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## REPORT

OF THE

#### COUNCIL

OF THE

## ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1877.

READ AT THE ANNUAL GENERAL MEETING,

APRIL 29th, 1878.



#### LONDON:

PRINTED BY TAYLOR AND FRANCIS,

RED LION COURT, FLEET STREET.

1878.

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OF THE

## ZOOLOGICAL SOCIETY OF LONDON.

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#### REPORT OF THE COUNCIL.

April 29, 1878.

The Council have the pleasure of submitting to the approbation of the Fellows their forty-ninth Annual Report

upon the progress of the Society.

This, in accordance with previous Reports, is divided into three heads, the first of which relates to the General Condition of the Society, the second to the operations carried on at the Office in Hanover Square, and the last to the state of the Gardens in the Regent's Park.

#### I. GENERAL CONDITION OF THE SOCIETY.

#### 1. STATE OF THE ROLL OF MEMBERS.

#### a. Fellows and Annual Subscribers.

The number of Fellows, Fellows Elect, and Annual Subscribers at the close of the year 1877 amounted to 3358. Of these there were:—

Compounders who have	paid £	20				87
Ditto ditto	£	3()				815
Compositions remitted .				•		17
Paying annual contribution	ous of a	£2				74
Ditto ditto	ē	£3			•	2212
Dormant						
Admission-fees unpaid .						34
Annual Subscribers, payi	ng £3		•	•		8
						3358
					_	

The corresponding number of Members of the Society at the close of 1876 was 3311, showing a net addition to our list of 47 members during the year 1877. The corresponding addition in 1876 was 70.

The progress of the Society during the past Ten years, as regards the number of its Ordinary Members, is given

in the subjoined Table.

Comparative Statement of Elections, Deaths, Resignations, and Removals during the past Ten years, with the number of Fellows and Annual Subscribers at the end of each Year.

	or ted.			Died.			F	Resigne	d.	B	lemove	d.	og .	of nal rs,
Years.	- ಆ.≍	Con	npound	lers.	Subsc	ribers.	Subse	ribers.	ssion es aid.	Subscribers.		ssion ses aid.	ased to Fellows	umber of Fellows d Annual bscribers
	Ele-ac Re-ac	£20.	£30.	Feere- mitted	£2.	£3.	£2.	£3.	Admission Fees Unpaid.	£2,	£3.	Admission Fees Unpaid.	Ceased Fello	Number of Pellows and Annual Subscribers, December 31
1868.	316	3	9		17	33	2	28			2		94	2924
1869.	197	7	7		17	37	3	30	1	2	25	26	155	2966
1870.	160	9	7		6	32		51					105	3021
1871.	163	4	8		10	38	1	48		2	26		137	3047
1872.	185	5	7	2	11	38	2	40	1		62	14	182	3050
1873.	216	5	7		6	33		34			2	1	93	3173
1874.	221	7	6	1	8	60		33			74	8	197	3197
1875.	180	8	16		8	57		36				11	136	3241
1876.	221	9	28		4	63		49	1				154	3311
1877.	229	3	23		9	63	•••	20		•••	58	6	182	3358

### b. Honorary, Foreign, and Corresponding Members.

No change has taken place in the lists of Honorary and Foreign Members in 1877.

The following Corresponding Members were elected during the year to replace vacancies:—

G. F. Bennett, Esq., of Toowoomba, Queensland.

Dr. Jean Cabanis, of the Royal Zoological Museum, Berlin.

John Murray, Esq., of 32 Alva Street, Edinburgh, late Naturalist to H.M.S. 'Challenger.'

These elections have raised the total number of the Society's Corresponding Members to 200, being the full complement authorized by the By-laws.

#### c. Medallists.

At the last Anniversary the Council had the pleasure of announcing that the Prince of Wales had consented to accept the Society's Gold Medal, which they had agreed to offer to His Royal Highness in acknowledgment of his many valuable donations to the Menagerie and of other favours. They have now the pleasure of informing the Fellows that the Medal was duly presented to His Royal Highness in person at Marlborough House, on the 7th of June last, by a deputation of the Council, consisting of the President, Vice-Presidents, and Secretary, and was most graciously received.

The Silver Medal of the Society has been conferred, by a unanimous vote of the Council, since the last Anniversary, on Mr. Robert Hudson, F.R.S., one of the Vice-Presidents of the Society, in recognition of the valuable services he has rendered to the Society for a lengthened period of years, during which he has acted on the Council and on

various Committees.

#### 2. STATE OF THE FINANCES.

#### a. Income.

It could hardly have been expected that the Income of the Society in 1877 would have attained the large amount of 1876, which, owing to the great augmentation of the Garden-receipts caused by the attractions of the Prince of Wales's Collection of Indian animals, reached an unprecedented total. But the Council have great satisfaction in pointing out that, next to that exceptional year, 1877 has given us the largest Income ever attained by the Scienty—the total receipts having amounted to £30,988 2\varepsilon\$. 2d., which, in a time of almost universal depression, must be regarded as extremely favourable.

The rapid and permanent advance of the ordinary Income of the Society, which has more than doubled itself during the past twenty years, will be seen by the following

Table:—

Year.	Total Income.	Year.	Total Income.
1858 1859 1860 1861 1862 1863 1864 1865 1866 1867	$\begin{array}{c} \pounds \\ 14,034 \\ 15,194 \\ 16,863 \\ 16,072 \\ 27,397 \\ 20,284 \\ 21,713 \\ 23,457 \\ 24,379 \\ 25,041 \\ \end{array}$	1868 1869 1870 1871 1872 1873 1874 1875 1876 1877	£ 24,958 22,768 23,257 24,620 26,728 28,099 28,417 28,738 34,955 30,988

The next Table gives the amounts of the various heads of Income in 1877, and of the corresponding amounts in 1876.

Comparative Table of Income, 1876 and 1877.

			-					_			_
	1876.			187	77.		Increase	.	Decrease.		
Admission Fees:-		8.				d.			£	8.	d.
Past	85	0	0]	85	0	0		1		• • • • •	• • • •
Present	900	0	0	955	0	0	55 0	0			
Annual Subscriptions:—											
Past	75	0	0	54	0	0			21	0	0
Present	6,433	3	0			0					
Future	36		0			0	56 0	0			
Compositions	1,470	0	0	1.260	0	0			210	0	0
Ivory Tickets	72		0		12	0	1		28	18	0
			0	18,765		6					6
Garden Sales	743		ĭ	505		1					0
Rent for Refreshment-rooms	1,051		ō			ō					
Publications	976		9					8			****
Dividends	355		í	461		2					
Miscellaneous	39		2			0	100 12	•	37		
		10	-		2	27		••••	91	•3	0
Rent for Premises in Oxford					1	3	7 ( 1	2			
Street				1.4	1	0	1 44 1	9		••••	
	24.055	4	•	20.000	- 0	0	510.12	_	1 100	1.4	11
	24,899	4	1	30,988	2	2					
							Ded. In	.cr.	519	13	0
*									12 0 45	-	
Decreas:				1			1		3,967	1	11

Adding to the Income of 1877 the balance of £1280 6s. 11d. carried forward from 1876, we find a total sum of £32,268 9s. 1d. available for the expenditure of the year 1877.

#### b. Expenditure.

This amount was disposed of in the following manner:— The sum of £29,002 12s. 11d. was required for the ordinary and extraordinary expenses of the year; the sum of £2008 6s. 8d. was devoted to the repayment of a temporary loan of £2000, obtained from the Society's Bankers in December 1876, and the sum of £155 6s. 10d. was invested in the purchase of Stock. After deducting a sum of £1 3s. paid for two powers of attorney by the Bankers, this left a balance of £1100 19s. 8d. to the credit of the Society on the 31st of December last, which was carried over for the benefit of the present year.

The subjoined Table gives the various items of expenditure of 1877, and a comparison of each of them with the corresponding amount paid in 1876:—

	1	Exp	end	liture o	of		Iner	ease.	Deci	eas	e.
	18	76.		18	77.		Inci	case.	1500		
	£	8.	d.	£	8.	d.	£	8. d.	£	8.	d.
Arrears of previous years	2,596	7	0	2,664	11	11	68	4 11			
Rent, Rates, Taxes, and Insu-				1							
rance	970	0	3	_,		3	48				· · · ·
Salaries, Wages, and Pensions	5,254	16	1	5,408		6	153	7 5			••••
Cost and Carriage of Animals	1,967	6	0	1,179		2				11	
Provisions	5,049	9	6	5,012		8			37	2	10
Menagerie Expenses	2,951 139	2	6	2,972		7	21	2 1			
Keepers' Dresses			3			6			.  6	12	9
Works, Materials, and Repairs.	3,390		2	3,890		9	500	2 7	0.444		•••
New Buildings		1	7			11			3,444	- 6	8
Garden Expenses	834	$\frac{2}{14}$	6	951		3 6	117	12 9		10	6
Band Expenses	233 219	13	0	233		-		3 0	31	10	О
Advertisements	654	17	0	242 729	16 8	0 5	23		,	• • • • • •	••••
Honse and Office Expenses	77	15		77	13	0	1-1	11 5	0	2	
Stationery and Account Books	457		5	458	10	•		9 11		ت	1
Printing (Miscellaneous)	2,121	0	2		17	$\frac{4}{2}$	502		10000000000	• • • • •	••••
Publications	281		ī	335		2	53	8 1		• • • • •	••••
Library Expenses		5	0	50	_	0	12			• • • • • •	••••
Returned Subscriptions			·	68		0	68			• • • • • •	••••
Cost of Medal	50	0	0	50		0	00	9 0		•••••	••••
Expenditure of Davis Bequest	59	4	.1	59	ı	10	*********		0	2	E
Expenditure of Davis Dequest		-						••••			
	31,635	10	11	29,002	12	11	1.643	12 2	4.276	10	2
Decrease				1				Incr.	1,643		2
Decrease							_ ca.		-,019		
									2,632	18	0
				l			<u> </u>		1		

Of the total expenditure of £29,002 12s. 11d. the portion to be attributed to ordinary expenditure was £27,290 13s. 7d., the remaining sum of £1711 19s. 4d. having been devoted to certain special expenses not involved in the

ordinary maintenance of the Society's establishment, of which the particulars are as follows:—

	£	8.	d.
New Buildings and Works	1555	1	9
New plan of the Gardens	106	17	7
Grant to Zoological-Record Association	50	0	0
	1711	19	4

As regards the increase of the ordinary expenditure, which in 1877 amounted altogether to £1557 10s. 3d. more than in 1876, the Council beg leave to point out to the Society that the two principal amounts of excess are under the heads of "Works" (£500 2s. 7d.) and "Publications" (£502 17s.). As regards the first of these it should be explained that an unusually large staff of workmen was retained on the Garden-establishment in the summer and autumn of the past year, occupied partly on painting and repairs, and partly on alterations consequent upon the erection of the new Lion-house, in connexion with which the necessary alteration of the levels of the surrounding ground caused considerable outlay. Part of this extra staff it has now been thought possible to dispense with; but as the number of buildings and quantity of iron fencing increases year by year, there must of necessity ensue an increased cost for their maintenance in an efficient state. The increase in the sum devoted to publications was mainly caused by the number of parts of 'Transactions' published. The Council would regret the necessity of restricting expenditure under this head, although, should circumstances arise which would make it expedient, there would be no difficulty in reducing the amount to a considerable extent by not accepting so many memoirs requiring illustration in a quarto form.

#### c. Assets and Liabilities.

The Assets and Liabilities of the Society on the 31st of December 1877 were as follow:—

## ASSETS.

		Arrears of						old a ided		Co	sh.	Total.		
	Pre Ye	viou ars.	الكنف	Curi			Property.			Ca	s11.	100		
												£		
Cashat the Banker's						•••				1,100	19 8	1,100	19	8
Freehold Premises,														
£23,725, less														
Mortgage to														
Messrs. Drum-								, ,	_	ł				_
mond of £10,000		• • • •	••••	•••••	••••	••	13,725	0	0		• • • • • • •	13,725	0	0
Cost of £1,994 9s.														
2d. Consols							7.000		_			7.000	_	^
(Davis Fund)		••••	•••		••••	•••	1,800	, 0	U		•••••	1,800	U	U
Arrears of Sub-	00	^	_	1.17	Λ	0						229	0	_
scriptions Ivory Tickets	00	7	0	1.11	6	0		• • • • •	• • • •		•••••	13	-	0
Ivory Tickets Garden Sales	107	4	0	300	7	0						857		0
Garden Sales	20	0	6	168	6	9					•••••	188	-	8
Publications		O	U	100	J		••••	••••	• • • •		•••••	100	11	0
Rent for Premises in Oxford Street				<b>ク</b> ち	Ω	0				-		75	0	0
in Oxiora Street		• • • •	• • • •	10				•••••			******	10		
	589	15	6	781	2	2	15.525	5 0	0	1.100	19.8	17,989	17	
	002	10	0	!	_	Ĩ	10,020	, 0		1		1.,000	-1	-3

## LIABILITIES.

	Del	ots.
Bills, &c., estimated at— For the Gardens	£ s. d. 1650 5 0 642 15 10	£ s. d.
Rent and Taxes unpaid— For the Gardens General Establishment	188 19 7 12 13 8	201 13 3
Contract for new second-class Refreshment room  Due for young Hipporotamus		725 0 0 800 0 0
		4019 14 1

#### d. General State of the Finances.

Before concluding the financial part of their Report, the Council think it right to acknowledge that the excellent way in which the Society's accounts have been kept, which has been repeatedly brought to their notice by the Committees of Finance and Audit, has been mainly due to the assiduous and constant attention of Mr. John II. Leigh, the Society's Accountant, who has now completed fifty years in the Society's employment. In acknowledgment of the great services thus rendered, the Council have unanimously agreed to present Mr. Leigh with a memorial in the shape of a gold watch and chain of the value of fifty guineas, which will be delivered to him this day by the Chairman of the present Meeting.

## 3. Purchase of the Freehold of the Society's House and of the House adjoining at the back.

In their last Annual Report the Council announced that the unusually favourable state of the finances in 1876 had determined them to commence a second Reserve Fund for the special purpose of enabling the Society to procure better accommodation for the Offices and Library than is at present afforded by this House. With this view the sum of £3000 had been invested in the purchase of £3104 15s. 9d. Consolidated 3 per Cents., to form the commencement of a "New Offices Reserve Fund." In 1877 it was determined to take more active steps to ascertain how the necessary accommodation could best be provided, and a special Committee of the Council was appointed for the purpose.

After much consideration and inquiry the Committee came to the conclusion that the most convenient and advantageous way of providing the necessary accommodation would be to purchase the freehold of the present house (No. 11 Hanover Square) and of the house immediately adjoining it at the back (No.  $314\frac{1}{2}$  Oxford Street), these houses belonging both to the same owner, and the lease of the Oxford-Street portion being terminable in about six

years.

The Council accordingly entered into a contract with Messrs. Cooper for the purchase of the freehold of the above-named properties for the sum of £22,225, which they were assured by experienced surveyors was a fair value under the circumstances. The necessary funds were raised by the sale of the sums of £10,649 5s. 5d. Reduced 3 per Cents. (being the ordinary Reserve Fund) and £3104 15s. 9d. Consols (being the New Offices Reserve Fund above mentioned), and by borrowing from Messrs. Drummond, the Society's Bankers, the sum of £10,000. As regards this advance, which it is proposed to repay in yearly instalments of £1000 on the 21st of November in every year, the Council feel bound to acknowledge the ready and liberal manner in which Messrs. Drummond placed the necessary sum at the Society's disposal. After the expiration of ten years, therefore, the Society will be in possession of an unencumbered freehold estate of the value, as they are led to believe, of at least £25,000, while there will be ample room for the proposed extension of the Society's premises so soon as the lease of the adjoining house shall fall in.

In the meanwhile the additional accommodation immediately required for the Library can be obtained at a small cost by placing a new story on the present building in

Hanover Squarc.

## II. OFFICE, 11 HANOVER SQUARE.

#### 1. Scientific Meetings.

To the fourteen meetings for the despatch of scientific business held in the Society's Rooms in Hanover Square in 1877, 137 communications were made. Of these 98 were from Fellows and 30 from Corresponding Members of the Society. The remaining 9 papers were from individuals not belonging to the Society, and were communicated to it by the Secretary or by other Members. The corresponding number of communications in the year 1876 was 132.

These communications were submitted to the Committee of Publication, by whom the following orders were made respecting them. Five were ordered to be printed entire in the 'Transactions' of the Society, and 112 in the 'Proceedings,' such illustrations being in each case allowed as the Committee considered necessary for the purpose. Of

the remaining communications, abstracts or extracts were considered to be sufficient for publication.

#### 2. Scientific Publications.

The volume of the Society's 'Proceedings' for 1877, which is now on the table, contains 893 pages, illustrated by 85 (mostly coloured) plates.

Five Parts of the Society's 'Transactions' were issued

during the year 1877, namely:-

## Vol. IX. Part X. (February, 1877).

Revision of the Heterocerous Lepidoptera of the Family Sphingide. By Arthur G. Butler (with five plates).

## Vol. IX. Part XI. (March, 1877).

On the Rhinoceroses now or lately living in the Society's Menagerie. By P. L. Sclater, M.A., F.R.S., Secretary to the Society (with five plates), concluding the volume.

## Vol. X. Part I. (May, 1877).

On the Axial Skeleton of the Struthionidæ. By St. George Mivart, F.R.S. &c.

## Vol. X. Part II. (August, 1877).

On the Ancient or Quaternary Fauna of Gibraltar, as exemplified in the Mammalian Remains of the Ossiferous Breccia. By George Busk, F.R.S. (with twenty-seven plates).

## Vol. X. Part III. (October; 1877).

Notes on the Manatec (Manatus americanus) recently living in the Society's Gardens. By A. II. Garrod, M.A., F.Z.S., Prosector to the Society (with three plates).

On Dinornis (Part XXI.): containing a Restoration of the Skeleton of Dinornis maximus, Owen. With an Appendix, on Additional Evidence of the Genus Dromornis in ustralia. By Professor Owen, C.B., F.R.S. (with three plates).

Since the commencement of the present year two more parts of 'Transactions' have been issued, and four others, containing all the remaining papers read up to the close of the year 1877, ordered for publication in the 'Transactions,' are in a very forward state.

The Council again wish to call the particular attention of the Members to the advantages offered to subscribers to the Society's Publications. The Subscription price of the Publications in the case of Fellows and Corresponding Members of the Society is £1 1s. per annum, provided such subscription be paid in advance, before the Anniversary Meeting of the Society, held on the 29th of April in each year.

The Publications of the year consist of four parts of 'Proceedings' (in 8vo, illustrated by upwards of 45 Plates, mostly coloured) and one or more parts of 'Transactions' (in 4to, with from 5 to 15 Plates). The ordinary prices at which these volumes are sold to the public amounts

to five or six Pounds in each year.

The Publications cannot be sent out by post, but are delivered to Subscribers free of expense at any address within the metropolitan districts.

#### 3. LIBRARY.

The Library, under the superintendence of Mr. F. H. Waterhouse, the Society's Librarian, has been kept in good working order during the past year.

The sum of £343 16s. 5d. was devoted to the purchase

of new zoological works.

The most important additions to the Society's Library

since the last anniversary were the following:-

A valuable donation of two folio and two quarto original illustrated MS. volumes of the 'Birds of India.' By the late Colonel S. R. Tickell. Presented by the Rev. E. A. Tickell.

A collection of 125 sheets of duplicates of original drawings of animals in the collection of the late John Russell Reeves, Esq., F.R.S., F.Z.S. Presented by Mrs. Reeves.

A nearly complete set of the Bulletin de la Société Philomatique de Paris. Presented by Monsieur Alphonse

Milne-Edwards, F.M.Z.S.

The following is a list of the periodicals received in 1877 from the various Societies and Institutions with whom this Society is in correspondence.

#### AMERICA.

- The Academy of Natural Sciences, Philadelphia. Proceedings, 1877, pp. 1-280.
- The Smithsonian Institution, Washington.
  Annual Report, 1875 & 1876.
  Contributions to Knowledge, vols. xx., xxi.
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### III. GARDENS, REGENT'S PARK.

#### 1. Buildings and Works.

The principal special expenditure on new buildings and works in the Gardens in 1877 was, as will be seen by the following details, in connexion with the new Lion-house and the surrounding grounds.

## List of Amounts paid for New Buildings and Works in 1877.

	£	s.	d.
1. New Lion-house	908	5	1
2. Removing and re-erecting Sheep-sheds	59	2	5
3. New Stone Steps	92	0	0
4. New Lodge and Entrance-gates	129	7	6
5. New Zebra-fence	195	10	0
6. Deepening and cleaning Well	144	_	3
7. New Second-class Refreshment-room	26	16	6

The expenditure on the new Lion-house was £9085s. 1d., of which the sum of £687 ls. 1d. was devoted to the completion of the large summer-cages at the back. These cages, which were finished early last year, the Council are

pleased to say, have proved to be a success in every way, enabling the animals to obtain air and exercise during the summer months, and allowing the crowds which frequent the Gardens at that season much greater facilities for examining their occupants.

The sum of £59 2s. 5d. was devoted to the re-erection of the Sheep-sheds on a site near the Antelope-house. Their removal was rendered necessary by their too close proximity to the new Lion-house, the vacant space thus

obtained having been levelled and turfed.

Besides this, the whole area round the Lion-house has been gravelled, and the compartments for ornamental water-fowl on the north and south sides completed and stocked, so that, with the exception of painting the two middle out-door cages, the Council believe that little further expenditure on this group of buildings beyond that of ordinary maintenance will be necessary.

A new flight of stone steps for the end of the terrace

cost £92.

A new ornamental outside fence and gates at the North Entrance cost £129 7s. 6d.

The new fencing rendered necessary by the transfer of the Elands from the Middle Gardens into the Antelopehouse cost £195 10s.

The sum of £144 0s. 3d. was devoted to clearing out the well in the Gardens, and to deepening the bore; but although a considerable increase in the supply of water has thus been obtained for the present, there can be no question that the amount of water to be got by pumping from wells within the metropolitan area is decreasing year

by year.

The only other important work undertaken by the Council last year was the rebuilding of the second-class refreshment-room according to the plans prepared by Mr. Salvin, when the complete reorganization of this part of the establishment was determined upon in 1868. On the preliminary work and removal of the old building the sum of £26 16s. 6d. was spent in 1877. Since then the new second-class refreshment-room, in a style harmonizing with the two portions previously completed, has been built by Messrs. George Smith & Co., under contract for the sum of £725, and is now ready for use. A new water-main has been laid down in order to give a con-

tinuous supply, and the building is ready for the throng of visitors that usually frequent it during the summer months.

These seven items make a total of £1555 1s. 9d. devoted to the permanent improvement of the Society's Garden establishment in 1877.

#### 2. Staff.

The permanent Staff of the Society's Gardens continues nearly the same as at the last Anniversary. It consists of:—

1 Superintendent.

1 Assistant Superintendent.

1 Head Kecper.

5 Keepers (1st class).

7 Kcepers (2nd class).

10 Keepers (3rd class).
3 Money-takers.

1 Storekeeper.

1 Cook.

1 Office Clerk.

1 Prosector's Assistant.

1 Watchman.

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Besides these there are 17 Helpers in the Menagerie, 1 Head Gardener, 10 Garden-labourers, 9 Artisans, 4 Painters, 7 Labourers, 1 Butcher, 1 Fireman, 2 Night-Watchmen, 2 Ladies' Attendants, and 1 Timekeeper employed at weekly wages; so that the number of the whole staff may be reckoned at about 90 persons.

#### 3. VISITORS.

The total number of visitors to the Society's Gardens during the year 1877 was 781,377, as will be seen by the following Table, which gives the corresponding numbers of entrances under each head for 1876 and 1877:—

	1876.	1877.	Comparison.	
Fellows and Friends	220,917 231,008 386,631	206,485 186,533 324,900	Decr. 14,432 Decr. 41,475 Decr. 61,731	
	60,043 17,165	52,645 10,814	Decr. 7,398 Decr. 6,351	
	915,764	781,377	Decr. 134,387	

The following Table, in which is given a statement of the Number of Visitors to the Society's Gardens during each year, from the year 1828 to the year 1877, will show that there is a steady increase under this head, and that the number of entrances in 1877 has been greater than in any previous year except in 1876.

Number of Visitors to the Gardens, 1828-77.

Year. Number.	Ycar. Number.
1828 98,605	$1853 \dots 409,076$
1829 189,913	$1854 \dots 407,676$
1830 223,420	$1855 \dots 315,002$
1831 262,193	1856 344.184
$1832 \dots 206,652$	1857 339,217
1833 211,343	1858 351,580
1834 208,583	1859 364,356
1835 210,068	1860 394,906
$1836 \dots 263,372$	1861 381,837
1837 173,778	†1862 682,205
1838 179,197	1863 468,700
1839 158,432	1864 507,169
1840 141,009	1865 525,176
1841 132,616	1866 527,349
$1842 \dots 107,459$	1867 556,214
1843 98,280	1868 573,186
1844 101,527	1869 572,848
1845 99,615	$1870 \dots 573,004$
1846 100,045	1871 595,917
1847 93,546	1872 648,088
1848 143,630	1873 713,046
1849 168,895	1874 706,907
$1850 \dots 360,402$	1875 699,918
*1851 667,243	$1876 \dots 915,764$
$1852 \dots 305,203$	$1877 \dots 781,377$
* Year of the Great Exhibition.	† Year of the International Exhibition.
	The state of the s

#### 4. ZOOLOGICAL LECTURES.

The Council have the pleasure of announcing that Professor Huxley has accepted the post of Davis-Lecturer for the present year.

Professor Huxley will give a course of six lectures on

Fridays, at 5 P.M., commencing on Friday, May 17.

The subject will be Crustaceous Animals and their Organization.

#### 5. PICTURE GALLERY.

The Society's series of water-colour drawings taken by Mr. Joseph Wolf from animals living in the Menagerie, which was sent by the Council to South Kensington to be exhibited in the Exhibition of Scientific Instruments in 1876, has been rearranged in the Picture Gallery, and will shortly be open for inspection by the Fellows and Visitors to the Gardens.

It is certain that no such series of life-like portraits of

animals of equal excellence has ever been formed.

Several additions have been made to the Collection, amongst which may be mentioned as of special interest five drawings of the five different species of Rhinoceroses in the Gardens (being the originals from which the illustrations to the Secretary's memoir on living Rhinoceroses, published in the Society's Transactions, were taken), and a large chalk drawing of the Gorilla.

#### 6. PROSECTOR'S DEPARTMENT.

Prof. Garrod, F.R.S., has made the following communications to the scientific meetings during the year, based mainly upon the examination of specimens that have died in the Gardens:—Notes on the Visceral Anatomy and Osteology of the Ruminants, with a Suggestion regarding a Method of expressing the Relations of Species by means of Formulæ; Note on the Solid-hoofed Pigs in the Society's Collection; On the Mechanism of the Intervertebral Substance, and on some Effects of the Erect Position of Man; Notes on the Anatomy of the Musk-Deer (Moschus moschiferus); Notes on the Anatomy and Systematic Position

of the Genera Thinocorus and Attagis; Notes on the Anatomy of Passerine Birds—Part II.; Notes on the Anatomy of Passerine Birds—Part III.; A Memoir on the Brain of the Sumatran Rhinoceros; On some Points in the Visceral Anatomy of the Rhinoceros of the Sunderbunds (Rhinoceros sondaicus); Note on an Anatomical Peculiarity in certain Storks; On the Tænia of the Rhinoceros of the Sunderbunds (Plagiotænia gigantea, Peters); Notes on the Anatomy of the Chinese Water-Deer (Hydropotes inermis); Note on the Possible Cause of Death in a young Seal; Note on the Absence or Presence of a Gall-bladder in the family of the Parrots.

The Prosector reports that the mortality in the Society's Gardens during the year 1877 was less than it had been in the two previous years, and that specially among the larger Felidæ was this reduction noticed, most probably on account of the new Lion-house affording more favour-

able protection during the colder months.

#### 7. MENAGERIE.

The number of animals belonging to the first three classes of Vertebrates living in the Society's Menagerie at the close of 1877 was 2200. The corresponding number on the 31st of December, 1876, was 2265, as will be seen by the subjoined Table:—

	December 31.		G	
•	1876.	1877.	Comparison.	
Quadrupeds. Birds Reptiles	$\begin{array}{c} 637 \\ 1405 \\ 223 \end{array}$	667 1357 176	Incr. 30 Decr. 48 Decr. 47	
_	2265	2200	Decr. 65	

The total number of registered additions to the Menagerie in 1877 was 1260, of which 506 were acquired by presentation, 324 by purchase, 181 were bred in the Gardens, 181 were received on deposit, and 68 obtained in exchange.

The mode in which these figures compare with those of

previous years is shown in the subjoined table:-

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1870.	386	529	160	218	40	1333
1871.	496	434	138	129	90	1287
1872.	460	527	195	110	52	1344
1873.	483	457	191	231	188	1530
1874.	425	296	214	242	25	1202
1875.	559	557	156	143	43	1458
1876.	533	316	171	172	27	1219
1877.	506	324	181	181	68	1260

The following is a list of the animals which have been bred in the Gardens of the Society between the 1st of January 1877 and the 1st of January 1878.

