādmān*. It is singular that none of the anthologists give this *Mailī's* real name. They all speak of him only by his pen-name. *Muḥammad Qulī* may have been a son or other relative of *Mailī* of Herat, and may, therefore, have assumed his pen-name. Or he may have done so merely because his real name closely resembled the real name of *Mailī* of Herat. That *Mailī* was of Turkish origin and is called *Mailī Tūrīk* in the *Ātishkāda*, Bombay lithograph, p. 25. That *Muḥammad Qulī* knew *Turkī* we know from his translating the *Memoirs*, and we may conjecture that *Mailī* of *Hiṣār* also knew *Turkī*, from the place of his birth. If *Mailī* of *Hiṣār* was a poet, though an undistinguished one, so also was probably *Muḥammad Qulī*, for the preface to his translation shows that he was a master of poetic diction. Another point of resemblance between *Mirzā Qulī Mailī* of Herat and *Muḥammad Qulī Moghal*, if not between him and *Mailī* of *Hiṣār*, is that both were patronised by Akbar, and in the service of his officer *Naurang Khān*. According to *Badayūni*, *Mailī* of Herat was eventually poisoned by *Naurang Khān*, but this is not mentioned by *Taqī*, and is a doubtful story. If it is true, it probably took place early in *Naurang Khān's* career, for *Mailī* is said to have died in Malwa, and *Naurang* left that country for Gujarat and died there.

Though *Mailī* of Herat's poetry is spoken of in high terms by *Badayūni III*, 329, and by *Luṭf 'Alī*, the author of the *Ātishkāda*, it does not seem to be much read nowadays. Apparently, he was a vain, amatory poet, and also a trencher-parasite. But he died young, and perhaps before he had attained his full strength. The most copious extracts from his poems are those given in the Supplement to *Taqī* of *Kāshān's* anthology. *Badayūni* has also one or two long extracts, and the *Ātishkāda* (see *Bland's* notice, p. 357 of *R.A.S.J. VII O.S.*) quotes 160 lines. The author of the *Bankipore Catalogue II*, 170, quotes *Taqī Auhadī* as saying that he possessed a collection of *Mailī's* odes, etc., containing 2,500 verses, and that he had also seen an equally large number of amatory poems. But *Taqī* of *Kāshān* seems to reduce the number to 1,500. There is a copy of *Mailī's* *Divan* in the British Museum, *Rieu II*, 666, but it is in such bad *Shikast* that I could make little or nothing of it. The odes in praise of Akbar and *Naurang Khān* are written on the margins of the MS., and the one in praise of *Naurang Khān* is on pp. 13 and 13b. The *Bankipore* copy is a modern one. *Badayūni*, III. 330 quotes a couplet where *Mailī* uses a striking image in speaking of himself as a despairing lover. He is, he

says, the half-dead prey that the hunter takes pity on and quickly puts out of pain. This may remind us of Enid who, when struck by Earl Doorm,

Sent forth a sudden sharp and bitter cry
As of a wild thing taken in the trap
Which sees the trapper coming thro' the wood.

There is also a copy of Mailī of Herat's Diwan in Berlin. It is described in Pertsch's Catalogue.



51. A Lisu Jew's Harp from Yunnan.

By J. COGGIN BROWN.

Bamboo Jew's harps are known to have a wide range among various tribes of Eastern Asia. According to H. Balfour they are found as far north as the Ainu of Yezo, and eastwards through the Malayan Archipelago to the Pacific, where they occur in many of the island groups. The same writer refers to their use in Northern India, and has also described a series of six Jew's harps collected in the Siamese Malay States and Perak by Dr. Annandale and Mr. Herbert C. Robinson.¹

The Rev. A. Willifer Young has traced the distribution of the Jew's harp in various parts of the world and has described six different specimens of this primitive musical instrument made in bamboo by the Lakher and Chin, Naga, Mikir, Garo, Kachin and Assamese tribes of Assam and Burma. Mr. Young was not able to prove the existence of the instrument in Lower Bengal, Behar and Chota Nagpur, and was informed on good authority that it is not used in Burma to the south of Mandalay.

Reference is also made in the same paper to the use of a form of Jew's harp in Tibet and Nepal; amongst the Lepchas, on the authority of Sir Joseph Hooker; in Mongolia, China and Tibet on the authority of W. W. Rockhill; and in Tibet, Burma, Siam and Japan as well as in the islands of the seas from Borneo to Fiji, Samoa and the Philippines, on the authority of the late Dr. Carrington Bolton.²

I have recently found that a bamboo Jew's harp of peculiar construction is a favourite musical instrument of the Lisu tribes of Yunnan and the Burma-China frontier. It may be mentioned here that the Lisu tribes are found in the basin of the Upper Salween between Lat. 25° 30' and Lat. 27° 30', where they exist in a savage state. They spread in numbers as far east as the right bank of the Mekong, and are found in small communities far beyond this line. Westwards, they reach into the valley of the Nmai-Hka, the eastern branch of the Irrawaddy. The more peaceful clans who have come into contact with Chinese civilization are found along the northern parts of the Burma-China frontier. There are also numbers of isolated village communities of the same people in the Northern Shan States, in the Kachin Hills east of the Irrawaddy, and in other places.³

¹ "Report on a Collection of Musical Instruments from the Siamese Malay States and Perak" by Henry Balfour, M.A., F.Z.S. "Fasciculi Malayenses." Anthropology, Part II (a), pp. 6-7.

² "The Jew's Harp in Assam," by A. Willifer Young. Journal Asiatic Soc. Bengal, vol. iv, No. 4, pp. 233-237.

³ For a detailed account of the Lisu tribes see "Lisu Tribes of the

The Jew's harp described here and figured in the annexed plate, was obtained from the Hua-Lisu of the Ku-yung-kai area, in the Teng-yueh district, Yunnan, but the same type of harp is prevalent among the other branches of the tribe. It consists of three separate harps of different tone cut from single pieces of hard bamboo. These are 11·2 cms. long, each one being made up of—

- (a) a solid piece 4·5 cms. long.
- (b) the part containing the vibrating tongue, which is cut away so as to form a broad V-shaped section, and which is 1·6 cms. long.
- (c) the part containing the movable central piece which carries the vibrating tongue and which is 3·5 cms. long. This part is cut away for more than half its thickness for a length of 2·2 cms.
- (d) the solid piece which connects the vibrating tongue and movable central bar, with the projecting spur by means of which the vibrations are set up. This is ·4 cms. long.
- (e) the projecting spur 1·2 cms. long.

The width of the instrument is ·55 cms. and its thickness ·15 cms. The projecting spur is rounded off so as to facilitate movement with the fingers. The central movable bar is approximately ·2 cms. wide and projects slightly into the V-shaped section carrying the vibrating tongue, where it is cut away to the thickness of the tongue. The latter is not more than ·05 cms. in width or thickness. Owing to its fragility, the instrument is invariably carried in a case made from a thin piece of bamboo, closed at one end, and furnished with a small pad of cloth by which the other end can be shut. This bamboo case also contains a hole through which is passed a string for hanging it from the coat or round the neck. Neither the harp nor case bear any trace of ornamentation.

In comparison with the Jew's harps from Assam and Burma described by the Rev. A. Willifer Young, which are usually crudely made and roughly finished, the Lisu instrument is smaller, and of far more delicate workmanship, demanding considerable skill in the use of the knife for its manufacture. It approaches more in shape and size those forms collected by Dr. Annandale in the Siamese Malay States.

In playing, the three harps are held in position in one vertical plane, between the thumb and first finger of the left hand, or between the first and second fingers. The mouth being opened, the harps are gripped lightly by the lips and the vibrating tongues are made to give out sound singly, or in

harmony by the movement of the fingers of the right hand over the projecting spurs. By breathing out or in, and by movements of the cheeks which cause an alteration in the shape of the resonant cavity of the mouth, a variety of different notes can be produced, and, as a rule, the result is a pleasing and tuneful measure.

The instrument is carried and played by both girls and young men, and it is by no means uncommon to see them sitting over the fires after nightfall and playing for hours at a time. The instrument is used by the youths for serenading as amongst the Chin, Naga, Kachin and other tribes. It also takes its place in the Lisu orchestra with other native musical instruments.

The late Prince Henri d'Orleans who met with the black Lisu of the Upper Salween in the course of his journey from Tonking to Assam writes as follows regarding the use of the Jew's harp by this section of the tribe.

"One of these Lissous produced a curious musical instrument formed of three small palettes of bamboo with stops. By applying the stops to his teeth and making them vibrate in turn with his finger, his open mouth acting as a sounding board, he drew from them a soft and plaintive tone, so low that one had to be quite close to hear it. The instrument is of Loutse origin, and the Lissous will sit for hours amusing themselves with it."¹

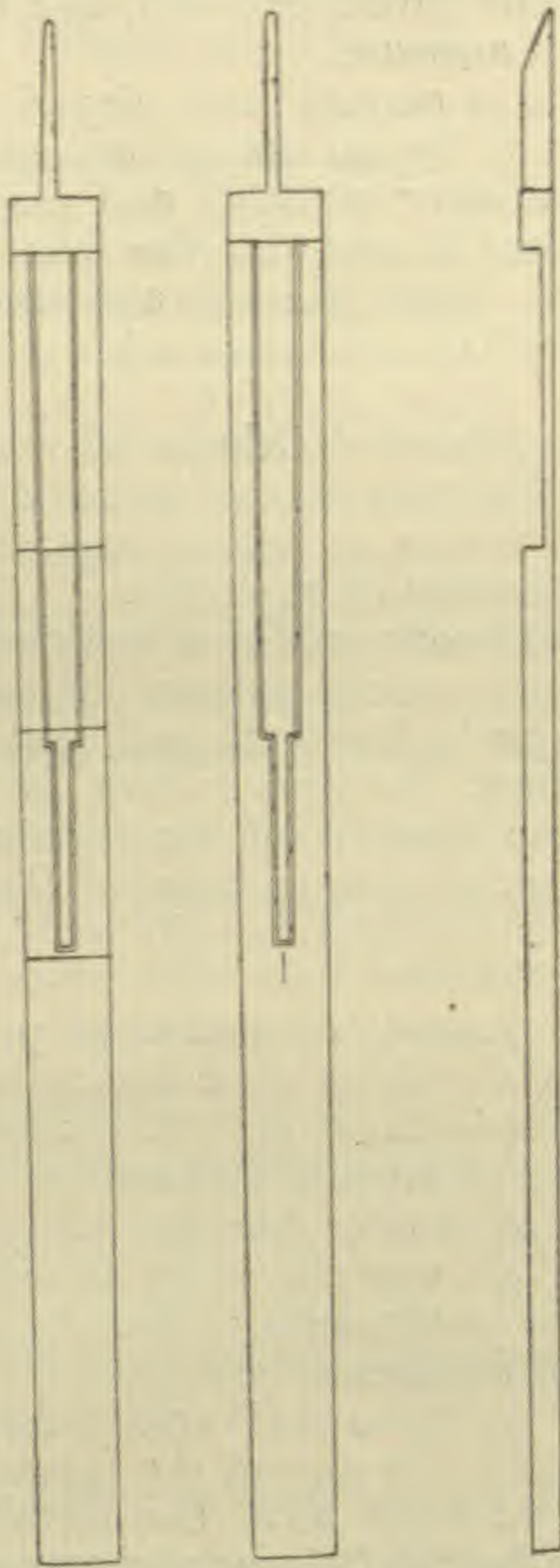
"Our hosts at Lameti consented to perform a dance for our benefit, and a threshing floor having been turned into a ball-room, the orchestra tuned up. It consisted of four musicians,—a flageolet, a violin with two strings, a guitar with four, and an instrument of slender bamboo strips made to vibrate on the teeth. This last was played by an old woman who was also mistress of the ceremonies. The air, though not very varied, was soft and rhythmic."²

¹ The "Loutse" or "Lu-tzu" tribe referred to by Prince Henri d'Orleans inhabit the part of the Salween valley between about Lat. 27° 30' and 28° 30'. The term "Lu-tzu" is the name given to them by the Chinese and means "people of the Salween River." Very little is known about this tribe, though Davies from a study of their language has recently classified them with the Moso and Hsifan tribes, in the Hsi-fan group of the Tibeto-Burman family in his scheme for the classification of the Sinitic languages of Yunnan.³ There is evidently considerable similarity between the Jew's harp used by the black Lisu of the Salween and the one here described.

¹ Prince Henri d'Orleans. "*From Tonkin to India by the sources of the Irawadi*", English translation 1898, pp. 191-192.

² *loc. cit.*, pp. 191-197.

³ H. R. Davies. "*Yunnan, the link between India and the Yangtze*," p. 337.



A Lissu Jew's Harp.

52. Reactions in presence of Nickel: (a) Inability of nitrogen and hydrogen to combine in presence of iron and nickel. (b) Reduction of the oxides of nitrogen, sulphur and phosphorous in presence of nickel.

By PANCHANAN NEOGI, M.A., *Professor of Chemistry, Rajshahi College*, and BIRENDRA BHUSAN ADHICARY, M.A.

The interesting problem of combining nitrogen and hydrogen directly to form ammonia has long been attracting the attention of chemists. Donkin (Proc. Roy. Soc. 21, 281) has succeeded in obtaining traces of ammonia by passing electric sparks or silent discharge through a mixture of nitrogen and hydrogen in the proportion of 1 : 3. This has been further studied by Morren (Compt. Rend. 48, 432), Perrot (Compt. Rend. 49, 204) and Chabrier (Compt. Rend. 75, 484). Johnson (Trans. Chem. Soc. 39, 128) showed that he obtained ammonia at the rate of .0059 grams per hour by passing over spongy platinum at a low red heat a mixture of hydrogen and nitrogen, the latter being prepared from ammonium nitrite and freed from nitric oxide by passing it through ferrous sulphate solution. L. Wright (Trans. Chem. Soc. 39, 257) pointed out that ferrous sulphate is unable to absorb all the nitric oxide evolved along with nitrogen, that the ammonia obtained by Johnson was due to the reduction of nitric oxide and not to the combination of nitrogen and hydrogen. In fact Wright (*loc. cit.*, p. 131) himself admitted that he did not get ammonia by using nitrogen prepared from air or the same gas obtained from ammonium nitrite and purified from the accompanying nitric oxide after passing the gas over red hot copper. Ramsay and Young (Trans. Chem. Soc. 45, 93) have remarked that they obtained small quantities of ammonia by passing a mixture of hydrogen and nitrogen over red hot iron filings. The details of their experiment and the method of purification of nitrogen and iron are not given in the paper, but their experiment has been embodied in Ramsay's System of Inorganic Chemistry. As reduced nickel has now been largely employed as a catalytic reducing agent in organic chemistry since Sabatier and Seuderens' time, we thought that nitrogen and hydrogen might combine in presence of nickel to a much greater extent than in the presence of iron. We therefore repeated Ramsay and Young's experiment, taking every possible precaution to remove nitric oxide, and found that nitrogen and hydrogen do not combine in presence of iron free from carbon. We also found that the two gases do not combine in presence of nickel also.

EXPERIMENTAL.

Preparation of Nitrogen free from Nitric Oxide.

Nitrogen as ordinarily prepared by heating a mixture of ammonium chloride and sodium nitrite contains a good deal of nitric oxide which is not wholly removed by ferrous sulphate, as pointed out by Wright. In fact even when four or five wash bottles of the solution are employed, the solution in the last bottle still gives the characteristic black colour. Gibbs (Ber., 10, 1387) recommended the addition of potassium bichromate to oxidise the nitric oxide to nitric acid, but we have seen potassium bichromate fails to destroy all the nitric oxide evolved. Wright (*loc. cit.*) recommended the use of alkaline sulphites which convert nitric oxide to nitrous oxide. His method is extremely tedious, and moreover the presence of nitrous oxide in nitrogen is not desirable. The best method of removing the last traces of nitric oxide is to pass the nitrogen over red hot copper. The nitrogen is prepared in the usual way and collected in a gas-holder after removing the greater part of the nitric oxide by means of ferrous sulphate. The gas is then dried and passed through a combustion tube filled with bright copper turnings, and heated in a combustion furnace. The tube is connected with Muencke's wash-bottle containing ferrous sulphate solution, which now shows no coloration, and the nitrogen thus freed from nitric oxide is collected in a second gas-holder. The gas thus obtained, even when passed for five or six hours through ferrous sulphate, does not in the least affect its colour. Of course nitrogen free from nitric oxide may be prepared from air, but as the complete removal of all oxygen from large quantities of air requires long time and many tubes filled with copper, the method described above seems to be the best and easiest for the purpose of preparing large quantities of nitrogen absolutely free from nitric oxide.

Nitrogen and Hydrogen in presence of Iron.

The nitrogen was then mixed with pure hydrogen in a gas-holder in the proportion of one to three, also in the proportion of one to six. Powdered iron (Merck) was taken in a combustion tube and heated in a tube heater. By means of a T-tube the tube containing iron was joined to the wash-bottle connected with the gas-holder and also to the wash-bottle connected with a hydrogen Kipp. The gases were finally passed before entering the tube containing iron through strong sulphuric acid in order to arrest any adventitious ammonia, and also through water as Ramsay and Young used moist gases. The other end of the tube is connected with a delivery tube which dips in a Nessler's solution.

The air was expelled from the entire apparatus by means of hydrogen while the tube was not heated. The hydrogen was stopped and the mixture of hydrogen and nitrogen was then slowly admitted to replace hydrogen. The tube was then heated to dull red heat. *After some time the Nessler's solution was found to be clouded with a whitish precipitate and a strong tarry smell was perceived. We are not sure if this whitish precipitate led Ramsay and Young who used iron filings to think that ammonia was being formed.* The tarry smell suggested to us the possibility of the formation of hydro-carbons by the combination of hydrogen with traces of carbon contained in the iron. In order to establish this, fresh experiments were started in which the tube containing the iron was strongly heated in the current of hydrogen as long as the tarry smell was perceived and the whitish precipitate was formed in the Nessler's solution. When the smell was no longer perceived, the mixture of nitrogen and hydrogen was passed for about four hours. The Nessler's solution remained unchanged, there was no smell of ammonia, and red litmus paper was unaffected. The following variations of the experiment were tried with the following results:—

- (i) Pure iron wire was used in the place of reduced iron, the same tarry smell and precipitate when heated in a current of hydrogen. No ammonia.
- (ii) Pure ferric oxide was reduced by hydrogen. *No tarry smell.* No ammonia.
- (iii) The gases were dried by omitting the wash-bottle containing water. Still no ammonia.
- (iv) The temperature was varied from dull red heat to bright red heat using a combustion furnace, no ammonia. Ramsay and Young heated the tube red hot, though ammonia begins to decompose at 500° .

Nitrogen and Hydrogen in the presence of Nickel.

The experiments were repeated, using nickel obtained by the reduction of nickel oxide in hydrogen, nickel wire and nickel obtained by electrolysis. There was no sign of the formation of ammonia.

Reduction of Nitric Oxide in presence of Nickel.

Sabatier and Sanderens showed that marsh gas is formed by the reduction of carbon monoxide and dioxide in presence of nickel reduced by means of hydrogen. We have here studied if the oxides of nitrogen, sulphur and phosphorous are also reduced in presence of reduced nickel.

Nitric oxide has been reduced to ammonia by means of hydrogen in presence of such porous substances as spongy

platinum, ferric oxide and the like. In the case of nickel, Sabatier and Sanderens (Compt. Rend. 14, 1429) have shown that when nitric oxide is passed over reduced nickel, nickel oxide (NiO) is formed. We have found that when a mixture of nitric oxide and hydrogen in the proportion of one to three (or better one to four) is passed over heated reduced nickel, almost the whole of the nitric oxide is converted into ammonia, scarcely any nitric oxide coming out unreduced. The reaction commences at about 300°C, and when once the reaction starts the temperature may be lowered to 120° when the reduction continues. At about 300° the reduction is very rapid and very considerable quantities of ammonia are formed. Blank experiments were performed by passing nitric oxide over heated nickel after driving out all the air by means of carbon dioxide and again cooling in a current of the same gas in order to avoid oxygen. It was found that no nitride, nitrite or nitrate of nickel was formed. Thus it is seen that the reduction of nitric oxide takes place directly and nickel acts as a catalytic agent.

Reduction of Sulphur Dioxide in presence of Nickel.

When a dry mixture of the two gases was passed over heated nickel, sulphuretted hydrogen was evolved. The reaction took place at a dull red heat. The reduction does not seem to take place directly. Geitner (Annalen, 139, 354) has already shown that aqueous sulphurous acid is decomposed by Ni at about 200° with production of Ni₃S₄. By passing dry sulphur dioxide over reduced or electrolytic nickel for six hours even at the ordinary temperature a little nickel sulphide was formed, and when a weighed quantity of such nickel was heated in a Sprengel pump, very small quantities of occluded sulphur dioxide were collected. It seems that sulphuretted hydrogen is formed partly by the reduction of nickel sulphide formed (blank experiments showed that precipitated nickel sulphide is readily reduced by hydrogen when heated, though it has been stated in Watt's Dictionary of Chemistry, vol. iii, "nickel monosulphide", that it is not decomposed by hydrogen) and partly by the reduction of the occluded sulphur dioxide.

Reduction of Phosphorous Pentoxide in presence of Nickel.

Phosphorous pentoxide was first heated in a current of oxygen for several hours in order to oxidise any free phosphorous contained in it. When hydrogen was passed over phosphorous pentoxide heated in a tube-heater, no phosphuretted hydrogen was formed. When, however, the pentoxide was mixed with reduced nickel (the pentoxide was introduced in the tube directly from the bottle in order to prevent moisture) and the mixture heated below dull red heat in a current of hydrogen,

the characteristic vortex rings of phosphuretted hydrogen were observed in abundance. Silver nitrate solution was immediately turned black. The gas did not take fire spontaneously on account of its dilution with a large excess of hydrogen. A wash-bottle containing water should be placed between the exit end of the tube containing the mixture and the delivery tube leading to the pneumatic trough in order to arrest the vapours of subliming phosphorous pentoxide. The reduction of the pentoxide seems to be indirect. Blank experiments were performed in which P_2O_5 and metallic nickel were heated below dull red heat in a current of carbon dioxide. A portion of the P_2O_5 sublimed and the remaining mass was found to consist of unchanged nickel mixed with glassy particles of fused P_2O_5 , nickel phosphide and a little phosphate (details will appear in a separate paper). As phosphates are not reduced by hydrogen (Fresenius, *Zeit. für anal. Chem.* 8, 203; Herapath, *Pharm. Journ. and Trans.* 7, 57), the reduction of P_2O_5 in presence of nickel seems to be effected by the reduction of the phosphide formed as an intermediate compound.

53. Notes on the History of the District of Hughli or
the Ancient Ráda.

By NUNDOLAL DEY.

CHAPTER I.

GENERAL HISTORY OF THE DISTRICT OF HUGHLI.

The town of Hughli, the former headquarters from which the district has derived its name, has got no history beyond the Portuguese settlement in 1537. In fact, it is supposed to have been founded by the Portuguese. It was called by them Porto Piqueno¹ or the Little Port, evidently by way of contradistinction to the Royal Port of Sátgaon. According to Faria de Souza, the English translation of whose *History of the Portuguese* was published in 1695, the name of the town was Golin. Hughes and Parker in their Letters, dated December 1620, state the name of the place to be Goliyr or Gollin.² But De Laët whose *India Vera* was published in 1631, calls it Ugeli, and the native historians of the 16th century mention it by the name of "Hugli."³ According to some the name of Hughli is derived from *hoglá* reeds or the elephant grass (*Typha elephantina*) with which the place was overgrown, and that Golin is a corruption of Hugli. But it is quite possible that Porto Piqueno was also called Golin or Golá by the Portuguese on account of the granaries (or *golás*) it contained for the sale of grains, and by the natives it was called Hugli on account of the *hoglá* jungle with which the place was covered. Hence, it is quite clear that before the Portuguese settlement it had not a distinguished name, but the homely one of Hughli on account of its physical features.

Chinsura, the present headquarters of the district, has likewise got no history beyond the Dutch settlement, which according to Tieffenthaler took place in 1625⁴ and according to Mr. Walter Hamilton in 1656,⁵ though it appears that the first *sanad* granted to the Dutch by the Emperor Shah Jehan

¹ De Laët: Topography of the Mogul Empire, p. 63, by Sir Roper Lethbridge.

² Stewart's History of Bengal, p. 274, note.

³ Topography of the Mogul Empire, p. 63.

⁴ Tieffenthaler says, "when the Dutch settled at Chinsura in 1625, they were followed by the Armenians." According to Orme, however, the Dutch settled in Bengal in 1625 (History of Hindoostan, vol. ii, Bk. vi, p. 8). Mr. W. Hamilton says that the Dutch in 1625 were permitted to build factory at the town of Hughli (East India Gazetteer).

⁵ East India Gazetteer, *voce* Chinsura.

is dated 1638.¹ The name of Chinsura, called Chuchurá by the inhabitants, is derived from that of a weed called Chirchirá or Chichirá (*Achyranthes aspera*) with which the place abounded. In fact, the place is called "Chichira, an Hollandish settlement and town" in the *Sēir Mutaqherin*.² There is also a local tradition of the name being derived from Chau-churá or four pinnacles at the four corners of the town. But the latter must be a mythical derivation from the name of the place, as from the existence of the pinnacles, if there were any, it must be presumed that the place had a name before the pinnacles were constructed.

In 1676 the French under Monsieur Deslandes settled at Chandernagore, and in that year the Danes also settled at Serampur which was called Frederiksnagar, and there is no tradition even that these places were of any importance before the Europeans came to settle in them.

These towns, which are the principal towns in the district of Hughli, had no habitation or name before the 16th century of the Christian era, and this fact is confirmed by the *Chandi*, which was written by Mukundarám Chakravarti, otherwise called Kavikankan, in Saka 1499 corresponding to 1577 A.D. This work describes two voyages made by Dhanapati Sadágar and his son Srimanta Sadágar from Burdwan to Ceylon. Though the poet mentions the names of towns and villages situated on both banks of the river Ganges, as Saptagráma, Hálisahar, Triveni, Garifá (Gouripur), Gondalpárá, Máhes, Nimai-Tirtha's Ghát (in Baidyabáti), Calcutta and other places, yet he does not name at all Hughli, Chinsurá, Chandernagore, Serampur and other famous places on the right bank of the river Hughli. It is, therefore, abundantly clear that these places in the latter half of the sixteenth century did not exist at all, or even if some of them did exist, they had not risen into importance, but were merely insignificant villages which did not even attract the attention of the poet.

The town of Hughli rose into importance after the Portuguese fort, the remnant of which may still be seen in the two low broken walls jutting into the river just opposite the gate of the present jail, had been besieged and blown up by the Moguls during the reign of the Emperor Shah Jehan and the town was declared to be the royal port in 1632 in the place of Sátgáon, which had begun to decline as an emporium of commerce on account of the diversion of the course of the Ganges which formerly flowed through the Saraswati. The diversion of the river was to the east in a direct line through the present bed of the Hughli, whereas the old course down the Saraswati was in a

¹ Toynbee's *Sketch of Administration of the Hooghly District*, p. 2.

² *Sēir Mutaqherin* by Seid Gholam Hossein Khan (1902), vol. ii, p. 225.

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curved form from Triveni to Sankrel near Howra. The Mogul fort was built that very year on the site of the present Imambara and the old court-houses when Hughli was declared to be a royal port. The condition of Serampur and Chandernagore may be ascertained from the writings of Captain Alexander Hamilton, who speaking about the Danes of Serampur in 1723 says: "The poverty of the Danes has made them desert it, after having robbed the Mogul's subjects of some of their shipping, to keep themselves from starving." About the French in that year he says that their "chief business" was to hear mass in their pretty little church. It is well known that it was not till after the arrival of Dupleix as Intendant or Director-General of Chandernagore in 1730 that over two thousand brick houses were built there, and before that it had always been regarded as a settlement of very minor importance.¹ All these circumstances prove that these towns have no history beyond the sixteenth and seventeenth centuries. At the time of the Mahomedans the district of Hughli comprised portions of Sarkars Sâtgáon, Mandáran, Salimabad and Sarifabad.

The district of Hughli appertained to the ancient country of Sumha. The history of the Hughli district, therefore, is the history of the ancient country of Sumha, to which it appertained. The modern province of Bengal at the time of the Mahábhárat comprised the countries of Anga, Banga, Kalinga, Pundra, Sumha, Támraliptá, Prágjyotish and Magadha.² It appears from the Vishnu Purán that Bali, a descendant of Yayáti of the Lunar dynasty, had five sons, Anga, Banga, Kalinga, Sumha and Pundra, after whom five kingdoms were named.³ It is related in the Mahábhárat that Sumha was conquered by Pándu, the father of Yudishthira, and his brothers.⁴ According to Nilakantha, the celebrated commentator of the Mahábhárat, who often quotes from the earlier commentator Arjuna Misra, Sumha is the same as Ráda⁵ (pronounced Rára); and Ráda is the Láta or Lála of the Buddhists and Láda of the Jainas. Ráda is the western part of Bengal which lies to the west of the Ganges.⁶ A portion of the district of Murshidabad is now its northern boundary, and in the south it comprises a large portion of the district of Midnapur, including Tamluk.⁷ Like other kingdoms of India, however, the boundaries of Sumha varied at different periods. Sometimes it was an independent kingdom and it extended its limits by

¹ J. J. Cotton's Chandernagore.

² Mahábhárat Bhishma Parva, ch. 9; Sabhá Parva, ch. 29; Adi Parva, ch. 113.

³ Vishnu Purán, part iv, ch. 18. ⁴ Mahábhárat, Adi Parva, ch. 113.

⁵ रुदाःरादाः—see Nilakantha's commentary on v. 25, ch. 30, Sabhá Parva of the Mahábhárat.

⁶ Tabakat-i-Nasiri: Major Raverty's Translation, pp. 584, 585.

⁷ Prof. Wilson's Introduction to the Mackenzie Collections, chaps. 138, 139.

its conquests. At other times it was conquered by a more powerful neighbour, and its area was reduced to a short compass. It was finally absorbed in the kingdom of Bengal.

Sumha was an independent kingdom at the time of the Mahábhárat, and we have already stated that its modern name is Ráḍa. It appears from the Jaina works *Acháranga Sutra* and *Kalpa Sutra* that at the time of Mahávira or Varddhamána, the real founder of the Jaina religion, who was born in the 6th century B.C. and who died at a great age in 467 B.C., Ráḍa or Láḍa extended much beyond its present northern limit, including a large portion of Anga, and it consisted of two divisions called Bajjabhumi and Subbhabhumi. Professor Jacobi is of opinion that of the two divisions, Subbhabhumi was the country of the Sumhas, and he has also identified the Sumhas with the Ráḍas.¹ Subbhabhumi appears to have been the southern part of Ráḍa, as Bajjabhumi included some portions of Anga. Mahávira wandered more than twelve years in Bajjabhumi and Subbhabhumi in Láḍa before he attained the Kevalaship and taught the Nigranthi doctrines, though according to Dr. Hoernle his peregrinations did not extend beyond the south of Rajmahal before he became a Jina.² Dr. Bühler, however, states that he travelled all over Ráḍa after he attained the Jinahood.³ There is a consensus of opinion among all the antiquarians that Nigrantha Jnátiputra or Nigantha Náta-putta of the Buddhist works, who was the contemporary of Buddha, and Mahávira—the twenty-fourth Tirthankara of the Jainas, who belonged to the Náta clan of the Kshatriyas of Kollaga, a suburb of Vaisali (Besarh)—were identical persons.⁴ Buddha was born in 557 B.C., and he died in 477 B.C. Hence at the time of Buddha, that is, in the 6th century B.C., Sumha or Ráḍa appears to have been an independent kingdom, and that its northern boundary extended much beyond the northern boundary of what is now known as Ráḍa. In the south also at that period Sumha included Támralipta or Tamruk, which was an independent kingdom at the time of the Mahábhárat. The port of Támralipta was then called the port of Surama. The two merchants, Tapussa and Bhallika, who gave honey and other articles of food to Buddha just after he attained Buddhahood, came from Oukkalaba (Rangoon)⁵ through the port of Surama,

¹ Prof. Jacobi's *Acháranga Sutra*, Bk. I, ch. 8, sec. 3; Dr. Bühler's *Indian Sect of the Jainas*.

² Prof. Wilson's *Hindu Religions—Life of Mahávira*; Dr. Hoernle's *Jainism and Buddhism*.

³ *Indian Sect of the Jainas*.

⁴ *Mahávagga*, vi, 31; Dr. Hoernle's *Uvasagadasáo*; *Jainism and Buddhism*; Dr. Bühler's *Indian Sect of the Jainas*; *Jaina-sutras* (S. B. E., vol. xxii).

⁵ Other Buddhist works have Ukkala (see Gogerly's *Ceylon Buddhism*, vol. i, p. 63), which according to Dr. Kern is the same as Utkala or Orissa (*Manual of Indian Buddhism*, p. 22).

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which has been identified with Tāmralipta,¹ at that time the port of the country of Surama (called “Soowama” by Bigandet)²—a different form of Sumha. In the 6th century B.C., therefore, Sumha extended as far as the sea to the south.

In the 5th century B.C. we find Sumha formed a part of the kingdom of Banga. The story of Suppa Devi related in the Mahāwanso bears out the statement. Briefly stated, the story is to the effect that a king of Banga had a daughter named Suppa Devi by his queen who was the daughter of the king of Kalinga. The princess eloped with a caravan chief, who was proceeding to Magadha, and in the wilderness of Lála (Ráḍa) she was carried away by a lion, with whom she lived, and had a son and a daughter named Siñhabáhu and Siñhasivali respectively. When the children grew up, they and their mother returned to Banga, where Suppa Devi married Anuro, who was the son of her maternal uncle and general of the king of Banga. On the death of Suppa Devi’s father, her husband Anuro was chosen as his successor, and Siñhabáhu and Siñhasivali went back to the wilderness of Lála, cleared the jungle and founded a city which they called Siñhapura. Siñhabáhu married his sister, and got by her thirty-two children, the eldest of whom was Bijaya who, being expelled from the kingdom, landed at Lanká (Ceylon) on the day of Buddha’s *nirvána*, colonised it, and became its first sovereign.³ In the *Rajávali*, which is also a history of Ceylon, it is mentioned that Suppa Devi’s cousin, who is called Anuro in the Mahāwanso, and who became king of Banga, caused the city of Siñhapura to be founded in Láḍa or Ráḍa, and gave it to Siñhabáhu.⁴ The Dipawanso gives the story stripped of its fabulous character. It says: ‘The daughter of a king of Wango, having formed a connection with a certain Siho, who found his livelihood in a wilderness, gave birth to two children. These two children named Sihabahu and Sewali were of prepossessing appearance. The mother was named Susimá and the father was called Siho.’⁵ The word “*Sahwayo*” of the text, which means “named” or “called”, is significant. The Dipawanso does not regard Siho as a lion, but as the name of a human being.⁶

The whole story of Suppa Devi shows that Láḍa or Lála was not only a part of the kingdom of Banga, but that it also retained the ancient name of Sumha as is apparent from the name of Suppa Devi, which is merely a corruption of Sumha Devi. After the death of Siñhabáhu, his son Sumitta became

1 Buddhadeva, p. 143, note, by Dr. Satischandra Vidyábhushana.

2 Bigandet’s *Life of Gautama*, vol. i, p. 109.

3 Turnour’s *Mahāwanso*, chaps. vi, vii.

4 Upham’s *Rajávali*, pt. i.

5 “माता च सुसिमानामा पिता च सिहसङ्कयो” ।

6 Turnour’s *Pali Buddhistical Annals*: J.A.S.B., 1838, p. 932, note.

king of Siñhapura: he was the father of Páñduvásadeva who succeeded Bijaya on the throne of Siñhala.

The town of Siñhapura mentioned in the Maháwanso is evidently the present village of Singur, which is a station on the Tárakeswar Branch of the East Indian Railway and ten miles from Tárakeswara in the district of Hughli. Singur is situated in Ráḍa, and the tradition of its foundation accords well with the story in the Maháwanso, though it has come down to us in a garbled form. It is stated that at the time of the Magadha Rájá (king), three brothers came to that part of the country where Singur is now situated, but it is not mentioned from which country they came. These three brothers belonged to the Kshatriya caste and their surname was Siñha. That part of the country was at the time a wilderness. One of the brothers cleared the jungle and founded a settlement which he named Siñhapura (pronounced Singhapura) according to his own surname of Siñha. The other two brothers went away to seek their fortune elsewhere. According to the tradition Bábubheri is a very ancient spot at Singur containing the remains of some ancient buildings and an earthen mound now overgrown with jungle. From time to time Jaina and Buddhist statues have been exhumed from the earth, and some of them still exist in the village. Traditionally Singur in ancient time was of considerable size, having comprised some ten villages. It was a very flourishing commercial town when the Saraswati used to flow by its eastern side. The old bed of the river is still visible, though a large portion of it has now been converted into culturable lands. It should only be remarked that the three brothers of the tradition evidently refer to Suppa Devi and her two children. General Cunningham, however, supposes that Siñhapura, the capital of Siñhabáhu, the father of Bijaya, is the town of that name situated 115 miles to the west of Ganjam and was the capital of Kalinga.¹ But he has been led to make this conjecture as the town is situated on the river Lalgla and Suppa Devi's mother was a princess of Kalinga, whereas Siñhapura of the Maháwanso was situated in the country of Lála ("Lála-rátṭhe")² or Láḍa³ which is another form of Ráḍa, the letters *r* and *l* being interchangeable. It should also be borne in mind that the princess Suppa Devi was carried away by the lion at Lála while she was proceeding from Banga to Magadha (modern Bihar), and therefore Lála must have been situated between Banga and Magadha, and not in Kalinga. The identification of Lála or Láṭa, the

¹ General Cunningham's *Ancient Geography of India*, p. 518.

² Turnour's *Maháwanso*, ch. vi.

³ Upham's *Mahávansi*, vi; *Rájaratnácari*, ii; *Rájávali*, pt. i, have got Láḍa instead of Lála. Mr. Upham in his note to the word says: "Properly Ráḍa, a country near Gauḍa-desá": *Sacred Books of Ceylon*.

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native country of Bijaya, with Guzerat by some writers cannot at all be correct.

From the 4th century B.C. to the 5th century A.D., that is from the time of Chandragupta's accession to the throne of Magadha in 321 B.C., to the end of the imperial Gupta dynasty in 480 A.D., Sumha appears to have formed a part of the Magadha empire.¹ The Puráns, most of which were composed between the 2nd century B.C. to the 5th century A.D., very rarely mention the name of Sumha. The Vishnu and the Bhágavat Puráns² mention it incidentally; the Brahma, the Matsya,³ and the Kalki⁴ Puráns, however, include it in the list of countries which appear to have been independent, though it cannot be precisely ascertained if it was actually independent or not. In some of them the name of Sumha is mentioned as Sumbha or Saumbha, as Subba (—bhumi), Surama (—bandara) and Suppa (—devi) were the vicarious forms of the same name during the mediæval period. During this period if Sumha ever attained independence, it must have been of a very short duration. The Raghuvansa⁵ mentions it as an independent country. Fa Hian, who visited India in the 4th century A.D., went from the kingdom of Champá (Anga) to the kingdom of Támralipta: he does not mention the name of Sumha at all.⁶

In the 6th century A.D. we find Sumha mentioned again as an independent country. It is mentioned in the Brihatsaṅhitá⁷ among the kingdoms which appear to be independent by Baráhamihira who died in 587 A.D. Dandi, who flourished also in the 6th century A.D., mentions the town of Dámalipta, modern Tamluk,⁸ as being situated in Sumha,⁹ but at the time of Fa Hian Támralipta or Tamluk had been an independent kingdom. Hence the inference is that in the 6th century Sumha extended its southern boundary to the sea.

But after the 6th century A.D., the name of Sumha disappears altogether as the name of a country. The only works of any note in which the name of Sumha appears after the 6th century are the Harshacharita by Bána and the Pavanaduta by Dhoyi, one of the *Pancha-ratnas* or five gems of the court of Lakshmana Sena of Gauda.¹⁰ Henceforth it was exclusively known by the name of Rádá or Ráda, a form of which was Rádaka. Most of the Tantras were composed between the 6th and 12th centuries of the Christian era. Some of them, as the

¹ Dr. Bhandarkar's Peep into the Early History of India.

² Vishnu Purán, pt. iv, ch. 18; Bhágavat Purán, ch. 9.

³ Matsya Purán, ch. 113.

⁴ Kalki Purán, pt. iii, ch. 14.

⁵ Raghuvansa, iv, 35.

⁶ Beal's Travels of Fa Hian, ch. xxxvii.

⁷ Brihatsaṅhitá, chs. 14, 16.

⁸ Hema Kosha.

⁹ सुद्येषु दामलिप्राङ्गयस्य नगरस्य । Dasakumáracharita, Uttara Khandá, ch. vi.

¹⁰ Harshacharita, ch. vi; Pavanduta, v. 27.

Yogini Tantra,¹ mention the name of Ráḍa. The allegorical play called the Prabodhachandrodaya, composed by Krishna Misra in the court of Kirttivarman of Bundelkhand (1049—1100), mentions the name of Ráḍa,² and it is also mentioned in the Jyotishatattwa of Raghunandana. It appears from the travels of Hiuen Tsiang and I-tsing that the kingdom of Támralipta existed in the 7th century A.D., and according to some authority most part of the southern portion of the district of Hughli was included in the kingdom of Támralipta. This shows that in the 7th century Támralipta recovered its independence and even conquered a portion of ancient Sumha. Hiuen Tsiang had gone to Támralipta from the kingdom of Samatata or East Bengal: he does not mention the name of Sumha or Ráḍa.³ It appears from his itinerary and other contemporaneous writings⁴ that about the middle of the 7th century A.D., Harshavarddhana or Siláditya II of Kányakubja conquered the eastern part of India, and there cannot be the slightest doubt that he subjugated at least the northern portion of Ráḍa by the conquest of Kajughira or Kájeri⁵ which was a part of Anga and appertained to the ancient Bajjabhumi, one of the two divisions of Láḍa. He was the last paramount monarch of Northern India before the Mahomedan conquest. But before Ráḍa or any portion of it was conquered by Harshavarddhana, it appears to have formed a part of the kingdom of Karnasuvarna.⁶ Hiuen Tsiang mentions the name of Karnasuvarna for the first time in the 7th century.⁷ Its king was the notorious Sasánka who treacherously murdered Rájyavarddhana, the elder brother of Harshavarddhana. In the Harshacharita, however, Karnasuvarna is mentioned as Gaura.⁸

It appears from the *Káriká* of Devivara Ghataka that Ráḍa formed a part of the kingdom of Gaura at the time of Ádisura.⁹ This monarch has been identified with Jayanta¹⁰ king of Gaura whose daughter Kalyánadevi was married by Jayapiḍa, king of Kasmir, in the middle of the eighth century

1 Yogini Tantra, Purva Khanda, ch. 11, v. 64.

2 Prabodhachandrodaya-náṭaka, Acts ii and iv.

3 Beal's Buddhist Records of the Western World, vol. ii, p. 200.

4 Harshacharita by Bána Bhatta.

5 Buddhist Records of the Western World, vol. i, p. 215, note; vol. ii, pp. 193, 198.

6 Dr. Waddell's Discovery of the Exact Site of Asoka's Classic Capital of Pátaliputra, p. 29.

7 Buddhist Records of the Western World, vol. i, Bk. v.

8 Harshacharita, ch. vi.

9 अम्बष्ठकुलसम्भूत आदिशूरो नृपेश्वरः

राट् गौरवरेन्द्राश्च वङ्गदेशे तथैव च ॥

एतेषां नृपतिश्चैव सर्वभूमौश्वरो यथा ।

10 Biswakosha, voce Kulina.

[N.S.]

A.D.¹ But this identification appears to be doubtful, and in the absence of authentic corroboration it cannot be accepted as the basis of an historical conclusion.

During the first half of the 9th century, while Bhu-sura was reigning in Gaura after the death of his father Adi-sura, the country was invaded by Dharma-pála, king of Magadha. Gaura was conquered, and Bhu-sura was obliged to take refuge in Ráda. Ráda, though it formed a part of the kingdom of Gaura was never under the sway of the Pála kings of Magadha. It formed an independent kingdom under the Sura kings, the descendants of Adi-sura, from Bhu-sura to Rana-sura, or Anu-sura as he was called, for a period of over two hundred years from a portion of the 9th century to the latter part of the 11th century A.D.² Bhu-sura's son, Kshiti-sura, gave fifty-six villages to the sons and descendants of the five Bráhmans who had been invited to the court of Adi-sura. No event of any importance occurred during the reigns of his two successors Avani-sura and Dharani-sura. Dharani-sura's successor Dhará-sura, a son of Kshiti-sura, divided the Bráhmans of the fifty-six villages into three classes, called Mukhya-kulinas, Gauna-kulinas and Srotriyas. We know very little of his successors Barendra-sura, Pradyumna-sura, and others. Towards the close of the 11th century Ráda and Gaura again formed a single kingdom under Vijaya-sena, the father of Ballála-sena of the Sena dynasty. He conquered Gaura,³ and perhaps Ráda also along with it. But it has been supposed that he might have acquired the throne of Ráda by inheritance, as his mother Yasodevi was evidently the daughter of Rana-sura, the last king, who seems to have died without leaving any male issue.⁴ That Ráda was an independent kingdom in the 10th century receives an unexpected confirmation from the Khajuraho inscription, which records that Dhanga Deva, the Chandrátreya (or Chandella) king of Jejabhukti (Bundelkhand), "was so powerful that the rulers of Kosala, Kratha, Siñhala (Ceylon) and Kuntala humbly listened to his commands (v. 45), and so successful in his wars that the wives of the kings of Kánchi, Andhra, Ráda and Anga lingered in his prisons (v. 46)."⁵ Though the language of the inscription appears to be hyperbolic, yet there can be no doubt that Ráda was an independent country at the time of Dhanga Deva who reigned from 950 to 999 A.D., that is in

¹ Dr. Stein's *Rájatarangini*, vol. i.

² Bansibadana Vidyaratna Ghatak's *Rádiya-kulavivarana*; Mahimachandra Majumdar's *Gauṛe Bráhmaṇa*; P. Banerji's *Bángálár Purávrítta*.

³ Deopara Stone inscription of Vijaya-sena, v. 20: *Epigraphia Indica*, vol. i, p. 306; and see also Mr. Venis's remark in vol. ii, p. 350.

⁴ *Ep. Ind.*, vol. i, pp. 312, 313; *Bángálár Purávrítta*, pp. 243, 244.

⁵ Khajuraho Inscription No. IV, *Ep. Ind.*, vol. i, pp. 138, 145, v. 46: it is the revised edition of an inscription "found near Chhatarpur" transcribed in *J.A.S.B.*, vol. viii (1839), p. 173.

the 10th century of the Christian era. The Tirumalaya stone inscription also mentions that Rájendra Chola (I) defeated Rana-sura, king of Dakshina Ráḍa, and Mahipála, king of Magadha and Uttara-Ráḍa. This event must have taken place shortly after he ascended the throne of the Chola kingdom in 1012 A.D. It confirms also that Dakshina-Ráḍa was an independent country during the first quarter of the 11th century. We also hear of the names of the kings of Bengal while the kings of the Sura dynasty reigned over Dakshina-Ráḍa, as for instance, the Tirumalaya inscription records the name of Govinda-chandra as king of Banga while Rana-sura reigned in the latter country.

The Prabodhachandrodaya-náṭaka, which was written by Krishna Misra in the second half of the 11th century A.D., mentions that "Ráḍá" was in the kingdom of Gaura, and in Ráḍá there was a town by the name of Bhurisreshṭhika.¹ The special mention of this place in the country of Ráḍa as the birth-place of "Pride" indicates that it was the principal town, and in all probability it was the capital of the Sura kings from the time of Avani-sura at least, if not earlier, when the kingdom was confined only to Dakshina or Southern Ráḍa by the invasion and conquest of Deva-pála in the latter half of the 9th century. It appears further from the same play that Dakshina-Ráḍa had already acquired a celebrity in the 11th century, denoting thereby that the country had been divided into Dakshina (Southern) and Uttara (Northern) Ráḍa long before the work was composed.² The river Ajaya formed the boundary between these two divisions. The town of Bhurisreshṭhika, which is a pleonastic form of Bhurisreshṭha, is the modern village of Bhurset or Bhursuṭ in the Arámbágh subdivision of the district of Hughli. Though now an insignificant village, yet its importance at some period of its history can at once be inferred from the fact of its conferring a name to an entire Parganá, which is still called Parganá Bhursuṭ and is situated partly in the district of Hughli and partly in the district of Burdwan.

There is much difference of opinion as to the precise date when Ballála-sena ascended the throne of Gaura, but there can be no doubt that he was reigning in Bengal during the first half of the 12th century of the Christian era. He constituted Ráḍa into a province of the kingdom of Bengal,³ and it

¹ Prabodhachandrodaya-náṭaka, Act ii, p. 28—

गौड़राष्ट्रमनुत्तमं निरुपमा तत्रापि राḍा ततो
भूरिश्रष्टिकनामधाम परमं तत्रोत्तमो नः पिता ॥

Act iv of the same work describes Ráḍá as a country : "अस्मि
राḍाभिधानो जनपदः"

² *Ibid.*, Act ii, pp. 25, 29.

³ Gopála Bhaṭṭa's Ballála-charitam, v. 7, published by Harischandra Kaviratna : वल्लभेन हि वल्लभश्च राḍवारेन्द्रवागडि ।

[N.S.]

continued to be so till it was conquered at the close of the 12th century by Mahammad-i-Sheran, a general under Bakhtiyar Khiliji, who afterwards became king of Bengal on the death of the latter.¹

Notwithstanding that Ráḍa formed a part of Bengal since its conquest by Bijaya-sena, it appears that a portion of the district of Hughli to the west of the Saraswati, though it appertained to Ráḍa, was conquered by the Gangávaṅsa kings of Orissa and formed a part of their dominion. The Rev. J. Long says: "The banks of the Saraswati at Triveni formed the ancient boundary of the kingdom of Orissa, extending as far west as Bishenpur in the time of the Gangávaṅsa princes from the 10th to the 14th century A.D."² But Churang or Sarang Deo, otherwise called Chora Gangá, the founder of the Gangávaṅsa dynasty, did not conquer Orissa till 1131 A.D., and we find that during the reign of his son Gangeswara Deo, who ascended the throne in 1151 A.D., the dominion of Orissa extended "from the Ganges to the Godavari,"³ and it should be borne in mind that the Ganges in the middle of the 12th century flowed through the Saraswati. There cannot be any doubt that the Gangávaṅsa kings of Orissa, from the time of Gangeswar Deo, retained possession of the western portion of the district of Hughli to the west of the Saraswati, and therefore it was that Ananga Bhim Deo assumed the proud title of "Gaurreswara" or sovereign of Gaura in his coin and seal, which title was retained even by the titular Rájás of Khurda.⁴ With regard to Telinga Mukunda Deo, the last independent sovereign of Orissa, who reigned from 1550 to 1558, it has been said "he founded a ghát and temple at the sacred spot called Triveni, on the Hooghly, north of the town of that name, which formed the extreme verge of his dominions."⁵ Hence it is clear that the Ganges formed the ancient boundary of the dominion of the Gangávaṅsa kings between the middle of the 12th century to the middle of the 16th century, instead of from the 10th to the 14th century A.D. as stated by the Rev. J. Long. Though no doubt Triveni formed the extreme verge of Mukunda Deo's dominion, yet it appears that this limit varied during the reign of one king at least, namely, Pratáparudra Deo, the contemporary of Chaitanya Deva, who ascended the throne in 1503 and died in 1524. It appears from the Chaitanya-charitámrita⁶ that during his reign the river Mantreswar in the district of 24-Parganás was the northern boundary of the kingdom of Orissa. It should be observed that the part of the district of Hughli to the west of the Ganges is the best

¹ Tabakat-i-Nasiri, translated by Major Raverty.

² The Banks of the Bhágirathi : *Cal. Rev.*, vol. vi, p. 402.

³ Stirling's Orissa (1904), p. 71; *As. Res.*, vol. xv, p. 164.

⁴ Stirling's Orissa, p. 73.

⁵ *Ibid.*, p. 83.

⁶ Madhyama Khandá, ch. 16.

[N S.]

south of Pradyumnanagara, which is identified with Páṇḍuá, and he cites the Mahábhárat as his authority; but notwithstanding all our attempt, we could not find any mention either of Pradyumnanagara or of Triveni in that work. It is related in the Maháwanso that Páṇḍu Sákyá, son of Buddha's uncle, Amitodana, for fear of falling into the hand of Virudhaba, the parricide usurper of the throne of Kosala, fled from the Sákyá kingdom and retired beyond the Ganges where he founded a "settlement" called Morapura and ruled over it.¹ He allied himself with Páṇḍuvásadeva of Sinhapura or modern Singur, who succeeded his uncle Bijaya on the throne of Sinhala (Ceylon), by giving him his daughter Bhaddakachchana in marriage. Local tradition regarding the conquest of Páṇḍuá by the Mahomedans confirms the fact that it was the capital of Rájá Páṇḍu. The legend runs to the effect that a Mahomedan officer of the court of the Rájá of Páṇḍuá whose name was Páṇḍu, celebrated the birth of his son with festivities by slaughtering a cow privately. But the atrocious deed was discovered on the next morning by the Hindus of the town. They rose to a man to revenge the insult to their religion, and killed his new-born son. The Mahomedan escaped to the court of the Emperor Firuz Tuglak (1351-88) at Delhi, who sent his nephew, Shah Sufi, with a large army. Páṇḍuá was besieged. Páṇḍu Rájá had a powerful ally in the Rájá of Máhnád, which is four miles to the south of Páṇḍuá. They held out for a long time till the water of the Jiánch-kunḍu, a tank which possessed the virtue of healing the wounded and reviving the dead, was defiled by a steak of beef thrown into it by the Mahomedans. That tank is now called Jiban Kunḍu. The Hindus were reduced to extremity for want of water, and they were routed with dreadful slaughter. A minaret was built by the Mahomedans in imitation of the Kutab Minar of Old Delhi as a tower of victory.² It will be observed that the name of the king

शाला तत्राक्षयं पुण्यं प्रयाग इव लक्ष्यते ।'

दक्षिणप्रयागस्तु उन्मत्तवेणो सप्तग्रामाख्यदक्षिणदेशे त्रिवेणीतिष्ठति ।'

See the Gangámáhátmya of the Práyaschitta-tattwam, p. 100, by Raghunandana Bháttáchárya.

¹ Turnour's Maháwanso, ch. viii. Though Turnour's Maháwanso does not mention the name of the "settlement," yet we find from Upham's Maháwansi that the city which Páṇḍu Sákyá founded was called Morapura. I leave it to the antiquarians to decide whether Morapura is not a dialectic variation, or corruption of Márapura, and as such whether it can not be connected with *Pradyumna-nagara*, as both the names mean the "Town of the God of Love." We have precedence in the Mahábhárat and the Puráns for the use of synonyms in respect of the names of towns.

² Early Bengali Literature and Newspapers by the Rev. J. Long (*Cal. Rev.*, vol. xiii, p. 128); Dr. Blochmann's Places of Historical Interest in the District of Hughli, in J.A.S.B., 1870.

of Páṇḍuá was Páṇḍu Rájá. Either he was a descendant of Páṇḍu Sákyá or that was the patronymic of the dynasty derived from him. Páṇḍuá was not only the seat of a Hindu Rájá, but it was a strongly fortified place and was surrounded by a wall and trench, five miles in circumference: the traces of the ancient fortification are still found at different places. There can be no doubt, therefore, that Páṇḍuá is a very ancient town in the district of Hughli.

In connection with Páṇḍuá we have mentioned the name of Máhnád, which is four miles to the south of Páṇḍuá. It was conquered by the Mahomedans along with Páṇḍuá in the middle of the 14th century. The word Máhnád is a corruption of Mahánáda which means a great noise, and the local tradition about the name of the place is that once upon a time a *Dakshinávartta sankha*, or a conch-shell with its windings to the right, fell in the village, and made a great noise when the wind passed through its orifice. The gods heard the noise: they came and assembled here for the purpose of consulting together as to how they might divert the course, or rather the sanctity of the Ganges. They established the Mahádeva Jateswara, and sanctified a tank called Basishtā-Gangá. They named the place as Mahánáda on account of the tremendous noise that issued from the conch-shell. There is a temple at Máhnád, which is curiously shaped, and is not like an ordinary temple: its style is like that of the temples of Bhuvaneswara in Orissa. The temple now contains a phallic image of Siva, called Jateswaranáth, like the other shrines of this place. The Basishtā-Gangá is said to be the Jianch-kunḍu or Jiban-kunḍu of the Páṇḍuá tradition. Around the temple are the *Samádhis* (graves) of the Buddhist Sramanas (priests) who lived here during the Buddhist period. The resident priest is a Buddhist, who, however, has no concern with the worship in the temple, which is conducted by a Brahmin. The famous fair (*Ját*) is held in the courtyard of the temple of Jateswaranáth every year at the time of the *Siva-chaturdasi* in honour of Dharma Thákura, whose worship is regarded as the only vestige we have got of Buddhism in Bengal.¹ It is therefore quite evident that the temple was appropriated by the Brahmins after the expulsion of Buddhism and devoted to the worship of Siva. The Samádhis or graves of the Buddhist priests around the temple indicate that there was a Buddhist monastic establishment or *Sangha* at this place.

The temple of Jateswara evidently appertained to the fort and palace of the Rájás, the vestiges of which still exist and are called the fort of Rájá Chandraketu. There is also a tank close by, which is called Chandra Dighi. One or two

¹ Mahámahopádhyaýa Haraprasád Sástri's *Discovery of Living Buddhism in Bengal*, p. 26.

[N.S.]

gold coins said to be of Asoka's time were discovered, when the foundations of the present Mission buildings were excavated. It seems very probable that both Máhnád and Páñduá were situated within the aforesaid circumvallation of five miles as parts of the same kingdom instead of being the capitals of two independent countries as the tradition about Páñduá would make out. The fact that the Jainas of Calcutta take much interest in this temple and have repaired it at a great cost, indicates that at one time it was a Jaina temple. It is very likely that at the time of the Mahomedan conquest the Brahminical religion prevailed at Páñduá and Máhnád, as the statues of Surya and Vishnu discovered at Páñduá¹ and the phallic images of Siva in the Buddhist temple and other shrines at Máhnád indicate that the Buddhist religion had to give way to the Brahminical faith.

One of the most ancient places in the district of Hughli is

Triveni.

Triveni, which is situated eight miles to the east of Máhnád and at a short distance from the town of Hughli. Its ancient name was Dakshina-Prayága. Raghunandana while quoting the authority of the Mahábhárat about it in his Práyaschittatattwa explains Dakshina-Prayága to be the same as "Mukta-veni celebrated as Triveni in the southern country called Saptagráma." Triveni is called Mukta-veni in contradistinction to Yukta-veni or Allahabad, where the three rivers—Gangá, Jamuná, and Saraswati—unite and flow together, and at Triveni they separate and flow in different directions. The Saraswati leaves the Ganges at Triveni Ghát and, flowing southward, joins the Ganges again at Sánkrel. The Jamuná flows to the east by the side of Kánchrápára and ultimately falls into the Ichámati near Tibi, which is six miles from Govardángá. The eastern portion of the river is known by the name of Bágerkhál. In a portion of its course it forms the boundary between the districts of Nadia and the 24-Parganas. It was a navigable river before, but its connection with the Hughli having silted up, it has now ceased to be so. The name of Triveni is mentioned in the Brihat-Dharma Purán.² Pliny, who flourished in the first century of the Christian era, mentions it as a great commercial centre. He says that ships assembling near the Godávári sailed by a particular route to Triveni. These ships were evidently bound for Sátgáon down the Saraswati, which is two miles from Triveni. Ptolemy, the celebrated geographer who lived in the middle of the second century of the Christian era, also notices Triveni. Triveni is also alluded to in the Pavanaduta, composed in the 12th century A.D.³ It is therefore evident

¹ Saptagráma, by Babu Rakhal Das Bandopádhyáya, in the Sáhitya Parishat-Patriká, vol. xv, p. 29.

² Brihat-Dharma Purán, Purva Khaṇḍa, ch. 6.

³ Pavanaduta, v. 33.

that at a very remote period Triveni was celebrated as a sister-town to Prayága or Allahabad in point of sanctity, though afterwards it became a quarter of Saptagrâma, as it has been described in some works of the 16th century.¹ It was celebrated as a place of Sanskrit learning, being one of the four *samâjes*, the other three being Nadiyá, Sántipura, and Guptipará. The celebrated Jagannáth Tarkapanchánana, the compiler of the digest of Hindu laws and Sanskrit tutor to Sir William Jones, was a native of this place. The Triveni Ghát and temple, as mentioned before, were constructed by Mukunda Deo, the last independent sovereign of Orissa, in the 16th century. But as a sacred place its importance centres in the temple of the Sapta Rishis, who are said to have resided at Saptagrâma, and it has already been stated that Triveni was included in that town. The temple of the Rishis does not at present exist: it was situated near the Triveni-Ghat. It was transformed with some alterations into the tomb of Zaffar Khan Ghazi, the conqueror of Saptagrâma,² popularly known as Darab Khan, whose celebrated hymn to Gangá (the river Ganges) is still extant.³ The figures of Buddha in meditation engraved in a slab of stone affixed to the base of a pillar in a neighbouring mosque and a broken statue of Páraswanátha, the twenty-third Tirthankara of the Jainas, which may be found within the enclosure containing the tomb of Zaffar Khan, indicate that the Brahminical Triveni had passed through the usual stages of Jainism and Buddhism.

Though Triveni formed a quarter or suburb of Saptagrâma, now called Sâtgáon, and though its name appears in some of the ancient Purans, yet the name of Saptagrâma itself does not appear in any of them. The reason, however, is not far to seek. The sanctity of Triveni in the eyes of the philosophic and religious Hindus was of far greater importance than the prosperity and opulence of Saptagrâma as an emporium of commerce, and hence they did not deign even to mention it in their ancient Sanskrit works. We therefore do not know when and by whom the town was founded. It is related that the seven sons of Priyavanta, king of Kányakubja, whose names were Agnidhra, Ramanaka, Bhapistu, Swarabána, Baráta, Sabana and Dyuti-

¹ See Saptagrâma (Sáhitya-Parishat-Patriká, vol. xv, pp. 35, 36); Chaitanya-Bhágavat.

² Sáhitya-Parishat-Patriká, vol. xv:—Saptagrâma; J.A.S.B., 1909—Saptagrâma or Satgánw. by Babu Rakhal Das Bandopádhyaia.

³ सुरधनि मुनिकन्ये तारयेः पुण्यवन्तं
स तरति निजपुण्यैस्तत्र किन्ते महत्त्वम् ।
यदि च गतिविहीनं तारयेः पापिनं माम् ।
तदपि तव महत्त्वं तन्महत्त्वं महत्त्वम् ॥

[N.S.]

manta, resided at Básudevapura, Bánsberia (Bañsabáti), Krishnapura, Nityánandapura, Sibpura, Sambachora and Baladgháti, on the bank of the Saraswati, and these seven villages were collectively called Saptagráma. Whether these villages were included in Saptagráma or not, there can be no doubt that the town was of immense size and was situated on the east bank of the river Saraswati, through which once flowed the main stream of the Ganges.¹ Large vessels sailed up to Saptagráma till the middle of the 16th century so long as the river did not get silted up, and it was known to the Romans under the name of *Ganges Regia*.² The *Periplus of the Erythræan Sea*, which was written in the first or second century of the Christian era, evidently mentions it under the name of Gángé. It says: "There is on it [the Ganges] a mart called after it, Gángé, through which passes a considerable traffic, consisting of betel, the Gangetic spikenard, pearl and the finest of all muslins—those called the Gangetic."³ According to Ptolemy Gángé was the capital of the Gangarides or the Gangá-Rádis. Saptagráma was a royal city, where the kings of the country resided.⁴ It was visited by Nityánanda, the great disciple and companion of Chaitanya-deva, about the middle of the 16th century.⁵ In 1570 it was visited by Fredericke, who states: "In the port of Sátgáon every year they lade 30 or 35 ships, great and small, with rice, cloth of bombast of divers sort, lacca, great abundance of sugar, pepper, oil zerzeline and other sorts of merchandise." Kavi-kankana, who wrote the *Chañdi* in 1577 A.D., describes it as a very opulent town, to which merchants from all parts of India and also from Ceylon used to come with their merchandise. He says: "But the Saptagráma merchants never go out of their town. They command the wealth of the world, as also such comforts at home as are procurable in Paradise. Their place is a holy seat of pilgrimage, incomparable in sanctity. It is called Saptagráma, because it was under the rule of its seven patron Rishis."⁶ It was conquered by the Mahomedans under Zaffar Khan in the 14th century A.D.: he came with Shah Sufi, the conqueror of Páñduá, and is said to have been the governor of Saptagráma for fifteen years after its conquest.⁷ It became a royal

¹ Asiatic Researches, vol. v; Rennell's Memoir of the Map of Hindoostan.

² Wilford: Asiatic Researches, vol. v, p. 278.

³ McCrindle's Commerce and Navigation of the Erythræan Sea, p. 146.

⁴ As. Res., vol. v; The Grand Trunk Road—its Localities, by the Rev. J. Long: C.R., vol. xxi, p. 181.

⁵ Chaitanya-Bhágavata.

⁶ C.R., 1891, p. 374.

⁷ S. P. Patriká, vol. xv, p. 23—Saptagráma; J.A.S.B., 1909—Saptagráma or Satgánw, by Babu Rakhal Das Bandopádhyáya. For the life of Zaffar Khan see J.A.S.B., vol. xv (1847), p. 393—An Account of the Temple of Triveni near Hughli by D. Money. It is difficult to reconcile the statement in the *Kursinámá* (J.A.S.B., xv, 395) that Zaffar

port at the time of the Moguls, and during the reign of Akbar 12,00,000 dams or 30,000 rupees were realised from this port and other neighbouring markets.¹ The Mahomedan Subedar resided at this place, and the ruins of the old fort, which was his residence, still exist. Sâtgáon has been described by travellers as “ a great and noble city ” and “ a fair citie,” but it is now an insignificant village, being a cluster of few huts. The extensive ruins, overgrown with dense jungle and once the abode of tigers and bears, are the only remains that we have to attest to its former greatness. These ruins have been described by Dr. Blochmann, but they almost all belong to the Mahomedan period.² Sâtgáon sank into ruin, as stated before, when Hughli was made a royal port in 1632, and all the public officers were withdrawn: the silting up of the river at that place also contributed to its decline.

It will be observed that in all these ancient places there is evidence to show the prevalence of Buddhism or Jainism in some period of their history. The temple of Tárakeswara, the most renowned shrine of Siva worship in the district of Hughli, appears to have been originally a Buddhist temple now transformed into a dome-topped Hindu temple with an outward covering and coating of bricks and plaster like that of Bargá Bhimá at Tamruk, which was originally a Buddhist temple where Devi is now worshipped. The Mahá-Lingeswara Tantra mentions Tárakeswara as one of the “ hundred names of Siva,” and places his shrine in Ráḍa. There can be no doubt therefore that the shrine existed at the time when the book was composed, though we are not aware of the precise time of its composition. It is, however, certain that it was not visited by Chaitanya, as there is no mention of it either in the Chaitanya-charitámrita or Chaitanya-bhágavata. Hence we may safely infer that at the time of Chaitanya it did not exist at all, or that it did not acquire sufficient importance as a place of pilgrimage. There is also a Jaina temple in Chinsura at Jugipará lane which is much resorted to by the Jainas of Calcutta: it is a very old temple and belongs to the Digambara sect. It is therefore clear that Buddhism and Jainism prevailed at one time in that portion of the district of Hughli which lies between the rivers Dámudá and the Ganges, if not in the whole of the district itself; and it appears also that Buddhism was supplanted by Siva worship.

Khan Ghazi came to Bengal accompanied by his nephew Shah Sufi with the Higira year 698 (1298 A.D.), the date of Zaffar Khan's conquest as mentioned in an inscription at Triveni (J.A.S.B., 1909, p. 248), bearing in mind the fact that Shah Sufi was sent to Bengal by the Emperor Firuz Tuglak.

¹ Gladwin's *Ayin Akbari*, pt. ii, p. 472.

² J.A.S.B., vol. xxxix (1870), p. 280.

CHAPTER III.

SOME CELEBRATED EVENTS.

Of some of the events in the history of Bengal the district of Hughli may justly be proud, as they all occurred in the former and present headquarters of the district.

(1) The first Printing Press in Bengal was set up at Hughli, the former headquarters of the district, in 1778, and Halhed's *Bengali Grammar* was the first book that was printed. Halhed was so proficient in colloquial Bengali that he was known to pass as a Bengali in assemblies of Hindus disguised in a native dress. He was also an accomplished Sanskrit scholar: he published the *Code of Gentoo Laws* which was compiled at Benares by some Brahmins at the instance of Warren Hastings. Sir Charles Wilkins, who rightly deserves the title of Caxton of Bengal and who was called the "Nestor of Sanskrit studies," prepared the types for this grammar with his own hand, and he taught one Panchánan, a blacksmith, in type cutting, and all knowledge of type cutting was derived from him.¹

(2) The Pánkhá, the *sine qua non* of our comfort during the summer season, was first invented by a Dutch governor at Chinsura, the present headquarters of the district, in the "Dutch barrack" as it is called, at the close of the 17th century. A newspaper which was in front of him on the table was blown up by the wind to a beam overhead and it commenced oscillating: this first suggested to him the idea of a Pánkhá.²

(3) The first grant-in-aid which was made by Government for the promotion of Vernacular education in Bengal, was allowed in support of Mr. May's schools around Chinsura in 1814 during the administration of the Marquis of Hastings at the monthly rate of Rs. 600.³

(4) The oldest Christian Church in Bengal was constructed at Bandel in 1597 by a Portuguese named Villalobos: it is about a mile to the north of Hughli.

(5) The first serious quarrel between the Moguls and the Europeans took place at Hughli in 1632 when the Portuguese were defeated and their fort was blown up; and the first action between the English and the Moguls in Bengal was fought at Hughli in 1686 which resulted in their obtaining an easy victory over the latter.

¹ *C. R.*, vol. xiii, p. 24; vol. vi,—“Sir William Jones,” by the Rev. T. Smith.

² Toynbee's *Sketch of the Administration of the Hughli District*, p. 10; *Janmabhumi*, 1298 B.S.

³ *Handbook of Bengal Missions*, p. 484 (1848), by the Rev. J. Long.

(6) The town of Hughli was the first settlement of the English in Bengal where they traded in 1640, in which year they built their factory at this place.¹

¹ Orme's History of Hindoostan, vol. ii, pp. 8, 9.

54. Contributions to the History and Ethnology of
North-Eastern India—II.

By H. E. STAPLETON, *Indian Educational Service.*

THE COINAGE OF ASSAM IN ITS RELATION TO THE HISTORY
OF ASSAM AS GIVEN IN THE "BURANJIS."

At the end of December 1906, three coolies who were hoeing in the Daflating Tea Garden, in the Jorhāt Sub-Division of Sibsāgar District, came upon a large number of old coins. The Deputy Commissioner investigated the matter under the provisions of the Treasure Trove Act and ultimately 928 coins—mostly minted by Assamese Kings—were recovered. On their being forwarded to Shillong for report, the coins were classified as follows :—

East India Company's Coins—Rupees, 15; $\frac{1}{2}$ -Rupees, 1.

Mughul Rupees—13.

Assamese Coins.

King.	Rupees.	$\frac{1}{2}$ -Rupees.	$\frac{1}{4}$ -Rupees.
Rudra Simha	18	2	..
Siva Simha	5	1	..
Siva Simha and Phuleśvari ..	6	..	..
Siva Simha and Pramatheśvari ..	6	2	..
Siva Simha and Ambikā ..	12	1	..
Siva Simha and Sarveśvari ..	4	3	..
Pramatta Simha	9	8	2
Rājeśvara Simha	25	32	..
Lakshmī Simha	16	97	..
Gaurinātha Simha	79	516	..
Bharatha Simha .. ..	..	2	..
Sarvānanda Simha	1	3	..
Kamaleśvara Simha .. ..	..	6	..
Chandra Kānta Simha	2	9	..
Brajanātha Simha	2	26	..
Jogeśvara Simha .. ..	..	4	..
TOTAL	185	712	2

The Local Government, recognising the importance of the find, requested that an account of it should be included in a paper dealing with all Assamese coins from the time of Rudra Simha to the end of Assamese rule, and steps were accordingly

taken to collate the information that could be derived from the principal local collections. These are as follows :—

(a) The Shillong Cabinet of 176 specimens including a selection from the coins of the Daflating find (referred to subsequently as [S. C.]).

(b) The Indian Museum Cabinet with 117 coins, recently described by Mr. Vincent Smith (*Catalogue of the Coins of the Indian Museum, Calcutta, Vol. 1, Part III, pp. 294—307*) [I. M. C.].

(c) Collection of 260 coins belonging to Mr. A. W. Botham, C.S., late Deputy Commissioner, Sibsāgar, who kindly forwarded for my inspection 62 selected specimens which he believed were undescribed [B].

(d) My own collection of about 130 specimens [H. E. S.].

In addition to the above, (e) Mr. Gait, in the course of his researches on Assamese history, opened at Sibsāgar a register of Assamese coins in which 242 coins are described. These include most of the Āhōm coins in the British Museum as well as some of the Assamese coins in the Shillong collection. An abstract of the information contained in the register is given in tabular form on page 3 of his *Report on the Progress of Historical Research in Assam*.

Small collections of 17 and 38 Assamese coins respectively are also in the possession of Lieut.-Col. Gurdon, I.A., Commissioner of the Assam Valley, and Mr. R. Burn, C.S., Deputy Commissioner, Gonda, U.P. Mr. Burn's collection formerly belonged to Dr. White King.

From the first and third of these, the coins figuring in Plates XXVI and XXVII had been selected and forwarded to the Survey Office at Calcutta for reproduction when I learnt that a catalogue of the 300 Assamese coins in the British Museum had already been prepared for publication by Mr. J. Allan of the Department of Coins and Medals of that institution. From the advance proof of his paper for the *Numismatic Chronicle*¹ that Mr. Allan was good enough to supply me with, it was evident that a detailed catalogue of Assamese coins would be superfluous, but, on the other hand, sufficient materials were now available to render possible a discussion of the bearings of Assamese coin inscriptions on the statements made in the *Buranjis*, the indigenous histories of Assam that Mr. Gait has utilised in the preparation of his *History of Assam*.

So far as is at present known, regular annual coinage in Assam only commenced with the accession of Rudra Simha in 1696 A.D., while the last date found on an Assam coin is 1743 *Sāka* (= 1821 A.D.). For this period of 125 years more than 750 selected coins are either catalogued or have passed through

¹ 1909, pp. 300—331.

my hands, and the resulting average of 6 per annum appears sufficient to justify comment on the few instances of years of which no coins have hitherto come to light. In addition to these 750 coins (which, with half a dozen exceptions, are in Bengali script, the language being Sanskrit) Mr. H. A. Grueber, Keeper of Coins and Medals at the British Museum, kindly placed at my disposal casts of the unique British Museum collection of 28 Assamese coins in the Āhōm language and script, most of which belong to the predecessors of Rudra Simha. The object of the present paper is to utilise these materials in checking the statements of the *Buranjis* regarding Assamese history, to supply any further information that may be derived from a study of the coins, and incidentally to summarise our knowledge of Assamese numismatics.

PRE-ĀHŌM COINS IN ASSAM.

Although we might expect from the intimate relations between Harsha Sīlāditya and the vassal King of Kām̄rūp in the time of Hiuen Tsiang (645 A.D.) that coins modelled on those of Harsha would be found in Assam, no such tokens have hitherto come to light, and the only information from numismatic sources that has reached us for the long period until Sūklenmūn initiated an Āhōm coinage in 1543, is derived from one or two finds of Musalmān coins, the chief being that made at Gauhati in 1880 (*cf.* Hoernle in *Journ. Asiatic Soc. Bengal*, 1881, p. 53). As noted in the first paper of this series (*Journ. Asiatic Soc. Bengal*, 1910, p. 150) the Gauhati find may be regarded as a relic of the invasion of Kām̄rūp by Tugh̄ril Kh̄ān, the insurgent Governor of Bengal who styled himself Sultān Mugh̄iṣu-d-Dīn Yuzbak. The coins range in date from those of Sultān Altamsh (614 A.H.) to those of Mugh̄iṣu-d-Dīn Yuzbak himself, minted at Lakhnauti in Ramazān, 653 A.H., and the occurrence in the find of a coin of the previous insurgent Governor Gh̄iyāṣu-d-Dīn 'Iwaz Ibnu-l-Husain dated the 2nd Jumāda, 621 A.H., suggests that Tugh̄ril Kh̄ān's disastrous expedition into Kām̄rūp may have been prompted by his predecessor's excursion up the Brahmaputra in 624 A.H. (=1226 A.D.), when he is said to have advanced as far as Sadiya. Sūkāphā, the first Āhōm King in the Assam Valley, had crossed the Patkoi Range just two years before Gh̄iyāṣu-d-Dīn 'Iwaz's invasion, and Tugh̄ril Kh̄ān's expedition was exactly contemporary with the founding of Charāideo, the first capital of the Āhōm Kings. At some unknown date prior to the invasion of the Āhōms, the old Hindu kingdom of Kām̄rūp had been overwhelmed by an invasion of a race of Tibeto-Burmans, known as Bodos, who finally established a capital on their western frontier at Kāmatāpur, not far from

the present Kuch Bihār. The ruling section of the tribe in the west called themselves *Khens*, while those who settled in the Brahmaputra Valley proper from Tezpur to west of Gauhati were known as *Kachārīs* (lowlanders). In the extreme east of the valley, the country round Sadiya, which still retained the old Hindu name of Vidarbha, was in possession of another tribe of the same stock called *Chutiyās* who appear to have descended from the Hills at a later date than the original *Bodos*. In addition to these, the *Āhōms* found in Darrang and Nowgong a confederation of petty chieftains known as the *Bāra Bhuiyas*, who seem in the first instance to have been established by the King of *Kāmatāpur* as "Wardens of the Marches" to hold back the *Chutiyās* (Gait, *op. cit.*, p. 38), but who afterwards warred indiscriminately on *Kachārīs* and *Chutiyās* alike. On the whole it is probable that the "Rāi of *Kāmṛūd*" who defeated *Mughīṣu-d-Dīn* was a *Kachārī Rājā* of *Prāgjyōtishpur* (Gauhati); but at the same time it has to be recollected that the story of the origin of the *Bāra Bhuiyas* indicates that the King of *Kāmatāpur* was either actual ruler or suzerain of the Brahmaputra Valley up to the *Chutiya* frontier—a fact moreover which explains why the *Āhōms* came into conflict with the rulers of *Kāmatāpur* so soon after their arrival from Upper Burmah.

After 1257 A.D., according to *Gunabhiram Barua*,¹ the *Musalmān* invasions of the Brahmaputra Valley ceased until the time of the "Great Vizier" in 1527 A.D. (*vide* previous paper, p. 161), but the existence of the coin of *Sikandar Shāh* dated *Chāwalistān 'urf 'Arsah Kāmṛū*, 759 A.H. (1357 A.D.: *cf. Indian Museum Catalogue—Bengal coins—No. 38*), as well as the discovery in 1892 in *Kāmṛūp* proper of 30 coins of various 14th century Bengal Kings (*Journ. Asiatic Soc. Bengal, Proc.*, April 1893, pp. 90 and 91) seem to indicate that *Muhammadan* influence continued to be exercised over some portions of the old kingdom of *Kāmṛūp* even to the end of the 14th century. The reported expedition of the Emperor *Muhammad Ibn Tughluq* of *Dilhī* into "Assam" about 1337 A.D. may also be recalled in this connexion (*Blochmann, Koch Bihār and Āsām, Journ. Asiatic Soc. Bengal, 1872, p. 79*, quoting from the '*Ālamgīrnāmāh*'), and a recent find has proved that *Muhammad Ibn Tughluq*'s coins minted at *Sunārgānw* in 733 and 734 A.H. (1333 A.D.) after the death of *Ghiyāṣu-d-Dīn Bahādur* were current in what is now western *Mymensingh*. Mr. Gait suggests on page 61 of his *History* that the portion of *Mymensingh* east and north of the old Brahmaputra was only incorporated in *Kāmṛūp* at the time of *Dā'ūd*'s defeat by Akbar's soldiers in 1575 A.D., but geographical considerations alone would lead us to believe that it always formed a part of *Kāmṛūp*. That this was actually the case is proved by the statement of the *Yōginī*

¹ *Assam Buranji*, p. 73, Calcutta 1897 edition.