#### MAMMALS.

3 Collared Fruit-Bats (Cynonycteris collaris).

3 Tigers (Felis tigris).

- 2 Striped Hyænas (Hyæna striata).
- 4 Common Foxes (Canis vulpes). 1 Common Badger (Meles taxus).

2 Coatis (Nasua nasica).

4 Chinchillas (Chinchilla lanigera).

- 1 Central-American Agouti (Dasyprocta isthmica).
- 1 Hairy-rumped Agouti (Dasyprocta prymnolopha).

1 Wild Boar (Sus scrofa).

1 Zebu (Bos indicus).

1 <sup>3</sup>/<sub>4</sub>-breed Zebu (Between Bos indicus ♂ and hybrid Bos frontalis ♀).

1 Cape Buffalo (Bubalus caffer).

2 Wapiti Decr (Cervus canadensis).

2 Axis Deer (Cervus axis).

1 Indian Muntjac (Cervulus muntjac).

1 Reeves's Muntjac (Cervulus reevesi).

2 Vulpine Phalangers (Phalangista vulpina).

1 Red Kangaroo (Macropus rufus).

1 Great Kangaroo (Macropus giganteus).

2 Yellow-footed Rock-Kangaroos (Petrogale xanthopus).

1 Derbian Wallaby (Halmaturus derbianus).

#### BIRDS.

1 Sacred Ibis (Geronticus æthiopicus).

1 Black-necked Swan (Cygnus nigricollis).

1 Black Swan (Cygnus atratus).

5 Variegated Sheldrakes (Tadorna variegata).

14 Spotted-billed Ducks (Anas pæcilorhyncha).

23 Chilian Pintails (Dafila spinicauda).

12 Summer Ducks (Aix sponsa).

1 Porto-Rico Pigeon (Columba corensis).
3 Spotted Turtle Doves (Turtur suratensis).

5 Geoffroy's Doves (Peristera geoffroyii).

- 2 Talpacoti Ground-Doves (Chamæpelia talpacoti).
- 2 Bronze-winged Pigeons (*Phaps chalcoptera*). 1 Wonga-Wonga Pigeon (*Leucosarcia picata*).
- 20 Amherst Pheasants (Thaumalea amherstiæ).
  - 2 Forked-tailed Jungle-Fowls (Gallus furcatus).
  - 5 Temminck's Tragopans (Ceriornis temmincki).

1 Sun Bittern (Eurypyga helias).

#### REPTILES.

- 21 Common Boas (Boa constrictor).
- 14 Mocassin Snakes (Tropidonotus fasciatus).

The following is a systematic list of the animals belonging to Species new to the Catalogue which were exhibited in the Society's Gardens in the year 1877.

# Class MAMMALIA. Order QUADRUMANA.

Family SIMIIDÆ.

Genus Hylobates.

4a. Hylobates leucogenys, Ogilby. White-cheeked Gibbon.

Hab. Siam.

a. Male. Presented W. H. Newman, Esq., H.B.M. Consul at Bangkok, June 2, 1877. See P.Z.S. 1877, p. 679, pl. lxx.

# Family CERCOPITHECIDÆ.

#### Genus Cynocephalus.

64a. Cynocephalus gelada, Rüpp. Gclada Baboon. Hab. Abyssinia.

a-c. Males; d-g. Females. Deposited, Dec. 7, 1877. See P.Z.S. 1878, p. 1.

# Family HAPALIDÆ.

#### Genus HAPALE.

98a. Hapale pygmæa (Spix). Pygmy Marmoset. Hab. Upper Amazons.

a. Male. Purchased, April 27, 1877. See P. Z. S. 1877, p. 418.

# Order INSECTIVORA.

# Family ERINACEIDÆ.

Genus Erinaceus.

136 a. Erinaceus frontalis, Smith. Cape Hedgehog. Hab. South Africa.

a. Received in exchange, Aug. 13, 1877. See P.Z.S. 1877, p. 681.

# Order CARNIVORA.

# Family FELIDÆ.

Genus Felis.

148a. Felis lanea, Scl. Woolly Cheetah. Hab. South Africa.

a. Male. Purchased, May 29, 1877. See P.Z.S. 1877, p. 532, pl. lv.

# Family VIVERRIDÆ.

#### Genus Paradoxurus.

182b. Paradoxurus leucomystax, Gray. White-whiskered Paradoxure.

Hab. East Indies.

a. Purchased, Oct. 13, 1877.

183a. Paradoxurus prehensilis (Desm.). Prehensile Paradoxure.

Hab. British Burmah.

a. Presented by W. H. Pattison, Esq., July 13, 1877. See P. Z. S. 1877, p. 681.

# Family CANIDÆ.

Genus Canis.

223a. Canis jubatus, Desm. Red Wolf.

Hab. Buenos Ayres.

a. Purchased, Nov. 30, 1877. See P. Z. S. 1877, p. 806, pl. lxxxi.

# Order RODENTIA.

# Family SCIURIDÆ.

Genus Sciurus.

277a. Sciurus ephippium, Müll. Saddled Squirrel.

Hab. Borneo.

- a. Presented by Messrs. Hill and Isaacs, Lieuts. R.N., May 15, 1877.
- 279 a. Sciurus prevosti, Desm. Prevost's Squirrel. Hab. Malacca.
  - a. Purchased, May 29, 1877.

#### Genus Sciuropterus.

300a. Sciuropterus layardi, Kelaart. Layard's Flying Squirrel.

Hab. Ceylon.

a. Presented by Sir Charles Peter Layard, Oct. 8, 1877. See P. Z. S. 1877, p. 754.

# Order UNGULATA.

# Family BOVIDÆ.

Genus Ovis.

408 a. Ovis burrhel, Blyth. Burrhel Wild Sheep. Hab. Himalayas.

a. Deposited, March 20, 1877.

#### Genus CERVICAPRA.

439a. Cervicapra bohor (Rüpp.). Bohor Antelope. Hab. East Africa.

a. Female. Deposited, April 24, 1877. See P. Z. S. 1877,
 p. 418.

#### Genus Bubalus.

468 a. Bubalus æquinoctialis, Blyth. East-African Buffalo. Hab. East Africa.

a. Male; b. Female. Purchased, Oct. 27, 1877. See
 P. Z. S. 1875, p. 457, and 1877, p. 754.

# Family CERVIDÆ.

# Genus Dama.

473 a. Dama mesopotamica, Brooke. Mesopotamian Fallow Deer.

Hub. Mesopotamia.

a. Male. Purchased, May 28, 1877. See P.Z.S. 1875, p. 261, pl. xxxviii., and 1877, p. 531.

#### Genus Cervus.

- 495 a. Cervus minor, Hodgs. Spotted Poreine Deer. Hab. India.
  - a. Male. Presented by H.R.H. The Prince of Wales, K.G.,
     July 12, 1877. See P. Z. S. 1876, p. 463.
- 501a. Cervus gymnotis, Wiegm. Naked-eared Deer. Hab. Ecuador.
  - a. Female. Presented by Chas. Cooper, Esq., March 29, 1877. From Guayaquil.

# Order EDENTATA.

# Family DASYPODIDÆ.

#### Genus Tolypeutes.

522a. Tolypeutes tricinctus (Linn.). Brazilian Threebanded Armadillo.

Hab. Brazil.

a. Purchased, Nov. 3, 1877. See P. Z. S. 1877, p. 805.

# Order MARSUPIALIA.

# Family DIDELPHYIDÆ.

#### Genus Didelphys.

- 531 a. Didelphys derbiana, Waterh. Derbian Opossum. Hab. U. S. Columbia.
  - a-d. Presented by L. R. Dickinson, Esq., May 16, 1877.
- 531 b. Didelphys dorsigera, Linn. Merian's Opossum. Hab. South America.
  - a. Purchased, July 13, 1877.

# Class AVES.

# Order PASSERES.

# Family TURDIDÆ.

Genus Turdus.

7c. Turdus flavipes, Vieill. Yellow-footed Thrush. Hab. Brazil.

a. Purchased, Oct. 17, 1877.

# Family CRATEROPODIDÆ.

#### Genus Trochalopteron.

52a. Trochalopteron erythrocephalum (Vig.). Red-headed Laughing Thrush.

Hab. Himalayas.

a. Purchased, March 8, 1877.

Family ——?

Genus Sibia.

52c. Sibia capistrata (Vig.). Black-headed Sibia. Hab. Himalayas.

a-c. Purchased, March 8, 1877. See P.Z.S. 1877, p. 303.

# Genus GRAMMATOPTILA.

54a. Grammatoptila striata (Vig.). Striated Jay-Thrush. Hab. Himalayas.

a, b. Purchased, March 8, 1877. See P. Z. S. 1877, p. 303.

# Family PYCNONOTIDÆ.

#### Genus Hemixos.

61 a. Hemixos flavala, Hodgs. Brown-cared Bulbul. Hab. Himalayas.

a-c, Purchased, March 8, 1877. See P.Z.S. 1877, p. 303.

#### Genus Hypsipetes.

61 b. Hypsipetes macclellandi (Horsf.). Rufous-bellied Bulbul.

Hab. Himalayas.

a, b. Purchased, March 8, 1877.

# Family PLOCEIDÆ.

#### Genus Amadina.

109a. Amadina erythrocephala, A. Smith. Red-headed Finch.

Hab. South Africa.

a, b. Females. Received in exchange, May 18, 1877.

#### Genus Hypochera.

128 a. Hypochera nitens (Gm.). Shining Weaver-bird. Hab. Africa.

a. Received in exchange, May 11, 1877.

# Family CORVIDÆ.

Subfamily Corvina.

Genus Corvus.

281 a. Corvus corone, Linn. Carrion-Crow. Hab. Europe.

a. Presented by W. M. Price, Esq., June 27, 1877.

# Subfamily GARRULINE.

#### Genus Calocitta.

301b. Calocitta formosa (Sw.). Swainson's Long-tailed Jay.

Hab. Central America.

a. Purchased, May 29, 1877.

#### Genus Urocissa.

304a. Urocissa flavirostris, Blyth. Yellow-billed Blue Magpie.

Hab. India.

a-c. Received in exchange, May 15, 1877.

# Order COCCYGES.

# Family MOMOTIDÆ.

#### Genus Momorus.

338a. Momotus brasiliensis, Lath. Brazilian Motmot.

Hab. Brazil.

a. Purchased, Aug. 30, 1877. See P. Z. S. 1877, p. 681.

# Family CAPITONID.E.

#### Genus Megalæma.

381 b. Megalæma hodgsoni, Bp. Hodgson's Barbet.

Hab. Himalayas.

a. Purchased, March S, 1877. See P. Z. S. 1877, p. 303.

# Order PSITTACI.

# Family PSITTACIDÆ.

Genus Caïca.

500a. Caïca xanthomera, Gray. Yellow-thighed Parrot. Hab. Upper Amazons.

a, b. Purchased, April 27, 1877. See P. Z. S. 1877, p. 419.

#### Genus Pionopsitta.

505 a. Pionopsitta pileata (Scop.). Red-capped Parrot. Hab. Brazil.

a. Purchased, March 13, 1877.

# Order STRIGES.

# Family BUBONIDÆ.

Genus Asio.

571a. Asio mexicanus (Gm.), Mexican Earcd Owl. Hab. Mexico.

a. Purchased, Feb. 15, 1877. See P.Z.S. 1877, p. 159.

# Genus Syrnium.

578 a. Syrnium indranee (Sykes). Indranee Owl. Hab. Ceylon.

a. Presented by Capt. Vincent Legge, R.A., May 7, 1877.

# Genus KETUPA.

589a. Ketupa ceylonensis, Gm. Ceylon Fish-Owl. Hab. Ceylon.

a. Presented by Capt. R. B. Turner, April 4, 1877. See
 P. Z. S. 1877, p. 418.

# Order ACCIPITRES.

Family FALCONIDÆ.

Subfamily BUTEONINE.

#### Genus Morphnus.

620 a. Morphnus guianensis (Daud.). Guianan Crested Eagle.

Hab. Amazons.

a. Purchased, May 23, 1877. See P. Z. S. 1877, p. 531.

#### Genus Urubitinga.

621 d. Urubitinga zonura, Shaw. Banded-tailed Urubitinga.

Hab. Amazons.

a. Purchased, June 15, 1877.

# Genus Spizaëtus.

- 642 a. Spizaëtus ceylonensis (Gm.). Ceylon Hawk-Eagle. Hab. Ceylon.
  - a. Presented by Capt. W. Vincent Legge, R.A., F.Z.S., May 7, 1877.

# Order HERODIONES.

Family ARDEIDÆ.

Genus Nycticorax.

- 730a. Nycticorax gardeni (Gm.). Garden's Night-Heron. Hab. Brazil.
  - a. Purchased, Oct. 17, 1877.

# Family CICONIIDÆ.

#### Genus Tantalus.

- 751 a. Tantalus loculator, Linn. American Tantalus. Hab. America.
  - a. Purchased, Aug. 30, 1877. See P. Z. S. 1877, p. 681.

# Order COLUMBÆ.

# Family COLUMBIDÆ.

Genus Leptoptila.

- 917 a. Leptoptila ochroptera, Pelz. Orange-winged Dove. Hab. Brazil.
  - a. Purchased, June 14, 1877.

# Order GALLINÆ.

# Family PHASIANIDÆ.

#### Genus Perdix.

- 967 a. Perdix hodgsoniæ (Hodgs.). Hodgson's Partridge. Hab. Bootan.
  - a. Presented by J. M. Cornély, Esq., C.M.Z.S., June 16, 1877.
  - b. Purchased, June 26, 1877. See P. Z. S. 1877, p. 680.

# Family CRACIDÆ. Subfamily CRACINÆ.

Genus CRAX.

1045 a. Crax globulosa, Spix. Globular Curassow.

Hab. Amazons.

a. Female. Purchased, Oct. 15. 1877.

#### Genus Nothockax.

1052a. Nothocrax urumutum (Spix). Urumutum Curassow.

Hab. Upper Amazons.

a. Purchased, July 16, 1877. See P. Z. S. 1877, p. 681.

# Family TURNICIDÆ.

Genus Turnix.

1075 a. Turnix sykesi, Smith. Sykes's Hemipode. Hab. India.

a, b. Presented by Mrs. Wood-Mason, April 3, 1877.

# Order FULICARIÆ.

Family RALLID.E.

Subfamily I. RALLINÆ.

Genus Porzana.

1079a. Porzana carolina (Linn.). Carolina Rail. Hab. America.

a. Presented by Capt. Carl Hannes, May 25, 1877. From Jamaica.

# Subfamily II. FULICINA.

Genus Gallinula.

1097 b. Gallinula galeata (Licht.). American Moorhen. Hab. America.

a. Presented by Capt. Carl Hannes, May 25, 1877. From Jamaica.

#### Genus Fulica.

1103 a. Fulica ardesiaca, Tschudi. Slaty Coot. Hab. Peru.

a. Male; b. Female. Purchased, Sept. 18, 1877. See P. Z. S. 1877, p. 683.

# Order LIMICOLÆ.

# Family SCOLOPACIDÆ.

Genus HIMANTOPUS.

1165 a. Himantopus brasiliensis, Brehm. Brazilian Stilt-Plover.

Hab. Brazil.

a. Purchased, July 16, 1877.

# Class REPTILIA.

# Order TESTUDINATA.

Family EMYDIDÆ.

Genus CLEMMYS.

30 a. Clemmys muhlenburgi (Schweigg.). Muhlenburg's Terrapin.

Hab. North America.

a-g. Purchased, July 3, 1877.

# Family TRIONYCHIDÆ.

Genus Trionyx.

70a. Trionyx perocellatus, Gray. Chinese Trionyx. Hab. China.

a. Purchased, Oct. 6, 1877.

# Order SAURIA.

# Family AMPHISBÆNIDÆ.

Genus Blanus.

90a. Blanus cinereus (Vandelli). Grey Amphisbæna. Hab. Spain.

a. Presented by John Goddard, Esq., March 13, 1877. See P. Z. S. 1877, p. 270.

# Family SCINCIDÆ.

Genus Silubosaurus.

130a. Silubosaurus stokesi, Gray. Stokes's Lizard. Hab. Australia.

a. Purchased, March 23, 1877.

# Order OPHIDIA.

Family BOIDÆ.

Genus Pelophilus.

153a. Pelophilus madagascariensis, Dum. & Bibr. Madagascar Boa.

Hab. Madagascar.

a. Purchased, Aug. 15, 1877.

# Class BATRACHIA.

#### Order URODELA.

Genus Salamandra.

26a. Salamandra atra, Laur. Black Salamander. Hab. Europe.

a-e. Presented by Aug. Kussmaul, Esq., Aug. 16, 1877. From Switzerland.

The following is a List of the Donors and their several Donations to the Menagerie during the year 1877.

Her Majesty the Queen.

One Egyptian Gazelle.

His Royal Highness the Prince of Wales, K.G.

One Sambur Deer, one Spotted Porcine Deer, two Rampoor Hounds, one Himalayan Bear.

Allen, J., Esq.

One Common Jackal.

Allen, J. Mason, Esq.

One Green Monkey.

Anderson, A., Esq., F.Z.S.
One African Buzzard.

Angus, A. Forbes, Esq. One Tiger.

Arabin, Mrs., F.Z.S.

One Malabar Green Bulbul.

Attwater, H., Esq.

One Pennant's Parrakeet.

Attwood, Miss, F.Z.S.

Two Scarlet Ibises.

Baillie, Alex. F., Esq.

Two Grey-breasted Parrakeets, three Sclater's Curassows.

Baird, John, Esq. Two Lions.

Barnett, B., Esq.

One Grey-headed Parrakeet.

Barrett, Mrs. E. J.

One Collared Peccary.

Bartlett, Mr. A. D.

One Pike.

Bazeley, Mrs. W.

One Vulpine Phalanger.

Bective, Earl of.

One Banded Ichneumon.

Benson, H. B., Esq.

One Egyptian Gazelle.

Berington, C. C., Esq.

One Wood-Brocket.

Best, Dr. G. P.

One Brown Coati.

Bovill, Miss Jessie.

One Common Magpie.

Bowie, W. A., Esq.

Two Horned Lizards.

Breton, General.

One Yellow-bellied Liothrix.

Broadbent, Dr.

One Pig-tailed Monkey.

Broughton, L. Delves, Esq.

Two Carolina Conures.

Brown, L. C., Esq.

One Malbrouck Monkey.

Browne, Miss L. L. One Raven.

Buckland, F., Esq., F.Z.S.

A Collection of American Charr, one Common Buzzard, one Eel.

Bunbury, The Lady.

One Rough-legged Buzzard.

Burke, Capt.

One Black-headed Partridge, one Hyacinthine Porphyrio, two Abyssinian Guinea-fowls.

Butler, T. G., Esq.

Two Vervet Monkeys.

Cameron, Mrs.

One Weeper Capuchin.

Carletti, P. V., Esq.

One Common Genet.

Chambre, Miss.

One Common Hangnest.

Chapman, J. J., Esq.

One Rose Hill-Parrakeet.

Clayton, Mrs.

Two Common Marmosets.

Cleaver, Mrs.

One Lesser White-nosed Monkey.

Clifton, C., Esq., F.Z.S.

One Chilian Sea-Eagle, one Jameson's Gull, one Heron, two White Storks, one Greater Black-backed Gull.

Clover, Mr. T.

One Horned Lizard.

Cobb, Mr. Henry

Two Hyacinthine Porphyrios.

Cochrane, E., Esq.

One Macaque Monkey.

Cocks, A. H., Esq.

Six River-Lampreys.

Cohen, Mrs.

One Greater Sulphur-crested Cockatoo.

Conyngham, Lord F., M.P., F.Z.S.

Two Emus.

Cooke, B. G. Davies, Esq. Three Water-Ouzels.

Cooper, C., Esq.

One Naked-eared Deer.

Coote, Mrs. Arthur.

One Saker Falcon.

Cornély, Mons. J. M., C.M.Z.S. One Thibetan Partridge.

Cotton, Capt. F.

One Sæmmerring's Antclope, one Arabian Gazelle.

Court, S. A', Esq.

Eight Green Tree-Frogs.

Cox, R. S., Esq.

One Rhesus Monkey.

Craig, R. S., Esq.

One Maugé's Dasyure.

Cresswell, F., Esq.

Two Grey Plovers, one Ringed Plover, one Dunlin, two Hooded Crows.

Crewe, Capt. R. H.

One Senegal Touracou.

Cullen, Mrs.

One Bonnet-Monkey.

Currey, Eliot G., Esq.

One Brazilian Tree-Porcupinc.

Daly, T., Esq.

One Macaque Monkey.

Des Vœux, G. W., Esq.

One Oil-bird.

Dickinson, L. R., Esq.

Four Derbian Opossums.

Ditmas, John, Esq.

One Purple Kaleege.

Dixon, Capt. E.

One Black Scoter.

Domville, Lieut. E. F., R.N.

One Moustache-Monkey.

Dore, Mrs.

One Greater Sulphur-crested Cockatoo.

Dudgeon, R., Esq.

One Grivet Monkey.

Dunlop, Hamilton, Esq.

One Common Hangnest.

'Dwarf,' crew of H.M.S.

One Pig-tailed Monkey.

Ellis, Hon. E. H.

One White-cheeked Capuchin, four Silky Marmosets.

Erskine, Sir Thomas, Bart., F.Z.S.

Two Arctic Foxes.

Escott, Mrs.

One Malbrouck Monkey.

Evans, T. H., Esq.

One Bonnet-Monkey.

Evans, T. W., Esq., M.P. One Passerine Owl,

Fairfax, Capt., R.N.

Two Rufous Tinamous.

Faulkner, Mrs. A. O.

One Wood-Owl.

Feilden, H. W., Esq.

One Natterjack Toad.

Fenton, G. F., Esq.

Two Black Vipers, two Common Snakes, one Smooth Snake, one Æsculapian Snake, thirty Wall-Lizards, one Green Lizard.

Field, Barclay, Esq., F.Z.S.

Two Crowned Partridges.

Fisk, the Rev. G. H. R., C.M.Z.S.

Three Rhomb-marked Snakes, one Hoary Snake, one Robben-Island Snake.

Fleuss, Mrs.

One Spotted Ichneumon.

Forbes, H. O., Esq., F.Z.S.

Twelve Sand-Lizards, four Wall-Lizards.

Foster, A. B., Esq.

Two Common Otters.

Fraser, A. A., Esq., F.Z.S. One Rusa Deer.

Fraser, A., Esq.

Five Green Lizards.

Fraser, Capt. Edmund.

One North-American Reindeer.

Fulton, Capt.

One Black-backed Jackal.

Geneste, F. A. B., Esq.

One Yellow-fronted Amazon.

Goddard, J., Esq.

One Grey Amphisbæra.

Golding, T., Esq.

One Bonnet-Monkey.

Goldsmid, Bartle G., Esq.

One Slender-billed Cockatoo.

Gover, Miss.

One Macaque Monkey.

Graham, Capt. J.

One Egyptian Gazelle.

Green, F., Esq. One Emu.

Greenwood, J. F., Esq.

One Macaque Monkey.

Gregory, W. H., Esq.

One Barraband's Parrakeet.

Greville, The Lady.

Two White-eared Conures.

Groove, Comm. Stanhope, R.N.

One Puma.

Guilford, Earl of.

One Black-backed Jackal.

Guthrie, J., Esq., F.Z.S.

Four Penguin Ducks.

Hance, T., Esq.

One Common Crane.

Hannes, Capt. Carl.

One American Moorhen, one Carolina Rail.

Harris, Capt. J. C.

Two Maugé's Dasyures.

Harrison, H., Esq.

One Radiated Tortoise.

Harper, Mrs.

Two Bonnet-Monkeys.

Hart, Lionel, Esq.

One West-African Python.

Harvey, J., Esq.

One Grivet Monkey.

Hayssen, R., Esq.

One Common Fox.

Heath, J., Esq.

One Common Cuekoo.

Henderson, A. C., Esq. One White Pelican.

Henderson, H. W., Esq.

One Macaque Monkey.

Henderson, W. H., Esq., R.N. One Galapagan Tortoise.

Hill, Lieut., R.N.

Two Javan Chevrotains, one Saddled Squirrel, one Green Turtle.

Hughes, W. W., Esq., F.Z.S. One Common Kestrel.

Huntley, Dr. J.

Three Chaplain Crows.

Isaac, Lieut., R.N.

Two Javan Chevrotains, one Saddled Squirrel, one Green Turtle.

James, W. D., Esq.

One Grivet Monkey, one Nisnas Monkey.

Jamraeh, Mrs. A. H.

One Californian Quail, one Wedge-tailed Pigeon.

Jones, Miss.

One King Parrakeet.

Kendall, J. J., Esq.

One River Jack-Viper, one West-African Python, one Royal Python.

Kennan, Major.

Two Common Swans.

King, Capt. H.

Two Double-striped Thicknees, one Levaillant's Amazon.

Kinncar, A., Esq.

One Herring-Gull.

Knocker, J. H. B., Esq.

One Purple-faced Monkey.

Kussmaul, Aug., Esq.

Five Black Salamanders.

Lablache, F., Esq.

One Greater Sulphur-crested Cockatoo.

Lambert, Rear-Admiral Rowley, C.B.

Two Tigers.

Larmer, Capt.

Two Secretary Vultures.

Laver, H., Esq.

One Common Partridge.

Layard, Sir Charles Peter.

One Layard's Flying Squirrel.

Legge, Capt. W. Vincent, F.Z.S.

One Antarctic Skua, one Indrance Owl, one Ceylon Hawk-Eagle.

Leith, Miss Alice.

One Common Boa.

Lidbury, Mr. A.

One Common Kestrel.

Lilford, Lord, F.Z.S.

One Smooth Snake.

Long, Mrs. Ceeil.

One Macaque Monkey.

Lovell, Francis, Esq.

One Mandrill, one West-African Python.

Lowe, Col. J. S.

Three Black-bellied Sand-Grouse.

Lyford, Mr. J.

Four Common Kingfishers.

Lynn, Dr.

One Grey Ichneumon.

McCheane, G., Esq.

One Bonnet-Monkey.

Marchant, W. L., Esq.

One Greater Sulphur-crested Cockatoo.

Mason, J. Wood, Esq.

One Bay Bamboo-Rat.

Mason, Mrs. Wood.

Two Sykes's Hemipodes, three Chinese Quails, one Rain-Quail, one Asiatic Quail.

Massey, W. Dillon, Esq.

Two Slender-billed Cockatoos.

Massey, T., Esq., F.Z.S.

One Common Squirrel.

Mathews, Mrs.

One Levaillant's Amazon.

Mayhew, W., Esq.

One Diana Monkey.

Medhurst, R. H., Esq.

Two Chinese Geese.

Mellin, G., Esq.

One Common Scal.

Mello, Mrs. Henry J.

One Grey Ichneumon.

Milestone, Mr. R. J.

One Common Lobster.

Millet, H., Esq.

One Rhesus Monkey.

Millington, W. H., Esq.

One Long-eared Owl.

Miron, Daniel, Esq.

One Crested Guan, two Rufous-vented Guans.

Mitchell, J. M., Esq.

Two Spotted-sided Finehes.

Möll, Mr. F.

One Common Thicknee.

Moore, Mrs. M. A.

Two Green-winged Doves, one Hamilton's Terrapin.

Moseley, J., Esq.

Three Carpet-Snakes.

Nathan, Mrs.

One Common Raven.

Newman, W. H., Esq.

One White-cheeked Gibbon.

Nixon, J. Forbes, Esq. One Surieate.

Norman, C. L., Esq.

One Bonnet-Monkey.

North, Mrs.

One Wood-Owl.

North, J. T., Esq.

Two Condor Vultures, one Chilian Sea-Eagle.

Nurse, Geo., Esq.

One White-throated Capuchin, one Barbary Ape.

Ord, Sir Harry St. George, C.B., F.Z.S.

Two Pig-tailed Monkeys, one Black Leopard, one Vicillot's Pheasant, two Argus Pheasants.

Page, J., Esq.

One Vulpine Phalanger.

Pain, Mr. W. H. B.

One Common Adder.

Parker, F. Searle, Esq.

Two Rufous Tinamous.

Parkinson, Mrs.

One Macaque Monkey.

Parlet, J. A., Esq.

One Common Wolf.

Parsons, Mr.

One Chubb.

Pasley, Major M., R.A.

One Slender-billed Cockatoo.

Paterson, Alex., Esq.
One Gannet.

Pattison, W. H., Esq.

One Slow Loris, one Prehensile Paradoxure.

Pauli, Capt. Newton.

Three Chukar Partridges.

Paxton, W. R., Esq.

One Rough-legged Buzzard.

Payton, Mrs.

One Bonnet-Monkey.

Percival, A. S., Esq.

One Macaque Monkey.

Phillips, T., Esq.

One Great Kangaroo.

Philpotts, J. R., Esq.

One Green Monkey.

Pillans, Eustace, Esq.

One African Cobra, one Ring-Hals Snake.

Piteairn, Miss.

One Wood-Owl.

Polloek, Sir Richard, K.C.S.I., H.M.Z.S.

Two Musk-Deer.

Potter, Miss.

One Roseate Cockatoo.

Poulson, Mr. Edward.

One Patas Monkey.

Powell, C. A. F., Esq.

One Indian Python.

Price, W. M., Esq.

One Carrion-Crow.

Purchase, E., Esq.

One Greater Sulphur-crested Cockatoo.

Quain, Miss.

Two Black-eared Marmosets.

Quintin, W. S., Esq. One Osprey.

Ransom, George, Esq.

One Common Occlot, one Scarlet Ibis, one Fulvous Tree-Duck.

Ranson, A. T., Esq. One Pike.

Reid, Dr. A. G.

Three Amherst Pheasants.

Renney, W., Esq.

Two Egyptian Cats, one Common Hobby.

Richardson, Mrs. H. M.

One Slight-billed Cockatoo.

Richardson, J. W., Esq.
One Grivet Monkey.

Rintoul, Mrs.

One Pig-tailed Monkey.

Rinzy, J. H. de, Esq.

One Common Quail.

Roberts, Mrs.

Two Lesser Sulphur-crested Cockatoos.

Rowe, Miss.

Two All-green Parrakeets.

Rowling, Mr. F.

One Rhesus Monkey.

Rowney, The Misses.

A Collection of Sea-Anemones.

Russell, Mrs.

One Ring-necked Parrakeet.

Salvin, Capt. F. H.

Two Red-backed Shrikes, one Hawfinch.

Sargent, E., Esq.

Two Pennant's Parrakeets.

Schütte, A. L., Esq.

One Pale-headed Tree-Boa.

Sclater, Master Guy Lutley. Two Smooth Newts.

Scott, J., Esq.

One Green Monkey.

Scrymgeour, John, Esq.

One Hoolock Gibbon.

Sellars, E., Esq.

One Sooty Mangabey.

Shand, Mrs.

One Leadbeater's Cockatoo.

Sharpe, Miss Ada.

One Bonnet-Monkey

Sharpe, S. N., Esq. One Gannet.

Shaw, Otho N., Esq.

One Bay Lynx.

Shipman, Mr.

One White-fronted Capuchin.

Siemens, Dr. Carl.

Two Axis Dccr.

Sim, Dr. R., F.Z.S.

Two Orang-Outangs.

Simpson, B. C., Esq.

One Nisnas Monkey.

Smerdon, Capt.

One Crested Porcupine.

Smith, Miss.

One Ring-necked Parrakeet.

Smith, Dr. Sidney.

One Indian Leopard.

Smith, J., Esq.

One Prussian Carp, one Bream, six Tench, six Perch, eighteen Roach.

Smith, W., Esq.

One Capybara.

Snell, J., Esq.

One Lesser Black-backed Gull.

Solomon, J. A., Esq.

One Angola Vulture, one Vociferous Sca-Eagle.

Southern, G. B., Esq.

One Bonnet-Monkey

Spicer, Major, F.Z.S.

One Berigora Hawk, one White Goshawk.

Spink, P., Esq.

One Diana Monkey.

Standish, Mrs.

One Weeper Capuchin.

Stead, W. W., Esq.

One Green Monkey.

Stead, W., Esq.

One American Black Bear.

Stephens, D., Esq.

Two Peregrine Falcons.

Stirling, Dr. W. B.

One Macaque Monkey.

Stradling, Dr. A.

One Central-American Agonti, two Teguexin Lizards.

Swanzy, A., Esq.

One Aden Sheep.

Taylor, J. G., Esq.

Two Senegal Touracous.

Taylor, J. H., Esq.

One Vervet Monkey.

Thompson, J. H., Esq.

One Bonnet-Monkey.

Thompson, W., Esq.

One Razorbill, one Common Kingfisher.

Thynne, Esq.

One Brown Coati.

Trent, Mr. W.

One Javan Chevrotain.

Trotter, J., Esq.

One Spotted Cavy, one Coati.

Turner, Capt. B.

One Ceylon Fish-Owl.

Turner, R., Esq.

One Bonnet-Monkey.

Tweed, Mrs.

One Puff-Adder.

Verner, W. W., Esq.

One Solitary Thrush.

Wallace, Mast. R.

One Macaque Monkey.

Walters, H. E., Esq.

One Yellow Baboon.

Ward, Miss.

One Bonnet-Monkey.

Ward, H., Esq.

One Anubis Monkey.

Watkins, Mr.

One Macaque Monkey.

Welsh, Thos., Esq.

One Vulpine Phalanger.

West, Hon. L. S. Sackville.
One Great Ant-eater.

Whitmee, Rev. S. J., C.M.Z.S.
One Leadbeater's Cockatoo.

Wieksteed, Dr. F.

One Malayan Bear.

Wildley, Mr. J.

One Common Moorhen.

Williams, A. G., Esq.

Three Rhesus Monkeys, one White-headed Sea-Eagle.

Williams, G. S. S., Esq.

One Greater Sulphur-crested Coekatoo.

Willimott, The Rev. W.

One Peregrine Faleon, one African Buzzard.

Wood, Mr.

Four Common Carp, one Common Tench, one Common Carp.

Woollatt, Miss E.

One Bennett's Wallaby.

Wright, The Hon. Dumaresq. One Indian Cobra.

Wright, D. G., Esq.

One Common Chameleon.

Wylde, A. B., Esq.

Two Cape Doves.

Young, J., Esq.

Two Meadow-Pipits.

#### Conclusion.

In concluding their forty-ninth Report, the Council beg leave to congratulate the Members upon the successful results of the last financial year, which, although not equivalent to those of the extraordinary year 1876, show in every respect favourably when contrasted with all previous years.

As regards the present year, there seems, so far as we have gone at present, to be no diminution in the interest taken by the public in the Society and its operations.

Lastly, the Council have to acknowledge with many thanks the assistance they have received from the Committee of Publication, and from the gentlemen who have served upon the Committees of Finance and Audit.

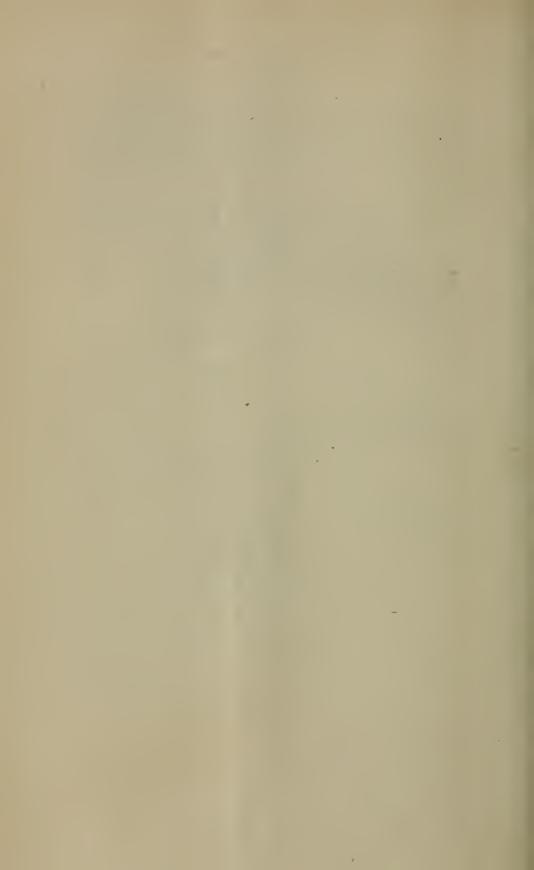
Signed (for the Council),

P. L. SCLATER,

Secretary.

11 Hanover Square, April 29th, 1878.





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# REPORT

OF THE

COUNCIL

OF THE

# ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1878.

READ AT THE ANNUAL GENERAL MEETING,



# LONDON:

PRINTED BY TAYLOR AND FRANCIS,

RED LION COURT, FLEET STREET.

1879.

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# REPORT

OF THE

# COUNCIL

OF THE

# ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1878.

READ AT THE ANNUAL GENERAL MEETING,

APRIL 29TH, 1879.



# LONDON:

PRINTED BY TAYLOR AND FRANCIS,

RED LION COURT, FLEET STREET.

1879.

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# REPORT OF THE COUNCIL.

April 29, 1879.

Before commencing the ordinary topics of their Report upon the progress of the Society during the year 1878, the Council feel that an allusion should be made to the serious loss the Society has suffered since its last Anniversary by the death of the late President, the Marquis of Tweeddale. The late Marquis, as the Fellows are well aware, was preeminently suited not only by his social position, but also by his attainments as a naturalist and his business-like habits, to be the President of the Society; and to fill the post thus vacated (as it was incumbent on the Council to do according to the Charter and Bye-laws) was by no means an easy task. In selecting for this high Office, however, the name of Prof. Flower, one of the most distinguished zoologists of the present day, and for many years a most active and efficient Vice-President of the Society, the Council feel sure that they will receive the approbation of the Fellows, and that their choice will be duly ratified by the ballot to be taken this day.

Having said thus much, the Council proceed to the usual subjects of their Report. These, in accordance with previous Reports, are divided into three heads, the first of which relates to the General Condition of the Society, the second to the operations carried on at the Office in Hanover Square, and the last to the state of the

Gardens in the Regent's Park.

# I. GENERAL CONDITION OF THE SOCIETY.

- 1. STATE OF THE ROLL OF MEMBERS.
  - a. Fellows and Annual Subscribers.

The number of Fellows, Fellows Elect, and Annual

Subscribers at the close of the year 1878 amounted to 3416. Of these there were:—

Compounders who have paid £20		81
Ditto ditto £30		831
Compositions remitted		20
Paying annual contributions of £2	•	69
Ditto ditto £3		2260
Dormant		114
Admission-fees unpaid	•	35
Annual Subscribers, paying £3.	•	6
		3416

The corresponding number of Members of the Society at the close of 1877 was 3358, showing a net addition to our list of 58 Members during the year 1878. The corresponding addition in 1877 was 47.

The progress of the Society during the past Ten years, as regards the number of its Ordinary Members, is given

in the subjoined Table.

Comparative Statement of Elections, Deaths, Resignations, and Removals during the past Ten years, with the number of Fellows and Annual Subscribers at the end of each Year.

	or sed.			Died.			F	lesigne	d.	R	emove!	d.	oq .	of of rist		
Years.	Elected or Re-admitted.	Con	apound	lers.	Subsc	ribers.	Subsc	ribers.	Admission Fees Unpaid.	Subse	ribers.	Admission Fees Unpaid.		alows allows Anna Anna Beribe		
	Ele Re-a	£20.	£30.	Feerc- mitted	£2.	£3.	£2.	£3.	Admissio Fees Unpaid.	£2.	£3.	Admissic Fees Unpaid	Ceased to l	2966 3021 3047 3050 3173 3197 2241 3311 3358		
1869.	197	7	7		17	37	3	30	1	2	25	26	155	2966		
1870.	160	9	7		6	32		51			•••		105	3021		
1871.	163	4	8		10	38	1	48		2	26		137	3047		
1872.	185	5	7	2	11	38	2	40	1		62	14	182	3050		
1873.	216	5	7		6	38		34			2	1	93	3173		
1874.	221	7	6	1	8	60		33			74	8	197	3197		
1875.	180	8	16		8	57		36			•••	11	136	2241		
1876.	224	9	28		4	63		49	1				154	3311		
1877.	228	3	23		9	63		20			58	6	182	3358		
1878.	176	6	12		5	52	1	40	1			1	118	3416		

Amongst the names of those who have joined the Society in 1878 the Council are pleased to be able to mention that of H.R.H. The Duke of Connaught, who, upon expressing

his wish to become a Fellow, was, according to former precedents, admitted by the Council by special resolution on the 18th of June last.

# b. Corresponding and Foreign Members.

Eight Corresponding and one Foreign Member were elected during 1878, namely :-

## Corresponding Members.

Dr. Heinrich Bolau, Director of the Zoological Garden, Hamburg.

Capt. Thomas Blakiston, Hakodadi, Japan.

Henry Durnford, Esq., Buenos Ayres.

Capt. F. M. Hunter, Assistant Political Resident, Aden. Dr. Adolf Bernhard Meyer, Director of the Royal Zoological Museum, Dresden.

Robert Ridgway, Esq., Smithsonian Institution, Wash-

ington, U.S. America.

R. B. Shaw, Esq., late H.B.M. Political Agent, Yarkand. W. H. Wormald, Esq., Honorary Secretary of the Natural History Society, Port Elizabeth, South Africa.

## Foreign Member.

Dr. Franz Steindachner, Director of the Imperial Cabinet of Zoology, Vienna.

## 2. STATE OF THE FINANCES.

### a. Income.

The universal depression which, during the past year, has so largely affected all trades and industrial undertakings has also, as might have been expected, told heavily upon the Society's Income for 1878. The Receipts for the past year have amounted only to £27,944 6s. 11d., and show a decrease of £3043 15s. 3d. as compared with the Receipts of 1877. At the same time, if the average Receipts of the last ten years are taken as a more trustworthy standard of comparison, it will be found that even during the past year not much permanent ground has been lost, the average Income of the past ten years, including therein the exceptional year 1876, having been

only £27,350.

The following Table gives a comparison of the various heads of Income of 1878 with those of the preceding year:—

		_						_	
18	1877.		1878.			Increase.	Decrease		e.
£	8.	d.						e.	d.
85	0	0	110	0	0	25 0 0			
	0	0	705	0	0		250	0	0
		-							
54	0	0	33	0	0		21	0	0
					0		33	18	0
							11	0	0
	-	~					420	0	0
1 1									
							2.248	19	6
		1			3	240 11 2		10	
		7				4	0.7	11	8
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	3	2			11			4	o
2	4	9	11	11	5	9 6 8		• • • • • •	• • • • •
30.988	2	2	27 944	6	11	521 17 7	3,565	12	10
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30,988	2	2	30,988	2	2		3,043	15	3
	\$2 85 955 955 1,260 43 18,765 505 1,051 74 981 464 2	## & & & & & & & & & & & & & & & & & &	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	\$\begin{array}{cccccccccccccccccccccccccccccccccccc	## St. d. ## 8. 8. 85 0 0 0 110 0 0 955 0 0 0 705 0 0	## 85 0 0 110 0 0 0 955 0 0 110 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	\$\begin{array}{c c c c c c c c c c c c c c c c c c c	\$\begin{array}{c c c c c c c c c c c c c c c c c c c

After adding to the Receipts for 1878 the balance of £1100 19s. 8d. carried over from 1877, it will be found that a total sum of £29,045 6s. 7d. was available for the expenditure of 1878.

## b. Expenditure.

This amount was disposed of in the following manner:— The sum of £25,048 1s. 6d. was required for the ordinary expenditure of the year. The extraordinary expenditure during the same period amounted to £2218 14s. 3d. The sum of £1000 was paid to Messrs. Drummond on account of their mortgage on the Society's House and Premises. The small sum of £23 15s. 11d. was required to carry out a change in the investment of the Davisfund, as hereinafter mentioned. This left a balance at the Society's Bankers, on the 31st of December last, of £754 14s. 11d., which was carried forward for the benefit of the present year.

The subjoined Table gives the various items of expen-

diture of 1878, and a comparison of each of them with the corresponding amount paid in 1877:—

	Expenditure of				Increase		Decr	eas	e.		
	1877.		187	78.							
Arrears of previous years	£ 2,664		d. 11		<i>8</i> .	d. 2	£ s. 1,045 l1	<b>d.</b> 3	£	8.	d.
Rent, Rates, Taxes, and Insurance Salaries, Wages, and Peusions	1,018 5,408	8	3	942 5,501		2 2	93 12	8	75	17	1
Cost and Carriage of Animals Provisions	1,179 5,012	$\frac{14}{6}$	8	1,008 4,249	$\begin{array}{c} 6 \\ 13 \end{array}$	9 2 9			171 762 359		5 6 10
Menagerie Expenses	2,972 132 3,890	$\begin{array}{c} 4 \\ 12 \\ 3 \end{array}$	7 6 9	2,612 137 2,622	1	6 5		0	1,267	 8	4
New Buildings	844 951		11 3 6	956 852 224	9 17 18	5 1 3	111 15		98 8	18	2 3
Band Expenses   Advertisements   House and Office Expenses	242 729	16 8	0 5	161 564	18	7 8		•••	80 165	5	5 9 0
Stationery and Account Books Printing (Miscellaneous) Publications	77 458 2,623	7	$\frac{0}{4}$	63 418 2,397		9 9		•••	14 40 226	6	7 5
Library Expenses Returned Subscriptions	335 50	1 5	2 0	281 43	8 2	0		•••	53 7 57	13 3 13	2 0 6
Grant in aid of Science Expenditure of Davis Bequest	50	0	0 0 10	10 50 64	0	6 0 11	5 17	 1			
Interest on Mortgage Debt		••••		392	18	9	392 18	9		••••	••••
Decrease	29,002	12	11	27,266 1,735		$\frac{9}{2}$	1,654 4 Ded. Inc		3,390 1,654		5 3
	29,002	12	11	29,002	12	11			1,735	17	2
Ordinary Expenditure Extraordinary ditto	27,290 1,711		7 4	25,048 2,218		6 3	506 14	11	2,242	12	1
	29,002	12	11	27,266	15	9			1,735	17	2

As will be observed, on reference to the Table, a considerable reduction of ordinary expenditure was made in 1878, as compared with the preceding year. This was effected partly by taking advantage of the fall of price which has lately taken place in various important articles of the Society's expenditure, such as hay, corn, and coke, and partly by slight economies, which the Council, having in view the decrease of income, thought it right to carry out in various branches of the establishment.

The total annual sum required to keep up the whole of the Society's establishment in a perfect state of efficiency may, under present circumstances, be put at about £25,000.

The following were the items of extraordinary expenditure paid in 1878:—

Buildings: Second-class Refreshment-room		s. 9	
Works: £ s. d Reinstating slip on Canal-bank (1877) 231 10 0 Alterations in Engine and Pumps at Well			
(1877) 180 14 10	412	4	10
Special Acquisitions: Young Hippopotamus (1877)	800	0	0
Grant in aid of Science (Zoological-Record Association) £ s. d.	50	0	0
Belonging to 1877			
	£2218	14	3

### c. Assets and Liabilities.

The Assets and Liabilities of the Society on the 31st of December 1878 were estimated as follow:—

ASSETS.																	
		A	rrea	rs of	•				old a								
				Previous Years.		Current Year.			Funded Property.				Tot	al.			
Cash at the Banker's	£	s. 	d.	£	s.	<i>d</i> .		£	s.	$\frac{d}{d}$ .	£ 754				£ 754		
Cost of £1900 Lond. & South-Western Ry. Co's New 4 per Cent. Prefe-																	
rence Stock Freehold Premises Annual Subscrip-							1,9 23,9	938 980	9	6	••••	••••	• • • • •		938 980	9	6
tions Ivory Tickets		0	0	147 6											338	$0 \\ 12$	0
Publications	22		$\frac{\ddot{3}}{0}$	186	15	2		••••	· · · · · ·	• • • • •		· • • • •	• • • • • •		209 83	0 1	5
Rent for Refresh- ment-rooms Rent for Freehold		•	••••									••••	••••		87		8
Premises in Oxford Street		••••	••••	75	0	0		••••		••••		• • • • •	••••		75	0	0
	236	18	3	568	7	4	25,	918	9	6	754	14	11	27,	478	10	0

LIABILITIES.										
	Debts.									
Bills, &c., estimated at—  For the Gardens, say  General Establishment, say	£ s. d. 1404 18 8 274 17 3	£								
Rent and Taxes unpaid— For the Gardens, say General Establishment, say	214 5 11 10 18 9	225	4	8						
Messrs. Drummond, Mortgage Debt		9000	0	0						
Messrs. Main, Iron Shed		225	0	0						
·		11,130	0	7						

It may be remarked that the estimate of Assets does not include the value of the Society's Library nor that of the collection of living animals, both of which are of considerable amount.

The amount paid for the freehold of the Society's premises (No. 11 Hanover Square and No.  $314\frac{1}{2}$  Oxford Street) was, as was stated in the last Report, £22,225. To this amount must be added the value of the lease of the Hanover-Square portion held by the Society, which, at the time of the purchase, was estimated to be £1500, making the total value of the freehold at the date of the purchase £23,725. To this sum, in order to arrive at the total value of the freehold, an addition (of £225) is made annually in respect of the increasing value of the premises in Oxford Street, the lease of which will run out altogether about  $3\frac{1}{2}$  years hence.

### d. Davis Trust-Fund.

With the view of increasing the income of the Davis-Fund, a change has been made in its investment since the last Anniversary. The sum of £1994 9s. 2d. Consols, originally purchased by Mr. Davis's legacy, has been sold

out, and the proceeds invested in the purchase of £1900 London and South-Western Railway Company's new 4 per cent. Preference stock. The amount required to purchase this stock having been £23 15s. 11d. more than that raised by the sale of the Consols, this small balance has been charged to the Society's general account.

## II. OFFICE, HANOVER SQUARE.

#### 1. Scientific Meetings.

To the fourteen meetings for the despatch of scientific business held in the Society's Rooms in Hanover Square in 1878, 160 communications were made. Of these 117 were from Fellows, 3 from Foreign Members, and 26 from Corresponding Members of the Society. The remaining 14 papers were from individuals not belonging to the Society, and were communicated to it by the Secretary or by other Members. The corresponding number of communications in the year 1877 was 137.

These communications were submitted to the Committee of Publication, by whom the following orders were made respecting them. Five were ordered to be printed entire in the 'Transactions' of the Society, and 128 in the 'Proceedings,' such illustrations being in each case allowed as the Committee considered necessary for the purpose. Of the remaining communications, abstracts or extracts were

considered to be sufficient for publication.

## 2. Scientific Publications.

The volume of the Society's 'Proceedings' for 1878, which is now on the table, contains 1056 pages, illustrated by 62 (mostly coloured) plates. This is the largest volume of 'Proceedings' yet issued since the commencement of the work.

Six Parts of the Society's 'Transactions' were issued during the year 1878, namely:—

## Vol. X. Part IV. (March, 1878).

On the Structure and Development of the Skull in Sharks and Skates. By W. K. Parker, F.R.S. (with nine plates).

## Vol. X. Part V. (March, 1878).

A Description of the Madreporaria dredged up during the Expedition of H.M.S. 'Porcupine' in 1869 and 1870. Part II. By Professor P. Martin Duncan, F.R.S. (with three plates).

## Vol. X. PART VI. (June, 1878).

On the Skull of the Ægithognathous Birds. Part II. By W. K. Parker, F.R.S. (with nine plates).

## Vol. X. Part VII. (August, 1878).

On the Axial Skeleton of the Pelecanidæ. By St. George Mivart, F.R.S. (with seven plates).

## Vol. X. Part VIII. (August, 1878).

A Monograph of the Ostracoda of the Antwerp Crag. By George Stewardson Brady, M.D., C.M.Z.S., &c. (with eight plates).

## Vol. X. Part IX. (August, 1878).

On the Brain of the Sumatran Rhinoceros (*Ceratorhinus sumatrensis*). By A. H. Garrod, M.A., F.R.S., Prosector to the Society (with one plate).

A further Contribution to the Knowledge of the existing Ziphioid Whales. Genus Mesoplodon. By William Henry

Flower, F.R.S. (with three plates).

Since the commencement of the present year two more parts of 'Transactions' have been issued, and two others, containing all the remaining papers ordered for publication in the 'Transactions' up to the end of 1878, are in a forward state, and will be ready for issue, it is expected, on June 1st and August 1st respectively.

Along with the latter will be given the Contents and

Index to the Tenth Volume of the 'Transactions.'

A new edition of the List of Vertebrated Animals now or lately living in the Society's Gardens is in preparation.

## 3. LIBRARY.

The Library, under the superintendence of Mr. F. H. Waterhouse, the Society's Librarian, has been kept in

good order during the past year, and has been much used by working zoologists. The Library contains upwards of 8,800 volumes of Zoological works, and as regards the departments of Mammals and Birds (works on which are specially necessary for the determination of the specimens in the Menagerie) is very nearly complete.

A new Library Catalogue is in preparation.

The sum of £303 12s. 10d. was devoted to the purchase of new zoological works in 1878.

The most important additions to the Society's Library

since the last anniversary are the following:-

Systematische Bearbeitung der Schmetterlinge von Europa, zugleich als Text, Revision und Supplement zu Jacob Hübner's Sammlung europäischer Schmetterlinge, von Dr. G. A. W. Herrich-Schäffer. 5 vols. 4to. Regensburg, 1843–55. [Purchased.]

Entomologie, ou Histoire Naturelle des Insectes, avec leurs caractères génériques et spécifiques, leur description, leur synonymie, et leur figure enluminée. Par M. Oliver. 6 vols. 4to. *Paris*, 1789–1808.

[Pnrchased.]

Neuere Beiträge zur Schmetterlingskunde mit Abbildungen nach der Natur, herausgegeben von C. F. Freyer. 7 vols. Small 4to.

Augsburg, 1833-58. [Purchased.]

Species Général et Iconographie des Coquilles Vivantes, Comprenant la collection du Muséum d'Histoire Naturelle de Paris. Par L. C. Kiener. 8 vols. *Paris*. [Purchased.]

The following is a list of the periodicals received in 1878 from the various Societies and Institutions with whom this Society is in correspondence.

#### AMERICA.

The American Academy of Arts and Sciences, Boston and Cambridge.

Proceedings, n. s., vol. v. parts 1-3.

The Museum of Comparative Zoology, Harvard College, Cambridge, Mass.

Memoirs, vol. v. no. 2; vol. vi. nos. 1, 2. Bulletin, vol. iv.; vol. v. nos. 2-7. Annual Report, 1877-78.

The Davenport Academy of Natural Sciences, Davenport, Iowa.

Proceedings, vol. ii. part 1.

The Wisconsin Academy of Sciences, Arts, and Letters.
Madison, Wis.

Transactions, vol. iii. (1875-76).

- The Minnesota Academy of Sciences, Minneapolis.
  Bulletin, 1876.
- The Connecticut Academy of Arts and Sciences, New Haven.

  Transactions, vol. iii. part 2; vol. iv. part 1.
- The Academy of Natural Sciences, Philadelphia. Proceedings, 1878.
- The American Philosophical Society, Philadelphia.

  Proceedings, vol. xvii. nos. 100, 101.
  Catalogue of the Library, part iii.
  List of Surviving Members.
- The American Entomological Society, Philadelphia. Transactions, vol. vi. nos. 3, 4.
- The Franklin Institute, Washington. Journal, 1878.

### Australasia.

- The Linnean Society of New South Wales, Sydney. Proceedings, vol. ii. parts 2-4; vol. iii. part 1.
- The New-Zealand Institute, Wellington.
  Transactions, vol. x.

### Belgium.

The Entomological Society, Belgium.

Annales, tom. xx. fasc. 3.

Compte-Rendu, 1878.

## EAST INDIES.

The Royal Physical Society, Batavia.

Natuurkundig Tijdschrift, deel xxxy.-xxxvii.

- The Royal Asiatic Society (Bombay Branch), Bombay. Journal, vol. xiii. no. 35.
- The Asiatic Society of Bengal, Calcutta.

Proceedings, 1877, nos. 7-10; 1878, nos. 1-8. Journal, vol. xlvi. nos. 211-215; vol. xlvii. nos. 216-221. List of Periodicals and Publications (1878).

Geological Survey of India, Calcutta.

Memoirs, ser. ii. part 3; ser. iv. part 2; ser. x. part 3, and ser. xi. part 2.

Records, vol. x. part 4; vol. xi. parts 1-4.

Index to vols. for the years 1868-77.

#### FRANCE.

- The Linnean Society of Normandy, Caen. Bulletin 2° sér. vols. vii.-ix. (1873-75).
- The Academy of Sciences, Lyons.

  Annales, 4° série, tome ix.
- The Muscum of Natural-History, Lyons.

Archives, tome i., ii. (1876-78).
Rapport par M. le Dr. Lortet, Nos. 5, 6.
Recherches sur la Fécondation et la Germination du *Preissia commutata*, par M. le Dr. Lortet.

- The Zoological Society of Acclimatization, Paris. Bulletin, January to December 1878.
- The Natural-History Society, Toulousc.
  Bulletin, année xi. (1876-77), année xii. fasc. 1 (1877-78).

## GERMANY.

- The Royal Prussian Academy of Sciences, Berlin.
  Monatsbericht, January to December, 1878.
- The Society of Friends of Natural History, Berlin. Sitzungsbericht, 1877.
- The Senckenbergian Natural-History Society, Frankfort a. M.
  Bericht, 1877-78.

The Zoological Society, Frankfort a. M.

Der Zoologische Garten, April to December, 1877; January to June, 1878.

The German Malacological Society, Frankfort a. M. Jahrbücher, 1878, Heft 1-4.

The Society of Sciences, Göttingen.

Abhandlungen, Band xxi. Nachrichten, Jahr 1877.

The Natural-History Society, Halle.

Abhandlungen, Band xiii. Heft 4. Bericht, Jahr 1876.

The Natural-History Union, Hamburg. Verhandlungen, 1875-76.

The Natural-History and Medical Society, Heidelberg. Verhandlungen, N. S. Band ii. Heft 2.

The Medical and Natural-History Society, Jena.

Jenaische Zeitschrift, Band xii. Heft 1-4. Denkschriften, Band ii. Heft 1, 2.

The Academy of Metz.

Mémoires, année 1875-76, 1876-77.

The Royal Bavarian Academy of Sciences, Munich.

Sitzungsberichte, 1877, Heft 3; 1878, Heft 1-3. Abhandlungen, Band xiii. Abh. 1. Die geognostische Durchforschung Bayerns, 1877.