Tantra (quoted on pp. 51 and 52 of Mr. Gait's *Report on Historical Research*) that the southernmost point of Kām̄rūp was the confluence of the Brahmaputra and Lākhyā rivers, *i.e.*, Egāro Sindhu, the spot where 'Isā Khān afterwards erected a fort and where his final struggle with Mān Singh took place (*cf. Journ. Asiatic Soc. Bengal*, 1909, p. 372).¹ Raids from the west and south banks, across the Brahmaputra, would easily account for the occurrence of such a coin as Sikandar Shāh's, without any invasion of the country north of the Garo or Khasia Hills being implied, while it is also probable from the fact that a large portion of south-eastern Mymensingh is called after Husain Shāh, that this was the "Kām̄rū" Husain Shāh boasts on his coins to have conquered.

COINS IN ĀHŌM SCRIPT.

In the first paper of this series it was shown how the Assam coinage was modelled on coins issued by the sons of Husain Shāh of Bengal—either Naṣrat Shāh or more probably Ghiyāṣud-Dīn Maḥmūd. The first Āhōm monarch to issue coins was Sūklenmūn, whose coins all date from the 15th year of the 17th *taosīnā*, or cycle of 60 years current among the Āhōms, equivalent to 1543 A.D., and the cause of the introduction of a metallic coinage in place of the cowries previously in use was undoubtedly the fact that, through the exertions of Sūklenmūn's father Sūhuṅmūn (whose reign began in 1497), the Āhōm power, from a petty state, had suddenly expanded into a provincial kingdom roughly co-terminous with that of the ancient Hindu Kings of Kām̄rūp. In 1523, the Chutiyās had been finally crushed and their country annexed; in 1536, the Kachārīs were similarly treated; while between these dates, as has already been detailed in the previous paper, two invasions by the Muhammadan rulers of Eastern Bengal were successfully met and the authority of the Āhōm King exercised as far as the Karatoya river, *i.e.*, over most of the territory that 40 years before had comprised the Kingdom of Kāmatāpur. It is true that this boundary was not long maintained, but henceforward, with only a brief interval when the Koch dominions served as

¹ The *Bāra Bhuiyas* of Eastern Bengal, of whom 'Isā Khān was the chief, were obviously a local imitation, proximate or remote, of the *Bāra Bhuiyas* of Assam previously referred to. Another set of *Bāra Bhuiyas* are also mentioned among the Kochs (Gait, *Hist.*, p. 46), and as 'Isā Khān made himself lord of Eastern Mymensingh by conquering the Kochs who then held it, it is possible that he was the first to introduce the nomenclature into Eastern Bengal. From the circumstances of the time the *Bāra Bhuiyas* of Bengal soon disappeared, but if an inference may be drawn from the Bengali proverb "বার হাতের কাজ ভাল হয় না" the system, during its short existence, did not specially commend itself to the people over whom 'Isā Khān and his fellow *Bhuiyas* ruled.

a buffer state, the western and southern border line of Assam formed the North-Eastern frontier of Muhammadan India. The first coin minted in Assam raises a question as to the accuracy of the *Buranjis*. The striking of new coinage was, in later years, the invariable accompaniment of installation,¹ and except in the case of Gadādhara's coins no evidence exists to show that coins in Āhōm script were ever struck, except to mark this occasion. Either therefore the *Buranjis* are wrong in stating that Sübuñmün was assassinated in 1539, or his son does not appear to have been formally installed on the *Singari-ghar* at Charāideo until four years later. It is of course possible that Sükleñmün did not begin to strike coins until after he had been on the throne for some time, but if this was done in the first instance, it is not clear why the system of an annual coinage was limited to the coins in Bengali script that began to be issued at a much later date.

The numismatic record for the period between Sükleñmün's coronation and Gadādhara's accession in 1681 is very incomplete, but besides the Āhōm coins a system of annual coinage was introduced at some date prior to 1648. This will be dealt with in the next section. The only fairly large collection of Āhōm coins is that belonging to the British Museum, and the few other coins that exist are probably all duplicates of those at London. Āhōm coins of the following Kings are known:—

1. Sükleñmün, 15th year of 17th *taosñā* = 1543 A.D.
2. Süñâtp̄hā (Udayāditya), 21st year of 19th *taosñā* = 1669.
3. Sühuñ, 27th year = 1675.
4. Süpātphā (Gadādhara), 33rd year = 1681. The comparatively large number of varieties of Süpātphā's coins, differing in the presence or absence, and position, of the ornamental *Simha*, the bird, and the "rising sun," rather point to the issue of fresh coins at intervals throughout his reign with the main inscription and date unaltered.
5. Pramatta Simha (Süneñphā), 36th year of 20th *taosñā* = 1744.
6. Rājeśvara (Süremphā),² 43rd year = 1751.

All Āhōm coins have practically the same inscription.

¹ Gait, *op. cit.*, p. 232; *vide* also Marsden, *Numismata Orientalia*, p. 797, for an account of the minting of coins at the installation of Rājā Rām Ganga Māñikya of Tippera in 1821.

² The meanings of the Āhōm names of these Kings are as follows:—

Sükleñmün—*Sü*, tiger; *k(l)en*, splendid; *mün*, country—'The splendid tiger of the country.'

Sü-ñât-phā—'The handsome tiger of heaven (*phā*).'

Sü-huñ—'The great tiger.'

Sü-pāt phā—'The club(-like) tiger of heaven.'

Sü neñ-phā—'The brave tiger of heaven.'

Sü rem-phā—'The tiger from the border (*rem*) of heaven.'

Obverse.

Chao, the God, [King's name], *Pin*, became, *Khün*, King, *Lāknī*, in the year, [year of cycle].¹

Reverse.

Kao, I, *Boi*, prayer, [Deity's name, generally with prefixed appellation, *Phā*, heavenly], *Hě-u*, offer, *Chü*, in the name.

Only three deities are mentioned on *Āhōm* coins—

1. On those of *Süklenmün*. *TĀRĀ* (*tā*, eye; *rā*, evil) the Evil-eyed One, that is to say, not the gentle Buddhist goddess, *Tārā*, but a *Shān* goddess who was first incorporated into Hinduism as the Tantric *Tārā*, the War-Goddess, and then transformed as an *amśa* of *Durgā* into *Kāmākhyā*, the Goddess of Desire. According to the *Yōginī Tantra* (*Report*, p. 52) this goddess was worshipped at *Nīlāchala* Hill near *Gauhati* from the time of *Naraka*, the legendary hero of *Assam*, who is said to have been born of the Earth by *Vishnu* in the form of a pig (the third incarnation), and who was the father of King *Bhagadatta* whose deeds are recounted in the *Mahābharata*..

2. *Sūñātphā* and *Sūhuñ* } *PHĀ-TÜ-CHIN*, literally, 'the highest being of heaven', *i.e.*, The Supreme God.

In the case of *Sūñātphā*'s coin the additional suffix *Ph(r)āñ hum*, 'the most glorious', also appears. This *Shān* god was identified with either *Sīva* or *Vishnu*, according as the Hindu priest happened to be a *Sākta* or *Vaisnava*.

3. *Gadādhara*,
Pramatta, and } *LENDĀN*.
Rāješvara

Leñdān literally means "the Sole (lord of) Thunder", and hence was identified with *Indra* by the Brahmins attached to the *Āhōm* court.²

It is obvious from the small number of known *Āhōm* coins that much work still remains to be done when a fortunate find will place us in possession of more of these interesting coins. In the meantime, to facilitate subsequent work by numismatists, I have embodied the results of a careful study of the casts

¹ In *Süklenmün*'s coins *Phā* (heavenly) is inserted as an additional appellation before the King's name, and *Chao* (God or King) takes the place of *Khün*. The third line of the obverse of *Sūñātphā*'s coin reads *Chao Chām Pī*, *Pī* being another *Āhōm* word for 'year' and *Chām* a copula which may be translated by 'and this was'. There are two misprints in Mr. Allan's transcription of this line.

² For a full account of the *Āhōm* theology, pp. 68—71 of Mr. Gait's *History* may be consulted.

of the 28 Āhōm coins in the British Museum in Plate XXV, which was drawn up with the assistance of Śrījut Golāp Chandra Barua, the translator of the Assam *Buranjis*. Mr. Allan informs me that the unique gold muhur reproduced at the bottom of the plate was bought from a London dealer in 1882. Of the remaining coins, 19 were bought in 1878 from Dr. Foster—presumably the resident of Nazira near Garhgānw, or some relation of his, who is referred to in the notes of Dr. Blochmann's paper on Kuch Bihār and Assam, to which reference has already been made. The gold coin of Sūklenmūn came from the India Office Collection. One of the gold coins of Sūñātphā was bequeathed by Sir C. W. Trevelyan in 1878, while the silver coin of Sūneñphā (Pramatta) was given to the Museum in 1818 by Miss Banks.

In addition to the 8 Āhōm coins in the Indian Museum Collection described by Mr. Vincent Smith (*Indian Museum Catalogue*, I, p. 298), Mr. Botham also possesses 8 coins—a muhur and rupee of Sūklenmūn; 5 rupees of Gadhādhara (Sūpātphā), 4 of which are duplicates of those in the Indian Museum; and the fairly common rupee of Pramatta. A few other specimens of Āhōm coins are also found in the local Cabinets already mentioned.

ASSAMESE COINS IN BENGALI SCRIPT PRIOR TO THE TIME OF RUDRA SIMHA.

Only three such coins are known. Two of them belong to Sūseñphā (more commonly referred to as Pratāpa Simha from his successful warfare against the Muhammadans), and the third to Chakradhvaja or Sūpuñmūn.¹ The former differ markedly from all coins in Āhōm character in being minted in a year far removed from the date of the King's installation; in fact they were struck shortly before Sūseñphā's death, after a long reign of at least 43 years. The inscriptions, which will be found on pp. 313 and 314 of Mr. Allan's paper, appear to afford evidence of greater progress of Vaishnavism in Assam than would be gathered from the *Buranjis*. The invocations to Hari Hara and Hari Harendra (Vishnu and Śīva) on the reverse of the coins are in marked contrast to the coin legends of most of the subsequent kings of Assam in which veneration for Hara Gaurī (Śīva and Durgā) is usually expressed, and were it not that the title had already been used by Sūhuñmūn, we might even be justified in concluding from the fact that Sūseñphā styles himself simply "Surga Nārāyaṇ Deva" (Vishnu) instead of giving his actual name, that he became a Vaishnava shortly before his death. The *Buranjis* record on the other hand that he encouraged the worship of Śīva and persecuted the Mahā-

¹ Sūseñphā means 'The beautiful tiger of heaven' and Sūpuñmūn 'The tiger of the open country.'

purushiās (a sect of Vaishnavas), but Mr. Gait notes that once in a fit of anger at the death of his son he also persecuted the Brahmins. As Messrs. Vincent Smith and Allan point out, the date of Pratāpa Simha's coins, 1570 *Sāka* (=1648 A.D.) is decisive in establishing that for some unknown reason the *Buranji* dates for the first half of the 17th century cannot be always trusted. The Assamese historian Kāśīnātha was almost certainly right in maintaining that Pratāpa Simha died in 1649 A.D. (and not in 1641), but on the other hand the *Buranjis* are probably correct in stating that Süsenphā came to the throne in 1603, as from the Jaintia *Buranji* we learn that he married his daughter to Dhan Māṇik, Raja of Jaintia, in 1528 *Sāka* (=1606 A.D.).¹ How long the two Kings, nicknamed Bhaga Rājā and Nariyā Rājā, who in turn successively followed Pratāpa Simha, reigned, and when Jayadhvaja came to the throne, cannot, in the absence of inscriptions, be determined with any certainty. If, however, as seems probable, Mr. Gait is correct in his reading of the inscription on Jayadhvaja's cannon found at False Point (*Report*, pp. 10 and 29), Jayadhvaja was on the throne in 1658, and there is no difficulty in agreeing with Kāśīnātha in assigning his installation to the year 1654, the two previous Kings being allotted reigns of 3 and 2 years respectively. As the coin of the next King, Chakradhvaja, shows, Jayadhvaja must have died soon after the withdrawal of Mīr Jumlā's troops from Assam in 1663. Cannon inscriptions bearing Chakradhvaja's name and dates 1589 and 1590 *Sāka* (=1667 and 1668 A.D.) are known (*Report*, p. 29) and as his successor, Süñātphā (Udayāditya), struck Ahōm coins in 1669 A.D., the duration of Chakradhvaja's reign could not have exceeded 6 years. A cannon at Gauhati, cast in Udayāditya's reign, is dated 1594 *Sāka* (=1672 A.D.), and, according to the *Buranjis*, he was poisoned in 1673 by Rāmadvaja who succeeded to the throne. No coins of Rāmadvaja are known, but there is an Ahōm coin of his successor Sühuñ, bearing a date equivalent to 1675.

The coin of Chakradhvaja dated 1585 *Sāka*, which was evidently minted in the year of his installation, exhibits, like those of Pratāpa Simha, Vaishnava influence both in the King's name and the invocation on the obverse to Śiva and Rāma (Śiva and Vishnu). This coin will be found reproduced as Fig. 14 of Plate XXIII, *Contributions I*, as well as in Plate XXIII of Mr. Allan's paper. The absence of coins of Jayadhvaja Simha, who was King of Assam when Mīr Jumlā invaded the country, is probably due to the seizure of his Garhgāñw Treasury by the Muhammadans and the necessity of paying a monetary indemnity (nominally Rs. 3,00,000) besides a dowry of 2,000 gold muhurs and 12,000 silver coins for the Assamese girl who

¹ Gait, *Report*, p. 18.

married Prince Muḥammad 'Āzam in 1668 (*Report*, p. 17; and Blochmann, *Koch Bihār and Āsām, Journ. Asiatic Soc. of Bengal*, 1872, p. 98). The *Fathiyah-i-'Ibriyah* states that when Garhgānw was entered by Mīr Jumlā in March 1662 A.D., nearly 3 lakhs of rupees in gold and silver were discovered in the Treasury. In the absence of coins, or definite statements in the *Buranjis*, little can be said regarding the progress of Vaishnavism in Jayadhvaja's reign, but the statement of the *Fathiyah-i-'Ibriyah* is interesting as throwing some light on the current religion of Assam. "He (the King) professes to be a Hindu, but as he believes himself to be one of the great emanations of the Deity, he worships no idols. The inhabitants (of Assam) profess no religion whatever." (Blochmann, *op. cit.*, p. 80.) In other words we gather that Hinduism in either of its forms had made little headway and that the Assamese as a nation were still Animists. Jayadhvaja had, however, as spiritual guide, a Brahmin who lived at Diwalgānw (*idem*, p. 74), and the title Svarga Nārāyaṇ is not found on his cannon, so that he was perhaps a Śaivite. Subsequently this title reappears on the cannon of Chakradhvaja, Udayāditya and Gadādhara (*Report*, p. 29). In the last-named case the cannon was one of those captured from the Muhammadans in 1682, *i.e.*, the year following the King's accession, and hence probably before the persecution of the Vaishnavas recommenced. Mr. Gait records gifts to Vaishnava shrines even as late as 1685 and 1686 (*idem*, pp. 6 and 13).

In addition to Assamese coins of Jayadhvaja's time, we may also anticipate the discovery of Muhammadan coins of 1072 and 1073 A.H., minted at Garhgānw. Khāfi Khān states that Mīr Jumlā forbade the circulation of "Nārāyaṇī" rupees in Assam, as he had minted money with Aurangzīb's name on it, and the minting of rupees and pice is also mentioned by the author of the *Fathiyah-i-'Ibriyah* (Blochmann, *idem*, pp. 99 and 85).

THE COINS OF ASSAM FROM THE ACCESSION OF RUDRA SĪMHA TO THE CLOSE OF ASSAMESE RULE.

From the death of Udayāditya in 1673 to the accession of Sūpātphā or Gadādhara Sīmha in 1681, chaos reigned in Assam, and in the short period of 8 years there were no less than 6 Kings on the throne. None of their coins in Bengali script are known, nor indeed, with the exception of Sūhuṅ's coin, any in Āhōm characters either; and when a strong King in the person of Gadādhara Sīmha established himself on the throne, he does not appear to have minted any but Āhōm coins. It was only with the accession of his son, Rudra Sīmha, in 1696 A.D. (*Sāka* 1618) that annual coinage in Bengali script began, and henceforward, with very few exceptions, the type of the coin-

age remained unaltered until the break-up of Assamese rule. To enable the relation of Rudra Simha to the remaining Sovereigns of Assam to be clearly understood, the pedigree on the following page, which is compiled chiefly from Mr. Gait's *History*, may be found useful. The dates (usually quoted in the *Sāka* era to facilitate reference to the coins struck by these Kings) are based upon a comparison of all available coin dates with the duration of each King's reign, as given by Mr. Gait.

From the year of Rudra Simha's installation, Assamese coins began to be produced of a standard that few subsequent issues could even be said to rival. The explanation of this probably lies in the fact that his father Gadādhara Simha (and presumably also himself), during the troublous years before the former's accession to the throne, had taken refuge in Muhammadan territory and both of them subsequently introduced artisans from Kuch Bihār and Bengal to improve the standard of civilisation in Assam. Amongst the workmen introduced by Rudra Simha must have been die-cutters and mechanics from some Muhammadan mint, as it is impossible to believe that the coins that were issued throughout his reign were the unaided work of indigenous craftsmen. In addition to ordinary rupees, muhurs with the same inscription were struck, and there was also an issue of half and quarter rupees. The inscriptions of the three varieties of coins are as follows:—

Rupees.

Obverse.	Reverse.
(1) <i>Srī Srī mat</i>	(1) <i>Srī Srī Ha</i>
(2) <i>Svarga deva Rudra</i>	(2) <i>ra Gaurī pa-</i>
(3) <i>Simhasya Sā</i>	(3) <i>d āmbuja madhu</i>
(4) <i>ke</i> (Date)	(4) <i>karasya</i>
‘Simha’ facing Right.	“A bee on the lotus feet of Hara and Gaurī”
“(Coin) of His Heavenly Majesty, Rudra Simha of surpassing beauty, (struck) in <i>Sāka</i> (date)”	

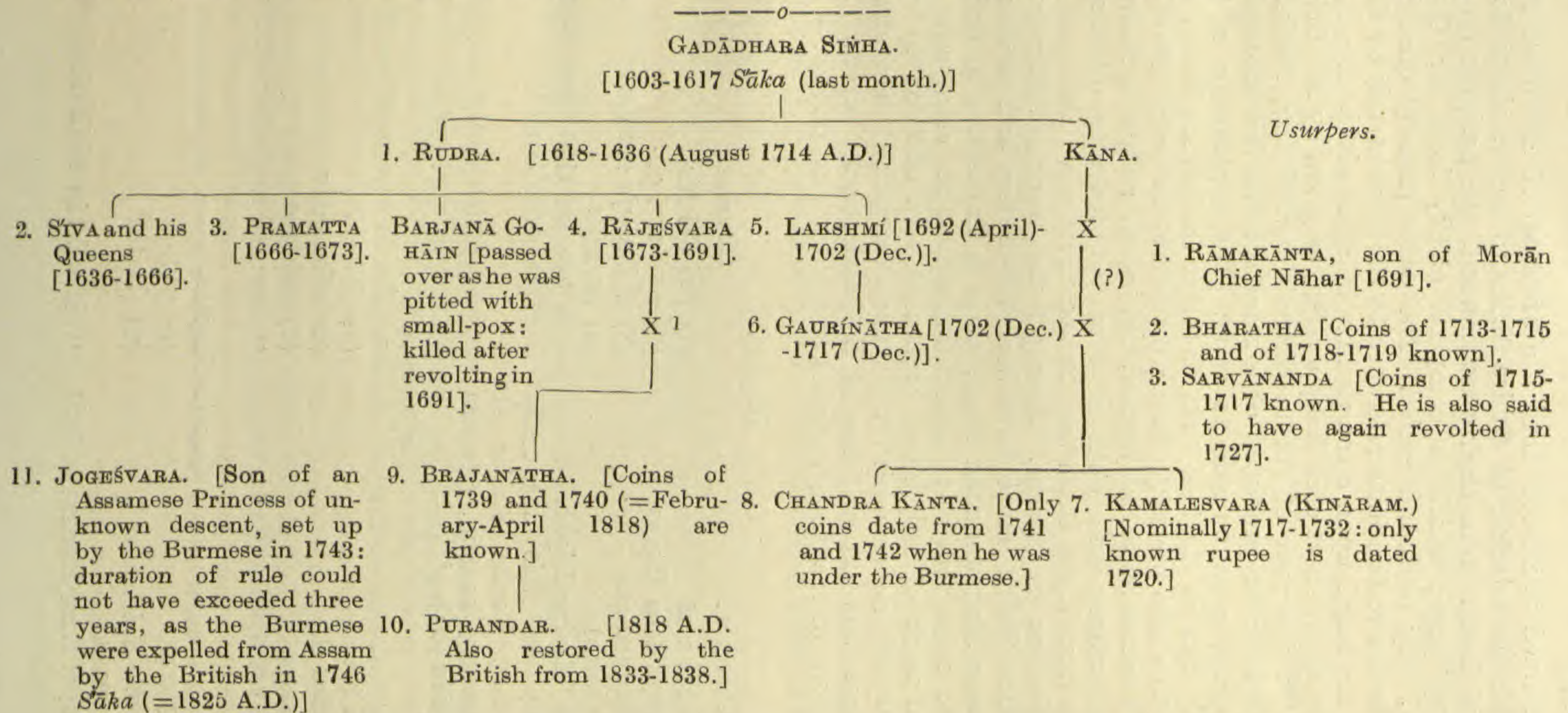
Half Rupees.

(1) <i>Srī Srī</i>	(1) <i>Srī Srī</i>
(2) <i>Rudra Si</i>	(2) <i>Siva pada</i>
(3) <i>mhasya</i>	(3) <i>parasya</i>
“(Coin) of Rudra Simha”	“Devoted to the feet of Siva”

Quarter Rupees.


(1) <i>Srī Srī</i>	(1) <i>Sāke</i>
(2) <i>Rudra Simha</i>	(2) (Date)
(3) <i>Nripasya</i>	
“(Coin) of King Rudra Simha”	“(Struck) in <i>Sāka</i> (date)”

THE RULERS OF ASSAM FROM GADĀDHARA SIMHA TO THE PERMANENT ADVENT OF THE BRITISH.



¹ Mr. Gait in his *History* states that Brajanātha was the great-grandson of Rājesvara, while Prinsep in his *Useful Tables* declares Purandar to have been Rājesvara's great-grandson. The latter appears more probable from consideration of the dates.

The only available specimens of a quarter-rupee are two of the year 1619,¹ but one other specimen passed through Mr. Gait's hands and is recorded by him to be dated 1616 (*Report*, p. 3). The coin could not be found when enquiries were recently made for it, and as no other coin of the same date is known, the reading was in all probability a mistaken one for 1618. If the Bengali symbol for 8 is viewed from a different angle, it can be easily taken for the Bengali 6, and the mistake probably occurred from the character being written with a slight inclination from

the vertical, thus . Mr. Gait states on p. 163 of his *History* that Gadādhara died in February 1696 A.D., while the *Sāka* year 1618 began on March 25th of that year.² There is, therefore, no reason for thinking that Rudra Simha was installed in any other year except that found on the earliest rupee, *viz.*, 1618.

Undated half-rupees are fairly common,³ while rupees of every year of Rudra Simha's reign exist. Only single specimens, however, of rupees minted in the years 1619, 1628 and 1629 are known,⁴ and, as may be seen from the following cut, the 1619 coin is peculiar in recording an old name of the early Āhōm kingdom and in having an inscription differing to some extent from the ordinary inscription on Assamese coins.



Silver Rupee.—Weight 172·3 grains. Size—·97".

Obverse.

- (1) *Srī Srīmat*
- (2) *Saumāreśvara (e)*
- (3) *d()va Rudra Simha*
- (4) *sya Sāke 1619*
(‘*Simha*’ chasing a deer)

Reverse.

- (1) *Srī Srī Hara*
- (2) *Gaurī padaju-*
- (3) *gala kamala*
- (4) *madhukar*

¹ [B. M.] and [B].

² Cunningham, *Indian Eras*, p. 193.

³ For reproduction of one belonging to the Daflating find, *vide* Plate XXVI., Fig. 1.

⁴ [B], [H. E. S.] and [B] respectively.

“(Coin) of His Majesty (*deva*) Rudra Simha of surpassing beauty, Lord of Saumāra, (struck) in *Sāka* 1619” “A bee on the lotus of the twin feet of Hara and Gaurī”

Saumāra¹ was the former name for the country round Sibsāgar, and the title of Saumāreśwara is found in the inscriptions on cannon belonging to Rudra Simha's father, Gadādhara, as well as on one cast in 1594 *Sāka* during the reign of Udayāditya.²

An explanation of the dearth of coins of 1628 and 1629 is found in the fact recorded in the *Buranjis*, that an expedition against the Kachārīs started in December, 1706 A.D. Rudra Simha left Rangpur for Rahā on the Kalang, south-west of Nowgong, where he remained until, apparently, February, 1708, when the captured Kachārī and Jaintia Kings were brought before him and both kingdoms annexed. An interesting fact recorded by Mr. Gait in connexion with this campaign³ is that the booty included 12,000 pieces of silver minted by Muhammadan, Āhōm, Koch and Jaintia Kings. The absence of any mention of Kachārī coins seems to show that until at least the beginning of the 18th century A.D. the Kachārī Kings did not mint coins of their own. The only specimen of Rudra Simha's gold coinage appears to be the muhur in Mr. Botham's Cabinet, dated 1620. This differs from the rupees in having the *dra* of Rudra at the beginning of the third line of the obverse, while the '*Simha*' faces *left* instead of *right* as in the rupees. A reproduction of this coin will be found as Fig. I, Plate XXVII.

No Āhōm coins of Rudra Simha under his Āhōm name Sūkh(r)ānpā, 'the terrible tiger of Heaven,' have yet come to light.

SIVA SIMHA.

The coins of Siva Simha, Rudra Simha's eldest son, constitute the most interesting series of Assamese coins, owing to the fact that he permitted the names of his various wives to appear on the coinage. The succession of coins issued during Siva Simha's reign will be understood from the following Table, which gives the dates of all known rupees. Rupees either of Siva Simha alone, or jointly with one of his wives, exist for every

¹ The old kingdom of Kāmrūp is said in the *Yōginī Tantra* to have been divided into a number of *Pīthas*, or sacred divisions, each dedicated to Siva and bhagavati (Durgā). Saumāra, which was one of the more recent additions to these (perhaps dating from Āhōm times), signifies the country of "Him who holds the Moon (on his forehead)," *i.e.*, Siva.

² Gait, *Report*, Appendix I, p. 29.

³ *History*, p. 173.

year. Where letters indicating some Cabinet occur in the Table after a date, only a single specimen of the coin mentioned is known.

Siva Simha alone.	Siva Simha and Phuleśvari.	Siva Simha and Prama-theśvari.	Siva Simha and Ambikā.	Siva Simha and Sarveśvari.
1637				
1638				
1639				
1640 [B]				
1641				
1642				
1643				
1644				
1645				
1646	1646	..	..	..
..	1647	..	..	..
..	1648	..	..	..
..	1649	1649 (and $\frac{1}{2}$ -Re. with 4 on reverse)	..	..
1650 (referred to by Mr. Allan: Cabinet not mentioned)	1650 (Muhur in possession of Muhammad Hazari of English Bazar, Maldah)	1650	..	..
..	..	1651 (both ordinary; and square Re. in Persian script minted at Garhgānw R.Y. 15)	..	..
..	..	1652	..	..
..	..	1653	..	..
1654 & R. Y. 18.	..	..	1654 & R. Y 19	..
..	..	..	1655 ,, ,, 19	..
..
..	..	..	1656 ,, ,, 20	..
..	..	..	1656 ,, ,, 21	..
..	..	..	1657 ,, ,, 21	..
..
..	..	..	1658 ,, ,, 22	..
..	..	..	1658 ,, ,, 23	..
..
..	..	..	1659 ,, ,, 24	..
..	..	..	[B; and $\frac{1}{2}$ -Re. B.M.C.]	..
1659 R. Y. 24. [$\frac{1}{2}$ -Re. I.M.C.]	..	..	..	..

S'iva Simha alone.	S'iva Simha and Phuleśvarī.	S'iva Simha and Pramathesvarī.	S'iva Simha and Ambikā.	S'iva Simha and Sarvesvarī.
..
1660 & R. Y. 25.
1661 & R. Y. 25 [B.M.C.]	1661 & R. Y. 25
..	1661 ,, ,, 26
..
..	1662 ,, ,, 27
..	[B]
..	1663 ,, ,, 27
..
..
..	1664 ,, ,, 29
..	1665 ,, ,, 29
..	1665 ,, ,, 30
..	1666 ,, ,, 30
..	1666 ,, ,, 31

[Pramatta Simha's Āhōm coins are dated the 36th year of cycle = *Sāka* 1666; but his ordinary coins start with 1667.]

From this Table the following deductions can be made:—

(a) Although no coin of 1636 is known, the regnal years on the later coins of S'iva Simha indicate that he dated his accession from 1636. Mr. Gait also states that Rudra Simha died in August 1714 A.D., whereas the *Sāka* year 1637 did not commence till March 25th, 1715. We may, therefore, expect that Āhōm coins of S'iva Simha in his Āhōm name of Sütānphā, 'the peerless tiger of Heaven,' will ultimately be discovered, with date corresponding to *Sāka* 1636.

(b) Mr. Gait, on the authority of the *Buranjis*, states that in consequence of a prediction of the astrologers in 1722 A.D. that his rule would soon come to an end, S'iva Simha "declared his chief queen Phuleśvarī, who was also known as Pramathesvarī, to be Bar Rājā, Chief King ... and caused coins to be struck jointly in her name and his."

The reason assigned cannot be regarded as altogether satisfactory for, as Messrs. Vincent Smith and Allan point out, S'iva Simha coined in his own name subsequent to 1722. The impression derived from a study of the coins is that S'iva Simha's action in permitting Phuleśvarī to mint coins in 1646 *Sāka* was chiefly due to pressure brought to bear on him by a strong-minded woman. A half-coin of S'iva Simha and Pramathesvarī is in the possession of Mr. Botham (*vide* Fig. 2, Plate XXVII) in which the inscription on the obverse ends with a distinct 4. This appears to indicate that in 1649 Pramathesvarī was asserting her right to place her own regnal year on the coins. The next year S'iva Simha is again found minting in his own name.

The only explanation seems to be that a quarrel had taken place between husband and wife in consequence of the previous year's incident and that Śiva Simha, to assert his marital authority, had reverted to coinage in his own name. In the following year, 1651, a compromise seems to have been arrived at, for from this year date the square coins in Persian script minted at Garhgānw, in which the regnal year of the King (15) duly appears, but the coins have the curious legend *Ba hukm Begam Pramathēśvarī Shāh*, i.e., they were struck in the name of Śiva Simha but "by order of Queen Pramathēśvarī."¹ The next and following year, however, the coins again appear in the name of Pramathēśvarī "Chief queen (*mahishī*) of King Śiva Simha" and the regnal year is omitted. The non-existence of coins of Śiva Simha and Pramathēśvarī after 1653 confirm the statements of the *Buranjis* that she died in that year. The *Buranjis* then narrate that the King married Phuleśvarī's sister Deopadī and made her Bar Rājā, with the name Ambikā. Before, however, Ambikā was installed, Śivā Simha again issued coins in his own name—this time with the addition of the regnal year—and regnal years continued to appear on the coins until the end of Śiva Simha's reign. Ambikā's coins end in 1659—R.Y. 24 (=1737 A.D.), so that this date, and not 1663, must be taken as the date of Ambikā's death. Coins of Śiva Simha in his own name again re-appear for about a year, but in 1661 (R.Y. 25) he married Enādarī ('Nobody's darling'), who was re-named Sarveśvarī, and she appears to have survived him. Both Ambikā and Sarveśvarī on their coins simply style themselves "the much beloved (*udvallabha*) of King Śiva Simha."

(c) In the absence of the *Buranjis*, the conclusion might reasonably have been drawn that Phuleśvarī and Pramathēśvarī were different people, and it is evident from the coins that Phuleśvarī did not cease altogether to use her old name until at least two years after she adopted the name Pramathēśvarī. On the other hand the further story of the *Buranjis* that the lady was a fanatical advocate of *Sākta* Hinduism and forcibly converted several Gosāins to *Sāktism*, is supported by the change in name. Phuleśvarī is another name for Ratī, the wife of Kāma, the Hindu Cupid, while Pramathēśvarī is a synonym of Durgā. A devotee of the goddess Durgā who happened to be married to a King called Śiva who arrogated to himself the title of God (*Svarga deva*), would naturally be inclined to change her name to one of the names of Durgā. Her example in this respect was followed by her successors, whose names on their coins are also synonyms of Durgā. A reproduction of Phuleśvarī's rupees of 1649 will be found as Fig. 2, Plate XXVI of this paper, and the obverse of a rupee of the same year with legend

¹ *Vide Indian Museum Catalogue*, I, p. 301; and Allan, *Num. Chron.*, Ser. IV, Vol. IX, Plate XXIV, Fig 1.

Sīva Simha and Pramathēśvarī is given by Mr. Allan as Fig. 15, Plate XXIII, of his paper. On Plate XXVI will also be found a reproduction of a half-coin of Sarveśvarī, dated R.Y. 29. Of Mr. Botham's coins the following, reproduced on Plate XXVII, may be referred to. The curious quarter-coin with apparently regnal year 4 on the reverse struck in the name of Pramathēśvarī as consort of Sīva Simha; the rupee of Sīva Simha alone dated 1654 and R.Y. 18; a half rupee of Ambikā dated R.Y. 19 (the latter may be compared with the similar coin of her successor, from the Daflating find already referred to); and the last rupee of Sīva Simha's reign, dated 1666 and R.Y. 31, that was issued by Sarveśvarī. It may also be noted in connexion with Sīva Simha's coins that he began by following his father in using the old form of †, '†,' on his coins. The more modern form as already employed on the coins of Pratāpa and Chakradhvaja re-appeared, however, as soon as Phuleśvarī began to strike coins, and thenceforward the old form is no longer found.¹ The square coin of 1651 seems to have been modelled on the coins of Manipur, as Prinsep (*Useful Tables*, p. 274) mentions square coins of the Manipur King Charairongba, dating apparently from 1634 *Sāka*.

The fullest account of the coinage of Sīva Simha and his Queens will be found in Mr. Allan's paper. In addition to the usual coins, quarter-muhurs are also found. The inscriptions follow in the main those of Rudra Simha, but in the Queens' coins, owing to the necessity of referring to two people, the phraseology is somewhat different. The quarter-coins of the Queens are either undated or give only the current regnal year of the King.

PRAMATTA SIMHA.

The coinage of this King needs no special reference. His Sanskrit coinage starts with rupees of 1667, of which the reverse reads *Srī Srī Hara Gaurī charana kamala madhukarasya*. This means the same as the inscription on the older coins. From the coin in Āhōm script already referred to, he appears, however, to have been installed immediately after Sīva Simha's death in 1666. Half-muhurs occur for the first time, but there is no reason to suppose that they were not also minted by his immediate predecessor. The muhur of 1669 in Mr. Botham's Cabinet is struck from the same die as the rupees of that year. Pramatta's last coins are dated 1673.

RĀJEŚVARA SIMHA.

The coinage of this King is interesting for the variety that it displays. At his accession in 1673 he struck money in Āhōm

¹ Cf. Fig. 10, Sīva Simha's rupee dated 1644, with Fig. 14—Phuleśvarī's rupee dated 1646—Plate XXIII of Mr. Allan's paper, *Num. Chron.*,

script, as is shown by the unique gold muhur reproduced in Plate XXV. This was followed up in the next year by a square rupee in Persian characters minted at Rangpur, in addition to ordinary coins.¹ In 1675 came an octagonal rupee in Nāgrī script with an invocation to Maheśvarī (Durgā) on the obverse.² From 1678 dates the square quarter-muhur in the Cabinet of Mr. Botham, which marks a new departure in coins with Assamese script, and, in the same collector's Cabinet is also found an eighth-muhur which seems to be dated on the obverse either R.Y. 4 or R.Y. 7. Rājeśvara's zeal for new types of coinage was not even yet satisfied, as in 1785 we find him issuing from Rangpur an octagonal rupee in Persian script, the inscription being identical, save as regards date, with the square rupee of 1674. Another peculiarity of the reign is the appearance of a sixteenth of a muhur and a sixtieth of a rupee, both undated, with *Srī Rājeśvara* on the obverse and *Siṃha Nripasya* on the reverse.³ The last known coin of Rājeśvara is dated 1690, but Mr. Gait (*History*, p. 182) reports an expedition against the Jaintias which seems to have happened in the following year just before Rājeśvara's death.

[RĀMA KĀNTA—USURPER.]

LAKSHMĪ SIMHA.

On the death of Rājeśvara disputes arose as to the succession, one party being in favour of Rājeśvara's eldest son, and another supporting the claims of Lakshmī Simha, the last of the sons of Rudra Simha. Doubts were cast on the legitimacy of the latter, and although he was selected, an insult offered by his minister, the Bar Barua, to the Moāmariā (Vaishnava) Gosāin caused an immediate insurrection. Lakshmī was captured and imprisoned, and, according to the *Buranjis*, a usurper called Rāma Kānta was placed on the throne. This man is said to have minted coins for some months (*Sāka*, 1691), but none of them have yet been recorded. The royalists ultimately succeeded in ejecting the Vaishnavas, and rescuing Lakshmī just as he was about to be executed. Rāgha, the Vaishnava general, was assassinated in the beginning of 1692, and soon after Rāma Kānta and the Moāmariā Gosāin were captured and tortured to death. Lakshmī Simha was then installed as King. In corroboration of this story, we find no coin of Lakshmī Simha of the year 1691, the full coinage commencing in the following year, and it is curious to note that in spite of the savage persecution of the Moāmariās

Ser. IV, Vol. IX; *vide* also this paper, Plate XXVI, Figs. 1 and 2 and Plate XXVII, Figs. 1 and 3.

¹ Allan, Plate XXIV, Fig. 11.

² *Vide I.M.C.*, Plate XXIX, Fig. 6.

³ *Vide* for the former, Allan, Plate XXIV, Fig. 13.

that followed Rāgha's death, Lakshmī Simha appears to have attempted to conciliate them in the first year of his reign by minting, in addition to the ordinary rupees with Hara Gaurī on the reverse, a rupee with *Hari Hara* (Vishnu and Śiva), of which a specimen is in the possession of Mr. Botham.¹ In 1692 he also issued a square quarter-muhur in imitation of the quarter-muhurs of his brother Rājeśvara.² For the rest of his reign, the coinage is ordinary. The reverse of the rupees has a slightly fuller inscription than those of his predecessors, and reads *Śrī Śrī Hara Gaurī charaṇāravinda makaranda madhukarasya* ('A bee on the nectar of the lotus feet of Hara Gaurī'); and *Narendra* (King) occurs as a synonym of *Nripa* on the obverse of his half-muhurs and half-rupees. The last coins known of this King are quarter-rupees minted in the year 1702.

Lakshmī Simha's Āhōm name was Sūñē-uphā ('the Colossal Tiger of Heaven'), but he does not appear to have struck any Āhōm coins.

GAURĪNĀTHA SIMHA.

The son of Lakshmī Simha ascended the throne after assuming the Āhōm name Sūhitpañphā ('the Gladsome Tiger of the Wide Heaven'), but no specimen of his Āhōm coinage has yet come to light. The first known Sanskrit coin dates from the year 1703, but from the regnal years on his later coinage, it is certain that he came to the throne in 1702. Mr. Gait also mentions that Lakshmī Simha died in December, 1702. The following tables show how well the coinage of this period illustrates the history of Gaurīnātha's troubled reign. The dates are those found on rupees, except where otherwise stated.

¹ *Vide* Plate XXVII, Fig. 10; *cf.* Plate XXVI, Fig. 4, for the ordinary rupee of that year.

² *Vide* Allan, Plate XXIV, Fig 17.

Coin dates of Gaurinātha as well as those of Rebels against his authority.

GAURINĀTHA.	BHARATHA (So-called Rājā of Rangpur).	SARVĀNANDA (Chief of the Morāns at Bengmara; so-called Rājā of Matak).
[Lakshmi—Quarter-coin, 1702.]		
1703.		
1704.		
1705.		
1706, R. Y. 5.		
1707, R. Y. 6.		
1708, R. Y. 7.		
1709, R. Y. 8.		
[1710] Half-Rupee R. Y. 9. [S.C.]		
1711 [Rupee and Quarter-Muhur B.M.C.; $\frac{1}{4}$ -Re. B.]		
1712 [$\frac{1}{4}$ -Re. R. Y. 11, B.M.C.]		
[1713] $\frac{1}{2}$ -Re. R. Y. 12 [B.]	1713 [B.M.C.; and $\frac{1}{4}$ -Re. B.]	....
[1714] R. Y. 13; $\frac{1}{2}$ -Muhur [B.M.C.]; and $\frac{1}{2}$ -Re. [B.]	1714 [B.M.C.]	....
1715 [$\frac{1}{4}$ -Re.; and $\frac{1}{2}$ -Re. R. Y. 14, B.]	1715.	1715 (in Mr. Burn's Cabinet).
1716 R. Y. 1	} [S.C.]	1716.
1716 mint <i>Disai</i>		
1717; and $\frac{1}{4}$ -Re. of R. Y. 16	....	1717.
....	1718.	....
....	1719.	....
[Kamaleśvara's coin of 1720]	....	....

Coinage of Gaurinātha in the Daflating find.

Year.	Rupees.	Half-Rupees.
1703	1	....
1705	3	....
1706	2	4 (R. Y. 5)
1707	7	14 (R. Y. 6)
1708	13	10 (R. Y. 7)
1709	6	9 (R. Y. 8)
1710	....	9 (R. Y. 9) ?
1716 (=1794 A.D.)	46	6 (<i>Disai</i>) ?
1717	1	16 (R. Y. 16)
R. Y. 1	(3; included in 1716)	34
Undated	....	414
TOTAL	79	516

The persecution of the Moāmariās that was initiated after an attack on the King in 1704 ultimately led in 1708 to a serious revolt, and the *Buranjis* state that Gaurīnātha fled from Rangpur, the capital, to Gauhati, leaving the Burhā Gohāin behind at Jorhāt to cope with the rebels. Fighting went on for several years, and in 1713 Bharatha Simha, the leader of the Moāmariās at Rangpur, showed by his action in establishing a mint that he regarded Gaurīnātha as no longer on the throne. It would appear moreover from the great rarity of the coins of the intervening years that Gaurīnātha, practically speaking, issued no coins for the entire period from 1710 to 1716, when he was reinstated at Rangpur by the British.

The minting of coins by Bharatha may also supply another reason, beyond that given by Mr. Gait, for the action of Gaurīnātha in appealing to the British in 1714. At the end of 1792 A.D. (= *Sāka* 1714) Captain Welsh, who had been deputed with six companies of sepoy to help Gaurīnātha, met the King fleeing from Gauhati, which had been raided by some Moāmariā Dōms, and shortly afterwards Gauhati was re-occupied. Here Captain Welsh remained for more than a year, busy with the pacification of Lower Assam, while in Eastern Assam, as the coins show, Bharatha continued to reign. Sarvānanda also appears to have begun to strike coins at this time. In January, 1794 (*Sāka* 1715), an advance was made against the Moāmariās. Jorhāt, where the Burhā Gohāin had maintained himself ever since Gaurīnātha's flight in 1708, was reached in the middle of February and Rangpur entered on the 18th of March. Shortly afterwards a Durbar of re-installation was held. Mr. Gait appears to consider that the Durbar took place in March, but as the coins that were presumably struck on this occasion bear the date 1716 and R.Y. 1, while the *Sāka* year 1716 does not commence until April 1st, 1794 A.D.¹, either the Durbar was held after April 1st, or the coins were slightly post-dated. In consequence of imperative orders from the new Governor-General, the British troops three months later were withdrawn from Assam, whereupon the Moāmariās again compelled Gaurīnātha to forsake Rangpur. Presumably these were the followers of Sarvānanda, as, from the disappearance of his coins, Bharatha Simha would seem to have been crushed in Captain Welsh's final operations against the Moāmariās. Mr. Botham has pointed out to me that a corroboration of Gaurīnātha's capital having then become Jorhāt is found in the $\text{ᱡ} = \text{ᱢ}$ (Di) for *Disai*, the Assamese name for Jorhāt that occurs at the bottom of the obverse of certain other coins of this year. Another curious variety of the coins bearing the date 1716, is one in the possession of Mr. Botham with the Bengali number ৬৮ (68) at the bottom

¹ Cunningham, *Indian Eras*, p. 196.

of the reverse. Mr. Botham suggests that this may refer to Gaurīnātha's age at the time, and the probability of the suggestion is evident from the following argument derived from the *Buranji* dates. Lakshmī Simha was the youngest son of Rudra Simha who died in 1636. Hence Lakshmī when he died in 1702 must have been at least 66. He is not likely to have had a son before he was 15 or 16, so that Gaurīnātha, his eldest son, was probably not born till 1652. If Gaurīnātha happened to have been born in this year, his age in 1716 would have been 64, which is a sufficiently close approximation to 68 for us to assume that Mr. Botham's supposition is correct. It follows from this that Gaurīnātha was born in 1648, while the age of Lakshmī Simha (67) at the time of his death would appear to have been understated by Mr. Gait.¹ Gaurīnātha evidently ceased to acknowledge his indebtedness to the British as soon as they left the country and the half-coins of the following year clearly bear R.Y. 16. Rupees of 1717, like the later ones of 1716, have no regnal year number.

With regard to the muhur of 1718, noted by Mr. Allan as being in some other Cabinet than that of the British Museum, it is, indeed, possible that this coin is a posthumous one struck by the Burhā Gohāin while he was arranging for the accession of Kināram (Kamaleśvara); but as Gaurīnātha is stated to have died on December 19th, 1795, while the *Sāka* year 1718 only began on April 9th, 1796, it is hardly likely that Gaurīnātha's death could have been concealed for nearly 4 months. In this case, therefore, 1716 should probably be read for 1718, just as with the first quarter-rupee of Rudra Simha there was confusion between 1616 and 1618.

In addition to the coins already catalogued by Messrs. Vincent Smith and Allan with obverse reading *Śrī Śrī Hara Gaurī charanāravinda* (or *kamala*) *makaranda madhukarasya*, Gaurīnātha introduced various changes in the inscription on the reverse of his coins in the year 1706. The chief one is a complete reversion to the inscriptions found on Rudra Simha's rupee.

Obverse.

- (1) *Śrī Śrī mat sva*
- (2) *rga deva Śrī Gau*
- (3) *rīnātha Simhasya*
- (4) *Sāke 1706*
- (5) 5

Reverse.

- (1) *Śrī Śrī Ha*
- (2) *ra Gaurī pa*
- (3) *d ambuja madhu*
- (4) *karasya*
- (‘*Simha*’ facing Right.)

[S. C. and B.]

The Daflating find also placed the Shillong Cabinet in possession of a unique series of half-rupees, many with Regnal

¹ *History*, p. 188. There is also contradiction between the statement made on this page and that found at the top of p. 184.

Years, and others with marks which are apparently mint marks. These marks include ८ , ५ , ○ , ॷ , ⊂ , ⊗ , and Maltese crosses of various sizes, mostly at the bottom of the obverse. Coins of Regnal Years 1 (at bottom of reverse, and also at bottom of both obverse and reverse), 5, 6 (one at bottom of obverse, and the other at bottom of reverse), 7, 8, 9, and 16 occur. A reproduction of a curious half-coin with regnal year 9 at the bottom of the obverse and ८ at the bottom of the reverse is given as Fig. 5, of Plate XXVI; and six half-rupees were also found at Daflating with ८ ('Disai') at the bottom of the obverse, which presumably date from either 1716 or 1717.

One-thirty-second muhurs and $\frac{1}{32}$ -rupees also appear for the first time among the coins of Gaurinātha, and in certain cases Gaurī is misspelt (गोरि instead of गोरौ). A similar mistake also occurs in the half-rupee of Jogeśvara (*vide* Plate XXVI, Fig. 13), as well as in that of Lakshmī Simha (लक्ष्मी instead of लक्ष्मौ).

COINS OF BHARATHA, SARVĀNANDA AND KAMALEŚVARA (KINĀRAM).

The coins of the two usurpers, Bharatha Simha at Rangpur and Sarvānanda Simha at Bengmara, are characterised by the introduction in both cases, on the reverse, of Krishna instead of Hara Gaurī, while Bharatha Simha on the obverse of his coins claims to be of the lineage of Bhagadatta, the famous King of Prāgjyōtishpur. All of Bharatha Simha's rupees are stated by Mr. Allan to bear the same inscription, but in the case of Sarvānanda, coins are found with a different one to that given by Mr. Allan on p. 327 of his paper. Specimens of both types are reproduced as Figs. 6 and 7 of Plate XXVI, and it will be seen that the Shillong coin of 1716 differs from the coin of 1717 by reading *Nripasya* for *Narendrasya*, while the three last lines of the reverse read (2) *charana kamala*, (3) *makaranda ma*, (4) *dhukarasya* instead of (2) *padapadmadvanda*, (3) *makarandabrinda*, (4) *madhukarasya*. Three different half-rupees of Sarvānanda also occurred in the Daflating find and are now in the Shillong Cabinet. They will be found reproduced in Figs. 8, 9 and 10 of Plate XXVI at the end of this paper. The conclusion of the inscription on the obverse reads either *Narendrasya* or *Nripasya*, while the three variations in the reverse are *Srī Srī Krishna pada parāyanasya*, *Srī Srī Krishna madhukarasya* and *Srī Srī Krishna charana madhukarasya*.

The coins of Bharatha Simha of 1718 and 1719 prove his identity with the "Bharathi Rājā" mentioned by Mr. Gait as having broken into revolt immediately after the announcement of Gaurinātha's death, and he appears to have taken the place

of Sarvānanda as leader of the Moāmariās, as no coins of Sarvānanda are known subsequent to 1717. Bharatha's insurrection probably accounts for the non-existence of any coins of Kamaleśvara, Gaurinātha's successor, before 1720, and the minting of coins in this year raises a question as to whether the date of Bharatha's death (1721) is correctly given by the *Buranjis*. Marsden (*Numismata Orientalia*, p. 777) states that Kamaleśvara, who is said to have been an illegitimate descendant of Kāna, the second son of Gadādhara, was never properly installed, and although he survived until 1732 it is curious that the only coins known that bear his name are those dated 1720.¹ From Mr. Gait's account of his reign there seem to have been constant rebellions, and in 1727 at the invitation of the Morān Moāmariās, who had again revolted under Sarvānanda Simha, detachments of the Burmese for the first time were brought into the country to fight against the adherents of the Burhā Gohāin.

CHANDRA KĀNTA, BRAJANĀTHA, PURANDAR AND JOGĒŚVARA.

According to the *Buranjis*, the Burhā Gohāin placed Chandra Kānta, the youthful brother of Kamaleśvara, on the throne when the latter died, but none of his coins are known except those of 1741 and 1742. Five years after Chandra Kānta's nominal accession, one Badan Chandra, a Bar Phukan whom the Burhā Gohāin wished to dismiss, fled first to Calcutta and then to Burma, where in 1738 *Sāka* he induced the Burmese King to send an army against the Burhā Gohāin, on the pretence that the Burhā Gohāin had usurped all the authority of the Assam King. The Burmese army of invasion twice defeated the Assamese armies, but left the country in the following year on payment of an indemnity. On their departure, the Assamese ministers quarrelled amongst themselves, and the son of the old Burhā Gohāin, who had died in the year of the Burmese invasion, proclaimed Brajanātha, a grandson or great-grandson of Rajésvara Simha, to be King, in *Sāka* 1739 (February 1818). "Brajanātha at once caused coins to be struck in his own name, but it was now remembered that he was ineligible for the throne as he had suffered mutilation, and his son Purandar Simha was, therefore, made King instead of him. Chandra Kānta was seized and his right ear was slit in order to disqualify him from again sitting on the throne" (Gait). Intelligence of these events quickly reached Burma, and on the arrival of a fresh Burmese army, about a year later (February 1819, or the end of 1740 *Sāka*), Purandar Simha fled to Gauhati and Chandra Kānta was again placed on the throne by the Burmese. He remained a nominal

¹ For reproduction of this coin, *vide* Plate XXVII, Fig. 11, *postea*.

King for about two years, during which time he struck coins dated 1741 and 1742 *Sāka*, but at last, "anxious about his own safety, in April, 1821, he fled first to Gauhati and then to British territory." Finding that they could not induce him to come back, the Burmese placed another prince of unknown descent called Jogeśvara on the throne.

The coins of Brajanātha show that Mr. Vincent Smith's statement that he only ruled in February, 1818, is not correct, for coins of both 1739 and 1740 exist. As the *Sāka* year 1740 did not begin until 7th April, 1818,¹ it seems probable that he was actually on the throne for about three months. The Daflating find included a half-coin belonging to him with apparently the mint mark 𑂔 on it.² This appears to indicate that Brajanātha minted at Rangpur. In addition to Chandra Kānta's gold muhur of 1741, given by Mr. Allan, rupees of 1742 are also in the Cabinets of Col. Gurdon and Mr. Botham, while Mr. Botham also possesses a quarter-rupee of 1742. No rupees are known of Jogeśvara, the prince whom the Burmese placed on the throne when Chandra Kānta took refuge with the British at the beginning of 1743 *Sāka*, and who, according to Prinsep, was "raised by the Assamese wife of an Ava monarch"; but Mr. Botham has a quarter-rupee struck in that year. Undated half-coins also occur, and one of those from the Daflating find is reproduced as Fig. 13, Plate XXVI. During Jogeśvara's nominal reign the Burmese appear also to have experimented in coinage of their own (*vide* the rupees with a pig on the reverse, which were described in the previous paper of this series, *Journ. Asiatic Soc., Bengal*, 1910, p. 164).

Both Chandra Kānta and Purandar Simha continued independently their struggles with the Burmese until the British intervened in 1824 A.D. (1746 *Sāka*). The British campaign resulted in 1826 in the annexation of Lower Assam, and for eight years Upper Assam was also administered by the British. The whole of Upper Assam, except Sadiya and Matak, was then handed back to Purandar Simha. It continued in his possession, with Jorhāt as the capital, until October 1838, when "his administration having proved a failure in all respects, he was deposed and pensioned." No coins of this ruler are known to exist, either for his short reign before the Burmese invasion, or after he was temporarily re-instated by the British.

¹ Cunningham, *op. cit.*, p. 187.

² *Vide* Plate XXVI, Fig. 11, *postea*.

APPENDIX.

PLATE XXVI.

Coins of the Daflating Find.

1. RUDRA SIMHA—*Half-Rupee*—Size $\cdot 65''$. Weight—87·2 grains.

Obverse.

*Srī Srī
Rudra Si
mhasya*

Reverse.

*Srī Srī
Siva pada
parasya*

No ornamentation or date.

Another specimen in the Daflating find had a half flower to the right of the *Srī* on obverse, and a dot to the right of the *Srī* on reverse as in the B. M. specimen.

2. SIVA SIMHA AND PHULEŚVARĪ—*Rupee*— $\cdot 88''$.

Weight—170·5 grains.

*Srī Srī Siva
Simha Nripa Mahi
shī Srī Phuleśva
rī devyāḥ*

*Srī Srī Hara
Gaurī pada pa
rayanayāḥ
Sāke 1649
(‘ Simha ’ R.)*

3. SIVA SIMHA AND SARVEŚVARĪ.—*Half-Rupee*— $\cdot 72''$.

Weight—85·2 grains.

*Srī Srī Si
va Simha Na
resvara*

*Udvalla
bha Srī Sarvve
śvarī devīnām*

4. LAKSHMĪ SIMHA—*Rupee*— $\cdot 86''$. Weight—175·0 grains.

*Srī Srī Svarga
deva Srī Lakshmī
Simha Nripasya
Sāke 1692
(‘ Simha ’ R.)*

*Srī Srī Hara
Gaurī charanāra
vinda makarānda
madhukarasya*

5. GAURĪNĀTHA—*Half-Rupee*— $\cdot 65''$. Weight—87·2 grains.

*Srī Srī Gau
rīnātha Si
mha Nripasya*

*Srī Srī Ha
ra Gaurī pa
da parasya*

6. SARVĀNANDA—*Rupee*—·95". *Weight*—178·4 grains.

Obverse.

*Srī Srī Svarga
deva Srī Sarvvāna
nda Simha Nripasya
Sāke 1716
(‘ Simha ’ L.)*

Reverse.

*Srī Srī Krishna
charaṇa kamala
makaranda ma
dhukarasya*

7. SARVĀNANDA—*Rupee*—·95". *Weight*—175·2 grains.

*Srī Srī Svarga
deva Sarvvananda
Simha Narendrasya
Sāke 1717
(‘ Siṁha ’ L.)*

*Srī Srī Krishna
pada padmadvanda
makaranda vrinda
madhukarasya*

“(Coin) of His Heavenly Majesty King Sarvānanda Simha, (struck) in *Sāka* 1717”

“A bee on the abounding nectar of the twin lotus feet of *Srī Krishna*”

8. SARVĀNANDA—*Half-Rupee*—·70". *Weight*—86·3 grains.

*Srī Srī Sarvvā
nanda Simha Na
rendrasya*

*Srī Srī Kri
shna pada pa
rayaṇasya*

9. SARVĀNANDA—*Half-Rupee*—·65". *Weight*—81·8 grains.

*Srī Srī Sa
rvvānanda Si
mha Nripasya*

*Srī Srī
Krishna madhu
karasya*

10. SARVĀNANDA—*Half-Rupee*—·67". *Weight*—88·2 grains.
As on No. 9.

*Srī Srī Kri
shna charaṇa ma
dhukarasya*

11. BRAJANĀTHA—*Half-Rupee*—·64". *Weight*—84·1 grains.

*Srī Srī Bra
janātha Si
mha Nripasya*

*Srī Srī Rā
dhā Krishna pa
da parasya
Ra 1 (? Rangpur, R Y. 1)*

12. CHANDRA KĀNTA—*Rupee*—·85". *Weight*—174·8 grains.

*Srī Srī Svarga
deva Srī Chandra Kā
nta Simha Narendrasya
Sāke 1741
(‘ Simha ’ L.)*

*Srī Srī Hara
Gaurī charaṇāra
vinda makaranda
madhukarasya*

13. JOGEŚVARA—*Half-Rupee—·64"*. *Weight—87·4 grains.*

Obverse.

*Srī Srī Jo
geśvara Si
mha Nripasya*

Reverse.

*Srī Srī Ha
ra Gaurī pa
da parasya*

In other specimens the Gaurī is spelt correctly (গৌরী instead of গৌরি).

PLATE XVIII.

Coins in the Cabinet of Mr. A. W. Botham, C.S.

1. RUDRA SIMHA—*Muhur—·77"*. *Weight—174·1 grains.*

*Srī Srī mat
Svarga deva Ru
dra Simhasya S'
āke 1620
(‘Simha’ L)*

*Srī Srī Ha
ra Gaurī pa
dambuja madhu
karasya*

2. ŚIVA SIMHA and PRAMATHEŚVARĪ—*Quarter-Rupee—·55"*.

Weight—44·0 grains.

*Srī Śi
va Simha
Nripa*

*Jāyā Srī
Pramathe
śvarasya (?) 4*

3. ŚIVA SIMHA—*Rupee—·9"*. *Weight—174·6 grains.*

*Srī Srī ma
t Svarga deva Śi
va Simha Nripasya
Sāke 1654
18*

*Srī Srī Hara
Gaurī pada
mbuja madhu
karasya
(‘Simha’ R.)*

4. ŚIVA SIMHA and AMBIKĀ—*Half-Rupee—·67"*.

Weight—86·9 grains.

*Srī Srī Śi
va Simha Na
resvara*

*Udvalla
bha Srī madambi
kā devinām*

5. SIVA SIMHA and SARVEŚVARĪ—*Rupee*—·98".*Weight*—168·3 grains.

Obverse.

Srī Srī Siva
Simha Nripa udva
llabha Srī Sarvve
śvarī devīnām

13

Reverse.

Srī Srī Hara
Gaurī pada
parāyaṇāṇam
Sāke 1666
 ('*Simha*' L)

6. RĀJEŚVARA—*Quarter-Muhur*—·53".*Weight*—45·7 grains (ringed).

Srī Srī Rā
jeśvara Si
mha Nripasya

Sāke
 1678

7. RĀJEŚVARA—*Quarter-Muhur, Sq.*—·50". *Weight*—41·4 grs.[*Inscription identical with that of octagonal Quarter-Muhur.*]8. RĀJEŚVARA—*Eighth-Muhur*—·42". *Weight*—20·6 grains.

Srī Srī Rā
jeśvara

Simha
Nripasya

9. RĀJEŚVARA—*Eighth-Muhur, Sq.*—·34". *Weight*—21·5 grains.[*Inscription as on octagonal Eighth-Muhur, but trace of Regnal year 4 or 7 at bottom of obverse.*]10. LAKSHMĪ SIMHA—*Rupee of 1692*—·85". *Weight*—174·6 grs.

The same as the other rupees
 of 1692 (*cf.* Plate XXVI,
 Fig. 4)

Srī Srī Ha
ri Hara parama
pada padma pa
rayaṇasya

“Devoted to the excellent
 lotus feet of Hari Hara
 (Vishnu and Siva)

11. KAMALEŚVARA—*Rupee*—·9". *Weight*—174·4 grains.

Srī Srī Svarga
deva Srī Kamaleśva
ra Simha Narendrasya
Sāke 1720
 ('*Simha*' L)

Srī Srī Hara
Gaurī charaṇa ka
mala makaranda
madhukarasya

55. Note on a Caste of Fish-dealers in Bengal not recognized in the Census of 1901.

By B. L. CHAUDHURI.

In December of 1906, when touring in places remote from railway communication, I found that in the eastern parts of the Jessore District the custom of salting or rather pickling *ilis* (hilsa) in brine, was very much resorted to—owing mainly to the want of adequate local demand for the fish in a fresh condition. In going into the details of different processes of salting, I came to learn the following rather curious fact. All along the banks of the river Madhumati, it appears that Malas and Tiars (the so-called Rajbansi Tiars) who are the actual catchers of *ilis* (hilsa), and immediate holders of the Fisheries, do not salt or pickle fish, and are precluded by caste rules from pickling of fish as a profession. It appeared also that there was a quite distinct caste of Antyaja Hindus, who carried on the pickling and the selling of pickled fish. These people are designated Karáls, and in their manners, habits, and religious observances are totally different from the fishermen, *i.e.*, the Málas and Tiars. Karáls have separate Brahmins from Málas and Tiars, and they observe *suddhis* on the 12th day, whereas Malas and Tiars keep 30 days. Karáls do not drink water touched by Tiars or Málas, nor would the Málas and Tiars drink water touched by the Karáls. It was ascertained that, though not numerous in any one place, they (the Karáls) are found well scattered in the river districts of the two Provinces of Bengal, *viz.*,—Jessore, Khulna, Barisal, and Faridpur. As we knew nothing about the existence of such a caste before, the latest census tabulation for the district of Jessore was at once scrutinized—but no mention of this interesting people could be found. The fact was noticed in para. 40 (page 11) of Mr. K. G. Gupta's Preliminary Report on Bengal Fishery Enquiry (dated 20th February, 1907). It has been subsequently confirmed, I am glad to say, in Mr. De's "Report on the Fisheries of Eastern Bengal and Assam" (para. 65 (*i*), page 36) of 1910.

My excuse for bringing this matter before the Society is to draw the attention of the members to the fact that this may not possibly be the only instance of a well established local caste escaping the notice altogether of our census officers and compilers of caste lists in Bengal. It may not be altogether out of place to mention here that when Sir Herbert Risley's "Tribes and Castes of Bengal" first came out, a good many people were

surprised to discover that a very widely distributed and well recognized and at the same time highly interesting tribe called *Hajangs*, who are found in the North-eastern districts of Bengal among many others, was not noticed.

The position and the history of the development of castes like the *Karál*, which is undoubtedly not of very ancient origin, carry in themselves elements and evidence of many more interesting facts than do those of the well established castes. As the real key to the system and formation of castes can only be found by closely studying these comparatively recently formed castes with all the history of transition they possess, they are of really very great importance to the ethnologists. The omissions of these castes, therefore, from census enumerations or caste lists are matters of very great regret to ethnologists. The reason why time and again such lapses are noticed in our census enumeration is, I venture to think, due to the defective system of census operations that exists in India. The most important work in these operations falls ultimately on a class of men who very imperfectly realize the importance of any such detail, and moreover consider the work itself as a perfect nuisance, as it interferes with their legitimate work and calling. Nor is there any provision to encourage any conspicuously good and intelligent work shown by any of them. To enumerators, therefore, who are the masters of entries under the column of caste schedule, it will continue to be regarded as a thankless task. Undoubtedly this is the time when our members can render some good service to ethnology by interesting themselves in the work of the present census, which is to be completed by March next. Some years ago the Society organized an Ethnographical Bureau, but I am afraid most of our members have forgotten all about it as we do not hear anything of it nowadays. I hope this short note will attract the notice of some of our members, and that some of them may help the census officers during the present tabulation to attain a better standard of ethnographical data than otherwise they would be able to reach.

56. NUMISMATIC SUPPLEMENT No. XV.

Note.—The numeration of the article below is continued from p. 581 of the "Journal and Proceedings" for 1910.

89. NOTES ON SOME MUGHAL COINS.

The following notes are to a certain extent supplementary to my paper "Old Coins in the Bahāwalpūr State Toshakhānā," published in the eleventh Numismatic Supplement to the Journal of the Asiatic Society of Bengal. I have also included notices of new and interesting coins obtained from other sources. Where the weight and size are not given, the coins are rupees of the usual dimensions. Where there are no indications to the contrary, the specimens described are in my own collection.

KĀMRĀN.

No. 1. *Æ.* Weight, 70 ; size, 1.

Mint, Lāhor.

Date, 946 A.H.

Obverse.

In wavy square, the Kalima.

Reverse.

In wavy circle

Margins.

Top امير الموصدين

Right امير الموصدين عمر عبدالله

Left على عبدالله

همايون

محمد

غازي

٩٤٦

Margin.

السلطان الاعظم المكرم

... ضرب لاهور

... خلد الله ...

The reverse is counterstruck with a quatrefoil in which is:—*عدل كامران بادشاه غازي*. Otherwise the coin is identical with I. M. Cat., Vol. III, No. 18.

AKBAR.

No. 2. Æ. *Weight*, 310; *size*, .8.*Mint*, Nārnol.*Date*, 50 Ilāhī; month Khūrdād.*Obverse.*تذکة اکبر شاهے
ضوب نار نول نیم*Reverse.*۵۰ الہ
خورداد

This is an *ilāhī dām* of Nārnol mint, and as such appears to be a novelty.

No. 3. Æ. *Weight*, 315; *size*, .8.*Mint*, Sambhal.*Date*, —; month Ardībihisht.*Obverse.*تذکة اکبر شاهے
ضوب سنبھل نیم*Reverse.*... الہ
بہشت
اردی

Coin No. 3610 in the Third Part of the White King Catalogue is a *dām* of Sambhal mint, but as far as I know the coin has not been previously described.

SHĀH JAHĀN.

No. 4. Æ. *Weight*, 310; *size*, .8.*Mint*, Shāhjahānābād.*Date*, 24 R. ? .*Obverse.*(بادشاهے غازی)
شاهے جهان
صاحب قران ثانی*Reverse.*دارالخلافہ
... اباد ...

Copper coins of Shāh Jahān of mint Shāhjahānābād are new. This specimen was found in Dehli, but is unfortunately in poor condition. It is probably of regnal date 24.

No. 5. Æ. *Weight*, 30; *size*, .45.*Mint*, Shāhjahānābād.*Date*, —.

<i>Obverse.</i>	<i>Reverse.</i>
... ثانی	ابا د
صاحب قران	... جهان
	—————
	دار الخلافه

I ascribe this small, dateless, copper coin of Shāhjahānābād mint to Shāh Jahān because of its style, and because it is akin in weight and size to the small copper coins of this emperor struck at Dehli mint. It was found in Dehli.

AURANGZEB.

No. 6. *A.* Weight, 170; size, .85.
Mint, Nuṣratābād.
Date, 1114 A.H.; 46 R.

<i>Obverse.</i>	<i>Reverse.</i>
سکه زد در جهان چو مهر منیر	مانوس
شاه اورنگ زیب عالم گیر ۱۱۱۴	میمنت
	سنه ۴۶ جلوس ا (باد)
	ضرب
	نصرت

A gold coin of Aurangzeb struck at Nuṣratābād is a novelty.

No. 7. *A.*
Mint, Aḥmadābād.
Date, 1069 A.H.; 1 R.

<i>Obverse.</i>	<i>Reverse.</i>
As on No. 6, but	احمد اباد
بدر منیر instead of	ضرب
مهر منیر. Date	میمنت مانوس
۱۰۶۹	جلوس سنه احد

No 8. *A.*
Mint, Khambāyat.
Date, 1070 A.H.; 1 R.

Obverse.

As on No. 7; date ۱۰۷.

Reverse.

کھنڈایت

ب

مانوس ضر

میمنت

جلوس سده احد

No. 9. *R.*

Mint, Multān.

Date, 1069 A.H.; 1 R.

Obverse.

ابوالمظفر محي الدين محمد ۱۰۶۹
اورنگ زیب بهادر عالم گیر بادشاہ عازی

Reverse.

دار الامان ملتان

ضرب

میمنت مانوس

جلوس سده احد

Government Collection, Lahore.

I publish the above three rupees of Aurangzeb as specimens of the Aḥmadābād, Khambāyat, and Multān mints, struck in regnal year one. The Khambāyat rupee is similar to the mohur described in the Bahāwalpūr paper.

The Multān coin is in the Government Cabinet, Lahore, the catalogue of which was compiled by Mr. Rodgers and published by the Baptist Mission Press, Calcutta, in the year 1891. As this catalogue does not appear to have been consulted by Mr. Burn when he wrote his paper "The Mints of the Mughal Emperors," I will give particulars of one or two other interesting coins in the Cabinet which do not appear to have been previously described.

No. 10. *R.*

Mint, A'zamnagar.

Date, — A.H.; 50 R.

Obverse.

As on No. 7; no date.

Reverse.

مانوس

میمنت

جلوس ۵۰ اعظم (ذنگر)

ضرب

There is a rupee of Farrukh Siyar of A'zamnagar mint in the British Museum—B. M. Cat. No. 936. This coin carries the mint back to the fiftieth year of Aurangzeb's reign for silver; a copper coin was in the White King Cabinet.

No. 11. *R.*

Mint, Bankāpūr.

Date, 1113 A.H.; 44 R.

Obverse.

As on No. 7; date

۱۱۱۳

Reverse.

مانوس

میمنت

سده ۴۴ جلوس

ضرب

بنکا پور

The Bankāpūr mint is only represented in Mr. Burn's Tables by rupees of Shāh 'Ālam Bahādur, and Farrukh Siyar.

No. 12. *R.*

Mint, Imtiyāzgarh.

Date, — A.H.; 43 R.

Obverse.

As on No. 7; dateless.

Reverse.

مانوس

میمنت

جلوس ۴۳

ضرب

امتیاز گده

In his Introduction to I. M. Cat., Vol. III, Mr. Nelson Wright says: "The earliest appearance of Imtiyāzgarh as a Mughal mint is on a dateless coin of Aurangzeb (Lahore Museum Catalogue)." This specimen is of regnal year forty-three.

No. 13. *R.*

Mint, Kurpā.

Date, — A.H.; 37 R.

Obverse.

As on No. 7; dateless.

Reverse.

مانوس

میمنت

سده ۳۷ جلوس

ضرب

کریا

Kurpā is a new Mughal mint, and is the old name of Cuddapah in the Madras Presidency. The district was conquered by Aurangzeb about the year A.H. 1100.

I am indebted to Dr. Taylor for the reading of this mint. The coin was found in Pathānkoṭ, as was No. 10.

No. 14. *Æ.*

Mint, Daru-l-Jihād.

Date, 1114 A.H.; 46 R.

Obverse.

As on No. 7; date

۱۱۱۴

Reverse.

جلوس

میمنت

دار الجهاد مانوس

۴۶

— — —

.....

Supplementary Collection, Lahore Museum.

In a paper entitled "On some rare Muhammadan Coins" (J.A.S.B., 1895), Colonel Vost published and illustrated a mohur of Aurangzeb struck at a mint read by him as Daru-l-Jihād Tatta. This coin is a facsimile of the mohur, and shows that what was read as Tatta is really the first part of the letter *sin* of *manūs*. However, the style of the coin is distinct from that of the Haidarābād mintage, but its mint if different has yet to be determined.

No. 15. *Æ.*

Mint, Peshāwar.

Date, —.

Obverse.

As on No. 7; date extant but rendered illegible by a shroff mark.

Reverse.

مانوس

میمنت

جلوس

ضرب

پیشاور

The earliest coins of Peshāwar mint recorded in Mr. Burn's Tables are gold and silver issues of Shāh 'Ālam Bahādur. This rupee carries the mint back into the reign of Aurangzeb. Unfortunately the regnal year is illegible, while the *hijri* date has been bored out. The units figure is three.

No. 16. *Æ.* *Weight*, 50; *size*, .6.

Mint, Ahmadnagar.

Date, 1118 A.H.; — R.

Obverse.
غازي شاه
عالم آليرباد
نثار
۱۱۱۸

Reverse.
مانوس
ميدنت
سنه ۵ جلوس
ضرب
احمد نگر

An Ahmadnagar *niṣār* of Aurangzeb is a novelty.

A'ZAM SHĀH.

No. 17. *R.*

Mint, Khujista Bunyād.
Date, 1119 A.H.; 1 R.

Obverse.
ممالک اعظم شاه
شاه ۱۱۱۹
بدولت و جاه باد
سکه
(زد در جهان)

Reverse.
جلوس (شور)
ف
سنه احد
ضرب
خجسته بنیان

The British Museum contains a mohur of A'zam Shāh struck at *Khujista Bunyād*, and there was also one in the White King Cabinet—Catalogue, Part III, No. 3951. A rupee is a novelty.

SHĀH 'ĀLAM BAHĀDUR.

The Rodgers Cabinet in the Lahore Museum contains two coins struck by Shāh 'Ālam Bahādur using his princely name of Mu'azzam Shāh. The first is a rupee struck at Tatta in regnal year one, and bears the following couplet:—

سکه مبارک در هفت کشور زد بر مهر و ماله
شاه جهان ثانی سلطان معظم پادشاه

The second is a rupee, the only certain words on the obverse of which, according to Mr. Rodgers, are:—

.....
شاه غاز
معظم
صاحب قرانی
.....

He described the coin as being unique, but in poor condition, and could not read the mint. The date is regnal year one—see the Rodgers' Catalogue of the Coins of the Mughal Emperors in the Lahore Museum, p. 197, No. 5.

I have seen this specimen, and read the mint as Murshidābād. Subsequently Dr. Taylor informed me that he had this coin, probably of Murshidābād mint, so I think the mint may be put down with certainty as Murshidābād. The following coin is of similar type. It is so badly rubbed as to be almost illegible, but fortunately there is enough to make certain that the mint is 'Azīmābād.

No. 18.

<i>Obverse.</i>	<i>Reverse.</i>
.....	سنة
شاه غاز	احد
معظم	مانوس
قرانی	میدنت
صاحب	آباد جلوس
.....	عظیم

The reverse is exactly similar to that of the 'Azīmābād rupees of Aurangzeb's fiftieth and fifty-first years—I. M. Cat., Pl. XII, No. 1252.

I cannot make even a suggestion as to what the couplet is because both top and bottom lines are illegible on this specimen, and on that of Murshidābād mint just referred to.

In my paper on the Bahāwalpūr coins I described mohurs having the following inscriptions:—

<i>Obverse.</i>	<i>Reverse.</i>
عالم گیر ثانی	جلوس مانوس
۱۱۱۹	میدنت
شاه	مستقر الخلافه
قرانی بہادر	سنة احد
صاحب	ضرب
.....	اکبر آباد

I went on to say, 'They are coins of Şāhib Qirān Bahādur 'Ālamgīr Şānī, struck at Mustaqirru-l-Khilāfat Akbarābād in 1119 (julūs 1), and resemble silver coin No. 3 on page 220 of C. J. Rodgers' Catalogue of 'The Coins of the Mughal Emperors of India in the Lahore Museum.' It would appear that this

rupee was erroneously attributed by Mr. Rodgers to 'Ālamgīr II, and is a coin of Shāh 'Ālam Bahādur I.'

Since writing the above I have seen this silver coin in the Lahore Museum, and find that it is exactly similar in type to the gold coins, and bears the same dates. I figure it here:—

No. 19. *Æ.*

<i>Obverse.</i>	<i>Reverse.</i>
عالم گير ثاني	جلوس مانوس
شاه ۱۱۱۹	ميمنت
قوانی بهادر	مستقر الخلافة
صاحب	سنه احد
.....	ضرب
	اکبرآباد

Rodgers' Cabinet, Lahore Museum.

Mr. Rodgers guessed the bottom line of the obverse as being probably بزرد, and suggested the couplet:—

بزرد سکه صاحب قرانی
 بهادر شاه عالم گير ثاني

It does not read convincingly, but will have to stand till specimens are discovered containing the bottom line intact. I should prefer

سکه زد چو صاحب قرانی
 بهادر شاه عالم گير ثاني

This rare variety cannot have been in circulation long, and rupees of the usual type struck at *Mustaqirru-l-Khilāfat Akbarābād* are known of year 1119, regnal year one.

To sum up, at the commencement of Shāh 'Ālam Bahādur's reign, four places at least—Tatta, Murshidābād, 'Azīmābād (Patna), and Akbarābād (Āgra)—struck coin exhibiting unique legends, the first three in the name of Mu'azzam Shāh, and the fourth in the name of his father 'Ālamgīr. These varieties were quickly superseded by the ordinary types, which endured throughout the remainder of the reign.

No. 20. *Al.* *Weight*, 168; *size*, .85.

Mint, Firozgarh.

Date, 1122 A.H.; 3 R.

<i>Obverse.</i>	<i>Reverse.</i>
بادشاه عاز	مانوس
—————	میمنت
۱۱۲۲	سنه ۳ جلوس
عالم بهادر	ضرب
—————	فیروز گره
سکه مبار	

*Supplementary Collection, Lahore Museum.*No. 21. *R.**Mint, Firozgarh.**Date, 1123 A.H.; 5 R.*

<i>Obverse.</i>	<i>Reverse.</i>
As on No. 20; date 1123.	As on No. 20; date 5. <i>ditto.</i>

These are gold and silver coins of Firozgarh, which is a new Mughal mint, probably in Southern India. Mr. Burn's Tables contain silver coins of Shāh 'Ālam Bahādur and Muhammad Shāh struck at Firoznagar mint, but the name is unmistakably Firozgarh on the specimens now described.

No. 22. *A.* *Weight, 165; size, .8.**Mint, Toragal.**Date, — A.H.; 4 R.*

<i>Obverse.</i>	<i>Reverse.</i>
باد عازی	مانوس
شاه	میمنت
شاه عالم بهادر	سنه ۴ جلوس
—————	ضرب
.....	نور کل

Rodgers' Cabinet, Lahore Museum.

This mint was identified with Nūrkal or Nūrgal by Dr. Taylor, and is a Southern India Mint, the chief town of a *sarkār* of that name in the province of Bījāpūr. Another reading Toragal has been suggested—see N.S. VII, Paper 50—and is probably the correct version. This coin and the following one show that Shāh 'Ālam Bahādur minted gold and silver at Toragal. Coins of Aurangzeb, Kām Bakhsh, and Farrukh Siyar have already been published.

No. 23. *Æ.*

Mint, Toragal.

Date, — A.H.; 4 R.

Obverse.

As on No. 22; dateless.

Reverse.

As on No. 22; date 4.

No. 24. *Æ.*

Mint, Muḥammadābād.

Date, 1121 A.H.; 3 R.

Obverse.

As on No. 22; date 1121.

Reverse.

محمد اباد
 ضرب
 سنه ۳ مانوس
 ميمنت
 جالوس

Government Collection, Lahore Museum.

In the Bahāwalpūr paper I mentioned a mohur of Shāh 'Ālam Bahādur struck at Muḥammadābād mint. I presume that this place is the same as the Muḥammadābād of the unique mohur of Aurangzeb in the Lahore Museum, but do not know if it has been identified. Banāras was not called Muḥammadābād till the time of Muḥammad Shāh.

This rupee differs in its dates and the arrangement of its inscriptions from the mohur, which is dated regnal year one, and is illustrated at Plate II, No. 24A.

No. 25. *Æ.* *Weight*, 330; *size*, .8.

Mint, Shāhjahānābād.

Date, — .

Obverse.

بہادر
 شہ عالم
 شہ عالم

Reverse.

..... نا باد
 ضرب

I publish this copper coin with diffidence, but I think that it may be described with fair certainty as a *dām* of Shāh 'Ālam Bahādur I struck at Dehli (Shāhjahānābād). Two specimens of this coin were discovered at Dehli in a find consisting entirely of Mughal copper coins.

JAHĀNDĀR SHĀH.

No. 26. *R.*

Mint, Bhakhar.

Date, 1124 A.H. ; 1 R.

Obverse.