The Imperial Academy of Sciences, Vienna.

Sitzungsberichte, Band lxxiv. Heft 3-5.
—, Band lxxv. Heft 1-4.
Denkschriften, Band xxxv.-xxxviii.
Register, no. viii.

The Zoological and Botanical Society, Vienna.

Verhandlungen, Bd. xxvii. 1877. Monographie der Phaneropteriden, von C. Brunner von Wattenwyl.

The Union of Natural History, Würtemberg.
Württembergische Jahreshefte, 1877, Heft 3; 1878, Heft 1-3.

#### GREAT BRITAIN AND IRELAND.

The Belfast Natural-History and Philosophical Society, Belfast.

Proceedings, Session 1877-78.

The Bristol Museum and Library, Bristol.

Catalogue of Books, 1878.

The Royal Irish Academy, Dublin.

Transactions (Science), vol. xxv. no. 20; vol. xxvi. nos. 6-17. Transactions (Polite Literature, &c.), vol. xxvii. no. 1. Proceedings, vol. i. ser. 2. no. 12; vol. ii. ser. 2. no. 7; vol. iii. ser. 2. nos. 1, 2.

The Hull Royal Institution, Hull.

Annual Report, &c., Session 1877-78.

The Leeds Philosophical and Literary Society, Leeds.

Annual Report for 1877-78. An Address by Wm. Lord Archbishop of York, Oct. 1877.

The Literary and Philosophical Society, Liverpool. Proceedings, no. xxxi. Session 1876-77.

The Royal Society, London.

Proceedings, vol. xxvi. nos. 184-186; vol. xxvii. nos. 187-191. Philosophical Transactions, vol. clxvii. part 2; vol. clxviii.; and vol. clxix. part 1.

The Linnean Society, London.

Journal (Botany), vol. xvi. no. 94-98; vol. xvii. nos. 99, 100.

—— (Zoology), vol. xiii. nos. 74; vol. xiv. nos. 75-77.

Transactions, 2nd ser. (Botany), vol. i. part 5.

——, 2nd ser. (Zoology), vol. i. part 7.

The Royal Geographical Society, London.

Proceedings, vol. xxii. nos. 1-6. Journal, vol. xlvii.

The Geological Society, London.

Journal, vol. xxxiv. parts 1-4. List of Fellows of the Society, 1878.

The Royal Institution of Great Britain, London.

Proceedings, vol. viii. parts 4-5. List of Fellows of the Society, 1876. Additions to the Library (No. XX.). The Royal United-Service Institution, London.

Journal, nos. 94-98.

Index to vols. xi.-xx.

The British Association for the Advancement of Science, London. Report for 1877.

- Royal Asiatic Society of Great Britain and Ireland, London. Journal, New Series, vol. x. part 1.
- The Society of Arts, London. Journal, 1878.
- The Royal Agricultural Society of England, London. Journal, vol. xiv. parts 1, 2.
- The Entomological Society, London.
  Transactions, 1877, parts 4, 5; 1878, parts 1-4.
- The Quekett Microscopical Club, London. Journal, nos. 36-38.
- The Natural-History Society of Northumberland and Durham, London.

  Transactions, vol. vii. part 1.
- The Royal Society of Literature, London. Transactions, 2nd ser. vol. xi. part 3.
- The Norfolk and Norwich Naturalists' Society, Norwich.
  Transactions, vol. ii. part 4.
- The Plymouth Institution and Devon and Cornwall Natural-History Society, Plymouth.

  Annual Report and Transactions, vol. vi. part 2.
- The Museum, Library, and Park Committee, Salford.
  Annual Report, 1876-77.
- The Royal Institution of Cornwall, Truro. Journal, no. xix., part 2.
- The Yorkshire Philosophical Society, York.

  Annual Report for 1877.

#### HOLLAND.

The Royal Academy of Sciences, Amsterdam.

Verslagen en Mededeelingen (Natuurkunde), tweede reeks, deel xi.; (Letterkunde), tweede reeks, deel vi. Jaarboek, 1876.

The Dutch Society of Sciences, Haarlem.

Archives Néerlandaises, tom. xiii. livr. 1-5. Natuurkundige Verhandelingen, 3° sér. tome iii. deel 3.

The Entomological Society of the Netherlands, The Hague.
Tijdschrift voor Entomologie, Jaargan 1877-78, afl. 1-4.

#### ITALY.

The Natural-History Society, Modena.

Annuario, ser. 2, anno xi. fasc. 3, 4; anno xii. fasc. 3<sup>a</sup>, 4<sup>a</sup>.

The Royal Academy of the Lincei, Rome.

Transunti, ser. 3 (Classe di Scienze fisiche, matematiche, &c.), vol. ii. fasc. 1-6.

The Royal Academy of Sciences, Turin.

Atti, vol. xiii. Memorie, ser. 2. tomo xxix. Annuario, 1877-78.

## PORTUGAL.

The Royal Academy of Sciences, Lisbon. Journal, nos. 22 and 23 (1877-78).

## Russia.

The Natural-History Society, Dorpat.

Sitzungsberichte, Band iv. Heft 2, 3.
Archiv für die Naturkunde Liv-, Ehst- und Kurlands. Erste Serie: Band viii. Lief. 3. Zweite Serie: Band viii. Lief. 4; Band viii. Lief. 1, 2.

The Imperial University, Kazan.

Bulletin, 1877.

The Imperial Society of Naturalists, Moscow. Bulletin, 1877, no. 3; 1878, nos. 1, 2.

The Royal Academy of Sciences, St. Petersburg.

Bulletin, tome xxiv. no. 4; tome xxv. nos. 1-3. Mémoires, 7e série, tome xxiv.; tome xxv. nos. 1-9; tome xxvi. nos. 1-4.

Mélanges Biologiques, tome ix. livr. 5, 6; tome x. livr. 1.

#### SCANDINAVIA.

The Royal Danish Society of Sciences, Copenhagen. Oversigt, 1876, no. 3; 1877, nos. 2, 3; 1878, no. 1. Mémoires, 5° sér. vol. xi. no. 5.

The Royal Society of Sciences, Upsala.

Nova Acta. [Ad Celebranda Sollemnia Quadringenaria Universitatis Upsaliensis.]

#### SPAIN.

The Spanish Natural-History Society, Madrid. Anales, tomo vii. cuaderno 1-3.

#### SWITZERLAND.

The Natural-History Society, Basel. Verhandlungen, Thiel vi. Heft 3, 4.

The Physical and Natural-History Society, Geneva. Mémoires, tome xxv. part 2, tome xxvi. part 1.

The Society of Natural Sciences, Lausanne. Bulletin, 2° série, vol. xv. nos. 79, 80.

The Society of Natural Sciences of Neuchâtel.

Bulletin, tome xi. cahier 2.

The Natural-History Society, St. Gall. Bericht, 1876-77.

The Natural-History Society, Zurich.
Vierteljahrsschrift, Jahr. xxi. & xxii. (1876-77).

Donations of Works, Memoirs, and Papers have also been received from:—E. R. Alston, Esq.; Professor Spencer F. Baird; Professor J. V. Barboza du Bocage; The Trustees of the British Museum; Dr. H. Burmeister;

Professor G. Canestrini; Messrs. Cassell, Petter, and Galpin; R. Collett, Esq.; Monsieur H. Crosse; Professor J. D. Dana; D. G. Elliot, Esq.; Major H. H. Godwin-Austen; H. Goss, Esq.; R. J. L. Guppy, Esq.; Dr. F. V. Hayden; James Hector, Esq.; The Trustees of the India Museum; Geo. R. Jesse; Professor A. Kölliker; Professor J. Leidy; Professor A. W. Malm; Dr. A. B. Meyer; Baron F. von Müller; Monsieur E. Oustalet; Professor Owen; Professor J. Reinhardt; Geo. Dawson Rowley, Esq.; Lord Arthur Russell; Victor Ritter von Schmidhofen; Dr. R. Schomburgk; The Science and Art Department, South Kensington Museum; P. L. Sclater, Esq.; W. B. Tegetmeier, Esq.; Dr. H. Troschel; E. F. Trois, Esq.; The University College of London; U. S. Commission of Fish and Fisheries; E. Walford, Esq.; H. T. Wharton, Esq.; Dr. F. Buchanan White; Dr. R. Wiedersheim.

#### 4. STAFF AT THE OFFICE.

The Council cannot close this part of their report without an allusion to the death of the Society's old and valued servant Mr. John Leigh, which took place on

Monday, the 13th of January last.

The Council need scarcely remind the Fellows of Mr. Leigh's long and faithful services as Accountant to this Society, as they have been frequently referred to on former occasions, and were acknowledged in a most emphatic manner at the last Anniversary Meeting of the Society.

The Council have appointed as Mr. Leigh's successor Mr. John Barrow, who has acted as Mr. Leigh's assistant for upwards of nine years, and in whom they have the

greatest confidence.

## III. GARDENS, REGENT'S PARK.

### 1. Buildings and Works.

The New Buildings and Works carried out at the Society's Gardens and charged to extraordinary expenditure in 1878 were not so numerous or extensive as in the immediately preceding years. The only new Building erected was the Second-class Refreshment-room, which

constitutes the third and last portion of this important work, according to the plans prepared by Mr. Salvin, when the complete renewal of the old buildings formerly on the same site was determined upon in 1868. The contract price of this third portion, which has been built by Messrs. George Smith and Co. in a style harmonizing with the two portions previously completed, was £725. Extras and additional works, together with the Architect's Commission, &c., raised the total sum expended on this building in 1878 to £956 9s. 5d. The new building was handed over to the occupation of the Refreshment Contractors early in the season; and as an arrangement has been made whereby the Contractors have engaged themselves to pay an additional rent to the amount of 6 per cent. on the cost of construction, the Council believe that the addition thus made to the permanent Buildings in the Gardens will be regarded as satisfactory in every way.

Besides this, the only other works charged to extraordinary expenditure in 1878 were two in number, namely, the repair of a portion of the slip on the Canal-bank, and the lowering of the pumps in the well, with a view of obtain-

ing a better supply of water.

The slip on the Canal-bank, especially that part of it which adjoined the new Elephant-house, had long been an object of disquiet to the Council and a source of contention between the Society and the Regent's Canal Company. In 1877, after long negotiations, an agreement was made with the Company whereby they engaged to take out the portion of the slipped clay next to the Elephant-house and to replace it with dry materials, under terms whereby the total cost to the Society should not exceed £200. work having been successfully performed and approved of by Mr. Clarke Hawkshaw as consulting engineer on behalf of the Society, the sum in question was paid over to the Company, and charged to extraordinary expenditure in 1878.

The sum of £180 14s. 10d. was spent in 1877 altering the engine and lowering the pump of the Society's deep well, with the expectation of increasing the supply of water from this source. In this expectation, however, the Council regret to say they have been disappointed, the water-level in this part of the metropolitan area being now unpre-

cedently low.

#### 2. STAFF AT THE GARDENS.

The permanent Staff of the Society's Gardens continues nearly the same as at the last Anniversary. It consists of:—

1 Superintendent.

1 Assistant Superintendent.

1 Head Keeper.

5 Keepers (1st class).

8 Keepers (2nd class).

8 Keepers (3rd class).

3 Money-takers.

1 Storekeeper.

1 Cook.

1 Office Clerk.

1 Prosector's Assistant.

1 Helper.

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Besides these there are 17 Helpers in the Menagerie, 1 Head Gardener, 2 Gardeners, 10 Garden-labourers, 7 Artisans, 4 Painters, 7 Labourers, 1 Butcher, 1 Fireman, 2 Night-Watchmen, 2 Ladies' Attendants, and 1 Time-keeper employed at weekly wages; so that the number of the whole staff may be reckoned at about 88 persons.

### 3. VISITORS.

The total number of visitors to the Society's Gardens during the year 1878 was 706,713, as will be seen by the following Table, which gives the corresponding numbers of entrances under each head for 1877 and 1878:—

### Visitors to the Gardens.

	1877.	1878.	Comparison.
Fellows and Friends	206,485 186,533	188,773 158,070	Decr. 17,712 Decr. 28,463
Paying On Mondays and other days at 6d. each	324,900	296,368	Decr. 28,532
Children under 12 years at 6d. each	52,645	48,144	Decr. 4,501
Charity Children	10,814	15,358	Incr. 4,544
	781,377	706,713	Decr. 74,664

The following Table contains a statement of the Number of Visitors to the Society's Gardens during each year, from the year 1828 to the year 1878.

Number of Visitors to the Gardens, 1828-78.

Year. Number.	Year. Number.
1828 98,605	1854 407,676
1829 189,913	$1855 \dots 315,002$
1830 223,420	1856 344,184
1831 262,193	1857 339,217
1832 206,652	1858 351,580
1833 211,343	1859 364,356
1834 208,583	$1860 \dots 394,906$
1835 210,068	1861 381,837
<b>1</b> 836 263,372	†1862 682,205
1837 173,778	1863 468,700
1838 179,197	1864 507,169
1839 158,432	1865 525,176
1840 141,009	1866 527,349
1841 132,616	1867 556,214
1842 107,459	1868 573,186
1843 98,280	1869 572,848
1844 101,527	1870 573,004
1845 99,615	1871 595,917
1846 100,045	1872 648,088
1847 93,546	1873 713,046
1848 143,630	1874 706,907
1849 168,895	1875 699,918
1850 360,402	1876 915,764
*1851 667,243	1877 781,377
1852 305,203	1878 706,713
1853 409,076	
* Year of the Great Exhibition.	† Year of the International Exhibition.

It will be observed that, notwithstanding the depression above alluded to, the number of visitors to the Gardens in 1878 has only been exceeded in four previous years, namely, 1873, 1874, 1876, and 1877.

### 4. Zoological Lectures.

The Lectures, to the payment of which the proceeds of the Davis Fund are under present arrangements devoted, will be given for the present year in the usual Lectureroom in the Society's Gardens, on Thursdays at 5 P.M., commencing May 8th.

The following is a list of the subjects:—

Date.	Subject.	Lecturer.
2. ,, ,, 15 3. ,, ,, 22 4. ,, ,, 29 5 June 5	The pleasures of Zoology. Tails	P. L. Sclater, Esq., F.R.S.
		P. L. Sclater, Esq., F.R.S.

These Lectures will be free to Fellows of the Society and their Friends, and to other Visitors to the Gardens.

#### 5. MENAGERIE.

The number of animals belonging to the first three classes of Vertebrates living in the Society's Menagerie at the close of 1878 was 2178. The corresponding number on the 31st of December, 1877, was 2200, as will be seen by the subjoined Table:—

	Decem	ber 31.	G .
	1877.	1878.	Comparison.
Quadrupeds Birds Reptiles	667 1357 176	640 1314 224	Decr. 27 Decr. 43 Incr. 48
	2200	2178	Decr. 22

The total number of registered additions to the Menagerie in 1878 was 1182, of which 511 were acquired by presentation, 272 by purchase, 150 were bred in the Gardens, 178 were received on deposit, and 71 obtained in exchange.

The mode in which these figures compare with those of previous years is shown in the subjoined table:—

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1870.	386	529	160	218	40	1333
1871.	496	434	138	129	90	1287
1872.	460	527	-195	110	52	1344
1873.	483	457	191	231	188	1530
1874.	425	296	214	242	25	1202
1875.	559	557	156	143	43	1458
1876.	533	316	171	172	43 27	1219
1877.	506	324	181	181	68	1260
1878.	511	272	150	178	71	1182

Perhaps the most important acquisition for the Menageric in 1878 was the young male Hippopotamus received June 20th, having been purchased of the Royal Zoological

Society, Amsterdam, for the sum of £800.

The original pair of Hippopotamuses obtained from the Viceroy of Egypt (the male in 1851, and the female in 1854) being both well advanced in years, and having ceased to breed, the Council thought it would not be right to miss an opportunity of obtaining a mate for the Society's young female of this species, born in the Gardens on the 5th November, 1872.

The Council accordingly entered into an agreement with the sister Society at Amsterdam for the acquisition of the young male Hippopotamus which was born in their gardens on the 3rd of August, 1876, and which arrived safely in this country under the care of Mr. Hegt, the sub-director of their gardens, on the 20th of June last.

The Council are happy to be able to say that the animal has improved much since its arrival, and is in the most

perfect state of health.

This acquisition has become the more valuable in consequence of the death of the old male Hippopotamus, which took place on the 11th of March last.

The following is a list of the animals which have been bred in the Gardens in the year 1878.

## MAMMALS.

1 Rhesus Monkey (Cynocephalus mormon).

1 Hybrid Mandrill Monkey (Bred between Cynocephalus mormon & and Macacus cynomolgus 3).

1 Collared Fruit-Bat (Cynonycteris collaris).

2 Wild Cats (Felis catus).

4 Common Foxes (Canis vulpes).

2 Tayras (Galictis barbara).

- 2 Chinchillas (Chinchilla lanigera).
- 1 Hybrid Ass (Between Equus onager  $\delta$  and E. hemippus  $\mathfrak{P}$ ).
- 3 Wild Boars (Sus scrofa).
- 1 Mouflon (Ovis musimon).
- 2 Elands (Oreas canna).

1 Zebu (Bos indicus).

1 \(\frac{3}{4}\)-bred Zebu (Bred between Bos indicus \(\frac{3}{2}\) and hybrid Bos frontalis).

2 Reindeer (Rangifer tarandus).

1 Hybrid Fallow Deer (Between Dama mesopotamica ♂ and D. vulgaris ♀).

1 Wapiti Deer (Cervus canadensis).

1 Red Deer (Cervus claphus).

1 Molucca Deer (Cervus moluccensis).

1 Hog Deer (Cervus porcinus).

2 Axis Deer (Cervus axis).

2 Indian Muntjacs (Cervulus muntjac). 2 Reeves's Muntjacs (Cervulus reevesi).

2 Red Kangaroos (Macropus rufus).

2 Great Kangaroos (Macropus giganteus).

2 Yellow-footed Rock-Kangaroos (Petrogale xanthopus).

1 Bennett's Wallaby (Halmaturus bennetti).

### BIRDS.

2 Saffron Finches (Sycalis flaveola).

1 Black-crested Cardinal (Gubernatrix cristatella).

1 Turquoisine Parrakeet (Euphema pulchella).

6 Upland Geese (Bernicla magellanica).

1 Black-necked Swan (Cygnus nigricollis).

3 Black Swans (Cygnus atratus).

4 Variegated Sheldrakes (Tadorna variegata).
3 Australian Wild Ducks (Anas superciliosa).

2 Brazilian Teal (Querquedula brasiliensis).

16 Chilian Pintails (Dafila spinicauda).

1 Bahama Duck (Dafila bahamensis).

4 Chilian Widgeon (Mareca chiloensis).

4 Summer Ducks (Aix sponsa).

1 Spotted Turtle Dove (Turtur auritus).

2 Spotted Turtle Doves (Turtur suratensis).

6 Geoffroy's Doves (Peristera geoffroii).

3 Talpacoti Ground-Doves (Chamæpelia talpacoti).

1 Wonga-wonga Pigeon (Leucosarcia picata).
1 Impeyan Pheasant (Lophophorus impeyanus).
11 Amherst Pheasants (Thaumalea amherstiæ).

1 Darwin's Pucras (Pucrasia darwini).

1 Fork-tailed Jungle-fowl (Gallus furcatus).

2 Horned Tragopans (Ceriornis satyra).

4 Temminck's Tragopans (Ceriornis temmincki).

1 Green-necked Peafowl (Pavo spicifer). 5 Argus Pheasants (Argus giganteus).

1 Yellow-legged Herring-Gull (Larus leucophæus).

#### REPTILES.

8 Mocassin Snakes (Tropidonotus fasciatus).

3 Hybrid Snakes (Between Chilobothrus inornatus  $\sigma$  and Epicrates angulifer  $\mathfrak{P}$ ).

The following is a systematic list of the animals belonging to Species new to the Catalogue which were exhibited in the Society's Gardens in the year 1878.

## MAMMALS.

Mayotte Lemur (Lemur mayottensis). Brown Mouse-Lemur (Chirogaleus milii). Smith's Dwarf Lemur (Microcebus smithi). Three-striped Paradoxure (Paradoxurus trivirgatus). Japanese Wolf (Canis hodophylax). Prairie-Wolf (Canis latrans). Weasel (Mustela vulgaris). Isabelline Bear (Ursus isabellinus). Hudson's-Bay Squirrel (Sciurus hudsonius). Fraser's Squirrel (Sciurus stramineus). Variable Squirrel (Sciurus variabilis). Hairy Tapir (Tapirus roulini). Equine Antelope (Hippotragus equinus). Cincreous Opossum (Didelphys cinerea). Squirrel-like Phalanger (Belideus sciureus). Short-tailed Wallaby (Halmaturus brachyurus).

#### BIRDS.

Japanese Warbler (Cettia cantans). White-cheeked Bulbul (Pycnonotus leucogenys). Sykes's Oriole (Oriolus kundoo). Yellow-bellied Grosbeak (Pheuticus chrysogaster). Thick-billed Seed-Finch (Oryzoborus crassirostris). Lineated Finch (Spermophila lineata). Guttural Finch (Spermophila gutturalis). Rock-Sparrow (Petronia stulta). Sulphury Secd-eater (Crithagra sulphurata). Spanish Blue Magpie (Cyanopolius cooki). Red-crested Touracou (Corythaix erythrolophus). Long-tailed Cuckoo (Eudynamis taitensis). Spix's Macaw (Ara spixi). Golden-winged Parrakect (Brotogerys chrysoptera). Burmah Parrakeet (Palæornis rosa). Oriental Eagle-Owl (Bubo orientalis). Dark-winged Buzzard (Leucopternis scotoptera). Levaillant's Darter (*Plotus levaillanti*). Black-capped Bittern (Butorides atricapilla). Javan Adjutant (Leptoptilus javanicus). Bewick's Swan (Cygnus bewicki). Woodcock (Scolopax rusticola). Common Snipe (Gallinago media). Puffin (Fratercula arctica).

## REPTILES.

Horsfield's Tortoise (Testudo horsfieldi).

Matamata Terrapin (Chelys matamata).

Vivacious Snake (Tachymenis vivax).

Black-headed Snake (Homalocranion melanocephalum)

Long-banded Snake (Tropidonotus vittatus).

Hog-nosed Snake (Heterodon platyrhinos).

D'Orbigny's Snake (Heterodon d'orbignyi).

Four-rayed Snake (Elaphis quaterradiatus).

Cananina Snake (Spilotes pæcilostoma).

Plumbeous Snake (Oxyrrhopus plumbeus).

Copper-head Snake (Cenchris contortrix).

The following is a List of the Donors and their several Donations for the year 1878.

Adcock, Dr.

Two Macaque Monkeys.

Alexander, Col. W. R.

One Punjaub Wild Sheep.

Allen, J. Mason, Esq.
One Brown Bear.

Amslie, Miss.

One Brazilian Caracara.

Andrade, J. da Costa, Esq.
One Crowned Eagle.

Annesley, Col. A. L., F.Z.S. Two Red-vented Bulbuls.

Ansdell, C. W., Esq.

One Red Deer, one Common Fox.

Arabin, Mrs., F.Z.S.

Two Black-crested Cardinals, one American Thrush, one Green Glossy Starling, one White-eared Bulbul, one Californian Quail.

Ayling, Capt. T.

One Vulpine Phalanger.

Badger, Dr. G. S.

One Banded Ichneumon, two Crested Porcupines.

Banks, Edward, Esq.

Two Common Cormorants.

Barclay, Miss.

One Palm-Squirrel. Barker, D. W., Jun., Esq.

One Laughing Kingfisher, one Black Wallaby.

Barthrop, Mrs.

One Javan Parrakeet.

Batterbee, R. C., Esq.

Three Reddish Finches, one Lineated Finch, one Guttural Finch, one Tropical Seed-Finch, one Plumbeous Finch.

Baxter, Mrs.

One Rhesus Monkey.

Baylis, W. H., Esq.

One Common Otter.

Beagle, E. J., Esq.

One Vulpine Phalanger.

Beck, T., Esq.

One Macaque Monkey.

Bell, W. D., Esq.

One Common Boa.

Bennet, James, Esq.

One Green Monkey.

Bennett, G. Lyon, Esq.

One Ceylon Jungle-fowl, two Ring-necked Pheasants, one Grey Francolin.

Benson, Capt.

One Sykes's Monkey.

Blackley, F. T., Esq.

One Banded Ichneumon.

Blumenthal, A., Esq.

One Common Kestrel.

Bottrell, Henry, Esq.

One Garden's Night-Heron.

Boyd, E. L., Esq.

Three Green Tree-Frogs.

Braybrooke, Lord, F.Z.S.

One Common Cormorant, three Summer Ducks.

Bridgett, R., Esq.

One Geoffroy's Cat.

Brough, F. S. B., Esq.

One Common Crow.

Broughton, D. L., Esq.

One Laughing Kingfisher.

Brown, Archibald, Esq.

Four Paradise Whydah-birds, one Pin-tailed Whydah-bird, three Grenadier Weaver-birds, two Hooded Finches.

Brownlow, Earl, F.Z.S.

One Barbel.

Bryant, R., Esq.

One Bonnet-Monkey.

Buckland, F., Esq., F.Z.S.

Two Common Cormorants, one Common Adder.

Burke, Commander.

One Beatrix Antelope.

Caffin, Crawford, Esq., Lieut. R.N.

One Great Kangaroo, two Laughing Kingfishers.

Calthrop, E., Esq.

One Squirrel Monkey.

Canning, Hon. A. S. G., F.Z.S.

Two Black-winged Peafowls.

Capstick, J. W., Esq., F.Z.S. One Herring-Gull.

Carazo, M. A. Gonzalez.

Two Black-faced Spider Monkeys, two Rufous-vented Guans.

Careless, G. D., Esq.

One Common Cuckoo.

Carew, Capt. Pole.

One Macaque Monkey.

Carr, E., Esq.

One King Parrakeet.

Carter, F., Esq.

One Bonnet-Monkey.

Cartwright, W. J. E., Esq.

Two Long-legged Buzzards.

Chadwick, Major.

Two European Lynxes.

Chittenden, Dr. J. F., C.M.Z.S.

One Brazilian Tree-Porcupine.

Clarke, A., Esq.

Six Herring-Gulls.

Clarke, Capt.

One Bonnet-Monkey.

Clayton, E., Esq.

One Common Marmoset, one Pinche Monkey.

Cocks, A. H., Esq.

Two Lesser Black-backed Gulls.

Coke, Capt. W. L.

Two Chacma Baboons.

Colam, J., Esq., F.Z.S.

One Common Swan.

Collingwood, Mrs.

Two Crested Guinea-fowls.

Colman, J., Esq., C.M.Z.S.

One Red-crested Touracou, one Cape Zorilla.

Cooper, J. A., Esq.

Two Greater Spotted Woodpeckers.

Cornély, Mons. J. M., C.M.Z.S.

One Hybrid Guinea-fowl, two Prairie-Marmots.

Cossback, J. W., Esq.

One Hawk's-billed Turtle.

Cottenham, the Countess of.

Two Black-eared Marmosets.

Cotton, Capt. F.

One Striped Hyæna, one Egyptian Fox.

Crochett, E. A. B., Esq.

Two Laughing Kingfishers.

Curtis, Samuel, Esq.

One Green Monkey.

Dalrymple, Capt.

One Three-striped Paradoxure.

Dalrymple, Sir Hew, Bart.

Six Common Guillemots.

Davies, D., Esq., R.N.

One White-fronted Capuchin.

Davies, W., Esq.

One Common Barn-Owl.

Davis, Messrs. E. and W. H. One Woodcock.

Davis, Miss.

One Rhesus Monkey.

Dent, A., Esq.

One Bornean Fireback.

Denyssen, Mr. Justice.

Four Egyptian Geese.

Donaldson, Robert, Esq.

Two Common Marmosets.

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One Common Jackal.

Eccles, Capt. W. H.

Two Black Swans.

Enoch, Mr.

One Macaque Monkey.

Farmer, J., Esq.

One Macaque Monkey.

Feilden, Lieut.-Col.

Two Macaque Monkeys.

Filliter, Capt. C. F.

One Campbell's Monkey.

Fisher, C. H., Esq.

One Many-zoned Hawk.

Fisk, Rev. G. H. R., C.M.Z.S.

Two Leopard-Tortoises, one Rhomb-marked Snake, one Aurora Snake, three Rufescent Snakes, two Radiated Tortoises, one Hoary Snake, one Hissing Sand-Snake, one Ring-hals Snake.

Floyer, F. A., Esq., F.Z.S. One Caspian Ouaran.

Forbes, A. C., Esq.

One Bonnet-Monkey.

Fowler, Charles, Esq.

One Oriental Eagle-Owl.

Fredericks, Mr. George.
One Common Fox.

Garrett, G. H., Esq.

Two Mandrills, one Oeellated Monitor, one Green Monkey, two Common Chameleons.

Gedge, W. H., Esq.

One Pig-tailed Monkey.

Gee, —, Esq.

One Nightingale.

Giglioli, Prof., C.M.Z.S. Six Brown Tritons.

Gould, J., Esq.

Three Guinea-pigs.

Graham, C., Esq.

One Mexican Deer.

Greenwood, J., Esq.

One Green Tree-Frog.

Hance, T., Esq.