بادشاه جهان
قران جهاندار ۱۱۲۴
ح
زد سکه ۵ چو صا

Reverse.

مانوس
میمنت
سنه احد جلوس
ضرب
بہکھر

A Bhakhar rupee of Jahāndār Shāh is a novelty.

FARRUKH SIYAR.

No. 27. *R.*

Mint, 'Ālamgīrpūr.

Date, — A.H. ; 2 R.

Obverse.

The usual couplet of Farrukh
Siyar.

Reverse.

مانوس
میمنت
جلوس سنه ۲
ضرب
عالم گیر پور

Supplementary Collection, Lahore Museum.

No. 28. *R.*

Mint, Sa'dnagar.

Date, — A.H. ; 5 R.

Obverse.

As on No. 27 ;
dateless.

Reverse.

مانوس
میمنت
سنه ۵ جلوس
ضرب
سعد نگر

Supplementary Collection, Lahore Museum.

Sa'dnagar is a new Mughal mint. I am indebted to Dr. Taylor for the following information. In Manucci's 'Storia do Mogor' translated by W. Irvine, Vol. II, page 311, note 1,

it is stated that 'Sambhā Jī hid in Kab Kalish's house and was caught there. The capture was reported to Aurangzeb at Akloj (renamed Sa'dnagar).' Akloj, or Aklaj, is a town some 55 miles to the N.-W. of Sholāpūr.

No. 29. Æ. *Weight*, 210 ; *size*, .8.

Mint, Akbarābād.

Date, — A.H. ; 3 R.

Obverse.

فرخ
شاه

.....

Reverse.

اکبر آباد ۳
ضرب

I read this as a copper coin of Farrukh Siyar struck at Akbarābād in regnal year three. It was found at Dehli in the same lot as coins Nos. 4, 5 and 25 of this paper, and copper coins of Salīmābād and Salīmābād-Ajmīr published previously.

The mint name on the reverse is very similar in style to that of coin No. 8, described and illustrated in Mr. C. J. Rodgers' paper 'Rare Mughal Coins' (Journal A.S.B. for 1896), as a coin probably struck by Shāh Jahān at Āgra or Akbarābād. This common peculiarity makes it quite possible that that coin was one of Shāh Jahān II. It was described as unique.

RAFĪ'U-D-DARJĀT.

No. 30. A. *Weight*, 170 ; *size*, 1.

Mint, Akbarābād.

Date, 1131 A.H. ; 1 R.

Obverse.

In double circle containing
one of dots

۱۱۳۱ رفیع الدرجات

برکا شاهنشہ بحر و بر

ت

سکہ زد بہند باہزاران

Reverse.

In double circle containing
one of dots

مستقر الخلفہ اکبر آباد

ضرب

جلوس میمنت مانوس

سکہ احد

This is a gold coin of Akbarābād. It differs from other couplet coins of Rafī'u-d-darjāt that I have seen in being a large, flat coin easily containing the entire legends and the ornamentation around them.

No. 31. *R.**Mint, Kābul.**Date, — A.H. ; 1 R.**Obverse.*

As on No. 30 ; dateless.

Reverse.

جلوس

میمنت

مانوس دارالملک

ضرب

کابل سنه احد

A silver coin of Kābul mint is new.

No. 32. *R.**Mint, Khujista Bunyād.**Date, 1131 A.H. ; 1 R.**Obverse.*

رفیع الدرجات

ت

برکا شاهنشہ افاق

س—ک—ه

۱۱۳۱

زد بهند با هزاران

Reverse.

مانوس

میمنت

احد

سنه جلوس

ضرب

خجسته بنیاد

Government Collection, Lahore Museum.

This is silver coin No. 4 of Rafī‘u-d-darjāt on p. 84 of C. J. Rodgers’ ‘Catalogue of the Coins in the Government Museum, Lahore.’ It is strange that the variation from the usual couplet, افاق in place of بحر و بر, escaped Mr. Rodgers’ discerning eye, and it has remained for Mr. Allan to publish a Khujista Bunyād mohur with the افاق couplet, nineteen years later—see Numismatic Supplement XIII. The mohurs of this mint, published by me in the Bahāwalpūr paper, exhibited the usual couplet.

SHĀH JAHĀN II.

No. 33. *R.**Mint, Tatta.**Date, 1131 A.H. ; 1 R.*

<i>Obverse.</i>	<i>Reverse.</i>
صاحبقران شاه جهان	مانوس
_____	صيفت
با امن و امان تا	احد
۱۱۳۱	سذه
_____	جـلـوس
.....	ضرب
	تذہ

This interesting coin can be nothing but a couplet coin of Shāh Jahān II, and as such is quite a novelty. The mint is Tatta, and there is a Tatta rupee of Shāh Jahān II of the ordinary type in the Lahore Museum.

The couplet is probably something like this:—

سکه زد بر زر با امن و امان
صاحب قران ثاني شاه جهان

MUHAMMAD SHĀH.

In my Bahāwalpūr paper I mentioned half mohurs of Muḥammad Shāh struck at Shāhjahanābād and Sind mints.

The legends of the first are identical with those on the usual type of gold and silver coin struck at Dehli during this reign. The Sind coin is different, and I give a revised reading below.

No. 34. *Al.* Weight, 85; size, .5.

Mint, Sind.

Date, — A H.; 12 R.

<i>Obverse.</i>	<i>Reverse.</i>
In circle	In double circle with one of dots between
محمد شاه بادشاه غازي	حب الزمان
صاحب قران	الامر صا ۱۲
	ضرب
	سند

In spite of the redundant *alif*, the reverse inscription is probably intended to be 'Zarb ul amr ṣāhib uz zamān,' that is, 'struck by order of the lord of the age.' All these Sind half mohurs bore regnal date twelve, and I saw no trace of the *hijri* year on any of them.

No. 35. *A.* Weight, 170 ; size, '8.*Mint*, Aurangābād.*Date*, 115 × A.H. ; 8 R.*Obverse.*

محمد شاه بادشاه غازے
صاحب قران ثانی
سکه مبارکی

Reverse.

اورنگ آباد
ضرب
مانوس
صیمنت
سنه ۸ جلوس

Supplementary Collection, Lahore Museum.

In the Bahāwalpūr paper I mentioned the interesting discovery of a mohur of Muḥammad Shāh of Aurangābād mint, in spite of the fact that from 1100 A.H. the town is known on its coins solely by its honorific epithet 'Khujista Bunyād.' The reason for the existence of this unique specimen is that an old die of Aurangzeb was used for the reverse side, and in fact the reverse is absolutely identical with that of coin I. M. Cat., Vol. III, No. 1246. The *hijri* and regnal years of the specimen now described do not agree.

At Bahāwalpūr I found a rupee, the obverse of which had been struck from a die of Shāh 'Ālam Bahādur, and the reverse of Shāhjahanābād mint, was plainly of Shāh 'Ālam II.

No. 36. *A.**Mint*, 'Ālamgīrpūr.*Date*, — A.H. ; 30 R.*Obverse.*

محمد شاه
بادشاه غاز
سکه مبارکی

Reverse.

مانوس
صیمنت
۳۰ جلوس
سنه
ضرب
عالم گدو پور

An 'Ālamgīrpūr rupee of Muḥammad Shāh is new.

No. 37. *A.**Mint*, Chīnāpatan.*Date*, — A.H. ; 8 R.

Obverse.
As on No. 36;
dateless.

Reverse.

مانوس
میمنت
۸ جالوس
سـذـه
ضـرب
چنداپتن

Star above *jīm* of *julūs*.

This specimen is identical with coin No. 2516 in I. M. Cat., Vol. III, but here the mint is undoubtedly Chīnāpatan, and the regnal date eight makes the reign certain.

No. 38. *R.*

Mint, Derajāt.
Date, 1160 A.H.; 30 R.

Obverse.
As on No. 36;
date 1160.

Reverse.

مانوس
میمنت
۳۰ جالوس
سـذـه
ضـرب
دیرجات

In Bahāwalpūr I found several rupees of Muḥammad Shāh struck at Derajāt, but all were of the same dates, 30 R. and 1160 A. H.

No. 39. *R.*

Mint, Sironj.
Date, — A.H.; 6 R.

Obverse.
As on No. 36;
dateless.

Reverse.

مانوس
میمنت
جلوس
ضرب
سروانج ۶ سنه

This is a rupee of Sironj mint, regnal year six.

No. 40. *R.**Mint*, Lāhor.*Date*, — A.H.; 2 R.*Obverse.*

محمد شاه بهادر

—————

بادشاه غاز

—————

سکه مبار

Reverse.

دارالسلطنة لاہور

ضرب

سنه ۲

میدانت

جلوس مانوس

This specimen was sent to me from Rawalpindi. Although it was of good workmanship and in excellent condition, I could not but regard it as a freak because of the unique combination Muhammad Shāh Bahādur. But I subsequently found two more like it at Bahāwalpūr, so presume that it must be regarded as a definite type of Muhammad Shāh's coinage. There is no trace of a *hijri* date on any of the three specimens, and though on the reverse of two the date is clear, it is difficult to read. It may be two, four, twenty-two, or twenty-four. I am inclined to read it as two, and to consider what looks like a tens figure, to be a peculiarly shaped ornament.

AHMAD SHĀH BAHĀDUR.

No. 41. *R.**Mint*, Bhakhar.*Date*, 1162 A.H.; 1 R.*Obverse.*

احمد شاه

—————

بادشاه غاز

—————

سکه مبار ۱۱۶۲

Reverse.

مانوس

میدانت

احد

سنه جلوس

ضرب

بہکھر

No. 42. *R.**Mint*, Dera.*Date*, 1162 A.H.; 2 R.

Obverse.
As on No. 41 ;
date 1162.

Reverse.
مانوس
میمنت
سنه ۲ جلوس
ضرب
دیره

No. 43. *R.*
Mint, Derajāt.
Date, 1161 A.H. ; 1 R.

Obverse.
As on No. 41 ;
date 1161.

Reverse.
مانوس
میمنت
احد
سنه جلوس
ضرب
دیرجات

The above are three coins of Aḥmad Shāh struck at Bhakhar, Dera, and Derajāt mints respectively. No. 41 was published in my Bahāwalpūr paper as being a coin of Muḥammad Shāh of Bhakhar mint, but I now find that the name is unmistakably Aḥmad Shāh, and Bhakhar coins of Muḥammad still remain to be found. The remarkable thing about these three coins is the absence of the usual title Bahādur after Aḥmad Shāh.

Coin No. 45 is a Dera rupee of Aḥmad Shāh Bahādur, dated 1162 A. H. ; 2 R, and coin No. 46 is a rupee of the same emperor struck at Derajāt in 1161 A. H. ; 1 R. Their dates are the same as those of Nos. 42 and 43, respectively, and it is strange that rupees were struck in the same places in the same years, some of Aḥmad Shāh, and some of Aḥmad Shāh Bahādur. Can the above three coins be issues of Aḥmad Shāh Durrāni ? They are of poor workmanship, but are Mughal, and not Durrāni in type and style.

Three other Dera rupees of this type bear dates 1163 A.H., 2 R, — A.H., 3 R. and — A.H., 5 R.

Another coin, the present attribution of which appears to me doubtful, is the following rupee.

No. 44. *R.*
Mint, Kashmīr.
Date, 1166 A.H. ; 6 R.

<i>Obverse.</i>	<i>Reverse.</i>
سکه زد بر زر بفضل اله شاه عالم پناه احمد شاه ۱۱۶۶	مانوس میمنت ۶ سنه جلوس ضرب کشمیر

This is a counterpart of coin No. 1 on p. 167 of Part II of the Rodgers' Collection Catalogue (Lahore Museum), but that coin is dated 1162 A.H., 2 R. Mr. Rodgers attributed it to Ahmad Shāh Durrāni, and described it as unique. I found two duplicates in Bahāwalpūr.

I do not know the exact state of politics in Kashmīr in the years 1162 and 1166 A.H., but from the internal evidence of the coins themselves I think their attribution to the Mughal Ahmad Shāh is more probable for the following two reasons. In the first place the coin is distinctly Mughal in style. Then again the couplet appears on rupees of Ahmad Shāh struck at Imtiyāzgarh where the Durrāni certainly never penetrated, and could have had no influence. The Imtiyāzgarh coin is No. 4082 in the Third Part of the White King Catalogue, and No. 2104 in Vol. III of the I. M. Catalogue, and is illustrated in both works.

Kashmīr rupees of Ahmad Shāh Durrāni, bearing his usual couplet, are not uncommon. Silver coins were struck at Kashmīr by 'Ālamgīr II, the successor of Ahmad Shāh Bahādur.

No. 45. R.

Mint, Dera.

Date, 1162 A.H.; 2 R.

<i>Obverse.</i>	<i>Reverse.</i>
(احمد شاه بهادر ————— ۱۱۶۲ بادشاه غاز ————— سکه صبار	مانوس میمنت ۲ سنه جلوس ضرب دیرة

No. 46. R.

Mint, Derajāt.

Date 1161 A.H.; 1 R.

Obverse.
As on No. 45 ;
date, 1161.

Reverse.
مانوس
میمنت
احد
سده جلوس
ضرب
دیوجات

I published a Derajāt mohur of Aḥmad Shāh Bahādur in the Bahāwalpūr paper.

No. 47. R.

Mint, Sīkākul.
Date, — A.H. ; 2 R.

Obverse.

۱۱۶ +
سده
احمد شاه
←
بهادر بادشاه غاز
—————
سکه صبار

Reverse.

مانوس
میمنت
۲
سده جلوس
ضرب
سیکا کل

Supplementary Collection, Lahore Museum.

This is a rupee of Aḥmad Shāh Bahādur struck at Sīkākul mint in the second year of his reign. The obverse of this specimen is strikingly different from that of the usual type. I published this Mughal mint in the Bahāwalpur paper, the coin being a mohur of Farrukh Siyar.

Dr. Taylor has referred me to p. 379 of Malleson's 'French in India,' showing that at the time this coin was struck there seems to have been a good deal of political activity in the districts near Chicacole.

‘ĀLAMGĪR II.

No. 48. R.

Mint, Akbarābād.
Date, 1168 A.H. ; 1 R.

<i>Obverse.</i>	<i>Reverse.</i>
شاه عالم گير ۱۱۶۸	جلوس مانوس میمنت
————— بادشاه غاز ————— سکه مبار	مستقر الخلافه سنه احد ضرب اکبر آباد

This is the only rupee of 'Ālamgīr II I know of bearing this type of obverse.

No. 49. *R.*

Mint, Bikānir.
Date, 1167 A.H. ; 1 R.

<i>Obverse.</i>	<i>Reverse.</i>
عالم گير ۱۱۶۷	بلده بکانر ضرب
————— بادشاه غاز ————— سکه مبار	میمنت مانوس احد جلوس سنه

I published this Baldat Bikānir rupee in my Bahāwalpūr paper, but did not describe it. Out of a large number of 'Baldat-i-Safa' coins, only one showed that the name was really Baldat Bikānir. 'Baldat-i-Safa' is written thus *بلده سفا*. The unique coin added a slant stroke to the loop, two more letters at the end, and two dots thus *بلده بکانر*.

No. 50. *R.*

Mint, Dera.
Date, 1173 A.H. ; 7 R.

<i>Obverse.</i>	<i>Reverse.</i>
عالم گير ۳۷۱۱	مانوس میمنت
————— بادشاه غاز ————— سکه مبار	سنه ۷ جلوس ضرب دیره

This is a rupee of 'Ālamgīr II struck at Dera. The *hijri* date is reversed, but the coin is obviously dated 1173 A.H.; 7 R.

No. 51. R.

Mint, Multān.

Date, 1172 A.H.; 7 R.

Obverse.

عالم گیر

۱۱۷۲

←—————

بادشاه غاز

—————ک

سکه مبار

Reverse.

مانوس

میمنت

دارالامان

جلوس ۷ سنه

ضرب

ملتان

Flower above *sin* of *julūs*.

This coin is a single specimen showing that 'Ālamgīr II struck coins at Multān in 1172 A.H. as well as 1173 A.H.—see the Bahāwalpūr paper. There I wrote that these Multān coins of 'Ālamgīr II bear a mint mark on the reverse. But this is only the sprig or flower characteristic of the Multān issues from the time of Aurangzeb downwards.

No. 52. R.

Mint, Mumbai.

Date, — A.H.; 2 R.

Obverse.

As on No. 51; date 116x.

Reverse.

مانوس

میمنت

سنه ۲ جلوس

ضرب

مبئی

This is a Mumbai rupee of 'Ālamgīr II. It is of the imperial type, and not of the fashion struck by the Hon. E. I. Co.

No. 53. R.

Mint, Shāhjahānābād.

Date, — A.H.; 4 R.

<i>Obverse.</i>	<i>Reverse.</i>
عالم گیر	(? خلد ملکہ و سلطنتہ)
—————	—————
شاه جهان باد	دارالخلافہ شاه جهان اباد
شاه	ضرب
زر چو مہر منیر	جلوس میمنت مانوس
سکہ	۴
یافت رونق از	سکہ

Supplementary Collection, Lahore Museum.

This is a revised reading of a rupee of 'Ālamgīr II published in the Bahāwalpūr paper as bearing a new couplet. On further consideration I read the couplet as:—

سکہ زر یافت رونق چو مہر منیر
از شاه جهان بادشاہ عالم گیر

The reverse is similar to that of coin I. M. Cat., Vol. III, No. 2186.

SHĀH 'ĀLAM II.

No. 54. R.

Mint, Gohad.

Date, 1190 A.H.; 18 R.

<i>Obverse.</i>	<i>Reverse.</i>
دین محمد عالم باد	مانوس
۱۱۹۰	میمنت
شاه	جلوس
فضل الہ حامی	سکہ ۱۸
سکہ	ضرب
سکہ زد بر ہفت کشور	گود

Above of ح the حامی is a pistol.

Gohad is a mint that does not appear in Mr. Burn's Tables, but is mentioned in the list of mints of the Ellis Collection—Numismatic Supplement III. The rupee is well executed, and perfectly legible.

No. 55. R.

Mint, Isma'īlgarh.

Date, 1203 A.H.; 31 R.

Obverse.

As on No. 54, but different arrangement and ornaments ; date 1203.

Reverse.

ا (س) معیل (گوا)
ضرب
میمنت مانوس
جلوس سنه ۳۱

This is a rupee of Isma'īlgarh mint. The coin is legible and of good workmanship.

Copper coin No. 50 on p. 249 of Mr. Rodgers' Catalogue of the Mughal Coins in the Lahore Museum, is undoubtedly of Isma'īlgarh mint.

MUHAMMAD AKBAR II.

No. 56. *R.*
Mint, Gohad.
Date, 1251 A. H. ; 30 R.

Obverse.

محمد اکبر شاه بادشاه غاز
۱۲۵۱

صاحب قران ثا
سکه مبارک

Reverse.

مانوس
میمنت

سنه ۳ جلوس
ضرب
گوه

Umbrella over the ب of صاحب ; pistol over the ج of جلوس.

See also No. 54. Gohad rupees of Shāh 'Ālam II, and of Muḥammad Akbar II, are mentioned by Mr Burn in his list of the rarer coins in the Ellis cabinet—Numismatic Supplement III, Paper IV—but neither has been described before. Both are of good and legible workmanship.

No. 57. *R.*
Mint, Dholpūr . . . rāj Gohad.
Date, 1225 A.H. ; 4 R.

Obverse.

As on No. 56. Umbrella over صاحب of ب

Reverse.

مانوس
میمنت
جلوس ۴ سنه
ضرب
راج گوه
دهولپور طعمه
دهولپور

Pistol over second half of word دهولپور

A Dholpūr rupee of Muḥammad Akbar II was also included in Mr. Burn's list just mentioned. For the word following Dholpūr, Dr. Taylor suggests طمذیچہ, a Turkish word meaning pistol, but my specimen, which is quite clear, does not bear out this reading.

BAHĀDUR SHĀH II.

No. 58. Æ. *Weight*, 170; *size*, .8.

Mint, Haidarābād.

Date, 1274 A.H.; 18 R.

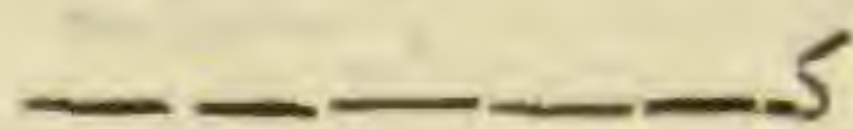
Obverse.

محمد بهادر شاه



۱۲۷۴

بادشاه غاز



سکه مبار

Reverse.

جلوس

۱۸

میمنت

مانوس فرخنده بنیاد

ضرب

(حیدر اباد)

This is a copper coin of Bahādur Shāh II of Haidarābād mint. The White King Collection contained a gold coin,—Catalogue, Part III, No. 4203,—and a silver coin of the same dates and similar inscriptions as this copper coin, was published by Mr. Longworth Dames in his paper 'Some Coins of the Mughal Emperors,' *Numismatic Chronicle*, Vol. II, pp. 275-309.

I only publish this coin because the mint has been recognized by Mr. Burn in his Tables as one of Bahādur Shāh II. On the other hand the power of this emperor was entirely bounded by the walls of Fort Dehli, and the coins struck elsewhere in his name are not even of the type of those struck in Shāhjahānābād, that is, they are not of the imperial type. I should prefer to see only the Shāhjahānābād coins recognized as being imperial issues, while those struck at other mints designated as what they really are, the issues of independent States.

Since writing the above I have come across the following rare coins, on which I add brief notes. The mohurs and rupees are of the usual weight and size.

SHĀH JAHĀN.

No. 59. A; Allahābād mint; date 1052 A.H., 15 R. Square areas type as illustrated in I.M. Catalogue, Vol. III, Plate X, No. 918, only name of mint in bottom margin.

No. 60. *A*; Gulkanda mint; dateless. Type as in I.M. Catalogue, Vol. III, Plate X, No. 947.

No. 61. *A*; Kābul mint; date 1040 A.H. Type as in I.M. Catalogue, Vol. III, Plate X, No. 910.

SHĀH JAHĀN II.

No. 62. *A*; Burhānpūr mint. Ordinary type and dates.

AḤMAD SHĀH BAHĀDUR.

No. 63. *R*.

Mint,—Gwāliār.

Date,—A.H.; 3 R.

Obverse.

احمد شاه

←

بہادر بادشاہ غاز

—————

سکہ صبار

Reverse.

مانوس

صیغہ

سنہ ۳ جلوس

ضرب

گوالیار

SHĀH 'ĀLAM II.

No. 64. *Æ*. *Weight*, 80; *size*, .7.

Mint,—Islāmābād Mathurā.

Date,—A.H.; 24 R.

Obverse.

شاه عالم

←

باد شاه غاز

.....

Reverse.

اسلام آباد متھرا

ضرب

جلوس ۲۴

Sword over *sīn* of *julūs*.

Mr. Burn mentions a copper coin of Shāh 'Ālam II of Islāmābād Mathurā mint as one of the rare coins in the Ellis Cabinet,—N.S. III,—but it has so far not been described. A rupee is contained in Mr. Burn's Tables, and a muhar has just been acquired by Mr. Nelson Wright.

The ordinary Islāmābād silver and copper coins of Shāh 'Ālam II are not uncommon.

90. —ON SOME COPPER COINS OF THE 'ĀDIL SHĀHĪ
DYNASTY OF BĪJĀPŪR.

In the month of August last (1910) Mr. Henry Cousens, M.R.A.S., then Superintendent of the Archæological Survey of India, Western Circle, forwarded to me 249 copper coins, sent him from Bījāpūr, the well-known capital of the District of that name in the Southern Division of the Bombay Presidency. Though with an occasional good specimen amongst them, most of the coins were in poor condition, battered and worn. Seven of them were square, all the others being round. From this material, sufficient indeed in quantity, but of inferior quality, Mr. Cousens set himself a task of reconstruction. Skilfully piecing together a bit from one coin and a bit from another, he was able finally to build up both the Obverses and the Reverses of nine different types of coin. As I now write, photographs of the coins thus reconstructed, and the copper coins themselves, lie before me, and a comparison of both reveals how remarkably true to the originals are these reconstructions. Not a stroke nor a dot is lacking, and the proportions and shapes of the letters have been reproduced with an almost absolute fidelity. Thus the accompanying Plate of these reconstructed coins may confidently be accepted as exhibiting facsimile representations of the original dies.

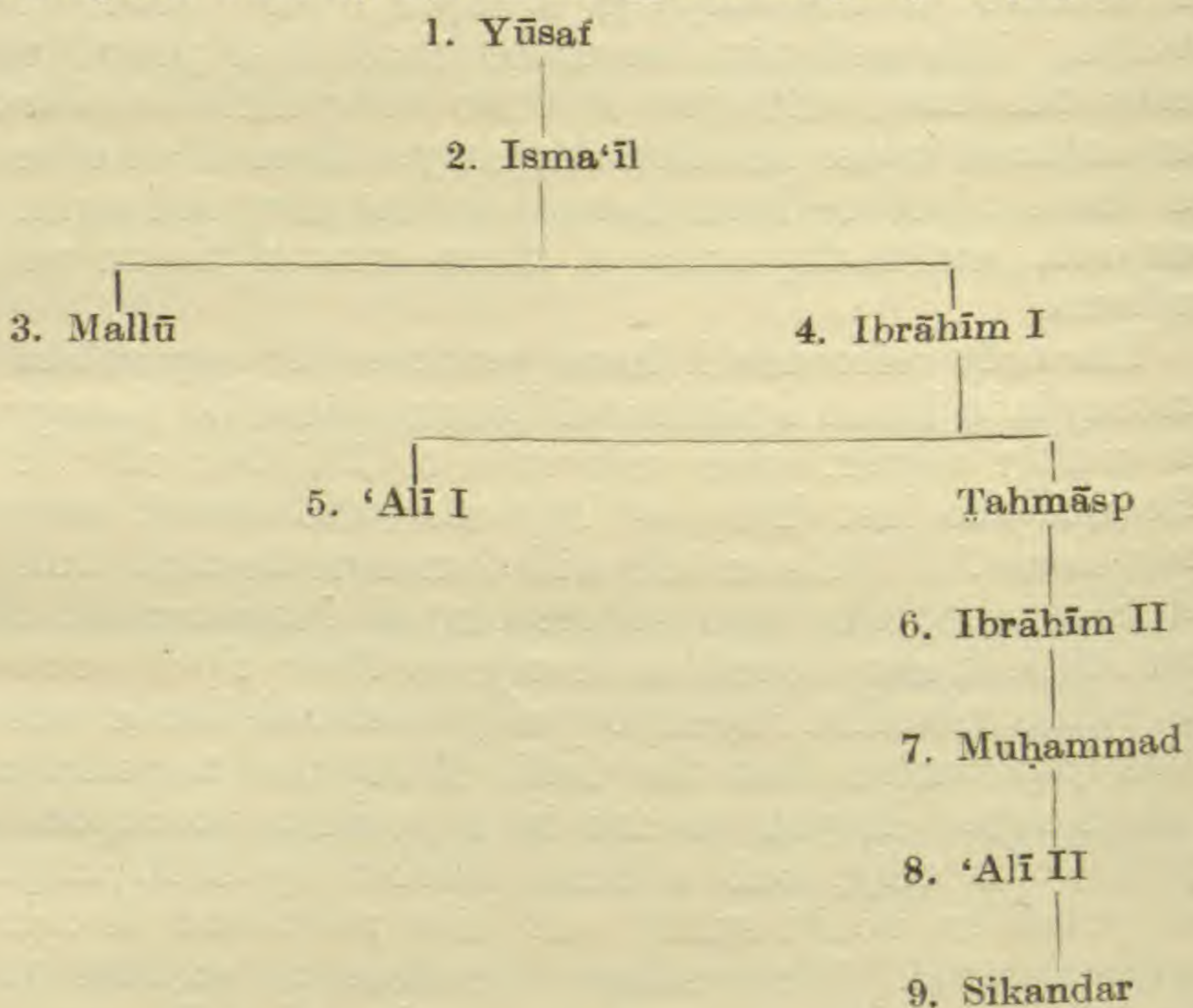
I have said that the coins came from Bījāpūr, and the question at once suggests itself, Are these then coins of a distinctive Bījāpūr currency? On this point the coins themselves are tantalizingly reticent, giving no clue as to the affinities of the kings who caused them to be struck. Not one records the place of mintage, and with eight exceptions they are dateless. They do, however, give the name (though never the father's name) of the regnant king, and hence we learn that the 249 coins were struck during the reigns of just five kings, an 'Alī, an Ibrāhīm, a Muḥammad, a second 'Alī and a Sikandar. But, when the names are written in this order, anyone familiar with the history of Bījāpūr will at once see that these are the very names of the last five kings of the 'Ādil Shāhī Dynasty. This fact of itself affords strong presumptive evidence in favour of the attribution of the coins to that dynasty. Confirmatory evidence is supplied by the dates on the eight dated coins. Six are of the reign of Ibrāhīm, and the years recorded are 1022 and (perhaps) 1024, 1025, years thus that fall within the reign of Ibrāhīm II of Bījāpūr (A.H. 988—1037). Two other coins, struck in the name of the Sultān Sikandar, are dated A.H. 1086, 1087, and Sikandar of Bījāpūr reigned from A.H. 1083 to 1097. Then, too, the inscription on one of the types (No. IX) bears associated with the king's name 'Alī the title 'Ādil Shāh, a title distinctive of the dynasty that held sway in Bījāpūr from A.H. 895 till

- | | | | |
|---------------------|---------|-------------------|-------------------|
| 3. Mallū 'Ādil Shāh | reigned | A.H. 941 [7 mos.] | (A.D. 1534—1535). |
| 4. Ibrāhīm I | ,, | A.H. 941—965 | (A.D. 1535—1557). |
| 5. 'Alī I | ,, | A.H. 965—988 | (A.D. 1557—1580). |
| 6. Ibrāhīm II | ,, | A.H. 988—1037 | (A.D. 1580—1627). |
| 7. Muḥammad | ,, | A.H. 1037—1067 | (A.D. 1627—1656). |
| 8. 'Alī II | ,, | A.H. 1067—1083 | (A.D. 1656—1672). |
| 9. Sikandar | ,, | A.H. 1083—1097 | (A.D. 1672—1686). |

The last king, Sikandar, deposed by Aurangzēb in A.H. 1097, died three years later.

It may be noted that the entire period of the rule of the dynasty was a little more than 200 lunar years, or from A.H. 895 to 1097, and a little less than 200 solar years, or from A.D. 1489—1686.

Genealogical Tree of the 'Ādil Shāhī kings of Bījāpūr.



This table shows that Ibrāhīm I was a brother of Mallū, and Ibrāhīm II a nephew of 'Alī I, and that with these two exceptions each king was a son of his immediate predecessor on the throne.

Controversy still gathers round the question as to the parentage of Yūsaf, the founder of the dynasty, but, whence-soever sprung, he rose to influence at the court of Sultān Muḥammad Shāh III of the Bahmanī dynasty of Kulbarga, who, when appointing him Governor of the Bījāpūr District, conferred on him the title of 'Ādil Khān. On this Sultān's death internal dissensions hastened the disintegration of the Bahmanī kingdom. "Yūsaf 'Ādil Khān, collecting around

[N.S.]

“him a strong force of Turks and Mughals, and feeling himself
 “pretty secure, began by degrees to sever his connexion with
 “the capital; and, finally, in A.D. 1489 he openly declared his
 “independence by ordering the *Khuṭba* to be read in the
 “mosques in his own name.”¹

Of the first four kings of this Dynasty no coins have as yet been discovered, but of course it by no means follows that no coins were struck by them. The coins hitherto found are of ten several types, nine of which Mr. Cousens has “reconstructed.” The one additional type is represented by only five specimens, and these of a coarse and clumsy make. The ten types range over the last five reigns. *Two* should in all probability be attributed to ‘Alī I, *three* to Ibrāhīm II, *three* to Muḥammad, *one* to ‘Alī II and *one* to Sikandar. Of each type we now proceed to give a detailed description.

TYPE I.

Number of specimens 5 (Cousens).

1. Reign: ‘Alī I: A.H. 965—988.
2. Diameter: (a) .8; .75; (b) .65 inch.
3. Weight: (a) 186, 182, 174, 157 grains.
 (b) 117 grains.

Obverse:

علي ابن ابي طالب

arranged thus:—

ابن

علي ابي

طالب

On the smallest of the five coins the *علي* is written *ابى*, and on the lowest line.

Reverse:

اسد الله الغالب

arranged thus:—

الله

اسد

الغالب

TYPE II (*Plate XXXIX, Figure 1*).

- Number of specimens 27: (a) 10 (Cousens); 2 (Thanawala).
 (b) 5 (Cousens); 1 (Thanawala).
 (c) 9 (Cousens).

¹ Cousens: *Guide to Bījāpūr*, 2nd Edn., p. 115.

1. Reign: 'Alī I: A.H. 965—988.
2. Diameter: (a) .75; (b) .7; (c) .55 inch; also of one square coin the side measures .5 inch.
3. Weight: (a) 177; (b) 110; (c) 52 grains; and of the square coin 58 grains.

Obverse: علي ابن ابي طالب
arranged as in *Fig. 1.*

Reverse: اسد الله الغالب
arranged as in *Fig. 1.*

'Alī I, as a convinced *Shī'a* (his father was a Sunni), would delight to associate himself in every possible way with 'Alī the fourth, or, as *Shī'as* maintain, the first rightful *Khalīfa*. Now this 'Alī *Khalīfa* was a son of Abū Tālib, and hence the king 'Alī, by striking on his coins the words 'Alī son of Abī (= Abū) Tālib, was suggesting at least his oneness with the revered *Khalīfa*.

On the Reverse of this 'Alī's coins he is styled *Asad Allah*, 'the Lion of God.' It is noteworthy, in this connexion, that a noble bearing the title *Asad Khān* was married to a sister of the king. He was "one of the greatest men in *Bījāpūr* story, "and since his death, for some reason or other, he is still "remembered and treated as a *walī* or saint."¹

TYPE III (*Plate XXXIX, Figure 2*).

Number of specimens 46: (a) 18 (*Cousens*); 4 (*Thanawala*).
(b) 22 (*Cousens*).
(c) 2 (*Cousens*).

1. Reign: *Ibrāhīm II*: A.H. 988—1037.
2. Diameter: (a) .75; (b) .65; (c) .55 inch.
3. Weight: (a) 172 grs. (average of 22 specimens).
(b) 115 grs. (average of 22 specimens).
(c) 60 grs. (average of 2 specimens).

Obverse: ابراهيم بلا الهى
arranged as in *Fig. 2.*

Reverse: غلام علي مرتضى
arranged as in *Fig. 2.*

A slight variant of this Type is preserved to us in a single coin. Its distinguishing feature is a four-petalled cruciform

¹ *Cousens: op. cit.*, p. 135. See also *Briggs's Ferishta*: III, 101, 102.

flower, markedly in evidence at the middle of both the Obverse and the Reverse. The long strokes of the *lām* and *alif* of *غلام* on the Reverse are not upright, but inclined, so as to form nearly a right angle, thus *غلام*, and the flower ornament comes just above their point of intersection. The exact arrangement of the words on the Obverse cannot be clearly determined from the solitary specimen to hand, but certainly the arrangement here differs considerably from that of Type III.

TYPE IV (*Plate XXXIX, Figure 3*).

Number of specimens 50 : (a) 12 (Cousens); 1 (Thanawala).
 (b) 17 (Cousens); 1 (Thanawala).
 (c) 19 (Cousens).

1. Reign: Ibrāhīm II : A.H. 988—1037.
2. Diameter: (a) .75; (b) .7; (c) .55 inch.
3. Weight: (a) 174 grs. (average of 13).
 (b) 123 grs. (average of 18).
 (c) 73 grs. (average of 19).

Obverse : *ابراهيم فلا ادلى*
 arranged as in *Fig. 3*.

Reverse : *غلام علي مرتضى*
 arranged as in *Fig. 3*.

TYPE V (*Plate XXXIX, Figure 4*).

Number of specimens 6 : (a) 2 (Cousens); 1 (Thanawala).
 (b) 2 (Cousens); 1 (Thanawala).

1. Reign: Ibrāhīm II : A.H. 988—1037.
2. All the 6 specimens are square;
 length of side: (a) .65; (b) .6 inch.
3. Weight: (a) 183 grs. (average of 3).
 (b) 120 grs. (average of 3).

Obverse : *ابراهيم بلا ادلى*
 arranged as in *Fig. 4*.

Reverse : *غلام علي مرتضى ١٠٢٢*
 arranged as in *Fig. 4*.

After many attempts to decipher them, the last two words on the Obverse of Types III, IV, and V still remain doubtful. They may possibly read *بلا اذنى*, *bilā athnī*, 'without a second,'

'the unique,' but certainly the penultimate letter seems on every specimen to be not *nūn*, but *lām*.

The Reverse legend is *غلام علي مرتضى*. *Murtadā*, 'the Chosen,' is a title frequently applied to 'Alī, the *Khalīfa*, and *Ibrāhīm* II, himself a *Shī'a*, might thus gladly style himself 'Slave of 'Alī the Chosen.'

All these six coins are dated. On the three heavier the year is 1022, 102 [? 4], 102 [? 4], and on the three lighter 1022, 102 [? 5], and xxxx.

TYPE VI (*Plate XXXIX, Figure 5*).

Number of specimens 70 : (a) 1 (Thanawala).

(b) 54 (Cousens); 3 (Thanawala).

(c) 11 (Cousens); 1 (Thanawala).

1. Reign: *Muḥammad* : A.H. 1037—1067.

2. Diameter : (a) .85 (Thanawala); (b) .8; (c) .7 inch.

3. Weight : (a) 267 grs. (Thanawala).

(b) 179 grs. (average of 57).

(c) 117 grs. (average of 12).

Obverse and *Reverse* legends together make the following couplet, arranged as in *Fig. 5* :—

جهان زاین دو محمد گرفت زینت و جاه

یکی محمد مرسل دوم محمد شاه

The world from these two *Muḥammads* received beauty and dignity ;

The first is *Muḥammad* the Apostle, the second *Muḥammad Shāh*.

One of the queens of *Muḥammad Shāh* was named *Tāj Jahān Begam*, and possibly there may be a veiled allusion to this lady in the distich inscribed on the king's coin. The lines would then bear this interpretation :—

The world (*Jahān*) received beauty and dignity from *Muḥammad* the Apostle, the queen (*Tāj Jahān*) from *Muḥammad Shāh*.

Or can the statement that *Muḥammad Shāh* conferred beauty and dignity on the world find its explanation in the marvellous tomb that this *Sultān* began to build soon after his accession to the throne? Dwarfing every other edifice in *Bijāpūr*, the *Gol Gumbadh* covers a larger area than any other dome in the world. Second to it, but *longo intervallo*, comes the Pantheon at Rome.

Probably, however, we had better not seek too exact a justification of the distich on these coins, and just be content

to regard it as a felicitous sample of the florid verses that the Persian court-poets have always been willing to supply for the gratification of their royal patrons.

TYPE VII (*Plate XXXIX, Figure 6*).

Number of specimens 16 : (a) 10 (Cousens); (b) 6 (Cousens).

1. Reign: Muḥammad: A.H. 1037—1067.
2. Diameter : (a) .75 ; (b) .65 inch.
3. Weight : (a) 173 grs. (average of 10).
(b) 115 grs. (average of 6).

Obverse and *Reverse* together furnish the same couplet as on Type VI, but arranged as in *Fig. 6*.

TYPE VIII (*Plate XXXIX, Figure 7*).

Number of specimens 27 : (a) 9 (Cousens); 2 (Kotwal).
(b) 13 (Cousens); 1 (Kotwal).
(c) 1 (Cousens).
(d) 1 (Cousens).

1. Reign: Muḥammad: A.H. 1037—1067.
2. Diameter : (a) .75 ; (b) .65 ; (c) .5 ; (d) .5 inch.
3. Weight : (a) 174 grs. (average of 11).
(b) 118 grs. (average of 14).
(c) 66 grs.
(d) 56 grs.

Obverse and *Reverse* together furnish the same couplet as on Type VI, but arranged as in *Fig. 7*.

This Type is distinguished by an outlined leaf, enclosing nine dots, set in the middle of both the *Obverse* and the *Reverse*.

TYPE IX (*Plate XXXIX, Figure 8*).

Number of specimens 18 : (a) 8 (Cousens); 5 (Thanawala);
3 (Kotwal).
(b) 1 (Cousens).
(c) 1 (Cousens).

1. Reign: 'Alī II : A.H. 1067—1083.
2. Diameter : (a) .75 ; (b) .6 ; (c) .55 inch.
3. Weight : (a) 179 grs. (average of 16).
(b) 116 grs.
(c) 58 grs.

Obverse : (?) علي عادل شاه سنه
arranged as in *Fig. 8*.

Reverse :

غلام حیدر صفدر

arranged as in *Fig. 8.*

The word *سید* on the Obverse is a conjectural, though probable, reading. Above it comes on some specimens what seems to be a date, perhaps ۱۰۶۸, but only the two middle figures are quite clear. The year 1068 Hijri was the second regnal year of 'Alī II.

Haidar, 'the Lion,' is one of the many honourable epithets bestowed on that 'Alī whom the *Shī'*as revere so profoundly. Thus by the Reverse legend, 'Slave of Haidar, the Rank-breaker,' 'Alī II, the *Shī'*a king, proclaimed his fealty to 'Alī the *Khalīfa*.

TYPE X (*Plate XXXIX, Figure 9*).

Number of specimens 16: (a) 5 (Cousens); 4 (Thanawala);
1 (Kotwal).

(b) 3 (Cousens).

(c) 3 (Cousens).

1. Reign: Sikandar: A.H. 1083—1097.
2. Diameter: (a) .75; (b) .65; (c) .6 inch.
3. Weight: (a) 178 grs. (average of 10).
(b) 117 grs. (average of 3).
(c) 58 grs. (average of 3).

Obverse :

سید ۱۰۸۶ سلطان سکندر قادری

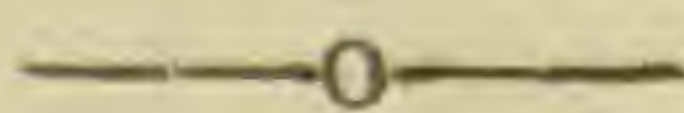
arranged as in *Fig. 9.**Reverse :*

خسرو گیتی ستان

arranged as in *Fig. 9.*¹

On another specimen the date recorded on the Obverse is ۱۰۸۷.

The title on the Reverse, "*Khusrau* (Chosroes), the Conqueror of the World," is also present on some of *Nādir Shāh's* Persian coins, and on some of the *Durrānī* king *Maḥmūd Shāh*.



From the foregoing description it is clear that the *Bijāpūr* copper currency consisted for the most part of coins of three denominations, weighing, respectively, about 60, 120, and 180 grains. Evidently, however, some of the coins that were

¹ The first two letters of the word *خسرو* were not decipherable on the coins from which Mr. Cousens made his "reconstruction." Both these letters are, however, distinctly seen on the specimen that Mr. Kotwal kindly sent me for inspection.

issued did not fall within this range of weight. Of these a notable example is Mr. Thanawala's beautiful specimen struck in the reign of Muḥammad Shāh and weighing 267 grains. Too few coins are yet known to warrant a detailed statement as to the metrology of the Bījāpūr coinage, but for the present the 100-*ratī* weight (or about 180 grains) may be held to have been the standard for the normal heavy coin. The normal light coin was only one-third as heavy; and the intermediate coin was in weight the arithmetic mean of the other two.

GEO. P. TAYLOR.

AHMADĀBĀD :

20th October, 1910.

91.—ON THE BĪJĀPŪR LĀRĪ OR LARIN.

That silver coins of a type similar to the copper were current in the territories of the 'Ādil Shāhī monarchs seems every way probable, but no specimens are as yet forthcoming. A silver currency of quite a different, and indeed of foreign, pattern was, however, in existence, the curious Larin currency, which, originating in the district of Lār at the head of the Persian Gulf, and thence deriving its name, was adopted by the kings of Bījāpūr, and, in a somewhat variant, the *fish-hook*, form, by the kings of Kandy in Ceylon. Describing this coin Pietro della Valle (1614—1626) writes :—

“The lari is a piece of money that I will exhibit in
 “Italy, most eccentric in form, for it is nothing but a
 “little rod of silver, of a fixed weight, and bent double
 “unequally. On the bend it is marked with some
 “small stamp or other. It is called Lari, because it was
 “the peculiar money of the Princes of Lar, invented by
 “them when they were separated from the kingdom of
 “Persia.”¹

Jean Baptiste Tavernier indicates the district in which, at his time (1640—1667), this currency obtained.

“The Larins are one of the ancient coins of Asia; and
 “though at this day they are only currant in Arabia and
 “at Balsara, nevertheless, from Bragdatt to the Island
 “of Ceylan, they traffick altogether with the Larin, and
 “all along the Persian Golf.”²

As the territory of the monarchs of Bījāpūr embraced a large portion of the Konkan littoral, it was probably with a

¹ Quoted in Yule and Burnell's "Hobson-Jobson," s.v. Larin.

² Tavernier: Travels in India: Made English by J. P., 1678, pages 1, 2.

view to meeting the local demand for this strange coast-money that they caused larins to be struck in their own names. That these 'Ādil Shāhī larins were at any time current over the whole extent of the 'Ādil Shāhī dominions is very doubtful. Their circulation was, one may well believe, restricted to a narrow tract of country bordering the sea.

The larin being merely a piece of silver wire, or slender rod, doubled on its middle, affords but a scanty surface for receiving an inscription. Hence many letters on the coins are incomplete. However, by collating several specimens it has become possible to decipher the "some small stamp or other." One prong of the coin seems to read—

سلطان علي عادل شاه

and the other ضرب لاري دانگي سنه

The Sultān 'Alī 'Ādil Shāh struck the lārī coin, year.....

One cannot be quite certain, however, that either ضرب or دانگ is a correct rendering of the original. In favour of the combination لاري دانگي it may be remarked that the early writer (A.D. 1525) of the *Lembranças das Cousas da India* mentions that 60 reis equal in value 1 *tanga larin*.¹

Some specimens bearing the above legend are dated 1071 and some 1077, which goes to prove that this 'Alī 'Ādil Shāh was 'Alī II (A.H. 1067—1083).

As other coins, so larins too bore different legends at different periods. One in my possession has thus far defied decipherment, but the words ابوالمظفر شاه stand out quite clearly on one prong, and (perhaps) علي on the other: so just possibly—for this specimen is dateless—this 'Alī may be 'Alī I (A.H. 965—988), one of whose titles was Abu'l Muzaffar. Can it be that both the silver larins of Bījāpūr and its copper currency were first issued under the auspices of this king?

Mr. Cousens has taken some admirable photographs of larins, sent him from Ratnagiri, from which Plate XL has been prepared. It exhibits the actual larins, and also their inscriptions, the latter attached to a plaster background. The sixth, seventh, and eighth inscriptions of the upper portion recur as the first, third, and fifth, respectively, of the lower portion. Unfortunately I am not able to give details as to the weight of each of the coins there represented, but the lengths shown are, I understand, the same as those of the originals. Of the only

¹ Voyage of Pyrard de Laval: Hakluyt Society's Edn., I, 232, note 2.

[N.S.]

two specimens in my cabinet, one measures in its double length 3.75 inches and weighs 74 grains: the other, though measuring only 1.75 inch, is so much thicker that it weighs 78 grains. Mr. Thanawala kindly informs me that the average weight of four larins in his possession is 71 grains.

GEO. P. TAYLOR.

92.—ON THE BIJĀPŪR MUGHAL RUPEE OF A.H. 1091.

It was in the year 1097 H., the 30th regnal year of Aurangzēb, that the Bījāpūr garrison capitulated to the Emperor, and the erstwhile kingdom of the 'Ādil Shāhs became but a Province of the Mughal Empire. The coins thereafter struck at Bījāpūr in the name of Aurangzēb, especially those of the years 1098 and (one issue of) 1116, were remarkable for the beauty of their lettering and for their exquisite workmanship. Also on these coins the mint-name appears in association with the proud title Dār al Zafar. But how is one to account for the fact that Mughal rupees bearing the name of Aurangzēb and purporting to have issued from Bījāpūr were struck so early as the Hijrī year 1091, the 24th regnal year—that is to say, six years before the capture of the mint-town? One such rupee is No. 763 of the British Museum Catalogue, and a second is in my own cabinet. Both these specimens, however, are of very ordinary make, without any claim to distinction as trophies of the engraver's art. The mint-name too is entered on them as plain Bījāpūr with no ennobling title. Under what circumstances, then, can these earlier rupees have been uttered?

Now, though Bījāpūr finally surrendered to the Mughals in A.H. 1097, it had previously often undergone siege at their hands. One of these occasions was in the year 1090, when Dilāwar Khān with his Imperial troops closely invested the city. The sister of Sikandar 'Ādil Shāh, in the hope of saving her brother and country, had already devoted herself and gone down to the Mughal camp to be the bride of Sulṭān Mu'azzam, the second son of Aurangzēb. But even this sacrifice proved of no avail. The siege was still pressed sore, and in his despair the Bījāpūr regent, Mas'ūd Khān, applied to Sīvājī for aid. The latter at once made a diversion by a vigorous attack on the Mughal possessions in the Dakhan. But the Mughal general, Dilāwar Khān, was not now to be drawn aside from the capture of Bījāpūr, and so closely did he beset the city that Mas'ūd Khān was under the painful necessity of making further supplication to the Marāthās. When at last these did come, and, hovering round the investing army, succeeded in cutting off its supplies, then only did Dilāwar Khān raise the siege and retreat by rapid marches westwards. There can be little doubt that it was while this siege was proceeding and

capitulation seemed imminent that the powerful Mughal faction in the city, thinking to anticipate an inevitable surrender, caused the 1091 Hijrī rupees to be struck in the name of the Emperor Aurangzēb. Or just possibly they may have been issued from some mint accompanying the Imperial forces in the field. Certainly no sufficient proof has come down to us that the Mughal assailants did actually capture the city in the year 1091; but no less certainly that year witnessed the circulation of Bijāpūr coins of Aurangzēb.

GEO. P. TAYLOR.

93.—ON THE HALF-MUHR No. 172 OF THE BRITISH MUSEUM CATALOGUE.

Mr. Stanley Lane-Poole, in his Catalogue of the Mughal Coins in the British Museum, has suggested that the very interesting gold piece No. 172, depicting a crowned archer followed by a woman veiled, may have been struck in order to commemorate the submission to Akbar of Ibrāhīm II, king of Bijāpūr, and the subsequent marriage of Ibrāhīm's daughter to Akbar's third son, the Sultān Dāniyāl Mirzā. This interpretation of the coin rests, however, on very slender foundation. The late M. Ed. Drouin, in an article contributed in 1902 to the *Revue Numismatique*, describes, and gives a vignette of, a half-muhr closely resembling this one in the British Museum, save that the specimen in the Cabinet de France bears on its Obverse the legend, in Devanāgarī characters, रामसत्य, Rāmasatya, 'the Truth of Rāma.'¹ Arguing mainly from this new feature of the coin, M. Drouin arrives at the following conclusion:—

“Notre médaille représente donc, suivant moi, le prince Rāma, reconnaissable à sa couronne, avec l'arc et les flèches célestes, suivi de Sītā, la fille de Djanaka, roi de Mithila, 'la belle Mithilène,' comme l'appelle le poète, tous deux partant pour l'exil; il ne manque que Lakshmaṇa.”

If this explanation, so consonant with the legend on the coin, wins, as it well may, our acceptance, we must then surely relegate to the same class with it the sister coin, No. 172 of the British Museum. That either of the two stands in any special relation to the 'Ādil Shāhs of Bijāpūr is very improbable.

GEO. P. TAYLOR.

¹ Compare the mention, on other Mughal coins, of the Khalīfas and their virtues, e.g., بصدق ابي بكر, 'By the Truth of Abū Bakr.'

94.—‘DĀMS OF AKBAR STRUCK AT JAUNPŪR AND AJMĪR
MINTS’ AND ‘SOME RARE PATHĀN COINS.’

Two papers entitled ‘Dāms of Akbar struck at Jaunpūr and Ajmīr Mints’ and ‘Some rare Pathān Coins’ appeared in Numismatic Supplements Nos. XIII and XIV, respectively. Since their publication I have made casts of the coins described, and a plate has been prepared which is published with the present paper. A reference is invited to the papers themselves, but for convenience I append an abbreviated list of the coins.

DĀMS OF AKBAR STRUCK AT JAUNPŪR AND AJMĪR MINTS.

- No. 1. New type of Jaunpūr *dām*, dateless.
- No. 2. *Dām* of Salīmābād Ajmīr, dated 982 A.H.
- No. 3. *Dām* of Salīmābād, dated 1008 A.H.

SOME RARE PATHĀN COINS.

No. 1. Copper coin of Ghiyāṣu-d-dīn Balban struck at Fakhrābād.

No. 2. Billon coin of Shamsu-d-dīn Maḥmūd Shāh of Dehli, dated 718 A.H.

In the list of ‘Books on the Coins of Northern India’ at the end of C. J. Rodgers’ ‘Coin Collecting in Northern India’ is the following—(57) Coins of Shams-ud-din Mahmud Shah. I cut, C. J. Rodgers. I have not seen this pamphlet, but the paragraph I quoted in my paper ‘Some Rare Pathān Coins’ from ‘Coin Collecting in Northern India,’ was written after it, and obviously recapitulates the information contained in it.

No. 3. Mohur of Muḥammad Tughlaq struck at Tughlaq-pūr *alias* Tirhut, date 735 A.H.

No. 4. New variety of a common billon coin of Muḥammad Tughlaq, date 734 A.H.

No. 5. Ditto.

No. 6. Coin of Fīroz Shāh Tughlaq with his son Zafar, of mint Dāru-l-Mulk Dehli.

No. 7. Coin of Fīroz Shāh Tughlaq with his son Muḥammad Shāh, of mint Dāru-l-Mulk Dehli, date 790 A.H.

R. B. WHITEHEAD, I.C.S.

DECEMBER, 1910.

The Monthly General Meeting of the Society was held on Wednesday, the 7th December 1910, at 9-15 P.M.

I. H. BURKILL, ESQ., M.A., F.L.S., in the chair.

The following members were present:—

Dr. N. Annandale, Babu Rakhal Das Banerji, Mr. B. L. Chaudhuri, Mr. B. De, Mr. H. G. Graves, Mr. F. H. Gravely, Mr. D. Hooper, Mr. S. N. Kemp, Rev. W. R. LeQuesne, Major L. Rogers, I.M.S., Mr. G. H. Tipper, Dr. Satischandra Vidyabhusana, Mr. E. Vredenburg.

Visitors:—Babu Ashutosh Dey, Mr. S. L. Agharkar, Babu Bepin Behari Gupta, Mrs. Burkill, Babu Birendrakumar Bose, Miss Graves, Babu Hemchandra Das Gupta, Rev. H. Hosten, S.J., Babu Jitendranath Mukerjee, Babu Joti Pershad, Babu Jyotish Chandra Pal, Rev. J. Mares, S.J., Babu Nanilal Datta, Babu Phanindranath Mukerjee.

The minutes of the last meeting were read and confirmed.

Two hundred and eighty presentations were announced.

The General Secretary reported that Capt. R. Foster, I.A., Mr. James H. Hyde and Mr. C. A. C. Streatfield, I.C.S., had expressed a wish to withdraw from the Society.

The General Secretary also reported the death of Dr. Melchior Treub, an Honorary Member, and Mahamahopadhyaya Sudhakara Dvivedi of Benares, an Associate Member of the Society.

Rev. H. Hosten, S.J., was balloted for and elected an Associate member.

The following six gentlemen were balloted for as Ordinary Members:—

The Anagarika H. Dharmapala, General Secretary, Maha Bodhi Society and Editor *Maha Bodhi Journal*, 96, Beniapur Lane, proposed by Dr. Satischandra Vidyabhusana, seconded by Mr. G. H. Tipper; *Dr. W. Chowdry*, 15, Wellesley 2nd Lane, proposed by Mr. E. M. Löffler, seconded by Dr. E. D. Ross; *Babu Devendra Kumar Banerjee*, Officiating Head Translator to Government of Eastern Bengal and Assam, Dacca, proposed by Dr. Satischandra Vidyabhusana, seconded by Mr. G. H. Tipper; *Major Frank Needham Windsor*, M.B., I.M.S., Chemical Examiner, Bengal, proposed by Major L. Rogers,

I.M.S., seconded by Capt. J. D. Sandes, I.M.S.; *Babu Radha Krishna*, Banker, Chauk, Patna City, proposed by Babu Rakhal Das Banerji, seconded by Mr. G. H. Tipper; *Mr. J. H. Towle*, Principal, M. A. O. College, Aligarh, proposed by Dr. E. P. Harrison, seconded by Mr. G. H. Tipper.

Mr. Vredenburg showed some lantern slides of the Mosque of Dera Ghazi and of decorative tile work. He also exhibited a photograph of an egg-case of a water-beetle.

The following papers were read:—

1. *The Evidence of the Faridpur Grants.*—By RAKHAL DAS BANERJI, M.A.

2. *A Visit to Buhukhatakishvara Bairava's shrine at Chhatabal (Srinagar).*—By ANAND KOUL. Communicated by the Joint Philological Secretary.

3. *Mundari Phonology and the Linguistic Survey.*—By DR. STEN KONOW. Communicated by the Philological Secretary.

4. *List of Portuguese Jesuit Missionaries in Bengal and Burma (1576-1742).*—By REVS. L. BESSE, S.J., and H. HOSTEN, S.J. Communicated by the General Secretary.

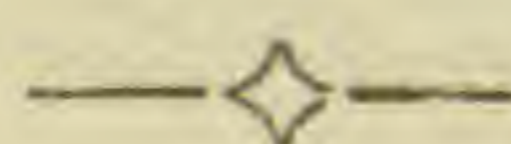
5. *History of Kashmir. (Second paper).*—By ANAND KOUL. Communicated by the Joint Philological Secretary.

6. *Methylamine Nitrite.*—By P. C. RAY and JITENDRA NATH RAKSHIT.

7. *Note on a Caste of Fish-dealers in Bengal not recognized in the Census of 1901.*—By B. L. CHAUDHURI.

8. *On the occurrence of Maestrichtien fossils at Kacch Station (in British Baluchistan).*—By HEM CHANDRA DAS GUPTA. Communicated by MR. VREDENBURG.

These papers will be published in a subsequent number of the *Journal*.



The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Thursday, the 15th December 1910, at 9-30 P.M.

LIEUT-COLONEL C. R. M. GREEN, M.D., F.R.C.S., I.M.S., in the chair.

The following members were present:—

Dr. C. H. Elmes, Dr. Gopal Chandra Chatterjee, Dr. Indu Madhab Mallick, Capt. A. E. J. Lister, I.M.S., Capt. J. W. D.

Megaw, I.M.S., Major J. G. P. Murray, I.M.S., Major L. Rogers, I.M.S., Honorary Secretary.

Visitors :—Dr. B. L. Das and Dr. Tarapasanna Ghosh.

The minutes of the last meeting were read and confirmed.

Major J. G. Murray, I.M.S., showed a case of Pseudo-hypertrophic Paralysis in a European boy.

Lieut.-Colonel C. R. M. Green showed: (1) a specimen of spontaneous rupture of the fundus of the uterus at the sixth month.

(2) A specimen of fibroid of the uterus extending down between the vagina and the rectum.

(3) One of a multilocular cyst of the left ovary and fibroids of the uterus raising up the pelvic peritoneum.

Major L. Rogers read a paper on Cirrhosis of the Liver, which was discussed by Lieut.-Colonel Green, Drs. Mukerjee and Mallick, Major Murray and Captains Megaw and Lister.

Lieut.-Colonel Calvert's paper was postponed as he was not able to be present.



CONSONANTS.			VOWELS.			Forms of Syllables found on the Āhōm Coins in the British Museum Cabinet.		
No.	Character.	Sound.	No.	Character.	Sound.	Vowel No.	Character.	Sound.
I	ṁ	kā	1	ṁ (a)	(ā)	1	ṁṁ; ṁṁ;	lāk; pāt;
II	ṅ	khā	2	ṁṁ	ā		ṁṁ; ṁṁ;	sān; kāp;
III	ḡ, ḡ	gā	3	ṁṁ	ā		ṁṁ; ṁṁ.	kāt; chām.
IV	ḡ	ghā	4	ṁ	i (sometimes e as in "met").	2	ṁṁ; ṁṁ.	tā; rā.
V	ṅ	ñā (ngā)				3	ṁ, ṁ.	phā.
VI	ṁ	chā	5	ṁ	ī	4	ṁṁ, ṁṁ.	pin;
VII	ṁ	jā, ña	6	ṁ	u		ṁṁ; ṁṁ	chin; lein;
VIII	ṁ	jhā	7	ṁṁ	ū		ṁṁ.	neñ.
IX	ṁ	ñā	8	ṁṁ (b)	e (as in "met")	5	ṁ; ṁ, ṁ	nī; nī;
X	ṁ	tā	9	ṁṁ	ē		ṁ; ṁṁ.	pī; sinā.
XI	ṁ	thā	10	ṁṁ	o (as in "off")	6	ṁṁ; ṁṁ;	hun; hum;
XII	ṁ	dā	11	ṁṁ, ṁṁ	ō (as in "moon")		ṁṁ;	khun;
XIII	ṁ	dhā	12	ṁṁ, ṁṁ	ü (c)		ṁṁṁ/ṁṁṁ.	khut.
XIV	ṁ	nā	13	ṁṁ	ai	8	ṁṁ	rem.
XV	ṁ	pā	14	ṁṁ	ao	12	ṁṁ; ṁṁ;	üs; tü;
XVI	ṁ	phā	15	ṁṁ (d)	ë-u		ṁṁ, ṁṁ;	chü;
XVII	ṁ, ṁ	bā, wā	16	ṁṁ (e)	i-u		ṁṁ;	mün;
XVIII	ṁ	bhā	17	ṁṁ	â (as in "all")		ṁṁ; ṁṁ.	k(l)en; p(l)ek.
XIX	ṁ, ṁ	mā, (final m).	18	ṁṁ	oi (as in "boil")	13	ṁṁ; ṁṁ	rai.
XX	ṁ	rā		[-]	Sātkār, or mark of final consonant = Bengali <i>hasanta</i> and Sanskrit <i>virāma</i> . It is omitted in the coins of Pramatta and Rājesvara.]	14	ṁṁ; ṁṁṁ	chao; kao.
XXI	ṁ	lā				15	ṁ; ṁ.	hë-u; kë-u.
XXII	ṁ	sa				17	ṁṁ; ṁṁ;	dān; ph(r)ân.
XXIII	ṁ	hā					ṁṁṁ.	ñât.
						18	ṁ	boi.

(a) "Is used like the *alif* of Hindōstānī, merely as a fulcrum for carrying the other vowels when they are initial" (Grierson). The inherent vowel sound in Āhōm being ā, vowels have only to be indicated when a consonant has a different vowel sound than ā. (b) In combination, the prefix of this vowel is omitted. (c) In combination, if the suffix be omitted, this vowel sometimes stands for *le* as in "lend". (d) Only found in open syllables. (e) In combination the suffix is dropped.

The consonant and vowel columns give the forms of the letters as found in the Āhōm *Buranjis*.

ĀHŌM MUHUR OF RĀJESVARA SĪMHA (SÛREMPHA).

(CABINET OF THE BRITISH MUSEUM—UNIQUE).

OBVERSE.

- (1) *Chao*, the God, *sū*, tiger,
- (2) *rem*, border, *phā*, heaven,
- pin*, became, (3) *khūn*, King.
- lāknī*, year, (4) *Raisīnā*.

"The God, Sūremphā (the tiger from the border of heaven), became King in the year Raisīnā" (43rd of the 20th *taosīnā*, or cycle of 60 years counting from 568 A.D. = 1751 A.D.).



REVERSE.

- (1) *Kao*, I, *boi*, prayer,
- (2) *phā*, heaven, *Lendā*
- (3) *n*, *hë-u*, offer, *chü*, name.

"I offer prayer in the name of the heavenly Lendān" (*i.e.*, Indra).



1



3



2



4



5



6



7



8



9



10



11



13



12





1 AV



2 AR



3 AR



4 AR



5 AR



6 AV



7 AV



8 AV



10 AR



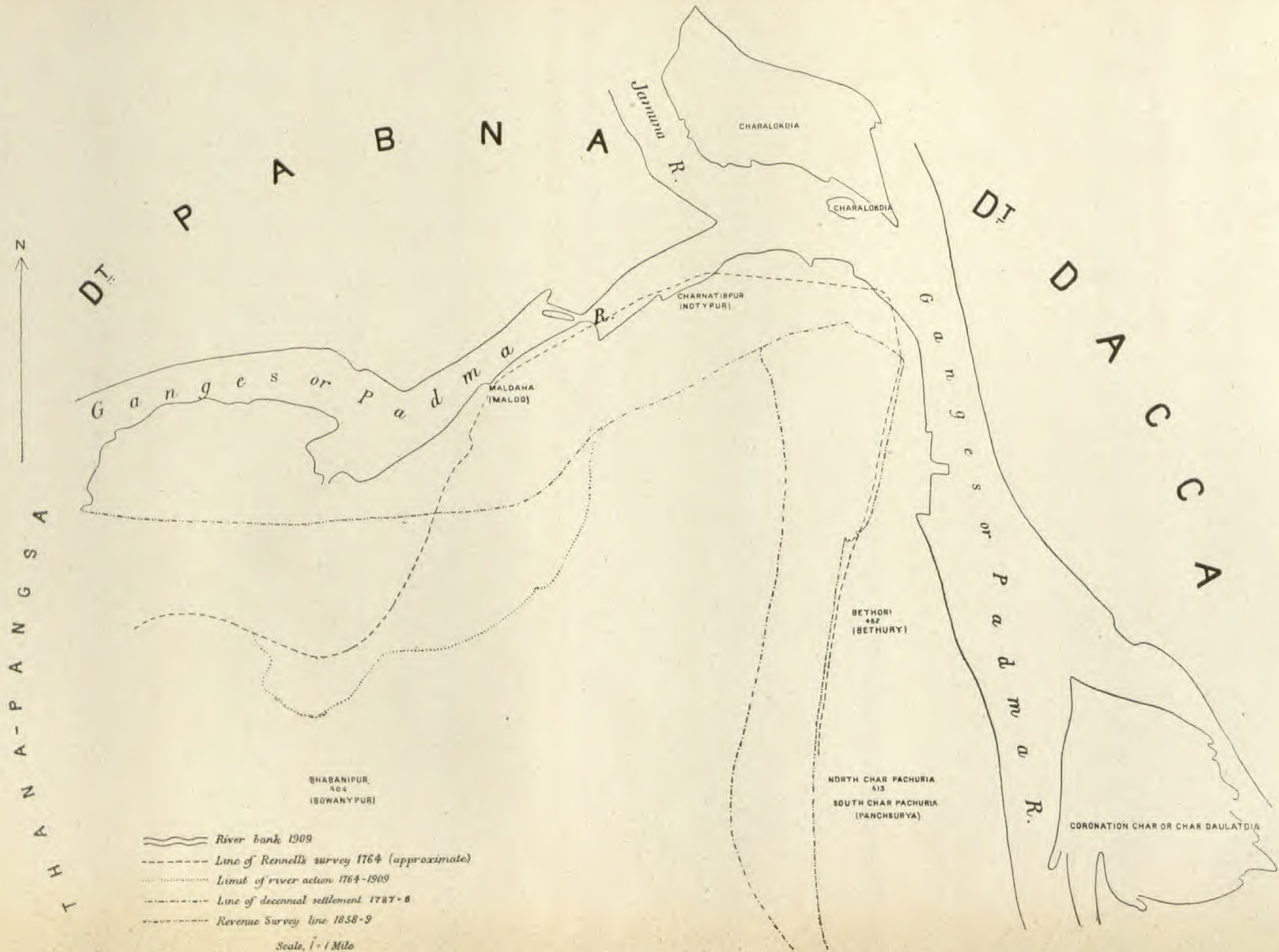
9 AV



11 AR



CHANGES IN THE RIVERS OF THE DELTA.

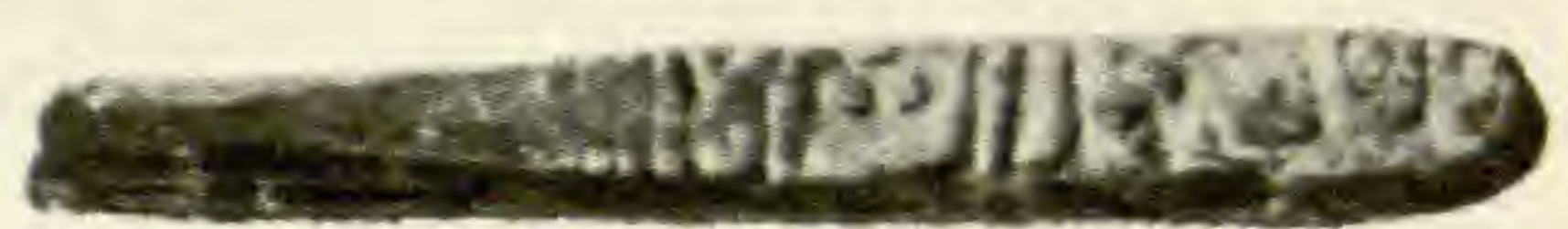
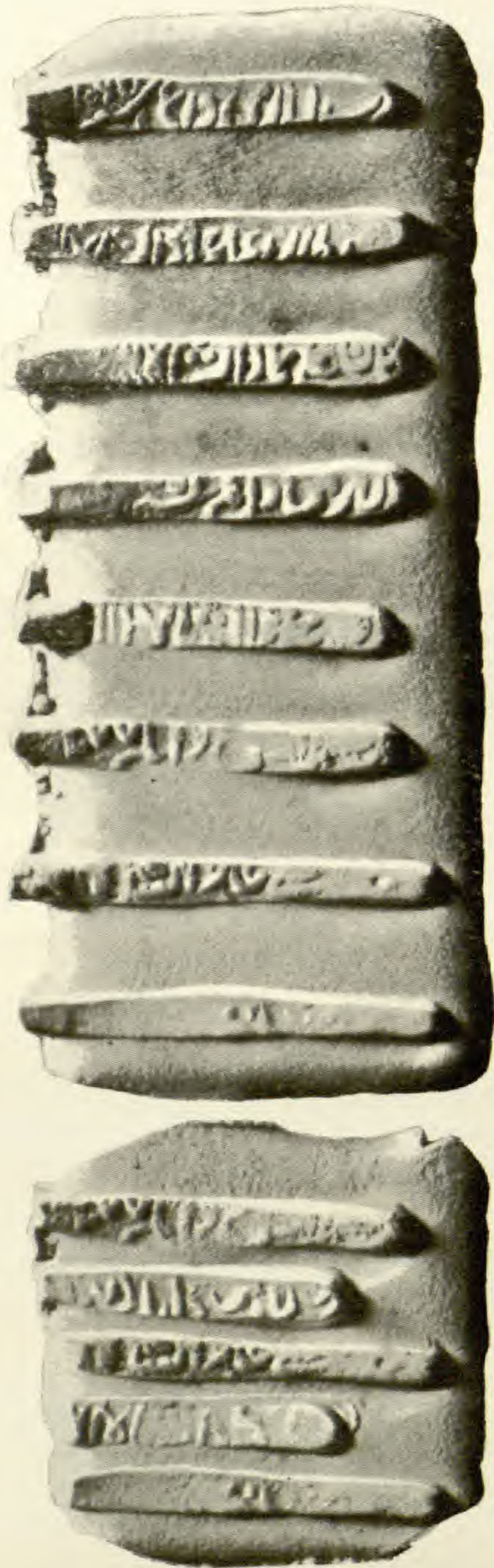


- River bank 1909
- Line of Rennell's survey 1764 (approximate)
- Limit of river action 1764-1909
- Line of decennial settlement 1787-8
- Revenue Survey line 1858-9

Scale, 1" = 1 Mile



COPPER COINS OF BIJAPUR.



LARI OR LARIM.

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Jatu Glossary.

By E. JOSEPH, I.C.S.

INTRODUCTION.

The language spoken by the Rohtak Jats is called by themselves *Játú*. One and the same language, with dialectical differences, almost imperceptible from village to village, is spoken throughout the *Báingar* or highlands lying between the *Khádir* of the *Jamná* on the east and the *Hissar Hariáná* tract on the west. The language is variously known in different parts as *Báingarú*, *Játú* or *Hariáni*. In *Hariáná* it is called, appropriately enough, *Deswáli* or *Desári*. In *Delhi* it is sometimes styled *Chamarwá* from the fact that the *Chamárs* who also speak it are numerous; but in *Rohtak* at least they speak it ungrammatically. The language is in reality a dialect of *Western Hindí*, modified on the one hand by the disturbing influences of *Panjábí* in the north and on the other by the *Ahírwátí* dialect of *Gurgaon* in the south which is classed in *Dr. Grierson's Linguistic Survey* as a form of the *Mewátí* dialect of *Rájasthání*. In *Rohtak* itself there is little of the former influence,¹ but the moment the town of *Jhajjar* is passed, we find the *Jats* of the south affected by *Ahírwátí*, into which their speech rapidly merges. The distinguishing mark of the change, which at once arrests attention, is the substitution of *o* for final *á*. If an *Ahir* of *Jhajjar* or his *Jat* neighbour wishes to say that there has been a fine crop of bulrush millet, he will say " *baro áchho bájro huó.*" With this dialect the following pages have nothing to do, though it is probable that some words have crept into the glossary which are not spoken in the north of the district. It is extraordinary how local are particular words, even particular forms of speech. Had I had the leisure I would have collected all the words in one particular village, but I have been obliged to compile them as I marched hither and thither through the district. The grammatical notes have in fact been recorded at *Sampla*.

English officers who serve in *Rohtak* generally find the dialect difficult to understand and tiresome to acquire. Probably the bulk of *Indian* officers do so too, and certainly the *Muhammadáns* who do not belong to the neighbourhood do so. The reason of this lies in the neglect of *Sanskrit* and *Hindi*

¹ *Dr. Grierson* has been good enough to supply me with a *MS.* copy of his grammatical notes on the *Báingarú* of *Karnál* and *Patiálá* (*Nirwáná*) which will appear in vol. ix (1) of the *Linguistic Survey*. It is remarkable how much more the speech of this tract is affected by *Panjábí* forms than that of *Rohtak*.

that is nowadays so prevalent. We are nurtured on the persianised Urdu of the munshi, and the language of the Higher Standard Hindustani is the polished language of Delhi city. Nothing is more useless for an understanding of the thought and wants of the villagers. At the present moment there is but one officer in the Panjab Commission who has passed the higher standard in Sanskrit and but three who have satisfied the same test in Hindi, and not one of those three is a member of the Indian Civil Service. I have often regretted for my own sake the absence of a compulsory test in Hindi.

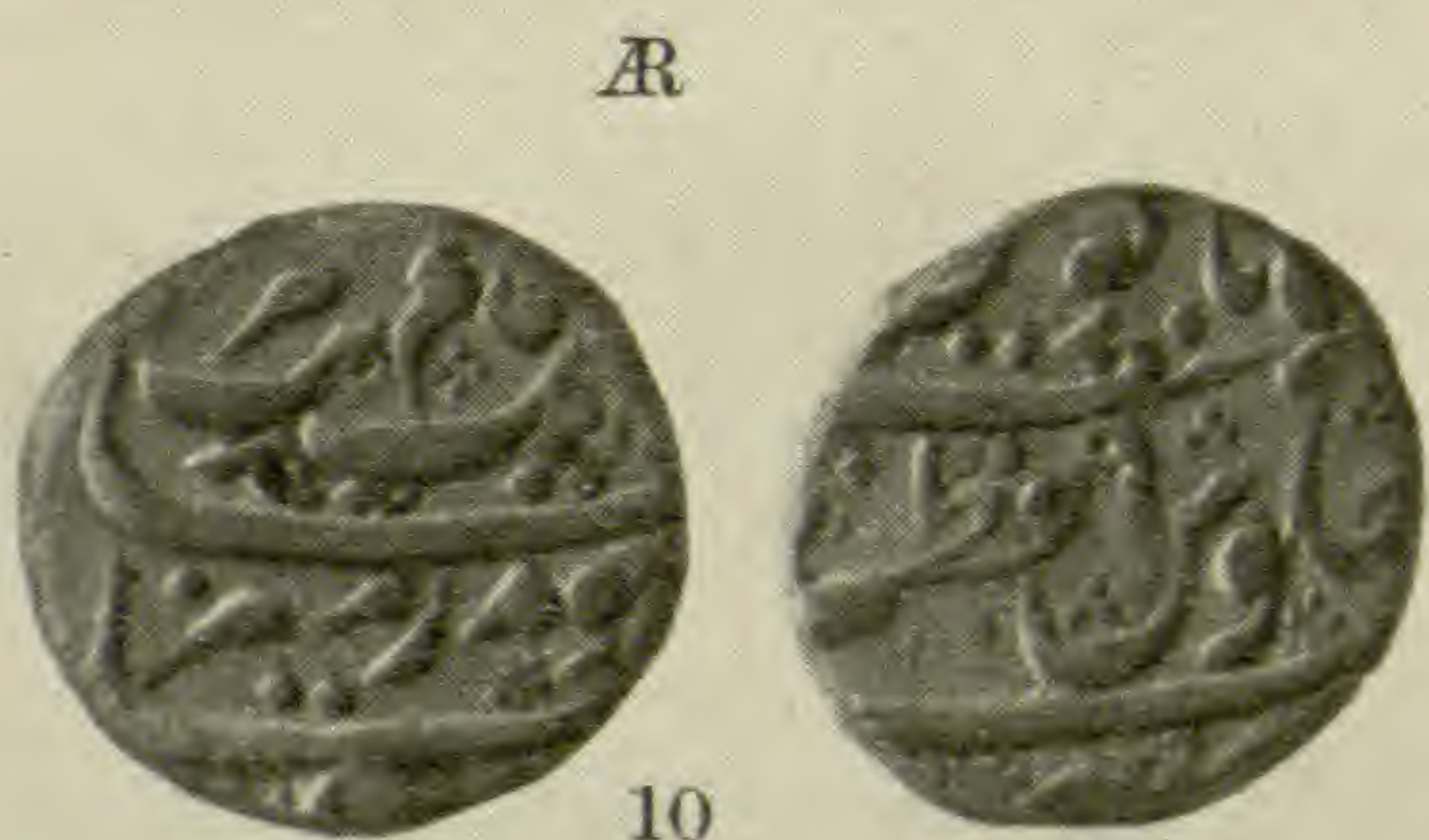
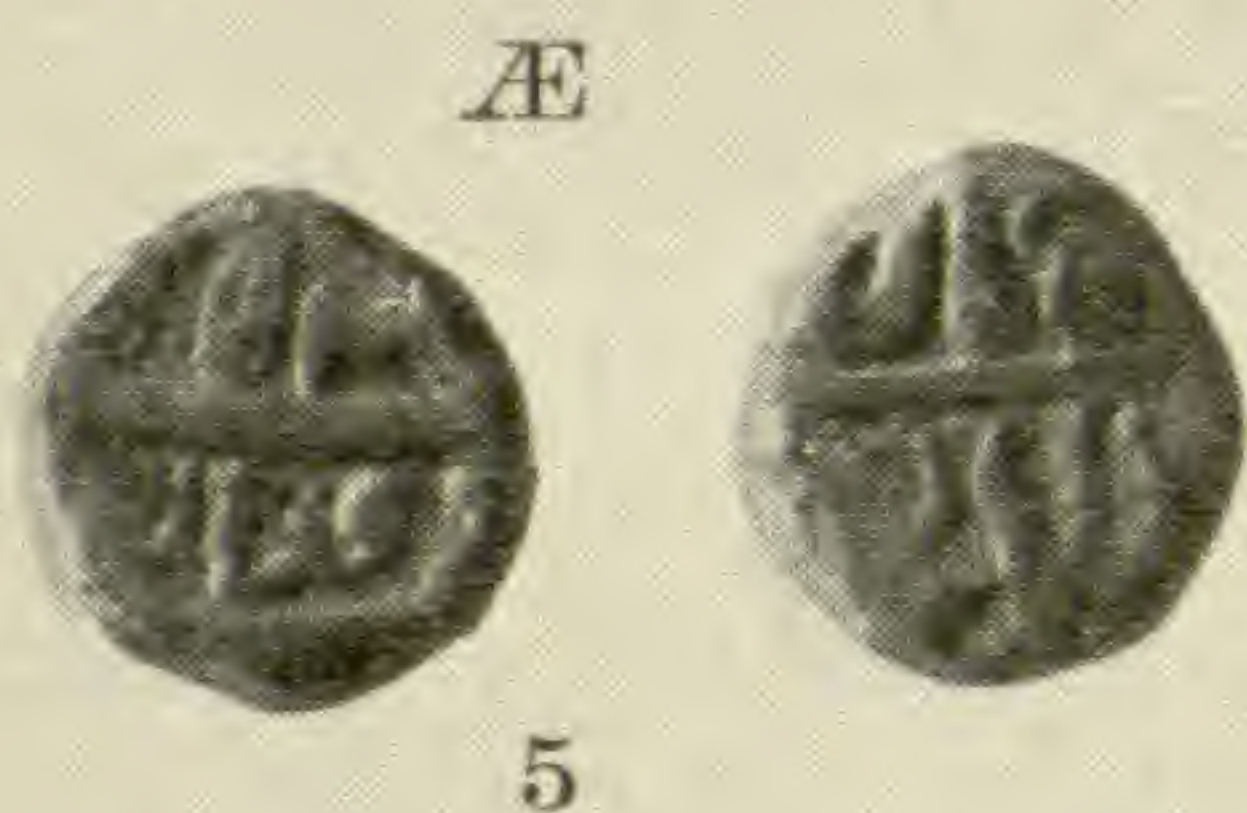
The object of the present notes is an attempt to simplify the work of the Englishmen who will serve in Rohtak in the future. It has perplexed me considerably to know how best to do this. One method that suggested itself was to record only such words as were to be found in no standard dictionary or were omitted from a given standard dictionary such as that of Platts. Even the latter of these alternatives seemed open to considerable inconvenience, and doubts again arose how slight a modification of form would entitle a word to inclusion in the glossary. Another course was to make a frank revelation of the extent of my own ignorance and to record only such words as were new to myself. It would be a bold assumption however—and, I trust, a groundless one—to suppose that all future officers would be as ignorant of Hindi as I was when I came to the district; it seemed on the other hand conceivable that a few might be even more stupendously ignorant. Ultimately I have attempted to include all the words in common use in Rohtak which so far as I knew were not in common use among educated Indians; it will be found that almost all are Hindi, but there are a few which are corruptions of Persian, or of English. The Hindi words are either 'tatsamas' borrowed direct from Sanskrit or 'tadbhavas' which have come into the language through Prakrit.

Not all the words however are in common use, for I have tried, whenever quoting a proverb or verse, to include every strange word in it, and there are some which are hardly known outside the quotation. On the other hand there are doubtless many instances of omission of words in common use. These I hope will be supplied by some future district officer. They must be written from the speech, proverbs or songs of the people, for the language has no literature.

I have divided my notes into three parts. The first is grammatical and assumes on the part of the reader a knowledge of Hindustani grammar. I have thought it unnecessary to repeat forms that are identical with the latter. The second is the Játú-English glossary, and here I have followed Mr. O'Brien's original model in his "Glossary of the Multani Language," interpolating proverbs and riddles in illustration of the words. Of the utility of the third part, or English-

Plates XLI-XLV to illustrate Mr. R. B. Whitehead's paper on "Notes on some Mughal Coins," published in the Numismatic Supplement No. XV, Journ., As. Soc. Bengal, Vol. VI, N.S., No. 11.

Plate XLVI to illustrate Mr. R. B. Whitehead's paper on 'Dāms of Akbar struck at Jaunpūr and Ajmīr Mints' and 'Some rare Pathān Coins,' published in the Numismatic Supplement No. XV, Journ., As. Soc. Bengal, Vol. VI, N.S., No. 11.



‘Notes on some Mughal Coins.’
(Numismatic Supplement XV).



'Notes on some Mughal Coins.'
(Numismatic Supplement XV)



Æ



31



Æ



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‘Notes on some Mughal Coins.’
(Numismatic Supplement XV).



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‘Notes on some Mughal Coins.’
(Numismatic Supplement XV).



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‘Notes on some Mughal Coins.’
(Numismatic Supplement XV).



‘ Dāms of Akbar struck at Jaunpūr and Ajmer Mints ’
 (Numismatic Supplement XIII), and
 ‘ Some Rare Pathān Coins ’ (Numismatic Supplement XIV).

Játú, I am more doubtful, but I have compiled it chiefly to aid in the identification of a word whose meaning, but not its exact form, has been grasped on first hearing. I am indebted for much assistance to Munshi Diwan Chand, Settlement Kanungo, without the aid of whose quick ear I should have been at a loss to render the spoken language correctly.

July 20, 1910.

E. JOSEPH.

PART I.

GRAMMATICAL NOTES.

§ 1. Notation and pronunciation.

The alphabet employed is the ordinary Nágrí, and the system of transliteration employed is in almost every case that which is adopted in every Hindi grammar or dictionary. The only points calling for remark are that 'n' is used both for न and ण; that the nasalized vowel which is symbolized in Hindi by the addition of a dot over the vowel affected is written by me as ñ; that the ng of the English word sing is represented by ङ and transliterated by ng; that श is transliterated by sh; that ष has not been employed.

I have not attempted to try and express the sound of the language by taking any further liberties with the alphabet. Minute variations in the value of different letters between Játú and Urdu can only be acquired by first-hand acquaintance.

The most marked characteristic of the speech is its broadness. Almost every initial a becomes á; achhá becomes áchhá; it is almost more than this, for the language is spoken with a drawl and áachhá more nearly represents the sound. The same characteristic is often observed in non-initial 'a' sounds; e.g., "to-morrow" is not kal but nearer to काल kál, as I have written it; yet it is not quite that, that being the sound of the words that mean 'time' or 'death' and 'famine.'

Similarly jamná, 'to be born,' becomes जाना jámná; chalná, 'to go,' becomes चाला chálná, etc.

Even other vowels than 'a' undergo this change, e.g., píchhe, 'behind,' is in Játú पाछे páchhe. Similar changes in the direction of broad speech may be seen in the use of सुधा súdhá = 'simple,' for sídhá and ऊठना—úṭhná = 'to get up,' for uṭhná.

Another change that is sometimes observed is that of र into l as खला khalá, 'standing,' for khará.

A. DECLENSION OF THE SUBSTANTIVE.

I. Suffixes.

§ 2. The termination of the agent case is ने ne as in Urdu, and of the genitive का ká, declining as in Urdu.

The termination of the dative case is not **को** ko but **ने** ne. The termination of the ablative is **ते** te or **के धोरे ते** ke dhore te : 'in,' as in Urdu, is **में** meñ : 'on' is **पे** pe, not par as in Urdu. The accusative takes the form either of the nominative or of the dative.

Note (1). The fact that accusative and agent case may both end in **ने** ne gives rise to considerable confusion. Both the subject and the object of the verb may have the same termination in the same sentence, *e.g.* :

मझे साहिब ने मार्या

Manne sáhib ne máryá.

I beat the Sahib.

Ordinarily the difficulty is avoided by using the nominative form of the accusative when the verb is transitive and of such a tense as to require its subject to be in the agent case, and the dative form of the accusative when the verb is intransitive or of such a tense of a transitive verb that it has its subject in the nominative case; for example,

मैं साहिब ने मार्या

Main sáhib ne máryá

or

झोरा साहिब ने पकड़या

Chhorá sáhib ne pakaryá

मझे पोलिस पाकड़ के ले गयी

Manne polís pákar ke le gayí.

or

झोरे ने पोलिस ले गयी

Chhore ne polis le gayí.

The Sahib beat me.

The Sahib seized the boy.

The Police arrested and took me off.

The Police took the boy off.

The ambiguity and its solution is well seen in the following sentence:—

जे मैं सांप ने न मारता तो मैं सांप ने खा लिया होता je main sánp ne ná mártá to main sánp ne khá liyá hoñtá.

If I had not killed the snake, the snake would have bitten me.

(2) Dhore is the equivalent of the Urdu pás, *e.g.*,

झोरे के धोरे

chhore ke dhore

मेरे धोरे

mere dhore

In the child's possession.

With me.

[N.S.]

In the true ablative, with the sense of 'from', there is no difference between mere te, and mere dhore te liyá. When the sense of the ablative is 'by', dhore te will not be used, e.g., I cannot do it is mere te náhín ho sake.

(3) There are certain peculiar uses of the genitive :—

(a) With the verb 'márná' in the sense of 'to strike' the object of the verb is put in the form of the masculine inflected genitive, for example—

मझे इस बोर (बोरौ) के मार्या	}	I hit this boy (or girl).
Manne is chhore (chhorí) ke máryá		
मझे इस के लाठी मारौ	}	I hit him with a stick.
Manne is ke láthí mári		
मझे इस के थपड़ मार्या	}	I slapped him.
Manne is ke thapar máryá		

(b) The same form of the genitive is used where in Urdu us ke pás is used; for example, the answer to the question "Have you seen my horse?" or "my mare?" is respectively

मझे इस पालौ के देख्या	}	"I saw it with this herdsman."
Manne is páli ke dekhyá		
OR		
मझे इस पालौ के देखी	}	
Manne is páli ke dekhí		

(c) In the phrase इस के घर कौ कौन जाने. Is ke ghar kí kaun jáne, referring to God, = "Who knows the secrets of His house?"—the invariable reply to a question regarding the likelihood of rain, etc.—it is probable that some word as बान bát is understood.

(d) इब के—Ib ke = this year, पुर के—Pur ke = Last year. Here साल—Sál is understood.

(4) In the dative of direction, the suffix is often omitted, e.g., गाम गया gám giyá = He has gone to the village. कलकत्ता गया Calcutta giyá = He has gone to Calcutta.

II. Inflection of the Noun Proper.

§ 3. The departures from Urdu here are—

(a) In masculine and feminine nouns the oblique plural terminates in आं án instead of in ओं on.

(b) In feminine nouns the nominative form of the plural is the same as that of the singular and is not inflected.

Examples.

<i>Masculine.</i>	chhorá, boy.	bulad, bullock.	bábú, father.
Vocative singular.	ये छोरे e chhore.	ये रे बुलद ere bulad.	ये बाबू e bábú.
Oblique singular.	छोरे chhore.	बुलद bulad.	बाबू bábú.
Nominative plural.	छोरे chhore.	बुलद bulad.	बाबू bábú.
Vocative plural.	ए छोरो e chhoryo.	ये रे बुलदो ere bulado.	..
Oblique plural.	छोरां chhorán.	बुलदां buladán.	बाबूआं bábúán.
<i>Feminine.</i>	chhorí, girl.	bír, woman.	bahú, wife.
Vocative singular.	ए छोरी e chhorí.	..	..
Oblique singular.	छोरी chhorí.	बीर, bír.	बहू bahú.
Nominative plural.	छोरी chhorí.	बीर, bír.	बहू, bahú.
Vocative plural.	ए छोरो e chhoryo.	..	..
Oblique plural.	छोरीयां chhoryán.	बीरां, bírán.	बहूआं, bahúán.

Notes.

(1) In one word there appears to be a pure locative case.

घरां जा—gharán já = go home.

This termination does not appear to occur in any other word.

(2) The vocative plural of bábú does not exist, as no one man can call more than one father; nor are vocatives used in bír woman or bahú wife: more polite forms of address are employed.

B. DECLENSION OF THE PRONOUNS.

§ 4. The Personal Pronouns.

These differ considerably from Urdu, and will be given in full. The use of the alternative forms of the accusative has already been explained.

It should here be noticed that the personal pronouns afford the only instance of the apparent omission of **ने** *ne* in the agent case. Probably in the singular it is absorbed in the final letter of *main* I; in the case of the 2nd person singular and of the plural of both pronouns it survives in the final letter of the inflected form of the agent case.

1st Person.

<i>Singular.</i>		<i>Plural.</i>	
Nom.	मैं, main = I.	हम ham = we.	
Acc.	मैं-मझे, main, manne = me.	हम-हमने—ham, hamne = us.	
Agent	मैं-मझे, main, manne = I.	हमां-हमने—hamán, ham ne = we.	
Gen.	मेरा—merá = my (declining as in Urdu).	हारा—mhára = our (declining as in Urdu).	
Dat.	मझे—manne = to me.	हमने—ham ne = to us.	
Abl.	मेरे ते—mere te.	हारे ते—mháre te.	} from or by us.
	मेरे धोरे ते—mere dhore te.	हारे धोरे ते—mháre dhore te.	
	मत्ते—matte.	हम ते—ham te.	

2nd Person.

<i>Singular.</i>		<i>Plural.</i>	
Nom.	तु तुं, tu-tuñ = thou.	तुम, tum ¹ = you.	
Voc.	तु तुं, tu-tuñ = thou.	तुम, tum = ye.	
Acc.	तु तुं तझे, tu-tuñ-tanne = thee.	तुम or तुम्हे, tum, tumne = you.	
Agent	तैं-तझे, taiñ, tanne = thou.	तुमां or तुम्हे, tumán, tumne = you.	
Gen.	तेरा, terá = thy (declining as in Urdu).	थारा, thára = your (declining as in Urdu).	
Dat.	तझे, tanne, to thee.	तुम्हे, tum ne = to you.	
Abl.	तेरे ते, tere te.	थारे ते, tháre te.	} from or by you.
	तेरे धोरे ते, tere dhore te.	थारे धोरे ते, tháre dhore te.	
	तत्ते, tatte.	तुम ते, tum te.	

¹ The pronunciation of tum all through is almost nearer tam than tum.

§ 5. Demonstrative Pronouns.

The most marked difference between the demonstrative pronouns in Játú and in Urdu is that in the former there is a distinct form for the feminine singular nominative.

योह. Yoh = this, he, she, it.

<i>Singular.</i>		<i>Plural.</i>	
Nom.	योह—yoh, mas. = he or this. याह—yáh, fem. = she or this.	ये—ye = they or these.	
Acc. a.	As nominative.	ये—ye.	
	b. इँने—ín ne.	इन ने—in ne.	
Agent.	इस ने— <i>is ne.</i> इँने—ín ne.	इन ने— <i>in ne.</i>	
Gen.	इस का— <i>is ká.</i> इँ का—ín ká.	इन का— <i>in ká.</i>	
Dat.	इँ ने—ín ne.	इन ने— <i>in ne.</i>	
Abl.	इँ ते—ín te. इँ धोरे ते—ín dhore te.	इन ते— <i>in te.</i> इन धोरे ते— <i>in dhore te.</i>	

ओह. Oh = that, he, she, it.

<i>Singular.</i>		<i>Plural.</i>	
Nom.	ओह, oh, mas. = he or that. वाह, wáh, fem. = she or that	वे—we : they or those.	
Acc. a.	As nominative.	वे—we.	
	b. उस ने—us ne.	उन ने—un ne.	
Agent.	उस ने—us ne.	उन ने—un ne.	
Gen.	उस का—us ká.	उन का—un ká.	
Dat.	उस ने—us ne.	उन ने—un ne.	
Abl.	{ उस ते—us te. उस धोरे ते—us dhore te.	उन ते—un te उन धोरे ते—un dhore te.	

§ 6. The Relative Pronoun.

जो. Jo = who, which, what, he who, etc.

<i>Singular.</i>		<i>Plural.</i>	
Nom.	जो—jo.	जो—jo.	

Singular.

Plural.

Acc. a. जो—jo.

b. जिस ने—jis ne.

जों ने—jín ne.

a. जो—jo.

b. जिस जिस ने—jis jis ne.

Oblique cases. { जीं or जिस—jín or jis ;
the suffixes through-
out as in the demon-
strative pronouns.

जिस जिस—jis jis, the suffixes
throughout as before.

Notes (1). In the singular jín is the more characteristic form, but the form of the plural shows that jis is also good Játú.

(2) In the plural instead of the distributive form jis jis, jin is sometimes heard, but this appears to be an exotic form introduced from Urdu.

§ 7. The Correlative Pronoun.

ओह Oh is preferred to सो so.

Note.—In the adverbial construction जब jib (then) is the invariable correlative of जब jib (when).

§ 8. The Interrogative Pronouns.

कौन Kaun, 'who,' 'which' ?

The singular exactly follows the declension of jo, the relative pronoun; the oblique cases being either कीं kíñ or किस kis. The plural also follows the same rule with this difference that कीं कीं kíñ kíñ is used as well as किस किस kis kis.

के Ke, what.

Nominative के—ke.

Accusative के—ke.

Genitive क्यां का—kyán ká.

§ 9. The Indefinite Pronouns.

कोई Koí = some, someone, any.

The accusative is either कोई koí or किये ने, kisse ne. The oblique cases are किये kisse with the usual suffixes.

Note (1). In the agent case where a negative follows the suffix ने ne, the latter is almost assimilated with the pronoun as किये न कहा.

Kissán ná kahá.

} No one said it.

(2) For the Urdu kisi ná kisi, Játú employs किये ते किये = kisse te kisse, or still more emphatically किये ते किये हो = kisse te kisse ho.

(3) The plural exists in the nominative koí only.

कुछ kuchh, 'something,' 'anything.'

This presents no differences, but वास्ता न wástá ná is far commoner and more idiomatic than kuchh nahín.

C. Adverbs.

§ 10. So far as syntax is concerned, adverbs call for no remark. But their form is in many cases very different in Játú; e.g.,—

to-morrow or yesterday	..	काल	..	kál.		
yes	..	हम्बे	..	hambe.		
at the side, near	..	धोरे	..	dhore.		
behind, after	..	पाछे	..	páchhe.		
till, until	..	लुग	..	lug.		
now	..	इब	..	ib.		
then (correlative)	}	..	जिब	..	jib.	
when—(relative).						
when ?	..	कद	..	kad.		
where ?	..	कडे	..	kaṛe.		
whither ?	..	}	..	कित	..	kit.
			..	कडे	..	kaṛe.
			..	कितोड़	..	kitor.
			..	कींघे	..	kinghe.
here	..	}	..	अडे	..	aṛe.
			..	आडे	..	áre.
			..	इत	..	it.
hither	..	}	..	इत	..	it.
			..	ईंघे	..	inghe.
there	..	}	..	उत	..	ut.
			..	ऊडे	..	úre.
thither	..	}	..	औन	..	aun.
			..	उत	..	ut.
thus, so	..	..	..	न्यून	..	nyún.

D.—The Verb—Active Voice.

§ 11. The Infinitive.

The uninflected infinitive ends, as in Urdu, with ना ná, e.g.—

साच बोला आवा से } It is best to speak the truth.
Sách bolná áchhá se. }

The inflected infinitive is formed by dropping the final letter of the termination, and adding, when euphony demands it, a short ' a ' before the now final n, e.g.,—

पीवन के लाइक } Fit to drink.
Píwan ke láik. }

खान जोग } Fit to eat.
Khán jog. }

मरनाआला, Maranálá. About to die.

एह जाअनआला, Eh já'anáá = Eh, you on the road.

§ 12. The Future Participle.

The future participle is formed by adding the termination álá to the inflected infinitive, e.g.,—

कर्ना, karná = To do.

कर्नाआला, karnáá = About to do.

मर्ना, marná = To die.

मरनाआला, maranáá = About to die.

§ 13. The Present Participle is as in Urdu. The Verb आना Aná—to come—has, however, a curious form in आम्ता Amtá. आम्ते—Amte is equivalent to the Urdu áteáte; and आम्ते ही—Amte hí = immediately on arrival.

§ 14. The Conjunctive Participle is as in Urdu.

§ 15. The Past Participle.

In forming the past participle, there is interpolated between the root and the final á of the termination a sound almost amounting to ĩ, but not quite so distinct. It may be represented by य, y.

Examples.

<i>Infinitive.</i>		<i>Past Participle.</i>	
मर्ना	.. marná	.. to die	.. मर्या .. marya.
मार्ना	.. márná	.. to kill, beat	.. मार्या .. máryá.
फेट्ना	.. pheṭná	.. to meet	.. फेट्या .. pheṭyá.
सौन्ना	.. símná	.. to sew	.. सौम्या .. símyá.
गाड्ना	.. gáḍná	.. to bury	.. गाड्या .. gáḍyá.
कर्ना	.. karná	.. to do	.. कर्या .. karyá.
ठान्ना	.. thánná	.. to determine	.. ठान्या .. thányá.

There are, of course, some irregular formations as—

		<i>Infinitive.</i>			<i>Past Participle.</i>
होना	..	honá	..	to be	.. हुआ .. huá.
देना	..	dená	..	to give	.. दिया .. diyá.
लेना	..	lená	..	to take	.. लिया .. liyá.
जाना	..	jáná	..	to go	.. गिया .. giyá.

§ 16. The Imperative.

The singular imperative is, as in Urdu, the plain root of the Verb, *e.g.*, मार—már = beat!

The plural imperative either takes the Urdu form मारो máro, or the Urdu precative form with a slight difference of intonation as मार्यो, máryo. The difference in use between these appears to be two-fold.

The precative form is more distant, and future; the imperative form more immediate. The imperative form again would be used to a junior or to a low-caste person, while to a senior the precative form may be used, even of immediate action.

The Urdu precative form in—‘ iye,’ *e.g.*, kariye, is not used in Játú.

§ 17. The Aorist Tense.

This differs from Urdu in the form of the first person plural, which ends in चाँ áñ, *e.g.*,—

		<i>Singular.</i>			<i>Plural.</i>
मैं कहं	..	main karún	..	हम करां	.. ham karáñ.
तु करे	..	tu kare	..	तुम करो	.. tum karo.
ओह करे	..	oh kare	..	वे करें	.. we karen.

Note (1). These terminations correspond exactly to those of the Auxiliary Verb, which is conjugated below.

(2) In the Verb जाना, jáná the first person singular is जाँ, jáñ as well as जाऊँ, jáúñ.

§ 18. The Auxiliary Verb.

		<i>Present.</i>			
		<i>Singular.</i>			<i>Plural.</i>
मैं हूँ	..	main sún	..	हम साँ	.. ham sáñ.
तु से	..	tu se	..	तुम सो	.. tum so.
ओह से	..	oh se	..	वे सेँ	.. we señ.

Past.

Same as Urdu, with the exception that the feminine plural is often थीं thī as singular, and not थीं thīn.

§ 19. The Indefinite Present Tense.

This tense never takes the Urdu form, which is compounded of the imperfect participle and the present Auxiliary Verb, e.g., main kartá hún.

The only exception to this rule appears to occur in the negative phrase मैं नहीं जान्ता, main nahín jántá, which is probably an introduction from Urdu.

The present tense is either—

(a) The aorist alone.

(b) The aorist compounded with the present auxiliary.

Thus 'I am doing it' is मैं करूँ हूँ main karún sún or मैं करूँ main karún; 'We are going' is हम चलाँ साँ, ham chaláñ sáñ or हम चलाँ ham chaláñ, just as in Urdu 'I am going' is main játá hún or main játá. This tense has the indefinite value of the Urdu main játá hún = 'I am going.'

§ 20. The Definite Present Tense.

To avoid the possible futurity of the above tense, and to indicate that the action is at the moment of speech in course of fulfilment the compound tense formed from the root of the verb, combined with the past participle of रहना rahná, and the present auxiliary verb, is employed.

Singular.

Plural.

मैं कर रिहा हूँ, main kar rihá sún हम कर रिहे साँ, ham kar rihe sáñ

तु कर रिहा से, tu kar rihá se. तुम कर रिहे सो, tum kar rihe so.

ओह कर रिहा से, oh kar rihá se. वे कर रिहे सेँ, we kar rihe señ.

= I (etc.) am actually doing it now.

Note.—If the auxiliary is omitted, the present significance is changed to a perfect, e.g., ओह आ रिहा oh á rihá means not 'he is coming,' but 'he has come.'

§ 21. The Future.

The future is formed, as in Urdu, by the addition of the declinable suffix गा gá to the aorist. It follows that the first person plural is कराँगे karáñge, and not करेँगे, kareñge.

§ 22. The Past Imperfect.

Just as the indefinite present is compounded of the auxiliary present and the aorist, and not as in Urdu of the auxiliary present and the imperfect participle, so the past imperfect is compounded of the auxiliary past and the aorist,

and not as in Urdu of the auxiliary past and the imperfect participle, *e.g.*,—

Singular.

Plural.

मैं कर रहा था .. main karún thá .. हम करां थे .. ham karán the.
 तु करे था .. tu kare thá .. तुम करो थे .. tum karo the.
 ओह करे था .. oh kare thá .. वे करें थे .. we karen the.
 = I (etc.) was doing it.

§ 23. The Past Unfulfilled Conditional.

The structure of this tense is the most curious in the language. It is formed by adding है hai for every person to the ordinary aorist.

In the correlative part of the sentence it is optional to omit the termination है hai, *e.g.*,—

1st Singular. जे मैं न्यून करूं है तो मैं मरूं (है)

je main nyún karún hai to main marún (hai).

2nd Singular. जे तु न्यून करे है तो तु मरे (है)

je tu nyún kare hai to tu mare (hai).

3rd Singular. जे ओह न्यून करे है तो ओह मरे (है)

je oh nyún kare hai to oh mare (hai).

1st Plural. जे हम न्यून करां है तो हम मरां (है)

je ham nyún karán hai to ham marán (hai).

2nd Plural. जे तुम न्यून करो है तो तुम मरो (है)

je tum nyún karo hai to tum maro (hai).

3rd Plural. जे वे न्यून करें है तो वे मरें (है)

je we nyún karen hai to we maren (hai).

= If I (etc.) had done so, I should have died.

Notes.

(1) The fact that the auxiliary verb is रहूं sún not हूं hún and its 3rd person से se not है hai, and the fact that this termination is not conjugated, suggest at once that it has nothing to do with the auxiliary verb.

(2) The same tense exists in Multání. See O'Brien's glossary of the Multání language, page vii, where the termination is given as há and Mr. O'Brien thought the tense was peculiar to Multání. He believed há to be the substantive verb, though page v shows it is not.

(3) Dr. Grierson, to whose notice I brought the existence of this tense, suggests that it is probably really an old future, something of the nature of—

<i>Singular.</i>	<i>Plural.</i>
“ Mārihañ	mārehaĩ.
“ Mārihai	mārehõ.
“ Mārihai	mārehaĩ.

“ This tense has gone through various changes of meaning (just as the old present has become the present conditional in Hindi), and in Kashmirí is actually a past conditional. The hañ, hai, etc., is a termination, not the verb substantive, the *h* representing an old *s* or *sh*. Thus Sanskrit māri-shyāmi, Prakrit mārissāmi, mārihāmi, modern mārihañ.” Cf. O’Brien, *op. cit.*, pp. v and vi, on the Multání future.

(4) The ordinary Urdu form of the past conditional is also in use, for example,—

जे आज थोड़ा पानी न होंता तो तोड़ चढ़ह जाता je áj thorá pání ná hontá to tor charh játá = If such a little water were not running to-day, it would flow up (on to the fields).

If the áj were omitted, the sense might equally be ‘ If such a little water had not been running, it would have flown up (on to the fields).’

§ 24. The Future Conditional.

Future conditionals are expressed as in Urdu—

(a) by the use of the aorist, when a general assertion is made, *e.g.*,—

जे पश्चा चल जाय तो समे कौ आस हो जाय, je pachhwá chal jáe to same kí ás ho jáe. If the west wind blows, there is hope of a good year ;

(b) by the use of the future, when the future nature of the contingency has to be emphasized, *e.g.*,—

जे तु काट लेगा तो मैं मारुंगा, je tu kát legá to main mārúngá.

If you cut it, I shall beat you.

There is, however, another form. If, in the first example above, it is desired not to express a general truth, but to indicate the fact that if only the west wind would begin to blow now, there is still hope of a good year, the है hai will be added to the first part of the sentence as in the past conditional, *e.g.*,—

जे पश्चा चल जाय है तो समे कौ आस हो जाय, je pachhwá chal jáe hai to same kí ás ho jáe.

In this tense, however, the termination is apparently added only to the 3rd person singular.

§ 25. The other tenses of the active voice accord with those in use in ordinary Urdu. The following idiomatic uses of tenses already discussed may be conveniently noted here.

(1) *Uses of the Past Participle.*

This is sometimes used when Urdu would employ the inflected infinitive, *e.g.*,—

मरे पाके, mare páchhe = After death.

उस ने गये ने कै साल हुए, us ne gaye ne kai sál húa = how many years is it since he went?

(2) *A contingent future* is formed by repeating the aorist with a negative, *e.g.*,—

मैं करूं किह न करूं, main karún kih ná karún = I may do it perhaps; perhaps not.

(3) The verb लेना lená, added to the root of an intransitive verb itself becomes intransitive, and gives the meaning of completed action, *e.g.*,—

हो लिया, ho liyá = it is finished.

आ लिया, á liyá = he has come.

(4) The verb रखना rakhná is idiomatically used as an intensive where Urdu employs dená; *e.g.*, 'to present a petition' is arzí de-rakhná; 'to sow cotton' is bārí bo-rakhná; bhej rakhná, to send; khol rakhná, to open.

(5) The past tense of the verb रहना rahná is used in the common phrase ओह रिहा 'oh rihá' as 'there it is,' "voila."

(6) An inversion of the common form of the past tense is most idiomatic; *e.g.*, "ओह गिया मर oh giyá mar" for 'oh mar giyá' 'he died.' The phrase is very vivid but not used for special emphasis.

(7) In the imperative it is common to combine both negatives, *i.e.*, the prohibitive मत with the negative ना. "मत ना चलियो mat ná chaliyo," "don't you go."

(8) The past tense of the verb बैठना baithná to sit" is used idiomatically for 'failed,' 'ceased' 'gave up,' *e.g.*, a man whose sight is failing will say of his eyes "देखन ते बैठ रिहे से' dekhan te baith rihe señ." Of a tree which is dying it will be said "रुख होखन ते बैठ रिहा से rúkh hoan te baith rihá se," "the tree is ceasing to be, drying up."

The Passive Voice.

§ 26. The passive voice is formed exactly as in Urdu, subject to the modifications of form already dealt with, *e.g.*,—

"I am being beaten" is not मैं मारा जात हूं, main máryá játa hún, but मैं मार्या जाऊं हूं, main máryá jáún sún.

The best rule for the use of the passive is, however, to avoid it wherever possible, *e.g.*, instead of saying "the tree was blown down by the wind" the Ját will either say 'the wind blew the tree down,' or more probably 'the tree fell down from the wind.' Ordinarily the passive is little used, except in such phrases as मैं मार्या गिया, main máryá giyá.

PART II.

JĀTŪ—ENGLISH GLOSSARY.

अ

- अंग, *aṅg*, n.m., body, limb.
- अंगौ, *aṅgī*, n.f., breast covering or bodice worn by married women, “*aṅgī gail peṭī, māñ gail beṭī*” a girl favours her mother as her bodice fits her bust.
- अंगूठी, *aṅgūṭhī*, n.f., finger ring with jewel or other ornament.
- अकर मकर, *akar makar*, n.m., tricks, hanky-panky.
- अकौयां, *akīyāñ*, plural of *ák*, n.m., *calotropis procera*.
- अगेता, *agetá*, adj., early, precocious.
- अचरज, *achraj*, n.m., a wonder, a remarkable or unusual occurrence.
- अभा, *ajhá*, n.m., goat.
“*Golá sohbat, ajhá dhan dūmāñ dhedāñ piyár,*
“*Gore khetī boe ke chároñ shakhs khowár.*”
A slave for friend, a goat for wealth, *Dúms* and such for love—A field sown near the village site, all four men are wretched.
- अभां, *ajhāñ*, n.f., she-goat.
- अटकना, *atakná*, v.a., to forbid.
- अटकल सटकल, *aṭkal saṭkal*, adv., approximately.
- अड़ंगा, *aṛaṅgá*, n.m., (1) weeds; (2) a collection of things lying together as patwari's papers, zamindar's tools, clothes or utensils.
- अड़ंग बड़ंग, *aṛaṅg baṛaṅg*, n.m., miscellaneous, useless articles, “paraphernalia.”
- अड़ांस, *aṛáñs*, n.f., (1) difficulty, complication; (2) obstacle; (3) insistence, *aṛáñs meñ áyá*, got into a hole; *aṛáñs láná*, to insist.
- अड़ाहा, *aṛáhá*, n.m., a grass preserve in the middle of cultivated fields.
- अड़े, *are*, adv., here. Cf. *áre*.
- अड़क, *aṛk*, self-sown, run wild.
- अड़ना, *aṛna*, v.n., to adjoin.
- अड़सन पड़सन, *aṛsan paṛsan*, n.m., miscellaneous articles of small value as *aṛaṅgá* (q.v.).
- अयसात, *an'át*, n.f., absence, lack, of anything, *an'át ke sabab se* ‘because there was no crop’—sometimes the meaning is lack of relations. The word seems to be a corruption from *anhot*, which is from *an* privative and *honá*, and so

means want, poverty: the particular sense can be judged from the context.

अणौ, *aní*, n.f., point.

“*Sel kí aní, hal kí aní, súi kí aní, kalm kí aní,*
“*phale karm se.*”

The spear's point, the plough's, the needle's, the pen's prosper by fate, *i.e.*, success in these professions depends on fate.

अण्डी, *andí*, n.f., (1) an iron band bound round the hub of the spinning wheel; (2) a similar band round the base of the plough clamping the *pháli* and *panihári* (q.v.).

अत्कादशी, *atkádshí*, n.f., eleventh day of either half of the lunar month.

“*Sáwan badí atkádshí gan garje ádhí rát,*
“*Píyá tún já so Málve, ham ján sán Gujrát.*”

“If the clouds thunder at midnight on the eleventh of the dark half of Sáwan, my husband you go to Málwá, I'm off to Gujrát.”

A sure sign of famine.

अधकारण, *adhkáran*, n.f., half-sharer (of a woman).

अधकारी, *adhkári*, n.m., half-sharer (of a man).

अधल, *adh*, adj., clear, distinctive, used with *pahchán*.

अनाड़ी, *anári*, adj., stupid, dense.

अनेक, *anek*, adj., many, too many.

अन्धेरा, *angherá*, adj., uninvited, unowned, having no particular business, loafing, *angherá áyá*, came unasked, *angherá bachhá*, a waif.

अन्त, *ant*, n.m., end, aim.

“*Rotí ant, rotí pañth,*
“*Rotiyán ne gáweñ sant.*”

Bread is man's aim,
Bread his path.

The saints (fakirs) hymn bread.

अन्तर, *antar*, n.m., difference. The root idea of the word is space.

अन्तका, *antká*, adj., too much, excessive.

“*Ghaná ná antká bolná, ghaní ná antkí chup;*
“*Ghaná ná antká barsná, ná ghaní antkí dhup.*”

“Nor speech nor silence to excess.”

“Nor rain nor sunshine to excess.”

Moderation in all things.

[N.S.]

- अम्बर. *ambar*, n.m., sky.
 अला, अलः *alá, ala*, n.m., a small species of mimosa.
 अलु, *alu*, n.m. & f., owl.
 अलेख, *alekh*, adj., invisible—an attribute of God.
 अलः *ala*, n.m., a very small fly that damages wheat.
 अलकत, *alkat*, n.f., aloofness, abhorrence; *a-khaiñchná* to feel abhorrence, keep oneself aloof.
 अलभेड़ा, *aljherá*, n.m., disagreement, dispute.
 अलबत. *albat*, conj., however, at least.
 अलबाद, *albád*, n.f., obstinacy.
 अलबादी, *albádí*, adj., headstrong, obstinate—of men or animals.
 अवेर, *aver*, n.m., delay.
 अष्टा, *ashtá*, adj., headstrong, obstinate—of men or animals.
 अष्टमी. *ashtmíñ*, n.f., as *átheñ*, q.v.
 असतल, *astal*, n.m., a Bairagi monastery.
 असताई, *asratái*, n.m., as *ásrat*, q.v.
 अह, *ah*, interj., a noise made to turn bullocks in plough or cart to the right.

आ

- आंकल, *áñkal*, n.m., a bull.
 आंख, *áñkh*, n.m., a letter (of the alphabet), e.g., *Do áñkh kádñá* = To write a short letter.
 आंग, *áñg*, n.f., grazing fees (taken by proprietors of the village from non-owners).
 आंगल, *áñgal*, n.f., finger.
 आंच, *áñch*, n.f., fire.
 आंट, *áñt*, n.f., 1. Knot.
 2. Difficulty.
 3. Custom, agreement.
 आंटी, *áñtí*, n.f., knot (poetical form of *áñt*, q.v.).
 आंटना, *áñtná*, v.a., to fill up (a tank or well, etc.).

“ *Bráhman ho ke áñte johr,*
 “ *Bányá ho ke kare maror,*
 “ *Zamíndár ho ke le kor;*
 “ *Tínoñ ká áyá, tháp le, or.’*”

If a Brahman fills up a tank,
 Or a Baniya practises pride,
 Or a Zamindar takes a bribe;
 The end of all three, mark you, has come.

आंडू, *ándú*, n.m., fine, strong bullock; also of an entire bull used for ploughing, not covering (used generally with *buld*, q.v.).

आक, *ák*, n.m., *calotropis procera*—*pl. akíyán*.

आकड़, *ákar*, adj., uneven, up and down, of ground.

आखली, *ákhli*, n.f., 1. Difficulty.

2. Holes or ruts in a road.

आगम, *ágam*, n.m., 1. A shallow trench dug to carry water from village or jungle to fields; *ágam ká páni* = the water which it carries.

2. Approach, futurity.

आगमबुधौ, *ágam budhí*, n.f., wisdom.

“ *Ágam budhí baníyá,*

“ *Pachham budhí ját.*”

Forethought the Baniya's, and afterthought the Jat's.

आहा, *áchhá*, adj., good; all words are lengthened like this.

आठें, *áthen*, n.f., the 8th day of either half of the lunar month.

आठ न साठ, *áth ná sáth*, adj., nought, useless. Cf. ‘at sixes and sevens.’

“ *Khetí us kí, áp kare.*

“ *Ádhí us kí dekhan jáe.*

“ *Áye gaye ko púchhe bát*

“ *Us kí khetí áth ná sáth.*”

His are the fruits of farming, who works himself.

He gets half who goes to see.

He who enquires of the passers-by

Nought of the fruits gets he.

आड, *ád*, n.f., 1. Prevention, obstacle.

2. Barrier.

3. Line—of *Sarson*, etc., sown up and down the wheat crop.

आडा, *ádá*, adj., 1. Curved, crooked.

n.m., 2. Reclining on side with legs drawn up.

“ *Rár karo to bolo ádá.*

“ *Krit karo to rakho gádá.*”

Would you quarrel? Speak crooked.

Go in for business? Keep a cart.

आड़, *árú*, adj., obstinate, quarrelsome.

आण, *án*, n.f., anything avoided or foresworn, e.g., *dárú kí án se* = wine is foresworn.

आथम, *átham*, n.m., the west.

आथमन, *áthman*, n.m., same as *átham*, q.v.

आथमना, *áthamná*, adj., western.

आथमनां, *áthamnán̄*, adv., westwards.

आदर, *ádar*, n.m., respect, honor, deference.

“ *Bhát, bhatíarí beswá,*
“ *Tínōñ ját ko-ját ;*
“ *Áye ká ádar kareñ,*
“ *Chalte púchheñ ná bát.*”

The bard, the baker, the strumpet,
All three castes are low ;
They honour the new comer,
And ask not when he goes.

आधम आध, *ádham ádh*, adv., half and half, equally.

“ *Hal báweñ, kúá dáēñ, gáří ádham ádh.*”

“ Left in the plough, right at the well, and half and
half in the cart.”

The meaning is that in the plough the left bullock has
most work, as the turns are made to the right, *vice*
versâ in the well: the cart goes straight. As a
matter of fact, the well and plough generally work
alike.

आधी डले, *ádhi dhaleñ*, n.f., a time of day, about 12 to 2 P.M.

आनंद, *ánañd*, n.m., ease, pleasure, tranquillity, peace, com-
fort.

आर्या, *áryá*, n.m., a vegetable, not unlike a small cucumber.

आल, *ál*, n.f., 1. Moisture, damp.

2. Mischief, folly.

आला, *álá*, n.m., a hole, niche in a wall.

आलकस, *álkas*, n.m., laziness.

“ *Álkas níñd mard ne khowe.*
“ *Bír ne khowe háñsí.*
“ *Taká biáj múl ne khowe.*
“ *Chor ne khowe kháñsí.*”

Laziness and sleep betray a man, and giggling a
woman.

(Craving for) interest betrays the principal—and
coughing the thief.

आला, *álná*, n.m., a bird's nest.

आला, *állá*, adj., moist, damp.

आस, *ás*, n.f., hope.

“ *Harí khetí gabhan dhínán.*

“ *Muñh par jáwe jib kí ás.*”

Green crops, a cow in calf !

When you taste, it's time to hope.

“ Don't count your chickens before they are hatched.”

आसङ्ग, *ásang*, n.f., strength, endeavour, courage; *himmat* of Urdu.

आसन, *ásan*, n.m., a fakir's residence or a Pandit's seat or *mat*.

आसौज, *ásauj*, n.m., the 7th month of the year, Sept. to Oct.

आसत, *ásrat*, n.m., a brahmin, other than one's family *parohit*, employed to do petty services such as cooking, etc., or engaged in a village where one is temporarily residing. The word is Sanskrit and primarily means “ dependent.”

आसनाई, *ásratáí*, n.m., same as *ásrat*, q.v.

आसा, *ásrá*, n.m., 1. Help, e.g., *málik ke ásre te*, by God's help.

2. Power, *Kál par gayá. Koí ásrá nahín rihá.*
Famine has fallen ; there is no power left in me.

इ

इञ्च, *inçh*, n.f., the Baniya's account against the Zamindar of moneys paid as revenue, &c.

इकठौड़े, *ikthauré*, adj. pl., collected together, assembled.

इत, *it*, adv., here, hither.

इब, *ib*, adv., now ; *ib ke sál*, or more commonly *ib ke*, this year.

इलहान, *ilhán*, n.m., anything useless to attempt, or beyond one's capacity or position.

इस्त्री, *istrí*, n.f., woman ; wife.

“ *Kis ká thákur páltí, kis ká mitr kalál.*

“ *Kis kí beswá istrí, kis ká baniyá yár.*”

Whose foundling is the *thákur*, whose friend the *kalál* ?
Whose wife is the strumpet, whose boon companion the Baniya ?

इ

इंघे, *inghe*, adv., hither.

इंढी, *inđhí*, n.f., a pad used in carrying water-pots on the head.
“ *Dabbí áwe, dabbí jáwe.*”

[N.S.]

“Squashed it comes, and squashed it goes”—coming and going, to and from the well, the pot rests on the pad.

इंधन, *indhan*, n.m., fire-wood, fuel.

“*Sāñj sakále kí bádli, do paihre kí panhyár.*

“*Khátan ho ke indhan ko cháli, tínoñ nahín padár.*”

Morning's and evening's clouds, the woman who fetches water at noontime.

The carpenter's wife who goes out for wood; there's no depending on any of them.

ईख, *ikh*, n.m., sugar-cane.

ईर्खा, *irkhá*, n.f., enmity.

“*Kañchan tajná saihj sai, par tiriá ká neh,*

“*Mán, baráí, irkhá, Tulsí durlabh yeh.*”

It's easy to give up (love of) gold; but to give up the love of a woman, pride, show and enmity—Tulsi, this is hard.

उ

उघाड़ा, *ughará*, adj., naked, bare.

“*Tín ughári sab dhakín, kar le nár bichár.*

“*Is gáhá ne khol ke jib jáyye panhár.*”

Three naked, all the rest covered: think it out, woman.

Solve this riddle, then go and fetch your water.

Answer—rafters in a roof.

उजड़, *ujar*, n.m., or n.f., a deserted village—adj., deserted.

“*Ujar dekhke gújar kúde dhál dekhke bairági.*

“*Khír dekhke báhman kúde, tínoñ ho jáeñ rází.*”

The Gujar jumps (for joy) when he sees a deserted village, the Bairagi when he sees a shield, the Brahman when he sees rice-milk; then all three are happy.

(The Gujar is a thief, the Bairagi often plays with a shield, and the Brahman is fond of good food.)

उजाड़, *ujár*, n.m., 1. A spot exposed to injury, e.g., *merí kyári bandarání kí ujár meñ sai* = my field gets overrun by monkeys.

2. Jungle, deserted land.

“ *Gújar se ujar bhalí, ujar se bhalí ujár.*

“ *Jahán dekhíye Gújar, wahán díjíte már.*”

A deserted village is better than the Gujar, better a howling desert; when you see a Gujar, kill him on the spot.

(It is better to live quite alone than in the company of such thieves as Gujars are.)

उकसना, *uksná*, v.n., 1. To rise.

2. To be stirred, to be moved. (Of emotions).

उखल, *ukhal*, n.m., the wooden or stone mortar in which grain is crushed.

उखली, *ukhlí*, n.f., a stone or wooden mortar smaller than *ukhal*, q.v.

उमाड़, *ugár*, n.m., a cattle yard, as *gher*, q.v.

उगम, *ugam*, n.m., the east.

उगमन, *ugman*, n.m., same as *ugam*, q.v.

उगमना, *ugmaná*, adj., eastern.

उगमनां, *ugmanán*, adv., eastwards, preceded by *te* q.v.,—to the east of.

“ *Tín bulaá, ghar men do chakí.*

“ *Ugmanán khet, Hákim kí bákí.*”

Three bullocks, two corn mills in the house.

A field in the east—and the Government's revenue will be in arrears.

i.e., why have an extra bullock and an extra mill, which mean waste?

If your field is in the east, coming and going the sun will be against you.

उगाही, *ugáhi*, n.f., money collected, especially the Government revenue.

उगाहना, *ugáhná*, v.a., to collect (money, etc.).

उजला, *ujlá*, adj., bright.

उड़ना, *udná*, v.n., to fly away.

“ *Thothe pachhore, ud ud já.*”

If you winnow hollow (gram), it will all fly away. (Waste labour, like ‘ploughing the sands.’)

उत, *ut*, adv., thither.

उतर, *utar*, n.m., answer.

उतर्ना-उतर जाना, *utarná, utar jáná*, v.n., to die.

उत्तम, *uttam*, adj., exalted.

उत्तर, *utr*, n.m., north.

उत्तरा, *utrá*, adj., northern.

उत्तराई, *utrái*, adj., or n.f., north wind.

उत्तराँहा, *utránhá*, adj., northern.

उत्तराँहाँ, *utránháñ*, adv., northwards.

उद्देश, *udes*, n.f., a form of salutation to *kanphárás*, q.v.

उध, *udh*, n.f., noise, uproar, bickering.

उधम, *udham*, n.f., same as *udh*, q.v.

उधलना, *udhalná*, v.n., to elope.

उन्मान, *unman*, n.m., cloud.

उन्मान सुन्मान, *unmán sunmán*, adv., approximately.

उपंग, *upaṅg*, adj., footless, crippled, lame; so depending upon others.

उपजना, *upajná*, v.n., to spring up, germinate, grow.

उपायो, *upáo*, n.m., remedy.

उपदेश, *updesh*, n.m., exhortation.

“ *Auroñ ke updesh par, sabhí gurú bharpúr.*

“ *Apne apne mukh par, sabhí ke dhúl.*”

In exhorting others all men are full-blown saints.

But every man has dust upon his own face.

i.e., all men can see the mote in their brothers' eyes,
but not the beam in their own.

उप्राहन, *upráhan*, n.m., high barren land, whose rain water is drained into a tank or less commonly into cultivated lands;
johar ká upráhan, the catchment area of a tank.

उफर्ना, *upharná*, v.n., to overflow.

उफान, *uphán*, n.m., an overflowing, ebullition (as of milk, when it boils up).

उफार्ना, *uphárná*, v.a., to make, to overflow.

उभार्ना, *ubhárná*, v.a., 1. To steal.

2. To instigate.

3. To seduce.

उम्रा, *umrá*, n.m., land that has borne an unirrigated spring crop, especially gram.

“ *Khetí kare to umre kare.*

“ *Náh to ghar meñ parke mare.*”

Would you farm? Farm in ‘*umrá*.’

If not you may lie down at home and die.

(*Umrá* soil is in the most workable and productive state.)

उलाङ्गा, *ulákná*, v.a, to cross, transgress.

उलीहना, *ulíchhná*, v.a., to bale, to pour out.

“ *Pání badh gayá náo meñ, aur ghar meñ badh gayá dām.*

“ *Donoñ háth ulíchhiye, yeh siáná kám.’’*

Water poured in the boat, and money was stored in the house.

Bale it out with both hands, this is wisest.

उल्गा, *ulgá*, adj., unemployed, at leisure—(urdu *alag*).

उल्गास, *ulgás*, n.f., leisure.

उलझना, *uljhná*, v.n., to be entangled (in difficulties), to quarrel.

उश्टंड, *ushtāṇḍ*, n.m., unnecessary action; anything beyond one's proper position or ability; contrariness.

उश्टंडी, *ushtāṇḍí*, n.m., contrary, one who acts beyond his position or station.

ऊ

ऊक चूक, *úk chúk*, n.f., forgetfulness, mistake.

ऊकना, *úkná*, v.n., to fail, to miss the opportunity or mark.

ऊम, *úg*, n.f., collection, subscription.

ऊठना, *úthná*, v.n., to get up.

ऊड़े, *úre*, adv., there, thither.

ऊत, *út*, n.m., childless man, *út jáná*, to die childless, sometimes used abusively, as worthless, good for nothing, senseless.

“ *Báří kí meñ báří boweñ,*

“ *Páh kas kí meñ boweñ ínkh,*

“ *Út gaye jab jániye,*

“ *Jab máne práí síkh.’’*

Sow cotton where cotton has been,

Sow cane in a far-off field,

Know a man's a fool,

When he follows another's advice.

ऊत न पूत, *út na pút*, n.m., a childless man.

ऊतनी न पूतनी, *útní na pútní*, n.f., (1) a childless woman; (2) a term of abuse among women.

ऊधलना, *údhalná*, v.n., to elope, leave home—of a woman; *udhalná* is also used.

ऊपला, *úplá*, n.m., dried cowdung cake—the fuel of the country.

ऊबना, *úbná*, v.n., to spring forth, be produced, grow.

“ *Sáwan lagtí ekádshí garbhe úbe bhán.*

“ *Ghar ghar bateñ bhadáyí gáweñ mañglá char.*”

If on the eleventh (dark half) of Sawan the sun springs out from the womb (of the sky), songs of joy will be heard (lit. distributed) in every house; they will sing hymns of congratulation.

ए

एकन्या, *ekanyá*, n.m., an *oṛhná*, q.v., worked on one hem only.

एकम, *ekam*, n.f., first day of either half of the month.

एकल्पा, *ekalpá*, adj., alone.

एकादशी, *ekádshí*, n.f., same as *a'kádshí*, q.v.

एक्का, *eklá*, adj., alone.

ऐ

ऐड़ा, *airá*, adj., obstinate, headstrong.

ओ

ओ ओ, *o, o*, a noise made to call horses up from watering.

ओग, *og*, n.m., a wooden wedge fixing the *hál*, q.v., into the *hal*,
q.v.

ओगला, *ogalná*, v.n., to wither (almost always of gram owing to
bad soil, drought or white-ants).

ओहा, *ochhá*, adj., small.

“ *Bail bisáwan chale, kañth, bhúre ke mat dekhiyo dañt.*

“ *Ochhe goḍe baiṅgan khurá jhúngá lío kaise kañth.*”

When you go to buy cattle, my husband, don't look at the teeth of the dun: small knees, hooves like an egg plant, and down-curving horns—however you may, buy such a one.

ओट, *ot*, n.f., shade, screen, e.g., *us kíkár kí ot meñ sai i.e.*, hidden
by that *kíkár* tree.

ओटा, *otá*, n.m., upright support at the side of a well on which the beam supporting the wheel is fixed.

ओटड़ा, *otrá*, n.m., 1. Same as *otá*, q.v.

2. A screening wall (round cattle-yard, etc).

ओटना, *otná*, v.a., to be responsible for, undertake. To admit e.g., *je tú apná kasúr ot le* = if you admit your fault.

Āj ghar meñ kám se, merá áre ká kám tú ot le = I am busy at home to-day, you undertake my work here.

Geñd uhhálún sún, oteo = I am throwing the ball; you catch it.

Merí láthí ot = Take (the blow of) my stick.

ओड़, *or*, n.f., 1. Direction.

2. Boundary, edge.

ओड़हना, *orhná*, n.m., woman's head-covering.

ओढना, *odhná*, n.m., same as *orhná*, q.v.

ओदा, *odá*, n.m., boundary pillar between villages.

ओपाहज, *opáhaj*, adj., crippled.

ओत्रा, *obrá*, n.m., a recess or cupboard in a room for storing grain, etc.

ओत्री, *obrí*, n.f., a smaller *obrá*, q.v.

ओरी, *orí*, n.f., the grain dues given to menials at sowing time.

ओर्ना, *orná*, n.m., 1. A seed drill, made of bamboo, and attached to the plough.

2. The droppings of cattle, picked up in the jungle.

ओल, *ol*, n.f., circuit.

ओलाखा, *olálwá*, n.m., a log of wood, to prop a cart from behind, when standing.

ओसारा, *osará*, n.m., a thatched roof.

ओसा, *osná*, v.a., to pound (flour only).

ओसा *osrá*, n.m., turn—(on a roster).

ओहलना, *ohlná*, n.m., a taunt.

“ *Jis ghar bará ná mániye, dhorí pariá ná ghás.*

“ *Sás bahú ké ohlne, ujar ho jáe bás.*”

Where none heed the elders, there's no grass before the cattle.

Where mother and daughter-in-law taunt each other, the home goes to ruin.

(A house divided against itself cannot stand).

औ

औकन सौकन, *aukan saukan*, n.f.

1. Relation of two living wives to each other.

2. Flashes of lightning in opposite directions.

औड बर, *aud̄ bar*, adv., late—tardily.

औड़ा, *aurá*, n.m., udder of cow or other animal.

औड़ी, *aurí*, n.f., smaller *aurá*, q.v.

औन, *aur̄n*, adv., thither, in that direction.

औला, *aulá*, adj., 1. Perverse, obstinate.

2. Left (opposite to right).

औला सौला, *aulá saulá*, adj., in different directions, uneven.

औली बात, *aulí bát*, n.f., ill-speaking, abuse, flippancy.

औसक, *ausak*, n.m., pain, disease, sickness.

क

कंचन, *kañchan*, n.m., wealth, gold.

कंठन, *kañthan*, n.m., throat.

कंथ, *kañth*, n.m., husband.

कंथा, *kañthá*, n.m., husband, as *kañth*, q.v.

ककैर्ला, *kakerlá*, adj., hard, containing kankar nodules.

कचोला, *kacholá*, n.m., metal cup.

कचोली, *kacholí*, n.f., a bowl with a hole in the bottom used as a water clock. It is set in a *jhákrá*, q.v.

कच कच, *kach kach*, n.f., chattering.

कच्री, *kachrí*, n.f., a small wild gourd.

कटाओ, *kaṭáo*, n.m., silver work on the armhole of *añgí*, q.v.

कटिया, *kaṭiyá*, n.f., buffalo heifer.

कटौड़, *kaṭír*, n.m., a swarm of creeping locusts.

कटेहड़ा, *kaṭehrá*, n.m., a small sitting place common to two or three families.

कटोरा, *kaṭorá*, n.m., a metal cup.

कठन, *kaṭhan*, adj., hard, distressing, cruel.

“*Khodan páran zamín sahe, káṭan sahe ban rá.*

“*Kaṭhan bachan sádhú sahe, aur pe sahe ná já.*”

The land will bear to be dug and split, the wood to be cut.

The fakir will bear a hard word : nought else bears these things.

(The word *rá* in the above is not satisfactorily explained).

कड़, *kar*, n.f., back.

कड़ा, *kará*, n.m., an anklet, worn by men on right leg only.

कड़ौ, *karí*, n.f., plain anklets.

कड़े, *karé*, adv., where ? whither ?

कड़कू, *karjú*, n.m., the block, to which the rope of a well is fastened.

कड़वान, *karván*, n.f., bitterness.

कढ़ौनी, *kadhaurí*, n.f., milk-pan (for boiling milk).

“ *Máinsán men kaun gayá, dúndí, már kadhaurí múndí.* ”

Who went out with the buffaloes, the idiot ?

Turn down the milking pail.

(Don't expect success from fools : the idiot will have let the calves get the milk.)

कणा, *kaná*, n.m., the axle tree of well-wheel.

कणताना, *kantáná*, v.n., to shrink from, wince, flinch.

कण्ठा, *kanyá*, n.m., poetical form of *kaní*, q.v.

कतूर्या, *katúryá*, n.m., a puppy.

कलौ, *katní*, n.f., a small basket in which women keep their cotton for spinning.

कद, *kad*, adv., when ?

कदावट, *kadawat*, n.f., enmity.

कनागत, *kanágat*, n.m., the first fortnight of Asoj in which Hindus feed the Brahmans in remembrance of their deceased kinsmen, and on the date corresponding to that of the month in which they died.

कनौ, *kaní*, n.f., single grain (of any cereal).

कण्ठी, *kanthí*, n.f., a necklace, worn close round the neck by men or boys only.

कण्डाई, *kandái*, n.f., a thorn plant. *k—satyánásan* = the argemone mexicana. *k—pasarmá* = the solanum xanthocarpum.

कन्स, *kans*, n.m., gold.

कन्सुआ, *kansuá*, n.m., an insect which damages sugar-cane.

कपत्ता, *kapattá*, adj., quarrelsome. fem.—*kapattí*, a shrew.

“ *Naulái ná karí dopattí, kyá chugegí kapattí.* ”

Not hoed (the cotton) when two leaves high !

What will the shrew pick ?

(Cotton picking is largely done by old women. The crop needs constant weeding and hoeing).

कपूत, *kapút*, n.m., an unworthy son.

e.g., *kapút betá mará bhalá*, an unworthy son is better dead.

कब, *kab*, n.m., a poet.

कमेर, *kamer*, n.f., earning, ability to work.

कमेरा, *kamerá*, n.m., a labourer.

कमेरी, *kamerí*, n.f., a workwoman, female labourer.

“ *Bál kamerí meñh kasán, yeh khetí ke ján binán.* ”

Wind the worker, rain the farmer: these are the life and soul of farming.

कम्माऊ, *kammáú*, adj., able to labour, one who earns, bread winner.

कम्बू, *kamrú*, n.f., the vest or shirt worn by zamindars.

कम्लाना, *kamláná*, v.n., to fade.

“ *Tágá tútiá phir jure, phúl tút kamláe.* ”

“ *Man ká tútiá ná jure, pás pás ke jáe.* ”

A broken thread can be joined, but a broken flower fades. There's no mending broken hearts, even though they live together.

क्यार, *kyár*, n.m., a largish field.

क्यारी, *kyári*, n.f., a small field.

क्यारी भर, *kyári bhar*, n.m., heavy rain, a field full.

करंक, *karank*, n.m., bone.

करंग, *karang*, n.m., or n.f., bone, as *karank*, q.v.

“ *Kark, makar, do bhainri, baiñhi eke bár.* ”

“ *Anáj ke kothe ríten, karangán kí bár.* ”

When the two sisters cancer and capricorn sit in one house,

The corn bins are empty, and bones will serve for fences.
(A sure sign of severe famine).

करंजा, *karanjá*, n.m., a batten in a mud roof, of cotton stalks, (*bansatí*), etc.

करक, *karak*, n.f., pneumonia.

कराओ, *karáo*, n.m., remarriage of a widow.

कराल, *karál*, adj., badly finished, ill-made.

“ *Kálar khēt, karál hal, lamtañgá bailán.* ”

“ *Kátar gáe, kátar nár, sab par gaye gailán.* ”

A hard field, an ill-made plough, long-legged cattle.
A barren cow, a barren wife, all befell together.
(Misfortunes never come singly).

करौंती, *karauṅtī*, n.f., an alligator, or crocodile.

करड़, *karr*, n.f., pluck, sticking to it.

करड़ा, *karrá*, adj., severe, stiff.

e.g.—of land,—of soil,—of a sentence,—of an officer,
etc.

कर्नी, *karní*, n.f., fate, fated business.

“ *Karní kare to kyauṅ dare, kar ke kyāuṅ pachhtāe.*

“ *Per boe bambúl ke, ám kahán te khāe.*”

If you do your fated work, why fear? When done,
why regret?

If you sow a *babul* tree, how can you eat mangoes?
(As you sow, so shall you reap).

कर्म हौन, *karm hín*, n.m., a luckless man (*hín* is a diminutive or
privative particle).

कर्हा, *karhá*, n.m., camel.

कर्हेला, *karhelá*, n.m., camel, as *karhá*.

“ *Kesar bhará karhelá, pút sapúti jo,*

“ *Meñh to barsá bhalá, honí ho so ho.*”

A camel laden with saffron; a wife with a child
worthy of her—rain fallen well—let well alone.

(“ God’s in his heaven, all’s right with the world.”)

कल, *kal*, n.m., a fool.

कलठरी, *kalatrí*, adj., anything relative to Land Revenue Depart-
ment, e.g., *kalatrí dām* is the fixed land revenue.

The word is derived from the English “Collector.”

कला, *kalá*, n.f., trouble, worry.

Ek halá aur sau kalá.

A single plough, a hundred troubles.

कलाना, *kaláná*, v.a., to winnow.

कला बाजी, *kalá bází*, n.f., diving into water head first.

कलपूछिया, *kalpúchhiyá*, n.m., *chikará*, gazelle.

कल्ले वार, *kalle wár*, n.f., the first watch of the day.

कल्वंती, *kalwantí*, adj. f., good, well-bred, thrifty, modest, all
that a house-wife should be.

कलहारा, *kalhárá*, adj., contentious, quarrelsome, fem., *kalhári*,
a shrew, a termagant.

“ *Bánt binaule bhúri khāe, hal chalan laṅḍá jāe.*

“ *Chal mere laṅḍe ek halái, tere liye nau man dāl dalái.*

“ *Tere ghar kalhári nár, nire bhus, batáwe dāl.*

[N.S.]

“ *Yeh dam gaje kisi aur ne de, nau man bech ke dúsrá kyon ná le.* ”

(Says the ox). “ The white buffalo eats fodder and oil-seed, the short-tailed ox goes ever to the plough.”

(Says the farmer). “ Come my short-tail, one ploughing, I’ve split nine maunds of chick-pea for you.”

(Says the ox). “ Nay, you’ve a shrew of a wife at home—feeds me on straw and calls it chick-pea: try your blarney-tricks with some other: why not sell your nine maunds and buy another ox?”

कवेरा, *kaverá*, n.m., poet.

“ *Mintar ká dhoká hoyá, náti ghar kí jo.* ”

“ *Karz ne náteá banyá, din hethe kí bát.* ”

“ *Khet meñ ho ná kanyá, kahen girdhar kaverá.* ”

“ *Karm kí lági ánti, ghále sonan háth, kans kí ho jáe máti.* ”

A friend turned traitor, the wife of one’s home refused her obedience, the baniya refused an advance, not a single grain in the field. These are marks of evil days, says Girdhar the poet, the luck’s gone away: touch gold with your hand, and the gold turns to earth.

कड़, *kawr*, n.f., a pair of closed square baskets made of twigs, to contain Ganges water.

कस, *kas*, n.m., bark of *kíkar* (acacia arabica) or *nímbar* tree (a. leucophloea).

कसान, *kasán*, n.m., farmer, peasant, specially a good farmer

“ *Hal halke, gári dhalke, kúa máro már.* ”

“ *Kasán us ne jániye, jo jáne in kí sár.* ”

Lightly with the plough, steadily with the cart.

Quickly with the well.

Count him the husbandman.

Who all their ways can tell.

“ *Chíná chorí chákri, hárá kare kasán.* ”

It’s the broken farmer who takes to *chíná*, service, or theft.

(*Chíná* is a cheap and inferior grain, and laborious to grow).

कसूत, *kasút*, adj., bad, dirty.

“ *Barhápa áyá lalkárke, bázi bahí kasút.* ”

“ *Yá to paisá gánth ká, yá betá ho sapút.* ”

Old age came bawling

“ The game’s bad,

“ Else there’s money in your purse

“ Or a dutiful lad.”

कछुता, *kasútá*, adj., same as *kasút*, q.v.

कसौला, *kasaulá*, n.m., a long-handled hoe.

कससौ, *kassí*, n.f., same as *phálá*, q.v., shovel, spade.

कांग्री, *kángnī*, n.f., a massive bracelet, worn below the *chúrí*, q.v.

कांटौ, *kántī*, n.f., same as *kándī*, q. v.

कांडौ *kándī*. n.f., chaff of *jowár* used for fodder.

कांस, *káns*, n.m., a kind of grass, (*saccharum spontaneum*).

काका, *káká*, n.m., father's younger brother.

काकौ, *kákí*, n.f., wife of *káká*, q.v.

काकड़ा, *kákrá*, n.m., 1. Leather-pad which prevents the spindle of a spinning wheel shifting too much when the thread is spun.

2. Cotton seed, when used for cattle fodder.

काकड़ौ, *kákrí*, n.f., a vegetable like a cucumber.

काग, *kág*, n.m., a crow.

कासा, *káglá*, n.m., a crow, as *kág*, q.v.

काज, *káj*, n.m., a funeral feast.

काजल, *kájal*, n.m., antimony—eye-powder.

“ *Godýán kájal, kamar thal, ghítí meñ do dañt.*

“ *Is gáhá ne khol ke, rotí kháyé kañth.*”

Antimony on the knees, back arched, two teeth in the neck.

Solve me this riddle, my husband, before you eat your food.

The answer is cart; the knees are wheels; the antimony is black grease. The teeth in the neck are the pegs in the yoke.

काटड़, *kátar*, adj., barren.

काटड़ा, *kátará*, n.m., buffalo calf.

काटड़ौ, *kátarí*, n.f., buffalo-heifer, as *katíyá*, q.v.

काठ, *káth*, n.m., wood.

काटना, *kádhná*, v.a., 1. To take or draw out.

2. To work (a pattern).

“ *Kálá báryá, lál kádhyá.*”

Put in black, pulled out red.

(Said of the ploughshare, in the blacksmith's forge).

कातक, *kátak*, n.m., the 8th month of the year, Oct. to Nov.

कात्नी, *kátní*, n.f., same as *katní*, q.v.

कान्यां, *kányán*, n.m., Irregular plural from *kán* (ear).

कापड़, *kápar*, n.m., cloth.

काबर, *kábar*, n.f., starling (Urdu *maiñná*).

कामल, *kámal*, n.m., 1. Blanket.

2. Well-finished, good, full (corr. from Persian *Kámil*).

“ *Adhe mágh káñdhe kámal báh.* ”

‘ In mid *Mágh* plough with a blanket on your shoulder.’
(It begins to be cold in November).

काम्ची, *kámchí*, n.f., same as *kámṛí*, q.v.

काम्ड़ा, *kámṛá*, n.m., a stick or twig used as a whip.

काम्ड़ी, *kámṛí*, n.f., same as *kámṛá*, q.v., but smaller.

काम्नी, *kámní*, n.f., lovely woman.

काम्नी, *kámlí*, n.f., a light blanket.

कार, *kár*, adj., sour (land).

कार, *kár*, n.m., work; *kár mukḥtyár*, an agent.

कारन, *káran*, n.m., 1. Doing, cause.

Postp. 2. Because of, on account of.

कार बेगार, *kár begár*, n.m., work of menials of village.

कारा, *kárá*, adj., as *kár*, sour, saline.

कार मुख्त्यार, *kár mukḥtyár*, n.m., an agent or a manager.

काल, *kál*, n.m., 1. Famine (from Sankrit *akál*).

2. Time, season, age, death.

3. To-morrow; the letter *a* in this *kal* is not exactly long. Is more a drawl than a long vowel.

“ *Ag lagi bankhand meñ, dájiá chañdan rúkh.* ”

“ *Ham to dájeñ pañkh biná, tú kyauñ dájiá hañs.* ”

“ *Phal kháe, bíthá karí, baiṭhe tumri dál.* ”

“ *Tum jal jáo, ham ur chalen, jiveñge kai kál.* ”

Fire caught in the forest, and the sandal tree burned.
(Said he) “ I must burn for lack of wings, but why do you burn, O goose ? ” (Said the goose) “ I’ve eaten your fruits, left droppings and sat on your boughs. If you burn and I fly away how long should I live ? ”

काला, *kálá*, n.m., the black buck or antelope (short for *kálá hirñ* or *mirg*, q.v.).

कासन *kásan*, n.m., metal vessels.

कि, *ki*, conj., or.

कित, *kit*, adv., whither ?

कितोड़, *kitor*, adv., which side ? whither ? where ?

किन्यावानी, *kinyáwání*, adj., steady, straight (rain).

किम, *kim*, adj., some.

किम्मे, *kimme*, adv., sometimes, occasionally.

किम्मे किम्मे, *kimme kimme*, adv., occasionally, rarely.

किम्मे न, *kimme na*, adv., nowhere, not at all.

किड़ा, *kirá*, n.m., cotton stalk wattlings at the sides of a cart for loading manure, etc.

किब्बे, *kibbe*, adv., sometimes.

“*Do jhoṭí, kibbe máṛí, kibbe moṭí.*”

“Two buffaloes, now weak now fat.”

(Answer : the blacksmith's bellows).

किसारी, *kisárí*, n.f., a grasshopper that damages gram.

कींघे, *kínghe*, adv., whither ?

कौच, *kích*, n.m., mud.

कौड़ नाल, *kír nál*, n.f., row of ants (from *kír*, an insect).

कुंडल, *kuṇḍal*, n.m., circle, ring, halo.

“*Cháñd to mat kuṇḍale aur súraj kuṇḍal já.*

“*Keh to Rájá kaṭ mareñ yá jaṅgal bhar já.*”

The moon not in a halo, but the sun in a halo !

Either there'll be Rajas killed, or the jungle will be full (of water).

कुंवार, *kuñwár*, n.m., Hindi month *Asauj*— (not used in common speech).

कुक्ड़ौ, *kukṛí*, n.f., 1. Head of *makkí* (maize).

2. The bundle of thread spun from the spindle.

कुक्रम, *kukram*, n.m., wrong, evil.

कुक्रा, *kukrá*, n.m., a cock.

“*Tín zát zát ne páleñ, kyásth, kág, kukrá.*

“*Tín zát zát ne gáleñ, náí, báhman, kuṭrá.*”

Three kinds cherish their kind, the Kaiasth, the crow and the cock.

Three kinds destroy their kind, the Nai, the Brahman and the dog.

कुठला, *kuṭhlá*, n.m., same as *koṭhí*, q.v.

कुठली, *kuṭhlí*, n.f., same as *kuṭhlá*, q.v., but smaller.

“*Bhádoñ máwas meñ paṛwá ḍhole.*

“*Ahírí moṭh kuṭhlí role.*”

If the east wind blow on the midday of Bhadon.

There'll be *moth* in the bin for the Ahir's wife to sift.

moth is a pulse (*phaseolus aconitifolius*).

कुड़ती, *kuṛṭí*, n.f., a girl's bodice.

कुतान, *kuṭán*, adj., small poor.

“ *Ochhí nagrí kuṭán wásá.*”

“ *Karí bír, kyá gharwásá.*”

A small village is a poor habitation.

Remarried a widow ! What kind of home ?

कुत्रा *kuṭrá*, n.m., a young dog (older than puppy but not yet full-grown).

कुड़ौ, *kuṛṛí*, n.f., same as *kúṛí*, a dung heap.

कुल *kul*, n.m., family.

कुलबन, *kuḷachhan*, n.m., misconduct, ill-temper.

Also as adj., misconducted, ill-favoured, ill-omened.

The word is a corruption of *ku lakshan*; *lakshan* is a mark, and *ko* is a prefix meaning bad.

“ *Bhaiñs kuḷachhan káṭrá, bír kuḷachhan dhí.*”

“ *Samá kuḷachhan jab jániye, jab Sáwan barse mí.*”

Ill-omened's the buffalo with a bull-calf, ill-omened the wife with a daughter. Judge the season ill-omened if it rains in Sawan.

(One would suspect an omission of a negative, as rain is badly needed in Sawan).

कुसल, *kusal*, n.f., happiness.

कूंगी, *kúngí*, n.f., an insect that blights wheat (due to excessive rain).

कूंड़ा, *kúñṛá*, n.m., 1. A tribe which sells vegetables.

2. Any vegetable-seller.

कूंदड़ा, *kúñḍrá*, n.m., a heap of wheat or barley or *gowár* ready for threshing.

कुना, *kúkná*, v.n., to shout.

कुख, *kúkh*, n.f., hips.

कूड़, *kúṛ*, n.m., a fool.

कुड़ा, *kúṛá*, n.m., dirt, filth, dung.

कूड़ौ, *kúṛí*, n.f., dung-heap.

कुड़ा, *kúḍhá*, n.m., 1. Share, part (of a village) or the shares of the crop made at division of produce.

2. A heap of grain, threshed, but not winnowed.

कून, *kún*, n.f., fleece of a sheep.

कूप, *kúp*, n.m., same as *búngá*, q.v.

के. *ke*, Interrog. pro., what ?

केसर *kesar*, n.f., saffron.

केसा, *kesá*, adj., with hair, hairy.

केसा, *késá*, adj., such as, used as Urdu *jaisá*.

केह, *keh*, conj., either, or.

कैडा, *kaiṇḍá*, n.m., 1. Size.

2. Shape.

कैड़, *kaiṛ*, n.m., direction, e.g., *johaṛ kaiṛ jáná*, to go out for purposes of nature.

कैर, *kair*, n.m., or n.f., a shrub (*capparis aphylla*) the *karíl* of the Panjab; irregular pl., *kairarián*.

“ *Akián, nímán bájrá, kairarián kopás.*

“ *Jo phale jál to jowár hone kí ás.*”

There'll be *bájrá* if there's *ák* and *ním*, cotton when there's *kair*.

If the *jál* fruits, then there's hope of *jowár*.

(Either a good season for one is a good season for the other, or land which bears a spontaneous crop of *ák* and *ním* is good soil for *bájrá*, etc.).

कैरड़ियाँ, *kairarián*, plural of *kair*, q.v.

कैहर, *kaihr*, n.m., oppression.

“ *Chalná to saṛk ká, cháhe pher kyoñ ná ho.*

“ *Dúdh to mainś ká, cháhe ser kyoñ ná ho.*

“ *Raihná to shahr ká, cháhe kaihr kyoñ ná ho.*

“ *Basná to bháyoñ ká, cháhe bair kyoñ ná ho.*

“ *Kháná to gehúñ ká, cháhe zaihr kyoñ ná ho.*”

A road to walk on, e'en though it wind a bit.

For milk, a buffalo's, e'en though but a quart of it.

A city for living in, though oppression be there.

Brothers to dwell midst, though there's enmity there.

And dinner of wheat flour, e'en though poison be in it.

को, *ko*, adj., prefix meaning bad e.g., *ko-saṅg* = bad company; *ko-samá* = bad season; *ko-nári* = bad woman; *ko gáe* = bad cow; *ko báchhrú*, bad calf, etc., etc.

“ *Base ko-saṅg, cháhe kusál, Tulsí yeh afsos.*

“ *Maihmán ghatí samuñd kí, Ráwan basiá paṛos.*”

Live in bad company and hope for happiness—Tulsi that's a pity!

The sea lost its reputation because Rawan lived near it!

(The sea was too near Rawan's kingdom and lost its reputation for being impassable.

Evil communications corrupt good manners).

कोखन, *kokhan*, n.f., belly, abdomen.

कोठा, *kothá*, n.m., a cistern in which water is stored at a well.

कोठी, *kothí*, n.f., a big receptacle for storing grain.

कोडा, *kodá*, adj., kneeling.

“*Baithá máre, kodá pakre.*”

(One) sitting hammers, (another) kneels and holds.
(Answer—the blacksmith's iron on the anvil).

कोड़, *kor*, n.m., bribe, bribery, corruption.

कोतक, *kotak*, n.m., wrong, ill-endeavour.

कोय्ली, *kothlí*, n.f., eatables tied up in a cloth and sent as a present to relation, etc.

कोद, *kod*, n.m., wrath.

कोर, *kor*, n.m., second watering, the first after sowing.

“*Mañghsar meñ ná diyá kor.*”

“*Kyá tere baldáñ le gayá chor.*”

Not given the second water in Magh!

What, had a thief run off with your bullocks?

(Wheat must get canal water in Magh).

कोरा, *korá*, adj., 1. Mere.

2. Unused.

कोर्बा, *korbá*, n.m., a middling season (between *kál* and *sambat*), e.g., if there has been fodder, though no grain, it would be called *korbá*.

कोलु, *kolú*, n.m., 1. Large round clod-crusher drawn by four bullocks.

2. A sugar press.

कोल्डी, *kolrí*, n.f., a small round clod-crusher drawn by two bullocks.

कोल्हू, *kolhú*, n.m., same as *kolú*, q.v.

कोवाड़, *kowár*, n.m., double doors.

“*Ráñghar gújar do, kuttá-billí do.*”

“*Yeh cháron ná hoñ, to khule kowáráñ so.*”

The Ranghar and Gujar a pair, the dog and the cat are another.

When none of the four are about, open doors and sleep (without bother).

(Thieves all).

कोसंग, *kosang*, n.m., bad society. See *ko*.

कोसमा, *kosamá*, n.m., bad times, see under *ko*.

कोसा, *kosná*, v.a., to curse.

“ *Kose te bairí mare, soche te dhan howe.*

“ *Pání meñ te ghí nikle to bháweñ koí biloe.*”

If your foe died by cursing, if wealth came by thinking of it.

If ghi came from water, any one you please could work the churn.

Cf. ‘ If ifs and ans were pots and pans,
‘ There’ld be no work for Mary’s hands.’

कौडी, *kaudí*, n.f., a small shell (*kaurí*).

कौली, *kaulí*, n.f., 1. The outstretched arms.

2. An armful.

कौलो भर्ना, *kaulí bharná*, v.a., to take into one’s arms. To embrace.

क्रानो *krání*, n.m., a Christian.

क्रित *krit*, n.f., business (literally, what is done).

क्रित्रङ्ग, *kritrang*, v.a., Poet. form for Sansk. *krit*; done, doing.

ख

खंड, *khañd*, n.m., tract, or large portion of a country (as in *Bandelkhañd bankhañd*).

खंडवा, *khañdwá*, n.m., turban, used by older persons, in which the cloth is twisted into rolls.

खटखटा, *khatkhatá*, adj., firm (used of a good firm soil).

खटया, *khatyá*, part., past part. of *khatná*, to be gained, so earned, spoils.

खडा, *khadá*, n.m., dimple, depression, trench.

खड़ाओं, *kharáon*, n.m., wooden pattens, such as faqirs often use.

खड़दू, *khardú*, n.m., fighting, quarrelling.

खड़या, *kharýá*, adj., standing, stood (poetical form for Urdu *khará*).

“ *Ke liyá áchhá, ke diyá áchhá, ke jaláyá áchhá.*

“ *Ke máryá áchhá, ke paryá áchhá, ke kharýá áchhá.*”

What’s best taken ? (God’s name).

What’s best given ? (Charity).

What’s best burned ? (Oil).

What’s best mastered ? (Wrath).

What’s best fallen ? (Rain).

What’s best standing ? (A plough).

खन्धी, *khandhí*, n.f., an instalment.

खवाहत, *khabáhat*, n.f., labour, effort.

खबतान, *khabtán*, n.m., or adj., mad, crazy.

खबत, *khabbat*, n.m., or adj., mad, crazy.

खब्बा, *khabbá*, adj., left (as opposed to right).

खर, *khar*, adj., 1. Hard, rough, coarse.

2. Wild (spontaneous growth).

“ *Khet bigára khar bathwá, sabhá bigári kúr.*

“ *Bhagat bigáre lobh ne, kesar ral gayí dhúl.*”

The wild chenopodium spoils the field.

Fools spoil society.

Avarice spoils the devotee.

And a mixture of dust spoils saffron.

खरा, *khará*, adj., good, pure, prime.

खरासट, *kharásat*, n.f., enmity.

खर्क, *khark*, n.m., a herd of cattle.

खर्च, *kharch*, n.m., cesses.

खड़, *kharr*, n.m., a coarse sheet placed in a cart before loading grain.

खर्सा, *kharsá*, n.f., the hot-weather season—four months.

खला, *khalá*, adj., erect, standing (the ordinary form *khará* is also in use).

“ *Gehún kahe main ghapan ghapír, sab náján ká kahyún pí.*

“ *Dhán kahe main sún dhán, áye gaye ká rákhún mán.*

“ *Je mere máheñ par jáe búrá ghí, gábrú kare lapká jhapkí.*

“ *Urd kahe main sab meñ níká, jul pañditán ne merá kardiyá tíká.*

“ *Je mere kar de dehí bare, mánus khá jáeñ khale khale.*

“ *Aur náj sab boyo mat ná boyo chiná, kháye chinghwá ho jáye, godyán par jáye híná.*”

Says wheat, ‘I’m (? valuable) of all grains, I’m called the chief’; says rice, ‘I’m president, and hold respect of all that come and go: if sugar and ghi are mixed with me, the young men come running for me.’ Says mash, ‘I’m the smallest of all, yet the learned unite to mark their forehead with me. If you cook me with curds, men will eat me as they stand. Sow all other grains but don’t sow china—if you eat it there’s heat in your water and weakness in your knees.’

खली, *khalí*, n.f., a heap of grain ready to be threshed.

- खस्र *khasm*, n.m., 1. Owner. (Urdu *خاسم*, *khasm*).
2. Good farmer.

“ *Khetí khasmán seti, kuchh agetí kuchh pachhetí nahín to retí kí retí.* ”

Cultivation is with the good farmers; some crop early, some late: otherwise it is all as sand.

खाङ *kháng*, n.f., a hot, withering wind (blowing after rain and injuring the young crops, chiefly in *Sáwan*).

खांचा *kháñchchá*, n.m., mud, slough.