One Slow Loris, three Common Cranes.

Hancock, Hon. H. J. Burford.

One Short-tailed Capromys.

Hands, H., Esq.

One Green Monkey.

Harris, Miss.

Two Vinaceous Turtle Doves, one Greek Land-Tortoise.

Harte, Madame.

One Common Squirrel.

Hatcher, W. H., Esq.
Two Black Rats.

Hawtayne, G. H., Esq., C.M.Z.S.

One Golden Agouti, two South-American Rat-Snakes, one Chequered Elaps, one Tiger-Bittern.

Henderson, Capt.

One Hawk's-billed Turtle.

Heyworth, Master R. C.

One Toque Monkey.

Hinde, Mr. F.

One Bonnet-Monkey.

Hole, Mrs. A. A.

One Greater Sulphur-crested Cockatoo.

Howard, Percy, Esq. One Suricate.

Howes, Capt. E. J.

One Two-spotted Paradoxure.

Hunter, Capt. F. M., B.C.S. Two Beisa Antelopes.

Huntly, Dr. J.

One Savigny's Eagle-Owl.

Hyde, R. M., Esq.

One Red-billed Tree-Duck, one Scarlet Ibis.

Ikin, J., Esq.

One White-cheeked Capuchin.

Iliffe, J. A., Esq.

Three Rufous Tinamous.

Inglis, R. W., Esq.

Two Persian Gazelles.

Irby, Col., F.Z.S.

One Common Adder.

Jackson, Miss M.

Two Red-faced Weaver-birds, one Chestnut-bellied Finch, two Common Redpoles, two Canary Finches.

Jaedecke, Mr. F. W. One Wood-Owl.

Jameson, J. B., Esq.

One Grey Ichneumon.

Jameson, J. S., Esq.

One Bacha Eagle.

Jamrach, Mr. A. H.

One Bronze Fruit-Pigeon.

Johnson, C. F., Esq.

Six Goldfinches, one Common Chameleon.

Jolliffe, Mrs. Hylton.

Two Undulated Grass-Parrakeets, one Saffron Finch.

Jones, Edward, Esq.

One Common Roe.

Jones, G. H., Esq. Two Barbel.

Jones, Heywood, Esq., F.Z.S. One Japanese Wolf. Kendall, Mrs.

Seven Bankiva Jungle-fowls.

Kenny, W. C., Esq.

One Black-faced Spider-Monkey.

King, Capt.

One Brazilian Tortoise, one Red-and-yellow Macaw.

King, G. H., Esq.

One Common Sole.

Kirk, Mrs.

One African Leopard.

Ladbury, G. E., Esq.

One Common Magpie, one Jackdaw.

Lancelott, F., Esq.

One Common Gull.

Landseer, T., Esq.

Two Herring-Gulls.

Lawder, F. E., Esq.

Four Green Lizards.

Lawrence, Rev. H. F. B.

One Banded Ichneumon.

Lewis, L. E., Esq.

One Macaque Monkey.

Liardet, J. E., Esq.

One Wood-Owl.

Lilford, Lord, F.Z.S.

Two Æsculapian Snakes, two Lacertine Snakes, one Horse-shoe Snake, one Leopardine Snake, one Darkgreen Snake, one Four-rayed Snake, one Vivacious Snake, one Spanish Blue Magpie, three Great Bustards.

Lloyd, J., Esq.

One Collared Peccary.

Lockley, E. H., Esq.

One Grivet Monkey.

Loveless, Mr. C.

Two Macaque Monkeys.

Mackie, W., Esq.

One Macaque Monkey.

McIntosh, J., Esq.

Two Spotted Ichneumons.

Mandeville, Viscount.

One Common Adder.

Marks, V., Esq.

Two Common Buzzards.

Marrett, Rev. E. L.

One Macaque Monkey.

Marryat, Miss G. E.

One Green Monkey.

Marshall, W. G., Esq.

Two Prairie-Marmots, two Leconte's Rattlesnakes, one Cross Fox.

Marx, Capt.

One Common Swan.

Massey, J. D., Esq. One Lion.

Middleton, R. M., Esq. One Black Rat.

Milward, George, Esq.

One Green Monkey.

Moir, Capt. J.

One Black-faced Spider Monkey, one Common Boa, one West-Indian Rail, one Black Tortoise, one Ocelot.

Momber, A., Esq.

One Passerine Owl.

Monteiro, J. J., Mrs.

Two Cape Zorillas.

Moss, T., Esq.

Two Egyptian Gazelles.

Murray, Capt. J.

One Brown Mynah, one Pied Mynah, one Indranee Owl, one Himalayan Bear, one Indian Crow.

Neil, J. M., Esq.

One Macaque Monkey.

Newman, W. H., Esq.

One White-handed Gibbon, one Brown Monkey.

Nixon, Col.

One Persian Gazelle, one Goliath Heron.

Nixon, G. E. P., Esq., M.D. One Burrowing-Owl.

O'Donoghue, T. H., Esq.
One Common Coot.

Painter, Dr. F., F.Z.S.

One Hog-nosed Snake, one Copper-head Snake.

Palmer, Miss E.

One Macaque Monkey.

Palmer, S., Esq.

One Malayan Bear.

Papillon, F., Esq.

One Greek Partridge.

Parish, F., Esq.

Three Common Rheas.

Parker, Mrs.

One Crested Ground-Parrakeet.

Parr, J. Charlton, Esq.

One Hybrid Duck.

Parsons, Mr.

Two Dace, one Eel.

Patey, Madame.

One Grivet Monkey.

Pauli, Major Newton.

Two Black Francolins, one Chukar Partridge.

Payne, Mrs.

One Spotted Ichneumon.

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Four Cunningham's Skinks.

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Saltoun, Lord, F.Z.S.

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Two Hooded Crows, one Water-Rail.

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One Common Paradoxure, one Common Hedgehog.

Saville, Philip, Esq.

One Stump-tailed Lizard.

Sclater, Master B. L.

Four Common Newts, one Smooth Newt.

Sclater, Master G. L.

Eight Common Sticklebacks.

Sclater, Master W. L.

One Sand-Lizard.

Seratton, W. H., Esq.

One Hobby.

Scrutton, A., Esq.

One Mexican Deer.

Seyd, R., Esq., F.Z.S.

One Black-backed Jackal, two Common Carp.

Sharpe, S., Esq.

One Common Fox.

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One Green-winged Dove.

Shaw, Mr. G. A.

One Yellow Baboon, two Ring-tailed Lemurs.

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One Red-beaked Weaver-bird.

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One Green Turtle.

Smith, J., Esq.

One Common Jackal.

Smith, H., Esq.

One Common Snake.

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Squires, A. G. Lytton, Esq. One Green Monkey.

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One Common Snipe, one Short-eared Owl.

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Stradling, Dr. A.

One Common Boa, one Azara's Fox.

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Sultan of Zanzibar, H.H. The One Beisa Antelope.

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Thompson and Gough, Messrs.
One Common Seal.

Thompson, S., Esq.

One Macaque Monkey.

Thompson, W., Esq.

One Water-Rail, one Common Cormorant.

Thomson, Mr. A.

Four Reeves's Terrapins.

Toogood, F. B., Esq.

One Common Fox.

Torpey, J., Esq.

One Wood-Owl.

Tranchell, Mrs.

One Toque Monkey.

Trelawny, Esq.

Two Mandarin Ducks.

Tubbs, Robt., Esq., F.Z.S.
One Indian Leopard.

Turner, Miss.

One Passerine Owl.

Twining, G. W., Esq.

One Vervet Monkey.

Upcher, H. M., Esq., F.Z.S. One Short-toed Eagle.

Verner, W., Esq.

One Solitary Thrush, one Horse-shoe Snake.

Vincent, Prof. C. M., F.G.S., F.R.G.S.

One Prairie-Wolf.

Vivian, Hon. H. C., H.B.M. Consul-General, Cairo. Two Ostriches.

Walcot, Mrs.

One Rhesus Monkey.

Walker, Mrs. Leslie.

One Stanleyan Chevrotain, one Javan Chevrotain.

Waller, E. S., Esq.

Two Squirrel-like Phalangers.

Walters, Robt., Esq., F.Z.S. One Pine-Marten.

Warrington, A., Esq.

One Brown Capuchin, one Daubenton's Curassow.

Waterhouse, Capt. E.

One Macaque Monkey.

Webb, W., Esq.

One Arabian Gazelle.

Wharton, C. B., Esq., F.Z.S. One Wood-Owl.

Wharton, H., Esq.

One Wood-Owl, one Blue-and-yellow Macaw.

Whately, Dr., R.N.

One Macaque Monkey.

Whitehead, Dr. Byron.

One Blue-fronted Amazon.

Whitmarsh, H. B., Esq.

One Ocelot.

Whyley, Mark, Esq.
One Arabian Gazelle.

Wickenden, F., Esq.

One Rufous Rat-Kangaroo.

Wiener, A. F., Esq.

One Hybrid Kaleege.

Wigram, C. Hampden.

One Emu.

Wilkinson, Rev. S. R., F.Z.S.

Two Lesser Black-backed Gulls.

Willatt, Henry, Esq.

One Bonnet-Monkey.

Williams, J., Esq.

One Green Monkey.

Wilson, C. Rivers, Esq., C.B.
Two Secretary Vultures.

Wilson, G., Esq.

One White-whiskered Paradoxure.

Wilson, T., Esq.

One Caspian Terrapin.

Witte, J. C., Esq.

One Horned Lizard.

Wood, C., Esq.

Two Arabian Baboons.

Wood, J. F., Esq.

One Macaque Monkey.

Woodforde, Dr. A. P.

One Arabian Baboon.

Wooler, J. W., Esq.

One White-eared Bulbul.

Wormald, W., Esq.

Two White-crested Touracous.

Wright, E., Esq.

One Malbrouck Monkey.

Wright, H., Esq.

One Macaque Monkey.

Wyatt, Commander. One Barn-Owl.

Wylde, W. H., Esq.

One Lion, one Patas Monkey.

Wynn, Hon. C. H.

Two Brown Coatis.

Yeomans, Mrs. George.

One Green Monkey.

Young, J., Esq.

One Jay.



#### Conclusion.

In concluding their fiftieth Report, the Council think they may assure the Fellows that, although they are not able to give such a favourable account of every part of the Society's affairs as on some former occasions, there seems to be no cause for apprehension. The estimated Income of the Society for the present year considerably exceeds the necessary Expenditure; and there will be a balance applicable to new works and buildings or to special acquisitions, although, for the present, the Council would not think it advisable to enter upon any fresh undertaking that would involve a large outlay.

Lastly, the Council have to acknowledge, with many thanks, the assistance they have received from the Committee of Publication, and from the gentlemen who have served upon the Committees of Finance and Audit.

Signed (for the Council),

P. L. SCLATER,

Secretary.

11 Hanover Square, April 29th, 1879.



# PROCEEDINGS OF THE SCIENTIFIC MEETINGS OF THE ZOOLOGICAL SOCIETY OF LONDON.

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# REPORT

OF THR

# COUNCIL

OF THE

# ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1879.

READ AT THE ANNUAL GENERAL MEETING.

APRIL 29TH, 1880.



### LONDON:

PRINTED BY TAYLOR AND FRANCIS,

RED LION COURT, FLEET STREET

1880.

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# REPORT

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# ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1879.

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### REPORT OF THE COUNCIL.

April 29, 1880.

THE Council have the pleasure of submitting for the approbation of the Fellows their fifty-first Annual Report

upon the progress of the Society.

This, in accordance with previous Reports, is divided into three heads, the first of which relates to the General Condition of the Society and its Finances, the second to the business transacted at the Office in Hanover Square, and the last to the state of the Gardens in the Regent's Park.

# I. GENERAL CONDITION OF THE SOCIETY.

#### 1. STATE OF THE ROLL OF MEMBERS.

### a. Fellows.

The number of Fellows and Fellows Elect at the close of the year 1879 amounted to 3364. Of these there were:—

Compounders who have	'e	paid	d d	£20				71
Ditto ditto			J	£30				849
Compositions remitted								19
Paying annual contribu	ıti	ons	of	$\pounds 2$		•		60
_ Ditto ditto				£3	•			2229
Dormant		•		•				110
Admission-fees unpaid	•	•	•	•	•		•	26
								3364

The state of the Society during the past Ten years, as regards the number of its Ordinary Members, is given in the subjoined Table.

A 2

Comparative Statement of Elections, Deaths, Resignations, and Removals during the past Ten years, with the number of Fellows at the end of each Year.

	or ted.	1		Died.			F	tesigne	d.	Removed.				of 31.
Years.	Elected or Re-admitted	Con	npound	lers.	Subsc	ribers.	Subsc	ribers.	mission Fees npaid.	Subsc	ribers.	mission Fees npaid.	eased to Fellows.	Number of Fellows December
}	Ele Re-a	£20.	£30.	Feere- mitted	£2.	£3.	£2.	£3.	Admission Fees Unpaid.	£2.	£3.	Admission Fees Unpaid.	Ceas	Nun F.
1870.	160	9	7		6	32	•••	51	•••	•••	•••		105	3021
1871.	163	4	8		10	38	1	48		2	26		137	3047
1872.	185	5	7	2	11	38	2	40	1		62	14	182	3050
1873.	216	5	7		6	38	•••	34	•••		2	1	93	3173
1874.	221	7	6	1	8	60	.,,	33			74	8	197	3197
1875.	180	8	16		8	5 <b>7</b>		36	•••			11	136	3241
1876.	224	9	28		4	63		49	1		•••		154	3311
1877.	228	3	23		9	63		20			58	6	182	3358
1878.	176	6	12		5	52	1	40	1			1	118	3416
1879.	145	9	17		7	46		54		,	50	6	189	3364

A slight decrease in the total number of Members is thus shown after a long period of increase. This is attributable, in the first place, to the number of new Members elected in 1879 having been rather less than the average (145 against 176 in 1878), and, secondly, to the number of resignations and removals for non-payment of subscriptions having been rather greater than usual.

The Council believe that this temporary check in the Society's progress is solely attributable to the effects of the general depression that universally prevailed during the past year.

# b. Corresponding, Foreign, and Honorary Members.

Thirteen Corresponding Members were elected during 1879, namely:—

Dr. John Dean Caton, of Ottawa, Illinois, U.S.A.

Frederick E. Cobb, Esq., Colonial Manager of the Falkland Islands Company, Stanley, Falkland Islands.

W. A. Conklin, Esq., Director of the Central Park Menagerie, New York, U.S.A.

John Colman, Esq., of St. Paul de Loanda, Angola, West Africa.

George Dundas, Esq., C.M.G., St. Vincent, West Indies. Theodore Hance, Esq., of Chinkiang, China.

William Hume Hart, Esq., Colonial Surgeon, Sierra Leone.

Dr. J. Huntly, of the Indian Telegraph Office, Bushire, Persian Gulf.

Capt. George C. Musters, R.N., H.B.M. Consul, Mozambique.

Harry Pryer, Esq., of Yokohama, Japan.

Louis Schwendler, Esq., Superintendent Electrician to the Government of India, Calcutta.

George A. Shaw, Esq., of Betsileo, Madagascar.

Professor J. B. Steere, of the University of Michigan, Ann Arbor, Michigan, U.S.A.

Three Foreign Members were elected to fill vacancies during the same period, namely:—

Prof. Carl Gegenbaur, of Heidelberg.

Prof. Johannes Japetus Smith Steenstrup, of Copenhagen. Dr. Alexander Strauch, Director of the Imperial Museum, St. Petersburg.

One Honorary Member only was elected in 1879, namely:—

His Excellency The Right Hon. Edward Robert, Lord Lytton, G.C.B., Governor-General of India.

### 2. STATE OF THE FINANCES.

#### a. Income.

As might have been anticipated, looking to the universal depression in all matters of business which continued to prevail during the greater part of 1879, and which has been already alluded to as affecting the number of new Members elected, and to the rainy weather, which interfered with the Garden-receipts, the Income of the Society for the past year again shows a decrease, although not one of a serious character. The total Receipts for 1879 were £26,463 3s. 6d., against a corresponding sum of £27,944 6s. 11d. for 1878. The difference (£1481 3s. 5d.) is mainly due to the falling off in the Garden-receipts, which were less by £1300 19s. in 1879 than in 1878. But the Council have no reason to believe that this decrease is to be regarded otherwise than as of a temporary character, entirely attributable to the cause above mentioned. That this is the case is fully evidenced by the more favourable

state of the Garden-receipts during the first months of the present year.

The subjoined Table gives a comparison of the various heads of Income for 1879, with the corresponding amounts for the previous year:—

	1878.			187	79.		Increase.	Decrease.		
Admission Fees:—	£	8.	d.	£	8.	$\overline{d}$ .	£ s. d.	£	8.	d.
Past	110	0	0	110		0				
Present	705	0	0	585	0	0		120	0	0
Annual Subscriptions:-										
Past		0	0	66	0	0	33 0 0			
Present	6,620	5	0	6,550	9			69	16	0
Future	81	0	0	78	0	0		3	0	0
Compositions	840	0	0	900	0	0	60 0 0			
Ivory Tickets	64	13	0	41	10	0		23	3	0
Admissions to Gardens	16,516	6	0	15,215	7	0		1,300	19	0
Garden Sales	746	6	3	401	9	8		344	16	7
Rent for Refreshment-rooms	963	8	4	1,223	1	8	259 13 4			
Rent for Premises in Oxford										
Street	300	0	0	300	0	0				
Publications	887	18	0	881					9	3
Dividends	64	18	11	74	8	4	9 9 5			
Miscellaneous	11	11	5	36	9	1	24 17 8			
			_							_
_							387 0 5		3	10
Decrease		••••	• • • • •	1,481	3	5	Ded. Incr.	387	0	5
	27.944	-6	11	27.944	-6	11		1.481	3	
	-,,011			-,,011	0			1,401		0

Adding to the Income of 1879 the balance (£754 14s. 11d.) carried forward from 1878, we find the total amount of £27,217 18s. 5d. available for the expenditure of the year.

### b. Expenditure.

This amount was disposed of in the following manner:— The sum of £23,908 6s. 1d. was required for the ordinary expenditure of the year. The extraordinary expenditure during the same period amounted to £1238 11s. 1d. The sum of £1000 was paid to Messrs. Drummond on account of their mortgage on the Society's House and Premises. This left a balance at the Society's Bankers, on the 31st of December last, of £1071 1s. 3d., which was carried forward for the benefit of the present year.

The subjoined Table gives the various items of expenditure of 1879, and a comparison of each of them with the

corresponding amount paid in 1878:-

		Ex	pen	diture	of		Increas	۵	Decr	easi	e.
	18	378.		18	79.		Increas		Dear	· Cus	•
A	£ 3,710	8.		£ 2,267	<i>8</i> .	d.	£ 8.	d.	£	8.	<b>d</b> .
Arrears of previous years Rent, Rates, Taxes, and Insu		9		2,201	y	Z	••••••	••••	1,4*4	1.4	U
rance	. 942		2	985		7	43 4	5			
Salaries, Wages, and Pensions				5,106		6			391	19	8
Cost and Carriage of Animals	. 1,008		9	1,349		2	341 2	5		•••;•	
Provisions	. 4,249 2,612		9	4,180 2,785		8	172 14	11	69	4	11
Menagerie Expenses	137		6	141		ő	4 16	6		• • • • •	
Works, Repairs, and Materials			5	2,892		3	269 15				
Buildings	. 956		5	200	0	ŏ	200 19		756	9	5
Garden Expenses	. 852		1	843		9				10	4
Band Expenses	. 224		3	221	8	0			3	10	3
Advertisements	. 161		7	229		2	67 18	7		• • • • •	
House and Office Expenses			8	601	0	7	36 17	11		3	:::
Stationery and Account Books Printing (Miscellaneous)	.,	0	9	62 391	10	0		••••	26		9
Publications			9	2.044		7		••••	352	7	2
Library Expenses		8	0	322	0	ò	40 12	0			
Returned Subscriptions	43	2	0	43	8	0	0 6	0			
Cost of Medals	10		6		•••••		***********		10	11	6
Grant in aid of Science	50	0	0	50	0	0					
Expenditure of Davis Bequest	64		11	74	8	4	9 9	5		•••••	
Interest on Mortgage Debt	392	18	9	352	10	0	• • • • • • • • • • • • • • • • • • • •	••••	40	8	9
	27,266	15	Q	25,146	17	2	986 18	0	3,106	16	7
Decrease		10		2.119		7	Ded. Inc		986		6
2 0010000										10	_
	27,266	15	9	27,266	15	9	••••••		2,119	18	7
Ordinary Expenditure	25,048	1	6	23,908	6	1			1,139	15	5
Extraordinary ditto	2,218			1,238		1			980	3	2
	27,266	15	9	25,146	17	2			2,119	18	7

It will be observed that the decrease of expenditure effected in 1879 amounted altogether to £2119 18s. 7d., being a sum considerably in excess of the falling off in the Income (£1481 3s. 5d.). Of this decrease, £1139 15s. 5d. took place in the ordinary expenditure, and £980 3s. 2d. in the extraordinary expenditure of the Society. The extraordinary expenditure consisting mainly of the sums devoted to new works and buildings and to other special undertakings, is of course completely under control; but it is more difficult to reduce the ordinary charges for keeping up the Society's large establishment; and the Council trust that the economies effected in this department, without, as they believe, any material sacrifice of efficiency, will be satisfactory to the Fellows.

The Extraordinary Expenditure paid in 1879 consisted of the following items:—

Buildings:	£	8.	đ.
Raising House at Hanover Square an additional story (on account)	200	0	0
Works in the Gardens: £ s. d.			
Iron Work-shed			
Slip on Canal-bank			
Insectorium       295       2       1         Walks &c. adjoining       45       7       2			
Wains acc. adjoining	758	9	2
Scientific Publications:			
'List of Animals,' 7th edition	230	1	11
Grant in aid of Zoological Science:			
Zoological-Record Association	50	0	0
Zoological-record respondition			
£	1238	11	1

References will be made to these items in subsequent portions of the Report.

#### c. Assets and Liabilities.

The Assets and Liabilities of the Society on the 31st of December 1879 were as follow:—

ASSETS.																
Arrears of				Freehold and												
		vion ears.					Cash.			Total.						
Cash at the Banker's	£	s.	<i>d</i> .	£	s.	d.		<u>દ</u>	s.	d.	£ 1071	s. d	3	£ 1,071	s. 1	d. 3
Davis Trust - fund (invested in South- Western 4 per Cent. Preference																
Stock) Freehold Premises					•••••	•••	$\frac{1,9}{24,2}$	33 205	9	$\frac{6}{0}$		•••••	••	1,938 24,205	9	6
Annual Subscriptions	123	0	0	209	0	0		••••	• • • • •	••••				332 15	0 15	0
Publication Sales Garden Sales	16	4	0	293 89	17	7 2		• • • •	• • • • •	••••	• • • • • •	•••••	••	310 104	2	$\frac{1}{2}$
Rent for Freehold Premises				75	0	0		••••						75	0	0
	163	11	6	673	12	9	26,1	43	9	6	1071	1	3	28,051	15	0

LIABILITIES.							
	Debts.						
Bills, &c., estimated at—  For the Gardens, say  Office, say	£ s. d. 985 11 8 460 14 10	£ 1446					
Rent and Taxes unpaid—  For the Gardens, say	155 7 1 17 3 9	172	10	10			
Messrs. Drummond, Mortgage Debt	.,,	8000	0	0			
Messrs. Aldin and Sons, Balance of Contracts	***************************************	341	5	0			
		9,960	2	4			

The amount paid for the freehold of the Society's premises (No. 11 Hanover Square and No.  $314\frac{1}{2}$  Oxford Street) was £22,225. To this amount must be added the value of the lease of the Hanover-Square portion held by the Society, which, at the time of the purchase, was estimated to be £1500, making the total value of the freehold at the date of the purchase £23,725. To this sum, in order to arrive at the total value of the freehold, an addition (of £225) is made annually in respect of the increasing value of the premises in Oxford Street, the lease of which will run out altogether about 2 years hence.

# II. OFFICE, 11 HANOVER SQUARE.

### 1. Extension of Premises.

The pressing want of further accommodation in the Library, which is much resorted to by such members of the Society as are working in different departments of Zoology, has been more than once adverted to in previous Reports. The freehold of the Society's House having been acquired by the Society, there remained no objection to spending money on its improvement. The Council accordingly entered into a contract with Messrs. Aldin and

Sons, in August last, to put a new upper story on the house and make other slight improvements, at a total cost of £541 5s. Of this sum £200 was paid last year, and charged to the extraordinary expenditure of 1879, while the remainder has been paid since the commencement of

the present year.

The additional accommodation thus provided has rendered the back room on the second floor available for the use of readers, and has also given ample space for additions to the library in the new large room on the upper story. At the same time the opportunity has been taken of painting and repointing the whole outer front of the Society's Office.

#### 2. Scientific Meetings.

To the thirteen meetings for the despatch of scientific business held in the Society's Rooms in Hanover Square in 1879, 144 communications were made. Of these, 100 were from Fellows, 1 from a Foreign Member, and 24 from Corresponding Members of the Society. The remaining 19 papers were from individuals not belonging to the Society, and were communicated to it by the Secretary or by other Members. The corresponding number of communications in the year 1878 was 160.

These communications were submitted to the Committee of Publication, by whom the following orders were made respecting them. Seven were ordered to be printed entire in the 'Transactions' of the Society, and 99 in the 'Proceedings,' such illustrations being in each case allowed as the Committee considered necessary for the purpose. Of the remaining communications, abstracts or extracts were

considered to be sufficient for publication.

### 3. Scientific Publications.

The volume of the Society's 'Proceedings' for 1879, which is now on the table, contains 868 pages, illustrated by 64 (mostly coloured) plates.

Four Parts of the Society's 'Transactions' were issued

during the year 1879, namely:-

# Vol. X. Part X. (February, 1879).

Notes on the Fins of Elasmobranchs, with Considerations on the Nature and Homologues of Vertebrate Limbs.

By St. George Mivart, F.R.S., V.P.Z.S. (with six plates and six woodcuts).

# Vol. X. Part XI. (February, 1879).

On the Mechanism of the Odontophore in certain Mollusca. By Patrick Geddes (with three coloured plates).

On the Hearts of Ceratodus, Protopterus, and Chimæra, with an Account of undescribed Pocket Valves in the Conus arteriosus of Ceratodus and of Protopterus. By E. Ray Lankester, M.A., F.R.S. (with two plates).

# Vol. X. Part XII. (June, 1879).

Observations on the Uraniidæ, a Family of Lepidopterous Insects, with a Synopsis of the Family and a Monograph of *Coronidia*, one of the Genera of which it is composed. By J. O. Westwood, M.A., F.L.S. (with four plates).

# Vol. X. Part XIII. (October, 1879).

Supplementary Notes on the Curassows now or lately living in the Society's Gardens. By P. L. Sclater, M.A., Ph.D., F.R.S., Secretary to the Society (with seven coloured Plates).

This Part completes the Tenth Volume of the Society's Quarto 'Transactions,' and with it is given the Contents and Index of the tenth volume.

A new edition of the List of Animals in the Gardens was also prepared and issued in 1879.

Since the commencement of the present year one more part of 'Transactions' has been issued, and three others (containing all the remaining papers ordered for publication in the 'Transactions' up to the end of 1879) are in a forward state.

#### 4. LIBRARY.

The Library, under the superintendence of Mr. F. H. Waterhouse, the Society's Librarian, has been kept in good order during the past year, and, now that the additional space so long required has been provided, better accommodation will be given to readers.

The new Library Catalogue is printed and is now ready

for distribution.

The sum of £326 18s. 2d. was devoted to the purchase of new zoological works in 1879.

Some of the most important additions to the Society's Library, purchased since the last anniversary, are the following:—

Anderson's Two Expeditions to Western Yunnan.

Curtis's British Entomology.

Dabry de Thiersant. Pisciculture en Chine.

Eimers. Die Medusen.

Entomological Magazine.

Houghton's British Freshwater Fishes.

Hume and Marshall's Game Birds of India, Burmah, and Ceylon.

Keyserling's Die Spinnen Amerikas.

Kobelt's Fauna Molluscorum extramarinorum Japoniæ.

Pfeiffer's Monographia Pneumonopomorum. Pfeiffer's Monographia Heliceorum viventium.

Reeves's Elements of Conchology.

Sowerby's Genera of Recent and Fossil Shells.

Sowerby's Conchological Manual.

Swainson's Selection of the Birds of Brazil and Mexico.

Wilson's Larvæ of the British Lepidoptera.

Wollaston's Insecta Maderensia.

Yarrell's History of British Birds (2nd edition).

The following is a list of the periodicals received in 1879 from the various Societies and Institutions with whom this Society is in correspondence.

#### AMERICA.

The Museum of Comparative Zoology, Harvard College, Cambridge, Mass.

Bulletin, vol. v. nos. 8-16. Annual Report, 1878-79.

- The Nova Scotian Institute of Natural Sciences, Halifax.
  Proceedings and Transactions, vol. v. part 1.
- The Academy of Natural Sciences, Philadelphia. Proceedings, 1879.
- The American Philosophical Society, Philadelphia. Proceedings, vol. xviii. no. 102.
- The Franklin Institute, Washington. Journal, 1879.
- The United States National Museum, Washington. Bulletin, Nos. 7-12.