खांड *khánd*, n.f., a water-course in canal lands, the main distributary leading from a *morí*.

खांड *khágar*, n.m., a bull.

खाज *kháj*, n.f., a rash, irritation of the skin.

खाजा *khájá*, n.m., food, sweets.

खाट *khát*, n.f., bed.

खाड़ा *khárá*, n.m., trouble.

खानौ *khátí*, n.m., a caste of carpenters (most of the carpenters of the district belong to this caste).

खानोड़ *khátor*, n.f., wood-store in front of a carpenter's house.

खाद *khád*, n.f., manure.

खाप *kháp*, n.f., 1. Branch, tribe, of a race.

2. Faction, party.

खाप्री *kháprí*, n.f., a small plot or field.

खार *khár*, n.m., dried leaves of gram used as fodder.

खाल *khál*, n.m., 1. The runnel of a well.

2. Runnel carrying off water from village.

खिंडाना *khindáná*, v.a., to scatter.

खिंदाना *khindáná*, v.a., to send off (a girl to her husband's home).

खिचड़ी *khichrī*, n.f., a mixture of *bájrá* and *múñg* or of rice and *múñg* cooked in water.

खिड़क *khīrak*, n.m., single door.

खिलासी *khilási*, n.f., a broad water-course, a government minor distributary.

खिस्सा *khissá*, n.m., proverb, story, tale; Urdu *qissá*.

खीस *khís*, n.m., the first milk that flows after a calf is born.

खुंडना *khundná*, v.a., to hinder.

खुरा *khurá*, n.m., hoof.

[N.S.]

“ *Ochhí godí, baiṅgan khurá; le áyye kañthá, kadí ná burá.* ”

Small knees, egg-shaped hooves—bring (such bullocks), husband; they are never bad.

खर्काना, *khurkáná*, v.a., to reprove.

खूटा, *khúntá*, n.m., Two uprights in which the hub of a spinning wheel is fixed by an iron pivot.

खूड, *khúd*, n.m., furrow.

खूडवानी, *khúdwání*, n.f., good rain, a furrow full.

खेदना, *khedná*, v.a., to drive off, eject.

खेर, *kher*, n.m., bad cold, influenza.

खेल, *khel*, n.f., trough at a well, at which cattle water.

खोई, *khoí*, n.f., crushed cane used for fuel.

खोटा, *khotá*, adj., bad, rascally, quarrelsome.

खाना, *khoná*, v.a., 1. To spoil (the common Urdu sense is to lose).

2. To pick.

खोर, *khor*, n.f., earthen manger at which cattle feed.

खोरौ, *khorí*, n.f., 1. A scratch.

2. Very light ploughing.

“ *Mágh kí khorí aur sính kí jhorí, pake bagair ná já.* ”

Magh's ploughing, and a tiger's-claw wound, never go without maturing.

(The double meaning of *pakná*, to mature and to fester, is not capable of being rendered in English).

खोला, *kholá*, n.f., buffalo or cow past bearing.

खोवा, *khowá*, n.m., an insect that blights *jowár* and *bájrá*.

खोवार, *khowár*, n.m., or adj., base (corruption of Persian *خوار* *khwár*.)

“ *Gore khetí bár bin, dúmán setí piyár.* ”

“ *Hákím setí oṛhná, tínon bát khowár.* ”

Cultivating land near the village, without a fence,

Close companionship with *dúms*,

Covering the face before the judge,

All three matters are bad.

खोसा, *khosná*, v.a., to seize, snatch away, withdraw.

ख्यास, *khyás*, n.f., remembrance.

ग

गंग्वर, *gaṅgwar*, n.m., hero.

गंडा *gaṅḍá*, n.m., a cane (of sugar-cane).

गंडसा. *gaṅḍśá*, n.m., a rough frame put under the plough to take the share off the ground when driving to and from the fields.

गज *gaj*, n m., elephant.

“ *Dhíli kokhan, kamr kas, jis kí píndí lál suraṅg.*

“ *Us ká jáyá gaj charhe, ná to albat charhe toraṅg.*”

Loose belly, tight back, red complexion—such a woman's child will mount an elephant—if not at least a horse.

गठवाना, *gathwáná*, v.a., to get mended or cobbled (of leather things).

गडौ. *gaḍí*, n.f., cup, the *lotá* of Urdu.

गता, *gatá*, n.m., battens across the well-yoke.

गद. *gad*, n.f., thud, bump, *gad-desí* suddenly, violently

“ *Harí thí man bharí thí, bábá jí ke bágḥ meñ.*

“ *Lataurá sí kharí thí.*

“ *Ayá thá máli ká, gad desí parí thí*”

When green she was lovely in Babaji's garden.
She stood so blooming.

Came the mali's son, down she fell thumpety.

(Answer *jowár*).

गदर, *gaddar*, adj., half ripe, ripening.

“ *Kachche phal soháwne, gaddar húe mithán.*

“ *We phal kaunse, jo pakke ho karwán.*”

Unripe fruits are agreeable, half ripe sweet.

What are those fruits that are bitter when ripe?

(Answer mankind—the three ages of children, grown lads, and old men are depicted).

गद देसौ, *gad desí*, adv., suddenly, violently.

गधल, *gadhal*, n.f., dirt, mud (in water).

गन, *gan*, n.m., cloud, gathering clouds.

गन्दोलक, *gaṅḍholak*, n.m., the time just after sunset.

गमौना. *gamíná*, n.m., doing errands, fagging to another village.

गर्गरी, *gargarí*, adj., newly watered, wet.

[N.S.]

गर्भ, *garbh*, n.m., 1. Pregnancy.2. Belly, womb; *garbh chhin jáná*, to miscarry, to drop a child.गलंते, *galante*, v.n., poetical form from *galná*, q.v.; it is either past tense or imperfect participle.गलना, *galná*, v.n., lit., to melt, so perish; idiom., to thunder.“ *Ap, galante pándíyá, jajmán bhí gále.* ”

The pandit perishing, ruins his client with himself.

(The fathers have eaten sour grapes and the children's teeth are set on edge).

गवांड, *gawánd* n.m., neighbourhood.गा, *gá*, n.f., cow that has calved.गांठ, *gánth*, n.f., 1. Repairing, cobbling by a *chamar*.

2. Purse.

3. Knot.

गांठ सेठ, *gánth seth*, n.f., cobbling, mending.गांडल, *gándal*, n.f., young shoots of *sarson* used for food (human).गादर, *gándar*, n.m., a kind of grass (*anatherum muricatum*).गाडा, *gádá*, n.m., a big cart.गाडौ, *gádí*, n.f., cart, also train.गात, *gát*, n.m., body.गाता, *gátá*, n.m., wooden bar, leather covered, making lip to prevent water tilting back into well when *charas*, q.v., is put down full.गादड़, *gádar*, n.m., a jackal.“ *Gádar kí maut áwe, to gám sohín bháje.* ”

When the jackal's to die, he runs towards the village.

(Running into the jaws of death).

ग ध्वा, *gádhlá*, adj., dirty, muddy (of water).गाब्रू, *gábrú*, n.m., a youth.गाम, *gám*, n.m., village.“ *Gám basáyá báníye, pár pare jab jáníye.* ”

The baniya has founded a village!

Say so, when it's finished.

गाम्डी, *gámrí*, n.f., a small village.गाल, *gál*, n.f., an abuse.गालना, *gálná*, v.a., to liquefy, melt, so to destroy.

गाह, *gáh*, n.m., 1. Poetic license for *gháo*, q.v.

2. An alligator or crocodile.

गाहा, *gáhá*, n.m., riddle.

“ *Bin sísan dañt anek bane, bin kañthan gáwe rág sutá.*

“ *Pán kí phík ne dúr kare, kyá siáhi kí rekh pe man chaltá.*

“ *Bhaj le alekh Nariñjan ne, is gáhe ne khole mánus sutá.*”

Sans head and teeth too many : sans throat and sings a good song.

Throws away the betel spittings : see how it follows the black line. Praise the invisible God—good man is he who solves this riddle.

(Answer ‘ a saw ’).

गाहटा, *gáhṭá*, n.m., threshing by driving four to six bullocks over the crop.

गिवाड़, *gitwár*, n.m., an enclosure, for stocking fodder, etc.

गिवाड़ा, *gitwára*, n.m., same as *gitwár*, q.v.

गियास, *giyás*, n.m., the 11th day of either half of the lunar month.

गिर्ज, *girj*, n.m., a kind of crane or stork.

गिर्ड़ी, *girri*, n.f., a small round clod-crusher drawn by two bullocks.

गिर्द गांठ, *girr gánṭh*, n.f., a round closed bundle.

गुड्डी, *guddí*, n.f., small uprights, resting on the *pát*, q.v., in which the axle-bar of the well-wheel is fixed.

गुदुड़ी, *gudri*, n.f., two uprights supporting the spindle of a spinning-wheel.

गुन, *gun*, n.m., goodness, virtue, kindness.

“ *Ját ná jáne gun kareá, chaná ná jáne báh.*

“ *Chañdan rúkh kaṭáeke kahán ghisáon gáh.*”

The Jat does not appreciate good done him, the gram knows not the plough. When the Jat had the sandal tree cut, how could I salve my wound ?

(A pig used to plough for a Jat, and heal the wounds the Jat gave him for taking some gram as guerdon of his labours by recourse to the sandal tree. So the ungrateful Jat cut down the tree—thereby “killing the goose that laid the golden eggs.” A Jat requites kindness as little as gram does labour spent on it).

गुबभ ना, *gubbharná*, v.a., 1. To push or thrust in.
2. To stitch roughly, cobble.

गुंदना, *gúndná*, v.a., 1. To plait, braid.
2. To knead, pound.

गुंधा, *gúndhná*, v.a., same as *gúndná*, q.v.

“ *Mittí kahe kumhár te, kyá gúndhe moe.*

“ *Ek din aisá hogá, ham gúndheñge toe.*”

Says the earth to the potter, why pound me so ?

‘The day will come when I’ll pound you.’

(The final words in each line are Brij or Purabi and not Jatu).

गूँह, *gúnh*, n.m., human excrement.

गून, *gún*, n.f., sack, load, pack, such as donkeys carry.

“ *Gadhá ná kúdá, kúdí gún.*”

The ass didn’t jump but off jumped the load.

(Used when some busybody puts his spoke into the wheel).

गूना, *gúná*, n.m., the broken straw or stalk of *jowár* (compare *jhorá*).

गूँडी, *gúmrí*, n.f., pimple, boil, bubo.

गर्ना, *gerná*, v.a., to put down, throw down, throw away.

गेहूँ, *gehún*, n.m., wheat.

“ *Gehún kháná cháhe thá, sádñ meñ kyon ná báhe thá.*”

Did you want to eat wheat ? Then why didn’t you plough in *Hár* ?

गैघल, *gaighal*, n.m., mud, slough.

गैल, *gail*, postp., with.

गैलड़, *gailar*, n.m., or n.f., step-child, i.e., woman’s child by a previous husband.

गैलड़ा, *gailrá*, adj., past, gone before (of time).

गैहना, *gaihna*, adj., mortgaged.

गैहरे, *gaihre*, n.m., comfortable circumstances, prosperity.

गोचौ, *gochní*, n.f., mixed wheat and gram.

गोचड़ा, *gojrrá*, n.m., a mixture of wheat, barley and gram.

गोभ, *gojh*, n.f., pocket in a man’s coat.

गोभा, *gojhá*, n.m., pocket in a boy’s *chádar*.

गोडा, *godá*, n.m., a knee.

गोड़ी, *gorí*, n.f., same as *jindrálá*, q.v., but dragged by bullocks.

गोद, *god*, n.m., adoption of a relation as a son (taking into lap).

गोद आना, *god áná*, v.n., to be adopted.

गोद लेना, *god lená*, v.a., to adopt.

गोना, *goná*, v.a. 1. To push or thrust in.

2. To stitch roughly, cobble.

गोपिया, *gopiyá*, n.m., sling used by a crop-watcher.

गोफिया, *gofiyá*, n.m., as *gopiyá*, q.v.

गोमाना, *gománá*, n.m., the foundation of the *kúp*, q.v., made of cotton-stalks.

गोरा, *gorá*, n.m., bare ground outside the *ábádí* where the cattle stand or rest.

“ *Ránghar ká maláhjá, gújar pe sián.*

“ *Gore kí khetí, kusal ná ján.*”

Friendship with a *Ranghar*, favours done a *Gujar*.

Farming by the village site,—expect no happiness from these.

गोरौ. *gorí*, n.f., a handsome woman (fem. of *gorá*—fair).

गोल, *gol*, n.m., sending cattle to another village to pasture.

गोला, *golá*, n.m., 1. The top-leaves of the cane, cut off before stripping.

2. Mud pellets slung by the crop-watcher.

गोलान. *golán*, n.f., recognition.

गोवाड़, *gowár*, n.m., same as *ugár*, q.v.

गोवार, *gowár*, n.m., villager, yokel.

गोवाल, *gowál*, n.m., herdsman, cowherd.

गोसा, *gosá*, n.m., dried cow-dung cakes.

गोहर, *gohar*, n.m., road, same as *rástá* or *gauñdá*, q.v.

गोहांड, *goháñd*, n.m., same as *gawáñd*, q.v.

गोह्रौ. *gohrí*, n.f., smaller *gohar*, q.v.

गोह्र्या, *gohlyá*, n.m., the starling (known in the Panjab as *tíliar*).

गौंड़ा, *gauñdá*, n.m., road between villages broad enough for several carts.

गौंडौ, *gauñdí*, n.f., road between villages, broad enough for one cart.

गौड़ौ, *gaurí*, n.f., a cow that has calved (the word is in form diminutive but not always so in usage).

गौन, *gaun*, n.f., the slope, down which the bullocks go in drawing water from a well.

ज्ञान, *gyán*, n.m., thought, idea, perception.

ज्ञानौ, *gyání*, adj., wise.

[N.S.]

“ *Gyání jhirwe gyán ne, ban ne jhirwe mor.*“ *Tiríá jhirwe kúh ne, andherá jhirwe chor.*”

The wise pines for wisdom,

The peacock for the wood,

The woman for the well,

The thief for the dark.

ज्ञारस, *gyáras*, n.f., same as *atkádshí*, q.v.ज्ञाल, *gyál*, n.m., the sonless dead. Often propitiated as inimical.

घ

घटा, *ghatá*, n.f., cloud.घटना, *ghatná*, v.n., to decrease, lessen, be short.“ *Dene áyí bunáí, ghatiyá batáwe sút.*”

Pay time for weaving came; says he the thread's short!

घड़ाना, *gharáná*, v.a., to get made.घड़ना, *gharúkná*, v.n., to thunder (used of thunder in month of *Sáwan* only).घड़ौंचौ, *gharauñchí*, n.f., 1. A stand for propping carts.

2. A stand for holding water-pots.

घधी, *ghadhí*, n.f., an insect that blights *bájrá*.घन, *ghan*, n.m., same as *gan*, q.v.घना, *ghaná*, adj., much, many.घनखरे, *ghankhare*, adj., much, many, very.घमसान, *ghamsán*, n.m., 1. Crowd.

2. Collected produce of a field.

घराना, *gharráná*, v.n., to thunder.घरवासा, *gharwásá*, n.m., house-keeping.“ *Karí ráñd ká kyá gharwásá.*”

It's no home with a widow for wife.

घाओ, *gháo*, n.m., sore, wound.घाट, *ghát*, adj., less.घाटा, *ghatá*, n.m., loss, deficit.घाम, *ghám*, n.m., sunshine, sun's heat.घामड़, *ghamar*, n.f., a heat-stricken cow (from *ghám*, q.v.).

घालामाला, *ghálámálá*, n.m., irresponsibility, saying one and doing another thing, confusion, disorder.

“*Ját jāt ke sále kar den ghále mále.*”

All Jats are brothers-in-law, and do as they will.

घारना, *ghálná*, v.a., 1. To thrust in, put in.
2. To fling down.
3. To send off, send away.

“*Ghare men nún ghálná.*”

Put salt in the pot.
(A form of oath).

“*Rahí kuñwári dumní, sir men ghále tel.*”

The dum's daughter remained a maiden, though she put oil on her head.

(There's many a slip 'twixt the cup and the lip).

घास टुक का वक्त, *ghás túk ká waqt*, n.m., evening time; the same as *díwá bale* or *rotiyán ká waqt*; *ghás túk* is a familiar phrase for the evening meal.

घिड़ी, *ghirri*, n.f., round earth-roller, or clod crusher.

घिल्ड़ी, *ghilri*, n.f., pot for heating *ghí*.

घिसाना, *ghisána*, v.a., to rub, or cause to rub.

घींस, *ghíns*, n.f., same as *ganḍsá*, q.v.

घीटी, *ghíṭi*, n.f., throat.

घुंघट, *ghuñghaṭ*, n.m., 1. Silver fringe to the *oṛhná*, q.v., falling over forehead.

2. Veil, idiomatically used in proverb for the beard of the wheat.

“*Chane thanakde báḍiye, masrí phulán nál.*”

“*Dhán satudde báḍiye gehún ghuñghaṭ nál.*”

Cut gram when it's rattling, masrí when still there are flowers, rice when softish and wheat when the beard is long.

(The form of this proverb is Panjabi and not Jaṭu but it is quoted locally).

घुंडी, *ghúṇḍi*, n.f., twisted strand of *sani* or *ḍob* or *munj*, etc.

घेर, *gher*, n.m., a cattle-yard.

घेनी, *gherni*, n.f., a peg by which the handle (*hathlí*) of a spinning wheel (*charkhá*) is worked.

घोघ, *ghogh*, n.m., hole made by scraping out earth for plastering.

घोट, *ghoṭ*, n.f., still moist heat.

घोटना, *ghoṭná*, v.a., to grind.

घोड़ना, *ghoṛṭá*, n.m., a donkey or a very small pony.

घोसौ, *ghosí*, n.m., a cattle-dealing tribe.

च

चंबोला, *chanbolá*, n.m., a kind of song (love song).

चकारा, *chakará*, n.m., gazelle.

चणक आना, *chanak áná*, v.n., to be strained (of a muscle, etc.).

चत्राई, *chatráí*, n.f., 1. Cunningness.

2. Pride.

चमगता, *chamgatá*, n.m., same as *gatá* (q.v.) when leather-covered.

चखी, *charkhá*, n.m., spinning wheel.

चर्मख, *charmakh*, n.f., pegs of grass or hemp, etc., through each *gudrí* (q.v.), on which the spindle of a spinning wheel rides.

चर्स *chars*, n.f., well-bucket.

चलावा, *chaláwá*, n.m., marriage (the final ceremony called *mak-láwá* in Urdu).

चहानी, *chahání*, n.f., cremation-ground.

चाक, *chák*, n.m., the vessel in which the boiled sugar-cane juice is cooled and consolidated.

चाठा, *cháṭhá*, n.m., masonry work in a sugar-press between the vessels in which the juice is boiled and cooked.

चातर, *chátar*, adj., clever.

“*Solá sású, sau bahú, tín khasm, ghar chár.*”

“*Gáhá Rájá Bhoj ká, koí chátar líyo bichár.*”

Sixteen mothers-in-law,

A hundred wives,

Three husbands,

Four houses.

Raja Bhoj's riddle : let some wise man solve it.

(Answer *chaupar* (“draughts”)—16 pieces, 100 squares, 4 dice, etc).

चादर भौज, *chádar bhíj*, n.m., light rain, enough to wet one's clothes.

चाम, *chám*, n.m., skin or leather.

“ *Bhar gayá merá Rám manáyo, á gayá bhái kílí kholde, Rám manáyó.* ”

“ *Har bhaj le Rám manáyó, á gayá bhái kílí kholde, Rám manáyó.* ”

“ *Dádú dunyá bawrí, kahe chám ne Rám.* ”

“ *Púchh maroṛ bald kí kádhe apná kám.* ”

It's full, God keep us all. It's come, loose the pegs, God keep us all. Sing to God, God keep us all. It's come, loose the pegs, God keep us all. Oh *Dádú*, the world is mad: they call leather God. A man's at work, twisting the tail of an ox.

(The first lines are the song of the well sung by the man at the bucket, the refrain *Rám manáyo* giving the time to the bullock-driver. *Dádú*, a great saint, hearing the refrain thought some religious ceremony was in progress, but coming up saw only some farmers and a leather well-bucket and broke out into an angry apostrophe).

चारुवा, *cháruwá*, n.m., a donkey.

चाला, *chálá*, n.m., 1. Hardship or oppression.
2. Occurrence.

चिकंटी, *chiúntí*, n.f., small black ant.

चिंघा, *chiñghwá*, n.m., heat in urine.

चिबमाशा, *chitrmáshá*, n.m., more commonly *chomásá*, q.v.

चिनार्ना, *chinárná*, v.a., To pile or heap carefully; used
(1) for heaping earth generally;
(2) of binding a turban.

चिन्ता, *chintá*, n.f., anxiety.

चिमा जाना, *chimájána*, v.n., to slip off, run away.

चिरी, *chirí*, n.f., a bird.

चिम्ठी, *chirmthí*, n.f., a *rattí*, (liquorice seed) $\frac{1}{96}$ part of a *tolá*.

चीघड़ा, *chíghrá*, n.m., same as *chúghrá*, q.v.

चौज, *chíj*, n.f., thing.

चौरा, *chírá*, n.m., coloured turban worn by young men.

चंडा बट, *chunḍá wat*, adj. or adv., division per stirpes, by wives (veils).

चुला, *chulá*, n.m., mouthful.

चूटना, *chúntná*, v.a., to pick (with sickle) the heads only of a crop.

चूघड़ा, *chúghrá*, n.m., a small lamp used at shrines and for *Diwáli*, etc.

चूड़ी, *chúṛí*, n.f., glass bangle.

चूतड़, *chútar*, n.m., buttock.

“*Pahár te áyí girṛ gánṭh—eke chútar eke áñkh.*”

Came a bundle from the hills—one buttock and one eye. (Answer—a jar of *ghí*).

चूतिया, *chútiyá*, n.m., a fool (though not used coarsely the origin of the word is obscene.)

“*Pair kharáon bowan chaliá, aur suthan paihn naláwe.*

“*Yeh tinoñ to asal chútiye, bojḥ dhare aur gáwe.*”

Go to sow in pattens, go to weed in trousers,
Lift a load and sing—these three are thorough fools.

चून, *chún*, n.m., flour.

चेत, *chet*, n.m., the 1st month of the year—March to April.

चेड़ा, *chebrá*, n.m., litter of pigs.

चोखा, *chokhá*, adj., very fair, passable, satisfactory; sometimes, good, especially as an interjection.

चोपाड़, *chopár*, n.f., common meeting house of the village or a subdivision of it.

चोपड़ी, *chopṛí*, adj., buttered, greasy (also *choprá*).

चोमासा, *chomásá*, n.m., the rainy season (4 months).

चोराहा, *choráhá*, n.m., four cross-roads.

चोलाई, *cholái*, n.m., amaranth.

चोसड़, *chosang*, adj., four pronged (of a pitch fork).

चौक, *chauñk*, n.m., ventilation-hole, generally square, in the centre of a roof.

चौंसी, *chauñsí*, n.f., a coarse country cloth used by zamindars.

चौकस, *chaukas*, adj., strong, intelligent, firm, careful.

“*Nar nárí ká piár, sajan, tum dil meñ rakhná.*

“*Nar ko dená már, nárí ko chaukas rakhná.*”

If thy wife has a lover, friend, hide it in thy heart.

Kill the lover, and keep thy wife safe.

(A riddle—lock (*nar*) and key (*nárí*)—lock the lock and keep the key secret; *tálá márná* is to lock a lock).

चौथ, *chauth*, n.f., the 4th day of either half of the month.

चौदश, *chaudash*, n.f., the 14th day of either half of the month.

चौना, *chauná*, n.m., a herd of cattle when going to graze.

चौपट, *chaupat*, adj., open all round, desolate, so unguarded, careless.

चौसर, *chausar*, n.m., fourth ploughing.

छ

- छट, *chhat*, n.f., the sixth day of either half of the lunar month.
- छटा पहर, *chhatá paihr*, n.m., the sixth watch of the day (Urdu *ádhí rát*).
- छटोरा, *chhatorá*, adj., extravagant, self-indulgent, luxurious.
- छड़ा, *chhará*, n.m., large stick put round to fence a field.
- छड़ी, *chharí*, n.f., smaller *chhará* (q.v.).
- छला, *chhalá*, n.m., a plain finger-ring.
- छा, *chhá*, n.f., same as *ráng* (q.v.).
- छाज, *chháj*, n.m., a winnowing fan.
- छान, *chhán*, n.f., a thatch roof.
- छावन, *chhában*, n.m., wattlings of the floor of a cart made of cotton stalks, *dhandhain* (q.v.), *sar* (q.v.), etc.
- छामा, *chhámá*, n.m., a piece of red-coloured coarse cloth (*chauñsí*) worked in crewels, worn at the front part of a woman's *orhná* (q.v.).
- छावा, *chháwá*, n.m., 1. Building (used on a survey of the accommodation provided).
2. Shade.
- छिन्ना, *chhikná*, v.n., to be satisfied, exhausted, satiated.
- छिलड़ा, *chhilrá*, n.m., milk following *khís* (q.v.), for eight or ten days. After this comes ordinary *dúdh*.
- छींका, *chhínká*, n.m., 1. A large cattle muzzle.
2. A basket or frame suspended from the roof on which milk, etc., is kept.
- छींकी, *chhínki*, n.f., a small cattle muzzle.
- छीदा, *chhídá*, adj., rare, sparse, few.
- “ *Til chhíde, jauñ sañghne, meñdak chál jowár.*
“ *Uñt pair meñ bájrá aur dhán pair meñ chár.*
“ *Chhídí chhídí banshtí ghore hinseñ báhar.*”
- (Sow) *til* sparsely, barley closely, *jowár* a frog's hop apart. *Bájrá* at a camel's hoof distance, and rice four times as close. Cotton very sparsely—and there'll be a horse to whinny at your door.
- छीपन, *chhípan*, n.f., female tailor or dye-stamper.
- छीपी, *chhípi*, n.m., tailor or dye-stamper.
- छुटपन, *chhutpan*, n.m., 1. Childishness.
2. Childhood.

कटभयन, *chhutbhayyan*, adj., (one) in low position, lowly.

के, *chhe*, interj., a noise used to make cows and bullocks drink.

का, *chho*, n.m., 1. Touch.

2. Anger.

(*Chho men áná* to get angry.)

“*Mañghsir jádá rañgsir, Poh jáde ká chho.*”

In *Maghair* the cold is moderate, in *Poh* it strikes home.

कोरट, *chhorat*, n.m., boy, loosely “children.”

कोरा, *chhorá*, n.m., boy.

कोरी, *chhorí*, n.f., a girl.

कोलना, *chholná*, v.a., to strip or peel, Urdu *chhílná*.

कोर, *chhaur*, n.m., a big stock of *púlís* (q.v.).

कोरी, *chhaurí*, n.f., a small stock of *púlís* (q.v.).

ज

जंगल, *jañgal*, n.m., Panjab country; cf. the Roman use of ‘barbarus.’

जंजाल, *jañjál*, n.m., trouble, misfortune.

जग, *jag*, n.m., 1. World.

2. A funeral feast.

“*Kágá kis ká dhan hare, koel kis ne de.*”

“*Ek jábá ke káran, jag apná kar le.*”

Whose wealth does the crow take? To whom does the koil give ought? Yet one by his tongue makes the whole world his own.

(Showing the benefits of a persuasive tongue).

जडानी, *jaṭhání*, n.f., elder brother's wife; cf. *drání*, younger brother's wife.

The two wives hold these relationships to each other whether both husbands are living, or both after *karáo* (q.v.) are living with the surviving brother.

जती, *jatí*, adj., celibate, continent.

“*Banyá mít ná beswán satí, kágá hañs ná gadhá jatí.*”

The *baniyá's* no more a friend than the prostitute an immolated widow.

The crow is as near a goose, the donkey as soon would be continent.

जनावर, *janáwar* n.m., an animal.

जन्दनी, *jandní*, n.f., the threads of human hair stretched criss-cross from wheel to wheel of a spinning wheel.

जबर, *jabar*, adj., more.

जमाई, *jamái*, n.m., son-in-law.

जलंधर, *jalandhar*, n.m., a disease due to malarious climate resulting in swelling of the stomach. Dropsy.

जलैहरौ, *jalaihrí*, n.f., a halo round the moon.

“*Súraj kuñḍal cháñd jalaihrí, túṭe tibe bhare daihrí.*”

A ring round the sun, a halo round the moon!

The sand hills are washed away and the hollows filled up.

(A sign of abundant rain).

जवारा, *jawára*, n.m., fodder given to bullocks at midday.

जांड, *jánḍ*, n.m., a tree, *prosopis spicigerá*.

जाखड़ा, *jákhṛá*, adj., nearly blind.

जाडा, *jáḍá*, n.m., the cold weather, four months.

जान बिनान, *ján binán*, n.f., life and soul, essence.

जावर, *jábar*, n.m., rank and deeply grown *dúb* grass.

जाया, *jáyá*, partic., born, so son, offspring, e.g., *mánjáyá*, “sons of the same mother.”

जाल, *jal*, n.m., or f., a tree (*salvadora oleoides*) (a big tree will be masculine and a small one feminine).

जिन्द्राला, *jindrálá*, n.m., a drag-rake dragged by men for leveling high land.

जिब, *jib*, adv., relative—when;
correlative—then;

e.g., *jib páni áyegá, jib bárí boáñge* or *jib páni áyá, jib inkh boyá thá.*

When the water comes, then we will sow cotton; or—when the water came, we sowed cane.

जिमाना, *jimána*, v.a., to entertain at meals.

जौजा, *jíjá*, n.m., sister's husband.

“*Jíje ke mál par, sáli laḍ baulí.*”

The sister-in-law goes half mad (with pride or envy at) her brother-in-law's wealth.

जौजौ, *jíjí*, n.f., sister; used to actual sister or near cousin only.

जौब, *jíb*, n.f., tongue (poetical *jíbá*).

जौना, *jímná*, v.n., to be entertained to food.

जीव, *jív*, n.m., life.

जुध, *judh*, n.m., war.

जुल्माना, *julmáná*, n.m., cruelty, oppression.

जूषा, *júá*, n.m., 1. The upper wooden bar in the yoke of a well-bullock.

2. The yoke of the plough or cart.

जूं, *jún*, n.f., louse.

(*Jún* is also the name of a tribe of *Játs*).

“*Júán kí mis, ghágrí gere.*”

Throws away a petticoat because of the lice in it! *i.e.*, any excuse is good enough!

जूड़, *júr*, n.m., yoke of a well.

जून, *jún*, n.m., 1. Twisted strand of cane-tops for binding sheaths of cane.

2. A meal.

3. A life (in the series of transmigrations).

जूम, *júm*, n.f., louse.

जूल, *júl*, n.m., a cubic measure, 10 by 10 by 1 haths usually, which is the unit when zamindars unite to dig their tank.

जे, *je*, conj., if.

जेठ, *jeth*, n.m., the 3rd month of the year, May to June.

जेठा, *jethá*, adj., first born, so best.

“*Jeth jethí, sárh hetí, sáwan meñ boí ná khoí.*”

Jeth's (cotton) is first and best, Har's late, Sawan's sowing gives no picking.

जेठूत, *jethút*, n.m., nephew, son of husband's elder brother.

जेली, *jelí*, n.f., a (two pronged) pitch-fork.

जेड़ा, *jewrá*, n.m., a rope stronger than *jewrí* (q.v.) made by twisting three *ghundís* (q.v.) together.

जेड़ी, *jewrí*, n.f., 1. Rope of the country, made by twisting two *ghundís* (q.v.) together.

2. Survey-chain.

“*Alí dekh ke gargarí, bahúti dení bo.*”

“*Phirtí áyí jewrí, ab kam kis bidh ho.*”

Seeing the soil moist and soft, he sowed a great deal. Round comes the chain; now how can he make it less? (The proverb refers to a fluctuating system of assessment when the demand is adjusted to the cultivation of each year).

जैल, *zail*, n.f., same as *thok* (q.v.).

जो, *jo*, n.f., wife.

जोग, *jog*, adj., worth, constructed with the inflected infinitive as
“*karan jog.*”

जोगम जोग, *jogam jog*, adj., suitable, agreeable.

“*Nadí kináre ghar kare, aur chorí khatyá kháe.*

“*Jogam jog ná beháe, yeh tínoñ chál jáeñ.*”

If a man builds a house on the banks of a stream, or lives on the spoils of theft; or mates unsuitably—all three will come to grief.

जोग्गा, *jogná*, n.m., a *jogí* (mere *jogí*)

(used in a contemptuous use).

“*Ghar ká jogí jogná, báhar gám ke sidh.*”

A *jogí* is a mere *jogí* in his own home but a saint in another village.

“A prophet is not without honour save in his own country.”

जोट, *jot*, n.f., band, yoke, yoke of oxen.

जोड़या, *joryá*, n.m., the leader pair of bullocks in a cart.

जोत, *jot*, n.m., leather strap passing from the yoke under the bullock's neck.

जोहड़, *johar*, n.m., a *kachchá* (unlined) tank.

जोहड़ी, *johrí*, n.f., a small *kachchá* tank.

जौ, *jauñ*, n.m., barley (same as *jau* of Urdu).

“*Khare gehúñ, pare jauñ.*”

(Cut) wheat still upright, and barley when fallen

झ

झकंत, *jhakant*, n.f., same as *jhakkat* (q.v.).

झकत, *jhakkat*, n.f., labour, assiduity, specially mental labour.

“*Jhakkat bidyá, pachchat khetí.*”

Wisdom by industry, farming by toil.

झड़क, *jharak*, n.f., noise made by churning milk or simmering milk.

झपक्का, *jhapakná*, v.n., to wink.

झांखा, *jháñkhá*, n.m., large ventilation-hole in the roof of a zamindar's house.

[N.S.]

भांझा, *jhāñpná*, v.a., to shut.भाक्रा, *jhákrá*, n.m., a big earthen water-pot with a wide mouth.भाड़, *jhár*, n.m., a shrub (*zizyphus nummularia*),
so called when still growing.भालू, *jhálrá*, n.m., a long hanging necklace, made of rupees.भिरा, *jhirá*, n.m., 1. Surplus canal water.

2. Dripping water.

भिरना, *jhirná*, v.n., 1. To pine.

2. To drip.

भौना, *jhíná*, adj., thin.भोसा, *jhímá*, adv., slowly.भुंड, *jhúñd*, n.f., a clump of cotton opening in the pod.भुलना, *jhulná*, v.n., to swing; to blow (of wind).“ *Ját kudáyá turá, to woh bhí burá.*“ *Báhman bándhe chhurá, to woh bhí burá.*“ *Sáwan jhuliá parwá, to woh bhí burá.*”

A Jat riding a horse, that's bad.

A Brahman wearing a knife, that's bad too.

An east wind blowing in *Sawan*, and *that's* bad.भूंगा, *jhúngá*, n.m., a bullock with horns bent downwards.भूंड, *jhúñd*, n.m., a kind of grass. (*Anatherum muricatum*.)भूंडी तोड़, *jhúñdí tor*, n.m., one whose rights (as occupancy tenant only) are based on his or his ancestor's having originally broken up the land.भेरा, *jherá*, n.m., an unlined well, fallen in.भोवांसा, *jhonwáñsá*, n.m., camel thorn (*alhagi maurorum*).भोकन चाला, *jhokan álá*, n.m., stoker at the sugar-press.भोका, *jhoká*, n.m., stoker at the sugar-press.भोक्रा, *jhokná*, v.a., to stoke a fire.भोट्टा, *jhotá*, n.m., buffalo of full age whether entire or not.भोट्टी, *jhotí*, n.f., same as *jhotrí* (q.v.).भोट्टड़ा, *jhotrá*, n.m., buffalo calf of two years or so.भोट्टड़ी, *jhotrí*, n.f., buffalo-heifer of two years or so.भोड़ा, *jhorá*, n.m., stalk of *múñg*, *moth*, *urd*, or gram, after the pods and leaves are shaken off.भोरौ, *jhorí*, n.f., a wound.

४

टंटा, *ṭaṅṭá*, n.m., noise, disturbance, trouble.

टटौरौ, *ṭaṭíri*, n.f., a bird (“the did you do it” of the Anglo-Indian) lapwing.

टलना, *ṭalna*, v.n., to be evaded, eluded, escaped.

“*Kál ṭaljá, kalál ná ṭale.*”

One may elude death, but not the *kalál*.

टांग्ली, *ṭaṅglí*, n.f., same as *jelí dosang* (q.v.).

टांडी, *ṭáṅdí*, n.f., a small mud-bracket on a wall.

टाट, *ṭát*, n.f., the pod of gram (with the pea intact).

टाटस, *ṭátas*, n.f., the pod of gram after threshing.

टाटा, *ṭátá*, n.m., the screen of cotton stalks etc., erected round the sugar-press.

टाटी सेवा, *ṭáṭí sewá*, n.m., as *ásrat* (q.v.).

टाड, *ṭáḍ*, n.f., armlet, worn only after *gáoná* or *chaláwá* (q.v.).

टापू, *ṭápú*, n.m., an island.

टाबर, *ṭábar*, n.m., boy under the age of 15 or so (used in south of the district).

टाल, *ṭál*, n.m., a big bell.

“*Chhotí thí jib dhotam dhotá, barí húi jib lál.*”

“*Búdhí húi jib náchan lagí báṅḍ gale meṅ ṭál.*”

When small it was hidden under the earth (?), when big it was red. When old it began to dance as if it had a bell on its neck.

(Answer—‘gram’).

टिकौड़ा, *ṭikaurá*, n.m., a heap of *jowár* or *bájrá*, ready for threshing.

टौ, *ṭí*, interj., Eh! girl (used to women in their paternal village only).

टौंड, *ṭíṅḍ*, n.f., fruit of *kair* (q.v.).

टौडी, *ṭíḍí*, n.f., full-grown locust.

टौबा, *ṭíbá*, n.m., the crest of a sandy hill.

टुक एक, *ṭukek*, adv., one moment, usually with “to stop.” Literally *ṭuk* probably means a piece, a part.

टुकटुकी, *ṭuk ṭukí*, n.m., goldsmith (onomatopœic).

टूक, *ṭúk*, n.m., a piece (of bread especially).

टुम्ब, *túmb*, n.f., ornaments (collectively), jewellery.

टेक, *tek*, n.f., 1. Safety.

2. Prop.

“*Chálná bhalá ná kos ká, betí bhalí ná ek.*

“*Qarzá bhalá ná báp ká, Sáhib rákho tek.*”

Walking's bad, even a mile; daughter's bad, even one of them. Debt's bad, even one's father's, God save us from them!

टेक्ना, *tekná*, v.a., to affix,

mohar tekna—to affix a seal.

टोक्ना, *tokná*, n.m., larger *tokní* (q.v.).

टोक्नी, *tokní*, n.f., brass water-pot used also for *ghí*.

टोटा, *totá*, n.m., loss, ruin.

“*Kúá khetí najá brábar, sárá totá gáři meñ.*”

A well, or farming, the gain (and the loss) are quits.
All's loss in driving a cart.

टोह, *toh*, n.f., search.

टोहना, *tohná*, v.a., to search for.

टौठा, *tauthá*, n.m., winter sunshine.

ठ

ठगाई, *thagái*, n.f., cunning, deception.

ठणकना, *thanakná*, v.n., to rattle, jingle, tinkle.

ठर्ना, *tharná*, v.n., to shiver (with cold).

ठाडा, *thadá*, adj., heavy, thick, fine.

ठाडी रौ, *thadí rau*, n.f., very heavy rain.

ठाली, *tháli*, adj., unemployed, at leisure.

ठना, *thúná*, n.m., pretence.

ठेकर, *thekar*, n.m., 1. Turn roster.

2. The potsherds by which the roster is determined.

ठेका, *theká*, n.m., the large round canvas sack in which grain is stored in a house.

ठेठ, *theth*, adv., exactly, on the spot.

ठोका पीटो, *thoká píti*, n.m., carpenter (idiomatic in proverb only—onomatopœic).

ठोठ, *thoṭh*, n.m., 1. Fool, bad husbandman.
adv., 2. Exactly, on the spot.

“*Barseṅge kátak diwáli, aisá hí thoṭh aisá hí hálí.*”

If it rains in *kátak* and at *diwáli*, its all one for the good and the bad husbandman.

ठोला, *tholá*, n.m., 1. The minor subdivision of a village.
2. A prick.
3. A peck, of a bird's beak or scratch of a man's finger-nail.

ठोले दार, *tholedár*, n.m., an elder councillor of the village: there is usually one for each *tholá* (q.v.).

ड

डंग, *ḍaṅg*, n.m., a pace, step.

डंगौला, *ḍaṅgraulá*, n.m., a path for cattle.

डंग्वारा, *ḍaṅgwára*, n.m., association of cattle or labour in cultivation; amalgamation of resources.

डंड, *ḍaṅḍ*, n.m., punishment, fine.

“*Nání khasm kare, deautá ḍaṅḍ bhare.*”

The grandmother takes another husband, and her daughter's son bears the loss.

“The fathers have eaten sour grapes and the children's teeth are set on edge.”

डंडोत, *ḍaṅḍot*, n.f., a form of salutation to *Bairágís*.

डटना, *ḍatná*, v.n., to stay, stop, halt.

ड्रावा, *ḍráwá*, n.m., a scare-crow.

डल्लियां, *ḍalhiyáñ*, n.m., a man who works a *ḍál* (q.v.).

डहौ, *ḍahí*, n.f., cross-sticks to support the cart, when standing.

डांका, *ḍáṅká*, n.m., stalk of gram and other pulses.

डांगर, *ḍáṅgar*, n.m., pl., cattle.

“*Sádhú kí khetí tínáñ kí ándhí, meñh aur dáṅgráñ kí.*”

The spring harvest depends on three things—the dust-storm, the rain and the cattle.

डांटना, *ḍáṅṭná*, v.a., same as *ḍatná* (q.v.).

डांटली, *ḍáṅṭhlí*, n.m., stalk of *múṅg*, *moth* and *urđ* before the pods and leaves are shaken off.

डांडा, *dándá*, n.m., big ornamental ear-ring.

डांडी, *dándí*, n.f., very small nose-ring worn simply to keep the hole open.

डाकर, *dákar*, n.f., hard clay soil.

डाक मारना, *dák márná*, v.a., to leap, to jump.

This term is used for leaping feet first into water.

डाटना, *dátná*, v.a., 1. To stop.

2. To rebuke.

डाब्डा, *dábrá*, n.m., 1. A small pond.

2. A small low-lying plot of ground.

डाम, *dábh*, n.f., a kind of grass. (*Eragrostis cynosuroides*).

डामचा, *dámchá*, n.m., a platform built up to watch the fields and scare birds from.

डाल, *dál*, n.f., 1. Branch.

2. Bucket lift used to lift the canal water onto a higher level.

डाला, *dálá*, n.m., a basket.

डालीया, *dálíyá*, n.m., a man who works a *dál* (q.v.).

डिक्री, *dikrī*, n.f., same as *jindrálá* (q.v.).

डिगर्ना, *digarná*, v.n., to go away, go back.

डोमक, *dímak*, n.f., white-ant.

डुंगा, *dúngá*, adj., deep.

डूम, *dúbh*, n.f., a kind of grass. (*Cynodon dactylon*.)

डेवा, *dewá*, n.m., a stile across a ditch, allowing men but not cattle to pass.

डैहर, *daihr*, n.m., 1. Flood.

2. Land where floods collect.

“*Chet chaná chaugná, je daihr áyá ho.*”

If the flood comes betimes, the gram's fourfold in *Chet*.

डोंगारा, *dongará*, n.m., drizzling rain. (Sufficient to plough on.)

डोब देना, *dob dená*, v.a., 1. To drown, so

2. To spoil.

डोल, *dol*, n.m., iron-bucket.

डौल, *daul*, n.f., boundary, ridge, of a field.

डौले तोड़, *daule tor*, n.m., heavy rain, enough to break down the field boundary.

ढ

ढं चर, *ḍhañchar*, n.m., bad cold, influenza.

ढं दैन, *ḍhañḍhain*, n.f., *aeschynomene indica*.

ढं दौई, *ḍhañḍhoi*, n.f., the first washings of the cauldron after the cane juice has been boiled (the perquisite of the stoker).

ढब, *ḍhab*, n.m., friendship, affection.

ढबी, *ḍhabí*, n.m., a friend.

ढलके, *ḍhalke*, adv., from *ḍhalná* (q.v.), steadily, slowly (cf. *ḍhulke* trotting).

ढलना, *ḍhalná*, v.n., 1. To roll.

2. To decrease, decline.

3. To spill, trickle.

“ *Parwá jeth kí gáje, din bahattar bháje.*

“ *Parwá sádh kí gale, din pañtálís ḍhale.*”

If it thunders on the first of Jeth (the clouds) will disappear for 72 days; if it thunders on the first of Har, they will roll away for 45 days.

ढाई, *ḍháí*, n.f., cry.

ढांक, *ḍhánk*, n.f., buffalo or cow past bearing.

ढांडा, *ḍhándá*, n.m., same as *ḍhándhá* (q.v.).

ढांदा, *ḍhándhá*, n.m., a bullock past work.

ढांढी, *ḍhándhí*, n.f., a cow past bearing.

ढाना, *ḍháná*, n.m., 1. The superstructure of a well.

2. A small hamlet (usually of tenants' houses) in the middle of an estate.

ढानी, *ḍhání*, n.f., same as *ḍháná* (q.v.), (hamlet) but smaller.

ढाल, *ḍhál*, n.m., 1. Way, habit.

2. Shield.

ढिसलना, *ḍhisalná*, v.n., same as *kantáná* (q.v.), (to shrink).

ढौ, *ḍhí*, n.f., a ridge between fields to hold up the rain.

ढोंकर, *ḍhínkar*, n.m., 1. Thorny branches (used for fencing).

2. Heap of *jhár* (q.v.), cut green for fodder or making a hedge.

ढौ तोड़, *ḍhí tor*, n.m., heavy rain, enough to wash away high ridges.

ढे डे, *ḍhe re*, interj., a noise made to call buffaloes up from watering.

ढै पड़ना, *ḍhai paṛná*, v.n., to fall down.

ढोङ, *ḍhong*, n.f., same as *thok* (q.v.).

ढोत्रा, *ḍhobrá*, n.m., a broken earthen or metal vessel.

ढोर, *ḍhor*, n.m., cattle.

“ *Jeth basáwe kámlí, mágh basáwe ḍhor.*

“ *Sáwan bane ghosí, to sháh ke chor.*”

Buy a blanket in *Jeth* or cattle in *Mágh*!

Turn cattle-dealer in *Sáwan*! Is the man a money-lender or a thief?

ढोलना, *ḍholná*, v.n., to blow.

त

तंत, *tant*, n.m., same as *gaihre* (q.v.), good circumstances; used with v. *baithná* only.

तक्का, *takná*, v.n., to perceive, to consider, to think to oneself.

तगार, *tagár*, n.m., a heap of earth mixed with water to make plaster or mud mortar.

तज्ना, *tajná*, v.a., to give up.

ततया, *tattayá*, n.m., a kind of hornet.

तप्ता, *tapná*, v.n., to be famous, notorious.

तर्साना, *tarsáná*, v.a., to thirst for, tantalize, tease.

तलोढी, *talohí*, n.f., the bottom wooden bar, parallel to *júá* (q.v.), in the yoke of a well-bullock.

तस्ला, *taslá*, n.m., a big iron saucepan for cooking sweets, etc.

तहेता, *tahetá*, adj., early (crop).

“ *Sáwan paihlí dasmín, je rohní ho.*

“ *Tahetá samá nipje, chintá karo ná ko.*”

If *Rohní* (one of the lunar mansions) falls on the dark tenth of *Sáwan*, there'll be an early harvest, let no one worry about it.

ताई, *tái*, n.f., wife of father's elder brother.

ताऊ, *táú*, n.m., father's elder brother.

ताएस, *táes*, n.f., wife of husband's or wife's father's elder brother.

ताएसा, *táesrá*, n.m., husband's or wife's father's elder brother.

ताकू, *tákú*, n.m., iron spindle in a *charkhá* or spinning wheel.

ताकूड़ी, *tákrí*, n.f., weighing scale.

तागड़ी, *tágrí*, n.f., silver waist-chain worn by males only.

ताड़ा, *tárá*, n.m., chill.

“ *Hare chane dekhkar, mat ná dil meñ phúl.*

“ *Tárá pálá par gayá, mára gayá sab phúl.*”

Don't blossom (into hope) at the sight of green gram.
Came cold and frost, and all the flowers died.

(“ Don't count your chickens before they are hatched ”).

तात, *tát*, adj., warm, hot.

तान बजाना, *tán bajána*, v.a., to cope with.

ताना, *tána*, v.a., to heat.

तापड़, *tápar*, n.f., land which is hard from having borne an autumn crop or an irrigated spring crop.

तार, *tár*, n.f., comfortable circumstances, prosperity.

तारा, *tára*, n.m., a star.

तार बैठना, *tár báithná*, v.n., circumstances to be comfortable.

ताल, *tál*, n.m., clapping of the hands, e.g., *tál bajána*, to clap the hands.

ताहना, *táhná*, v.a., to drive off, eject.

तिगाई, *tigái*, n.f., advance made by Government for agricultural objects (corr. of *takávi*).

तिर्या, *tiryá*, n.f., wife, woman.

“ *Ghaná antká barsná, ghaní antkí dhup.*

“ *Ghaná antká bolná, ghaní antkí chup.*

“ *Sáwan antká barsná, Jeth antkí dhup.*

“ *Bhátán antká bolná, tirián antkí chup.*”

Too much rain, too much heat.

Too much speech, too much silence (are bad except)

Much rain in *Sáwan* is good, and much heat in *Jeth*,

Much speech in bards and much silence in women.

तिवाई, *tiwái*, n.f., a small 3-legged stool (Urdu *tipái*).

तिवाया, *tiwáyá*, n.m., the winnowing stool. (Cf. Urdu *tipái*.)

तिस, *tis*, n.f., thirst.

तिसाया, *tisáyá*, adj., thirsty.

“ *Cháli utrá, hálá búr, kyaun tisáyá jáe sai súr.*”

The north wind blows, and the chaff flies about: why does the thirsty pig go away?

(Because the north wind means rain and the pig knows that he will thirst no more).

तीज, *tíj*, n.f., 1. A girl's festival on the 3rd of *Sudí Sáwan* (q.v.).

2. The 3rd day of either half of the month.

“ *Sáwan paihlí pañchwín je chamkegí bíj.*
“ *Tún to ghále dāmche, main khelúngí tíj.*”

If it lightens on the dark fifth of *Sáwan*, do you build your stand to watch the crops from: I'll keep my holiday.

तौतर पंखा, *títar pañkhá*, adj., feathery—applied to clouds or any thing that suggests a feather.

तौल, *tíl*, n.f., a set of woman's clothing, viz., *orhná*, *angí* and *ghágrí*.

तौसर, *tísar*, n.m., third ploughing.

तुफान, *tuphán*, n.m., lying, untruthfulness.

तुफानन, *tuphánan*, n.f., a liar or ill-conducted woman.

तुफानी, *tuphání*, n.m., a liar or ill-conducted man.

तुरङ्ग, *turang*, n.m., horse.

“ *Ujlá bhojan, gáe dhan, ghar kalwantí nár.*
“ *Chauthé píth turang kí, bahisht nishání chár.*”

Good food, a cow for wealth, at home a thrifty wife.
Fourthly the back of horse—these are the four marks of heaven.

तुरा, *turá*, n.m., same as *turang* (q.v.).

तुर्त, *turt*, adv., immediately, quickly.

तूड़ा, *túrá*, n.m., straw of wheat, barley and *gochní*, etc.

तूना, *túná*, v.n., to miscarry.

तेड़ा, *terá*, n.m., a mixed crop of *sarson* (sown broadcast and not in lines) and wheat; sometimes used of *kharif* mixtures too.

तैना, *tainá*, v.n., to be heated.

तोड़ा, *torá*, n.m., scarcity, want.

तौल, *tol*, n.f., news, information.

तोश, *tosh*, n.f., the 13th day of either half of the month.

तौल, *taul*, n.f., hurry, haste.

“ *Toriá hal joríá, urdán chhodí bel.*
“ *Kitní taul kar le sále, pakegá merí gel.*”

When the *toría* was sown, the *urd* had put out its tendrils. (Said the *toría* to the *urd*). However much haste you make, you blackguard, I'll ripen with you. (*Toría* is a very quick-growing crop. *Sálá*, brother-in-law, is here, as usual, used abusively).

तौला, *taulá*, adj., quick.

तौले, *taule*, adv., quickly.

त्यौंखा, *tyaunkhá*, n.m., trijunction pillar.

त्यौर, *tyaur*, n.m., eyesight.

चाफ़, *tráf*, n.m., a tax levied by the village community on merchants and craftsmen. (Corr. of Urdu *Ahtráf* probably).

बास, *trás*, n.m., trouble.

चेड़, *treṛ*, n.f., crack, fissure, in a building or in soil.

थ

थम्ना, *thamná*, v.n., to stay, stop, halt.

थल, *thal*, n.m., mound, hill.

थली, *thalí*, n.f. high-lying sandy soil, or sand hill.

थलना, *thalsná*, v.n., to slip.

थान, *thán*, n.m., a small shrine to any deity, e.g., *mátá ká thán*.

थान्ना, *thápná*, v.a., to settle, to fix.

थान्ना, *thámná*, v.a., to stop.

थाल, *thál*, n.m., a big metal plate.

थाली, *thálí*, n.f., a small metal plate.

थावर, *tháwar*, n.f., Saturday.

थोक, *thok*, n.f., minor subdivision of a village.

थोथा, *thothá*, adj., empty, hollow.

“*Thothá chaná, báje ghaná.*”

Empty gram makes much noise

(i.e., A jack in office gets above himself).

थान्ना, *thyáwná*, v.n., to be got (as Urdu *milná* in that sense).

द

दखन, *dakhan*, n.m., the south.

दखनां, *dakhanán*, adv., southwards.

दखनाई, *dakhanáí*, n.f., southwind or adjectively with *bál* = south (wind).

दखनांदा, *dakhanánhá*, adj., southern.

[N.S.]

दक्षिणी, *dakhshní*, adj., southern.

(This form is good Hindi but I have never heard it in the District except in the proverb.)

“ *Máhi pohí dakhshní, Sáwan kesí lakhshní.* ”South wind in *Magh* and *Poh*, there'll be wealth like *Sawan*'s.दगड़ा, *dagrá*, n.m., road, same as *gawñdá*, *rástá*, etc. (q.v.).दक्षना, *dachhná*, n.f., charity in cash, paid to a Brahman after feeding him.“ *Akar kar makar kar, khír par shakar kar.* ”“ *Itne meñ chulá leññ, dachhná ká fikar kar.* ”

Play what tricks you will, put some sugar on the rice. I'll just drink a sip of water, do you think of a present for me.

(So says the greedy Brahman to the Jat).

दमजा, *damgajá*, n.m., deception.दमखा, *damrakhá*, n.m., same as *kákrá* (q.v.).दरानौ, *darání*, n.f., husband's younger brother's wife; see note on *jathání*.दाल्या, *dalyá*, n.m., half-ground wheat or *jowár* or *bájrá*, cooked in water—a sort of porridge.दल्होज, *dalhíz*, n.f., same as *paulí* (q.v.).दवान, *dawát*, n.f., a small wooden bracket to hold (*díwá*) lamp.दवादसौ, *dawádsí*, n.f., the 12th day of either half of the month.दसौं, *dasmín*, n.f., the 10th day of either half of the month.दहड़, *dahar*, n.m., flood or land where floods collect.दहाना, *dahána*, n.m., same as *kháñd* (q.v.).दांतौ, *dántí*, n.f., same as *drántí* (q.v.).दाज्जा, *dájna*, $\left. \begin{array}{l} \text{v.n.} \\ \text{v.a.} \end{array} \right\}$ to burn, be burnt.“ *Lakrí kahe kumhár te, kyá dájegá moe.* ”“ *Ek din aisá hogá, ham dájáñge toe.* ”

Says the wood to the potter, ‘Why do you burn me? The day will come when I'll burn thee.’

(The form of the last word in each line is *Brij* or *Purabí* and not *Jatu*).दानौ, *dátí*, n.f., same as *drántí* (q.v.).दादा, *dádá*, n.m., applied respectfully to a Brahman, especially in addressing him, e.g., the village of Wazirpur is called *Dádán* by the people because of the Brahmans living in it

- दासी, *dámní*, n.f., lightning.
- दारु, *dárú*, n.f., 1. Medicine.
2. Wine or spirits.
- दाहो, *dáhoñ*, adv., entirely, altogether, absolutely.
- दाहना, *dáhná*, v.a., to burn.
- दिन, *din*, n.m., 1. Sun.
2. Day.
- दिन चिपे, *din chhipe*, n.m., = *chauthe paihr*.—The 4th watch of the day—evening.
- दिन ढला, *din dhalá* or *din dhaleñ*, n.m., = *tísre paihr*.—The 3rd watch of the day—afternoon.
- दिन निकल रैहना, *din nikal rahná*, n.m., = *áthwáñ paihr*.—The 8th watch of the day—early morn.
- दौवा बले, *díwá bale*, n.m., lamp-lighting or evening time.
- दुखाला, *dukhálá*, adj., in pain.
- दुरेटा, *dureṭá*, adj., at a distance, far, e.g., *dureṭá bhái*, a distant cousin.
- दुर्लभ, *durlabh*, adj., difficult.
- दुहनौ, *duhní*, n.f., any vessel into which an animal is milked, so milking-pail.
- दूंदी, *dúndí*, n.m., a fool, an idiot.
- दूतौ, *dúti*, n.f., liar, exaggerator (a term used among women).
- दूद, *dúd*, adj., belonging to caste, used in the question, *tum kaun dúd so?* = To what caste do you belong?
- दूधल, *dúdhal*, adj., milch, giving much milk.
- “*Gáe to dúdhal bánkí aur tez bánkí ghoríyáñ.*
“*Mard to maroṛ bánká aur liház bánkí goríáñ.*”
- A cow's glory is her milk (*lit.* the milch cow is glorious) and a mare's her pace : a man's his pride, and her modesty a woman's.
- दूध्या, *dúdhyá*, adj., milky, applied to clouds when general rain is going on, in contradistinction to the black clouds of a local storm.
- दुभर, *dúbhar*, n.m., discomfort, difficulty.
- “*Ghoríyáñ dúbhar bhádwá maiñsáñ dúbhar Jeth.*
“*Mardáñ dúbhar písná, bahúáñ dúbhar pet.*”
- Bhadon* means discomfort for the mare, and *Jeth* for the buffalo ; grinding for the man, and pregnancy for the woman.
- देसौता, *deautá*, n.m., daughter's son.

[N.S.]

- देरुत, *derút*, n.m., son of husband's younger brother.
 देसा भरन, *desá bharan*, n.f., general rain.
 देसौला, *desaulá*, adj., affecting the whole country side, wide-spread.
 देही, *dehí*, n.f., body.
 देहल, *dehl*, n.f., sill, threshold of a door.
 देहली, *dehlí*, n.f., cross-beam or stone across the mouth of well on which the superstructure is reared.
 दैह, *daiñh*, adj., ten.
 दैह्म, *daihm*, n.m., still heat.
 दैहश्न, *daihshat*, n.f., fear (used with v., *mánná*).
 दोकन्या, *dokanyá*, n.m., an *orhná* (q.v.), worked on both hems.
 दोज, *doj*, n.f., the 2nd day of either half of the month.
 दोत्यी, *dotyí*, adj., land successively cultivated in both harvests.
 दोत्रासी, *dotrálí*, n.f., a rake.
 दोपैहरा, *dopahrá*, n.m., the 2nd watch of the day.
 दोसङ्ग, *dosang*, adj., two pronged (of a pitchfork).
 दोसर, *dosar*, n.m., second ploughing.
 दोहा, *dohá*, n.m., verse.
 द्रान्ती, *drántí*, n.f., bill-hook used for stripping sugar-canes and for purposes of reaping.

ध

- धंदा, *dhañdá*, n.m., business.
 धंधा, *dhañdhá*, n.m., same as *dhañdá* (q.v.).
 धड़क्का, *dharúkná*, v.n., to thunder.
 धन, *dhan*, n.m., wealth, property.

“*Je tere kañthá dhan ghaní, gáří kar le do.*”

“*Je tere kañthá dhan nahín kálar báří bo.*”

If you're very rich, my husband, take and drive your cart.

If you're poor, sow cotton in hard soil.

- धनी, *dhaní*, adj., or n.m., 1. Rich.
 2. Owner.

- धर्ती, *dhartí*, n.f., land, soil.

“*Chháwe meñ sowe, jab lagiyá bisákh.*”

“*Gerdiyá khád, táptí thí dhartí.*”

“*Din ne kare rakhwál, rát ne khá jáe harní.*”

Sleep indoors in *Baisakh*, mulch the ground when its baking hot, watch your crops by day (and let) the buck eat them by night—(heavens, what a fool!)

धवाना, *dhawána*, v.a., to have washed.

धांगला, *dhángarlá*, n.m., a mixture of *múng*, *másh* and *moth*.

धाक. *dhák*, n.f., fear of, danger from.

धागला, *dháglá*, n.m., same as *dhángarlá* (q.v.).

धाड़ौ, *dháṛí*, adj. or n.m., 1. Vigorous, energetic, of man or bullock.

2. A robber or dacoit.

The Lyallpur Colony is known here as *Dulá dháṛí kí bár*.

धाम्ना, *dhápná*, v.n., to be satisfied.

धी, *dhí*, n.f., daughter.

धीनां, *dhínán*, n.f., same as *dhínú* (q.v.).

“*Khetí kar le dhán kí, dhínán rakh le gáe.*”

“*Kapre rakh le kámlí, to bighá ek ná jáe.*”

In farming go in for rice, in cattle (*lit.* cow)-keeping for a milch cow—in clothing for a blanket; then you won't lose a single *bigha*.

धीनू, *dhínú*, n.f., a milch cow.

“*Sagá same bacháṛíye, dhínú Phágan men.*”

Know a friend in time (of trouble) and a milch cow in *Phagan*.

‘*Ko-same*’ is a variant for ‘*same*’ and gives the above sense.

धीमा, *dhímá*, adv., slowly.

धुमर, *dhumar*, n.f., fog, mist.

धुरा *dhurá*, n.m., the axle-tree of a well-wheel.

धुड़ना, *dhúṛná*, v.n., to thunder.

धूल *dhúl*, n.f., dust.

“*Cheúntí le ande chalı, chirıá naháwe dhúl.*”

“*Shádı kahe Bhádlı, barkhá ho bhar púr.*”

The ant carries her eggs, the sparrow's taking a dust-bath. Says Shadi, “Eh, Bhadli there'll be rain in plenty.”

धो, *dho*, n.m., cunning, deception, fraud.

धोरी, *dhorı*, n.f., 1. The wheeler pair of bullocks in a cart.

2. Cattle generally.

3. Used metaphorically for the leader of an enterprise.

धोरे, *dhore*, postp., in possession of, near (equivalent to Urdu *pás*).

[N.S.]

धौंज, *dhaunij*, n.m., same as *kiṛá* (q.v.), but netted with *barrí* (q.v.) instead of with cotton stalks.

धौन, *dhaun*, n.m., half maund, 20 seers.

धौला, *dhaulá*, adj., white.

धौलपोश, *dhaulposh*, n.m., a native gentleman (a barbarous equivalent of Urdu *sufedposh*).

ध्यान, *dhyán*, n.m., thought.

न

नङ मलङ, *naṅ malāṅ*, n.m., solitary, alone, a man with no family of his own.

नग्रौ, *nagrí*, adj., belonging to a *nagar* or small town, townsfolk.

नडाहलौ, *naṛáhlí*, n.f., the small peg in the *halas* (q.v.), which admits of the yoke being adjusted backwards and forwards.

नढेल, *nadhel*, n.f., same as *naṛáhlí* (q.v.).

नणद, *nanad*, n.f., husband's sister.

नणदूत, *nandút*, n.m., son of husband's sister.

नणसाल, *nansál*, n.f., maternal grandfather's house.

नथ, *nath*, n.f., a large nose ring worn only after marriage.

नदान, *nadán*, adj., ignorant, foolish (of a child).

नदारद कुढौ, *nadárad kúḍhí*, n.f., a deserted house.

नपूता, *napútá*, adj., childless.

नपोज, *napoj*, adj., weak, feeble (of a man, animal, or soil).

नमस्ते, *namaste*, interj., a form of salutation among *Aryá Smájists*.

नमो नारायण, *namo náráyan*, interj., a form of salutation to *Gosáíns*.

नरोल, *narol*, adj., clear, cloudless.

नर्व, *nark*, n.m., hell.

“*Khar bhojan ajhá dhan, ghar kalhári nár.*

“*Chauthe maile kápre, nark nisháni chár.*”

Coarse food, a goat for wealth, at home a shrew for wife; fourthly dirty clothes—four marks of hell.

नल, *nal*, n.m., hole or lair of a large animal, especially of wolf.

नलौना, *nalauná*, v.a., to weed, hoe.

नलना, *nalná*, v.n., to be weeded, be hoed

नांगला, *nānglá*, n.m., the rope joining the *júá* (q.v.) to the *talotí* (q.v.) at their extremities in a well-yoke.

नांदनौ, *nāndní*, n.f., rope on the well-yoke into which the *láo* (q.v.) is fixed.

नाके तोड़, *náke tor*, n.m., same as *ḍau e tor* (q.v.).

नाग, *nág*, adj., 1. (A plough), lighter than ordinary one, for sowing.

2. A big (snake).

नाटना, *nátaná*, v.n., to deny, refuse, go back on one's word, repudiate.

“ *Bāns charí nátní kahe, hot náto mat ko.*

“ *Main nátní nátní bhayí, náte so nátní ho.*”

Says the *nátní* when she's climbed the pole, “If any has ought (to give) let him not refuse. I refused and became a *nátní*; refuse and become one too.”

(A *nátní* is a female acrobat, and the punning of the original can be faintly reproduced by calling an acrobat a “knotter.”)

नाटवा, *nátwá*, n.m., second calf.

नाड़, *nar*, n.f., a nerve.

नाड़ी, *narí*, n.f., a leather strap joining the yoke to the plough.

नाड़ कर्ना, *nar karná*, v.n., to be proud.

नाणका, *nānká*, adj., maternal grandfather's.

नामा, *námá*, n.m., money or coin.

नार *nar*, n.f., a woman.

नारा, *nará*, n.m., a young ox broken to plough, as *bahrá* (q.v.).

नारी, *narí*, adj., same as *nág* (q.v.), (plough).

n.f., a woman.

“ *Nar par narí kharí, nar narí ke háth.*

“ *Nar narí bhejiá, gayá awáz ke sáth.*”

Female standing on male, male in female's hand.

The female thrown a male which has gone with a whirr!

(The riddle refers to a girl watching the crops and standing on a platform (*ḍámchá* n.m.). In her hand a sling (*gopiyá* n.m.) with which she slings a mud pellet (*golá* n.m.) which whistles as it goes).

निचामन, *niáman*, n.m., a hole dug in the earth for drinking water (the word seems to be peculiar to the south of the district).

निकंद, *nikand*, adj., clean, thorough, careful (of ploughing).

निगोडा, *nigodá*, adj., worthless, ill-tempered.

“*Tarke kí bádli, aur ránd kasumbe nahá.*

“*Main nigodí yún kahún, donoñ kí burí hál.*”

Clouds at dawn, and a widow who bathes in saffron!
I, poor wretch, so say—‘both bode ill!’

निगोड़ा, *nigorá*, adj., same as *nigodá* (q.v.).

निगोदा, *nigodá*, adj., rare for *nigodá* (q.v.).

नित, *nit*, adv., constantly, always.

निम्हारी, *nindhári*, n.m., one who subscribes at marriage time.

See *neauñdá*.

निपट, *nipat*, adj., very, too (intensive).

निपजना, *nipjáná*, v.n., to be produced, ‘turn out’ (of crops).

“*Thalí dhaní ne yún kahe tú mainne mat boe.*

“*Main bighá nipjún náhín, tainne dúngí khoe.*”

Says the sand hill to its master, “Don’t you sow me.
“I’ll produce nothing to the *bigha*, but only ruin
you.”

निफ्राम, *nifráam*, adj., at leisure, leisured.

Dekh parái choprī kyun tarsáwe jí.

Lúkhí súkhí kháeke thándá pání pí.

Dekh parái choprī, dhai par bayímán.

Do gharí kí be sharmí áth paihr nifráam.

(Says the ascetic)—“Why fret your soul to see another’s
battered bread? Eat dry bread and drink cold
water.”

(Answers the glutton)—“When you see another’s battered
bread, covet it (*lit.* fall down), you blackguard. An
hour’s shame—and you’ll be at leisure all the day!

निवेड़ा, *niberá*, n.m., decision, settlement.

निमान, *nimán*, n.m., low-lying ground.

निमाना, *nimáná*, adj., 1. Low-lying, also of low class.
2. Simpleton.

“*Eklá mirg, dújá sál, jhoṭe chariá mile gowál.*

“*Tín kos lug mil jáe telí, to maut nimáne sir par
khelí.*”

If you meet a solitary antelope or next a jackal, or a
herdsman riding a male buffalo—or see an oilman
within three miles, then, simpleton, death is playing
over your head.

निम्हड़ना, *nimbarñá*, v.n., to be finished or settled.

निम्हना, *nimbhñá*, v.n., to pass, to do, to serve.

निरासा, *nirásá*, adv., clearly, emphatically, severely.

“*Jeth más jo tape nirásá, to jáno barkhá kí ásá.*”

If Jeth stokes up with a vengeance, then know there is hope of rain.

निरक, *nirk*, n.m., hell, as *nark* (q.v.).

निर्धन, *nirdhan*, adj., penniless.

निर्धना, *nirdhaná*, n.m., a pauper.

निर्ना बासी, *nirnábasí*, adj., with empty stomach, hungry; also used adverbially.

निर्प, *nirp*, n.m., a king, a prince.

निर्भाग, *nirbhág*, adj., wretched (a term of abuse).

“*Kallar ke khet meñ, pachh pachh mare gowár.*

“*Sab se woh nirbhág, jiská biswá kár.*”

In a hard field the villager dies of his toil. He's the most unfortunate of all whose land is sour.

निर्भै, *nirbhai*, adj., fearless.

“*Bháí, bhainoi, bhánjá, bhayán aur bhoñpál.*

“*Pánchoñ bhambe chhor ke, nirbhai karo beopár.*”

Brother, brother-in-law, nephew, lord and king (*lit.* the tutelary gods of a village), avoid these five bh's and trade without fear.

(The last two are apparently added for alliterative reasons. Avoid your own relations in trade!)

निर्सा, *nirsá*, adj., worthless, bad.

निसाफ, *nisáf*, n.m., justice (corr. of Urdu *insáf*).

नौर, *nír*, n.m., water, particularly in the eye.

“*Gújar godá, jánd jar, bar pípai sikhrant.*

“*Ját háreá jab jánye, jab ánkhen nír dhalant.*”

Know a Gújar beaten when his knees (are on the ground), a *jand* tree when its roots (are dry), a *pipal* tree when its top (is dry), and a Jat when tears trickle from his eyes.

नौना, *nirná*, v.a., to water or provide with food.

नुषा, *nugrá*, adj., ungrateful, an ingrate.

“*Nugrá mánas mat milo, aur pápi milo hazár.*

“*Ek nugre ke síis par, sau pápi ká bár.*”

Don't meet an ingrate, though you meet a thousand other sinners. One ingrate bears on his head the load of a hundred sinners.

(Ingratitude the worst of crimes).

ने, *ne*, n.f., a wooden block placed on ground for chopping fodder on.

नेडाऊ, *neáú*, adj., bad, worthless.

नेचौता, *neautá*, n.m., 1. Entertainment (of a Brahman).
2. As *nyauindá* (q.v.).

“*Trepan meñ púnjí gayí, chawan meñ gayá bíj.*

“*Pachpan meñ neautá gayá, chhapan meñ sab chíz.*

“*Satáwan ke sál meñ lagá mahíná Jeth.*

“*Haize kí bemárá húi chhútá múnh aur peṭ.*”

In 1953 (Bikramajit = A.D. 1896) stores ran out, in '54 seed was not left, in '55 there was nothing to contribute to weddings, in '56 went everything, in '57 when the month of Jeth was in came cholera; stomach and mouth retained nought.

(A record of the recent trials of the Rohtak District).

नेचौला, *neautná*, v.a., to entertain (especially of a Brahman).

“*Kyoñ andhá neaute, kyoñ do buláe.*”

Why entertain a blind man? Why call two?

(If you entertain a blind man you must also entertain his guide!)

नेजू, *nejú*, n.f., rope of a drinking well.

नेठम, *netham*, adv., surely, certainly.

नेपा, *nepá*, n.m., produce, outturn (of crops).

नेसङ, *nesang*, n.m., a small iron peg in the bottom of the *hál* (q.v.) which prevents its detachment from the *hal* (q.v.).

नेस्तर, *nestar*, adj., sluggish.

नेह, *neh*, n.m., love.

नेन, *nain*, n.m., eye.

नेहज, *naihj*, adj., bad.

नोती, *nortá*, n.m., as *norátrá* (q.v.).

नोला, *nolá*, n.m., purse (worn round the waist).

नोक्रा, *naukrá*, adj., separate (individual, and not joint).

नौड़ना, *naurná*, v.n., to run.

नौमौ, *naumín*, n.f., the 9th day of either half of the month.

नौह्रा, *nauhrá*, n.m., byre, cattle-yard.

न्या, *nyá*, n.m., justice.

“*Bár karí thí khet ne, bár khet ne khá.*

“*Rájá ho chorí kare nyá kaun par já.*”

Make a fence to a field, and the fence eats it up!

Be a Raja and thief—to whom can one go for justice?

न्यार, *nyár*, n.m., fodder.

न्यारा, *nyará*, adj., separate.

न्यून, *nyún*, adv., this way, thus (of direction, manner, etc.).

“*Jis ke síng nyún, us ne báhweñ kyoñ.*”

Why test the ox in the plough if his horns go thus?

“*Jis ke síng hoñge nyún, koí degá kyoñ.*”

Why should any one sell an ox whose horns go so?

(In both these cases a downward curve of the horns is indicated—it is highly approved).

न्यौदा, *nyauñdá*, n.m., a system of contribution to wedding expenditure (for fuller particulars see Sir D. Ibbetson's Karnal Settlement Report).

न्यौना, *nyauñná*, v.n., to submit to, yield.

“*Múrah se nyauñná bhalá, chátar ke bhale trás.*”

“*Je súraj garmí kare, meñh barsan kí ás.*”

It's well to yield a fool. At the hands of a wise man even trouble is good. If the sun scorches, there is hope of rain coming.

(Out of darkness comes light—and every cloud has a silver lining).

न्यौर्ता, *nyaurtá*, n.m., a feast day in honor of Durga—(9 such days come between the *kanágats* (q.v.), and the *Dusehrá*).

प

पंखी, *pañkhí*, adj., winged, having wings (*pañkh*).

“*Títar pañkhí bádli, bidwáh káñil rekh.*”

“*Yáh barse wáh ghar kare is meñ mín ná mekh.*”

Partridge-feathered clouds—a widow streaked with antimony.

The one will rain, the other take a husband—there is no picking holes in this.

पंचक *pañchak*, n.f., 5th day of either half of a month.

“*Sháhdev kahe sun Bhádli, Jeth galiá mat ro.*”

“*Je Sáwan pañchak gale, náñh sambat so.*”

Says Sháhdev, “List, Bhadli, Jeth's gone (*lit.* melted), don't cry. If fifth Sawan goes (without rain) then it'll be a bad year.”

पथ, *pañth*, n.m., a path.

पकेवा, *pakewá*, n.m., a boil or gathering.

[N.S.]

पगड़ौ बट, *pagrī bat*, adj. or adv., division by brothers
(*pagrīs*), *per capita*.

पचंत, *pachant*, n.f., same as *pachchat* (q.v.).

पचत, *pachchat*, n.f., hard toil, labour, industry (physical).

पचना, *pachná*, v.n., to toil, labour.

पक्कम, *pachham*, n.m., the west.

पक्कम बुद्धी, *pachham budhí*, n.m., wisdom after the event, so
foolishness.

पक्कायां, *pachháyañ*, adj., western.

पक्काहे, *pachháheñ*, adv., west or westwards.

पक्केता, *pachhetá*, adj., late, backward, late sown.

पक्केला, *pachheldá*, n.m., a small wedge rammed under the plough
to tighten up the share.

पक्केली, *pachheli*, n.f., plain silver bangles worn above the glass
chúrí (q.v.).

पक्कोड़ना, *pachhorná*, v.a., to winnow.

पक्कवा, *pachhwá*, n.f., 1. Westwind.

adj., 2. In combination with *bál* (q.v.).

पटार, *paṭár*, n.m., a big round basket with lid to contain clothes,
etc.

पटारौ, *paṭárá*, n.f., a smaller *paṭár* (q.v.).

पटबीजा, *paṭbijná*, n.m., butterfly, moth or fire-fly.

पड़ाई, *paṭáí*, n.f., malaria.

पड़ेत, *paṭet*, n.f., land left fallow for cattle to graze on.

पड़काला, *paṭkálá*, n.m., staircase of masonry or mud to the roof.

पड़हौ, *paṭhhí*, n.f., a thatch coping to walls, used where the
soil is light to protect them from rain

पड़वा, *paṭwá*, n.f., 1. The East.

adj., 2. In combination with *bál*. The East wind.

n.f., 3. The first day of either half of the month.

“*Sáwan máh chále paṭwá, khele pút bulá le má.*”

If the east wind blows in *Sawan* and *Magh*, the chil-
dren will play, though their mother calls them.

(A sign of an abundant harvest).

पढ़ना, *paḍhná*, v.a., to read.

v.n., to be educated (as Urdu *paṭhná*).

“*Kyásth ká betá paḍhá bhalá yá mará bhalá.*”

A *Kyásth's* child is best lettered or beaten,
(i.e., the scrivening caste is no use for anything else).

पणिहारौ, *panihárá*, n.f., the strip of wood supporting the share of the plough.

पणघट, *panghaṭ*, n.m., drinking well.

पणहार, *panhár*, n.f., a woman carrying water for her family.

पणहारौ, *panhári*, n.f., a woman paid to carry water for others.

पत, *pat*, n.f., respect, honour.

पताल, *patál*, n.m., as *pañtál* (q.v.) the bowels of the earth—the infernal regions.

“*Máh machká Jeth siál sádh parwá bál.*

“*Saidá kahe Bhádlí, barkhá gayí patál.*”

Heat in *Magh*, cold in *Jeth*, east wind in *Har*!

Says Saida ‘Eh, Bhadli, the rain’s gone down below.’

(All the seasons inverted).

पथ्वारा, *pathwára*, n.m., a place reserved to make cow-dung fuel cakes.

पदार, *padár*, adj., stable, constant, lasting (corr. of Persian *páedár*).

पदौड़ा, *padaurá*, n.m., an exceedingly fat man.

“*Nadíde ne miliá kaṭorá, pání pí pí huá padaurá.*”

If a glutton find a cup he will drink water till he becomes a pot belly.

पन्काल, *pankál*, n.m., a famine caused by excessive rain or flooding.

पर, *par*, conj., but.

“*Beáhí dagá dede, par báh dagá ná de.*”

Your wife may fail you, but your ploughing won’t (*i.e.*, well ploughed land is sure to give a return).

परस, *paras*, n.f., common meeting house of the village or a subdivision of it.

परां, *parán*, adj. or postp., far, beyond (chiefly in *Jhajjar*).

परार, *parár*, n.m., last year but one—antepenultimate; also *parár ke sál*.

पराल, *parál*, n.f., rice-straw.

परिश्मौ, *parithmí*, n.f., the world.

परोसा, *parosá*, n.m., a portion of food, for one man, a ration or ‘commons.’ (Term chiefly in use at weddings).

पर्खी, *parkhná*, v.a., to try, prove, test.

पर्धान, *pardhán*, n.m., president, chief (corrupted in verse to *dhán*).

पनी, *parní*, n.f. or adj., married, wife.

“*Chánd ne chhorí harní, mard ne chhorí parní.*”

The moon's left 'Harni,' and the husband his wife!
(*Harni* is an astronomical sign. The particular event is a sign of a great famine which would drive a man to leave his wife in search of labour).

पल्ला दिन, *parlá din*, n.m., three days hence.

पर्हाई, *parháí*, n.m., the work of the *chamár* who provides all the family with shoes as often as wanted.

पर्हान, *parhán*, n.m., clothes (collectively).

पलक, *palak*, n.f., eye-lid.

पलूया, *palúryá*, n.m., a puppy.

पलेज, *palej*, n.m., a small plot of vegetables.

पलेव, *palev*, n.f., a preliminary watering before sowing.

पल्टा, *paltá*, n.m., an iron spoon for turning over sweets, etc. while being cooked.

पलना, *palná*, n.m., a cradle, *i.e.*, basket to carry babies in; at home this basket is suspended from the roof and the baby swung in it.

पल्ला, *palwá*, n.m., a ladle for oil.

पसर, *pasar*, n.f., pasturing buffaloes during the night in the rainy season.

“*Waqt bahí ná dhartí, pasar charáí ná shám.*”

“*Ajání vidyá ná lí, tínoñ bigare kám.*”

The land not ploughed betimes, the buffalo not pastured at eve, the child not learned wisdom—all three are bad.

पसरना, *pasarná*, v.n., to be outstretched.

पसारा, *pasará*, n.m., 1. The place where the carts stand and the canes are laid preparatory to pressing the juice.

2. System of well sinking whereby all one's friends and neighbours help and are paid by feasting only.

पसगामां, *pasgámán*, n.m., an 'outside' village other than one's own.

पह्रा, *pahrá*, n.m., watch, guard.

पह्रू, *pahrú*, watchman.

पह्र का तह्रा, *pahr ká tarhá*, n.m., *sátwán pahr*, the 7th watch of the day.

- पह्र रात, *pahr rát*, n.f., *pánchwán pahr*, the 5th watch of the day.
- पहलम चोट, *pahlam chot*, adv., at the first attempt, first of all.
- पांखी, *pánkhí*, n.f., a small water-course in canal lands.
- पांसा, *pánglá*, adj., crippled.
- पांचे, *páncheñ*, n.f., the 5th day of either half of the month.
- पांडा, *pándá*, a pandit.
- पांड्या, *pándyá*, n.m., a pandit.
- पागड़ौ, *págrí*, n.f., a turban used by younger persons.
- पाके, *páchhe*, adv., behind, after.
- पाक्ला, *páchhlá*, adv., latter.
- पाट, *pát*, n.m., 1. Horizontal beam for supporting the well-wheel.
2. Cotton thread.
- पाट्ठी, *pátrí*, n.f., 3 strips of wood, forming the base of a *charkhá* or spinning wheel.
- पाटना, *pátná*, v.n., to be paid, procured, e.g., *máng nahín páttí* = the debt cannot be discharged—*beaurá pátá* = news was procured.
- पाड़, *pár*, n.m., sowing after one ploughing only.
- पाड़वा, *párchhá*, n.m., the trough of the well, into which the bucket of water is emptied.
- पाड़ना, *párná*, v.a., to split, tear (Urdu *phárná*).
- पात, *pát*, n.m., leaf.
- पातन, *pátan*, n.f., shoes.
- पातौ, *pátí*, n.f., a strip of iron or leather for strengthening and repairing.
- पात्तौ, *páttí*, n.f., dried leaves of *múng*, *moth* or *urd*.
- पाथना, *páthná*, v.a., to pat or knead (cow-dung cakes or lumps of *gur* or bricks).
- पाद्रा, *pádrá*, adj., straight, plain.
- पाना, *páná*, n.m., the major subdivision of a village.
- पान्नी, *pánní*, n.f., a kind of grass (used usually for *anatherum muricatum* and sometimes of *saccharum munja*).
- पापड़ौ, *páprí*, n.f., thin crusts forming on the earth due to heat following slight rain (see *ránpar*).
- पार पड़ना, *pár parná*, v.n., to come to an end, be finished.
- पाल, *pál*, n.m., the high banks round a tank formed by excavations.

[N.S.]

पाला, *pála*, n.m., see *dhínkar*; the leaves of *zizyphus nummularia* dried and ready to be used for fodder.

पाली, *páli*, n.m., cowherd.

- “ *Páli khálá pál pe, khalá sukáwe kes.*
 “ *Main páli bújhdí, ghar gorí kaisí ek.*
 “ *Achhí gorí pátlí, sappári kaisá raṅg.*
 “ *Kele kaisá kámṛá, muṛ tuṛ láge aṅg.*
 “ *Yoh dohá khúb kehá, yoh lágyá mere aṅg.*
 “ *Ek kálá dohá aur kaho, chalún tumháre saṅg.*
 “ *Kále kole kair ke, kále baní ke kág.*
 “ *Kále gorí ke kes, jáno baithá básak nág.*
 “ *Yoh bhí dohá khúb kehá, yoh bhí lágyá mere aṅg.*
 “ *Ek dhaulá dohá aur kaho, tab chalún tumháre saṅg.*
 “ *Dhaule gáye báchhrú, dhaulí rúí kopás.*
 “ *Dhaule gorí ke dañt, jáno tará khilyá ákás.”*

(Note—the form *bújhdí* is not *Jatu*).

The cowherd standing on the dam,
 Standing dries his hair.

- “ I ask you, cowherd,
 “ What’s the girl for you at home ? ”

- “ Good’s the girl that’s slim,
 “ Coloured like the betel.
 “ Straight as a twig of banana
 “ And her body bows and sways.”

- “ You’ve sung that couplet well,
 “ Well has it pleased my fancy.
 “ Read me a couplet of black,
 “ And I’ll go along with you.”

- “ Black is coal of the *kair* tree,
 “ Black are the crows of the wood,
 “ Black are a lass’ locks,
 “ Like the coils of a huge snake.”

- “ Well said this couplet too,
 “ It too has pleased my fancy.
 “ Tell me too a couplet of white,
 “ Then will I go along with you.”

- “ White are cows and their calves,
 “ White is cotton too,

“White are a lass’ teeth

“Like a star shining in the sky.”

(In this Theocritean discourse a girl is supposed to be testing the wits of a cowherd who wants to marry her).

पालेट, *pálet*, n.f., a cow or buffalo that has failed to be covered at the proper time.

पाल्दौ, *páldi*, n.f., a basket holding 10 or 12 sers of grain.

पाल्तौ, *pálti*, n.m., foundling, adopted child.

पालपुत्र, *pálputr*, n.m., a waif, brought up in one’s house.

पाहकस, *páhkás*, n.m., other village than one’s own; cf. the revenue term *páhi kásht* = cultivation by an outsider.

पाहगाम, *páhgam*, n.m., as *páhkás* (q.v.).

पिंडी, *piñdī*, n.f., body.

पिहवा, *pichhwá*, n.f. or adj., as *pachhwá* (q.v.).

पिड़या, *piṛiá*, n.m., squasher, the man who used to break and squash the canes in the wooden sugar press.

“*Kal ke peñch lagáe ke, kolhú dene lagí sarkár.*

“*Láweñ zamíndár píṛ leñ gañde, dhore dhore chalen pánch ke dháñde.*

“*Piṛiá kí kismat khotí, miltí nahín chikní rotí.*”

The Sirkar’s began to introduce the machine sugar press. The people get it: they squash the canes; round go the poor old five-bob bullocks.

Ill’s the squasher’s luck,

He gets no buttered bread.

(In the iron press there is no need to break up the canes before pressing and the *piṛiá* has disappeared).

पिड़वा, *piṛwá*, n.f., the 1st day of either half of the month, *badi* or *sudí* (q.v.).

पिता, *pitá*, n.m., father, used chiefly by *Pandits* (also in *Jhajjar* by *Jats*).

“*Mán par dhí, pitá par ghorá, bahut nahín to thorá thorá.*”

A girl favours her mother and a horse it’s sire.

It’s so a bit if not entirely.

पिपया, *pipayá*, n.m., a cuckoo (*hierococcyx varius*).

Popularly believed to have a hole in the neck, its only method of drinking being to catch rain drops in the hole. The superstition is based on the fact perhaps that its note, which is very like the *koil*’s but less rising and harsh, is heard in the rains only.

- पिथी, *pirthí*, n.f., world.
- पिर्वा, *pirwá*, n.f., east wind; also adjectivally in combination with *bál*.
- पिल्ला, *pillá*, n.m., a puppy.
- पौ, *pí*, n.m., husband.
- पोंड, *pínd*, n.f., a cotton pad bound on the spindle for *má'* (q.v.), to turn over.
- पोंडा, *píndá*, n.m., hub in a *charkhá* or spinning wheel.
- पौड़, *pír*, n.f., pain.
- पौड़ना, *pírná*, v.a., to squash (of canes, etc.).
- पौढा, *pídhá*, n.m., a woman's low stool used mostly for spinning.
- पौतस, *pítas*, n.f., wife of husband's or wife's father's younger brother.
- पौतेखा, *pítesrá* or *pítasrá*, n.m., husband's or wife's father's younger brother.
- पौया, *píyá*, n.m., husband, lover.
- पौल, *píl*, n.f., fruit of the *jál* (*salvadora oleoides*).
- पौल, *pílu*, n.f., as *píl* (q.v.).
- पौले बादल, *píle bádál*, n.m., one hour before sunrise.
- पौसाल, *písál*, n.f., husband's house.
- पौहर, *píhar*, n.m., father's house (of a woman).
- पौहौ, *píhí*, n.f., watering animals, *píhí ká kúná*, a well for watering cattle at.
- पुग्गा, *pugná*, v.n., 1. To succeed.
2. To be afforded.
e.g. 1. *Bítí dañdá meñ main abbal pugyá.*
i.e. I come out 1st in the game of *b.d.*
e.g. 2. *Ugáhi náhin puge,*
i.e. Revenue cannot be afforded; people can't pay up.
- पुचकार्ना, *puchkárná*, v.a., to soothe (an animal).
- पुचड, *putrang*, n.m., as *putr*, son.
- पुरा, *purá*, n.f., as *parwá* (q.v.).
- पुर के साल, *pur ke sál*, or more commonly 'pur ke,' n.m., next or last year.
- पुर्ख, *purkh*, n.m., a man.
- पुर्ली, *purlí*, n.f., as *mání* (q.v.).
- पूई, *púí*, n.f., picking of cotton crops by menials or labourers not belonging to the family and remunerated by a share of the pickings.

पंगौ, *púngí*, n.f., same as *kúngí* (q.v.).

पंजौ, *púnjí*, n.f., capital, stock in trade.

पंजड़ौ, *púnjri*, n.f., the twisted end of the *láo* (q.v.), in which a peg fits and joins it to the *nándni* (q.v.).

पूड़ा, *púrá*, n.m., a wheat cake cooked in *ghí* and sugar, in use at weddings.

पूनौ, *púni*, n.f., cotton, cut in short lengths, ready for spinning.

पूनो, *púno*, n.f., last day of 2nd or light half of the month.

पूरनमाशौ, *púranmáshí*, full moon. The last day of the light (second) half of the month.

पूरनी, *púrná*, n.f., as *púno* (q.v.).

पूला, *púlá*, n.m., the top leaves of cane or of *sar* or *pánní* grass used for thatching, etc.

पूलौ, *púli*, n.f., a bundle of straw of *jowár* or *bájrá*.

पे, *pe*, postp., on, upon.

“*Ashrafion kí lút, aur koelon pe mohr.*”

Spends his gold like loot, and puts a seal upon his charcoal!

(Penny wise, pound foolish).

पेचौ, *peo*, n.m., father.

पेचौसाल, *peosál*, n.f., father's house.

“*Sáwan paihlí pañchwín je dharúke bál.*

“*Tain jáyo kanthá Málwe, main jáún peosál.*”

If there's thunder in the wind on the first fifth of *Sáwan*, go you, my husband, to *Málwá*; I'm off to my father's house.

(A sure sign of famine.)

पेंच, *pench*, n.m., a steam factory, especially cotton ginning press.

पेटौ, *petí*, n.f., bust, chest.

पेटला, *petlá*, adj., bulky, fat.

“*Khet retlá, bail petlá.*”

Be my field sandy and my bullock fat.

पेडा, *pedá*, n.m., tree trunk.

पेड़, *per*, n.m., tree trunk, as *pedá* (q.v.).

पेल देना, *pel dená*, v.a., 1. To press, urge (a horse or cattle).
2. To press (oil or cane).

पैडा, *paiñdá*, n.m., large earthen water-pot.

पैताल, *paiñtál*, n.m., the interior, bowels of the earth.

पैनी, *painí*, n.f., handle of whip or goad.

“ *Háth painí bájrá, meṇḍak phudak jowár.*

“ *Aur kíṛ nál bowe moṭh gowár.*”

Sow *bájrá* a goad's length, and *jowár* a frog's jump apart; *moṭh* and *gowár* like a string of ants.

पैन्ना, *painná*, adj., sharp, keen (of wind, taste, tongue, knife, etc.).

पैयां, *paiyáñ*, n.m., a wheel.

पैर, *pair*, n.m., the threshing floor.

पैहंडा, *paihṇḍá*, n.m., as *paiṇḍá* (q.v.).

पैहंडी, *paihṇḍí*, n.f., a wooden bracket on a wall to hold two or more pots.

पैह्रा, *paihrá*, n.m., watch.

“ *Búḍhe karen basáoní, aur jhíná kápar leñ.*

“ *Woh nar ḍúbe jániye, jo sote paihrá deñ.*”

Old men who go buying, and wearing fine clothes.

And men who sleep on the watch—

Count them good for naught.

पैहलड़ा, *paihlṛá*, adj., former.

पोना, *poná*, v.a., to cook.

पोहन, *pohan*, n.m., a donkey.

पोहो, *poho*, n.m., the 10th month of the year—December to January.

पौंच, *pauñch*, n.f., power, capacity, reach (= Urdu *pahuñch*), e.g.,
merí pauñch náhín sai, i.e., not within my reach.

पौड़, *paur*, n.m., hemp and other fibre plants steeped in water, e.g., *paur sár rakhná* = to steep hemp, etc., in water; retting.

पौन, *paun*, n.f., wind.

“ *Paun chale utrá, anáj kháie ná kutrá.*”

If the north wind blows, even the dogs will not eat up the grain.

(i.e. there will be such plenty that the dogs even will be tired of eating).

पौली, *paulí*, n.f., the cattle shed and sitting room that forms the entry of a house.

प्राई, *prái*, adj., other's, foreign.

प्रीत, *prít*, n.f., friendship, love (Jats only use the term of third parties and not of themselves).

प्रीती, *prítí*, n.m., a friend (Jats only use the term of third persons and not of themselves)..

फ

फंलौदू, *phañlídúñ*, n.m., extravagance.

फड़ना, *pharakná*, v.n., to shy, caper (of a horse).

फड़का, *pharká*, n.m., a kind of grasshopper that damages the young Autumn crops.

फलाना, *phaláná*, pron., so and so, such and such. adj.

फलाना ढींकड़ा, *phaláná dhínkrá*, as *phaláná* (q.v.).

फलेज, *phalej*, n.m., as *palej* (q.v.).

फल्यार, *phalyár*, n.m., chaff of *múñg*, *moth*, *másh* and *gowár*.

फरसा, *phalsá*, n.m., gate or entrance of a village.

फांगड़ी, *phángri*, n.f., the flanges of the wheel of a *charkhá* or spinning wheel.

फांस, *pháñs*, n.m., stubble, remaining after the crop is cut.

फागन, *phágan*, n.m., the 12th month of the year—February to March.

फाला, *phálá*, n.m., a cross between a spade and mattock (same as *kassí*, q.v.).

फाली, *pháli*, n.f., the share of the plough.

“*Alí káth aur súkhe pháli, kátak baldán aur bhádon hálí.*”

When damp the plough (*lit.* wood), when dry the share; in *Katak* the bullocks, in *B'hadon* the ploughman.

(These are the times when its hardest work for each of the persons or things named).

फौक, *phík*, n.f., 1. Want, necessity.

2. Spittings.

फुटकड़, *phutkar*, n.f., change (of coin).

फुदक, *phudak*, n.f., a hop, jump.

फुलका, *phulká*, n.m., thin cake of wheat bread (same as *mañdá*).

फुलसौ, *phulsí*, n.f., threshing by drawing a heavy weight yoked to a pair of bullocks over the crop.

फेटना, *phetná*, v.a., to come across, to meet.

फस, *phaiñs*, n.f., trouble, care.

“*Le lená maiñs, kaṭ jāegí phaiñs.*”

Buy a buffalo, and your trouble will disappear.

ब

बंट, *bañt*, n.m., a twist (of rope, etc.).

बंदर्वाल, *bañdarwál*, n.m., mango leaves hung by a string on the door of a house on occasions of rejoicing.

बंदी खाना, *bañdí khána*, n.m., prison.

“ *Ráñghar bhale kalál ke, kih bañdí kháne.*

“ *Kih ghoṛe kí píth, kih dúñge dháne.*”

The *ranghar* and the *kalal* are good when in jail, or on the back of a horse or deep in wealth.

बंधेज, *bañdhej*, n.m., 1. Prohibition, interdiction.
2. Settlement, agreement.
3. Bundle wrapped in cloth.

बकत, *bakat*, n.m., time (Urdu *waqt*).

बकल, *bakal*, n.m., 1. Skin of man.
2. Bark of a tree.

बकाल, *bakál*, n.m., a *banyá*.

बक्वाद, *bakwád*, n.f., chattering, silly talk (as Urdu *bak* and *bak-wás*).

बखेड़ा, *bakherá*, n.m., 1. Falsehood, ill-faith.
2. Quarrelling, quarrelsomeness.

बखेर्ना, *bakherná*, v.a., to scatter broadcast (seed, or pice among the poor at a wedding).

बखौरा, *bakhaurá*, n.m., metal tumbler.

बगड़, *bagar*, n.m., yard, courtyard (Urdu *sahan*); also close quarters, i.e., a room enclosed by others.

बचन, *bachan*, n.m., speech, talk.

बचार्ना, *bachárná*, v.a. or n., to think, discriminate, recognize.

“ *Kal sajan haṭ ath nau áñkh samán bachár.*

“ *Dugná, tigná, chaugná, ghaṭat raihat ek sár.*”

Know the fool and the wise man are like the figures 8 and 9.

Double, treble, quadruple them respectively; one diminishes, and the other remains constant.

(8 is the fool. $8 \times 2 = 16$, and $1 + 6 = 7$; $8 \times 3 = 24$ and $2 + 4 = 6$;
 $8 \times 4 = 32$, and $3 + 2 = 5$.)

9 is the wise man. $9 \times 2 = 18$ and $1 + 8 = 9$; $9 \times 3 = 27$ and $2 + 7 = 9$;
 $9 \times 4 = 36$ and $3 + 6 = 9$.)

बच्चिया, *bachhiyá*, n.f., as *báchhrí* (q v.).

बटेज, *batej*, n.m., partition, division (of everything).

बटौड़ा, *bataurá*, n.m., stock of cattle-dung cakes.

“*Kaudí ne jore, bataure ne tore.*”

Counts the cowries, but breaks up a whole stack of fuel.

(Penny wise, pound foolish).

बटले, *batle*, adj., pl., gathered together, assembled.

बटयां, *batyán*, n.f., footpath, track.

बटयौ *batyau*, n.m., traveller, guest.

“*Be húi ká danđ, putr ká sog.*

“*Nit uťh chalen batyau log.*

“*Jin kí marín adh bich nár.*

“*Biná agan yeh jal jáen chár.*”

A fine for no offence, or mourning for a son,
Travellers who rise and march each day,
Or he whose wife has died in mid life,
These four need no fire to burn with.

बडरा, *badará*, adj., the biggest, or oldest, among several.

बडा, *baddá*, adj., big, large, usually in comparison.

बडंगी, *bardangí*, adj., 1. Shameless.

2. Indigent.

बडना, *barná*, v.n., to get in, enter, penetrate.

“*Chár khare, chár pare, ek ek meñ do do bare.*”

Four uprights, four horizontals: in each one two inserted.

(Answer—a bed).

बडवा, *barwá*, n.m., buds of the *kair* (q.v.).

बडहापा, *barhápa*, n.m., old age.

बडौ *badhí*, n.m., a caste of carpenters (less common in this District than *khátí*, q.v.).

बणक, *banak*, n.m., merchant, trader.

बणज, *banaj*, money-lending.

बणखंड, *bankhand*, n.m., a great wood, forest.

बण्टी, *banshtí*, n.f., cotton stalk.

बण्टौ, *banstí*, n.f., as *banshtí* (q.v.).

बत्तौ, *battí*, adv., more.

“*Do ghar battí mángne, par chalná masal kí chándní.*”

He'll travel by torchlight though he has to beg from two more houses.

(Spoken of a person who lives beyond his means).

बतलाना, *batláná*, v.n., to talk, to converse.

(It does not mean to tell or explain as in Urdu).

“ *Banyá beswán ek se, is meñ antar náh.*
“ *Dhan wále se hit karen resí resí batláweñ.*
“ *Nirdhane ne dekh palak yeh ultí jhánpeñ.*”

The *baniya* and harlot are alike; there's no difference here.

They love the rich man and speak to him sweetly :
At the sight of a poor man they close their eyelids.

बध्वा, *bathwá*, n.m., a kind of weed, used as a vegetable also (*chenopodium album*).

बधाऊ, *badháú*, adj., surplus, in excess.

बन, *ban*, n.m., forest.

बनखौ, *banastí*, n.f., as *banshtí* (q.v.), cotton stalk.

बनी, *baní*, n.f., the wood surrounding the village.

बनजोडा, *banjotá*, n.m., a client of a moneylender.

बनड़ा, *banrá*, n.m., bridegroom.

बनड़ी, *banrí*, n.f., bride.

बम्बी, *bambí* n.f., the hole of a big snake.

बर, *bar*, n.f., time, turn, occasion—corruption of *bár*.

बराड़, *barárá*, adj., unirrigated, dependent on rainfall (of land, soil).

बरीं ब्राबर, *baron brábar*, adv., equally (an intensive form of *brábar*).

“ *Gári wálá sadá dewálá, bhainswálá ádhe.*

“ *Gáe wálá baron brábar, bakriwálá bádhe.*”

He who keeps a cart is always bankrupt, and the buffalo-keeper half way to it. The cowherd makes gain balance loss, and the goatherd shows a profit.

बर्खा, *barkhá*, n.f., rain.

बर्जना, *barjáná*, v.a., to forbid, to caution.

“ *Kanthaté te barje nári, tú mat bo inkh kí kyári.*

“ *Tú bo le bájrá bári, terí máng utr jáe sári.*”

Cautions her husband the woman “ don't sow a field of cane. You sow millet and cotton, and all your debt will disappear.”

बट, *bart*, n.m., half gelt bullock.

बरी, *barrá*, n.m., 1. Sand met with in sinking a well.
2. Runnel—of a well only.

बरी, *barrí*, n.f., 1. Sand met with in sinking a well.

2. A strong rope made by twisting together three strands of *jewrí* (q.v.); used for netting sides of a cart.

बरे, *barre*, n.f., a noise made to turn bullocks in plough or cart to left.

बसावना, *barsáwná*, v.a., to winnow.

बसौधिया, *barsaudhiyá*, n.m., a farm-servant engaged for the year.

बहोटा, *barhotá*, n.m., as much grass or other fodder as a man can carry on his head.

बल, *bal*, n.m., a twist (of rope, etc.).

बलौ, *balí*, n.f., two iron rings which join the well-block, and the *boují* (q.v.).

बसाख, *basákh*, n.m., the 2nd month of the year—April to May.

बसावनी, *basáwní*, n.f., merchandise, trade.

बसेबा, *basebá*, n.m., living, abiding, e.g., ‘*je Sarkár basá rakhe, mhárá basebá hogá*’ “if the Government helps us, we can maintain our houses and village.”

“*Mágh meñ khet baheá ná, aur ghar meñ chale kaheá ná.*

“*Ghilrí meñ ghí tayá ná, úpar sháh saheá ná.*

“*Baso to sahí par basebá kuchh rehá ná.*”

Field not ploughed in *Magh* and your word not heeded in the house: no *ghi* heating in the pot: the money-lender not bearing with you—yes, you may live but there’s nothing worth living for left.

बहा, *bahá*, v., past., became; a *púrab* form; the verb is defective.

“*Lakrí jal koelá bahá, koelá jal bahí rákh.*

“*Main pápan aisí jalí, koelá bahí ná rákh.*”

The wood burned and became charcoal, the charcoal burned and became ash. I poor sinner have burned so, there’s neither coal nor ashes.

(The cry of a disappointed woman).

बहौ, *bahí*, v. past., feminine of *bahá* (q.v.).

बहू, *bahú*, n.f., wife.

“*Sás antká bolná, aur bahú antkí chup.*

“*Bhádoñ antká barsná, jeth antkí dhup.*”

Let the mother-in-law speak freely, and the daughter-in-law be silent. Let rain be heavy in *Bhádoñ*, and the sun’s heat full in *Jeth*.

बहूड़या, *bahúryá*, n.f., as *bauhuríá* (q.v.).

बांका, *bānkā*, adj., 1. Good-looking, foppish, fashionable.
2. Curved, crooked.

“*Gāe to śingal bānkī, aur chāl bānkī ghorīān.*

“*Mard to mūchhal bānkā, nainī bānkī gorīān.*”

A cow's glory her horns, and a mare's her paces;
A man's his moustaches, a woman's her eyes.

“*Dhaulī tāng dhobīnā, aur bhūrī mūchh sunār.*

“*Tīn jāton ká kyā pūchhnā—jo bānkī tāng kumhār.*

White legs, the washerman's wife; brown moustache,
the goldsmith.

Bandy legs, the potter: what need to ask their three
castes?

बांगा, *bāngā*, adj., curved, crooked.

“*Bhīnt kyon bāngī, bahū kyon nāngī.*”

Why is the wall crooked and the wife naked?

(Because the cotton crop has failed and there is not
enough even to make a plumb line).

बांग्रू, *bāngrū*, adj., unirrigated, dependent on rainfall (of land or
soil only).

बांज, *bāñjh*, n.f., barren.

बांट, *bānt*, n.f., fodder.

बांदी, *bāndī*, n.f., a maid-servant (among the *Rānghars* like
Hagar).

“*Sat mat hār eh bāwre, sat hāre pat jā.*

“*Sat kī bāndī lachhmī, phir milegī ā.*”

Don't lose righteousness, O fool: if you lose it respect
goes too. Riches are the handmaiden of righteous-
ness and will come again.

बांस, *bāns*, n.f., bad smell, stench.

बाकड़ी, *bākṛī*, n.f., twisted anklet going over instep.

बाकली, *bāklī*, n.f., grain cooked with sugar, given to women who
come to sing on auspicious occasions.

“*Jaisī terī bāklī, waisā mhārā gīt.*”

Our song will be according to your offering.

बाखड़ी, *bākhṛī*, n.f., a cow or buffalo going off milk.

बागड़, *bāgaṛ*, n.m., the dry land of Hissar, Bikanir, etc.

“*Kāl bāgaṛ se upje, burā bāhman te ho.*”

Famine comes from the *Bāgaṛ* as evil from the Brah-
man.

बागड़ी, *bágrí*, adj., 1. Belonging to *Bágar* (q.v.).
2. Unirrigated, dependent on rainfall—of land.

बागड़, *bágrú*, adj., belonging to *Bágar* (q.v.).

बाचना, *báchná*, v.a., to read.

बाहड़ा, *báchhrá*, n.m., a calf (for the first two years of its life).

बाहड़ी, *báchhrí*, n.f., a heifer (for the first two years of its life).

बाहड़, *báchhrú*, n.m., pl., calves of either sex.

“*Ko-gáyán ká báchhrú, ko nárián ká pút.*

“*Kadí ná hosí ujlá, saurián máhñ ká sút.*”

Calves of bad cows, sons of bad women,

Cotton of quilts—these three are never good.

बाजू, *bájú* n.m., 1. Jamb, side-posts of doorway.

2. Lintel of doorway.

3. An armlet generally made of rupees strung together.

बाजूचौक, *bájú chauk*, n.m., as *bájú band* (q.v.).

बाजू फूल, *bájú phúl*, n.m., an ornamental armlet with one silver boss.

बाजूबंद, *bájú band*, n.m., an ornamental armlet with big silver bosses.

बाजना, *bájná*, v.n., to be called, named.

बाट, *bát*, n.m., 1. Weight (for scales).

2. Division.

3. Travel.

बाट देखना, *bát dekhná*, to await, expect.

बाड़ना, *bádná*, v.a., to reap, to cut.

बाड़ी, *báří*, cotton plant, cotton.

बाड़ना, *bárná*, v.a., to put in, insert.

बात, *bát*, n.f., custom (as well as the ordinary Urdu meanings).

बाता, *bátá*, n.m., same as *bátí* (q.v.), i.e., stalks, but bigger in size.

बाती, *bátí* n.f., 1. A long bundle of *bájrá* stalks put in a thatch roof to support the loose stalks thereon.

2. A candle.

3. Talking, discourse.

“*Khetí bátí chákrí aur ghore ká tañg.*

“*Yeh to kare áp se, cháhe lákh log ho sañg.*”

Farming, talking, service, and girthing a horse ;

Do these yourself, though a hundred thousand men be with you.

बाध, *bádḥ*, adj., more.

बाधा, *bádhá*, n.m., increase, excess, profit.

बाबू, *bábú*, n.m., father.

बार, *bár*, n.m., Sunday.

बारस, *báras*, n.f., 12th day of either half of the month.

वाल, *bál*, n.f., 1. Ear of *bájrá*, wheat or barley.
2. Wind.

बालक, *bálak*, n.m., child.

बाला, *bálá*, n.m., child.

बालू रेत, *bálú ret*, n.f., sand met with in sinking a well.

बाव्रा, *bávrá*, adj., as *báolá*, mad (*báorá* is also used).

बास, *bás*, n.m., dwelling, abode, abiding. In composition seen in the name of many villages as *Mánkáwás*, *Nyábás*, etc.

बासक, *básak*, n.m., a fabulous serpent of Hindu mythology—*Básak nág* is used for a huge snake.

बासन, *básan*, n.m., an earthen vessel.

बाह, *báh*, n.m., as *báhn*, ploughing.

“*Sháh laut jāwe, par báh ná laute.*”

The moneylender may fail you, but not the furrowed land.

बाह, *báhn*, n.m., ploughing.

बाह्मन, *báhman*, n.m., Brahman.

बिआज, *biáj*, n.m., interest.

बिखर्ना, *bikharná*, v.n., to be scattered.

बिचार, *bichár*, n.m., thinking.

बिजार, *bijár*, n.m., bull, same as *khágar* or *ánkal* (q.v.).

बिटोल, *biṭol*, n.f., assembly.

बिटौड़ा, *biṭaurá*, n.m., stock of cow-dung fuel.

बिद्या, *bidyá*, n.f., knowledge.

बिदा, *bidwá*, n.f., a widow.

“*Ját, bairágí, nátwá chauthe bidwá nár.*”

“*Yéh cháron bhúkhe bhale, dhápe karen bigár.*”

The Jat, Bairagi, second calf, and fourthly the widow—
These four are best hungry: sated they do evil.

बिध, *bidh*, n.f., way, means; *kis bidh* = how?

बिधक्ता, *bidhakná*, v.n., 1. To fear.

2. To shy (of an animal).

बिन, *bin*, postp., without, as *biná*, often used in composition as 'un' in a non-privative.

“ *Bin mirchoñ ke ghoṭe bhañg, bín bháyoñ ke kare jañg*
 “ *Bin pañoñ ke naháwe gañg, bhañg ná jañg ná gañg.*”

Pound hemp without pepper, fight without fellows,
 Bathe in the Ganges without coppers: it's no hemp,
 no fight, no Ganges!

“ Hamlet without the Prince of Denmark.”

बिनौला, *binaulá*, n.m., cotton seed.

“ *Báñt binaule bhúri kháe, hal chalán lañdá jáe.*
 “ *Chal mere lañde ek haláí, phir joṛúñ to Rám duháí.*
 “ *Eh damgaje kisi aur ne de, kádhí sare khet kí ek ná kare.*”

Says the bullock, “ The white buffalo eats fodder and
 cotton seed, while the short-
 tailed bullock goes to the
 plough.”

Says the farmer, “ Come, my short-tailed bullock,
 one ploughing! Then, by God,
 I'll not yoke thee again.”

Says the bullock, “ Give your blarney to some one
 else. Don't you make one dose
 of the whole field!”

बिनकुट, *binkuṭ*, n.f., (1) A cow that won't let itself be milked
 because its calf has died.

(2) A cow going off milk.

बिर्क, *birchh*, n.m., a large full-grown tree.

बिल्ला, *birlá*, adj., sparse, uneven (of a crop).

बिर्वा, *birwá*, n.m., a tree.

बिल, *bil*, n.m., hole of small animals, *i.e.*, snake, mouse, etc.

बिला, *bilá*, n.m., a male cat.

बिलाई, *biláí*, n.f., a female cat.

बिलाओ, *biláo*, n.m., as *bilá* (q.v.).

“ *Turk, jáṭ aur múñḍchará, báñdar bhiry biláo.*
 “ *Yeh chheoñ ná apne, bháweñ dúdh kaṭore piláo.*”

The Mussalman, the Jat, the cut-throat, the monkey,
 the wasp and the cat: these six will never be your
 friends though you give them cups full of milk.

बिलोना, *biloná*, v.a., to churn.

बिलोनी, *biloní*, n.f., a churn.

बिसर, *bisar*, n.m., necessity, need.

बिसाना, *bisáná*, v.a., to purchase.

“*Do Sáwan, do bhádwe, do kátak, do má.*

“*Dhande dhore bech ke náj bisáwan já.*”

Two *Sawans*, two *Bhadons*, two *Kataks*, two *Maghs*!

Go sell your cattle and buy grain.

(If the intercalary month fall after any of these it is considered a sure sign of impending famine.)

बिसाल, *bisál*, n.m., recess inside the living room of the house.

बिसासत, *bisásat*, n.f., residence, living.

बिस्वा, *biswá*, n.m., a share in the village and so one's landed property—The ownership of a village is often still divided on so many ploughs or the 20 *biswás* of a bigha.

बिस्वेदार, *biswedár*, n.m., landowner with a share in the common property of the village.

बीटा, *bíntá*, n.m., wooden handle of any implement.

बीज, *bíj*, n.f., lightning.

“*Sáwan paihlí pañchwín, bádál ho ná bíj.*

“*Becho gádí baldán nipje kuchh ná chíj.*”

If there be no cloud or lightning on the dark fifth of *Sáwan*, sell your cart and cattle, nothing will grow.

(A sign of famine.)

बीज्जा, *bíjñá*, n.m., a hand fan.

बीज्ना, *bíjhná*, v.n., to be eaten away (of wood).

बीठा, *bíthá*, n.f., droppings of birds.

बीड़ह, *bírh*, n.m., forest or grass preserve.

बीत, *bít*, n.f., grazing fees taken by a herdsman for looking after another man's cattle.

बीर, *bír*, n.f., woman (strictly a married woman in her husband's house).

बीर बट, *bír bat*, adj. or adv., division per stirpes—by wives.

बीरबानौ, *bírbání*, n.f., as *bír* (q.v.).

बुंदा बांदी, *buñdá bándí*, n.f., a few drops of rain, “spitting.”

बुख, *bukh*, n.f., sand that pours into a well from the spring level.

बुला, *bulá*, n.f., calling, summoning.

बुला आला, *bulá álá*, n.m., one who calls (the *dhának* or *chúrhá* whose duty it is to assemble the villagers).

बुल्द, *buld*, n.m., bullock broken to plough or cart.

“*Ghoríán ráj, buldán anáj.*”

A kingdom by horses,
Grain by bullocks.

बुहारौ, *buhári*, n.f., a fine broom or brush usually made of *dáb* or *pánní* grass.

बुधा, *búá*, n.f., father's sister.

बुंगा, *búngá*, n.m., circular stack containing straw of wheat or any other broken straw.

बुंठ, *búnt*, n.m., a single gram-plant.

“*Agetá búnt, pachhetí sánthrí.*”

One plant of early gram (is worth) an armful later.

बुज्जी, *bújní*, n.f., ear-studs.

बुझना, *bújhna*, v.a., to ask, enquire.

बुम्बला, *búmblá*, n.m., chaff of *bájrá* used for litter.

बुर, *búr*, n.m., the white powdery bloom which protects the ripening *jowár* and *bájrá*.

बुरा, *búra*, n.m., cleaned sugar.

बेचौरा, *beaurá*, n.m., knowledge, news.

Equivalent of Urdu *khabr*; *biaurá* is also used.

बेभड़, *bejhar*, n.f., a mixture of barley and gram.

बेड़ा, *berá*, n.m., infantry—rarely army in general.

बेदन, *bedan*, n.f., pain.

“*Aisí bedan apní aisí parái, kyá apní kyá parái sab eke pí.*”

Your own pain and another's are all one.

Whether your own or another's count it all the same pain.

बेदी, *bedí*, n.f., altar, before which bride and bridegroom are married.

बेबस, *bebas*, adj., out of control (of an animal), perforce, involuntary.

बेबे, *bebe*, n.f., sister—used loosely to any girl of the village.

बेर, *ber* n.m., the small berry of the *zizyphus nummularia*, eaten as fruit.

बेरा, *berá*, n.m. as *bowára*; sowing.

बेराना, *berána*, adj., outside, hence foreign, somebody else's.

बेल, *bel*, n.f., chain used to secure cart bullocks at night on road.

बेलन, *belan*, n.f., 1. An iron pivot in a *charkhá* or spinning wheel.

2. Large round clod-crusher drawn by four bullocks.

3. Sugar press.

4. Cotton-ginning hand machine.

बेली, *belí*, n.m., the leader pair of bullocks in a cart.

बेल्वा, *belwá*, n.m., small metal cup.

बेस्वा, *beswá*, n.f., prostitute.

“*Sabhí jāt gopāl kī, tīn jāt be pīr.*”

“*Biná garz larze nahīn banak beswá hīr.*”

All (other) castes are God's, but three are without mercy—

The Baniya, Prostitute and Ahir, incline nowhere without self-interest.

बैडा, *baiṇḍá*, adj., crooked, bandy.

“*Dhīlí dhotí bányá, ultí muchh sunár.*”

“*Baiṇḍe pair kumhár ke, tīnoñ adhl pahchán.*”

Loose loin cloth, the Baniya, moustache curled up, the Goldsmith.

Bandy legs the potter—all three are easily recognised.

बैठ, *baiṭh*, n.f., revenue (the amount settled on any one as his share).

बैठल, *baiṭhal*, adj., ordinary heavy plough (in contrast to *Nág* or *Nárí*).

बैया, *baiyá*, n.m., the weaver bird (plocceus baiya).

बैर, *bair*, n.m., enmity.

“*Jidhar jáe pání naihr, udhar jáe bemárí bair.*”

Where goes the canal water,
There go sickness and enmity.

बैरन, *bairan*, n.f. (a woman), enemy.

बैरी, *bairí*, n.m., enemy.

बैहड़ा, *baihrá*, n.m., a calf of one and a half or two years.

बैहड़ी, *baihrí*, n.f., a heifer of one and a half or two years.

बैहड़का, *baihrká*, n.m., calf of 1 year old.

बैहड़कौ, *baihrkí*, n.f., heifer of 1 year old.

बैहलां, *baihlán*, n.f., barren cow or buffalo.

बोभड़ा, *bojhrá*, n.m., shrub, a low tree.

बोदा, *bodá*, adj., weak, poor, worn out.

बोथ्या, *boyyá*, n.m., a small basket to take seed or food to the fields.

बोल, *bol*, n.m., voice, call, note.

बोल बाला, *bol bálá*, adj., quiet.

बोवा खावा, *bowá kháwá*, n.m. (eating what he sows), a tenant at will with no stake in the village beyond his tenancy.

बोवारा, *bowára*, n.m., sowing.

- बोझौ, *bohni*, n.f., a small basket made of twigs or straw to collect *jál* berries in.
- बौजौ, *bouji*, n.f., cross iron bars over the *maṇḍal* (q.v.).
- बौला, *baulá*, adj., mad, crazy.
- बौलौ बूह, *baulí búchh*, n.m., idiot (a term of abuse).
- बौडइया, *bauhuríá*, n.f., any young wife of the house, e.g. son's or younger brother's.
- बौहक्रा, *bauhkrá*, n.m., same as *raṛká* (q.v.).
- बौहइना, *bauhṛná*, v.n., to come quickly, overtake.
- ब्रः, *brá*, n.m., hog.
- ब्राजना, *brájna*, v.n., to live.
- ब्रित, *brit*, n.f., the clientele of a Brahman or a particular client (Urdu *jajmán*).
- ब्रिहस्पत, *brihaspat*, n.f., Thursday.

भ

- भज्जा, *bhajná*, v.a., to worship.
- भइवा, *bharwá*, n.m., blockhead.

“ *Múe chám te chám katáweñ, bhauñ par sukṛe soweñ,*
 “ *Ghág kahe yih tínoñ bharwe, údhal jáeñ aur roweñ.*
 “ *Apní garz ne chám katáweñ par ghar sukṛe soweñ,*
 “ *Karkar pichhlí prít piyá kí údhal jáeñ aur roweñ.*”

Cut skin from a dead skin, sleep squeezed on the earth, elope and weep—says *Ghag* these three must be blockheads.

Reply, ‘Nay one cuts leather for his own needs; they sleep squeezed (only) in another's house—and a woman elopes and weeps for love lately borne to a friend.’

- भदायो, *bhadáyí*, n.f., congratulation.

- भदाइ, *bhadwár*, n.m., land ploughed in *bhádoñ* and left fallow for spring crop.

“ *Sádhú bowe, sárh báh, yeh bhúl jáe, bhadwár.*”

Would you sow a spring crop, plough in Har. If you fail to do so, at least in Bhadon.

- भनुड, *bhanuṅ*, n.f., two thin upright sticks between two *gudṛís* (q.v.) to prevent the *mál* (q.v.) riding too far right or left; see *charkhá* or spinning wheel.

- भम्बा, *bhambá*, n.m., the sound of *bh*.

भय्या *bhayyá*, n.m., brother.

“*Bháí bhalá ná bhayyá, sab se bhalá ropayá.*”

Nor one brother nor another is any good.
Money is best of all.

भरन *bharan*, n.f., rain.

भर्तार *bhartár*, n.m., husband.

“*Sagá kosame parkhiye, dhínú mañde ghás,*
“*Tiryá ke gun parkhiye, jab nirdhan ho bhartár.*”

Prove a friend in time of trouble, and a milch cow
when the grass is bad. Prove a woman's virtues
when her husband is penniless.

भा *bhá*, n.m., rate, price.

भाई बट *bháí bat*, adj. or adv., division per capita, by brothers
(*pagrís*).

भागवान *bhágwán*,, adj., rich, prosperous, fortunate.

भाजी *bhájí*, n.f., vegetables (according to Platt's Dictionary,
“especially cooked vegetables” from *bhájná* to fry).

“*Añdher nagrí to chaupat Rájá.*

“*Take ser bhájí take ser khájá.*”

Blind townfolk and a careless Raja.

Vegetables and sweets alike sell at a copper the quart!

भाजा *bhájná*, v.n., to run, come quickly.

भादूसा *bhádúwá*, n.m., the 6th month of the year, August to
September.

“*Phágan badí jo dúj din, bádál ho ná bíj,*

“*Barse sáwan bhádúwá, khelo sádhoñ tíj.*”

If there be no clouds or lightning on the dark
second of Phagan, it will rain in Sawan and Bhadon,
you may keep holiday all Har.

(A sign of a plentiful year).

भान *bhán*, n.m., sun.

भाना *bháná*, v.n., to be agreeable to, to suit, seem fit.

भाबी *bhábí*, n.f., elder brother's wife; the term of address to
the *bháwaj*.

“*Híne kí jorú sab kí bhábí, Tháde kí jorú sab kí kákí.*”

The poor man's wife is sister-in-law to all; and the
strong man's is all the world's aunt.

भास *bhál*, n.f., news, information.

भावे, *bhāweñ*, conj., (1) whether, or, (2) 'if you will,' the aorist of *bhāná* (q.v.).

“ *Ek háth se tál ná báje, dekh chuko bhāweñ bajáke,*
 “ *Ek or se prít ná láge, dekh chuko bhāweñ láke,*
 “ *Biná búkh bhojan ná bhāwe, dekh chuko bhāweñ kháke,*
 “ *Biná buláe ádar ná howe, dekh chuko bhāweñ jáke.*”

You can't clap with one hand ; clap and see, and you will.
 There can't be friendship on one side ; try and see, and you will.

Without appetite food does not please ; eat and see, and you will.

Without an invitation, there's no honour ; go and see, and you will.

भिड़, *bhirr*, n.f., wasp.

भिड़ा, *bhirrá*, n.m., as *karjú* (q.v.).

भींत, *bhínt*, n.f., wall.

“ *Bhínt meñ álá, ghar meñ sálá, kare kuchh ná kuchh chálá.*”

A niche in the wall, a brother-in-law in the house, they'll make some mischief or other.

भीजा, *bhíjná*, v.n., to become wet.

“ *Jyún jyún kámbal bhíje, tyún tyún bhárá ho.*”

The wetter a blanket gets, the heavier it becomes.
 (And so the more you flatter a person the bitterer he becomes, etc.)

भीड़ा, *bhírá*, adj., narrow.

भीतर, *bhítar*, prep. or adv., inside.

भूँडा, *bhúñdá*, adj., dirty, bad.

भूड़, *bhúṛ*, n.f., sandy soil.

भूरा, *bhúrá*, adj., white, straw-coloured, pale (of a buffalo, dog, man, etc.).

“ *Kálá báhman, bhúrá chamár, ultí múnchh sunár* ”
 “ *Inká ná koí itbár.*”

A dark Brahman, a fair Chumar, a Goldsmith with drooping moustache, distrust all three.

भेली, *bhelí*, n.f., a lump of *gur* 4 seers—This is the form in which the sugar of the district is turned out.

भैषा, *bhaiyán*, n.m., 1. The tutelary deity of the village.
 2. His shrine.

The sense is occasionally transferred to the founder of a village or some other great man.

भीपाल. *bhoñpál*, n.m., as *bhaiyán* (q.v.), but ordinarily used by low castes and not by Jats.

भोग्ना, *bhogná*, v.a., to undergo, suffer, endure.

भोजन, *bhojan*, n.m., eating, food.

भौ, *bhau*, n.m., fear.

भौं, *bhaun*, n.f., land.

भौं भाई, *bhaun bhái*, n.m., an outsider who has been given land in the village but has no share in the common property.

भौरा, *bhaunrá*, n.m., a big black butterfly with semi-transparent wings.

भौन, *bhaun*, n.m., the well-wheel.

भौनी, *bhauní*, n.f., as *bhaun* (q.v.), but for a drinking well.

म

मंगल, *maṅgal*, adj., auspicious, triumphant.

मंघा, *maṅgrá*, n.m., a small uneven field.

मंगला चार, *maṅglá chár*, n.m., hymns of congratulations; see *maṅgal*. *Chár* is a corruption of *achár* utterance.

मंघसिर, *maṅghsir*, n.m., the 9th month of the year November to December.

मंजोलौ, *mañholí*, n.f., a small trotting bullock-cart (feminine of adjective *mañholá*, intermediate, supplé *gáři*).

मंडल, *maṅḍal*, n.m., the iron ring to which the well-bucket is attached.

मंडा, *maṅḍá*, n.m., wheat bread cakes.

“*Nau bár maṅḍá, das bár gaṅḍá.*”

(Plough) nine times for wheat and ten times for cane.

मंडना, *maṅḍná*, v.n., to stick to, (of work) persevere.

मंढ, *maṅḍh*, n.m., a temple of *Deví*; *maḍh* is also used.

मंदा, *maṅḍá*, adj., 1. Cheap.
2. Bad, below par.
3. Scarce.

मखो, *makho*, n.f., a kiss.

मचका, *machká*, n.m., still heat.

“*Mágh machká jeth siál, sáwan parwá bál*
“*Shadí kahe Bhádlí, túi to kis bidh biáh.*”

Heat in *Mágh*, cold in *Jeth*, east wind in *Sáwan*.
Shadí says, ‘*Eh, Bhadli* what is marriage for a woman who has dropped her child?’

मजाना, *majāná*, v. a., to roll (land after irrigating and ploughing) with the clod-breaker.

मट *maṭ*, n. m., as *maṭh* (q. v.).

मट्टी, *maṭī*, n. f., earth.

मट्का, *maṭká*, n. m., earthen water-pot.

मठ, *maṭh*, n. m., a *kanphará jogí* monastery.

मठा, *maṭhá*, adj., slow, sluggish.

“*Káṭar gáe, kunar nár, maṭhá dhorí, thoṭh gur*

“*Kúá khárá nír, yeh páñchòñ señ sharír.*”

A barren cow, an evil wife, a sluggish bullock, a fool for a teacher, and a well of brackish water, these five are bad.

मत, *mat*, n. f., senses.

“*Mat márí jāt kí, jab ráñghar rakhá hálí*

“*Woh kahe use kám ne, woh dehe usne gálí.*”

A Jat's senses have left him when he appoints a Rajput as his ploughman. He shows him work to do, and the other gives him abuse!

मतौरा, *matírá*, n. m., a wild water-melon growing in the rains chiefly in sandy soil.

मन, *man*, n. m., heart.

मन भरा, *man bhará*, adj., lovely.

मरावा, *maráwná*, v. n., to be beaten.

“*Paří maráwe, baithá máre,*

“*Gharí gharí ke márne meñ, ángal ángal sarkáwe.*”

One prostrate is beaten, and one sitting beats, At each twenty minutes of the beating, they shift a finger further.

Answer—“*cloth weaving.*”

मरोड़, *maror*, n. f., twisting, swaggering, pride.

मर्वा, *marwá*, n. m., a fragrant herb, not unlike basil, common in Bairagi monasteries; *quaere marjoram?*

मलाहजा, *maláhjá*, n. m., regard, friendship (corruption of Urdu *muláhzá*).

मस्तक, *mastak*, n. m., forehead.

मस्तां, *massáñ* (with or without addition of *te*), adv., hardly, with difficulty.

महौसिम, *mahausim*, adj., powerful.

माशोश, *máosh*, n. f., last day of dark half of lunar month.

मांग, *māng*, n.f., debt.

“ *Kálar bo de bárí, terí máng utar jáe sárí.* ”

Sow cotton in hard land and all your debts will disappear.

मांघी, *mānghí*, n.f., milk-pail (as *dohní* (q.v.)).

मां जाया, *māñ jáyá*, adj., born of the same mother.

मांझी, *māñjhí*, n.f., a small frame for carrying the crushed cane to the fire.

माची, *máchí*, n.f., as *māñjhí* (q.v.).

माचना, *máchná*, v., to be stirred up, caused, made.

1. Of a slough.

2. Of a noise.

माज्रा, *májrá*, n.m., a small village, hamlet.

माटी, *mátí*, n.f., earth.

“ *Sáthí mátí kapre sání munj aur tát*

“ *Yeh chheon kúte bhale aur sátwán ját.* ”

Rice, clay, cloth, hemp, munj and gram-pods.

These six are best pounded—ditto the Ját.

माडा, *márá*, adj., weak, feeble, indifferent.

मान, *mán*, n.m., honour.

मानस, *mánas*, n.m. or f., man, person.

मानौ, *mání*, n.f., a small button or sheath put on the plough-share to protect it when not in use.

मापना, *mápná*, v.a., to measure.

माल, *mál*, n.f., cotton thread, strengthened with *ák* (q.v.) juice that rotates the iron spindle of the spinning wheel.

मालिक, *málik*, n.m., 1. Owner.

2. God (if used alone).

“ *Únche únche daule, dúnge dúnge kyár*

“ *Barse málik músal dhár, usmeñ nipje urd jowár.* ”

High ridges, fields lying low

If God send rain in torrents, *másh* and *jowár* will grow in that land.

मावस, *máwas*, n.f., the last day of dark half of the month—
Commonly corrupted into *máosh* or *maush*.

“ *Jeth máwas purná, je kahín bádál ho*

“ *To kanthá barkhá nahín, chalo des dhúndo.* ”

If there's ever a cloud on 15th or 30th of Jeth

Then, husband, there'll be no rain, go and search for some other country.

(A sign of famine.)

मास, *más*, n.m., 1. Month.

2. Meat.

माघ, *máh*, n.m., the 11th month of the year, January to February.

“*Sau bár báh, baithúngí máh.*”

(Says the carrot) “Plough a hundred times, but I’ll root in Magh.”

माहोठ, *máhoṭh*, n.f., winter rain.

माहं, *mahn̄*, postp. or adv., jointly or jointly with, included in; less often, inside.

मिठान, *miṭhán*, n.m. or n.f., sweetness.

मित्तौ, *mittí*, n.f., interest (on capital).

मित्र, *mitr*, n.m., a friend.

मित्रङ, *mitrang*, n.m., poetical form for *mitr* (q.v.).

“*Khatri putrang, kadí ná mitrang*

“*Jad mitrang, dagá kritrang.*”

The Khatri’s child is never a friend;

When he’s a friend, he’s deceiving you.

मिन्तर, *mintar*, n.m., a guest, a friend.

मिर्ग, *mirg*, n.m., gazelle or antelope (*hiran* or *chakará*).

मिर्धा, *mirdhá*, n.m., chainman—This word was used in old times of the land measurer and is now sometimes applied to a *jaribkash*. Corruption of Persian *mírdeh*.

मिस, *mis*, n.f., pretext, pretence

(used with *kar lená*).

मिस्कोट, *miskot*, n.m., council, confabulation (a term introduced from the army; corrupt from *mess-kot* = mess-house).

मीं, *mín*, n.f., the sign of the zodiac ‘pisces’; *mekh* is aries—*min mekh* is straw-splitting, criticizing, picking holes.

मींह, *mín̄h*, n.m., rain, rainfall, a shower.

मीठी, *miṭhí* (with *lená*), n.f., a kiss—kissing.

मीत, *mít*, n.m., a friend.

“*Ūnche ḍaule khet ke jin ke khet nimán*

“*Us ká bairí kyá kare jis ká mít Díwán.*”

Whose field is low with ridges high,

Whose friend is the Judge,

What can his enemy do?

मुक्त, *mukat*, n.f., release, emancipation, salvation.

मुकद्दम, *mukaddam*, n.m., headman, *lambardár*.

“ *Mír mukaddam chaudhri, patwári aur kab*

“ *Yeh to jáenge nark meñ apne karne sab.*

“ *Mahanñ, maháwat, chaudhri, kánúgo, sardár*

“ *In kí mukat ná howegí, janam leo sau bár.*”

The rich man, headman, *chaudhri*, *patwari* and poet.

These will go to hell, and the rest according to their works.

(Retorts the *patwari*.) The Abbot, the elephant-driver, the *chaudhri*, the *kanungo* and the *sirdar*, theirs will never be salvation though they are born a hundred times.

मुक्खड़ा, *mukhrá*, n.m., mouth, face.

“ *Karwí kachri kach kachí, karwe bole bol*

“ *Ham pardesí log sain, hañs ke mukhrá khol.*”

The immature girl is bitter and speaks harshly.

I'm a stranger, open your mouth with a smile.

(So says the bridegroom to his bride when he first meets her in her father's house.)

मुठभेड़, *muth bher*, n.f., fighting, quarrelling, riot (of a number of persons).

मुन्डान, *mundán*, n.f., antelope, doe.

मुकौ, *murkí*, n.f., very small earrings worn by men only.

मुसल, *musal*, n.m., the wooden pestle with which grain is crushed.

मुसली, *musalí*, n.f., a smaller *musal* (q.v.).

मुसलधार, *musaldhár*, n.m., drenching rain, coming down in straight stream.

मुहार, *muhár*, n.m., see *her muhár*.

मुंडा, *múnda*, adj., hairless, hornless (of cattle).

मुण्डचड़ा, *múndchará*, adj. or n.m., ingrate (lit., one who cuts the root).

मुंदा, *múnda*, adj., turned over, upside down.

मुंदा, *múndná*, v.a., to fill up, stop (of water leakage, etc.).

मुंह का राज, *múnh ká chháj*, n.m., same as *ghúnghat* (q.v.).

मुकान, *múkán*, n.m., mourning (i.e., going to a relation's village to condole).

मुक्खल, *múchhal*, adj., moustachiod.

मुठया, *múthyá*, n.m., the person who feeds the sugar-press with canes.

सूढ, *múḍh*, adj., same as *baithal* (q.v.).

सूरख, *múrákh*, n.m. or f. adj., foolish, fool.

“*Hírú pariá bazár meñ, lákh áweñ lákh jáweñ,*
“*Chátar saudá kar gayá, múrákh phir phir jáweñ.*”

A diamond is lying in the bazar, hundreds of thousands passing by; the wise man has done his shopping and gone while the fools wander round and round.

सूल, *múl*, n.m., 1. Root, used in the barbarous compound *jar-o-múl*, i.e., root and stock.

2. Principal (sum).

“*Pípal káte dhan kare, kanyá bech dhán kháe,*
“*Par nári te neh kare, jar-o-múl te jáe.*”

He who cuts a pipal (*ficus religiosa*) and sells it, or sells his daughter and eats rice, or loves another's wife, they shall perish root and stock.

सूला, *múlá*, n.m., a *ját* converted to Islám.

सूली, *múli*, n.f., a *játni* converted to Islám.

सूलना, *múlná*, adv., not at all.

सूसा, *músá*, n.m., mouse, rat.

“*Ándhe múse, thothe dhán.*”

Blind mice, and hollow rice stalks!

(Said of a fool, i.e., when the Jat goes to the money-lender).

मेढी, *meñdhí*, n.f., plait of a girl's hair on the forehead (they are undone on the day of her wedding); *meñdhí kholná* is to prostitute.

मेख, *mekh*, n.m., Aries, see s.v. *mín*.

मेघ, *megh*, n.m., clouds.

“*Megh jo barse, sambat upje*

“*Khetí kare kasán*

“*Sab dunyá dhañde láe ke*

“*Ap bhale bhagwán*”

If the clouds rain, the year will be a good one

And the farmer will ply his farming.

All the world doing its business.

It is God who is good!

मेटना, *metná*, v.a., to settle (a quarrel).

मेढ, *medh*, n.f., a solid pole erected in the ground and forming the pivot when bullocks are threshing.

- मेस्सान, *messán*, n.m., mixture.
- मेस्सा, *messá*, adj., mixed (bread of mixed grain).
- मेहठ, *mehat*, n.f., meeting, intercourse, visit, *mehat honá* is to meet or visit.
- मैस, *mainś*, n.f., cow-buffalo.
- मैज, *maiĵ*, n.m., flat clod-crusher.
- मैहजद, *maiĥjad*, n.f., a mosque.
- मैह्मां, *maiĥmāñ*, n.f., good reputation.
- मैहवठ, *maiĥwath*, n.f., winter rain = *máhoṭh*.
- मोक्का, *moklá*, adj., loose, spare, superfluous.
- मोख, *mokh*, n.m., a small hole in the roof for smoke to pass ;
(sometimes, as in Panjab *mogh* is also used).
- मोघ्ला, *moghlá*, n.m., a small hole.
- मोटयार, *motyár*, n.f., stiff loam.
- मोडा, *modá*, n.m., 1. A Sadhu.
2. A sect of Sadhus.
- “*Ledá, modá, ghágrá, khulá kesí nár*
“*Biná tilak ke báhman, in pathar ke de már.*”
- A Baniya, a Sadhu, a petticoat, a woman with loose hair, a Brahman without a forehead mark, kill them with stones.
- मोड़ा, *morá*, n.m., still heat.
- मोड़ना, *morná*, v.n. or a., to turn round, to turn back.
- मोत्या, *motyá*, n.m., a kind of grass with a long brittle tap root.
- मोन्या, *monyá*, n.m., hero.
- मोहर, *mohar*, n.f., signet ring.
- मोहण्ड, *mohñd*, n.m., head of a canal or stream, where it takes out from parent stream.
- मौड़, *maur*, n.m., the tinsel crown worn by the bridegroom.
- मौड़ौ, *maurí*, n.f., the tinsel veil worn by the bride.
- मौश, *maush*, n.f., the last day of the dark half of the month.
- मौसा, *mausá*, n.m., husband of mother's sister.
- मौसौ, *mausí*, n.f., mother's sister.
- मौह्रा, *mauhrá*, n.m., the brick front of a masonry house.
- माड़ा, *mará*, n.m., the top level part of the well slope where the bullocks stand to be yoked.

य

यत्न *yatan*, n.m., effort.

“ *Bail basáran chale kanth, búdhe ke mat dekhiyo dant*
 “ *Lákhá liyo lákh yatan kar, lílá láyo karor par*
 “ *Dhaulá píla dáen báwen joṛ kar*
 “ *Je líawe kanthá aisá kaisá to jhúnge le áyo bháwen*
kaisá.”

When you go to buy cattle, my husband, don't look at the old one's teeth. Take a red one, whatever efforts it cost you, and a blue one if it cost a hundred times as great an effort again.

Yoke and try a white or cream one right and left.

If, my man, you bring anything else, do as you please but bring one with horns curved forwards.

र

रंगसिर, *raṅsir*, adj., moderate.

रंडापा, *raṅdápá*, n.m., widowhood, widowed life.

रखवाल, *rakhwál*, n.f., watch, guard.

रचना, *rachná*, v.n., to be made, formed.

रजा कर के *razá kar ke*, adv., hardly, scarcely.

रजाला, *rajálá*, adj., mean, degraded. (The clothed *jogis* are so termed by the naked).

“ *Súí satakan sherá re, gaz kaiñchí rah gayá terá re*
 “ *Das gaz le ke nau gaz detá, ab kaun hawál merá re.*
 “ *Galyán galyán kúktá, sir dhar ke dálá*
 “ *Aise moniye mar gaye, terá chhíñpí kaun rajálá.*
 “ *Kún katarñí báṛá karná, kaun samo tere marne kí*
 “ *Aise aise mard chal gaye, ke gintí tere kúñjre kí.*
 “ *Kar gábhru ke dátí soñdhí, sir múñdá jhálá*
 “ *Aise aise gaṅwar chal gaye, kaun gaḍaryá rajálá.*”

The tailor's wife laments her lord—

“ Oh lion of needling, your yard and scissors alone are left!

“ Ever you took 10 yards of cloth and returned nine.

“ What are my circumstances now ? ”

The greengrocer's widow answers—

“ In lane and alley he used to cry, with his basket on his head. Oh that such braves are dead—what was your mean tailor ?

The shepherd's widow retorts—

“Clipping the fleece, making the fence!

“It was no time for you to die.

“Such splendid men have died. Your greengrocer
doesn't even count.

The *jhíñwar*'s widow replies—

“How well looked the sickle on the lad's back,

“And the basket turned over on his head!

“Such braves have died,

“What was your mean shepherd?”

रड़का, *raṛká*, n.m., a broom (coarse and constructed of twigs,
etc.).

रण, *ran*, n.m., a patch of saline soil in a field (distinction from
shor is that it does not like the latter look white).

रब्ब, *rabbá*, n.m., habit.

रमत, *ramat*, n.f., wandering-pilgrimage (of *sádhús*, etc.).

रमता राम, *ramtá rām*, n.m., a wandering *sádhú*.

रम्ना, *ramná*, v.n., to wander about (especially of a *fakír* or
sádhú).

रयौ, *rayí*, n.f., churn-staff.

रवैया, *ravaiyá*, n.m., custom, way.

रांग, *rāng*, n.m., butter-milk (the *pakkí lassí* of Panjab).

रांगड़, *rānghar*, n.m., Muhammadan Rajput; (rarely and if so
generally contemptuously, of Hindu Rájputs).

“*Sau rāngharāñ kī ek mán.*”

A hundred *Rānghars*, and one mother to all, *i.e.*, they
all back each other up.

रांधा, *rāndhná*, v.a., to boil vegetables, pulses or anything in
water or milk.

“*Biná chináre bānde pág, biná nún ke rāndhe ság*

“*Bina kañṭh ke gáwe rág, pág ná ság ná rág.*”

Bind a turban without care, cook greens without salt,
Sing a song without voice—it's no turban, no greens,
no song.

रांपड़, *rānpaṛ*, n.f., failure of the germinated seed to come up
owing to thin crusts forming on the earth by reason of
heat following slight rain.

राख पोख, *ráchh pochh*, n.m., pl: a collection of the tools or im-
plements of one's trade or profession.

राज, *rāj* (*baiṭhná*), n.m., as *tár* (*baiṭhná*) (q.v.).

राजौ, *ráji*, adj., happy.

राड़, *rár*, n.f., quarrel, fighting.

राना, *ráná*, adj., self-sown, run wild.

राबड़ी, *rábrí*, n.f., food made of fermented *jowár* or *bájrá*.

राम कौ गाय, *rám kí gáye*, n.f., the painted grasshopper (*poecilocera picta*).

राम चौना, *rám chauná*, n.m., a herd of wild cattle bred from animals set free as a vow.

रास, *rás*, n.f., 1. A heap of winnowed grain.

2. Reins, especially rope with which bullocks are driven.

रासा, *rásá*, n.m., quarrel.

रासा, *rástá*, n.m., as *gawñdá* (q.v.).

राह, *ráh*, n.m., way.

“ *Pán saṛe, ghorá aṛe chulhe meñ roṭí jale*

“ *Kaho is ká kyá ráh.*”

Betel leaves are withering, the horse is shying,
The bread is burning in the oven—say what is the
remedy for these?

(Answer—turn them over).

राही, *ráhi*, n.f., same as *batyán* (q.v.).

रौ, *rí*, interj., hark, oh, see.

“ *Motiyá jaṛ thoṭhiyá, dúb tale tal já*

“ *Á rí sásar so raheñ, káhe ká nalá.*”

The *motiya* grass' roots are hollow, the *dub*'s roots
gone right down, Come mother-in-law, sleep on:
what's the good of weeding?

(Bad husbandry).

रौंड, *ríñd*, n.f., need, necessity.

रौत, *rít*, n.f., custom.

“ *Básí kúsí santáñ ne díye, búrá bhát chamaráñ ne*

“ *Aisí rít merí sású mat ná karíye, le dúbegí sáryáñ ne.*”

Giving stale bread to *sadhus*, sugar and cooked rice
to the *Chamars*. Don't follow such a custom,
mother-in-law, you will ruin everything.

रौता, *rítá*, adj., empty.

रुपय्या, *rupayyá*, n.m., a single rupee attached to a string worn
close round the neck by men or boys.

रुख, *rúkh*, n.m., a tree.

[N.S.]

“ *Ag lagi bankhand meñ, dájiá chandán rúkh*
 “ *Ham to dáje pañkh biná, tú kyoñ dájiá hañs.* ”

Fire broke out in the forest, the sandal tree burned.
 Said it, ‘I have no wings and must burn, but why do
 you burn, O goose?’

(For the rest of the story see s.v. *kál*).

रुपा, *rúpá*, n.m., an alloy or base metal from which jewels used
 commonly to be made.

रुसा, *rúsná* or *rúsjáná*, v.n., to be displeased.

रे, *re*, interj., hark, oh.

“ *Kahe binolá sun re motí, kyoñ kartá se chatráí*
 “ *Phúlán meñ sardár phúl, phúlán meñ se roshnáí*
 “ *J te tan ko dhakeñ, láj meri rakheñ log logáí*
 “ *Kahe motí sun re binolá, kyoñ kartá se nář*
 “ *Take ke sawá ser binolá, bhar kuñdá deweñ lár.* ”

Says the cotton seed, “Hark ye, pearl, why do you
 “pride yourself? I’m king among flowers, peerless
 “amongst blossoms. I cover the living body, men
 “and women de me honour.”

Says the pearl, “Hark ye, cotton seed! Why boast
 “yourself? You are sold at 2½ pounds to the
 “rupee. They place a manger full of you (before
 “the cow).”

रेख, *rekh*, n.f., a line, streak.

kájl rekh = painted with antimony: see proverb
 s.v. *bidwá*.

रेङ्ग, *reṅhú*, n.m., a kind of bullock tonga.

रेन, *ren*, n.f., night.

रेपटना, *repaṭná*, v.n., to slip.

रसौ, *resí*, adj., happy. (It is suggested that the word is a cor-
 ruption of *ráz*).

रैबारन, *raibáran*, n.f., feminine of *raibári* (q.v.).

रैबारौ, *raibári*, n.m., camelman (a tribe).

“ *Ját, jamáí. bhánjá, raibári, sunár*
 “ *Kabhí ná howeñge apne, salúk karo sau bár.* ”

The Jat, a son-in-law, a sister’s son, a *raibari* and a
 goldsmith. These will never be your friends though
 you treat them ever so well.

रोकड़ा, *rokrá*, n.m., cash.

रोखाला, *rokhálá*, n.m., crop-watcher.

रोग, *rog*, n.m., sickness.

“ *Kuñwár karelá chet guř sáwan ság ná khá*
 “ *Kaurí kharch giráh kí rog bisáwan já.* ”

Don't eat *karela* (a sort of vegetable) in *Asauj*, or molasses in *Chet*, or greens in *Sawan*.

It's spending a *cowrie* from your purse and buying sickness, if you do.

रोज, *roj*, n.m., the *nílgáe*, antelope.

रोटीहार, *rotihár*, n.f., bread-carrier, carrying bread to the field.

“*Sáwan paihlí pañchwín, je dharúke bál*

“*Tú kañthá hal jorío, main terí rotihár.*”

If it thunders on the dark 5th of *Sawan*

Do you, my husband, yoke the plough : I'll bear your food to the fields.

रोठयां का वकत, *rotýán ká waqt*, n.m., evening meal time, the same time as *dívá bale*.

रोली, *rolí*, n.f., rust on wheat.

रोलना, *rolná*, v a., to smooth, to sift (by rubbing with the hands).

रोस, *ros*, n.m., displeasure, anger.

रोस्ली, *roslí*, n.f., loam.

रौंज, *raunjh*, n.m., a tree, same as *nímbar* (*acacia leucophlœa*).

ल

लंघन, *langhan*, n.m., fasting.

“*Hansá to motí chuge, ná langhan hí kar jáe*

“*Máni paráni prít se, kañkar chug chug kháe.*”

The goose eats pearls or else goes hungry.

But out of old admitted friendship, he picks at limestone nodules.

(The goose who lived on pearls was friend of a weaver bird. In his devotion he followed the bird to distant lands where he could get only kankar to eat).

लखाना, *lakhána*, v.n., to look at, gaze, stare.

लखीना, *lakhína*, n.m., one who owns lakhs.

“*Chíná lahú píná, bald mare pachás sáth ká, manas mare lakhína.*”

China drinks blood—a bullock worth 50 or 60 Rs. dies, and a man worth a lakh.

(*China* is said to be a most difficult grain to grow).

लखपती, *lakhpatí*, adj., worth 1,00,000 rupees, so very rich.

लक्ष्मी, *lakshmi*, n.f., wealth (literally the goddess thereof).

- लग्नात, *lagmát*, n.m., relationship.
- लठौरा, *lathaurá*, adj., blooming.
- लडबौला, *ladbaulá*, adj., half mad.
- लड़, *lar*, n.m., a twist or strand, s.v. *dolar*, *tilar*, double and triple, respectively; used of rope, etc.
- लडा. *ladhá*, n.m., a cart without side wattles.
- लत्ता नचोड़. *laitá nachor*, n.m., light rain—enough to make you wring your clothes.
- लप्सी. *lapsí*, n.f., 1. A preparation of *gur* mixed with bread.
2. Also used for *dhandhoí* (q.v.).
- लबाड़. *labár*, n.m., liar, exaggerator.
- लड्डीक, *labdhínk*, n.m., a kind of stork.
- लम्गा. *lamṅá*, adj., long-legged.
- ललकानी, *lalkárná*, v.a., to bawl, to cry out.
- लवे. *lawe*, adv., near, close.
- लस्सी, *lassí*, n.f., milk mixed with water.
- लहौड़ा. *lahaurá*, adj., younger, junior (of two wives, sons, branches of the family, etc.).
- लाली. *láo*, n.f., well-rope.
- लांगा. *lángá*, n.m., as *lán* (q.v.).
- लाखा. *lákhá*, adj., scarlet.
- लाग. *lág*, n.f., 1. Connection.
2. Enmity.
- लाज. *láj*, n.f., honor.
“ *Bhauñ bin anáj nahíñ, kul bin láj nahíñ.*”
Sans land, no grain.
Sans family, no honour.
- लाड़ा. *lárá*, adj. (1) gluttonous, well-living; (2) of soil which used to receive irrigation and now not doing so is hard, thirsty.
- लादुड़ा. *ládurá*, n.m., small bundle of fodder, such as a boy can carry.
- लान. *lán*, n.m., 1. Cooked vegetables or lentils.
2. Grain given to the menials at the Spring harvest.
- लाना. *láná*, v.a., to lay or place (Urdu *lagáná*).
- लान्डा. *láñdá*, adj., tail-cropped or docked.
- लाम्नी. *lámni*, n.f., reaping, harvesting.
- लाम्ने. *lámne*, adv., near, close.
- लार देना. *lár dená*, v.a., to put.

लाला, *lálá* or sometimes *lál*, n.m., a term of endearment for a child.

“*Sáth din ká tale bachhiyá aur baras din ká úpar*
“*Áth paihr ká lálá húi, khele chhate úpar.*”

A sixty days' child below, and a yearling above.
A day-old child playing on the top.

Answer—rice (which ripens in 60 days) cooked in milk (the cow giving milk for a year) with *ghi* (which takes a day to make) floating on the top.

लालड़ा, *lálrá*, adj., as *lárá* (q.v.).

लालड़ा, *lálri*, n.f., garnet, so reddest of the red.

“*Soná royá dhái de, uttam merí ját*
“*Kále mukhí chirmhí, tule mere sáth*
“*Lálon meñ main lálri, lál merí rañg*
“*Kálá múñh jab te huá, tulí n'ch ke sañg.*”

The gold cried wailing, “High my caste, but I'm weighed against a black-faced *rattí*” (liquorice seed). (Says the seed).

“I'm reddest among the red, red my colour is,
“My face was blackened by being weighed against an inferior!”

लावनी, *lawní*, n.f., same as *lámni* (q.v.).

लासी, *lassí*, n.f., as *lassí* (q.v.).

लाका *láhná*, v.a., to take off; to clear off (debt).

लिकड़ना *likarñá*, v.n., to come out (Urdu *nikalñá*).

लिप्टी, *liptí*, n.m., an Extra Assistant Commissioner (corruption of Deputy).

लोक, *lik*, n.f., A set of earthen vessels supplied at marriage occasions by *kumhárs*.

2. Cart track, rut.

“*Líke l k gádí chale aur líke chale kapút*
“*Tinoñ líke ná chalen, súr, siñgh, sapút.*”

The cart travels in the beaten rut, and so does the ne'er do weel son: three things travel not on the track, hero, lion, and dutiful son.

लौका, *l'ká*, s.f., as *lík* (q.v.).

लौरम लौर, *liram l'ir*, adv. torn into pieces, in shreds.

लौरा, *l'rá*, n.m., torn cloth.

लुका *lukná*, v.a., to hide, conceal.

लुकाँ *lukmáñ*, adv., privately, secretly.

लुग *lua*, postp., up to.

लुगड़ी, *lugr'í*, n.f., a girl's head covering.

[N.S.]

लुचा, *luchá*, adj., an evil-doer (particularly in his sexual relations).

लुहा, *lulhá*, adj., lame.

लुंग, *lúng*, n.m., foliage or twigs of the *kíkar*, *jáñd* or *raunj* trees.

लुखा, *lúkhá*, adj. dry, unseasoned (of food).

“ *Dekh parái chōprí kyoñ tarsáwe jí*

“ *Lúkhí súkhí kháe ke, thañdá páni pí.*”

Why vex your soul to see another's buttered bread ?

Eat dry bread, and drink cold water !

लुगाई, *lúgái*, n.f., woman; the feminine form of *log* (q.v.).

लेट, *leṭ*, n.f., a small pond in the fields.

लेडा, *ledá*, n.m., a *banyá* (quaere from *lálá*?).

लैडा, *laiñdá*, n.m., same as *chauná* (q.v.) but used when most or all of the animals are buffaloes.

लैह्वर, *laihbar*, n.m. or f., a messenger or guide (corruption of *ráhbar*).

लैह्वरी, *laihbri*, n.f., the duty of a *laihbar* (q.v.).

लैह्रे, *laihre*, n.m. (with *karná*) same as *gaihre* (q.v.).

लोग, *log*, n.m., pl., men in contrast to *lúgái* (q.v.).

लोड़, *loṛ*, n.f., need, necessity.

लोबां, *lobáñ*, n.f., a fox.

लोभ, *lobh*, n.m., avarice.

लौड़, *launḡ*, n.m., intercalary month in the *Bikramájít* calendar.

व

वार, *wár*, 1. Turn (on a roster).

2. n.f., Delay, lateness.

वास्ता, *wástá*, n.m., concern, trace or particle : see *wástá ná*.

वास्ता ना, *wástá ná*, adv., not at all.

विद्या, *vidyá*, n.f., knowledge.

श

शाह, *sháh*, n.m., a banker, moneylender.

“ *Banyá hákim, Báhman sháh, Ját piyádá, ḡhazab Khudá.*”

The Baniya a judge, the Brahman a moneylender, the Jat a process server ! The wrath of God.

शिवौज, *shiauḡ*, n.m., any wild bird or animal which damages crops.

शिमालू, *shimálú*, n.m., a shrub (*vitex negundo*) supposed to do well in villages with a masculine name but not in those with a feminine name; used in fomentations.

शिंह, *shính*, n.m., lion.

शूद्र, *shúdar*, n.m., a menial (strictly a *Sudrá*).

“ *Bairí, shúdar, bákrá, jatí aur bidhwá nár*

“ *Yeh páñchoñ mare bhale, chauṛe karen bigár.*”

An enemy, a menial, a goat, a celibate, and a widow. These five are better dead, wide the mischief they do.

स

संग, *saṅg*, n.m., company.

सङ्घा, *saṅghná*, adj., dense

संत, *sañt*, n.m., ascetic, saint.

संतर, *sañtar*, n.m., 1. A path beside a canal *paṛí* or a common pakka road.

2. Piece of land around any platform.

संतल, *sañtal*, n.m., as *sañtar* (q.v.).

संदेश, *sañdes*, n.m., a message.

संदेह, *sañdeh*, n.m., anxiety.

सकाली, *sakálee*, s.f., dawn, early morning, adv., *sakálee* at dawn.

सक्ड़ा, *sakṛá*, adj., tight, narrow.

सगा, *sagá*, n.m., a friend.

सग्ला, *saglá*, adj., all, entire.

सज्जन, *sajjan*, adj. or n.m., a friend, a well-wisher, wise.

सझला, *sajhlá* adj., joint.

सठकन, *satakan*, n.f., act of sewing (quaere from *tánkná*?).

सत, *sat*, n.m., righteousness.

सतुदा, *satuddá*, adj., soft.

सदा, *sadá*, adv., always.

सनौशर, *saníshchar*, n.m., Saturday (a form used by more literate persons).

सन्तोख, *santokh*, n.m., patience, contentment.

सन्सर, *sansar*, adj., thousand.

सपूत, *sapút*, n.m., a worthy son.

सपूता, *sapútá*, adj., having a worthy son.

[N.S.]

“ *Ek áñkh ká kyá salaukhá, ek sau ká kyá jamá*“ *Ek pút ká kyá sapútá—*”

How can the one-eyed be sharp-sighted? What is a capital of a hundred rupees? How can one have a worthy child, if there be but one?

(i.e., it's no good having but one son even if he is good.)

सवादली, *sabádlí*, adj., cloudy.

“ *Parwá chale sabádlí, pachhwá chale narol*“ *Sáhdev kahe Bhádlí barkhá gayí kit or.*”

If the east wind blow cloudy and the west wind blow clear, says Sahdeo, “ Eh Bhadli, where has the rain gone off? ”

सब्बा. *sabbá*, adj., right (as opposed to left).

सभा, *sabhá*, n.f., society.

सभाओ, *sabháo*, n.m., temper, nature.

“ *Man motí aur dúdh ká ek sabháó*“ *Páte píchhe ná mileñ lákh karo upáo.*”

A heart, a pearl, and milk have the same nature.

They ll never mend, once broken, though one tries a hundred remedies.

समर्ना, *samarná*, v.n., to be mended, repaired; *bál samarná*, to be shaved or be cut (of hair).

समर्नाना. *samarwáná*, v.a., to get repaired, or mended.

समा, *samá*, n.m., season, more especially a season of good crops.

समान, *samán*, adj., postp., alike, like.

समाना, *samáná*, v.a., to be held, contained in.

“ *Chauthe chamke bijlí, páñchweñ barse meñh*“ *Sáhdev kahe Bhádlí, naddiyon nír ná samá.*”

If it lightens on the fourth and rains on the fifth.

Says Shadeo, “ Hark Bhadli, the stream won't hold the water.

समाना, *samáná*, n.m., area, lands of a village.

Hamáre samáne meñ kuchh nahín upje = ‘nothing grows in our lands.’

समर्ना. *samárná*, v.a., to repair, mend; *bál samárná* to shave, or cut the hair.

समेप, *samep*, postp., near.

“ *Nirp, bel, bidyá, tiriá, yeh ná gineñ gun zát*“ *Jo samep inke rahe, usí ke lipte háth.*”

The Raja, the creeper, knowledge, and woman—these heed not virtue or caste. Whatever dwells near them they embrace it!

समो, *samo*, n.m., time (the form is probably *áh'rwáti*).

सम्बन्ध, *samdan*, n.f., the relation of two women whose children are married to each other.

सम्बन्धी, *samdí*, n.m., the relation of two men whose children are married to each other.

सम्बन्धन, *sambandhan*, n.f., as *samdan* (q.v.).