The United States Geological and Geographical Survey of the Territories, Washington.

Bulletin, vol. v. nos. 1-3.

#### Australasia.

The Linnean Society of New South Wales, Sydney. Proceedings, vol. iii. parts 2, 3, and 4.

The New-Zealand Institute, Wellington.

Transactions, vol. xi.

#### BELGIUM.

The Entomological Society of Belgium.

Annales, tom. xxi. Compte-Rendu, 1879.

The Royal Museum of Natural History, Brussels.

Annales, tome ii.

#### EAST INDIES.

The Royal Physical Society, Batavia.

Natuurkundig Tijdschrift, deel xxxviii.

The Asiatic Society of Bengal, Calcutta.

Proceedings, 1878, nos. 9 & 10; 1879, nos. 1-9. Journal, vol. xlvii. nos. 222-224; vol. xlviii. nos. 225-229.

Geological Survey of India, Calcutta.

Memoirs, ser. ii. part 4; ser. iv. part 3; ser. xii. part 1, and ser. xiii. part 1.
Records, vol. xii. parts 1-4.

#### FRANCE.

The Museum of Natural History, Paris.

Nouvelles Archives, sér. 2, tome i.

The Zoological Society of Acclimatation, Paris.
Bulletin, January to December 1879.

The Natural-History Society, Toulouse.

Bulletin, année xii. fasc. 2, 3 (1877-78), année xiii. (1878-79), fasc. 1.

#### GERMANY.

The Royal Prussian Academy of Sciences, Berlin.

Monatsbericht, 1879. Abhandlungen 1878-79.

- The Society of Friends of Natural History, Berlin. Sitzungsbericht, 1878.
- The Senckenbergian Natural-History Society, Frankfort a. M.
  Bericht, 1878-79.
- The Zoological Society, Frankfort a. M. Der Zoologische Garten, Jahr. xx. 1879, 1-6.
- The German Malacological Society, Frankfort a. M. Jahrbücher, 1879, Heft 1-4.
- The Society of Sciences, Göttingen.
  Abhandlungen, Band xxiv.
- The Natural-History Society, Halle.
  Abhandlungen, Band xiv.
  Bericht, Jahr 1877-78.
- The Medical and Natural-History Society, Jena.

  Jenaische Zeitschrift, Band xiii. Heft 1-4 and Supplement.
- The Academy of Metz.
  Mémoires, année 1878-79.
- The Royal Bavarian Academy of Sciences, Munich. Sitzungsberichte, 1878, Heft 4; 1879, Heft 1-3. Abhandlungen, Band xiii. Abh. 2.
- The Imperial Academy of Sciences, Vienna.

  Sitzungsberichte, Band lxxvi. Heft 1-5.

  ——, Band lxxvii. Heft 1-5.

  Denkschriften, Band xxxix.

  Register zu den Bänden 65. bis 75.
- The Zoological and Botanical Society, Vienna. Verhandlungen, Bd. xviii. 1879.
- The Union of Natural History, Württemberg.
  Württembergische Jahreshefte, 1878, Heft 4; 1879, Heft 1.

#### GREAT BRITAIN AND IRELAND.

- The Royal Geological Society of Ireland, Dublin. Journal, new series, vol. v. part 1.
- Royal Physical Society of Edinburgh.
  Proceedings, Sessions 1876-78.

Royal Society of Edinburgh.

Transactions, vol. xxviii. part 2.

The Hull Royal Institution, Hull.

Annual Report, &c., Session 1878-79.

The Leeds Philosophical and Literary Society, Leeds. Annual Report for 1878-79.

The Literary and Philosophical Society, Liverpool.

Proceedings, no. xxxii. Session 1877-78.

The Royal Society, London.

Proceedings, vol. xxviii. nos. 192-194; vol. xxix. nos. 197-199. Philosophical Transactions, extra vol. clxix. part 2. Catalogue of Scientific Papers, vol. viii. 1879.

The Linnean Society, London.

Journal (Botany), vol. xvii. nos. 101-103. — (Zoology), vol. xiv. nos. 78-80. Transactions, 2nd ser. (Botany), vol. i. part 6. —, 2nd ser. (Zoology), vol. i. part 8.

The Royal Geographical Society, London.

Proceedings, vol. i. nos. 1-11. Journal, vol. xlviii.

The Geological Society, London.

Journal, vol. xxxv. parts 1-4. List of Fellows of the Society, 1879.

The Royal Institution of Great Britain, London.

Proceedings, vol. viii. part 6; vol. ix. part 1. List of Fellows of the Society, 1878.

The Royal United-Service Institution, London.

Journal, nos. 99-103.

The British Association for the Advancement of Science, London.

Report for 1878.

Royal Asiatic Society of Great Britain and Ireland, London. Journal, New Series, vol. xi.

The Society of Arts, London. Journal, 1879.

- The Royal Agricultural Society of England, London. Journal, vol. xv. parts 1, 2.
- The Entomological Society, London. Transactions, 1878, part 5; 1879, parts 1-4.
- The Quekett Microscopical Club, London. Journal, nos. 39-41.
- The Royal Society of Literature, London. Transactions, 2nd ser. vol. xii. part 1.
- The Public Free Libraries, Manchester. 27th Annual Report, 1878-79.
- The Norfolk and Norwich Naturalists' Society, Norwich. Transactions, vol. ii. part 5.
- The Plymouth Institution and Devon and Cornwall Natural-History Society, Plymouth. Annual Report and Transactions, vol. vii. part 1.
- The Museum, Library, and Park Committee, Salford. Annual Report, 1877-78; 1878-79.
- The Royal Institution of Cornwall, Truro. Journal, nos. xx., xxi.

#### HOLLAND.

The Royal Academy of Sciences, Amsterdam.

Verslagen en Mededeelingen (Natuurkunde), tweede reeks, deel xii., xiii.; (Letterkunde), tweede reeks, deel vii. Jaarboek, 1877.

Verhandelingen, deel xviii.

- The Dutch Society of Sciences, Haarlem. Archives Néerlandaises, tom. xiv. livr. 1-5.
- The Entomological Society of the Netherlands, The Hague. Tijdschrift voor Entomologie, Jaargan 1878-79, afl. 1-4.

#### ITALY.

- The Civic Museum of Natural History, Genoa. Annali, vol. xiii. (1878).
- The Natural-History Society, Modena. Annuario, ser. 2, anno xiii. fasc. 1, 2.

The Royal Academy of the Lincei, Rome.

Transunti, ser. 3, vol. iii. fasc. 1–5. Memorie, ser. 3, vol. ii.

The Royal Academy of Sciences, Turin.

Atti, vol. xiv. Memorie, ser. 2. tomo xxx., xxxi. Bollettino, Anno xiii., 1878.

#### PORTUGAL.

The Royal Academy of Sciences, Lisbon. Journal, nos. 24-26 (1878-79).

#### Russia.

- The Natural-History Society, Dorpat. Sitzungsberichte, Band v. Heft 1.
- The Imperial University, Kazan. Bulletin, 1878.
- The Imperial Society of Naturalists, Moscow. Bulletin, 1878, nos. 3, 4; 1879, nos. 1, 2.
- The Royal Academy of Sciences, St. Petersburg.

  Bulletin, tome xxv. nos. 4, 5.

  Mémoires, 7e série, tome xxvi. nos. 5-11.
- The Entomological Society of Russia, St. Petersburg. Horæ, tome xiv. 1878.

#### SCANDINAVIA.

- The Royal Danish Society of Sciences, Copenhagen. Oversigt, 1878, no. 2; 1879, no. 1.
- The Royal Norwegian University, Christiania.

Forhandlingar, 1876-77. Enumeratio Insectorum Norvegicorum, fasc. iv. Bidrag til Kundskaben om Norges Arktiske Fauna, i. Mollusca regionis arcticæ Norvegiæ.

#### SPAIN.

The Spanish Natural-History Society, Madrid. Anales, tomo viii. cuaderno 1-3.

#### SWITZERLAND.

The Physical and Natural-History Society, Geneva. Mémoires, tome xxvi. part 2.

The Natural-History Society, St. Gall. Bericht, 1877-78.

The Natural-History Society, Zurich. Vierteljahrsschrift, Jahr. xxiii. 1878.

Donations of Works, Memoirs, and Papers have also been received from:—Professor A. Agassiz; The Editors of the American Naturalist; Professor J. V. Barboza du Bocage; W. T. Blanford, Esq.; The Trustees of the British Museum; Dr. H. Burmeister; Messrs. Cassell, Petter, and Galpin; T. S. Cobbold, Esq.; Monsieur Crosse; Professor James D. Dana; Dr. Anton Dohrn; D. G. Elliot, Esq.; The Museum Godeffroy; Lt.-Col. H. H. Godwin-Austen; H. Goss, Esq.; R. J. L. Guppy, Esq.; Dr. F. V. Hayden; John Hancoek, Esq.; Dr. James Hector; The Government of India; The Trustees of the Indian Museum; C. J. Forsyth Major, Esq.; H. C. McCook, Esq.; Monsieur E. Oustalet; Professor Owen; Professor J. Reinhardt; A. M. Ross, Esq.; Alfred Sanders, Esq.; Monsieur H. E. Sauvage; P. L. Sclater, Esq.; H. G. Smith, Esq.; S. Stevens, Esq.; W. B. Tegetmeier, Esq.; Dr. 11. Troschel; the University College of London; U.S. Commission of Fish and Fisheries; Professor J. D. Whitney; Dr. R. Wiedersheim; Dr. Julius von Haast; Heer S. C. Snellen van Vollenhoven.

## III. GARDENS, REGENT'S PARK.

### 1. Buildings and Works.

In view of the falling-off of the Society's Income consequent on the general depression so often alluded to, the Council thought it prudent to restrict, as far as possible, the outlay on new buildings in the Society's Gardens in 1879. The amount spent in this way was only £758 9s. 2d., against £1368 14s. 3d. expended in a similar way in 1878. The items making up this amount were as follows:—

	£	5.	d.
New Iron work-shed	210	0	0
Repairing slip on Canal-bank	207	19	11
Re-erection of iron-and-glass house in			
North Gardens	295	2	1
Walks in North Gardens			
at the state of th	£758	9	2

A large work-shed for the use of the painters and mechanics in winter and in bad weather has long been a much-needed addition to the Society's establishment. A convenient site for it having been found in the eastern corner of the North Gardens, the Council, in the autumn of 1878, arranged for its erection by Messrs. Main, of Glasgow, at a contract-price of £210 0s. 0d. This amount was paid in 1879 and charged to the extraordinary expenditure of that year. The building has been found to answer the purpose for which it was intended in

every way.

The long-continued rains of the summer and autumn of 1879 caused a slip to appear on the north bank of the Canal, at the western extremity of the North Gardens. The Society having agreed with the Regent's Canal Company, when the bridge was built in 1872, to keep the north bank in order, were called upon by the Company to repair this slip. This the Council accordingly proceeded to do by taking out the slipped clay and burning it into ballast, which they considered to be a more economical plan than having the clay carted away, as a large quantity of ballast was required for the new road and paths in this part of the Gardens. After taking out about a third part of the slipped clay, it became evident, from the material which presented itself, that the slip was not a new onc, but an old slip that had been imperfectly repaired, and on inquiry it was found that such had been really the case. The Council accordingly gave orders that the repair of the slip should not be further proceeded with, leaving the question open for future arrangement between the Society and the Canal Company, who still maintain the Society's liability.

The expenditure on the repair of the slip in 1879 was £207 19s. 11d., besides which the sum of £45 7s. 2d. was devoted to the new walks and roads in the North

Gardens.

Great progress was also made in 1879 with the reerection, in the North Gardens, near the north entrance, of the iron-and-glass building which formerly served as a second-class refreshment-room. With a slight addition at the back this will make a nice light building, which it is proposed to utilize during the present summer as a receptacle for the birds in the Parrot-house (which requires thorough repair), and afterwards to use either as an Aviary or as an Insectorium. The amount expended under this head in 1879 was £295 2s. 1d.

The Military Band having now become a great attraction during the summer months, it has become advisable to provide a covered Band-stand. Mr. Charles Henry Gatty, of Felbridge Park, East Grinstead, Fellow of the Society, having intimated his wish to provide the necessary funds for this purpose, the Council have had great pleasure in accepting Mr. Gatty's most liberal offer, and a new Bandstand is now in process of erection, as a present from Mr. Gatty to the Society, and will, it is expected, be ready for use before the usual season for the commencement of the Band.

#### 2. STAFF.

The permanent Staff of the Society's Gardens continues nearly the same as at the last Anniversary. It consists of:—

1 Superintendent.

1 Assistant Superintendent.

1 Head Keeper.

4 Keepers (1st class).

9 Kcepers (2nd class).

9 Keepers (3rd class).

3 Money-takers.

1 Storekeeper.

1 Cook.

1 Office Clerk.

1 Prosector's Assistant.

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Besides these there are 19 Helpers in the Menagerie, 1 Head Gardener, 10 Garden-labourers, 9 Artisans, 5 Painters, 12 Labourers, 1 Butcher, 1 Fireman, 2 Night-Watchmen, and 1 Timekeeper employed at weekly wages; so that the number of the whole staff may be reckoned at about 93 persons.

#### 3. Visitors.

The total number of visitors to the Society's Gardens during the year 1879 was 643,000, as will be seen by the following Table, which gives the corresponding numbers of entrances under each head for 1878 and 1879:—

Visitors to the Gardens.

	1878.	1879.	Comparison.
Fellows and Friends	188,773 158,070	169,737 151,808	Decr. 19,036 Decr. 6,262
Paying On Mondays and other days at 6d. each	296,368	259,931	Decr. 36,437
Children under 12 years at 6d. each	48,144	45,067	Decr. 3,077
Charity Children	15,358	16,457	Incr. 1,099
	706,713	643,000	Decr. 63,713

The following Table contains a statement of the Number of Visitors to the Society's Gardens during each year, from the year 1828 to the year 1879.

Number of Visitors to the Gardens, 1828-79.

Transcer of Feeters to	ine darache, 1020 for
Year. Number.	Year. Number.
$1828 \dots 98,605$	$1854 \dots 407,676$
1829 189,913	$1855 \dots 315,002$
1830 223,420	1856 344,184
1831 262,193	1857 339,217
1832 206,652	1858 351,580
1833 211,343	1859 364,356
1834 208,583	1860 394,906
1835 210,068	1861 381,837
1836 263,372	†1862 682,205
1837 173,778	1863 468,700
1838 179,197	1864 507,169
1839 158,432	$1865 \dots 525,176$
1840 141,009	1866 527,349
1841 132,616	1867 556,214
1842 107,459	1868 573,186
1843 98,280	1869 572,848
1844 101,527	1870 573,004
1845 99,615	1871 595,917
1846 100,045	1872 648,088
1847 93,546	1873 713,046
1848 143,630	1874 706,907
1849 168,895	1875 699,918
1850 360,402	1876 915,764
*1851 667,243	1877 781,377
1852 305,203	1878 706,713
1853 409,076	1879 643,000
* Year of the Great Exhibition.	† Year of the International Exhibition.

It will be observed that, notwithstanding the depression above alluded to, the total number of visitors to the Gardens does not present any serious decrease.

#### 4. Zoological Lectures.

Great interest being taken by many Fellows of the Society in the Zoological Lectures, to which the proceeds of the Davis Trust-fund have been devoted for several years, the Council have determined to continue them during the present season.

The Lectures for this year will be given in the usual Lecture-room in the Society's Gardens, on Thursdays at

5 P.M., commencing June 3rd.

The following is a list of the subjects:-

Date.	Subject.	Lecturer.		
2. ", ", 10" 3. ", ", 17 4. ", ", 24 5. ", July 1 6. ", ", 8	Cats	Prof. Parker, F.R.S. J. E. Hartiug, Esq., F.Z.S.		

These Lectures will be free to Fellows of the Society and their Friends, and to other Visitors to the Gardens.

### 5. PROSECTOR'S DEPARTMENT.

The loss suffered by the Society, and by Science in general, by the death of their excellent and accomplished Officer, Mr. Alfred Henry Garrod, F.R.S., in October last, is already well known to most of the Members. The Council feel it hardly necessary to repeat the expression of their great regret at this occurrence, as it has already formed the subject of a special communication to the Society at one of its general meetings, and is, they feel assured, fully participated in by every one acquainted with the late Prosector.

To fill the vacancy thus caused in the Prosectorship, the Council have selected, as successor to Mr. Garrod, Mr. William Alexander Forbes, B.A., Scholar of St. John's College, Cambridge. Mr. Forbes, whose name is already well known to many of the Fellows as that of a valuable contributor to the Society's 'Proceedings,' acted as Mr. Garrod's deputy during his absence abroad in the

winter of 1878-79, and is, the Council feel confident, fully competent to discharge the duties of the post with efficiency and success.

#### 6. MENAGERIE.

The number of animals belonging to the first three classes of Vertebrates living in the Society's Menagerie at the close of 1879 was 1955. The corresponding number on the 31st of December, 1878, was 2178, as will be seen by the subjoined Table:—

	Decem	ber 31.		
Quadrupeds Birds Reptiles	1878.	1879.	Comparison.	
	640 1314 224	548 1334 73	Decr. 92 Incr. 20 Decr. 151	
	2178	1955	Decr. 223	

The total number of registered additions to the Menagerie in 1879 was 1266, of which 550 were acquired by presentation, 421 by purchase, 115 were bred in the Gardens, 124 were received on deposit, and 56 obtained in exchange.

The mode in which these figures compare with those of previous years is shown in the subjoined table:—

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1870.	386	529	160	218	40	1333
1871.	496	434	138	129	90	1287
1872.	460	527	195	110	52	1344
1873.	483	457	191	231	188	1530
1874.	425	296	214	242	25	1202
1875.	559	557	156	143	43	1458
1876.	533	316	171	172	27	1219
1877.	506	324	181	181	68	1260
1878.	511	272	150	178	71	1182
1879.	550	421	115	124	56	1266

The Council call attention with great pleasure to the large and increasing number of presents now received by the Society, the number of animals thus acquired of late years having exceeded those obtained by purchase. This testifies to the great interest taken in the Society's affairs by its friends and correspondents in every part of the world.

It naturally becomes more difficult every year to obtain specimens of animals that have not been previously exhibited. The Council have, however, the pleasure of submitting a systematic list of 12 Mammals, 26 Birds, 10 Reptiles, and 2 Fishes belonging to species new to the Catalogue which were brought to the Society's Gardens in the year 1879.

#### MAMMALS.

Mitred Monkey (Semmopithecus mitratus).
Red-faced Saki (Brachywrus rubicundus).
Caffer Wild Cat (Felis caffra).
Rude Fox (Canis rudis).
Bush-Dog (Icticyon venaticus).
Beech-Marten (Martes foina).
Indian Otter (Lutra nair).
Indian Jerboa Rat (Gerbillus indicus).
Brazilian Hare (Lepus brasiliensis).
Japanese Goat Antelope (Capricornis crispus).
White-rumped Roe Deer (Capreolus pygargus).
Mule Deer (Cariacus macrotis).

#### BIRDS.

Alpine Accentor (Accentor collaris). Blue-winged Green Bulbul (Phyllornis hardwicki). Crowned Tanager (Tachyphonus coronatus). Saira Tanager (Pyranga saira). Wiener's Finch (Pytelia wieneri). Yellow Bunting (Emberiza citrinella). White-bellied Shore-Lark (Eremophila chrysolæma). Lanceolated Jay-Thrush (Garrulus lanceolatus). Black-headed Jay (Cyanocorax cyanomelas). Purple-crested Touracon (Corythaix porphyreolophus). Spotted-billed Toucanet (Selenidera maculirostris). Funereal Coekatoo (Calyptorhynchus funereus). Horned Parrakeets (Nymphicus cornutus). Golden-headed Conure (Conurus auricapillus). Bodinus's Amazon (Chrysotis bodini). Red-tailed Amazon (Chrysotis erythrura). Blue-eheeked Amazon (Chrysotis cœligena). Golden-fronted Parrakeet (Brotogerys tuipara). Buff-backed Egret (Ardea russata). Variegated Bittern (Ardetta involucris).

Stair's Ground-Dove (Phlogænas stairi).
Elliot's Guinea-fowl (Numida ellioti).
White-spotted Rail (Rallus maculatus).
Sooty Rail (Rallus rhythirhynchus).
Bar-winged Rail (Rallina pæciloptera).
Red-throated Diver (Colymbus septentrionalis).

Amongst these special attention may be called to the beautiful pair of Horned Parrakeets, natives of New Caledonia, and rare, even in the principal Museums. (See frontispiece to Report.)

#### REPTILES.

Darwin's Amphisbæna (Amphisbæna darwini). European Gecko (Phyllodactylus europæus). Taraguira Lizard (Taraguira smithi). Wizlizenus's Lizard (Crotaphytus wislizeni). Spotted Slow-worm (Acontias meleagris). Coral Snake (Tortrix scytale). Coppery Snake (Rhinostoma cupreum). Back-marked Snake (Rhinechis scalaris). Cobella Snake (Liophis cobella). Neck-marked Snake (Geoptyas collaris).

#### FISHES.

Black Bass (Huro nigricans). American May-fish (Fundulus majalis).

The summer of 1879 was particularly unfavourable for breeding animals. There were nevertheless a considerable number of successful reproductions in the Gardens, as the following list of the animals which were bred in the Gardens in the year 1879 will show:—

#### MAMMALS.

- 1 Collared Fruit-Bat (Cynonycteris collaris).
- 3 Common Badgers (Meles taxus).
- 1 Canadian Beaver (Castor canadensis).
- 3 Black Rats (Mus rattus).
- 2 Cuming's Octodons (Octodon cumingi).
- 2 Chinchillas (Chinchilla lanigera).
- 2 Hairy-rumped Agonti (Dasyprocta prymnolopha).
- 1 Zebu (Bos indicus).

1 Cape Buffalo (Bubalus caffer).

1 Eland (Oreas canna).

3 Reeves's Muntjacs (Cervulus reevesi).

1 Hybrid Red Deer (Between Cervus elaphus and C. barbarus).

1 Japanese Deer (Cervus sika).

1 Sambur Deer (Cervus aristotelis).

2 Axis Deer (Cervus axis).

1 Hybrid Mexican Deer (Between Cariacus mexicanus and C. virginianus ♀).

1 Vulpine Phalanger (Phalangista vulpina).

1 Squirrel-like Phalanger (Belideus sciureus).

1 Red Kangaroo (Macropus rufus).

1 Great Kangaroo (Macropus giganteus).

1 Yellow-footed Rock-Kangaroo (Petrogale xanthopus).

1 Bennett's Wallaby (Halmaturus bennettii).

1 Gaimard's Rat-Kangaroo (Hypsiprymnus gaimardi).

#### BIRDS.

2 Saffron Finehes (Sycalis flaveola).

- 3 Hybrid Grass-Parrakeets (Between Euphema chryso-stoma and E. pulchella).
- 3 Egyptian Geese (Chenalopex ægyptiaca). 1 Black-necked Swan (Cygnus nigricollis).
- 7 Australian Wild Ducks (Anas superciliosa).
- 3 Spotted-billed Ducks (Anas pæcilorhyncha).
- 1 Yellow-billed Duck (Anas xanthorhyncha).
- 7 Brazilian Teal (Querquedula brasiliensis).

6 Chilian Pintails (*Dafila spinicauda*). 2 Chiloe Wigeons (*Mareca chiloensis*).

6 Rosy-billed Duck's (Metopiana peposaca).

13 Geoffroy's Doves (*Peristera geoffroii*). 2 Crested Pigeons (*Ocuphaps lophotes*).

5 Amherst Pheasants (Thaumalea amherstia).

3 Fork-tailed Jungle-fowls (Gallus furcatus). 1 Peacock Pheasant (Polyplectron chinquis).

4 Yellow-legged Herring-Gulls (Larus cachinnans).

2 Jameson's Gulls (Larus novæ-hollandiæ).

### REPTILES.

2 Hybrid Tree-Boas (Between Epicrates angulifer, Dum. & Bibr. ♂, and Chilobothrus inornatus ♀).

1 Smooth Snake (Coronella lævis).

6 Seven-banded Snakes (Tropidonotus leberis).

The following is a List of the Donors and their several Donations for the year 1879.

Adams, Edgar T., Esq.

One Common Gannet.

Addams, The Rev. F. H.

One Lesser Black-backed Gull.

Anderson, T. G., Esq.

One Rhesus Monkey.

Arbuthnot, Lt.-Col.

One Blue-eyed Cockatoo.

Baber, R. S. E., Esq.

One Cuvier's Podargus.

Backhouse, James, Esq.

Two White-throated Capuchins.

Bagnall, F., Esq.

One Common Barn-Owl.

Baldwin, J. L., Esq., F.Z.S. One Common Magpie.

Baldwin, R. A., Esq.

Two Common Barn-Owls.

Ball, Capt. E.

One Anaconda.

Balls, Miss.

One Undulated Grass-Parrakeet.

Balston, R. J., Esq., F.Z.S.

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### Conclusion.

In concluding their fifty-first Report, the Council regret not to be able to give such a good account of the financial progress of the Society as on some previous occasions; but they have no doubt that the check experienced is merely a temporary one, and will pass away along with the state of affairs to which it is to be attributed.

In every other respect they believe that good progress has been made since the last Anniversary; and, as regards the present year, there seems, so far as we have gone at present, to be no diminution in the interest taken by the public in the Society and its operations.

Lastly, the Council have to acknowledge, with many thanks, the assistance they have received from the Committee of Publication, and from the gentlemen who have served upon the Committees of Finance and Audit.

Signed (for the Council),

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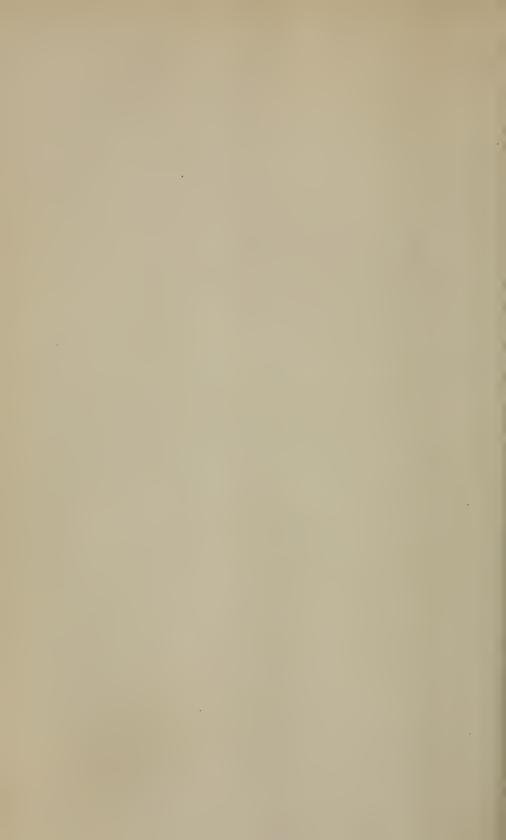




























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OF THE

# ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1881.

READ AT THE ANNUAL GENERAL MEETING,

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<sup>\*</sup> No copies of these volumes remain in stock.

# REPORT

OF THE

### COUNCIL

OF THE

# ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1881.

READ AT THE ANNUAL GENERAL MEETING,

APRIL 29th, 1882.



# LONDON:

PRINTED BY TAYLOR AND FRANCIS,

RED LION COURT, FLEET STREET.

1882.

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### REPORT OF THE COUNCIL.

April 29, 1882.

THE Council have the pleasure of submitting to the Fellows their fifty-third Annual Report upon the pro-

gress of the Society.

This, in accordance with previous Reports, is divided into three heads, the first of which relates to the General Condition of the Society and its Finances, the second to the business transacted at the Office in Hanover Square, and the last to the state of the Gardens in the Regent's Park.

### I. GENERAL CONDITION OF THE SOCIETY.

### 1. STATE OF THE ROLL OF MEMBERS.

### a. Fellows.

The number of Fellows and Fellows Elect at the close of the year 1881 amounted to 3213. Of these there were:—

Compounders who have	'e	paid	1 £	220		•		42
Ditto ditto								
Compositions remitted	•					•		18
Paying annual contribu	ıti	ions	of	£2	•	•	•	50
Ditto ditto								
Dormant								
Admission-fees unpaid	•	•				•		32
								3213

The state of the Society during the past Ten years, as regards the number of its Ordinary Members, is given in the subjoined Table.

A 2

Comparative Statement of Elections, Deaths, Resignations, and Removals during the past Ten years, with the number of Fellows at the end of each Year.

	or sed.			Died.			I	Resigne	d.	R	emove	of of sil.		
Years.	cted	Cor	npound	lers.	Subsc	ribers.	Subsc	ribers.	mission Fees npaid.	Subsc	ribers.	mission Fees npaid.	eased to Fellows.	Number of Fellows December
	Elec Re-ac	£20.	£30.	Feere- mitted	£2.	£3.	£2.	£3.	Admission Fees Unpaid.	£2.	£3.	Admission Fees Unpaid.	Ceas	Nur Fe
1872.	185	5	7	2	11	38	2	40	1		62	14	182	3050
1873.	216	5	7		6	38		34		•••	2	1	93	3173
1874.	221	7	6	1	8.	60		33			74	8	197	3197
1875.	180	8	16		8	57	•••	36				11	136	3241
1876.	224	9	28		4	63	•••	49	1		•••		154	3311
1877.	228	3	23		9	63	•••	20			58	6	182	3358
1878.	176	6	12		5	52	1	40	1		***	1	118	3416
1879.	145	9	17		7	46		54			50	6	189	3364
1880.	153	4	18	1	4	65		74			38	4	208	3309
1881.	138	24	31		5	78	•••	65	3	1	27		234	3213

The decrease of 96 in the number of Fellows which has taken place since the last Anniversary is partly due to the removal from the list by the Council of the names of 27 Compounders, whose addresses had been unascertainable for ten years and upwards.

### b. Corresponding Members.

The following Corresponding Members were elected during the year 1881 to fill vacancies in the list:—

Dr. Anton Dohrn, of the Zoological Station, Naples.

Henry Matthew Clark, Esq. (re-admitted).

Dr. Hans Gadow.

Mons. G. A. Boulenger, of the Royal Museum, Brussels.

Professor Wilhelm Blasius, of Brunswick.

Dr. A. A. W. Hubrecht, of the Leyden Museum.

Professor Othniel C. Marsh, of Yale College, New Haven, Connecticut, U.S.A.

### 2. STATE OF THE FINANCES.

### a. Income.

The Income of the Society for 1881 shows a slight decrease as compared with that of the previous year, having

been only £25,810 (omitting fractions) as compared with £27,388 for 1880. The principal head of decrease (£672) is, as will be seen by the subjoined Table, the Garden-receipts, which in ordinary years always vary with the state of the weather. In the summer of 1881 this was unusually unfavourable. The decrease under the head of Compositions (£420) is also easily accounted for by the pressure on possessors of landed property which continued to prevail throughout the year. As regards the decrease under the head of Miscellaneous receipts, it should be noted that in 1880 this head of income was increased to an abnormal amount by Mr. Gatty's liberal donation of the sum expended on the Band-stand (£329 1s. 10d.).

# Comparison of Receipts in 1880 and 1881.

		Ι	nco	me of						_
	18	80.		l Is	81.		Increase.	Increase. Decrease		
Admission Fees:— Past Present		0	0	90		_	£ s. d.	£	8,	d
Annual Subscriptions:— Past	010							105	5	0
PresentFuture	6,508	8	0		13		30 0 0	179	15	0
Compositions	1,020	0		600	0	0		24 420	0	0
Admissions to Gardens	15,786	10	0	15,113 462	17	0 6 3		672	11 14	6
Rent for Refreshment-rooms Rent for Premises in Oxford	1,107			,			133 3 0	22	13	4
StreetPublications	975	0 11	0	300 981		0	6 0 0		••••	••••
Dividends	7.1	6	9 11		3 2			0 320	3	2 5
Decrease	27,388	0	3	25,810 1,577			169 3 0 Ded. Incr.	1,746 169		5 0
	27,388	0	3	27,388	0	3		1,577	5	5

The balance carried forward from 1880 was £879 14s. 2d., besides which two short temporary loans of £200 and £1000 (since repaid) were borrowed of the Society's Bankers in November and December last. Adding these three sums to the Income received in 1881 (£25,810 14s. 10d.) we find a total amount of £27,890 9s. 0d. available for the expenditure of the year.

# b. Expenditure.

This amount was disposed of in the following manner:-

The sum of £24,651 4s. 3d. was required for the ordinary expenditure of the year. The extraordinary expenditure during the same period amounted to £1036 1s. 5d. The sum of £1000 was paid to Messrs. Drummond on account of their mortgage on the Society's House and Premises. This left a balance at the Society's Bankers, on the 31st of December last, of £1203 3s. 4d., which was carried forward for the benefit of the present year.

The subjoined Table contains the payments made in 1881 and the comparative amounts paid in 1880. The Council may point out that the total expenditure was less

than the total Income by £123.

# Comparison of Payments in 1880 and 1881.

	Е	хp	endi	iture o	f		Increase.	Decre	2886	
	188	0.		188	1.		Therease.	2002		
Arrears of previous years Rent, Rates, Taxes, and Insu-	£ 2,124	<i>8</i> .	d.	£ 2,153	8. 6	d. 7	£ s. d. 28 18 1	£	8.	d.
rance Salaries, Wages, and Pensions Cost and Carriage of Animals	1,494	1 14	4 2 5	900 5,262 867	8 5	0 10 6	42 19 8 102 7 8	627		
Provisions	4,676 2,808 144 3,922	$^{17}_{12}$	4 6 0 11	4,627 3,193 154 2,967	$\frac{10}{12}$	5 0 0 4	384 12 6 10 0 0	48 954	18	7
Works, Repairs, and Materials . Garden Expenses	792 213	18	0	886 200	6	10 5 0		13	7	6
House and Office Expenses Stationery and Account Books Printing (Miscellaneous)	397	4	0 2 3	611 64 370	17 11 11	7 11 6		29 6 26	7 4 12	5 3 9
Publications	1,835 664 114	$\frac{7}{15}$	7	2,355 422 26	7	10 2 0	520 3 11	241 88	18	5 0
Grant in aid of Science Expenditure of Davis Bequest Interest on Mortgage Debt		1	0	50 76 273	18	9	2 17 0	38	18	7
Decrease	26,579	7	4	25,687 892	5 1	8 8	1,185 7 8 Ded. Incr.	2,077 1,185		4 8
	26,579	7	4	26,579	7	4		892	1	8
Ordinary Payments Extraordinary ditto	$24,753 \\ 1,825$	9 17	5 11	24,651 1,036				102 789		2 6
	26,579	7	4	25,687	5	8		892	1	8

The ordinary expenditure of the Society was thus less by £102 5s. 2d. than that of the previous year. The extraordinary expenditure (which it was thought proper to restrict within narrower limits than usual, on account of

the falling Income) was also less than that of 1880 by the sum of £789 16s. 6d. It consisted of the following items:—

# Extraordinary Expenditure paid in 1881.

<ul> <li>a. Additions to Prosector's House</li> <li>b. Insect-house Expenses</li> <li>c. Burning Ballast</li> <li>d. Grant to the Zoological Record Association</li> </ul>	495 313 177	12	$\begin{array}{c} 10 \\ 4 \\ 3 \end{array}$
	1036	1	5

# c. Assets and Liabilities.

The Assets and Liabilities of the Society on the 31st of December 1881 were estimated as follow:—

	ASSETS.													
	Unpaid a				Unpaid arrears of Freehold and									
	Previous Years.			Current Year. Cash.						Funded Property.		100	aı.	
Cash at the Banker's		s,	d.	£	s. (	d.	£ &	s. d.	£ 1203	s. d. 3 4		s. 3	$\begin{bmatrix} d. \\ 4 \end{bmatrix}$	
Cost of £1900 Lond. & South- western Ry. Co.'s New 4 per Cent.														
					••••	•••	1,938 *24,745	9 6			1,938 24,745	9	6 0	
Annual Subscriptions	34	0	0	138	0 3							0 4	0	
Ivory Tickets Publication Sales Garden Sales	19	11	6	145		4				•••••	165	_	_	
Rent for Refreshment Rooms		••••	•••	48	10	0					48	10	0	
Rent for Freehold Premises			•••	75	0	0					75	0	0	
	58	5	6	475	11	1	26,683	9	3 1203	3 3 4	28,420	9	5	

<sup>\*</sup> This is the estimate of Messrs. Widnell and Trollope plus the addition of £225 annually until the expiration of Mr. Purdey's lease. The sum actually paid was £22,225 on June 24, 1877.

LIABILITIES.									
	Del	bts.							
Bills, &c., estimated at—  For the Gardens, say  Office, say	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	£ s. d.							
Rent and Taxes unpaid— For the Gardens, say Office, say	272 18 10 25 18 0	1245 2 7							
		298 16 10							
Messrs. Drummond, Mortgage Debt	••••	6000 0 0							
Temporary Loan had November 18, 1881 Ditto ditto December 21, 1881									
		8743 19 5							

It may be remarked that the estimate of Assets does not include the value of the Society's Library or that of the collection of living animals, both of which are of considerable amount.

# II. OFFICE, 11 HANOVER SQUARE.

# 1. PROPOSED NEW MEETING-ROOM.

Although great relief was given to the business carried on in this office by the addition of the new storey in 1879 and the consequent rearrangement of the upper rooms, additional space is still required for the accommodation of the stock of publications (now stowed away in different places in the Gardens) and for the increasing Library. Besides these pressing requirements, a new and large meeting-room has long been a necessity, the present Council-room being, as is obvious to all that use it, quite insufficient for any but the most ordinary occasions, and most inconvenient for the Scientific Meetings. Council have accordingly determined, upon the expiration of Mr. Purdey's Lease at Michaelmas next, or so soon after as can be conveniently arranged, to build a new meeting-room at the back of the present house, and a store-room beneath it for the publications. This will not interfere with the utilization of the frontage and premises in Oxford Street, which, as the Council are assured, are likely to return a very good rate of interest upon the amount expended in their purchase.

#### 2. Scientific Meetings.

To the fourteen meetings for the despatch of scientific business held in the Society's Rooms in Hanover Square in 1881, 121 communications were made. Of these, 83 were from Fellows, 1 from Foreign Members, and 15 from Corresponding Members of the Society. The remaining 22 papers were from individuals not belonging to the Society, and were communicated to it by the Secretary or by other Members. The corresponding number of communications in the year 1880 was 131.

These communications were submitted to the Committee of Publication, by whom the following orders were made respecting them: 2 were ordered to be printed entire in the 'Transactions' of the Society, and 99 in the 'Proceedings,' such illustrations being in each case allowed as the Committee considered necessary for the purpose. Of the remaining communications, abstracts or extracts were considered to be sufficient for publication.

# 3. SCIENTIFIC PUBLICATIONS.

The volume of 'Proceedings' for 1881 (copies of which are on the table) contains a number of important papers, and is above the average as regards dimensions and the number of its illustrations, as will be seen from the following table, in which are given the number of pages and plates of the volumes of 'Proceedings' for the past ten years:—

i years	•—					
•					plates.	pages.
1872	•	•	•	•	75	927
1873	•	•	•	•	69	842
1874	•		•		84	728
1875		•	•	•	72	726
1876	•	•	•		82	864
1877	•	•	•		85	893
1878		•	•	•	62	1056
1879	•	•	•	•	64	868
1880	•	•	•	•	64	743
1881				•	72	1056

Three Parts of the Society's 'Transactions' were issued during the year 1881, namely:—

# Vol. XI. Part III. (March, 1881).

On the Genera and Species of the Lepidopterous Subfamily Ophiderinæ inhabiting the Indian Region. By F. Moore, F.Z.S. (with three coloured plates).

On the Structure of the Skull in the Chameleons. By

W. K. Parker, F.R.S., F.Z.S. (with five plates).

# Vol. XI. PART IV. (April, 1881).

On the Male Generative Organs of the Sumatran Rhinoceros (*Ceratorhinus sumatrensis*). By W. A. Forbes, B.A., F.L.S., Scholar of St. John's College, Cambridge, Prosector to the Society (with one plate).

On the Anatomy of the Female Organs of the Proboscidea. By M. Watson, M.D., Professor of Anatomy, Owens

College, Manchester (with two plates).

# Vol. XI. PART V. (June, 1881).

Descriptions of some new and rare Cephalopoda (Part II.). By Prof. Owen, C.B., F.R.S., F.Z.S., &c. (with thirteen plates).

Since the commencement of the present year another part of 'Transactions' (vol. xi. part vi.) and a General Index to the first ten volumes of the 'Transactions' have been published and delivered to the Subscribers to the Publications.

An Index to the ten volumes of the 'Proceedings' from 1871 to 1880 is nearly all in type, and will be ready for issue on June 1st.

## 4. LIBRARY.

The Library, under the superintendence of Mr. F. H. Waterhouse, the Society's Librarian, has been kept in good order during the past year, and is used by many working zoologists.

Many important additions have been made to it, among which attention may be called to the following donations:—

Barboza du Bocage. Ornithologie d'Angola.—Part 2. Presented by the Author.

Burmeister (Dr. H.). Description Physique de la République Argentine. Text, Tome iii. Atlas, Section i. Part i. and Section ii. Part i. Lépidoptères. Livr. 1, 2. Presented by the Author. Duncan (P. Martin) and Sladen (W. P.). Memoir on the Echinodermata. 4to. London, 1881. Presented by the Authors.

Holub (Dr. Emil) und Pelzeln (Aug. von). Beiträge zur Ornithologie Südafrikas. 8vo. Wien, 1882. Presented by Dr. Emil Holub.

Moore (F.). The Lepidoptera of Ceylon. Parts i. and ii.

sented by the Government of India.

Piaget (E.). Les Pédiculines. Text and Atlas. 4to. Leide, 1880. Presented by the Director of the Museum of Natural History, Leiden.

Retzius (Gustaf). Das Gehörorgan der Wirbelthiere. Folio. Stockholm, 1881. Presented by the Author.

Some of the most important additions to the Society's Library, purchased since the last anniversary, are the following:--

Balfour. Comparative Embryology. 2 vols., 8vo, 1881-82. Barbut. Genres des Insectes de Linné. 4to, 1781.

Bennett. Whaling Voyage round the Globe. 2 vols., 8vo, 1840. Bock. Head-Hunters of Borneo. Roy. 8vo, 1881. Booth. British Birds. Part i. Small folio, 1881.

Bullettino della Società Malacologica Italiana. Vols. i. to vi. 8vo, 1875–80.

British Burma Gazetteer. 2 vols., 4to, 1879-80. Broderick. Falconer's Favourites. Folio, 1865.

'Challenger,' Voyage of H.M.S. [Zoology], vols. ii., iii. 4to, 1881.

Chenu. Manuel de Conchyliogie. 2 vols., 8vo, 1859-62. Claus. Grundzüge der Zoologie. Fourth Edition, 8vo, 1880-82.

Cotton's Song Birds of Great Britain. 2 vols., roy. 8vo, 1835-36. Cuvier's Animal Kingdom. New Edition. By Carpenter and Westwood. 4to, 1863.

De Geer. Genera et Species Insectorum. 8vo, 1783.

Du Bois. Oiseaux de Belgique. Livr. 1-39. Royal 8vo, 1876-81. Dufour. Recherches Anatomiques et Physiologiques sur les Hémiptères. 4to, 1833.

Dunker. Mollusca Japonica. 4to, 1861.

Edinburgh Journal of Natural History. Small folio, 1835 40.

Ellis. Natural History of Zoophytes. 4to, 1786.

Entomologische Nachrichten. Jahr. vi., vii. 8vo, 1880-81.

Garner. Natural History of the County of Stafford. 8vo, 1844. Girard. Traité Élémentaire d'Entomologie. Tome ii. & iii. 8vo, 1879-82.

Griffith. Quadrumana and Carnivora. 2 vols., royal 8vo, 1821. Haeckel. Die Radiolarien. Text & Atlas, folio, 1862.

Hahn. Die Arachmiden. Continuation by C. L. Koch. 16 vols. 8vo, 1831-48.

Hewitson's British Oology. First Edition, 2 vols., royal 8vo. 1831-44.

Second Edition, 2 vols., royal 8vo, 1846. Holub. Seven Years in South Africa. 2 vols., 8vo, 1881.

Turbellaria ad Litora Norvegiæ Occidentalia. 4to, 1878. Jensen. Leigh. Natural History of Lancashire, Cheshire, &c. Folio, 1700.

Leuret et Gratiolet. Anatomie Comparée du Système Nerveux.

Text 8vo, Atlas folio, 1839-57.

Leydig. Lehrbuch der Histologie. Royal 8vo, 1857. -. Die augenähnlichen Organe der Fische. 8vo, 1881.

Long's Expedition to the Source of St. Peter's River. 2 vols., 8vo, 1825.

Markham. Polar Reconnaissance. 8vo, 1881. Martyn. Natural History of Spiders. Folio, 1793.

Maximilian. Travels in Brazil. 4to, 1820.

Mivart. The Cat. 8vo, 1881.

Montagu's Ornithological Dictionary. 2 vols., 8vo, 1802-13.

Moquin-Tandon. Histoire Naturelle des Mollusques de France. vols. and atlas, royal 8vo, 1855.

Moreau, Histoire Naturelle des Poissons de la France. 3 vols., 8vo, 1881.

Nordenskiöld. Voyage of the 'Vega' round Asia and Europe. 2 vols., royal 8vo, 1881.

Oates. Matabele Land. Svo, 1881.

Pennant. British Zoology. 1st Edition, folio, 1776. -. New Edition, 4 vols., 8vo, 1812.

Perry. Conchology. Folio, 1811.

Petiver. Gazophylacii Naturæ et Artis Decades X. Folio,

Pinto. How I crossed Africa. 2 vols., 8vo, 1881. Piso. Historia Naturalis Brasiliæ. Folio, 1648. Roesel. Historia Naturalis Ranarum. Folio, 1758.

Rolland. Faune Populaire de la France. 4 vols., 8vo, 1877-81.

Schimper and Zittel. Handbuch der Paläontologie. 8vo, 1880. Schiödte. Zoologia Danica. Hefte 2. Folio, 1881.

Selby's British Ornithology. 4 vols., Elephant folio. Selenka. Zoologische Studien, Hefte i., ii. 4to, 1878-81. Selous. A Hunter's Wanderings in Africa. 8vo, 1881. Tegetmeier. Natural History of the Cranes. Royal 8vo, 1881.

Thomson's Archives Entomologiques. 2 vols., royal 8vo, 1857-58. Tiedemann (F.). Icones Cerebri Simiarum et quorundam Mammalium rariorum. Folio, 1821.

Anatomie und Naturgeschichte der Vögel. 2 vols., 8vo,

1810-14.

Walters. Birds of Ireland. 12mo, 1853.

Weinkauff. Conchylien des Mittelmeeres. 2 vols., 8vo, 1867-68.

Wood. Index Entomologicus. Royal 8vo, 1854.

Illustrations of the Linnar Genera of Insects. 2 vols. 12mo, 1821.

Yarrell's History of British Birds. [3rd Edition.] 3 vols., 8vo, 1856.

The following is a list of the periodicals received in 1881 from the various Societies and Institutions with which this Society is in correspondence.

#### AFRICA.

The South-African Philosophical Society, Cape Town. Transactions, vol. i.; vol. ii. parts 1, 2.

#### AMERICA.

- The American Academy of Arts and Sciences, Boston.

  Proceedings, New Series, vol. vii. part 2; vol. viii. parts 1, 2.
- The Boston Society of Natural History, Boston.

  Proceedings, vol. xxi. part 1.

  Anniversary Memoirs, 1830-1880.
- The Buffalo Society of Natural Sciences, Buffalo. Bulletin, vol. iii. no. 5.
- The Museum of Comparative Zoology, Harvard College, Cambridge, Mass.

Bulletin, vol. vii. no. 1; vol. viii. nos. 1-14. Memoirs, vol. viii. no. 1. Annual Report, 1880-81.

- The Argentine Zoological Society, Cordova.

  Periodico Zoologico, tomo i.-iii.
- The Nova-Scotia Institute of Natural Sciences, Halifax.

  Proceedings and Transactions, vol. v. pts. 2, 3.
- The Academy of Natural Sciences, Philadelphia. Proceedings, 1881.
- The American Philosophical Society, Philadelphia.

  Proceedings, vol. xix. nos. 107, 108.

  Transactions, vol. viii. nos. 1-4.
- The National Museum, Rio de Janeiro.

  Archives, vol. iii. nos. 3, 4.
- The Peabody Academy of Sciences, Salem, Mass. Memoirs, vol. i. nos. 5, 6.
- The Franklin Institute, Washington. Journal, 1881.

The Smithsonian Institution, Washington.

Contributions to Knowledge, vol. xxiii.
Miscellaneous Collections, vols. xviii.-xxi.
Annual Report, 1879.
Report of the Geological Survey of Ohio, vol. iii.
Memorial of Joseph Henry.

The United States National Museum, Washington. Proceedings, 1881.

#### AUSTRIA.

The Royal Society of Sciences, Cracow. Proceedings, tom. xiv., xv.

The Imperial Academy of Sciences, Vienna.

Sitzungsberichte, Band lxxxii. Heft 3-5; Band lxxxiii. Heft 1-4.

The Zoological and Botanical Society, Vienna. Verhandlungen, Band xxx. 1880 (1881).

#### AUSTRALIAN COLONIES.

The Royal Society of South Australia, Adelaide.
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# III. GARDENS, REGENT'S PARK.

## 1. Buildings and Works.

The buildings and walks in the Society's Gardens were kept in good repair during the year 1881 by the ordinary staff of workmen, reinforced by a small number of extra painters during the summer. The buildings specially attended to were the Bears' den, Hyenas' den, Ladies Waiting-rooms near Tunnel, and a portion of the Superintendent's House. These were thoroughly repaired and painted, and put into complete order. A new Farrier's Shop adjoining the Smith's Shop was also built, and is likely to prove a great accommodation, as all horses were previously obliged to be shod outside the Gardens.

As regards new buildings and works, in view of the falling-off of the Society's Income, already alluded to, the Council thought it prudent to restrict, as far as possible, the outlay under this head. The amount spent in this way was therefore only £986 1s. 5d., consisting of the

following items:-

There being no accommodation for occasional visitors and assistants in the Prosector's Office, the Council determined, as announced in their last Report, to make an addition to it of some studies at the back, for Naturalists engaged in special examinations. This work was commenced in 1880 by the Society's staff of workmen, and the sum of £94 18s. 11d. was expended upon it. The further sum of £495 5s. 10d. was devoted to the same object in 1881, and charged to extraordinary expenditure.

The studies are now complete, and seem to be in every way suited for the purpose intended. As will be seen by reference to a subsequent part of the Report, a considerable amount of good work has been already done in them.

As regards the Insect-house, to the fittings and maintenance of which the sum of £313 12s. 4d. was devoted and charged to extraordinary expenditure during the past year, the Council are glad to be able to say that the

hopes which they have on former occasions expressed of the success of this important addition to the Society's Garden establishment have been, as will be subsequently shown, more than realized.

The only remaining item of extraordinary expenditure consists of the sum of £177, devoted to clearing the ground and burning ballast on the proposed site of the new Reptile-house. The plans for this much-required building have been ready for some time past, and the Council have great hopes that the improvement in the Society's finances which has taken place during the past few months will enable them to commence the undertaking at the end of the present summer.

#### 2. Insect-house.

Although of late years many entomologists have been in the habit of rearing insects in captivity for the purpose of watching their transformations and of obtaining good specimens in each stage of their existence, nothing like a systematic attempt, so far as the Council know, has yet been made to form a general collection of living insects for exhibition. As in former days with respect to reptiles and the lower marine animals, so in the present instance as regards its Insect-house, the Society seems to be first in the field, and, so far as can be judged from the progress already made, to be likely to attain many interesting and instructive results.

The building now used as an Insect-house is constructed of iron and glass on three sides, with a brick back to it, and formerly formed part of the refreshmentrooms. The cases containing the insects are arranged on stands all round the building, and also occupy two tables in the centre. The cases used for the principal specimens are formed of zinc plates. The upper part of them is glazed on all four sides, the top being formed of perforated zinc so as to admit the air. The food-plant or object required for the suspension of the chrysalises, when that stage of the insect is exhibited, is inserted into the case through a circular hole in the bottom; but the glass front also opens, so that ready access can be obtained to the interior. The larger cases in the front row measure about 24 inches in breadth by 18 in depth, and are 32 inches in height. The cases in the opposite row are of similar construction, but rather smaller in dimensions.

The cases on the south side (on each side of the entrance door) are mostly appropriated to the exhibition of the larger and finer species of silk-producing moths of the

family Bombyeidæ.

On the north side the smaller cases are devoted principally to the rarer and more noticeable butterflies and moths of Europe, such as the Swallow-tailed Butterfly (Papilio machaon), the Black-veined Butterfly (Aporia cratægi), the Purple Emperor (Apatura iris), and the Orange-tip (Anthocharis cardamines) among the former, and the Scarlet Tiger-moth (Callimorpha dominula) and Emperor Moth (Saturnia carpini) among the latter group. The series is continued, mixed with other forms, at the east end of the building. On the larger tables in the middle of the Insect-house are examples of other butterflies, moths, beetles, mayflies, stoneflies, and aquatic insects of different kinds. The whole series exhibited last year contained examples of about fifty species.

Every specimen in the Insect-house is distinctly labelled, and over each of the principal cases is fixed a glazed box, in which are placed preserved specimens of the various stages of metamorphosis of the insect exhibited in the case

beneath.

The Insect-house was opened to the public on the 25th of April last year, and during the season of 1881 was placed under the sole charge of Mr. William Watkins, an experienced entomologist and breeder of insects, whose name is well known to many naturalists. Mr. Watkins, whose services were retained for six months, for the purpose of inaugurating this novel exhibition, has written a series of reports upon the various insects bred under his charge, which are published in the volume of 'Proceedings' for 1881.

## 3. PROPOSED RAILWAY THROUGH THE GARDENS.

It has been known to the Council for some years past that a plan was on foot for making a Railway along the north bank of the Regent's Canal which passes through the Society's Gardens, but the Bill of the Regent's Canal City and Docks Railway Company for carrying out this plan was first introduced in the present session of Parliament. After much preliminary negotiation with the Promoters, which failed in effecting a settlement of the terms upon which the Council thought fit to withdraw the Society's opposition, the Council, acting upon the advice of the Society's Solicitors, resolved to present a petition to the House of Commons praying to be heard by counsel against the Bill. At the same time the Council have reason to believe that the Promoters will ultimately assent to the conditions which the Council, acting under the advice of their Solicitor and Surveyor, have thought it right to insist upon, and that, if these conditions are carried out, the proposed Railway will not occasion any serious detriment to the Society's interests.

## 4. STAFF.

The permanent Staff of the Society's Gardens remains nearly the same as at the last Anniversary. It consists of:—

1 Superintendent.

1 Assistant Superintendent.

1 Head Keeper.

7 Keepers (1st class).

6 Keepers (2nd class).
9 Keepers (3rd class).

3 Money-takers.

1 Storekeeper.

1 Cook.

1 Office Clerk.

1 Prosector's Assistant.

1 Head Gardener.

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Besides these there are 20 Helpers in the Menagerie, 12 Garden-labourers, 8 Artisans, 3 Painters, 11 Labourers, 1 Butcher, 1 Fireman, 2 Night-Watchmen, and 1 Time-keeper employed at weekly wages; so that the number of the whole staff may be reckoned at about 92 persons, against 97 at the corresponding period last year.

# 5. VISITORS.

The total number of visitors to the Society's Gardens during the year 1881 was 648,694, as will be seen by the following Table, which gives the corresponding numbers of entrances under each head for 1880 and 1881:—

# Visitors to the Gardens.

	1880.	1881.	Comparison.
Fellows and Friends	190,695 156,560	180,324 148,489	Decr. 10,371 Decr. 8,071
Paying On Mondays and other days at 6d. each	271,148	249,423	Decr. 21,725
Children under 12 years at 6d. each	44,793	56,768	Incr. 11,975
School Children (admitted free)	12,783	13,690	Incr. 907
	675,979	648,694	Decr. 27,285

The following Table contains a statement of the Number of Visitors to the Society's Gardens during each year, from the year 1828 to the year 1881.

# Number of Visitors to the Gardens, 1828-81.

Year. Number.	Year. Number.
1828 98,605	1855 315,002
1829 189,913	1856 344,184
1830 223,420	$1857 \dots 339,217$
1831 262,193	1858 351,580
1832 206,652	1859 364,356
1833 211,343	1860 394,906
1834 208,583	1861 381,837
1835 210,068	$+1862 \dots 682,205$
1836 263,372	1863 468,700
1837 173,778	1864 507,169
1838 179,197	1865 525,176
1839 158,432	$1866 \dots 527,349$
1840 141,009	1867 556,214
1841 132,616	1868 573,186
1842 107,459	1869 572,848
1843 98,280	1870 573,004
1844 101,527	1871 595,917
1845 99,615	1872 648,088
1846 100,045	1873 713,046
1847 93,546	1874 706,907
1848 143,630	1875 699,918
1849 168,895	$1876 \dots 915,764$
1850 360,402	1877 781,377
*1851 667,243	1878 706,713
1852 305,203	1879 643,000
1853 409,076	1880 675,979
1854 407,676	1881 648,694
* Year of the Great Exhibition.	† Year of the International Exhibition.

#### 6. Zoological Lectures.

The Zoological Lectures, to which the proceeds of the Davis Trust-fund have been devoted for several years, will be continued during the present season.

The Lectures for this year will be given in the usual Lecture-room in the Society's Gardens, on Thursdays at

5 P.M., commencing June 8th.

The following is a list of the subjects:-

	Dat	e.			Subject.	Lecturer.
1.	Thursday,	June	8	•••	Armadillos, living and extinct.	Prof. Flower, LL.D., F.R.S.
2.	,,	*1	15		The British Lion	Prof. Boyd Dawkins, F.R.S.
3.	,,	,,	22		Crocodiles	Prof. Parker, F.R.S.
4.	**	"	29		British Snakes and Lizards.	Prof. Mivart, F.R.S.
5.	"				Frogs and Toads	
6.	33	,,	13		Insects and their Metamor-	Prof. Martin Duncan, F.R.S.
					phoses.	
7.	1,	,,	20		Foreign Zoological Gardens	P. L. Sclater, Esq., M.A.,
						F.R.S.