“ *Do bálak bin jív, bánjh un kí mátá rí*

“ *Un ká kar diyá biáh, be húí kaun bechári*

“ *Bin Pañdit bedí rachí, pañch suná ná kán*

“ *Bhain bhain sambandhan húín, koí chátar kariyo giyán.*”

Two lifeless children, barren their mothers;

See they've married them! What an unnatural thing to think of!

They've spread the altar without a pandit, the old men never heard of such a thing!

Sisters have married their children to each other, let some wise man think it out!

(Answer. Two children playing with their dolls.)

सम्बत, *sambat*, n.m., 1. Year.

2. A season, especially a good one.

सरौर, *sarír*, n.m., body.

“ *Mathá dhorí, thoṭh nar, kúeñ khárá nír*

“ *Aur ghar kálhári kámní, cháron dáheñ sarír.*”

Slow bullocks, a fool of a man, a salt-water well, and at home a shrew for wife—the four burn the body.

सर्क, *sark*, n.f., scraping, scratching of a pen.

“ *Ghore kí pharak, dúdh kí jharak, qalm kí sark.*”

The capering of the horse, the simmering of milk, the scraping of a pen.

(The fortunate man's inheritance.)

सर्काना, *sarkáwná*, v.a., to move.

सर्ता, *sartá*, n.m., a head of *jowár*.

सर्हक, *sarṛak*, n.f., high road.

सर्ना, *sarná*, v.n., to be sufficient, e.g., *manne sar gayá* = I have had enough.

सर्प, *sarp*, n.m., snake.

“ *Báweñ bhalá ná dáhne lálá, sarp, sunár*

“ *Kadí ná hoñge apne sau sau karo piyár.*”

It's not good (to meet) the Baniya, a snake or a goldsmith left or right. They'll never be your friends though you try a hundred endearments.

सर्वर, *sarwar*, n.m., pond, tank, lake.

“*Hansá to sarwár behá. kágá behá dewán*
“*Já píñde ghar apne, shính kis ká jajmán.*”

The goose has gone to [*lit. become*] the lake, and the crow become minister.

Away, pandit, to your home! Whose client is the lion?
(A goose once introduced a pandit to a lion, to be his *parohit*, and the lion gave him alms. Next time the pandit asked for alms the goose his patron had gone and a crow succeeded him, and the lion refused him. Hence the pandit uttered this lament. The moral is, that an officer's reputation depends upon the character of his staff.)

सर्साई, *sarsái*, n.f., 1. Greenness, fertility.
2. Abundance, plenty.

सलौखा, *salaukhá*, adj., full-eyed, sharp-sighted.

सख्खंतौ, *salwantí*, adj., f., good, thrifty woman.

सवालौ, *sawáli*, n.f., sweet biscuits made of flour, *ghí* and sugar.

सहंसर *sahañsar*, adj., thousand (a corruption of Sanskrit *sahasrá*).

सहार्ना, *sahárná*, v.a., to pull, draw.

सहज *sahj*, adj., easy, leisurely, slowly.

सांकल, *sáñkal*, n.f., a chain to secure doors of a house.

सांगर *sáñgar*, n.m., fruit of *jánd* (*prosopis spicigerá*).

सांभ, *sáñjh*, n.f., evening.

सांटा, *sáñtá*, n.m., whip, goad.

सांथ्रौ, *sáñthrí*, n.f., as much fodder as a man can hold in his arms—an armful.

सांथल, *sáñthal*, n.f., thigh.

सांपड़ना, *sáñparná*, v.n., to come to an end, to be exhausted.

साक *sák*, n.m., relationship by marriage.

साख *sákh*, n.f., crop, harvest.

साङ *sáñg*, n.m., good circumstances, prosperity.

साभा, *sájhá*, n.m., share.

साभा, *sájhí*, n.m., sharer.

“*Thoká p'tí, tuk tukí, ghoré bañdhe báhar,*
“*Báhman sájhí mat karen, khetí bádhé sár.*”

The carpenter, the goldsmith, and the potter (*lit. he who binds a horse at the door*) and the Brahman. Make them not sharers in cultivation: be content to take rent on the cultivation,

[i.e., these castes make bad cultivators and it is better to take a fixed cash rent from them than to divide the produce (of which there will be little).]

साढी. *sáthí*, n.m., red rice (ripening in 60 days, hence the name).

“*Sáthí pake sáth din, pání mánge rát din.*”

Red rice ripens in 60 days, but needs water night and day.

साड. *sád*, n.m., the 4th month of the year, June to July.

साइसती. *sársatí*, n.f., a corruption of *sáre satí*, a period of 7½ years occupied by the revolutions of Saturn—hence: misfortune, calamity.

“*Mat dekhyo bhúre ke dañt, sársatí chhá jáegi kañth*

“*Lákhá le le lákh par nílá nau karor, múndá dhaulá jib líyo pahle líyo jor.*”

Look not at the dun's teeth, misfortune will overshadow you, husband. Buy a red bullock for a hundred thousand, or a blue for nine hundred times that: don't buy a hornless or white one without yoking it first.

साढ. *sádh*, n.f., a Hindu month, as *sád* (q.v.).

“*Sádh Sáwan chale parwá, dal dal kháwen bíj lugáí.*”

If east wind blow in *Hár* and *Sáwan*, the women folk will grind and eat seeds.

(A sign of famine.)

साढू. *sádhú*, n.m., 1. Wife's sister's husband.

2. The spring harvest.

सानें. *sáten*, n.f., the 7th day of either half of the month

सानौ. *sání*, n.f., chopped fodder of *bájrá*, *jowár*, cane, etc.

“*Áwegí jot, kátiye sání*

“*Jab tú ne bo diyá inkh merí ná mání.*”

In comes the yoke—cut fodder: for you sowed cane and bode not my word.

(The wife girds at her husband: he sowed cane against her advice: there'll be extra feeding of the cattle who have extra work at the press.)

सामन. *sáman*, n.f., as *sáwan* (q.v.)

“*Sáman lagtí satwín, garje ádhí rát*

“*Ham to jáenge pí Málwe tum jáyo Gujrát.*”

If it thunder at midnight on the seventh of the second half of *Sawan*, I'll go, my husband, to *Malwá* and do you go to *Gujrát*.

(A sign of impending famine.)

साम्ठा. *sámthá*, adj., fine, strong, handsome.

साभर्ना, *sámbharná*, v.a., to clear or tidy up, collect things together.

सार, *sár*, n.f., way, method, correct management.

सार्ना, *sárná*, v.a., to be satisfied with—the thing that gives satisfaction is the object of the verb.

साल *sál*, n.m., 1. A jackal.
2. A verandáh.

“*Rát ne bole ká:plá, din ne bole sál*

“*Chhor kañthá is des ne, koí jí ne áwe jañjál.*”

If the crow call by night and the jackal by day,
My husband, leave this country: some trouble will
befall us.

सालत. *sálút*, n.m., wife's brother's son.

साल पलट, *sál palat*, adj., rotation of crops; cultivating alternately wet or dry—same as *hirtí phirtí* (q.v.).

साल्हे *sálhe*, n.f., wife's brother's wife.

सावन, *sáwan*, n.m., the 5th month of the year July to August.

“*Sáwan bhádwe kí dhúp meñ, jogí ban jáe Ját.*”

In the heat of Sawan and Bhadon, the Jat turns jogi;
i.e., he goes about with next to nothing on.

सावनू, *sáwnú*, n.f., the autumn harvest.

सास, *sás*, n.f., mother-in-law.

सासू, *sású*, n.f., as *sás* (q.v.).

सास्रा, *sásrá*, n.m., father-in-law's home (of a woman).

साहिब, *sáhib*, n.m., God.

सिखर, *sikhar*, n.m., height, summit, apex, zenith.

सिखरत, *sikhrañt*, n.m., top-most part, apex.

सिंखया, *sinkhyá*, n.f., suspicion.

सिंगाहः, *siñgáhá*, n.m., footpath or track between villages.

सिटक, *siṭak*, n.f., a drop of water.

सिटक जाना, *siṭak jáná*, v.n., to run away—to go away quickly.

सिटको, *siṭko*, n.f., swift-flowing canal.

सिमल, *simal*, n.f., the pegs in the yoke, each side of the bullock's head.

सिर्शम, *sirsham*, n.f., *sarson*, *sarsaf*, rape-seed (*brassica campestris*).

सिल, *sil*, n.f., stone slab on which the well-bucket is emptied.

सिंगल, *siñgal*, adj., with horns, horned.

सौख, *síkh*, n.f., wisdom, advice, teaching.

“*S'ikh us ne d'j'e, jis ne s'ikh suhá.*

“*Bándar ne ke s'ikh d'j'ie, bayyá ká ghar já.*”

Teach him who cares for teaching.

Why teach the ape? the weaver-bird's house will be destroyed.

(Once in the rains a monkey took shelter under a tree; a weaver-bird who had her nest there advised the monkey to build one like it. The latter thereupon destroyed the nest to make the bird's condition like his own).

सौखदड़, *sikhdar*, adj., learning, under training.

सौत. *sít*, n.f., same as *ráng* (q.v.).

सौन्या, *sinyá*, n.m., tailor.

“*Biná tilak ke páñdiyá, biná purkh ke nár*

“*Báen bhalá ná dáen, sinyá, sarp, sunár.*”

A pandit with no forehead mark, a woman without her man, or a tailor, a snake, or a goldsmith—these are ill, (whether they pass you) to left or right.

सौम, *sím*, n.f., boundary.

“*Gám gañwár, sañsar budh, sím uláke páñch*

“*Jub áwe darbár meñ, miyán kahe so sánch.*”

In his village the yokel is a thousand wits, when he crosses the border he's five. When he gets to the court its ‘Oh yes, Sir, it just as you say, Sir.’”

सौर. *sír*, n.m., 1. Share.

2. Sharer.

सौल *síl*, adj., cold.

“*Káká ji, bhayá ji, Dilpat Ráe buláweñ señ*

“*Tát ghar te áye señ, s' l ghar ne jáweñ señ*

“*Milná ho to milo, Sámbhar ká sañg máhñ señ.*”

Uncle, brother, Dilpat Rai is calling you.

He comes from the hot house and is going to the cold! If you'd meet him, meet him now; company from Sámbhar is with him too.

(The good wife sends a child to call the family to dinner. Dilpat Rai is the lentils [*dál*], which are taken out of the oven and put in the plate. Company from Sámbhar is, of course, salt.)

सौलक, *silak*, n.f., cold.

सौला, *sílá*, adj., cold.

सौस, *sís*, n.m., 1. Moon.

2. Head.

“*Bars húá das, kányán pariá ras.*

“*Bars húá bis, mastak chariá sís.*

[N.S.]

“ *Bars húá tís, lágan lági síkh.*“ *Bars húá cháli, gárhí bát ukári.*“ *Bars húá pachás, phúl gaí kapás.*“ *Bars húá sáth, háth men liyá láth.*“ *Bars húá sattar, jabbe gayá nestar.*“ *Bars húá assí, nar húá khassí.*“ *Bars húá nawe, dáb gayá jabbe.*“ *Bars húá sau, gharán dar ná báhar bhau.”*

Ten years old, and discrimination comes to the ear.
 Twenty years old, and the forehead rises on the head.
 Thirty years old, and wisdom begins to settle.
 Forty years old, and a man expounds hard matters.
 Fifty years old, and his hair grows white as cotton.
 Sixty years old, and he takes a sick in his hand.
 Seventy years old, and he's become sluggish.
 Eighty years old, and a man's become an eunuch.
 Ninety years old, and he's done and down.
 A hundred years old, and none fears him at home or
 abroad.

(The ten ages of man.)

सुकड़ना, *sukarná*, v.n., 1. To shrink.

2. To be squeezed.

सुकर, *sukkar*, n.m., Friday.सुकवारौ, *sukkarwári*, adj., Friday's.“ *Sukkarwári bádlí, rahe san'chhar chháe*“ *Kahe Sháhdeo sun Bhádli, biná bars? ná jáe.”*

Friday's clouds, and Saturday remains overcast!
 Says Shahdeo, “Hark Bhadli, it'll not go without
 raining.”

सुखबासौ, *sukhbási*, n.m. and f., a settler in the village, who owns
 no land or share of the estate.

सुघड़, *sughar*, adj., neat, pretty, accomplished, good, thrifty
 (of a wife).

“ *Soná, resham, sughar nár, túten juren sau bár*“ *Múrah, ghará kumhír ká, mile ná dúje bár.”*

Gold, silk, and a thrifty wife—if they break a hundred
 times they'll mend again. A fool, and a potter's
 pot will not unite a second time.

सुता, *sutá*, adj., good.सुथन *suthan*, n.f., female's trousers.सुथ्रा, *suthrá*, adj., nice, clean, pretty, fine.

सुधां, *sudhán*, postp., 1. With, used as Urdu *samet*.
 adv., 2. Early.

सुफेत, *sufet*, adj., a corruption of *sufed*—white.

सुरज. *suraj*, n.m. and f., sun.

सुरी, *surí*, n.f., sow.

सुस्रा, *susrá*, n.m., father-in-law.

सुस्राड़, *susrár*, n.m., father-in-law's home (of a man).

सुहाना, *suhána*, v.n., to please, be agreeable.

सुखा, *súá*, adj., 1. Intelligent, wise, sensible.

n.m., 2. A small stack of sheaves in a field.

सुंडी, *súndí*, n.f., an insect that infests and damages gram.

सुत, *sút*, adj., pretty, good, convenient, e.g. *sút báith gayá* = it was convenient so.

सुधा, *súdhá*, adj., simple, upright, well-behaved.

सुना, *súná*, adj., empty.

“*Sís bin súní ren, giyán bin hirdá súná*

“*Kul súná bin putr, pát bin birwá súná*

“*Gaj súná bin dañt, hañs bin ságar súná*

“*Ghatá súní bin dární, kahe Girdhar sunre Gunní,*

“*Ghar súná bin kámní.*”

The night is empty without a moon, and the heart empty without perception. A family is empty without a son, and empty a tree without leaves. An elephant is empty without tusks, and empty a lake without the goose. Empty a cloud without lightning; says Girdhar, “Hark 'ee Gunní, a house is empty without a wife.”

सुर. *súr*, n.m., hero.

सुल. *súl*, n.f., long thorn of *kíkar* or *raunj* trees.

सुसा. *súsá*, n.m., hare.

“*Turte súsá máryá, turte kádhyá más*

“*Jinán súsá máryá, mare hoe chhe más.*”

Quickly he killed the hare, and quickly took off the flesh. He who killed the hare was six months dead himself.

(A hare got caught in the bones of a corpse and so died.)

सेती, *setí*, postp., with.

“*Bále kí mán baulí aur baulá kisan*

“*Age kí jáneñ náhín, karne setí dhiyán.*”

The child's mother is a fool, and so is the farmer.

They reckon nothing of the future; their thoughts are with the act of the moment.

सेध, *sedh*, n.f., disease, illness.

सेल, *sel*, n.f., spear.

सेहम *saihm*, adv., uselessly, aimlessly.

सोचासाई, *soásái*, n.f., keeping guard at night.

सोका *soká*, n.m., drought, drying up.

“*Karm hín khetí kare, bail mare yá soká pare.*”

If the luckless man take to farming, his bullock will die or drought befall him.

सोग *sog*, n.m., mourning.

सोणन, *sonan*, n.m. (inflected); gold, it is a *Púrabí* form for *sone meñ* or *sone ko*.

सोधो, *sodhí*, n.f., intelligence, sense, wisdom.

सोफेत, *sofet*, adj., as *sufet* (q.v.).

“*Káli bhalí ná sofet, donoñ rákho eke khet.*”

Neither the black is good nor the white one—slay both in one field.

(From a story of Rajah Bhoj and his two wives.)

सोमार, *somár*, n.m., Monday.

सोल्हा, *solhrá*, n.m., straw of barley (chiefly) when in bulk and not crushed.

सोहाग, *sohág*, n.m., married life.

“*Chalná hai, raihná náhín, chalná biswe bis*

“*Aise saihj sohág par kyon gundáwe sí.*”

We have to go, and cannot stay—we have to go—four rood to the acre—

For so short a married life, why plait the head?

(Make no great preparation for a short life—Live quietly and piously.)

सोहागा, *sohágá*, n.m., a flat clod-crusher, same as *maij* (q.v.).

सोहावना, *soháwná*, adj., agreeable.

सोही, *sohín*, adv. or postp., in front of—towards.

सोहं, *sohñ*, n.f., an oath.

सोड़, *saur*, n.m., quilt.

सौन, *saun*, n.m., omen. *Saun chirí*, one of the shrikes.

सोपत्तौ, *saupatí*, adj., worth 100 rupees.

सौला, *saulá*, adj., right (as opposed to left).

स्यान, *syán*, n.m., a favour (corruption of *ahsán*).

स्यल, *syál*, n.m., cold.

स्वर्ग, *swarg*, n.m., heaven.

“*Gehún puráne, ghi nayá, aur ghar salwantí nár*

“*Chauthe píth toraᅅg kí, swarg nishání chár.*”

Old wheat, fresh ghi, and at home a thrifty wife,

Fourth the back of a horse—heaven's four signs.

ह

हंगा, *haṅgá*, n.m., strength, effort, force.

हंगे, *haṅge*, adv., 1. With difficulty.

2. By compulsion.

हंडौवार, *haṅd'wár*, n.f., about 4 to 6 P.M.

हजार पत्तौ *hazár patí*, adj., worth 1,000 rupees, moderately rich.

हडवारा, *hadwára*, n.m., place where dead bodies of cattle are skinned and bones left to lie.

हड़ लेना, *haṛ lená*, v.a., to rob.

हतकार, *hatkár*, n.m., food given to Brahmans before feeding oneself at *máwas* (q.v.) or *kanágat* (q.v.)

हथा, *hathá*, n.m., the handle with which the plough is driven.

हथलौ, *hathlí*, n.f., the handle of a *charkhá* or spinning wheel.

हथ्वाड़, *hathwár*, n.f., the spring of the tiger with his claws.

“*Bhádoñ kí bhadwár, sher kí hathwár.*”

Bhadon's ploughing, and a tiger's spring!

(Scilicet *biná pake ná jáe*—both will ripen or mature; *pakná* means to fester, of a wound.)

हन्सला, *hanslá*, n.m., a massive necklace worn close round the neck.

हम्बे, *hambe*, interj., yes.

“*Ját kahe sun Játñí isí gám meñ raihná*

“*Ūñt bilái le gayí, to hambe hambe kaihná.*”

Says the Jat, “List, wife, we've got to live in this vilage. (If they say) ‘the cat stole your camel’ you must say, ‘Yes, of course.’”

(So says the Jat who has to live in a Rajput village.)

हर, *har*, n.m., Almighty (a name of Vishnu): cf. Harí.

हल, *hal*, n.m., the body of the plough to which the share, handle, shaft, etc., are fixed.

हलस, *halas*, n.f., the main shaft of the plough on which the yoke rides.

हल्वा, *halwá*, adj., light (of soil or weight).

हलसन, *halsan*, n.f., a prop to raise the share from the ground when a plough is being dragged to the fields.

हवाल, *hawál*, n.m., condition, circumstances (corruption of *Ahwál*).

हांड, *hánd*, n.f., travelling.

हांडी, *hándí*, n.f., cooking vessel.

“*Jis hándí te kháe, us hándí chhed kare.*”

Split the plate from which you eat!
(Rank ingratitude.)

हांडना, *hándná*, v.n., to wander about.

हांस, *hánsí*, n.f., laughter.

हाट *hát*, n.f., shop.

हान, *hán*, n.f., 1. Time.

2. Age.

Ek hán ká = hání (q.v.).

हानी, *hání*, n.m., contemporary, age-fellow.

हान होमान *hán homán*, n.m., of equal ages, contemporaries.

हारा, *hára*, n.m., oven for heating milk, etc.

हाल, *hál*, n.f., same as *halas* (q.v.).

हालन *halan*, n.m., earthquake.

हाला, *hálá*, n.m., Government land-revenue.

“*Dhaulí parmeshrí, dhaulí jhund khiñdá*

“*Hálá malbá lálh ke, mainne háns ghará.*”

“O white goddess, spread open the white cotton-clump.

“Pay the revenue and the village-expenses, and make me a necklace still.”

(The girl addresses the cotton-plant as she is picking the crop.)

हाली, *hálí*, n.m., ploughman.

हालना, *hálná*, v.n., as Urdu *hálná*, to shake, move, be agitated.

हित, *hit*, n.m., love.

हितौ फिरती, *hirtí phirtí*, adv., in rotation.

हिर्दा, *hirdá*, n.m., heart, mind.

हिस्सा सारु, *hissá sárú*, adv., according to shares, proportionately.

होंस *h óns*, n.m., a thorny shrub (quaere *capparis horrida*?).

हीना, *híná*, adj., bereft, destitute, weak.

हीयो, *híyo*, interj., a noise used to call cows and bullocks up from watering.

हीर, *hír*, n.m., a tribe, *Ahír*.

हुं हुं, *huñ huñ*, interj., a noise used in driving buffaloes in the jungle.

हेठी, *hetí*, n.f., disgrace.

हेता, *hetá*, adj., late (of crops).

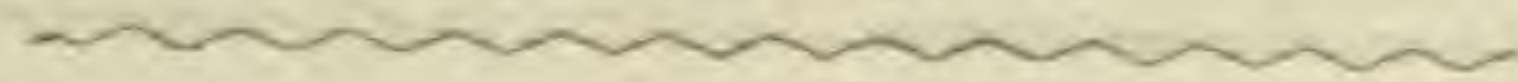
हेर, *her* n.m., major subdivision of a village.

हेर मुहार, *her muhár*, n.m., land or side of a village in which one's business, one's coming or going, lies—intercourse.

हेल मेल, *hel mel*, n.m., as *her muhár* (q.v.).

हो हो, *ho ho*, interj., a noise used to make buffaloes drink.

हौस्ला, *hauslá*, n.m., wisdom, grace, beauty.



PART III.

ENGLISH—JAṬŪ.

A

- Abdomen, *kokhan*, n.f.
 Abhorrence, *alkat*, n.f.
 Abiding, *bás*, n.m.; maintenance of a home, *basebá*, n.m.
 Abode, *bás*, n.m.
 Absence of anything, so poverty, destitution, etc., *ana't*, n.f.
 See sub voce.
 Absolutely, *dáhoñ*, adv.
 Abundance, *sarsáí*, n.f.
 Abuse, *auli bát*, n.f.; *gál*, n.f.
 Acacia (a. leucophlœa), *nímbar*, n.m.; *rauñjh*, n.m.
 Acceptable, to be, *bháná*, v.n.
 Accomplished (skilful), *sughar*, adj.
 Account. The baniya's account against the zamindar, of money paid for him as revenue, etc. *Iñchh*, n.f.; on account of, *káran*, postp.
 Adjoin, to, *arná*, v.n.
 Admit, to, of a fault, etc., *oṭná*, v.a.
 Adopt, to, *god lená*, v.a.
 Adopted, to be, *god áná*, v.n.
 Adoption, (1) of a relation, as a son, *god*, n.m., literally the lap; (2) for adoption of a foundling, *see s.v. waif.*
 Advice, *síkh*, n.f.
 Aeschynomene (a. indica), *ḍhañḍhain*, n.f.
 Affection. *See Love.*
 Affix, to, *ṭekná*, v.a.; *mohar ṭekná*, to seal.
 Afforded, to be, *pugná*, v.n.
 After, *páchhe*, adv.
 Age, (1) *hán*, n.f.; (2) of the same age, *ek hán ká*, *hání*, n.m.; *hán homán*, n.m.; (3) time, *kál*, n.m.; (4) old age, *barhápá*, n.m.
 Agent, *kár mukḥtyár*, n.m.
 Agitated, to be, *hálná*, v.n.
 Agreeable, *soháwná*, adj.; *jogam jog*, adj.
 Agreeable, to be, *suháná*, v.n.
 Agreement, *bañdhej*, n.m.; *áñt*, n.f.—literally a knot, and so anything knotted, fixed.
 Ahir, a tribe, *Hír*, n.m.
 Aim, *ant*, n.m.

- Aimlessly, *saihm*, adv.
 Alike, *samán*, adj.
 All, *saglá*, adj.
 Alley, *bagar*, n.m.
 Alloy, an alloy of silver and copper from which jewels used commonly to be made, *rúpá*, n.m.
 Almighty, *Har*, n.m. (God).
 Alone, *ekalpá*, *eklá*, adj. See also s.v. Solitary.
 Aloofness, *alkat*, n.f. *a-khaiñchná*, to keep aloof, feel abhorrence.
 Altar, *bedí*, n.f. See s v.
 Always, *sadá*, adv.; *nit*, adv.
 Amalgamation. See Combination.
 Amaranth, *cholái*, n.f.
 Anger, *ros*, n.m.; *kod*, n.m.; *chho*, n.m.
 Angry. See Displeased.
 Angry, to become, *rúsná*, *rús jáná*, v.n.; *chho meñ áná*, v.n.
 Animal, *janáwar*, n.m.
 Anklet. See JEWELLERY.
 Answer, *utar*, n.m.
 Ant (black), *chíúñtí*, n.f.; (white) *đímak*, n.f.; row of ants, *kír nál*, n.f.
 Antelope, (1) *mirg*, *kálá mirg*, n.m.; *kálá* (supple *hiran* or *mirg*), n.m.; (doe, *muñđán*, n.f.); (2) nilgai antelope, *roj*, n.m.
 Antepenultimate. See s v. Last.
 Antimony, as eyepowder, *kájal*, n.m.
 Anxiety, *sañdeh*, n.m.; *chintá*, n.f.
 Apex. See Summit.
 Applaud, to, *tál bajáná* (to clap hands).
 Approach, *ágam*, n.m.
 Approximately, *unmán*, *unmán sunmán*, adv.; *aṭkal saṭkal*, adv.
 Area, the area or lands of a village generally, *samáná*, n.m.
 Aries, *mekh*, n.m.
 Armful, (1) *kauli*, n.f. (the outstretched arms); (2) an "armful" of fodder, *sánthrí*, n.f.
 Armlet. See JEWELLERY.
 Ascetic, *sañt*, n.m.
 Ask, to, *bújhná*, v.a.
 Assembled, *batle*, adj. pl.
 Assembly, *biṭol*, n.f.
 Assiduity, *jhakkat*, n.f.
 Association. See Combination.
 Aunt. See s.v. RELATION.
 Auspicious, *mañgal*, adj.
 Autumn, the autumn harvest, *sáwnú*, n.f.
 Avarice, *lobh*, n.m.
 Await, to, *báṭ dekhná*, v.a.

B

- Back, *kar*, n.m.
Backward. *See* Late.
Bad, (1) worthless, *naihj*, adj.; *nirsá*, adj.; *neáú*, adj.: (2) nasty, dirty, *bhúndá*, adj.; *kasút*, adj.; *kasútá*, adj.: (3) feeble, weak, *mañdá*, adj.; *bodá*, adj.: (4) ill-made, *karál*, adj.: (5) in composition bad is expressed by *ko* (see s.v.), as *kosamá*, bad times; *kosang*, bad society, etc.
Bail, to go, to undertake as a surety, *oṭná*, v.n.
Bale, to, *ulíchhná*, v.a.
Band, *joṭ*, n.f., a strip of iron or leather for repairing, *pátí*, n.f.
Bangle. *See* JEWELLERY.
Banker, *sháh*, n.m.
Banyá, *bakál*, n.m.; *leḍá*, n.m.
Bare, *ughará*, adj.
Bark, (1) of tree, *bakal*, n.m.; (2) specifically of *kíkar* or *nímbar* (acacia arabica and leucophlœa) *kas*, n.m.
Barley, *jaun*, n.m.
Barren, *bánjh*, n.f.; *káṭar*, adj.; of cow or buffalo, *baihlán*, n.f.
Barrier, *ád*, n.f.
Base, *khowár*, adj.
Basket, (1) generally *ḍalá*, n.m.; (2) big round basket with lid to contain clothes etc., *paṭár*, n.m.; smaller, *paṭárí*, n.f.; (3) small jug-shaped basket to collect *jál* berries, *bohñí*, n.f.; (4) bird-cage like baskets carried, *báñgí*—like for Ganges water, *kawr*, n.f.; (5) a small basket hung from the roof to secure eatables etc., *chhínká*, n.m.; (6) a basket holding 10 or 12 seers of grain, *pálrí*, n.f.; (7) a small basket for taking seed or food to the fields, *boyá*, n.m.; (8) a small lidded basket for keeping cotton for spinning, *kátní*. *katní*, n.f.
Batten, in a mud roof, *karañjá*, n.m.; in thatch roof, *bátí*, n.f.
See s.vv.
Bawl, to, *lalkárná*, v.a.
Beaten, to be, *maráwná*, v.n.
Beauty, *hauslá*, n.m.
Became, *bahá*, v.n.; defective.
Because of, *káran*, postp.
Bed, *khát*, n.f.
Before, in front of, *sohín*, adv. or postp.
Behind, *páchhe*, adv.
Bell (big), *tál*, n.m.
Belly, *kokhan*, n.m.
Belt. *See* Waistband.
Bereft, *híná*, adj.
Beyond, *parán*, adv. or postp. (chiefly in *Jhajjar*).
Bickering, *udh*, n.f.; *udham*, n.f.
Big, *baddá*, adj.
Biggest, among several, *baḍerá*, adj.

Billhook, for stripping sugarcane and reaping, *dátí*, *dántí* or *drántí*, n.f.

Bin (1) a receptacle of clay for storing grain, *kothí*, n.f.; (2) the same but smaller, *kuthlá*, n.m.; (3) smaller still, *kuthlí*, n.f.

Bind, to, to bind a págrí carefully, *chinárná*, v.a.

Bird, *chirí*, n.f.

Bitterness, *karwán*, n.f.

Blank, unused, *korá*, adj.

Blanket, *kámal*, n.m.; lighter, *kámlí*, n.f.

BLIGHTS, (1) wheat rust, *rolí*, n.f.; (2) an insect that blights wheat when rain is excessive, *kúngí*, n.f., *púngí*, n.f.; (3) a very small fly that injures wheat, *ala*, n.m.; (4) an insect that blights bájrá, *ghadhí*, n.f.; (5) an insect that injures sugarcane, *kansuá*, n.m.; (6) rust on jowár and bájrá, *khowá*, n.m.; (7) grasshopper that damages young millets and gram, *pharká*, n.m.; (8) an insect that damages young crops, *súndí*, n.f.

Blindish, nearly blind, *jákhṛá*, adj.

Blockhead, *bharwá*, n.m.

Bloom, the white powdery bloom which protects the ripening jowár and bájrá, *búr*, n.m.

Blooming, *lataurá*, adj.

Blow, to, *jhulná*, v.n.; *dholná*, v.n.

Bodice, a girl's bodice, *kurtí*, n.f.

Body, *dehí*, n.f.; *gát*, n.m.; *piñdí*, n.f.; *sarír*, n.m.; *añg*, n.m.

Boil, *pakewá*, n.m.; *gúmrí*, n.f.

Boil, to, of vegetables, pulses or anything in water or milk, *rándhná*, v.a.

Bone, *karañg*, *karañk*, n.m.

Boundary, (1) *sím*, n.f., the circuit of a village's lands; (2) *or*, n.f., generally; (3) boundary pillar between two villages, *odá*, n.m.; (4) trijunction boundary pillar, *tyavúñkhá*, n.m.; (5) edge ridge of fields, *ḍaul*, n.f.

Bowels, of the earth, *pañtál*, n.m.

Boy, (1) generically, *chhorá*, *chhorat*, n.m.; (2) boy under 15 or so, *tábar* (used chiefly in the south of the district).

Bracelet. See JEWELLERY.

Bracket, a small mud bracket on wall, *táñdí*, n.f.; small wooden bracket to hold lamp, *dawát*, n.f.

Brahman, *Báhman*, n.m.

Braid, to, *gúñdná*, v.a.

Branch, of a tribe or race, *kháp*, n.f.; of a tree, *ḍál*, n.f.

Bread. See WHEAT.

Bread-carrier, *rotíhár*, n.f.

Breast-covering, worn by married women, *añgí*, n.f.

Breeze. See WIND.

Bribe, bribery, *kor*, n.m.

Bride, *baurí*, n.f.

- Bridegroom, *baurá*, n.m.
Bright, *ujlá*, adj.
Broom, (1) coarse, made of twigs, etc., *rarká*, n.m.; *bauhkrá*, n.m.; (2) fine, made usually of *dáb* or *pání* grass, *buhári*, n.f.
Brother, *bhayyá*, n.m.; own or full brother by the same mother, *mánjáyá*, adj. or n.m.
Brother-in-law. See s.v. RELATION.
Brush. See Broom.
Bubo, *gúmri*, n.f.
Buck. See Antelope.
Bucket, iron bucket, *dol*, n.m. See also Well Gear.
Buffalo, (1) calf, *kátrá*, n.m.; (2) calf of two years or so, *jhotrá*, n.m.; (3) heifer, *katiyá* or *kátrí*, n.f.; (4) heifer of two years or so, *jhotrí* or *jhotí*, n.f.; (5) full-grown buffalo, whether entire or not, *jhotá*, n.m.; (6) full-grown cow that has calved, *maiñs*, *bhaiñs*, n.f.; (7) old cow, past bearing, *kholá*, n.f. See also s.v. Cow, where many of the words apply equally to buffalo cows.
Building, *chháwá*, n.m.; the word appears to be used on a survey of the accommodation from inside.
Bull, (1) *khágar*, *áñkal*, *bijár*, n.m.; (2) an ungelit bull used for the plough, but not for breeding, *ándú*, n.m.
Bulky, *petlá*, adj.
Bullock, (1) a young bullock broken to the plough, *nará*, n.m.; (2) the full-grown bullock of the plough or cart, *buld*, n.m.; (3) half gelt bullock, *bart*, n.m.; (4) old bullock past work, *dhandhá*, n.m.; (5) bullock with horns bent downwards, *jhúngá*, n.m. For younger animals, see s.v. Calf.
Bump, *gad*, n.f.
Bundle, (1) a bundle of stalks of jowár or bájrá, *púli*, n.f.; (2) bundle of grass, etc., see s.v. Load; (3) a bundle wrapped in cloth, *bandhej*, n.m.; (4) a round closed bundle, *girr gánth*, n.f.; (5) a bundle of eatables taken as a present, *kothlí*, n.f.
Burn, to, *dáhná*, v.a., *dájna*, v.n.
Burning ground. See Cremation-ground.
Business, *dhandhá*, n.m.; *dhandá*, n.m.; *krit*, n.f.
Bust (a woman's), *petí*, n.f.
But, *par*, conj.
Buttered, *chopri*, adj.
Butterfly, *patbjná*, n.m.; a big black butterfly is *bhaurá*, see s.v.
Buttermilk, the *pakkí lassí* of the Panjab, *ráng*, n.m.; *chhá*, n.f.; *sít*, n.f.
Buttock, *chútar*, n.m.
Buy, to, *bisána*, v.a.
Byre, *nauhrá*, n.m. See also s.v. Cattle-shed.

C

Cadet. See Junior.

Cake, (1) a preparation of *gur* mixed with bread, *lápsí*, n.f.; (2) sweet cakes made of flour, *ghí*, and sugar, *sawáli*, n.f.; (3) wheat cakes cooked in *ghí* and sugar and eaten at weddings, *púrú*, n.m.

Calamity, *sársatí*, n.f. See s.v.

Calf (1) up to one year of age, *baihrká*, n.m.; (2) of one-and-a-half or two years of age, *nárú*, n.m., *baih á*, n.m.; (3) generally for the first two years of its life, *báchhrú*, n.m.; (4) heifer of 1½ or 2 years of age, *baihrí*, n.f.; (5) a second calf with one already at foot, *nátwá*, n.m.

Call, of an animal, *bol*, n.m.

CALL, to cattle, etc., (1) driving bullocks or cows in the open, a click with the tongue is made like an English driver's; (2) driving buffaloes in the jungle, *huñ huñ*; (3) to turn a bullock in plough or cart to the right, *a-a* (between the sound of *a* and *á*); (4) as the last, to the left, *barre*; (5) to make cows and buffaloes drink at the tank or well, *chhe*; (6) similarly to make buffaloes drink, *he ho*; (7) to call up cows and bullocks from their watering, *hí yo*; (8) similarly to call up buffaloes, *dhe re*; (9) similarly to call up horses *o-o*.

Called, to be, *bájná*, v.n.

Caller, the menial who calls the village folk together, *bulá álá*, n.m.

Calling, summoning, *bulá*, n.f.

Calotropis, c. procera, *ák*, n.m.; plural is *akíán*.

Calves, collectively, of either sex, *báchhrú*, n.m., pl.

Camel, *karhá*, n.m.; *karhelá*, n.m.

Camelman, *raibárá*, n.m.; *raibáran*, n.f. (a tribe).

Camelthorn, *jhoñwáñsá*, n.m. (*alhagi maurorum*).

Candle, *bátí*, n.f.

Cane, (1) sugarcane, *ikh* or *ínkh*, n.m.; (2) a single cane of the same, *gándá*, n.m.

Capacity. See Power.

Caper, to, *pharakná*, v.n.

Caper, capparid aphylla, *kair*, n.m. or f., pl. *kairaríán*; the bud is *barwá*, n.m., and the fruit, *tínd*, n.f.; c. horrida, *híns*, n.m.

Capital (in trade), *púnjí*, n.f.

Care. See Trouble.

Careful, (1) *chaukas*, adj.; (2) especially of ploughing, *nikánd*, adj.

Careless, *chaupaṭ*, adj.

Carpenter, *khátí*, n.m.; to this caste belong the carpenters of most villages in the district: in a few they are *badhí*, n.m.

Carriage, *gádi*, n.f.; bullock carriage, *manjholí*, n.f.; bullock tonga, *rerhú*, n.m.

- Cart, (1) *gádí*, n.f., or bigger, *gádá*, n.m.; (2) cart without side wattles, *ladhá*, n.m.; (3) trotting bullock cart, *mañjholí*, n.f.
- Cash, *rokrá*, n.m.
- Casteman, *dúd*, adj. See s.v.
- Cat, male, *bilá*, n.m.; female *bilái*, n.f.
- Catch, to. See s.v., *otná*, v.a.
- Cattle, (1) generally *đingár*, n.m., pl.; *đhor*, n.m.; *đhorí*, n.f.; (2) a herd of wild cattle bred from animals set free as a vow, *rám chauná*, n.m.; (3) a herd of domestic cattle going to graze, *chauná*, n.m.; *lainđá*, n.m.; (4) old cattle, *đhándá*, n.m.
- Cattle-dealer, *ghosí*, n.m. (a tribe).
- Cattle-shed, (1) the *baiṭhak* that forms the entry of the house, *dalhíz*, n.f., *paulí*, n.f.; (2) a separate cattle-shed, *nauhrá*, n.m.
- Cattle-track See s.v. Path.
- Cattle-yard, *gher*, n.m.; *ugár* (or by metathesis, *guár*), n.m.
- Cause, *káran*, n.m.
- Caution, to, *barjná*, v.a.
- Celibate, *jatí*, adj.
- Censure, to, *đáñtná*, v.a.
- Certainly. See Surely.
- Cesses, *kharch*, n.m.
- Chaff, (1) of *múñg*, *moth*, *másh* and *gowár*, *phalyár*, n.m.; (2) of jowar—used for fodder, *káñđí*, n.f.; *káñtí*, n.f.; (3) of bajra—used for litter, *búmblá*, n.m.
- Chain, (1) for measuring or surveying, *jewrí*, n.f.; (2) to secure cart bullocks on the road at night, *bel*, n.f.; (3) to secure house doors, *sáñkal*, n.f. See also JEWELLERY.
- Chain-man, *mirdhá*, n.m. This word was used in old times for a measurer, and is now sometimes used for the *jaríbkash*; corruption of the Persian *mírdeh*.
- Change (for money), *phutkar*, n.f.
- Channel. See s.v. Watercourse, and Runnel.
- Charity, cash paid to a Brahman after feeding him, *dachhná*, n.f.
- Chattering, *bakwád*, n.f.; *kachkach*, n.f.
- Cheap, *mañdá*, adj.
- Chenopodium, c. album, *bathwá*, n.m. See s.v.
- Chest (of body) *petí*, n.f.
- Chief, *pardhán*, n.m., in verse corrupted to *dhán*.
- Child, *bálá*, *bálak*, n.m., *chhorat*, n.m.—the latter word is used for children generically also; *lál*, *lálá*, n.m. (a term of endearment).
- Childhood, *chhutpan*, n.m.
- Childishness, *chhutpan*, n.m.
- Childless, *út*, *útnápút*, n.m., the feminine *útnínápútní* is used among women as a term of abuse; *napútá*, adj.

- Chill, *tára*, n.m.
 Chopping-block, *ne*, n.f.
 Christian, *kráni*, n.m.
 Churn, to, *biloná*, v.a.
 Churn, *biloní*, n.f.
 Churning, the noise made by churning of milk, *jharak*, n.f.
 Churn staff, *rayí*, n.f.
 Circle, *kuñdal*, n.m.
 Circuit, *ol*, n.f.
 Circumstances, *hawál*, n.m., comfortable circumstances, *tár*, n.f., *sáng*, n.m., *gaihre*, n.m., pl., *tañt*, n.m., To be in c.c. *tañt* or *gaihre baithná*, *tár baithná*, *ráj baithná*, *lahre karná*.
 Cistern, in which water is stored at the well, *kothá*, n.m.
 Clapping (of hands), *tál*, n.m.
 Clay, *ḍákar*, n.f.
 Clean, (1) *suthrá*, adj.; (2) of ploughing, *nikañd*, adj.
 Clear, *narol*, adj.
 Clearly, *nirásá*, adv.
 Clear off, to (a debt), *láhná*, v.a.
 Clear up, to, to collect things together, tidy up, *sámbharná*, v.a.
 Clever, *chátar*, adj.
 Client, (1) of a moneylender, *banjoṭá*, n.m.; (2) of a Brahman, or his clientele generally (Urdu *jajmán*), *brit*, n.f.
 Clock. See Water-clock.
 Close, *lámne*, adv.; *lawe*, adv.
 Cloth, *kápar*, n.m.; the coarse country cloth used by zamindars, *chauñsí*, n.f.
 Clothes, (1) *parhán*, n.m.; (2) a set of women's clothes, *tíl*, n.f.
 Cloud, *unman*, n.m.; *megh*, n.m.; *ghatá*, n.f.; gathering clouds, *gan*, *ghan*, n.m.
 Cloudless, *narol*, adj.
 Cloudy, *sabádlí*, adj.
 Coarse, *khar*, adj.
 Cobble, to, *gubbharná*, v.a.; *goná*, v.a.; to get cobbled, *gathwáná*, v.a.
 Cobbling, *gáñth*, *gáñth seth*, n.f.
 Cock, *kukrá*, n.m.
 Coin, *námá*, n.m.
 Cold, (1) *sílá*, adj., *síl*, adj.; (2) cold weather, see Winter; (3) a cold, influenza, *kher*, n.m., *ḍhánchar*, n.m.; (4) cold, chilliness, *sílak*, n.f.; *siyál*, n.m.
 Collect, to, *ugáhná*, v.a. (of money, etc.).
 Collected, *ikthauṛe*, adj., pl., *batle*, adj., pl.
 Collection. See Subscription.
 Combination, association of cattle or labour in cultivation, *ḍaṅwára*, n.m.
 Come across, to. See Meet.

- Come out, to, *likarṇá*, v.a. (corruption of *nikalṇá*).
Comfort, *ánaṇḍ*, n.m.
Comfortable. *See* s.v. Circumstances.
Common-room, (1) the common building of a village or subdivision of it, *paras*, *pres*, n.f., *chopár*, n.f.; (2) a small sitting-place common to two or three families, *katehrá*, n.m.
Company, *saṅg*, n.m.
Completed, to be. *See* Finished.
Complication, *arāṅs*, n.f.
Compulsion } *See* s.v. Force.
Compulsory }
Conceal, to, *lukná*, v.a.
Condition, *hawál*, n.m.
Condolence. *See* Mourning.
Confabulation, *miskot*, n.m.—a term introduced from the army.
Confusion, *ghálá málá*, n.m.
Congratulation, *bhadáí*, n.f. *See* also Hymn.
Connexion, *lág*, n.f.
Consider, to, *takná*, v.n.
Constant, *padár*, adj.
Constantly, *nit*, adv.
Contained in, to be, *samáná*, v.n.
Contemporary, age-fellow, *hání*, n.m.; *hán homán*, n.m.
Contentment, *santokh*, n.m.
Contentious, *kalhára*, adj.
Continent, *jatí*, adj.
Contrary, one who acts beyond his station, *ushtaṇḍí*, n.m.
Control, beyond control (of an animal), *be bas*, adj.
Convenient, *sút*, adj.
Converse, to. *See* Talk.
Convert, a *Jat* or *Jatni*, converted to *Islám*, *Mulá*, n.m.; *Mulí*, n.f.
Cook, to, *poná*, v.a.
Cooking vessel, *hāṇḍí*, n.f.
Co-operation. *See* Combination.
Cope with, to, *tán bajáná*, v.a.
Coping. *See* Thatch.
Corruption. *See* Bribery.
Cosharer. *See* Sharer.
Cotton, (1) cotton plant, *báří*, n.f.; (2) cotton cut in short lengths ready for spinning, *púní*, n.f.; (3) a clump of cotton opening in the pod, *jhuṇḍ*, n.f.
Cotton seed, *binaulá*, n.m.; when used for cattle fodder, also called *kákrá*, n.m.
Cotton stalk, *banstí*, n.f. *See* also Stalk.
Cotton thread, *pát*, n.m.
Council. *See* Confabulation.
Country side. *See* Widespread.

Courage, *ásang*, n.f.

Courtyard, *bagar*, n.m.

Cow, (1) a full-grown cow, one that has calved *gá*, *gaurí*, n.f.; (2) barren cow (or buffalo) *baihlán*, n.f.; (3) cow that won't let its calf come near it or herself be milked *binkut*, n.f.; (4) cow (or buffalo) that has failed to be covered at the proper time *pálet*, n.f.; (5) cow (or buffalo) going off milk *bákhri*, n.f., *binkut*, n.f.; (6) cow past bearing *dhándhí*, n.f.; (7) ditto, of cow or buffalo, *kholá*, n.f., *dhánk*, n.f.; (8) milch cow *dhínú*, n.f.

Cow-dung, (1) dried cakes of c., *úplá*, n.m., *gosá*, n.m.; (2) place reserved for making them *pathwára*, n.m., (*páthná*, to knead); (3) stock of them *bitaurá*, n.m.

Cowherd, *páli*, n.m.; *gowál*, n.m.

Crack, in building or in soil, *trer*, n.f.

Cradle, basket in which a woman carries her baby to the fields, or swings him from the roof, *palná*, n.m.

Crazy, *baulá*, adj.; *khabbat*, adj. or n.m.; *khabtán*, adj. or n.m.

Cremation-ground, *chaháni*, n.f.

Crest, of a sand hill, *tíba*, n.m.

Cringe, to, *kantána*, v.n.

Crippled, *pánqlá*, *opáhaj*, *upang*, adj.

Crocodile, *gáh*, n.m.; *karautí*, n.f.

Crooked, *bánká*, adj.; *adá*, adj.; *baiñdá*, adj.

Crop, (1) *sákh*, n.f.; (2) the collected produce of a field, ready for threshing, *ghamsán*, n.m.

Crop-watcher, *rakhála*, n.m.

Cross. See Displeased.

Cross, to, *ulákná*, v.a.

Crow, *kág*, n.m.; *káglá*, n.m.

Crowd, *ghamsán*, n.m.

Crown, the tinsel crown worn by the bridegroom, *maur*, n.m.

Cruel, *kathan*, adj.

Cruelty, *julmáná*, n.m.

Crust, forming on the ground due to heat following slight rainfall, *páprí*, n.m.

Cry, *dhái*, n.f.

Cry out, to, *lalkárná*, v.a.

Cunning, *dho*, n.m.; *thagái*, n.f.

Cunningness, *chatráí*, n.f.

Cup, of metal, *bakhaurá*, n.m.; *katorá*, n.m.; *kacholá*, n.m., ditto smaller, *belwá*, n.m.; the *lotá* is here called *gadí*, n.f.

Cupboard, a recess in the living room of a house for storing grain etc., *bisál*, n.m.; *obrá*, n.m.; ditto, smaller *obrí*, n.f.

Curse, to, *kosná*, v.a.

Curved, *bánká*, adj.; *adá*, adj.; *baiñdá*, adj.

Custom, *bát*, n.f.; *ánt*, n.f.; (see s.v. Agreement) *ravaiyá*, n.m.; *rít*, n.f.

D

Dacoit. *See* Robber.

Damp. *See* Moist, Moisture.

Dampness. *See* Moisture.

Danger, danger from, fear of, anything *dhák*, n.f.

Daughter, *dhí*, n.f.

Dawn, *sakáli*, n.f., at dawn *sakále*.

DAY, 1st day of either half of the month, *pirwá*, n.f.

2nd	„	„	„	<i>doj</i> , n.f.
3rd	„	„	„	<i>tíj</i> , n.f.
4th	„	„	„	<i>chauth</i> , n.f.
5th	„	„	„	<i>pañchak</i> or <i>páncheñ</i> , n.f.
6th	„	„	„	<i>chhat</i> , n.f.
7th	„	„	„	<i>sáteñ</i> , n.f.
8th	„	„	„	<i>ashmí</i> or <i>átheñ</i> , n.f.
9th	„	„	„	<i>naumín</i> , n.f.
10th	„	„	„	<i>dasmín</i> , n.f.
11th	„	„	„	<i>ekádshí</i> , <i>at kádshí</i> <i>giyáras</i> or <i>giyás</i> , n.f.
12th	„	„	„	<i>bárus</i> , n.f.; <i>dawádshí</i> , n.f.
13th	„	„	„	<i>tosh</i> , n.f.
14th	„	„	„	<i>chaudash</i> , n.f.

last day of the dark half of the month, *máwas*, *máosh*, *maush*, n.f.; last day of the light half of the month, *púran-máshí*, n.f., or *púrná*, n.f., or *púno*, n.f.

Death, *kál*, n.m.

Debt, *máñg*, n.f.

Decay, to. *See* Eaten away, to be.

Deceit, } *dho*, n.m.; *thagái*, n.f.

Deception, } *damgaje*, n.m., pl.

Deceit, *niberá*, n.m.

Decline, to (of sun), *dhalná*, v.n.

Decrease, to, *ghalná*, v.n.; *dhalná*, v.n.

Deep, *dúngá*, adj.

Deference. *See* Respect.

Degraded, *rajálá*, adj. *See* s.v.

Deficit, *ghátá*, n.m.

Delay, *aver*, n.m.; *wár*, n.f.

Deluge. *See* s.v. Famine.

Dense, *sanghná*, adj. *See* Stupid.

Deny, to, *nátná*, v.n.

Depression (in the ground, etc.) *khadá*, n.m.; *See* also Hollow.

Deputy, an E. A. C. *Liptí*, n.m.

Deserted, a deserted house *nadárad kúdhí*, n.f.; of village, *wjar*,
adj.

- Desolate, *choupat*, adj.
 Destitute, *híná*, adj.
 Die, to, *utr jáná*, v.n.
 Die-stamper, *chhípi*, n.m.; *chhípan*, n.f. (a caste).
 Difference, *antar*, n.m.
 Difficult, *durlabh*, adj.
 Difficulty, (1) *ánt*, n.f.; *aráns*, n.f.; *ákhli*, n.f. (*lit.* holes or ruts in a road); *dúbhar*, n.m.; (2) with difficulty, hardly *massán*, adv., or *massán te*.
 Dimple, *khadá*, n.m.
 Direction, (1) (side) *or*, n.f.; *kair*, n.m.; (2) in different directions *aulá saulá*, adj.
 Dirt, *kúra*, n.m., of mud in water, *gadhal*, n.f.
 Dirty, *kasút*, *kasútá*, adj.; *bhúndá*, adj.; of muddy water *gádhla*, adj.
 Disagreement. *See* Dispute.
 Discomfort, *dúbhar*, n.m.
 Discourse, *bátí*, n.f.
 Discriminate, to, *bachárná*, v.a. or n.
 Disease, *sedh*, n.f.; *ausak*, n.m.
 Disgrace, *hethí*, n.f.
 Disorder, *ghálá málá*, n.m.
 Displeased, to be *rúsná*, *rúsjáná*, v.n.
 Displeasure, *ros*, n.m.
 Dispute, *aljherá*, n.m.
 Distant, *duretá*, adj., a distant cousin, *duretá bhái*.
 Distinctive, *adhl*, adj. *See* s.v.
 Distressing, *kathan*, adj.
 Disturbance (noise, etc.), *tanjá*, n.m.
 Ditch. *See* Trench.
 Dive, to, *đák márná* (this is the term for diving feet first).
 Diving, *kalá bází*, n.f. (head first).
 Division, (1) of any thing, property, land, etc., *batej*, n.m.; *batwára*, n.m.; (esp. for land) *bát*, n.f.; (2) division per stripes *bír bat*, *chuñdá bat*, adj. or adv.; (3) division per capita *bhái bat*, *págrí bat*, adj. or adv.
 Do, to, in sense of to pass, to serve, *nimbhná*, v.n.
 Doing, done, *krit*, n.f.; *kritang*. *See* s.v.
 Donkey, *cháruwá*, n.m.; *pohan*, n.m.; *ghortá*, n.m.; (the last word, literally a small pony, is used for donkey also).
 Door, a single door, *khirak*, n.m.; double doors, *kowár*, n.m.
 Drainage, rain water drained from high lands into tank or fields, *upráhan ká pání*, n.m.; *ágam ká pání*, n.m.
 Draw, to. *See* Pull, to.
 Draw out, to, *kádhná*, v.a.
 Drill, a seed drill, *orná*, n.m.
 Drip, to, *jhírná*, v.n.
 Dripping (of water), *jhirá*. So the term is used for a surplus supply in any branch of the canal.

- Drive off, to, *táhná*, v.a. ; *khedná*, v.a.
Drought, *soká*, n.m.
Drop (of water), *sitak*, n.f.
Droppings, of cattle, picked up in the jungle *orná*, n.m. ; of birds, *bíthá*, n.m.
Dropsy, *jalandhar*, n.m.
Drown, *đob dená*, v.a.
Dry, unsavoured, *lúkhá*, adj. ; so dry bread is *lúkhí rotí*.
Dry up, to. See Exhausted, to be (of tank).
Dung, *kúrá*, n.m. See also Dripping and Cow-dung.
Dungheap, *kúrí*, n.f. ; *kurrí*, n.f.
Dust, *dhúl*, n.f.
Dwelling, *bás*, n.m.

E

- Ear, of *bájrá*, wheat or barley, *bál*, n.f. See also Head.
Early, *sudhán*, adv. ; early sown or ripening, *agetá*, adj. ; *tahetá*, adj.
Earned, *khatyá*, p.p. See s.v.
Earring. See JEWELLERY.
Earth, (1) land, *dhartí*, n.f. ; (2) soil, *dhartí*, n.f. ; *matí*, n.f. ; (3) the world, *prithmí*, *pirthí*, n.f. ; (4) bowels of the earth, *paiñtál*, n.m. ; (5) of animals, see Hole.
Earthquake, *hálán*, n.m.
Ease, *ánañd*, n.m.
East, *ugam*, *ugman*, n.m.
Eastern, *ugmaná*, adj.
Eastwards, *ugmanán*, adv. (preceded by *te*).
East wind, *pirwá*, n.f. ; *purá*, n.f. ; *pirwá bál*, n.f.
Easy, *sahj*, adj.
Eatables, tied up in a cloth and sent as a present to relations etc., *kothlí*, n.f.
Eaten away, to be—of wood, *bíjhná*, v.n.
Eating, *bhojan*, n.m.
Ebullition, *uphán*, n.m.
Edge, *or*, n.f.
Effort, *hañgá*, n.m. ; *yatan*, n.m. ; *khábáhat*, n.f. ; sinister effort, *kotak*, n.m. ; by an effort with difficulty, *hañge*, adv. See also s.v. Difficulty.
Eighth, of a lunar half month, *ashtmí*, n.f. ; *átheñ*, n.f.
Either, *keh*, conj.
Eject, to, *táhná*, v.a. ; *khedná*, v.a.
Eld. See Age.
Elder, the elder councillor of a village ; (there is generally one for each) *tholá*, *tholedár*, n.m.
Eldest, among several, *bađerá*, adj.
Elephant, *gaj*, n.m.
Eleventh, of a lunar half month, *atkádshí*, *ekádshí*, n.f. ; *giyáras* n.f. ; *giyás*, n.f.

- Elope, to, *udhalná*, v.n.
 Else. See Foreign.
 Eluded, to be, *ṭalná*, v.n.
 Emancipation, *mukat*, n.f.
 Embrace, *kaulí*, n.f. (lit. the outstretched arms).
 Embrace, to, *kaulí bharná*, v.a.
 Empty, *rítá*, adj.; *thothá*, adj.; *súná*, adj.
 End, to, to come to an end, *sánpaṛná*, v.n.
 End (aim), *ant*, n.m.
 Endeavour, *ásang*, n.f. (Urdu *himmat*); ill endeavour, *kotak*, n.m.
 Endurance. See Pluck.
 Endure, to, *bhogná*, v.a.
 Enemy, *bairí*, n.m.; *bairan*, n.f.
 Energetic. See Vigorous.
 Enmity, *kharásat*, n.f.; *írkhá*, n.f.; *bair*, n.m.; *kadáwat*, n.f.; *lág*, n.f.
 Enquire, to. See Ask.
 Entangled, to be (in difficulties), *uljhná*, v.n.
 Enter, to, *barná*, v.n.
 Entertain, to (at meals), *jimáná*, v.a., esp. of a Brahman, *neautná*, v.a.
 Entertained, to be, *jímná*, v.n.
 Entertainment, *neautá*, n.m. (usually of a Brahman).
 Entire, *saglá*, adj.
 Entirely, *dáhoñ*, adv.
 Entry, of village. See Gate.
 Equally, *baroñ brábar*, adv.; *brábar*, adv.
 Erect, *khalá*, adj. (the ordinary Urdu *khará* is also in use).
 Errand, doing errands—"fagging" to another village, *gamíná*, n.m.
 Eruption. See Rash.
 Escaped, to be, *ṭalná*, v.n.
 Essence, *ján binán*, n.m.
 Evaded, to be, *ṭalná* v.n.f.
 Evening, *sánjh*, n.f.
 Evil, *kukram*, n.m.
 Evil-liver, *luchá*, adj. (especially in sexual relations).
 Exactly, *theth*, adv.; *thoth*, adv.
 Exaggerator, *labár*, n.m., amongst women *dútí*, n.f., is used.
 Exalted, *uttam*, adj.
 Excess, *bádhá*, n.m.—e.g., a rent may be the revenue with so much *bádhá* over and above.
 Excessive, *badháú*, adj.; *antká*, adj. adv.
 Excrement, human, *gúñh*, n.m.; of birds, *bíthá*, n.m.
 Excuse, *mis*, n.f.
 Exhausted, of soil etc., *bodá*.
 Exhausted, to be, (1) fatigued, *chhikná*, v.n.; *kantáná*, v.n.; (2) to come to an end, or of a tank to dry up, *sánpaṛná*, v.n.

- Exhortation, *updesh*, n.m.
Expect, to, *bát dekhná*, v.a.
Exposure, exposure to injury, *ujár*, n.m.; e.g., my field gets over-
run by monkeys, *merí kiyári bañdarañ ke ujár meñ se*.
Extravagance, *phañlídáñ*, n.m.
Extravagant, *chhatorá*, adj.
Eye, *nain*, n.m.
Eyelid, *palak*, n.f.
Eyesight, *tyaur*, n.m.

F

- Face, *mukhrá*, n.m.
Faction, *kháp*, n.f.
Factory, *peñch*, n.m.
Fade, to, *kamláná*, v.n.
Fagging. *See* Errand.
Fail, to miss the mark or opportunity, *úkná*, v.n.
Fair. *See* Satisfactory.
Fakir, *modá*, n.m.
Fall down, to, *dhai parná*, v.n.
Fall in with, to. *See* Meet.
Fallow, land left fallow for cattle to graze on, *paret*, n.f.
Falsehood, *bakherá*, n.m.
Family, *kul*, n.m.
Famine, *kál*, n.m.; if due to excess of rain or flooding it is *pan-
kál*, n.m.
Famous, to be, *tapná*, v.n.
Fan, *bíjñá*, n.m.
Far, *paráñ*, adj. or postp. (chiefly Jhajjar). *See* also s.v. Dis-
tant.
Farmer, *kasán*, *kassán*, n.m., esp. of a good farmer; a bad one
is *thoth*, n.m.
Fashionable, *báñká*, adj.
Fasting, *langhan*, n.m.
Fat, *petlá*, adj., an excessively fat man, *padaurá*, n.m.
Fate, *karm*, n.m.; *karní*, n.f.
Father, *bábú*, n.m.; *pitá*, n.m., the latter chiefly by pandits,
but also in Jhajjar by Ja s; *peo*, n.m. father's home (of a
woman) *peosál*, n.f.
Father-in-law. *See* s.v. RELATION.
Fatigued, to be, *kantáná*, v.n.
Favour, *sían*, n.m.
Fear, *daihshat*, n.f.; *bhau*, n.m.; fear of danger from, *dhák*, n.f.
Fear, to, of an animal, to be shy; *bidhakná*, v.n.
Fearless, *nirbhai*, adj.
Feast. *See* Funeral-feast.
Feast day, in honour of Durgá; *nyaurtá*, n.m. *See* s.v.
Feathery, *títur pañkhá*, adj.
Feeble, *bodá*, adj.; *márá*, adj. *See* also Weak.

- Feed, to, *nirná*, v.a. (i.e. to feed animals). See also Entertain.
- Fence, thorn fence, *dhínkar*, n.m.; small sticks put round to fence a field, *chharí*, n.f.; if large, *chhará*, n.m.; for fence of a sugar press see Screen.
- Fertility, *sarsái*, n.f.
- Fester, *pakewá*, n.m.
- Festival, girls' festival on 3 Sudi Sawan, *tíj*, n.f.
- Few. See Rare.
- Field, *kyár*, n.m.; smaller, *kyárí*, n.f., *kháprí*, n.f.; small and uneven field, *mañgrá*, n.m.; small and lowlying, *dábrá*, n.m.
- Fifteenth, of lunar half month, *purná*, n.f.; *púranmáshí*, n.f.
- Fifth, of lunar half month, *pañchak*, n.f.; *páncheñ*, n.f.
- Fighting. See Quarrelling—of a number of persons, *muthber*, n.f.
- Filial, *sapút*, n.m.
- Fill up, to, to stop a leakage, *múndná*, v.a., to fill up a tank or well, *ántná*, v.a.
- Filth, *kúrú*, n.m.
- Fine, *thádá*, adj., a fine young man, *bará thádá jawán*. See Strong, Handsome.
- Fine, *dañd*, n.m.
- Finger, *áñgal*, n.f.
- Finished, to be, *nimbarná*, v.n.; *pár parná*, v.n.
- Fire, *ánch*, n.f.
- Firefly, *pat bíjná*, n.m.
- Firewood, *íñdhan*, n.m.
- Firm, *chauk s*, adj., of soil, *khatkhatá*, adj.
- First, at the first attempt, or first of all, *pahlam choṭ*, adv.
- First-born, *jethá*, adj.
- Fissure. See Crack.
- Fix, to. See Settle, to.
- Fleece, of sheep, *kún*, n.f.
- Flesh, *más*, n.m.
- Flinch, to, *kantáná*, v.n.
- Fling down, to, *ghálná*, v.a.
- Flippancy, *aulí bát*, n.f.
- Flood, } *daihr*, n.m.
- Floodlands, } *dahr*, n.m.
- Flour, *chún*, n.m.
- Fly away, to, *udná*, v.n.
- Fodder, (1) *niyár*, n.m.; *bánt*, n.f.; (2) fodder given to bullocks at midday, *jawára*, n.m. See also sub v. Straw, Leaves, Grazing, Zizyphus.
- Fog, *dhumar*, n.f.
- Foliage, of *kíkar*, *jánd* or *raunjh*, *lúñg*, n.m.
- Folk, of men, *log*, n.m. pl.; of women, *lugái*, n.f., pl.
- Folly, *ál*, n.f.
- Food, (1) *khájá*, n.m.; *bhojan*, n.m.; (2) the ordinary food of the people of fermented millets, *rábrí*, n.f.; (3) food given to

- Brahman at *máwas* or *kanágat* before helping oneself, *hatkár* n.m.; (4) cooked grain given to women who come on auspicious occasions to sing, *báklí*, n.f.
- Fool, *thoth*, n.m.; *múrah*, n.m. & f.; *dúndí*, n.m.; *kúr*, n.m.; *chútiyá*, n.m. (see s.v.). See also Idiot.
- Foolish, *nadán*, adj.; *múrah*, adj.
- Foolishness, *pachham budhí*, n.f.
- Foppish, *bánká*, adj.
- Forbid, to, *atakná*, v.a.; *barjáná*, v.a.
- Force, *hangá*, n.m.; by force, *hange*, adj.
- Forehead, *mastak*, n.m.
- Foreign. See Outsider—another village than one's own, *páh gám*, n.m.; someone else's, *prái*, adj.
- Forest, (1) *ban*, n.m.; *bankhand*, n.m.; (2) small jungle round a village, *baní*, n.f.; (3) a grass preserve or wood, *bírh*, n.m.
- Forgetfulness, *úk chúk*, n.f.
- Fork. See Pitchfork.
- Formed, to be, *rachná*, v.n.
- Former, *paihlrá*, adj.
- Fortunate. See Prosperous.
- Foundation, —of the *kúp* (q.v.) made of cotton stalks, *gománá*, n.m.
- Foundling, *páltí*, n.m.
- Four cross-roads, *choráhá*, n.m.
- Four pronged, *chosang*, adj.
- Fox, *lobán*, n.f.
- Fraud, *dho*, n.m.
- Friday, *sukkar*, n.m.; Friday's *sukkarwári*, adj.
- Friend, (1) a close acquaintance, *dhabí*, n.m.; *mít*, n.m.; *mitr*, n.m.; *sagá*, n.m., or—used of third parties only, *prítí*, n.m.; (2) a guest, *mintar*, n.m.; (3) well-wisher, kindly disposed, *sajjan*, n.m.
- Friendship, *dhab*, n.m.; *maláhjá*, n.m. See also Love.
- Fringe. See JEWELLERY.
- Frontal, masonry front of an adobe house, *mauhrá*, n.m.
- Front of, in, *sohín*, adv. or postp.
- Fuel, *índhan*, n.m.; crushed cane stalks used as such at press is *khoí*, n.f. See also Cowdung.
- Funeral feast, *jag*, n.m.; *káj*, n.m.
- Furrow, *khúd*, n.m.
- Futurity, *ágam*, n.m.

G

- Garnet, *lálrí*, n.f.
- Gate, entrance of village, *phalsá*, n.m.
- Gathering. See Festering.
- Gaze, to, *lakháná*, v.n.

- Gazelle, *chakará*, n.m. (after which a got of Jats is named),
mirg, n.m.; *kalpúchhiá*, n.m.
- Gentleman, *dhaulposh*, n.m. See s.v.
- Germinate, to, *upajná*, v.n.
- Get in, to, *barná*, v.n.
- Ginner, cotton-ginning machine, *belan*, n.m.
- Girl, *chhorí*, n.f. eh, girl! *Tí* (interj.)—this is used to women
 in their native village only.
- Give up, to, *tajná*, v.a.
- Gluttonous, *lára*, adj.
- Go away, to, *đijarná*, v.n.
- Go back, to, see go away.
- Goad, *sántá*, n.m.
- Goat, *ajhá*, n.m., fem. *ajháñ*, n.f.
- God, *málik*, n.m.; *sáhib*, n.m.
- Gold, *kañchan*, n.m.; *kans*, n.m.
- Good, *sút*, *chokhá*, *khará* (pure, prime), *sutá*, *kámal* (used in
 most senses of *paká*), adj. As an attribute of a woman
salwañtí, adj. f.
- Good-looking, *báñká*.
- Goodness, *gun*, n.m.
- Got, to be,—as *milná* in that sense—*thyáwná*, v. n.
- Gourd, *kachrí*, n.f.; see s.v. *Kákrí*, n.f. and *áryá*, n.m., are
 kinds of cucumbers.
- Grace, *hauslá*, n.m.
- Grain, a single grain of any cereal, *kaní*, n.f.; or poet. *kanyá*,
 n.m.
- Grain-dues, grain given to menials at sowing time is *orí*, n.f.,
 and at spring harvest, *lán*, n.m.
- Gram, a single plant of gram, *búñt*, n.m.
- Grandfather, maternal grandfather's house, *nansál*, n.f.
- Grass, main grasses of district are cynodon dactylon, *đúbh*, n.f.,
 called *jábar*, n.m., when rank and deep; eragrostis cyno-
 suroides, *đábh*, n.f.; saccharum spontaneum, *káñs*, n.m.;
 anatherum muricatum, *jhúñđ*, n.m.; or *gáñdar*, n.m.; sac-
 charum munja, *sar*, n.m.; cyperus rotundus?, *motyá*, n.m.
- Grasshopper, *kisárí*, n.f. attacks gram; *pharká*, n.m. attacks
 millets. The painted grasshopper (poecilocera picta) liv-
 ing largely on *ák* is *Rám kí gáye*, n.f.
- Grazing, (1) grazing buffaloes during the night in rainy season,
pasar, n.f.; (2) tending cattle to another village to pasture,
gol, n.m.
- Grazing fees, (1) taken by owners of village from non-owners,
áñg, n.f.; (2) taken by herdsmen for looking after another
 man's cattle, *bít*, n.f.
- Greasy, *chopri*, adj.
- Greens. See Shoots.
- Grind, to, *ghotná*, v.a.
- Grow, to, of crops, *upajná*, v.n.

Guard, *pahrá*, n.m.; keeping guard at night sentry duty, *soá-sái*, n.f.; crop watching, *rakhwál*, n.f.; a guard *pahrú*, n.m.
Guest, *miñtar*, n.m.; traveller putting up with one, *bateau*, n.m.
Guide. *See* Messenger.
Gur, a 4-seer lump of *gur*, the unit of the sugar press, *bhelí*, n.f.

H

Habit, *rabbá*, n.m.; *dhál*, n.m.
Hairless, *múñdá*, adj.
Hairy, *kesá*, adj.
Half and half, *ádhám ádh*, adv.
Half maund, *dhaun*, n.m. (20 seers).
Half-sharer. *See* Sharer.
Halo, *kuñdal*, n.m., of moon, *jalaihrí*, n.f.
Halt, to, *datná*, v.n.; *thamná*, v.n.; *thámná*, v.a.
Hamlet, *dháná*, n.m.—smaller, *dhání*, n.f. (usually used of tenants' hamlet in the middle of an estate).
Handle, of a goad, *painí*, n.f.; driving handle of plough, *hathá*, n.m.; wooden handle of any implement, *bíñtá*, n.m.
Handsome, *sámthá*, adj.; *sutá*, adj.; *sutrá*, adj.
Happiness, *kusal*, n.f.
Happy, *resí*, adj. *See* s.v.; *rájí*.
Hard, *khar*, adj.; cruel, *kathan*, adj.; *karrá*, adj., exactly corresponds to the Urdu *sakht* in all its senses.
Hardly, *massáñ*, adv.; *massáñ te*, *razá karke*.
Hardship, *chálá*, n.m.
Hare, *súsá*, n.m.
Hark, *re*, *rí*, interj.
Harrow, flat clod-crusher is *maij*, n.m., or *sohágá*, n.m.; a round clod-crusher is *belan*, n.m.; *girrí* or *ghirrí*, n.f.; *kolu* or *kohlu*, n.m.; smaller, *kolrí*, n.f.
Harrow, to (to put harrow on ground), *majáná*, v.a.
Harvest, *sákh*, n.f. *See* also Autumn and Spring.
Harvesting, *lawní*, n.f.; *lámni*, n.f.
Harvest dues, spring harvest dues of menials, *lán*, n.m.; *láñgá*, n.m.
Haste, *taul*, n.f.
Head, *sís*, n.m.; head of a branch canal, etc., *mohñd*, n.m.; head of *jowár*, *sartá*, n.m., of maize, *kukrí*, n.f. *See* also Ear.
Headman, *mukaddam*, n.m.
Headstrong. *See* Obstinate.
Heap, to. *See* Pile, to.
Heart, *hirdá*, n.m.; *man*, n.m.
Heat, hot weather of 4 months, *kharsá*, n.m.; still moist heat, *ghot*, n.f.; still dry heat, *machká*, n.m.; *dahm*, n.m.; sun's heat, *ghám*, n.m.; *morá*, n.m.

- Heat, to, *táná*, v.a.
 Heated, to be, *tainá*, v.n.
 Heat-stricken, of a cow—*ghámar*, adj. and n.f. See s.v.
 Heaven, *swarg*, n.m.
 Heavy, *thádá*, adj.
 Heifer, of a year or so, *baihríkí*, n.f.; *baihrí*, n.f.; generally up to 2 years or so, *báchhrí*, n.f.; *bachhiyá*, n.f.; buffalo heifer, *kuṭiyá*, n.f.; *kátrí*, n.f.
 Height, *sikhar*, n.m.; *sikharant*, n.m.
 Held, to be, *samáná*, v.n. (to be contained in).
 Hell, *nirk*, n.m.
 Help, *ásrá*, n.m., *parameshwar ke ásre te*, by God's help.
 Herd, *chauná*, n.m.; *lainḍá*, n.m.; *khark*, n.m.
 Herdsman, *gowál*, n.m.; *páli*, n.m.
 Here, *are* or *áre*, adv., *it*, adv.
 Hero, *súr*, n.m.; *gaṅgwar*, n.m.; *monyá*, n.m.
 Hide, to, *lukná*, v.a.
 Hill, *thal*, n.m.; sand hill, *thalí*, n.f.; crest of sand hill, *ṭibbá*, n.m., *ṭibá*, n.m.
 Hinder, to, *khunḍná*, v.a.
 Hip, *kúkh*, n.f.
 Hither, *it*, adv., *inghe*, adv.
 Hoe, hand hoe for stubbing grass, etc., *khurpá*, n.m.; long handed hoe for weeding, *kasaulá*, n.m.
 Hoe, to, *nalauná*, v.a.
 Hoed, to be, *nalná*, v.n.
 Hog, *bará*, n.m.
 Hole, (1) of large animals, esp. wolf, *nal*, n.m.; (2) of small animals as snake, mouse, etc., *bil*, n.m.; (3) of a big snake, *bambí*, n.f.; (4) hole made by scraping out earth for plastering, etc., *ghogh*, n.m.; (5) a small hole, *moghlá*, n.m.; (6) hole or rut in a road, *ákhli*, n.f.; (7) hole in a roof, see ventilator.
 Hollow, a small lowlying plot of ground, *ḍábrá*, n.m.
 Hollow, *thothá*, adj.
 Home, (1) locative, *gharáñ*, e.g., *gharáñ já*; (2) woman's father-in-law's home, *sásrá*, n.m.; (3) man's father-in-law's home, *susrár*, n.m.; (4) woman's father's home, *píhar*, n.m.; *peosál*, n.f.; (5) maternal grandfather's home, *nánká*, n.m.; *nansál*, n.f.; (6) husband's house, *písál*, n.f.
 Honour, *láj*, n.f.; *mán*, n.m.; *pat*, n.f. See also Respect.
 Hoof, *khurá*, n.m.
 Hop, *phudak*, n.f.
 Hope, *ás*, n.f.
 Horned, *síngal*, adj.
 Hornet, *tatayá*, n.m.
 Hornless, *múṅḍá*, adj.
 Horse, *turá*, n.m.; *turaṅg*, n.m.
 Hot, *tát*, adj.

- Housekeeping, *gharwásá*, n.m.
Housewife, *kalwantí*, adj. f., the word describes all that the model housewife should be.
However, *a'bat*, adv.
Hub, *píndá* (of a spinning wheel). See also under WELL GEAR.
Hungry, *nirná básí*, adj.
Hunt, to. See Search, to.
Hurry, *taul*, n.f.
Hurry, to, *bhájná*, v.n. (to run, go quickly), *bauhṛná*, v.n. (to overtake).
Hurt, *kotak*, n.m.
Husband, *kañth* or *kañthá*, n.m.; *pí*, n.m.; *píyá*, n.m.; *bhartár*, n.m.; husband's house, *písál*, n.f.
Husbandman. See Farmer.
Hymn, hymn of congratulation, *mañglá chár*. See s.v.

I

- Idea, *gyán*, n.m.
Idiot, *dúndí*, n.m., as a term of abuse, *baulí búchh*, n.m. See also Fool.
If, *je*, conj.
Ignorant, *nadán*, adj. (of a child).
Ill, *dukhála*, adj. See also Evil.
Illconducted, *tuphání*, adj., fem. *tuphánan*. The word seems primarily to mean liar, lying.
Illfavoured, *kulachhan*, adj.
Illness, *ausak*, n.m.; *sedh*, n.f.; *rog*, n.m.
Immediately, *turt*, adv. See also First.
Increase, *bádhá*, n.m.
Indifferent, *márá*, adj. (of quality).
Indigent, *baṛdañgí*, adj.
Individual, not joint, *naukrá*, adj.
Indulgent, of self, *chhatorá*, adj. See also Gluttonous.
Industry, physical, *pachchat* or *pachant*, n.f.; mental, *jhakkat* or *jhakant*, n.f.
Infantry, *berá*, n.m.
Influenza, *kher*, n.m.; *dhañchar*, n.m.
Information. See News.
Ingrate, *múñdchará*, adj. and n.m. See s.v.
Inheritance. See Division.
Insect. See Blight.
Inside, *bhítar*, adv. and postp.; *máññi*, adv. and postp. More often the meaning of the latter word is 'jointly with.'
Insistence, *aráñs*, n.f., constructed with *láná*.
Instalment, *khañdhí*, n.f.
Instigate, to, *ubhárná*, v.a.
Intelligence, *sodhí*, n.f. See also News.

Intelligent, *chaukas*, adj.; *súá*, adj.

Intercalary (month), *lauṅg*, n.m.

Intercourse, *meht*, n.f., land or side of a village in which one's business or coming and going lies, *her muhár*, n.m.; *hel mel*, n.m.

Interdiction, *bandhej*, n.m.

Interest, *biáj*, n.m.; *mittí*, n.f. (of money).

Invisible, *alekh*, adj., an attribute of God.

Involuntarily. See Perforce.

Irregular. See Uneven.

Irresponsibility, *ghálá málá*. See s.v.

Irrigation. See Watering.

Irritation, of the skin, *kháj*, n.f.

Island, *tápú*, n.m.

J

Jackal, *gádar*, n.m.; *sál*, n.m.

Jamb, *bájú*, n.m. (of door).

JEWELLERY, *túmb*, n.f., a collective term; specific sorts are as follows:—

Glass bangle, *chúrí*, n.f. (always put off by a widow).

Plain silver bangle, *pachhelí*, n.f., this is worn above the *chúrí*.

Massive bracelet, *káṅgní*, n.f., worn below the *chúrí*.

Armlets (worn on the biceps), *bájú band* or *bájú chauk* (this is a massive ornamental article with two or more silver bosses); *bájú phúl*, n.m. (like the above but with only one boss); *tád*, n.f. (a deep solid silver armlet with a heavy rim—put on after *makláwá*); *bájú*, n.m. (this generally consists of a string of rupees).

Anklets, *karí*, n.f. (a plain silver anklet); *bákrí*, n.f. (a twisted anklet going over the instep); *kará*, n.m. (an anklet worn by men only and on the right leg only).

Earrings, *bújní*, n.f. (ear studs); *murkí*, n.f. (very small earrings worn by men only); *dándá*, n.m. (big ornamental earrings)

Fingerrings, *chhalá*, n.m. (a plain finger ring); *aṅgúthí*, n.f. (for a jewelled or otherwise ornamented ring); *mohar*, n.f. (signet ring).

Nose rings, *dándí*, n.f. (a small ring worn only to keep the hole open); *nath*, n.f. (a large nose-ring worn only after marriage).

Necklaces, *nanslá*, n.m. (a massive necklace worn close round the neck); *jhálrá*, n.m. (a long hanging necklace made of rupees); *rupayyá*, n.m. (a single rupee attached to a string and worn close round the neck by men and boys—efficacious against disease); *kañthí*, n.f. (a necklace worn close round the neck by men and boys)

[N.S.]

Waist chain, *tágrí*, n.f. (a silver chain worn by men and boys only).

Silver work on the arm hole of aṅgí, (bodice), *kaṭáo*, n.m.

Silver fringe, to the 'dopattá,' falling over the forehead; *ghuñghat*, n.m., *múñh ká chháj*, n.m.

Jingle, to, *thanakná*, v.n.

Jogi, *jogná*, n.m. (used in a contemptuous sense—a mere *jogí*).

Joint, *sajhlá*, adj.

Jointly

Jointly with } *máññ*, adv. and postp.

Jump, *phudak*, n.f.

Jungle, *ujár*, n.m. (waste); see also *Forest*.

Junior, *lahaurá*, adj. (of two wives, sons, branches of a family, etc.)

Justice, *nisáj*, n.m.; *nyá*, n.m.

K

Keen. See *Sharp*.

Kindness, *gun*, n.m.

King, *nirp*, n.m.

Kiss, *makho*, n.f. (cp. with *dená*); *míthí*, n.f. (cp. with *lená*).

Knead, to, *gúñdhná*, v.a.; *páthná*, v.a.; *gúñdná*, v.a.

Knee, *godá*, n.m.

Kneeling, *kodá*, adj.

Knot, *ánt*, n.f., poetically, *ántí*, n.f.; *gáñth*, n.f.

Knowledge, *bidyá* or *vidyá*, n.f.; *news*, *biaurá* or *beaurá*, n.m.; (the *khabr* of Urdu).

L

Labour, *khabáhat*, n.f.; *pachchat* or *pachant*, n.f.; *mental*, *jhakkat* or *jhakant*, n.f.; *ability to labour*, *labouring*, *kamer*, n.f.

Labour, to, *pachhná*, v.n.

Labourer, *kamerá*, n.m.; *kamerí*, n.f.; *kammáú*, n.m.; *farm servant engaged by the year*, *barsaudhíyá*, n.m.

Ladle, *palwá*, n.m. (for oil).

Lair. See *Hole*.

Lake, *sarwar*, n.m.

Lame, *lulhá*, adj.; *upañg*, adj.; *opáhaj*, adj.

Lamp, the small lamp used at shrines or for illumination at Diwali etc., *chúghrú* or *chíghrú*, n.m.

LAND, (1) generally, 'soil,' so and so's 'land,' *dhartí*, n.f.; *rarer*, *bhauñ*, n.f.; (2) *lands of a village*, the village area, *samáná*, n.m.; (3) *land successively cultivated in both harvests*, *dotái*, adj.; (4) *soil once irrigated but now hard and thirsty*, *lárá*, *lálrá*, adj.; (5) *loam*, *rauslí*, n.f.; *stiff loam*, *moṭíár*, n.f.; *clay*, *dákar*, n.f.; (6) *lowlying flooded land*, *daihrí* or *dahrí*, adj.; (7) *light sand*, *bhúr*, *bhúd*, n.f.; (8) *high-lying*

sandy land, *thalí*, n.f.; crest of a sand hill, *tíbá* n.m., *tibbá*, n.m.; (9) hard land full of limestone nodules, *kakerlá* or *kakrelá*, adj.; (10) unirrigated land, *brárú*, *bángrú*, adj.; (11) dry land of Hissar, Bikanir and such like, *bágar*, n.m.; *bágrí* or *bágrú*, adj.; (12) soil that is soft, having borne an unirrigated rabi crop, especially gram, *umrá*, n.m.; (13) soil that is hard from having borne a *kharif* or irrigated rabi crop, *tápar*, n.f.; (14) soil ploughed in *Bhádon* and left ready for spring crop, *bhadwár*, n.m.; (15) bare ground outside *ábádí*, where cattle stand, etc., *gorá*, n.m.; (16) bare ground round a tree or platform, *sañtar*, *sañtal*, n.m.; (17) high ground formed by excavation round a tank, *pál*, n.m.; (18) high bare ground from which drainage goes into a tank, *upráhan*, n.f.; (19) saline soil, *kalar*, *kálar*, n.m.; *shor*, n.m.; *ran*, n.m.

Landowner, (1) with a share in the common property of the village, *biswedár*, n.m.; (2) an outsider who has been given land in the village, but has no share in the common property, *bhauñbháí*, n.m.

Lapwing, *tañirí*, n.f. (the red-wattled lapwing or 'did you do it' of the Anglo-Indian).

Large, *baddá*, adj.

Last, last year, *pur ke*, *pur ke sál*, n.m.; last year but one, *prár ke sál*. Next but two in either direction, *parlá*, adj.

Late, *aud bar*, adv.; late sown, backward, *hetá*, adj.; *pachhetá*, adj.

Lateness, *wár*, n.f.

Latter, *páchhlá*, adj.

Laughter, *háñsí*, n.f.

Law (in), one's own child's parents-in-law, *sambañdhí*, n.m.; *sambañdhan*, n.f.; this is the relationship which the parents of the husband and wife bear to each other—*cf.* Mother-in-law, Father-in-law, RELATION, etc.

Lay, to, *láná*, v.a.—this is apparently a local form of *laganá*.

Laziness, *álkas*, n.m.

Leader, the leader pair of bullocks in a cart, *belí*, n.m.; *joryá*, n.m. The word *dhorí*, which is the wheeler pair, is used metaphorically for a leader of men.

Leaf, *pát*, n.m.; dried leaves of gram used as fodder, *khár*, n.m.; of *múñg*, *moth* and *urd*, *páttí*, n.f.; top leaves of the cane cut off before stripping, *golá*, n.m. See also under fodder and zizyphus.

Learner, *sikhdar*, adj. (e.g. of a bullock learning his work).

Least, at, *albat*, adv.

Leather, *chám*, n.m.

Left (not right), *khabbá*, adj.; *aulá*, adj.

Leisure, *ulgás*, n.f., at leisure, *nifráñ*, adj.

Leisured, *nifráñ*, adj.

Leisurely, *sahj*, adj.

- Less, *ghát*, adj.
Letter, *áñkh*, n.m. (of alphabet).
Level, *pádrá*, adj.
Liar, *tuphání*, n.m.; *labár*, n.m.; *tuphánan*, n.f. See also Exaggerator.
Lie down, to, to lie outstretched, *pasarná*, v.n.
Life, *jív*, n.m.; a life in the series of transmigrations, *jún*, n.m.; life and soul of anything, *ján binán*, n.f.
Lift, bucket lift used for getting canal water on to high land, *dál*, n.f.
Lift-man, the man who works the above, *dálíyá*, n.m.; *dalhíyán*, n.m.
Light, *halwá*, adj. (of soil, or weight).
Lightning, *bíj*, n.f.; *dámní*, n.f.; flashes of lightning in opposite directions, *aukan saukan*, n.f.
Like, *sumán*, postp.
Limb, *añg*, n.m.
Line, *rekh*, n.f.; a line of *sarson*, etc., sown across another crop, *ád*, n.f.
Lintel, *bájú*, n.m.
Lion, *shính*, n.m.
Litter, *chebrá*, n.m. (of pigs).
Live, to, *brájná*, v.n.
Living, *bisásat*, n.f.; a living house, *bisásat ká ghar*; ability to live or maintain oneself in a place, *basebá*, n.m.
Load, *gún*, n.f. (e.g., a donkey's load); *ládrá*, n.m. (a small load of fodder such as a boy can carry); *sánthrí*, n.f. (as much fodder as a man can hold in his arms); *barhotá*, n.m. (as much grass or fodder as a man can carry on his head).
Loafing. See Uninvited.
Loam, *roslí*, *rauslí*, n.f.; a stiff loam, *motyár*, n.f.
Loan, a Government agricultural loan, *tigáí*, n.f. (corruption of *takáví*). [n.m.]
Locust, *tídí*, n.f. (full grown); a swarm of creeping locusts, *katír*,
Long-legged, *lamtañgá*, adj.
Look at, to, *lakháná*, v.n.
Loose, *moklá*, adj.
Loss, *totá*, n.m.; deficit, *ghátá*, n.m.
Louse, *júm*, n.f.; *júnñ*, n.f. (*júnñ* is also the name of a tribe of Jats).
Love, *hit*, n.m.; *dhab*, n.m.; *neh*, n.m.; used of third parties and not of oneself, *prít*, n.f.
Lovely, *manbhará*, adj.
Lover, *píyá*, n.m.
Lovesong, *chanbolá*, n.m.
Low, *nimáná*, adj.; low class, of lowly rank, *nimáná* adj.; *chhut bhayan*, adj.; lowlying (ground), *nimán*, adj. and n.m.
Luckless, *karm hín*, adj. and n.m., *hín* is a diminutive and privative suffix.

- Luxuriance, *sarsái*, n.f.
 Luxurious, *chhatorá*, adj.
 Lying, *tuphán*, n.m. (untruthfulness).
 Lying. See reclining.

M

- Mad, *báorá*, adj.; of a dog, *baulá*, adj.; half mad, maddish, *lad baulá*, adj. See also crazy.
 Made, to be, *rachná*, v.n.; of mud, of a noise, etc., to be stirred, *máchná*, v.n.
 Made, to get, *gharána*, v.a.
 Maid-servant, *báñdí*, n.f.
 Malaria *parái*, n.f.
 Min, *mánas*, n.m. and f (person), *purkh*, n.m.
 Management, *sár*, n.f. (correct management).
 Manager, *kár mukhtyár*, n.m. (agent).
 Manger, *chor*, n.f. (earthen manger at which cattle feed).
 Mango-leaves, hung by a string across the door of a house on occasions of rejoicing, *bandarwál*, n.m.
 Manure, *khád*, n.f.
 Many, *ghane*, *ghankare*, adj. pl.; *anek*, adj.; too many, *anek*, adj.
 Marjoram. See s.v., *marwá*, n.m.
 Marriage, (1) *chalárá*, n.m.; *gáoná*, n.m. (these represent the final ceremony or *makláwá*; (2) contributions among the brotherhood for marriage expenditure (see Ibbetson's "Karnal Settlement Report"), *nyauñdá*, n.m.; *neautá*, n.m.; (3) one who subscribes as above, *nindhárá*, n.m.
 Married, *parní*, adj. and n.f.
 Marvel, *achraj*, n.m. (an unusual or wonderful event).
 Matrimony, *sohág*, n.m.
 Meal, *jún*, n.m. (a single meal).
 Mean, *rajálá*, adj. See s.v.
 Means, *bidh*, n.f. (way).
 Measure, to, *mápná*, v.a.
 Meat, *más*, n.m.
 Medicine, *dárú*, n.f.
 Meet, to, *phetná*, v.n.
 Meeting, *meht*, n.f.
 Melon, *matírá*, n.m. (a kind of wild water-melon growing in the rains, chiefly in sandy ground).
 Melt, to, *gálná*, v.a.
 Men. See Folk.
 Mend, to. See Repair.
 Mendicant, *sáhú*, n.m.; a wandering fakir, *ramtá rám*, n.m.
 Menial, *shúdar*, n.m. (= *sudrá*); menial's dues, i.e., bushels of grain given at the spring harvest, are *lángá*, n.m.
 Merchandise, *basáoní*, n.f.

- Merchant, *banak*, n.m.
Mere, *korá*, adj.
Message, *sañdes*, n.m., carrying a message, *laihbarí*, n.f. See Messenger.
Messenger, *laihbar*, n.m. and f. (corruption of *ráhbar*; the guide who goes from village to village or takes messages); *bulá alá*, n.m. (the *dhának* or *chúhrá*, whose duty it is to assemble the villagers).
Method, *sár*, n.f. (correct method of managing anything).
Milch cow, *dhínáñ*, n.f.; *dúdhāl*, adj.
Milk, (1) milk mixed with water, *lassí* or *lássi*, n.f.; (2) the milk that first flows after birth of a calf, *khís*, n.m.; (3) next following for 8 or 10 days, *chhílrá*, n.m.; (4) thereafter, *dúdh*, n.m.
Milk pail, *máñghí*, n.f.; *dúhñí*, n.f. (any vessel in which an animal is milked).
Milk pan, *kadháuní*, n.f.
Milky, *dúdhya*, adj., applied to the clouds of general rain as opposed to the black clouds of a local storm.
Mimosa, *alá, ala*, n.m. (a small species of m.).
Mird, *hirdá*, n.m.
Miscarry, to, *túná*, v.n.; *garbh chhin jáná*, v.n. (of pregnancy).
Miscellanies, *arañgá*, n.m. See s.v.
Mischievous, *ál*, n.f.
Misconduct, }
Misconducted, } *kulachhan*, adj. and n.m.
Misfortune, *sársatí*. See s.v., *janjál*, n.m.
Miss, to, to miss the mark, or opportunity, *úkná*, v.n.
Mist, *dhumar*, n.f.
Mistake, *úk chúk*, n.f. (the Urdu *bhúl*).
Mixed, *messá*, adj.; *messí rotí*, bread of mixed grain
Mixture, *messan*, n.m.; a mixture of *múñg*, *másh* and *moth*, *dháglá* or *dháñgarlá*, n.m.; a mixture of wheat and gram, *gochní*, n.f.; of wheat, barley and gram, *gojrrá*, n.m.; of barley and gram, *bejhar*, n.f.; of *bájrá* and *múñg* or of rice and *múñg*, cooked in water, *khichrí*, n.f.; of wheat and *sarson* sown broadcast and not in lines, *terá*; the word is sometimes used for *kharíf* mixtures too.
Moderate, *rañgsir*, adj.
Moist, *alá*, adj.
Moisture, *ál*, n.f.
Molasses, a lump of *gur*, 4 seers in weight, *bhelí*, n.f.
Moment, *tuk*, n.f.; *tuk ek*, one moment!
Monastery, (1) of Bairagis, *astal*, n.m., *ásan*, n.m.; (2) of Jogis, *math*, n.m.; *mat*, n.m.
Monday, *Somár*, n.m.
Money *námá*, n.m.; cash, *rokrá*, n.m.
Moneylender, *sháh*, n.m.
Moneylending, *banaj*, n.m.

Month, *más*, n.m. The 12 months are as follows:—

1. March to April, *Chet*, n.m.
2. April to May, *Basákh*, n.m.
3. May to June, *Jeth*, n.m.
4. June to July, *Sád*, n.m.; *Sáḍh*, n.m.
5. July to August, *Sáwan*, n.m.; *Sáman*, n.m.
6. August to September, *Bháduvā*, n.m.
7. September to October. *Āsauj*, n.m., in verse *Kuñwár*, n.m.
8. October to November, *Kátak*, n.m.
9. November to December, *Mañghsir*, n.m.
10. December to January, *Poho*, n.m.
11. January to February, *Máh*, n.m.
12. February to March. *Phágan*, n.m.

Moon, *sís*, n.m.

More, *jabar*, adj.; *battí*, adv.; *báḍh*, adj.

Morning. See Dawn.

Mortar, (1) See Plaster, (2) the wooden or stone mortar for pounding gram, *ukhal*, n.m.; or smaller, *ukhlí*, n.f.

Mortgaged, *gaihna*, adj.

Mosque, *maihjad*, n.f.

Moth, *paibijná*, n.m.

Mother-in-law, *sás*, n.f.; *sású*, n.f.

Mound, *thal*, n.m.

Mourning, *sog*, n.m.; going to a relative's village to condole, *múkán*, n.m.

Mouse, *músá*, n.m.

Moustachio'd, *múchhal*, adj.

Mouth, *mukhrá*, n.m.

Mouthful, *chulá*, n.m.

Move, to, *hálná*, v.n.; *sarkáwná*, v.a.; to be moved emotionally, *uksná*, v.n.

Much, *ghaná*, adj.; *ghankhará*, adj.; too much, *antká*, adj.

Mud, *kích*, n.m.; *kháñchchá*, n.m.; *gaighal*, n.m.; mud in water, *gadhal*, n.f.

Muddy, *gádhlá*, adj. (of water).

Muzzle, large, *chhínká*, n.m.; small, *chhínkí*, n.f., for cattle.

N

Naked, *ughará*, adj.

Named. See Called.

Narrow, *bhírá*, adj.; *sakrá*, adj.

Nasty, *bhúndá*, adj.

Nature, *sabháo*, n.m.

Near, *lawe*, adv.; *lámne*, adv.; *samep*, postp.; *dhore*, postp.—
the last word is the equivalent of the Urdu *pás*.

Neat, *sughar*, adj.

Necessity. See Want.

- Necklace. *See* JEWELLERY.
Need. *See* Want.
Neighbourhood, *goháñd*, n.m.; *gawáñd*, n.m.
Nephew. *See* RELATION.
Nerve, *nár*, n.f. (a nerve).
Nest, (1) of birds, *álná*, n.m.; (2) of burrowing animals, *see* Hole.
New. *See* Unused.
News, *bhál*, n.f.; *tol*, n.f.; *beaurá*, n.m. (= Urdu *khabr*).
Next, next year, *pur ká sál*, n.m., or more commonly *pur ke*, adv.; next year but one, *prár ká sál*, n.m.
Nice, *suthrá*, adj.
Niche, *álá*, n.m.
Niece. *See* RELATION.
Night, *ren*, n.f.
Noise, *udh*, n.f.; *udham*, n.f.; *tañtá*, n.m.
North, *utr*, n.m.
Northern, *utrá*, adj.; *utráñhá*, adj.
Northwards, *utráñháñ*, adv.
Nose-ring. *See* JEWELLERY.
Not, at all, *wástá ná*, adv.; *múl ná*, adv.; *kimme ná*, (lit. nowhere), adv.
Note (of a bird, etc.), *bol*, n.m.
Notorious, to be, *tapná*, v.n.
Now, *ib*, adv.
Nowhere, *kimme ná*, adv.

O

- Oath, *sohñ*, n.f.
Obstacle, *ád*, n.f.; difficulty, *aráñs*, n.f.
Obstinacy, *albád*, n.f.
Obstinate, *airá*, adj.; *albádi*, adj.; *ashtá*, adj.; *aulá*, adj.; *árú*, adj.
Occasion, *bar*, n.f. (so many 'occasions').
Occasionally, *razá karke*, adv. (*See* Hardly: the term means hardly ever, very rarely); *kimme*, *kimme kimme*, adv.
Occurrence, *chálá*, n.m.
Offspring, *jáyá*, partic. m.
Oh, *re*, *rí*, interj.
Omen, *saun*, n.m.; *sugan*, n.m.; omen bird (a shrike), *saun chirí*, n. f.
On, *pe*, postp.
Oppression, *kaihr*, n.m.; *chálá*, n.m.; *julmáná*, n.m.
Or, *keh*, *ki*, conj.
Ornaments. *See* JEWELLERY.
Other's, *prái*, adj.
Outsider, *beráná*, adj.; outside village, not one's own, *pás gám-áñ*, n.m.; a man belonging to such, *páh kas*, n.m.
Outturn *nepá*, n.m. (of crops).

- Oven, *hára*, n.m. (for heating milk, etc.)
 Overflow, *uphán*, n.m. (e.g., of milk, boiling up).
 Overflow, to, *upharná*, v.n.; to cause to overflow, *uphárná*, v.a.
 Overtake, to, *bauhrná*, v.n.
 Owl, *alu*, n.m. or f.
 Owner, *dhaní*, n.m.; *khasm*, n.m.

P

- Pace, *dañg*, n.m. (a pace).
 Pack, *gún*, n.f. (an animal's).
 Pad, *índhí*, n.f. (used by women to support the water-pot on the head).
 Paid, to be, *pátná*, v.n.; *ugáhi náhin páti*, the revenue was not paid.
 Pail. See Milk-pail.
 Pain, *bedan*, n.f.; *pír*, n.f.; *ausak*, n.m.; in pain, sick, *dukhála*, adj.
 Pale, *bhúra*, adj. (straw-coloured).
 Pandit, *pándá*, n.m.; *pándyá*, n.m.; a Brahman other than one's own *parohit*, employed to do petty services, is *ásrat*, *asratái* or *táti sewá*, n.m.
 Paraphernalia, *arsan parsan*, n.m.; *ráchh pochh*, n.m., pl.; *ar-angá*, n.m.; *arang barang*, n.m. The general meaning of all these terms is that of a collection of miscellaneous properties—generally of small value.
 Parent, parent of a worthy son—*sapúta*, adj.
 Part. See Share.
 Particle, *wástá*, n.m.; not a particle, *wástá ná*.
 Partition, *batej*, n.m. (division of anything): of land, *batwára*, n.m.
 Pass, *ulákná*, v.a.; to do, to serve, *nimbhná*, v.n.
 Passable. See Satisfactory.
 Past, *gailrá*, adj.
 Pasture, *aráhá*, n.m. (a grass preserve in the middle of cultivated fields).
 Pat. See Knead.
 Paternal, paternal home, *peosál*, n.f.
 Path, *pañth*, n.m., footpath or track, *ráhi*, n.f.; *batyán*, n.f.; footpath between two villages, *singáhá*, n.m.; path beside a canal *patrí* or a *pakká* road, *sañtar* or *sañtal*, n.m.; path for cattle, *dañgraulá*, n.m.
 Patience, *santokh*, n.m.
 Pattens, *kharáon*, n.m.
 Pauper, *nirdhaná*, n.m.
 Peace, *ánañd*, n.m.
 Peasant, *kasán*, n.m.
 Peck, *tholá*, n.m. (of a bird's beak, etc.).
 Peel, to. See Strip.

- Peg. *See s. PLOUGH.*
Pellet, *golá*, n.m. (the mud pellet slung by the crop-watcher).
Penetrate, to, *barná*, v.n.
Penniless, *nirdhan*, adj.
Penultimate. *See Next and Last.*
Perceive, to, *takná*, v.n. (mental).
Perception, *gyán*, n.m.
Perforce, *bebas*, adv.; *hange*, adv.
Persevere, to, *mandná*, v.n.
Persist, to. *See Stick to.*
Persistence. *See Insistence.*
Person, *mánas*, n.m. and f.
Perverse, *aulá*, adj. *See also Obstinate.*
Pestle, with which grain is crushed, *musal*, n.m.; or smaller *muslí*, n.f.
Phenomenon, *achraj*, n.m. (an unusual occurrence).
Pick, to, *khoná*, v.a.; of the heads only of a crop, with a sickle, *chúníná*, v.a.
Picking. *See Reaping.*
Piece, *túk*, n.m. (especially of a piece of bread).
Pile, to, to heap carefully, *chinárná*, v.a. (of earth, a *pagrí*, etc.).
Pilgrimage, *ramat*, n.f. (of a fakir's wanderings).
Pillar. *See Boundary pillar.*
Pimple, *gúmṛí*, n.f.
Pine, to, *jhírná*, v.n.
Piscis, *mín*, s.f., *see s.v.*
Pitchfork, *jelí*, n.f., two-pronged j. *dosang* or j. alone; four-pronged j. *chosang*, *tánglí*, n.f.
Place, to, *láná*, v.a. (the Urdu *lagáná*); *lár dená*, v.a.
Plain, *pádrá*, adj. (straight, level, etc.).
Plait (of a girl's hair on the forehead), *meñdhí*, n.f.
Plait, to, *gúñdná*, v.a., *gúñdhná*, v.a.
Plaster, a heap of earth mixed with water to make mud plaster, *tagár*, n.m.
Plate, *thál*, n.m. (a big metal plate); smaller, *thálí*, n.f.
Platform, from which to scare birds, *dámchá*, n.m. (the Urdu *machán*).
Please, to, *suháná*, v.n., *bháná*, v.n.; if you please, *bháwe* or *bháweñ*.
Pleasure, *ánand*, n.m.
Plenty. *See abundance.*
Plot (of ground). *See Field.*
PLOUGH, a lighter plough for sowing, *nág (hal)* or *nári (hal)*, adj.; in contradistinction to the ordinary heavy *baiṭhal (hal)* or *múdh (hal)*.
The parts of the plough are as follows:—
The main shaft on which the yoke rides, *halas*, n.f., or *hál*, n.f.; the driving handle, *hathá*, n.m.; the share, *phálí*, n.f.;

the body to which handle, share, shaft, etc., are fixed, *hal*, n.m.; the yoke, *júá*, n.m.; strip of wood supporting the share, *panihárá*, n.f.; wedge rammed under the plough to tighten the share, *pachhelá*, n.m.; iron band clamping share and supporting wood, *andí*, n.f.; wooden wedge fixing the *halas* into the *hal*, *óg*, n.m.; small peg in *halas* admitting of adjustment of the yoke, *naráhlí*, n.f.; *nadhel*, n.f.; small iron peg in bottom of *halas* which prevents detachment from *hal*, *nesang*, n.m.; leather strap joining yoke to plough, *nárá*, n.f.; leather strap passing from yoke beneath the bullock's neck, *jot*, n.m.; pegs in yoke each side of bullock's neck, *simal*, n.f.; sheath or button put on point of share when not in use, *purlí*, n.f.; *mání*, n.f.; plough rest to support it when driven to the fields, *halsan*, n.f.; *ghíns*, n.f.; *gandsá*, n.m.; bamboo reed drill, *orná*, n.m.

Plough, ploughed land, *báhn*, n.m.

Ploughing, *báh*, n.m.; *báhn*, n.m.; a light ploughing, *khorí*, n.f.; second ploughing, *dosar*, n.m.; third, *tísar*, n.m.; fourth, *chausar*, n.m.

Ploughman, *hálí*, n.m.

Plough-rest } See s. PLOUGH.
Ploughshare }

Pluck, *karr*, n.f. ("sticking to it").

Plug, to, *múndná*, v.a. (of a leakage).

Pneumonia, *karak*, n.f.

Pocket, in a man's coat, *gojh*, n.f.; in a boy's *chádar*, *gojhá*, n.m.

Pod, of gram, with the pea intact, *tát*, n.f.; ditto, after threshing, *tátas*, n.f.

Poet, *kab*, n.m.; *kaverá*, n.m.

Point, *aní*, n.f.

Pole, the pole round which the bullocks rotate in threshing, *medh*, n.f.

Pond, (1) a big village pond, *johar*, n.m.; (2) smaller, *johrí*, n.f.; (3) a small pond in the jungle, *dábrá*, n.m., *let*, n.f.; (4) poetically, *sarwar*, n.m.

Pony, *ghortá*, n.m. (a small pony).

Poor, in quality, *bodá*, adj; *kután*, adj. See penniless, etc.

Porridge, half-ground wheat, *jowár* or *bájrá*, cooked in water, *dalyá*, n.m.

Possession of, in, *dhore*, postp. (the Urdu *pás*).

Pot, (1) a large brass pot for water or *ghí*, *tokná*, n.m.; smaller, *tokní*, n.f.; (2) pot for melting *ghí*, *ghilrí*, n.f.; (3) see also Waterpot, Vessels; (4) a set of earthen pots supplied by *kumhárs* at marriage, *lík*, n.f.

Potsherds, *thekar*, n.m.; by these a roster is determined, so, *thekarálá chaukídár*, the man whose turn it is to keep guard.

- Pound, to, *gúndhná, gúndná, v a.*; of flour, *osná, v.a.*
Pour out, to, *ulíchhná, v.a.*
Power, *paunch, n.f.* (capacity)—*meri paunch náhín sai*—it is beyond my reach; *ásrá, n.m.* (power to help) *see s.v.*
Powerful, *mahausim, adj.*
Precocious, *agetá, adj.*
President, *pardhán, n.m.* (corrupted to *dhán* in verse).
Press, for sugarcane, cotton, etc., *belan, n.m.*
Press, to, *pel dená, v.a.* (to press oil, cane, etc.; to urge an animal.
Pretence } *mis, n.f.; thúná, n.m.*
Pretext }
Pretty, *sút, adj.*; *suthrá, adj.*; *sugar, adj.*
Prevention, *ád, n.f.*
Previous. *See Former.*
Price, *bhá, n.m.*
Prick, *tholá, n.m.* (of anything sharp).
Pride, *chatráí, n.f.*; *maror, n.f.*
Prime, *khará, adj.*
Prince, *nirp, n.m.*
Principal, *múl, n.m.* (of money).
Prison, *bandí kháná, n.m.*
Privately, *lukmán, adv.*
Procured, to be, *pátná, v.a.*; *beaurá náhín páttá*, news cannot be got.
Produce, *nepá, n.m.* (of crops).
Produced, to be, *nipajná, v.n.*
Profit, *bádhá, n.m.* *See note on Excess.*
Prohibition, *bandhej, n.m.*
Prong. *See Pitchfork.*
Prop., *tek, n.f.*; cross-sticks supporting front of cart, *dahí, n.f.*; log of wood supporting it behind, *olálwá, n.m.*; prop. to lift the wheel for repairs, *gharauñchí, n.f.*
Property, *dhan, n.m.*; land, one's share in a village, *biswá, n.m.*
Proportionately, *hissá sárú, adv.*
Prosopis, *P. spicigera, jánd, n.m.*; its fruit, *sángar, n.m.*
Prosperity, *rujnás, n.f.* *See also Circumstances.*
Prosperous, *bhágwán, adj.*
Prostitute, *beswá, n.f.*
Proud, to be, *nár karná.*
Proverb, *khissá, n.m.* (Urdu *kissá*).
Pull, to, *sahárná, v.a.*
Punishment, *dañd, n.m.*
Puppy, *palúriá, n.m.*; *katúriá, n.m.*; *pillá, n.m.*; rather older, *kutrá, n.m.*
Purchase, to *See Buy, to.*
Pure, *khará, adj.*
Purse, *gáñth, n.f.*; worn round the waist, *nolá, n.m.*

Push in, to, *goná*, v.a.; *gubbharná*, v.a.

Put, to, *lár dená*, v.a.

Put down, to, *gerná*, v.a.

Put in, to, *ghálná*, v.a.; *bárná*, v.a.

Q

Quarrel, to, *uljhná*, v.a.

Quarrel, a, *rár*, n.f.; *rásá*, n.m.

Quarrelling, *bakherá*, n.m.; *kharđú*, n.m.;—of a number of persons, *muthbher*, n.f.

Quarrelsome, *kalhára*, adj.; *kapattá*, adj.; *khotá*, adj.; *árú*, adj.

Quick, *taulá*, adj.

Quickly, *turt*, adv.; *taule*, adv.

Quiet, *bolbálá*, adj.

Quilt, *saur*, n.m.

R

Rag. See Shred.

Rain, (1) generic, *barkhá*, n.f.; *bharan*, n.f.; *mính*, n.m.; (2) steady straight rain, *kinyá wání*, adj. f. (sc. *barkhá*); (3) a few drops, *búndá bándí*, n.f.; (4) light rain, enough to wet the clothes, *chádar bhíj*, n.m., or to wring the clothes, *lattá nachor*, n.m.; (5) drizzling rain, enough to plough on, *dongrá*, n.m.; (6) good rain, a furrow full, *khúđ wání*, n.f.; (7) heavy rain, a field full, *kiyári bhar*, n.m.; (8) heavy rain, enough to obliterate the field boundaries, *daule tor*, n.m., *náke tor*, n.m.; (9) heavy enough to wash away higher ridges, *dhí tor*, n.m.; (10) any heavy rain, *tháđí rau*, n.f.; (11) drenching rain, coming down in a straight stream, *músaldhár*, n.m.; (12) general rain, throughout the countryside, *desá bharan*, n.f.; (13) the rains, the four rainy months; *chomásá*, n.m., *chitr máshá*, n.m.; (14) winter rains *máho h*, n.f., *maihwañh*, n.f.

Rainfall, *mính*, n.m.

Rajput, *Ránghar*, n.m.,—the term is rarely applied to Hindus, but is the common name for the Muhammadan Rajput of the district.

Rake, *dotrálí*, n.f.; a drag rake for levelling high land, pulled by bullocks, *gorí*, n.f.; similar but pulled by men, *jindrálá*, n.m., *dikrí*, n.f.

Rapeseed, *sirsham*, n.f.

Rare, *chhídá*, adj. (sparse, few).

Rarely. See Occasionally.

Rascally, *khotá*, adj.

Rash skin-irritation, *kháj*, n.f.

Rat, *músá*, n.m.

Rate (price), *bhá*, n.m.

Rateably, *hussá sárú*, adv.

Ration, *parosá*, n.m. (the term is used chiefly in weddings — one man's ration or commons).

Ratti, ninety-sixth part of a tola, *chirmthí*, n.f.

Rattle, to, *thanakná*, v.n.

Reach. *See* Power.

Read, to, *padhná*, v.a.; *báchná*, v.a.

Reap, to, *bádná*, v.a. *See also* Pick.

Reaping, *lawní*, n.f.; *lámni*, n.f.; reaping of cotton crops by menials who take a share of the pickings as wages, *púí*, n.f.

Rebuke, to, *dántná*, v.a.; *dátná*, v.a.

Recess. *See* Cupboard.

Reclining, *áđá*, adj. (on side, with legs drawn up).

Recognise, to, *bachárná*, v.a.

Recognition, *golán*, n.f.

Reed, *pánní*, n.f. (usually of *anatherum muricatum*, sometimes of *saccharum munja*).

Refuse, to, *nátná*, v.n.

Regard, *maláhjá*, n.m. (Urdu *maláhazá*).

RELATION. *A. Common terms used by either man or woman.*

father, *bábú*, *pitá*, n.m.; mother's sister (elder or younger) *mausi*, n.f.; mother's sister's husband, *mausá*, n.m.; father's sister, *búá*, n.f.; father's sister's husband, *phuphá*, n.m.; father's elder brother, *táú*, n.m.; father's elder brother's wife, *tái*, n.f.; father's younger brother, *káká*, n.m.; father's younger brother's wife, *kákí*, n.f.; husband's or wife's father's elder brother, *táesrá*, n.m.; father-in-law's elder brother's wife, *táes*, n.f.; father-in-law's younger brother, *pítasrá*, n.m.; father-in-law's younger brother's wife, *pítas*, n.f.; father-in-law, *susrá*, n.m.; mother-in-law, *sás*, *sású*, n.f.; sister's husband, *jíjá*, n.m.; sister, *jíjí*, *bebe*, n.f. *See s.v.*; elder brother's wife, *bháwaj*, or *bhábí*, n.f., —always addressed as *bhábí*! younger brother's or son's wife, or any other young wife of the family, *bahúríá*, n.f.; daughter's son, *deautá*, n.m.; daughter's daughter, *deautí*, n.f.; son-in-law, *jamái*, n.m.; step-child, *gailar*, n.m. or f.

B. A man's relations by marriage.

wife's brother's wife, *sálhe*, n.f.; wife's brother's son, *sálút*, n.m.; wife's sister's husband, *sádhú*, n.m.

C. A woman's relations by marriage.

husband's elder brother's wife, *jatháni*, n.f.; husband's younger brother's wife, *daráni*, n.f. (note—two wives hold these relationships to each other whether both husbands are living, or both wives are (after *karáo*, q.v.) living with the surviving brother); son of husband's elder brother, *jethút*, n.m.; son of husband's younger brother, *derút*, n.m.; husband's sister, *nanad*, n.f.; son of husband's sister, *nandút*, n.m.

D. Miscellaneous.

- relationship of two living wives to each other, *aukan saukan*, n.f.; relation of two men whose children are married to each other, *samdí*, n.m.; ditto of two women, *samdan*, n.f.
- Relationship, (1) by blood, *lagmát*, n.m.; (2) by marriage, *sák*, n.m.
- Release, *mukat*, n.f.
- Remarriage, *karáo*, *kráo*, n.m. (of a woman).
- Remedy, *upáo*, n.m.
- Remembrance, *khyás*, n.f.
- Repair, to, *samárná*, v.a.; to get repaired, *samarwáná*, v.a.; of leather things, *gathwáná*, v.a.
- Repaired, to be, *samarná*, v.n.
- Reprove, to, *khurkáná*, v.a.
- Repudiate, *nátná*, v.n. (to repudiate a promise, go back on one's word).
- Reputation, *maihmán*, n.f. (good).
- Residence. See Living.
- Respect, *pat*, n.f.; *ádar*, n.m.; *mán*, n.m.
- Rest. See Stand, a.
- Ret, to. See Steep, to.
- Revenue, (1) the Govt. revenue, *ugáhi*, n.f.; *hálá*, n.m.; (2) the amount settled on anyone as his share, *baith*, n.f.; (3) anything relating to the land revenue department, *kalatrí*, adj. (English 'Collector').
- Rice, *sáthí* (red rice).
- Rich, one who owns lakhs, *lakhíná*, adj. See also Wealthy.
- Rick. See Stack.
- Riddle, *gáhá*, n.m.
- Ridge, (1) ridge between fields to mark the boundary and give access, *daul*, n.f.; (2) high ridge between fields to hold up rain water, *dhí*, n.f.
- Right, *saulá*, *sabbá*, adj. (not left).
- Righteousness, *sat*, n.m.
- Ring, circle, *kuñdal*, n.m. See also JEWELLERY.
- Riot, *muthbher*, n.f.
- Ripening, half-ripe; *gaddar*, adj.
- Rise, to, *uksná*, v.n.
- Road, (1) between villages, broad enough for a cart, *gohrí*, n.f., *gauñdí*, n.f.; (2) ditto, broad enough for several carts, *dagrá*, n.m., *gohar*, n.m., *rástá*, n.m., *gauñdá*, n.m.; (3) high road, *sarrak*, n.f.; (4) see Path.
- Rob, to, *har lená*, v.a.
- Robber, *dhárí*, n.m.—The Lyallpur colony is here known as *Dulá dhárí ká bár*.
- Role, to, *dhalná*, v.n.
- Roll, to, *rolná*, v.a., see also Harrow.
- Root, *múl*, n.m., 'root and stock' *jar-o-múl*.

Rope, (1) twisted strands of *saní*, *dáb*, *munj*, etc., *ghúndí*, n.f.; (2) the rope of the country, made by twisting two *ghúndí*'s together, *jeaurí* or *jewrí*, n.f.; (3) stronger rope, of three *ghúndí*'s, *jeaurá*, n.m.; (4) strong rope made by twisting three *jeaurí*'s together and used for netting sides and floor of a cart, *barrí*, n.f.; (5) well rope, *láo*, n.f. *See* Well Gear.

Roster. *See* Potsherd and Turn.

Rotation, rotation of crops, cultivating alternately wet and dry, *sál palat*, adj.; *hirlí phirtí*, n.f.; in rotation, *hirtí phirtí*, adv.

Rough, *khar*, adj.

Rub, to, *ghisáná*, v.a.

Rubbish. *See* Paraphernalia.

Ruin, *totá*, n.m.

Run, to, *naurná*, v.n.; *bhájná*, v.n.; to hurry, go quickly, *bhájná*, *sítak jáná*, v.n.; to run away, slip off, *chimá jáná*, v.n.; to overtake, *bauhrná*, v.n.

Runnel, (1) of a well, *barrá*, n.m., *khál*, n.m.; (2) to carry off water from the village, *khál*, n.m.; (3) to carry water from the waste to the fields, *ágam*, n.m.; (4) for canal runnels, *see* Watercourse.

Rush. *See* Reed.

Rust, on wheat, *rolí*, n.f. *See* Blight.

Rut, *lík*, n.f.; *líká*, n.f.; *ákhlí*, n.f.

S

Sack, (1) as carried by donkeys, etc., *gún*, n.f.; (2) the large round canvas sack in which grain is stored in a house, *theká* n.m.

Safety, *tek*, n.f.

Saffron, *kesar*, n.f.

Saint, *sañt*, n.m.

Saline, a patch of saline soil in a field, *ran*, n.m. This is distinct from 'shor' for it does not look white. *See* also Sour.

Salutation, (1) amongst common folk, *Rám Rám!* (2) amongst Arya Samajists, *Namaste!* (3) to Brahmans, *Dádá!* (4) to Gosains, *Namo Náráyan!* (5) to Bairagis, *Dandot!* (6) to Jogis, *Udes!*

Salvadora, *S. oleoides*, *jál*, n.m. or f. (m. if large, and f. if small). Its fruit is *píl*, n.f. or *pílú*, n.f. pl., *S. persica* is *kharjál*.

Salvation, *mukat*, n.f.

Sand, (1) sandy soil, *bhúd*, *bhúr*, n.m.; (2) sand hill, *thalí*, n.f., *tíbá*, n.m.; (3) sand encountered in sinking a well, *bálú ret*, n.m., *barrá*, n.m., *barrí*, n.f.; (4) sand that rises in a well from spring level, *bukh*, n.f.

Satiated, to be, *chhikná*, v.n.

Satisfactory, *chokhá*, adj.

Satisfied, to be, *chhikná*, v.a., *dhápná*, v.n.; to be satisfied with anything (whc. is the object of the verb), *sárná*, v.a.

Saturday, *Tháwar*, n.f.; *Saníshchar*, n.m. (a form of the common word used by more literate persons).

Saucepan, a big iron one for cooking sweets, etc., *taslá*, n.m.

Scales, *tákrí*, n.f. (for weighing).

Scarce, *chhídá*, adj.; *mañdá*, adj.

Scarcely *See* Hardly.

Scarcity, *torá*, n.m.

Scarecrow, *daráwá*, n.m.

Scarlet, *lakhá*, adj.

Scatter, to, *khindáná*, v.a.—to scatter broadcast, as seed, or largess at a wedding, *bakherná*, v.a.

Scattered, to be, *bikharná*, v.n.

Scattered. *See* Directions (different).

Scraping, *sark*, n.f. (of a pen, e.g.).

Scratch, *khorí*, n.f.

Scratching. *See* Scraping.

Screen, (1) of wattled cotton stalks round a sugar press, *tátá*, n.m.; (2) screening wall round a cattle-yard, *otrá*, n.m.; (3) *see* also Shade.

Search, *toh*, n.f.

Search for, to, *tohná*, v.a.

Season, *kál*, n.m.; *sambat*, n.m.; a famine season, famine, *kál*, n.m. (corr. from *akál*); a good season, *samá*, n.m., *sambat*, n.m.; a middling season (e.g. when the yield of fodder is good though grain is poor) *korbá*, n.m. The year is divided into three seasons; of four cold months, *jádá*, n.m.; of four hot months, *kharsá*, n.m.; of four rainy months, *chom-ásá*, n.m., *chitrmáshá*, n.m.

Secretly, *lukmán*, adv.

Seduce, to, *ubhárná*, v.a.

See! *re*, *rí*, interj.

Selfsown, *ráná*, adj.; *ark*, adj.

Send, to, *khindáná*, v.a. (of a girl to her husband's house), *ghálná* (to send, send away).

Sense. *See* Intelligence—one's senses, *mat*, n.f.

Sensible, *súá*, adj.

Sentry. *See* Guard.

Separate, *nyará*, adj.; individual, not joint, *naukrá*, adj.

Serve, to, to pass, do, *nimbhná*, v.n.

Service, *kár begár*, n.m. (the work of menials).

Settle, to, *thápná*, v.a. (to fix a price, a date, etc.); *metná*, v.a. (to compose a quarrel).

Settled, to be, *nimbarná*, v.n. (of quarrel, etc.).

Settlement, *bandhej*, n.m. *See* also Decision.

- Settler, a settler in a village who owns no land or share of the estate, *sukhbási*, n.m.
- Severe, *karrá*, adj. (all senses of Urdu *sakht*). See also Hard.
- Sewing, *satakan*, n.f.
- Shade, *chháwá*, n.m., *ot*, n.f.—it is hidden by that acacia, = ‘*us kíkar kí ot meñ sai.*’
- Shake, to, *hálná*, v.n.
- Shameless, *bardangí*, adj.
- Shape, *kaindá*, n.m.
- Share, *sír*, n.m.; *sájhá*, n.m.—a share in a village (which was originally divided on 20 *biswáhs*) and so one's property, *biswá*, n.m.; part of a village, or of the crop made at division of produce, *kúdhá*, n.m.; of a plough, see s.v.
- Sharer, *sájhí*, n.m.; *jí ká sájhí*, n.m. (a labourer who divides the crop as his guerdon), *sír*, n.m.; half sharer, *adhkárí*, n.m.; *adhkáran*, n.f.
- Sharp, *painná*, adj. (of wind, taste, tongue, knife, etc.), sharp-sighted, *salaukhá*, adj.
- Shave, to, *bál samárná*, v.a.; to be shaved, *bál samarná*, v.n.; to get oneself shaved, *bál samarwáná*, v.a.
- Shaven, *múndá*, adj.
- Shawl, woman's head covering, *orhná* or *odhná*, n.m.; a small girl's is *lugrí*, n.f. The piece of red cloth worked in crewels, which often ornaments the front of the *orhná*, is *chhámá*, n.m.; a shawl worked at one end is *ekanyá*, and at both ends *dokanyá*, n.m. For the silver ornamentation, see s. JEWELLERY.
- Sheath, of a ploughshare, see s.v.
- Shed. See Cattle-shed.
- Sheet, a coarse sheet placed in a cart before loading grain, *kharr*, n.m.
- Shelf, a wooden shelf on wall like a *gharawichí*, (q.v.) for holding pots, *paihndí*, n.f.
- Shell, *kauđí*, n.f. (as *kaurí*).
- Sherd. See Potsherd.
- Shield, *dhál*, n.f.
- Shirt. See Vest.
- Shiver, to, *tharná*, v.n.
- Shoeing, *parháí*, n.f. (the work of the *chamár* who provides all the family with shoes when wanted).
- Shoes, *pátan*, n.f.
- Shoot, young shoots of sarson used for human food, *gándal*, n.f.
- Shop, *hát*, n.f.
- Shorn. See Shave, Shaven.
- Shout, to, *kúkná*, v.a.; *lalkárná*, v.n.
- Shower, *mính*, n.m.
- Shreds, torn cloth, *lirá*, n.m.; in shreds, torn to bits, *líram lír*, adv.

- Shrew, *kalkári*, n.f.; *kapattí*, n.f. See Quarrelsome.
- Shrine, to any deity, *thán*, n.m., e.g., *mátá ká thán*; the shrine of the tutelary deity of a village is *bhaiyán*, n.m.—and of a Mussalman one *sayad*, n.m. (corruption from *shahíd*).
- Shrink, to, *dhisalná*, v.n., *kantána*, v.n.; of cloth, etc., *sukar-ná*, v.n.
- Shrub, *bojhrá*, n.m.
- Shut, to, *jhánpná*, v.a.
- Shy, to, *pharakná*, v.n. See also Fear, to.
- Sick. See Ill.
- Sickness. See Illness.
- Sidepost (of doorway), *bájú*, n.m.
- Sift, to, *rolná*, v.a. (by rubbing with the hands).
- Sight. See Eyesight.
- Sill, *dehl*, n.f.
- Simmering, *jharak*, n.m. (noise made by simmering milk).
- Simple, *súdhá*, adj.
- Simpleton, *nimána*, n.m.
- Sister, (1) of actual sister or near cousin, *jíjí*, n.f.; (2) of any unmarried girl of the village, *bebe*, n.f.
- Sister-in-law. See RELATION.
- Sister-in-law's husband. See RELATION.
- Size, *kaindá*, n.m.
- Skin, *chám*, n.m., of man, also, *bakal*, n.m.
- Skinning-ground, *hadwára*, n.m. (animals are skinned here and the bones left to bleach).
- Sky, *ambar*, n.m.
- Skylight, *chauñk*, n.m. See also Ventilator.
- Sling, *gopiyá*, n.m., *gofía*, n.m. (used by crop-watcher).
- Slip, to, *repatná*, v.n.; *thalsná*, v.n.
- Slip off, to, *chímá jáná*, v.n. (to give the slip).
- Slough *kháñchchá*, n.m.; *gaighal*, n.m.
- Slow, *mathá*, adj.; *sahj*, adj.
- Slowly, *dhalke*, adv. See s.v.; *dhímá*, adv.; *jhímá*, adv.
- Sluggish, *mathá*, adj.; *nestar*, adj.
- Small, *ochhá*, adj.; *kután*, adj.
- Smell, *báñs*, n.f. (bad smell).
- Smooth, to, *rolná*, v.a.
- Snake, *nág*, n.f.; *sarp*, n.m.; big snake, *básak*, n.m. See s.v.
- Snatch, to, *khosná*, v.a.
- So. See Thus.
- So and so, *flána*, adj. and pron.; *flána dhínkrá*, adj. and pron.
- Soak, to. See Steep, to.
- Society, *sabhá*, n.f.
- Soft, *satuddá*, adj.
- Soil. See Earth, Land.
- Solitary, *nang malang*, n.m. (of a man who has no family of his own).
- Some, *kim*, adj.

Sometimes, *kimme*, adv.; *kibbe*, adv.

Son, *putrang*, n.m. (poetical).

Son-in-law. *See* RELATION.

Sonless. *See* Childless. The sonless dead, often propitiated as inimical, *gyál*, n.m.

Soothe, to, *puchkárná*, v.a. (to soothe, coax an animal).

Sour, *kára*. *kár*, adj. (of soil).

South, *dakhan*, n.m.

Southern, *dakhnánhá*, adj.; *dakhshní*, adj. *See* s.v.

Southwards, *dakhnán*, adv.

Sow, *surí*, n.f.

Sowing, *berá*, n.m.; *bowára*, n.m.; sowing after one ploughing only, *pár*, n.m.

Spade, *phálá*, n.m., *kassí*, n.f. (a cross between a spade and a mattock).

Spare, *moklá*, adj. (superfluous).

Sparse, *birlá*, adj.; *chhídá*, adj. *See* Rare.

Spear, *sel*, n.f.

Speech, *bachan*, n.m.

Spill, to, *dhalná*, v.n.

SPINNING WHEEL, *charkhá*, n.m. Its principal parts are as follows: the flanges of the wheels, *phángrí*, n.f.; the handle, *hathlí*, n.f.; the three strips of wood forming the base, *pátrí*, n.f.; the two uprights in which the hub is fixed by an iron pivot *khúntá*, n.m.; the hub, *píndá*, n.m.; threads of human hair stretched criss-cross from wheel to wheel, *janđní*, n.f.; the iron spindle, *tákú*, n.m.; the two uprights, supporting the spindle, *gudrí*, n.f.; cotton thread, strengthened with *ák* juice that rotates the spindle, *mál*, n.f.; two thin upright sticks between the *gudrís* to prevent the *mál* riding too far to right or left, *bhanung*, n.f.; pegs of grass or hemp through each *gudrí* on which the spindle rides, *charamakh*, n.f.; a cotton pad bound on the spindle to ease friction on the *mál*, *pínd*, n.f.; leather pad which prevents the spindle shifting too far when the thread is spun, *kákrá*, n.m. or *damrakhá*, n.m.; peg by which the handle is worked, *gherní*, n.f.; iron pivot, *belan*, n.f.; iron bands, or clamps, round the hub, *andí*, n.f.

Spirit, *dárú*, n.f. (potable).

Spitting, *phík*, n.f.

Split, to, *párná*, v.a.

Spoil, to, *dob dená*, v.a.; *khoná*, v.a.

Spoils, *khatyá*, past part. *See* s.v.

Spoon, *paltá*, n.m. (of iron, for turning the sweets in the saucepan).

Spot, 'on the spot.' *See* Exactly.

Spring, (1) spring harvest, *sádhú*, n.f.; (2) spring of a tiger, etc., with claws, *hathwár*, n.f.

Spring forth, to, *úbná*, v.n.

- Squash, to, *pirná* (of cane), v.a.
 Squasher, *pirá*, n.m. (see above).
 Squeezed, to be, *sukarná*, v.n.
 Stable, *padár*, adj.
 Stack, (1) a small stack of millet sheaves, *chaurí*, n.f.; (2) a large stack or rick of ditto, *chaur*, n.m.; (3) small circular stack of any straw that is beaten fine in the threshing, *búngá*, n.m. *kúp*, n.m.; (4) small stack of sheaves standing in the fields, *súá*, n.m.
 Staircase, of masonry or mud, to the roof, *parkálá*, n.m.
 Stalk () of *gowár*, *gúná*, n.m.; (2) of *múng*, *moth*, *urd*, etc., before the pods and leaves are shaken off, *dánthlí*, n.m.; (3) of gram and often of other pulse, *dánká*, n.m.; (4) as (2) and (3), after pods and leaves are shaken off, *jhorá*, n.m.; (5) of cotton, *banshtí*, *banastí*, *banstí*, n.f.
 Stand, for propping cart wheels, holding water-pots, etc., *ghar-
aun chí*, n.f. See also under PLOUGH and Prop.
 Standing, *khalá*, adj. (the ordinary *khará* is also in use), poet., *kharyá*, adj.
 Star, *tará*, n.m.
 Stare, to. See Gaze, to.
 Starling (1) *tiliar* of Panjab, *gohlyá*, n.m.; (2) *myainá* of Panjab, *kábar*, n.f.
 Stay, to. See Halt and Hinder.
 Steadily, *dhalke*, adv. See s.v.
 Steal, to, *ubhárná*, v.a.
 Steep, to, of hemp, etc., *paur sár rakhná*, v.a.
 Steeping, of hemp and other fibres, *paur*, n.m.
 Stench, *báns*, n.f.
 Step. See Pace.
 Step-child, *gailar*, n.m. or f. (a woman's child by previous husband).
 Stick. See Twig.
 Stick to, to, *mandná*, v.n. (of work).
 Sticking to it, *karr*, n.m.
 Stiff. See Hard.
 Stile, *dewá*, n.m. across a ditch, allowing men but not cattle to pass).
 Stirred, to be, *uksná*, v.n. (emotionally); to be stirred up, of a noise, of mind, etc., *máchná*, v.n.
 Stock, *púnjí*, n.f. (stock-in-trade).
 Stoke, to, *jhokná*, v.a.
 Stoker, *jhoká*, n.m.; *jhokanálá*, n.m.
 Stood. See Standing.
 Stool (1) a woman's low stool, chiefly used for spinning, *pidhá*, n.m.; (2) a small three-legged stool (*tipái*) *tiwái*, n.f.; (3) the winnower's stool, *tiwáyá*, n.m.
 Stop, to, *thamná*, v.n.; *dátná*, v.a.; *dánthná*, v.a.; *thámná*, v.a.
 See also Halt, Hinder.

- Stop up, to. *See* Plug, to.
Stork, *labdhīnk*, n.m.; *girj*, n.m.
Story, *khissá*, n.m. (Urdu *kissá*).
Straight, *pádrá*, adj.
Strained, to be, *chanak áná*, v.n. (of a muscle).
Strand. *See* Twist.
Strap, of leather, passing from yoke under bullock's neck, *jot*, n.m.; ditto, joining yoke to plough, *náří*, n.f.
Straw (1) chopped straw for fodder, *sání*, n.f.; (2) rice straw, *parál*, n.f.; (3) barley straw, *solhrá*, n.m. (usually in bulk and not when crushed); (4) of wheat, barley, *gochní*, etc., crushed, *túrá*, n.m.; (5) broken straw of *gowár*, *gúná*, n.m.
Streak, *rekh*, n.f.
Strength, *ásang*, n.f. (Urdu *himmat*—endeavour, courage); force. *haṅgá*, n.m.
Strict. *See* Hard.
Strip. *See* Band.
Strip, to, *chholná*. v.a.
Strong, *chaukas*, adj.; fine, *sámthá*, adj.; powerful, *tháḍá*, adj.
Stubble, *pháns*, n.m. (after crop is cut).
Stupid, *anáří*, adj.
Subdivision, of village—(1) major; usually, *páná*, n.m., and in Rohtak, Mehm, etc., *her*, n.m.; (2) minor; usually *tholá*, n.m., and less commonly, *thok*, n.f., *ḍhong*, n.f., *zail*, n.f.
Submit, to, *nyauṅná*, v.n.
Subscriber. *See* s. Marriage.
Subscription, *úḡ*, n.f., *ugáhí*, n.f. *See* also Marriage.
Succeed, to, *pugná* v.n. *See* s.v.
Such and such. *See* So and so.
Such as, *kesá*, adj.
Suddenly, *gaddesí*, adv.
Suffer, to, *bhogná*, v.a.
Suffice, to, *samáná*, v.n.
Sugar, *búrá*, n.m. (cleaned).
SUGAR PRESS, *kolu*, *kolhú*, n.m.; the actual machine is *belan*, n.m.; the screen of wattled cotton stalks is *tátá*, n.m.; the ground where the carts stand and the canes are laid is *pas-ará*, n.m.; the cauldrons are *karáhá*, n.m.; the vessel in which the juice is collected, *kúṅḍ*, n.f.; the vessel in which the molasses are cooled is *chák*, n.m.; the masonry work between the *karáhá* and *chák* is *cháthá*, n.m.; the crushed cane used for fuel is *khoí*, n.f.; the frame on which it is carried is *máñhí* or *máchí*, n.f.; the man who feeds the press is *múthiyá*, n.m.; the stoker is *jhoká*, or *jhokanálá*; the first washings of the cauldron after the juice has been boiled (the perquisite of the stoker) are *ḍhañḍhoí*, n.f.
Suit, to, *bháná*, v.n.
Suitable, *jogamjog* adj.
Summit, *sikhar*, n.m.; *sikharant*, n.m.

- Summoning, } See Calling.
 Summons, }
 Sun, *din*, n.m.; *bhán*, n.m. (*súraj*, n.m. or f. is also used).
 Sunday, *bár*, n.m.
 Sunshine, *ghám*, n.m.; winter sunshine, *tauthá*, n.m.
 Superfluous. See Spare.
 Surely, *netham*, adv.
 Surety. See Bail.
 Surplus, *bádhá*, n.m.; *badháú*, adj.
 Survey, to. See Gaze, to; Measure, to.
 Surveyor. See Chainman.
 Suspicion, *siñkhyá*, n.f.
 Swaggering, *maror*, n.f.
 Sweetness, *mithán*, n.m. or f.
 Sweets, *khájá*, n.m.
 Swift a swift canal, *sitko*, n.f.
 Switch. See Twig.

T

- Taboo, anything avoided or foresworn, *án*, n.f.; *dáru kí án sai* = wine is foresworn.
 Tail-docked, *lánđá*, adj. (t-docked, cropped, or short; tailless).
 Tailor, *sinyá*, n.m. By caste, *chhípi*, n.m., *chhípan*, n.f. (the caste are also die-stampers).
 Take off, to, *láhná*, v.a.
 Take out, to, *káđhná*, v.a.
 Tale. See Story.
 Talk, *bachan*, n.m.
 Talk, to, *batláná*, v.n. (not, as in Urdu, to tell or explain).
 Talking, *bátí*, n.f.
 Tank. See Pond.
 Tantalise, to, *tarsáná*, v.a.
 Tardily, *audbar*, adv.
 Taunt, *ohlná*, n.m.
 Tax, *tráf*, n.m. (a tax levied by the village community on merchants and craftsmen living in the village, and so distinct from the common *kúđhí kamíní*, though levied in the same way), quære corruption of *ahtráf*?
 Teaching, *sikh*, n.f.
 Tear, to, *párná*, v.a.
 Tease, to, *tarsáná*, v.a.
 Teat. See Udder.
 Temper, *sabháo*, n.m.
 Temple, *mandh* or *madh*, n.m. (of Devi). See also Shrine.
 Ten, *daiñh*, adj.
 Tenant, (1) one whose rights as occupancy tenants are based on clearance of the jungle, *jhúndí tor*, n.m.; (2) tenant at will with no stake in the village beyond his tenancy, *bowá kháwá*, n.m.

Termagant, *kalhári*, n.f.

Test, to, *parkhná*, v.a.

Thatch, (1) a thatched roof, *chhán*, n.f., *osára*, n.m.; (2) a thatch coping to walls used where the soil is light and the walls liable to damage from rain, *parchhí*, n.f.; (3) thatching grass (top leaves of cane, *sar*, or *pání* grass) *púlá*, n.m.

Then, *jib* (corr. adv.).

There, *ut*, adv., *úre*, adv.

Thick, *thádá*, adj.

Thigh, *sánthal*, n.f.

Thin, *jhíná*, adj.

Thing, *chíj*, n.f.

Think, to, *bachárná*, v.a. or n.; to think to oneself, *takná*, v.n.

Thinking, *bichár*, n.m.

Thirst, *tis*, n.f.

Thirsty, *tisáyá*, adj.

Thither, *aun*, adv., *ut*, adv.

Thong, *nári*, n.f. (of leather).

Thorn, *sál*, n.f. (long thorn of *kíkar*, or *rauñj*), a thorn plant, *kandái*, n.f.; argemone mexicana, *kandái satyánásan*; solanum xanthocarpun, *kandái pasarmá*. See also Camel-thorn.

Thorough, *nikand*, adj. (of ploughing, etc.).

Thought, *dhyán*, n.m.; *gyán*, n.m.; *khyás*, n.f.

Thousand, *sansar* or *sahañsar*, adj. See s.v.

Thread, cotton thread, *pát*, n.m.; the bundle of thread spun from the spindle, *kukrí*, n.f.

Three, three days hence, *parle din*, n.m.

THRESHING, (1) a heap of wheat, barley, or *gowár* ready for threshing, *kúndrá*, n.m.; (2) ditto of gram, *khalí*, n.f.; (3) ditto of *bájrá* or *jowár*, *tikaurá*, n.m.; (4) a heap of grain threshed, but not winnowed, *kúdhá*, n.m.; (5) a heap of grain threshed and winnowed, *rás*, n.f.; (6) threshing by drawing a heavy weight yoked to a pair of bullocks over the crop, *phulsí*, n.f.; (7) ditto with two or three pairs of bullocks, *gáhtá*, n.m.; (8) threshing floor, *pair*, n.m.; (9) pole round which bullocks go, *medh*, n.f.

Threshold (of doorway), *dehl*, n.f.

Thrifty, *salwantí*, adj. f., *sughr*, adj.

Throat, *kanthan*, n.m.; *ghítí*, n.f.

Throw away, to }
Throw down, to } *gerná*, v.a.

Thrust in, to, *goná*, v.a., *ghálná*, v.a., *gubbharná*, v.a.

Thud, *gad*, n.f.

Thunder, *galná*, v.n., *gharráná*, v.n., *dhúrñá*, v.n., *dharúkná*, v.n.—in *Sáwan* only, *gharúkná*, v.n.

Thursday, *brihaspat*, n.f.

Thus, *nyún*, adv. (of anything indicated, this way, so, etc.).

Tidy up, to See Clear up.

Tight, *sakrá*, adj.

Till, *lug*, postp.

TIME, *kál*, n.m., *samá*, n.m. (see s.v.), *hán*, n.f. *bakat*, n.m. See also Occasion. Time is calculated as follows:—

1st watch (of 3 hours each) *kallewár*, n.f.; 2nd *dopahrá*, n.m.; 3rd *din dhaleñ* n.m., *din dhalá*, n.m., *tísrá pahr*, n.m.; 4th *din chhip gayá—chauthá pahr*, n.m.; 5th *pahr rát*, n.f., *pánchwán pahr*, n.m.; 6th *ádhi rát*, n.f., *chhatá pahr*, n.m.; 7th *pahr ká tarhá*, n.m., *sátwán pahr*, n.m.; 8th *din nikal rahná*, *áthwán pahr*, n.m. About 12 to 2 A.M. is *ádhi dhaleñ*; one hour before sunrise, *píle bádál*, n.m.; about 4 to 6 P.M., *handíwár*, n.f.; just after sunset, *gandholak*, n.m.; lamplighting or evening meal time, *dívá bale*, n.m., *rotiyán ká bakat*, n.m., *ghás túk ká bakat*, n.m.

Tinkle, to, *thanakná*, v.n.

Together, *ikthauṛe*, adj. pl.

Toil. See Labour.

Toil, to, *pachhná*, v.n.

Tongue, *jíb*, n.f., poet, *jibá*.

Too, *nipaṭ*, adv. and adj.

Tools, a collection of tools, etc., miscellaneous articles taken together, *ráchh pochh*, n.m. pl.

Top. See Summit.

Torn. See Shreds.

Touch. *chho*, n.m.

Towards, *sohín*, postp.

Townfolk, *nagrí*, adj.

Trace, *wástá*, n.m., not a trace, *wás á ná*.

Track, *lík*, n.f., *líká*, n.f. See Path.

Tract, *khand*, n.m.

Trade, *banák*, n.m., *basáoní*, n.f.

Train, *gadí*, n.f.

Training. See Learning.

Tranquillity, *ánañd*, n.m.

Travel, *báṭ*, n.f.

Traveller, *bateau*, n.m.

Travelling, *hánd*, n.f.

Tree, *birwá*, n.m.; *rúkh*, n.m., a large full-grown tree, *birchh*, n.m.

Trench, *khadá*, n.m., a shallow trench to carry water from jungle to fields, *ágam*, n.m.

Trickle, *dhalná*, v.n.

Tricks, *akar makar*, n.m.

Triumphant, *mañgal*, adj.

Trouble, *kalá*, n.f., *trás*, n.m., *janjál*, n.m., *phaiñs*, n.f., *kháṛá*, n.m., making trouble, *tañtá*, n.m.

Trough, of well, into which the bucket is emptied, *parchhá*, n.m.; that at which the cattle water, *khel*, n.f.

Trousers, *suthan*, n.f. (a woman's).

- Trunk, *ped*, *pedá*, n.m. (of tree).
Try, to, *parkhná*, v.a. (to test).
Tumbler, *bakhaurá*, n.m. (of metal).
Turban, (1) of younger persons, *págrí*, n.f.; (2) coloured one used by young 'bloods,' *chirá*, n.m.; (3) twisted one of older persons, *khañdwá*, n.m.
Turn, *bár*, n.f.; *vár*, n.m.; *osrá*, n.m.; *thekar*, n.m. See 'potsherds,' 'rotation.'
Turn round, to }
Turn back, to } *morná*, v.n. and a.
Turned over, *múñdá*, adj.
Twig, (1) large, used as whip, *kámṛá*, n.m.; (2) smaller ditto, *kámṛí*, n.f., *kámchí*, n.f.; (3) twig of *kíkar*, *jáñḍ* and *rauñj*, *lúñg*, n.m.
Twist, (1) a single twist in rope-making, *lar*, n.m., so *dolar*, *tilar* of double, and triple twist; (2) a twist of rope, *bañṭ*, n.m., *bal*, n.m.; (3) a twisted strand of *saní*, *ḍáb* or *munj* is *ghuñḍí*, n.f.; (4) see also Whisp.
Twisting, *maror*, n.f.
Two-pronged, *dosanṅ*, adj.
Tyranny. See Oppression.

U

- Udder, of cow or similar animal, *aurá*, n.m.; of smaller animals, *aurí*, n.f.
Uncle, See RELATION.
Undergo, to, *bhogná*, v.a.
Undertake, to, *otná*, v.a.
Unemployed, *thá lí*, adj.; *ulgá*, adj. (Urdu *alag*).
Uneven, *aulá saulá*, adj., *ákar*, adj.—of a crop, *birlá*, adj.
Unfilial, *kapút*, n.m. See s.v.
Unfortunate, *nigorá* or *nigodá* or *nigodá*, adj.
Ungrateful, *nugrá*, adj.
Unguarded, *chaupat*, adj.
Uninhabited, *nadárad kúdhí*, n.f. (a deserted house).
Uninvited, *angherá*—*angherá áyá* = he came unasked, *angherá bachhá* = a waif.
Unirrigated. See LAND.
Unnecessary, *ushtañḍ*, n.m. (unnecessary activity, etc.).
Unrestrained, *bebás*, adj. (usually of animal beyond control).
Unsavoured, } *lúkhá*, adj. (e.g., dry bread, *lúkhí rotí*): cf.
Unseasoned, { Urdu *rúkhá*.
Until. See Till.
Untruthfulness. See Lying.
Unused, *korá*, adj. (of blank, unused paper).
Unworthy, of a son, *kapút*, n.m.
Upon, *pe*, postp.
Uppish, *ushtañḍí*, n.m.

- Upright, *súdhá*, adj.
 Uproar. *See* Noise.
 Upside down, *múndá*, adj.
 Up to, *lug*, postp. (of time and place).
 Urge, to. *See* Press, to.
 Urine, heat in urine, *chinghwá*, n.m.
 Useless, *neáú*, adj.; *nirsá*, adj.; *áth ná sáth*, adj. *See* Bad;
 anything useless or beyond one's capacity, *ilhán*, n.f.
 Uselessly, *saihm*, adv.

V

- Vegetable, (1) a small plot of vegetables, *palej* or *phalej*, n.m.; (2) cooked vegetables or lentils, *lán*, n.m.; (3) vegetables generally, *bhájí*, n.f.; (4) vegetable-selling tribe, and vegetable sellers generally, *kúnjrá*, n.m.
 Veil, (1) woman's head-covering, *orhná*, n.m. *See* under Shawl; (2) fringe or ornament covering the forehead, *ghuñghat*, n.m.; (3) tinsel veil worn by the bride, *maurí*, n.f.
 Ventilator, (1) large ventilators in the roof of zamindárs' houses, *jháñkhá*, n.m., *chauñk*, n.m.; (2) small hole in the roof for smoke to escape, *mokh*, n.m. (sometimes, as in Panjab, *mogh*).
 Verandah, *sál*, n.f.
 Verse, *dohá*, n.m.
 Very, *upat*, adj. and adv.; *ghankhare*, adj. pl.
 Vessel, (1) earthen vessel, *básan*, n.m.; (2) metal vessel, *kásan*, n.m.; (3) broken vessels of either kind, *dhobrá*, n.m.; (4) a set of earthen vessels supplied by the potter at a wedding, *lík*, n.f.
 Vest, the vest or shirt worn by zamindars, *kamrí*, n.f.
 Vicinity. *See* Neighbourhood.
 Vigorous, *dháří*, adj.
 Village, *gám*, n.m.; a small village, *gámrí*, n.f., *májrá*, n.m. *See* also Hamlet; an outside village other than one's own, *pas-gámán*, n.m.
 Villager, *gowár*, n.m.
 Violently, *gaddesí*, adv.
 Virtue, *gun*, n.m.
 Visit, *meht*, n.f.
 Vitex, v. negundo, *shimálú*, n.m. (the *banná* of the Panjab: used in fomentations and poultices, and popularly supposed to thrive in villages with masculine names, and not in those of a feminine form).
 Voice, *bol*, n.m.

W

- Wage-earner. *See* Labourer.
 Waif, *pálputr*, n.m. (a waif brought up in one's own home)
angherá bachhá, n.m.

- Waistband, *tágrí*, n.f. (a silver chain usually worn by boys and lads).
- Wall, *bhínt*, n.f.
- Wander, to, *háñdná*, v.n, *ramná*, v.n.
- Wandering, *ramat*, n.f. (of Fakirs).
- Want, *phík*, n.f.; *lor*, n.f.; *ríñd*, n.f.; *bisar*, n.m.; scarcity, *torá*, n.m. See also Absence.
- War, *judh*, n.m.
- Warm, *tát*, adj.
- Washed, to have, *dhawáná*, v.a.
- Wasp, *bhirr*, n.f.
- Watch, *pahrá*, n.m, keeping guard at night, *soásái*, n.f.; crop watching, *rakhwál*, n.f.; a watch of the day or night. See TIME.
- Watchman, *pahrú*, n.m.
- Water, *nír*, n.m. (especially in the eyes).
- Water, to, *nírná*, v.a. (of animals).
- Water-carrier (1) a woman carrying for her own house, *panhár*, n.f.; (2) paid to carry for others, *panhári*, n.f.
- Water-clock, a bowl with a hole in the bottom, *kacholí*, n.f., which is set in a *jhákrá*, n.m.
- Watercourse, a broad watercourse, foremost minor distributary, but smaller than *rájbahá*. *khilási*, n.f.; (2) the main distributary beyond the outlet or *morí*, *kháñd*, n.f., *daháná*, n.m.; (3) a small distributary in the fields, *páñkhí*, n.f. The above terms apply to canal irrigation. For wells see Runnel.
- Watering, (1) preliminary watering before sowing, *paleo*, n.f.; (2) first watering after sowing, *kor*, n.m.; (3) next, *dúsrá pání*, *tísrá pání*, and so on.
- Waterpot, (1) ordinary earthen waterpot is *matká*, n.m.; (2) ditto big, with a wide mouth, *jhákrá*, n.m.; (3) any large earthen waterpot, *patñdá*, n.m. See also Vessel, and Pot.
- Wattle. See Screen.
- Wattlings, (1) cotton stalk wattling at side of cart for loading manure, etc., *kirá*, n.m.; (2) rope (*barrí*) wattling at sides of cart, *dhauñj*, n.m.; (3) wattling in floor of cart, of *dhadhain*, *sar*, etc., *chhában*, n.m.
- Way (custom, means), *bidh*, n.f.; *ravaiyá*, n.m.; *dhál*, n.m.; the right method, *sár*, n.f. See also Habit.
- Weak, *híná*, adj.; *napoj*, adj. (feeble); poor in quality, *bodá*, adj.; *márá*, adj.
- Wealth, *kañchan*, n.m., *lakhshmí*, n.f. (see s.v.), *dhan*, n.m.
- Wealthy, *bhágwán*, adj., *dhaní*, adj. Gradations may be expressed by *saupatí*, *hazárpatí*, *lákhpátí*, adj.—worth a hundred, a thousand or a lakh.
- Weather. See Season.
- Weaver-bird, *baiyá*, n.m. (ploceus baiyá).

Wedge. See PLOUGH.

Weed, to, *nalauná*, v.a.

Weeded, to be, *nalná*, v.a.

Weeds, *araṅgá*, n.m.

Weights, *bát*, n.m. (for scales).

WELL, (1) drinking well, *panghat*, n.m.; (2) for watering cattle, *píhí ká kúná*; (3) an unlined well, fallen in, *jherá*, n.m.; (4) a shallow hole, dug in the ground for drinking, *niáman*, n.m. (the word seems to belong to the south of the district); (5) generally, *kúá* or *kúná*, n.m.; (6) the principal parts of a well are (a) collective name for superstructure of a well, *dháná*, n.m.—consisting of (b) stone slab on which the well bucket is emptied, *sil*, n.f.; (c) cross beam or stone across the mouth of well on which the superstructure is raised, *dehlí*, n.f.; (d) two uprights at each end of above, on which the beam supporting the wheel is fixed, *otá*, n.m., *otrá*, n.m.; (e) horizontal beam on above, *pát*, n.m.; (f) two small uprights resting on above in which the axle tree of well wheel is fixed, *guddí*, n.f.; (g) the well wheel, *bhaun*, n.m. (of a drinking well, *bhauní*, n.f.) and (h) the axle tree of the wheel, *dhurá*, n.m., *kaná*, n.m.; (i) the yoke, collectively, *júr*, n.m., consisting of (j) upper wooden bar, *júá*, n.m.; (k) lower wooden bar, parallel to above, *talotí*, n.f.; (l) ropes joining these two at extremities, *nánḡlá*, n.m.; (m) battens across the *júá* and *talotí*, *gatá*, n.m., or covered with leather, *chamgatá*, n.m., and (n) rope on the *júá* into which the *láo* is fixed, *nánḡní*, n.f.; (o) the well rope, *láo*, n.f. or in drinking well, *nejú*, n.f.; (p) the twisted end of the *láo* into which a peg fits and joins it to the *nánḡní*, *púnjri*, n.f.; (q) the block to which the *láo* is fastened, *karjú*, n.m., *bhirrá*, n.m.; (r) two iron rings which join the block and the next following item, *balí*, n.f.; (s) cross iron bars over the ring of the bucket, *boují*, n.f.; (t) the iron ring to which the bucket is attached, *maṅḡal*, n.m.; (u) the well bucket, *chars*, n.f.; (v) a wooden bar, leather covered, making a lip to prevent the water tilting back into the well when the bucket is put down full, *gátá*, n.m.; (w) the slope down which the bullocks pull, *gaun*, n.f., at the top of which, *mará*, n.m., they are yoked.

Note.—These terms are liable to variation in different parts of the district, and are markedly different among the *ahír-vátí* speaking people of the *kachchá* well tract.

Well-behaved, *súdhá*, adj.

Well-finished, *kámal*, adj. (Urdu *pakká*).

Well-living, *lára*, adj.

Well-sinking, a system of, under which one's friends and neighbours contribute their labour in return for feasting, *pasára*, n.m.

- Well-wisher, *sajjan*, n.m.
West, *pachham*, n.m.; *átham*, n.m.; *áthman*, n.m.
Western, *áthamaná*, adj.; *pachháyan*, adj.
Westwards, *áthmanán*, adj.; *pachháheñ*, adj.
Wet. See Moist, Moisture—newly watered, *gargarí*, adj.
Wet, to become, *bhíjná*, v.n.
What? *ke*, pron.
Wheat, *gehún*, n.m., cake of wheat bread, *phulká*, n.m.; *mandá*, n.m.; wheat-rust, *rolí*, n.f.
Wheel, *paiyán*, n.m.
Wheeler, *dhorí*, n.f. (of wheeler pair of bullocks in a cart).
When, interrogative, *kad*, adv.; relative, *jib*, adv.
Where? *kaṛe*, (interrog.), adv.
Whether, *bháwe*, *bháweñ*, conj.
Whip. See Goad.
Whisp, a twist of several cane tops used to bind a sheaf of canes, *jún*, n.m.
White, *dhaulá*, adj.; *sufet*, adj.; pale, or straw-coloured, *bhúrá*, adj.
Whither? *kit*, adv.; *kaṛe*, adv.; *kitor*, adv.; *kínghe*, adv.
Whole, *saglá*, adj.
Widespread, *desaulá*, adj. (affecting the whole country side).
Widow, *bidwá*, n.f.
Widowhood, *rañdápá*, n.m.
Wife, *jo*, n.f.; *parní*, n.f.; *tiryá*, n.f.; *kámní*, n.f.; *bahú*, n.f.—any young wife of the house as son's or younger brother's, *bauhuríá*, n.f. See also Woman.
Wild, *khar*, adj., e.g. *khar jál*. See also Selfsown.
Wince, to, *kantáná*, v.n.
Wind, (1) generic, *bál*, n.f., *paun*, n.f.; (2) west wind, *pichhwá* or *pachhwá* (sc. *bál*); (3) east wind, *pirwá* (sc. *bál*); (4) south wind, *dakhnái* (sc. *bál*); (5) north wind, *utrái* (sc. *bál*). The above four can be used substantively or adjectively with *bál*; (6) a hot withering wind blowing after rain and injuring the young crops, especially in *Sáwan*, *kháng*, n.f.; (7) the hot wind of summer, *lú*, n.f.
Wine, *dáru*, n.f.
Winged, *pañkhí*, adj.
Wink, to, *jhapakná*, v.n.
Winnow, to, *barsáuná*, v.a.; *pachhorná*, v.a.; *kaláná*, v.a.
Winnowing basket, *chháj*, n.m.
Winter, *jádá*, n.m. (the four cold months).
Winter-rains, *máhoṭh*, n.f., *maihwaṭh*, n.f.
Wisdom, *síkh*, n.f.; *sodhí*, n.f.; *hauslá*, n.m.; *ágam budhí*, n.f.
Wise, *gyání*, adj.; *sajjan*, adj.; *súá*, adj.; *sughar*, adj.
With, *gail*, postp.; *setí*, postp., *sudhán* (= Urdu *samet*) postp.
Without, *bin*, postp.
Withdraw, to, *khosná*, v.a.
Wither, to, *ogalná*, v.n. (especially of gram crop).

Woman, *nár*, *nárí*, *istri*, *tiriá*, *tiryá*, n.f.; *lúgái*, n.f. (fem. of *log.*); *bír* or *bírbáni*, n.f. (strictly of a married woman in her husband's village); a lovely woman, *gorí*, n.f.; *kámní*, n.f.; women, see Folk.

Womb, *garbh*, n.m.

Wonder. See Marvel.

Wood, *káth*, n.m.; store of wood in front of a carpenter's house, *khátor*, n.f.; a copse, *baní*, n.f.; a forest, *ban*, n.m.; *ban-khand*, n.m.

Work, to. See Labour; to work a pattern, *kádhná*, v.a.

Work, *kár*, n.m.; unpaid work, *kár begár*, n.m. See Labour, Toil.

Working, *kamer*, n.f. (ability to work).

Workman, *kammáú*, n.m.; *kamerá*, n.m.; *kamerí*, n.f.

World, *pirthí* or *prithmí*, n.f., *jag*, n.m.

Worn out, *bodá*, adj.

Worship, to, *bhajná*, v.a.

Worth, *jog*, adj., constructed with the inflected infinitive, *karan jog = karne láik*.

Worthless, *nirsá*, adj.; *neáú*, adj.; *út*, adj. (as a term of abuse) *nigorá*, *nigodá*, or rarely *nigodá*, adj.

Wrothy, a worthy son, *sapút*, n.m.

Wound, *gháo*, n.m.; *jhorí*, n.f.

Wrath. See Anger.

Wretch, } *nigorá*, *nigodá* or rarely *nigodá*, adj.; *nirbhág*,

Wretched, } adj.

Wrong, a, *kotak*, n.m.; *kukram*, n.m.

Wroth. See Displeased.

Y

Yard, *bagar*, n.m. (the *sahan* of Urdu) see s.v.; Cattle-yard, *gher*, n.m., *ugár*, n.m.; *guár*, n.m.; enclosure for stocking fodder etc., *gitwár*, n.m., *gitwára*, n.m.

Year, this year, *ibke sál* or more commonly *ibke*; next or last year, *pur ke sál* or *pur ke*, next or last but one, *prár ke sál* or *prár ke*.

Yes, *hambe*, interj.

Yield, to, *nyauñná*, v.n.

Yoke, of plough or cart, *júá*, n.m., *jot*, n.f., a yoke of oxen, *jot*, n.f., well yoke, *júr*, n.m.

Yokel, *gowár*, n.m.

Younger. See Junior.

Youth, a, *gábrú*, n.m.

Z

Zenith, *sikhar*, n.m., *sikharañt*, n.m.

Zizyphus, Z- nummularia, *jhár*, n.m., a heap of it cut for fodder or hedge-making and still green is *dhínkar*, n.m.; its leaves dried and ready for use as fodder are *pálá*, n.m., its berry is *ber*, n.m.

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