These Lectures will be free to Fellows of the Society and their Friends, and to other Visitors to the Gardens.

## 7. PROSECTOR'S DEPARTMENT.

The accommodation afforded by the original dissecting-rooms, built in 1865, having been found to be too limited, and the rooms themselves being so damp as to render them very unhealthy, it was decided in 1880 to thoroughly repair and alter the whole house, to raise the floor and put in hot-water pipes to dry and warm it, and, as already mentioned, to increase the available space by enlarging the Prosector's private room, and by building on to it three smaller and separate studies, for the accommodation of students, artists, and others who have occasion to work in the dissecting-room.

These repairs and improvements have now been satisfactorily completed, the new studies having been finished in the summer of last year, and the remaining rooms shortly before Christmas. They have, in every respect, been found to answer their purpose admirably, the new

rooms being both dry, warm, and light.

During the months of July and August last year the

new studies were occupied by a long-vacation class of four students from Cambridge, who worked at the comparative anatomy of the Mammalia under the supervision of the Demonstrator of Comparative Anatomy in that University,

Mr. J. J. Lister, F.Z.S.

The Pathological Society, being anxious to avail themselves of the opportunities afforded by the Society's Gardens for the study of Comparative Pathology, have formed a Committee of their members with that object, and two professed pathologists are now regularly working in the Prosector's rooms. Their investigations promise to be of great scientific interest and value, not only to pathologists, but also to the officers of this Society, as affording better indications than have hitherto been obtained of the various morbid causes affecting the animals in the Society's menagerie.

When the increased facilities now afforded for scientific research by the Society shall become more fully known, there is every reason to suppose that many anatomists will

avail themselves of them.

The number of deaths in the Society's menagerie during the year 1881 was somewhat in excess of the few previous years, the increased mortality being consequent on the very severe cold of the first six weeks of the year—the deaths during January 1881 being more than double the average number during the ten preceding years. There were, however, but few serious losses: the most important perhaps were a male Giraffe (the last of those that were bred in the Gardens) 14 years old, the cause of death being tubercle of the lungs; a Great Anteater (Myrmecophaga jubata), which had extensive inflammation of all the tissues surrounding the submaxillary glands; a Whitenosed Saki (Pithecia albinasa); the second Koala (Phascolarctos cinereus) and Red Wolf (Canis jubatus); and two female Kudus (Strepsiceros kudu). Amongst the birds the greatest loss was the Indian Darter (Plotus melanogaster), obtained in April last.

The Prosector has published, inter alia, the following papers and memoirs in the Society's 'Proceedings' and 'Transactions' for the year, based upon specimens that have lived in the Society's menagerie:—"On the Anatomy of the Koala (Phascolarctos cinereus)"; "On the Male Generative Organs of the Sumatran Rhinoceros (Ceratorhinus sumatrensis)"; "Note on the Epithelium of the

Stomach of the Darter (Plotus anhinga)"; "On the Conformation of the Trachea in the Ratite Birds"; "Notes on the Incubation of the Indian Python (Python molurus), with special regard to the alleged increase of temperature

during that period."

The following papers, based on materials from the Society's Gardens, have also been read before the Society: -"Additional Observations on the Anatomy of the Spotted Hyæna (Hyæna crocuta)," by Prof. Morrison Watson. Owens College, Manchester; and "On the Condition of the median portion of the Vaginal Apparatus in the Macropodidæ," by Messrs. J. J. Lister, Cambridge, and J. J. Fletcher, Sydney, N.S.W.

Numerous specimens have been forwarded from the Prosector's Department to the Museum of the Royal College of Surgeons, the University Museum at Cambridge, the Museum of Comparative Zoology, Cambridge, Mass., and to other institutions, as well as to private workers, including Prof. W. K. Parker, Prof. Turner, Dr. Max Fürbinger, of Amsterdam, Prof. Gegenbaur, Dr. Hans Gadow, and others.

## S. MENAGERIE.

The number of animals belonging to the first three classes of Vertebrates living in the Society's Menagerie at the close of 1881 was 2294. The corresponding number on the 31st of December, 1880, was 2372, as will be seen by the subjoined Table:-

	Decem	ber 31.	a .
	1880.	1881.	Comparison.
Quadrupeds Birds Reptiles	1438	647 1389 258	Decr. 56 Decr. 49 Incr. 27
	2372	2294	Decr. 78

The total number of registered additions to the Menagerie in 1881 was 1213, of which 565 were acquired by presentation, 310 by purchase, 167 were bred in the Gardens, 136 were received on deposit, and 35 obtained in exchange.

The mode in which these figures compare with those of previous years is shown in the subjoined table:—

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1870.	386	529	160	218	40	1333
1871.	496	434	138	129	90	1287
1872.	460	527	195	110	52	1344
1873.	483	457	191	231	188	1530
1874.	425	296	214	242	25	1202
1875.	559	557	156	143	43	1453
1876.	533	316	171	172	27	1219
1877.	506	324	181	181	68	1260
1878.	511	272	150	178	71	1182
1879.	550	421	115	124	56	-1266
1880.	624	515	148	161	40	1488
1881.	565	310	167	136	35	1213

The following is a list of the most noticeable additions made to the Menagerie during the year 1881:—

#### JANUARY.

1. A White-nosed Saki (*Pithecia albinasa*), purchased January 11th. The typical example of this species in the Paris Museum has hitherto remained unique in Europe, so that the Society was fortunate in obtaining an example of so rare a species.

2. An American Monkey of the genus Callithrix—probably referable to C. brunnea. This specimen was purchased along with the preceding and a Douroucouli (Nyctipithecus trivirgatus?). All three were probably from some district of the Upper

Amazons.

3. An example of an Insectivore of the genus *Tupaia* (probably *T. tana*), obtained by purchase January 11th.

## FEBRUARY.

4. A female Bactrian Camel (Camelus bactrianus), formerly belonging to Ayoub Khan, which Col. O. H. St. John, F.Z.S., purchased from its captors at Kandahar and presented to the Society.

5. A male Blanford's Sheep (Ovis blanfordi), obtained from Afghanistan, and presented to the Society by Capt. W. Cotton,

F.Z.S. This species is new to the Collection.

## MARCH.

6. A young male Gooral Antelope (Nemorhædus goral) from the Himalayas, purchased 16th March, being the first example of this fine species that we have received. 7. Three Birds of Paradise belonging to the following species:
—The Twelve-wired Bird of Paradise (Seleucides alba), the Red Bird of Paradise (Paradisea sanguinea), and the Green Manucode (Manucodia chalybeia). These birds were all of species new to the Collection.

#### APRIL.

S. An Indian Darter (*Plotus melanogaster*), received in exchange from the Zoological Gardens, Calcutta, April 8th. This was the first living example received of the Indian Darter, previous examples of this genus having belonged to *Plotus anhinga* of South America and *Plotus levaillantii* of Africa.

9. A young female Beisa Antelope (Oryx beisa), born in the Gardens April 12th, believed to be the first example of this

Antelope that has been bred in captivity.

10. A Mountain Ka-Ka (Nestor notabilis), transmitted as a present to the Society by Dr. A. de Lautour of Otago, New Zealand.

#### MAY.

11. An African Wild Ass (Equus teeniopus) from Upper Nubia, purchased May 26th, being the second example of this form of Wild Ass which we have received.

12. A White-marked Duck (Anas specularis) from Autarctic America, purchased May 26th, being the first specimen of this fine species which has been obtained for the Collection.

### JULY.

13. Eight Menobranchs (*Menobranchus lateralis*) from North America, examples of this singular Amphibian with external gills not having been previously received.

14. A Surucuru (Lachesis mutus) from Pernambuco, Brazil,

presented by C. A. Craven, Esq., July 27th.

This deadly Serpent formed a new and most interesting addition to the series of Venomous Snakes in the Snake-house.

## SEPTEMBER.

15. A specimen of the Rubiginous Cat (Felis rubiginosa) from Ceylon, presented by Charles E. Pole Carew, Esq., the species being new to the Society's Collection.

## OCTOBER.

16. An example of the little-known Carnivore Hemigalea hardwickii, new to the Society's Collection. It is very shy and fierce and nocturnal in its habits. When handled it ejects a highly aerid and Skunk-like secretion from its anal glands.

17. Two female Beatrix Antelopes (Oryx beatrix), obtained from the great desert behind the mountainous district of Muscat by Lieut.-Col. S. B. Miles, British Consul at Muscat, and presented to the Society by Lord Lilford, F.Z.S.

#### NOVEMBER.

18. Ferty-six young Nose-horned Vipers (Vipera nasicornis), produced alive by a large female of this Serpent acquired on the 1st of October 1880. But few of them long survived their birth; but the large number of young produced on one occasion by this venomous Snake is remarkable and worthy of record.

19. A Vinaceous Amazon (*Chrysotis vinacea*), purchased November 30th, being of a species new to the Society's Collection.

#### DECEMBER.

20. A young male Guemul Deer (Furcifer chilensis), from Patagonia, purchased December 22nd.

21. A Germain's Peacock-Pheasant (Polyplectron germaini),

purchased December 24th.

Both these accessions were of species new to the Society's Collection.

The following is a systematic list of the Mammals, Birds, and Reptiles, belonging to species new to the Society's Catalogue, which were exhibited in the Society's Gardens in the year 1881:—

## MAMMALS.

Brown Teetee (Callithrix brunnea).
White-nosed Saki (Pithecia albinasa).
Tana Tupia (Tupaia tana).
Rusty-spotted Cat (Felis rubiginosa).
Hardwicke's Hemigale (Hemigalea hardwickii).
Robust Gerbilles (Gerbillus robustus).
White-rumped Gerbille (Gerbillus pygargus).
Hairy-footed Jerboas (Dipus hirtipes).
Gooral Antelope (Nemorhædus goral).
Blanford's Wild Sheep (Ovis blanfordi).
Gemul Deer (Furcifer chilensis).

## BIRDS.

Common Swallow (Hirundo rustica). Topela Finches (Munia topela). Bar-breasted Finch (Munia nisoria).

Red-chested Whydah Bird (Vidua ardens).
Red-shouldered Weaver Bird (Urobrachya axillaris).
Twelve-wired Bird of Paradise (Seleucides nigra).
Green Manucode (Manucodia chalybeia).
Red Bird of Paradise (Paradisea rubra).
Swift (Cypselus apus).
Vinaccous Amazon (Chrysotis vinacea).
Indian Darter (Plotus melanogaster).
White-marked Duck (Anas specularis).
Spotted Zenaida Doves (Zenaida maculata).
Brush Bronze-winged Pigeon (Phaps elegans).
Germain's Peacock Pheasant (Polyplectron germaini).
Sclavonian Grebe (Podiceps cornutus).
Black-throated Diver (Colymbus arcticus).

### REPTILES.

Senegal Chameleon (Chamæleon senegalensis).

Sooty Amphisbæna (Amphisbæna fuliginosa).

Indian Monitor (Monitor dracæna).

Egyptian Ouarans (Psammosaurus scincus).

Derbian Zonures (Zonurus derbianus).

Cape Adder (Vipera atropos).

Deadly Snake (Trigonocephalus atrox).

Surucucu or Bush-master (Lachesis mutus).

Ocellated Bladder-Frogs (Cystignathus ocetlatus).

Orange-shanked Tree-Frog (Phyltomedusa hypochondrialis).

Menobranchs (Menobranchus lateralis).

## FISHES.

Fringe-lipped Lampern (Petromyzon branchialis).

The subjoined list gives the number of animals of each species which were bred in the Gardens in the year 1881:—

## MAMMALS.

2 Rhesus Monkeys (Macacus erythræus).

3 Collared Fruit-Bats (Cynonycteris collaris).

1 Tiger (Felis tigris).

2 Hybrid Paradoxures. (Between Paradoxurus leucomystax and P. larvatus.)

1 Banded Ichneumon (Herpestes fasciatus).

2 Dingo Dogs (Canis dingo).

6 Cuming's Octodons (Octodon cuminyi).

2 Hybrid Peccaries. (Between Dicotyles tajacu and D. labiatus.)

1 Hybrid Camel. (Between Camelus bactrianus and C. dromedarius.)

1 Zebu (Bos indicus).

1 Hybrid Bison. (Between Bison americana ♂ and hybrid Bos frontalis ♀.)

2 Cape Buffalos (Bubalus caffer).

1 Eland (Oreas canna 3).

1 Beisa Antelope (Oryx beisa  $\circ$ ).

1 Cashmere-shawl Goat (Capra hircus, var. ♀).

1 Mouflon (Ovis musimon).

2 Reeves's Muntjaes (Cervulus reevesi &).

2 Hybrid Muntjaes. (Between Cervulus scluteri and C. muntjac Q.)

1 Reeves's Muntjac (Cervulus reevesi).

2 Japanese Deer (Cervus sika).

1 Sambur Deer (Cervus aristotelis ♀).

1 Hog Deer (Cervus porcinus).

1 Molucea Deer (Cervus moluccensis).

1 Hybrid Mesopotamian Fallow Deer. (Between Cervus mesopotamicus and C. duma.)

1 Pampas Deer (Cariacus campestris).

1 Squirrel-like Phalanger (Belideus sciureus).

1 Vulpine Phalanger (Phalangista vulpina).

1 Red Kangaroo (Macropus rufus).

1 Bennett's Wallaby (Halmaturus bennetti).

1 Gaimard's Rat-Kangaroo (Hypsiprymnus gaimardi).

## BIRDS.

2 Turquoisine Parrakeets (Euphema pulchella).

4 Undulated Grass-Parrakeets (Melopsittacus undulatus).

2 Searlet Ibis (Endocimus ruber). 1 Ruddy Sheldrake (Tadorna rutila).

3 Variegated Sheldrakes (Tadorna variegata).

7 Australian Wild Ducks (Anas superciliosa).

3 Spotted-billed Ducks (Anas pacilorhynchu).

3 Common Wigeon (Mareca penelope). 5 Chiloe Wigeons (Mareca chiloensis).

9 Summer Ducks (Aix sponsa).

1 Mandarin Duck (Aix galericulata).

3 Red-crested Whistling Ducks (Fuligula rufinu).

4 Geoffroy's Doves (Peristera geoffroii).

6 Himalayan Monauls (Lophophorus impeyanus).

2 Cheer Pheasants (Phasianus wallichii).

1 Siamese Pheasant (Euplocamus prælatus).

5 Horned Tragopans (Ceriornis satyra).

3 Common Peafowls (Pavo cristatus).

4 Peacock Pheasants (Polyplectron chinquis).

2 Hybrid Gulls. (Between Larus fuscus and L. argentatus.)

1 Jameson's Gull (Larus jamesoni).

#### REPTILES.

1 Mocassin Snake (Tropidonotus fasciatus).

46 Nose-horned Vipers (Vipera nasicornis).

The following is a List of the Donors and their several Donations for the year 1881.

Abrahams, J. A., Esq.

Two Golden Sparrows.

Aldridge, Mr. G.

One Green Monkey.

Allen, Mr. A.

Two Greater Black-backed Gulls.

Alsop, Mrs.

One Black-eared Marmoset.

Angel, Maurice C., Esq., F.Z.S.

Three Paradise Whydah Birds, one Pin-tailed Whydah Bird, one Red-shouldered Weaver Bird, one Wiener's Finch, one Red-beaked Weaver Bird, two Yellow-rumped Seedeaters.

Anson, Lieut. W. V., R.N.

One Purple-faced Monkey.

Apthorp, F. N., Esq.

Two Squirrel Monkeys.

Arbuthnot, Gerald, Esq.

Two Black-tailed Parrakeets.

Areher, H. T., Esq.

Two Wood-Owls.

Armitage, Lieut.-Col. J. S., F.Z.S.

Two Leopards.

Astley, Arthur F., Esq.

Two Common Jays.

Aylesbury, H., Esq.

One Malbrouck Monkey.

Balfour, H., Esq.

One Common Crayfish.

Barber, C. B., Esq.

Two Common Squirrels.

Barker, D. W., Esq.

Two Squirrel-like Phalangers.

Barrow, J., Esq.

One Serval, two Bell's Cinixys.

Bassano, W., Esq.

One Chipping Squirrel, one Plaintain-Squirrel.

Baxendale, Salisbury, Esq., F.Z.S. Two Common Swans.

Baxter, Mr. G. H.

One Pomarine Skua.

Beard, Mrs.

One Lesser Sulphur-crested Cockatoo.

Beart, Master Alfred.

One Common Cuckoo.

Benison, F. H. Worsley, Esq. One Carrion-Crow.

Bennett, G. Lyon, Esq.

One Ceylonese Hawk-Eagle.

Berridge, Master H.

One Vulpine Phalanger.

Berryman, E. W., Esq. One Bosch Bok.

Beyts, N. H.

Six Hairy-footed Jerboas, one White-rumped Gerbille, two Egyptian Ouarans.

Birt, Dr. Louis F. H.

One Yaguarundi Cat.

Black, H. H., Esq.

One Long-snouted Snake.

Blackstone, J., Esq., F.Z.S.

Two Common Chameleons.

Bland, E. H., Esq.

Three Green Lizards.

Blasius, Dr. Rudolph.

Two Black Storks.

Bott, Major.

One Common Raven.

Bower, Mr. T. H. Bowyer.

Two Beautiful Parrakeets, two Ceylonese Hanging-Parrakeets, one Chinese Quail, one Regent Bird, one

Blue-beaked Weaver Bird, two Banded Grass-Finches, two Bicheno's Finches, one Melodious Finch, one Black-headed Finch, three Modest Grass-Finches, one Paradise Whydah Bird.

Branford, W. Catton, Esq.

Two Black-footed Penguins.

Brassey, Mrs.

One Vervet Monkey.

Bree, Dr.

Two Hawfinches.

Brodrick, W., Esq.

One Lesscr Kestrel.

Brooke, Mr. H. C.

One Common Polecat.

Brookfield, E. O., Esq.

One Ring-tailed Lemur.

Brown, E. A., Esq.

One Herring-Gull.

Brown, Mrs. Edward.

Two Common Peafowls.

Brownlow, Earl, F.Z.S.

One Loggerhead Turtle.

Buckingham and Chandos, His Grace the Duke of.

One Indian Leopard.

Burke, Capt. F. M. (S.S. 'Cheybassa').

One Brush Turkey.

Burkett, Commander.

One Indrance Owl.

Burnham, J., Esq.

Two Wonga-Wonga Pigeons.

Burnside, Eustace L., Esq.

Two Leopards (young).

Caledon, the Earl of, F.Z.S., and the Hon. Charles Alexander.
One American Black Bear.

Carew, Charles E. Pole, Esq.

One Rubiginous Cat.

Cecil, The Lord W. Gascoyne.

Two Common Marmosets.

Chappelow, J. S., Esq.

One Weeper Capuchin.

Chauncy, Reginald, Esq.

One Malbrouck Monkey.

Clayton, J. E., Esq.

One Red-legged Partridge.

Cocks, A. H., Esq., F.Z.S.

One Fringed-lipped Lampern, four River-Lampreys.

Colquhoun, Sir Patrick, F.Z.S. One Grey Ichneumon.

Comyns, George, Esq.

One Macaque Monkey.

Cook, John M., Esq.

One Leucoryx Antelope.

Cornély, Mons. J. M., C.M.Z.S.

One Chinese Quail, one Wedge-tailed Fruit-Pigeon, two Red-chested Whydah Birds, two Calandra Larks, two Variable Lizards, two Fire-tailed Finches, one Chukar Partridge, one Grey Francolin, one Chilian Teal.

Cotton, Capt. W., F.Z.S.

One Blanford's Wild Sheep.

Cottrell, Mr. S. A.

One Tennant's Squirrel.

Cox, Harding, Esq.

One Macaque Monkey.

Craven, Charles A., Esq.

One Tarantula Spider, one Millipede, one Surucuru or Bush-master, one Horrid Rattlesnake.

Cubitt, W., Esq.

One Banded Ichneumon.

Cuffe, The Rev. George.

One Macaque Monkey.

Dance, Mr. E. H.

One Collared Peccary, one Black-faced Spider Monkey.

Davies and Jolliff, Messrs.

Thirteen Indian Fruit-Bats.

Dawson, H., Esq.

One Common Snake.

Day, Mr. Henry.

One Alexandrine Parrakeet.

De Lautour, Dr. A., M.R.C.S. One Mountain Ka-Ka.

Douglas, Mr.

One Laughing Kingfisher.

Dowling, A., Esq.

One Macaque Monkey.

Dowly, A. A., Esq.

Two Pileated Jays.

Drax, Miss.

One Black-faced Kangaroo.

Druce, A., Esq., F.Z.S.

One Common Paradoxure.

Dummett, Mr. H.

One Macaque Monkey.

Duncan, James W.

One Macaque Monkey.

Dunn, W., Esq., C.M.Z.S. Three Hedgehogs.

Edge, Mr. R.

One Macaque Monkey.

Edger, R. M., Esq.

One Vervet Monkey.

Edwards, Mr. J.

Two Common Kestrels.

Ellcsmere, The Countess of.

One Undulated Grass-Parrakeet.

Elliot, Edmund A. S., Esq., M.R.C.S.
Two Dunlins, one Ringed Plover.

Faed, Mrs. J. F. Two Ferrets.

Findlay, Mrs.

One Chacma Baboon.

Fisk, Rev. G. H. R., C.M.Z.S.

Five Robben-Island Snakes, one Smooth-bellied Snake, one Rufescent Snake.

Fletcher, C. W. C., Esq.

One Common Paradoxure.

Fletcher, Robert, Esq.

One Goldfinch, one Snow-Bunting.

Forbes, A. W., Esq.

One Two-Spotted Paradoxure.

Foster, C. T., Esq.

Two Common Barn-Owls.

Fuller, Mrs.

One Ring-tailed Coati.

Garrett, G. H., Esq.

One Royal Python.

Gibbs, Dr. Heneage, F.Z.S. Two Axolotls.

Glennie, G. R. J., Esq.

One Macaque Monkey.

Godfrey, Masters John and Charles.

Two Common Kestrels. Graham, Lieut. C. E. F. C., R.N.

One Ocelot.

Greaves, Mrs.

Two Herring-Gulls.

Green, Mr. C.

One Bonnet-Monkey.

Guppy, Lachmere, Esq.

One Rough Terrapin.

Gurney, J. H., Esq., Jun. One Little Grebe.

Hagenbeck, Mr. Carl.

One Giant Toad, one Spider.

Hancock, H. J. Burford, Esq., F.Z.S.

Two West-Indian Agoutis, two Martiniean Doves, three Garden's Night-Herons.

Hargreaves, John, Esq.

Four Common Swans.

Harland, Mr. E. A.

One Black-crested Eagle.

Hart, Lionel, Esq.

Two Guinea Baboons, one Grivet Monkey.

Hart, W. Hume, Esq., C.M.Z.S.

One Two-spotted Paradoxure. Two Getulian Ground-Squirrels.

Hassard, Col. R.E.

Six Dwarf Chameleons.

Hassell, Mrs. C.

One Grey Ichneumon.

Haworth, L. H., Esq.

One Ring-tailed Coati. Hawtayne, G. H., Esq., C.M.Z.S.

One Common Boa, two Red-billed Trec-Ducks, one Sooty Amphisbæna.

Heatley, G. H. Tod, Esq.

One Common Kite.

Henderson, Mrs. J. S.

One Vulpine Phalanger.

Holding, Mr. R. E.

Two Pantherine Toads.

Horniman, F. J., Esq., F.Z.S.

Two Vulpine Phalangers, one Rufous Rat-Kangaroo.

Humphry, Mrs.

One Green Tree-Frog.

Hunt, Major.

One Dwarf Chameleon.

Hunt, Mr. C.

One Herring-Gull.

Jameson, James S., Esq.

One African Cheetah, one Secretary Vulture, one Chacma Baboon.

Jameson, James, Esq.

One White-collared Mangabey.

Jamrach, Mr. A. H.

One Indian Cobra.

Jarvis, G. E., Esq.

One Macaque Monkey, one Bonnet-Monkey.

Jerram, W., Esq.

One young Ostrich.

Johnston, H. H., Esq.

One Undulated Grass-Parrakeet, two Californian Quails, two Common Quails, one Barred Dove, one Nutmeg-Finch, one Greenfinch, one Goldfinch, two Chaffinches, two Common Crossbills, one Common Lapwing, two Rufous-necked Weaver Birds, two Mecca Pigeous, one Swift.

Jolliffe, Mrs. Hylton.

One Banded Grass-Finch, two Yellow-billed Liothrix.

Jones, Mrs. J. J.

One Egyptian Gazelle.

Keiser, Mr.

One Red-handed Tamarin.

Kerr, Hamilton, Esq.

One Rhesus Monkey.

King, Capt.

One Daubenton's Curassow, one Hawk's-billed Turtle.

King, Mr. G. H.

One Common Adder.

Kirk, Sir John, C.B., C.M.Z.S.

One Leopard Tortoise, one Radiated Tortoise, three Bell's Cinixys.

Lambert, Alan, Esq.

One Globose Curassow.

Lawrence, Edward, Esq.

One Blackbird, two Song-Thrushes, two Skylarks, one Greenfinch, two Chaffinches, two Common Quails.

Laver, Henry, Esq.

Four Harvest-Mice.

Laye, Frank G. S., Esq.

One Moustache Monkey.

Leckie, P., Esq.

Onc Common Ocelot.

Leechman, Mrs. John.

One Tarantula Spider.

Lewis, J., Esq.

One Wall-Lizard.

Lidbury, Mr. A.

One Common Kestrel.

Lilford, Lord, F.Z.S.

One Mesopotamian Fallow Deer, two Beatrix Antelopes, two Arabian Gazelles.

Lindstedt, E., Esq.

One Indian Monitor.

Lloyd, Master Rew.

One Black-headed Gull.

Lloyd, J., Esq.

One Grey-breasted Parrakect, onc Black-headed Conure.

Long, W. H. L., Esq.

One Chacma Baboon.

Lonsdale, Countess Dowager of.

One Ring-necked Parrakeet.

Louis, Wyatt, Esq.

One Diana Monkey.

Lubbock, F., Esq.

One Rose-coloured Pastor.

Lydston-Newman, Robert H. S. D., Esq.

One Silver Fox.

Mackenzie, Osgood H., Esq. One Hooper Swan.

Mackenzie, Capt.

One Wood-Brocket.

Macpherson, H. A., Esq.

One Short-toed Lark, one Hybrid Greenfinch, one Snow-Bunting.

M'Pherson, Capt.

One American Black Bear.

Maitland, F. O., Esq.

One Stump-tailed Lizard.

Manley, the Rev. R. H.

One Bonnet-Monkey.

Mann, J. T., Esq.

Six Common Lizards, two Smooth Snakes, two Sand-Lizards.

March, the Earl of, F.Z.S.

One Egyptian Gazelle.

Marlton, Mr. R. J.

One Naked-footed Owlet.

Marshall, J., Esq.

Two Black-winged Peafowls.

Marshall, Ernest L., Esq.

One Blue-shouldered Tanager.

Maskell, Edwin H., Esq.

One Indian Fruit-Bat.

May, Miss Margeny.

One Arctic Fox.

Melhuish, Mr. A.

One Central-American Agouti.

Mengee, Mr. G.

One Slowworm.

Milestone, Mr.

One Common Lobster.

Milne-Edwards, Mons. Alphonsc. Two Robust Gerbilles.

Mitchell, H., Esq.

Two Common Otters.

Morgav, Gellibrand, & Co., Messrs.

One Brown Bear.

Morrell, Arthur, Esq.

One Red-legged Partridge.

Morrison, Mr. H.

One Common Cuckoo.

Mortimer, Miss.

One Carrion-Crow.

Moseley, H. N., Esq., F.Z.S.

Ten Green Lizards.

Mosse, Charles B., Esq.

Two Yellow Snakes.

Müller, Hugo, Esq.

Three Bull Frogs, one Noisy Frog.

Murray, J. Wolfe, Esq.

One Marsh-Harrier.

Nesbitt, A., Esq.

One Upland Goose.

Norcliffe, Francis B., Esq.

One Ring-tailed Coati.

Nugent, Mr. W.

One Macaque Monkey.

Okes-Voysey, R. W., Esq.
One Bonnet-Monkey.

Ord, Sir Harry St. George, C.B., H.M.Z.S. Three Short-tailed Wallabies.

Oxley, Major C. R.

One Viverrine Cat.

Page, Mr. F.

One Common Barn-Owl.

Palmer, J. N., Esq.

One Common Marmosct.

Parry, the Misses.

One Green Lizard.

Paterson, Mrs.

One Malbrouck Monkey.

Pesque, John, Esq.

Two Red-handed Tamarins.

Petty, Mr. W.

One Rude Fox, one Azara's Fox.

Phipson, A., Esq.

One Slowworm.

Pichot, Mons. M. P.
Two Polecats.

Pierce, Col. Thomas, 16th Regiment Bombay N. I. Two Chukar Partridges.

Pillans, Borradaile, Esq. One Cape Adder.

Platt, S. R., Esq.

One Silver Fox.

Ponsonby, Arthur C., Esq.
One Rough-eyed Cayman.

Pope, Mr. J.

One Malbrouck Monkey.

Portella, Dr.

Two Spotted Cavies.

Poyer, Poyer J., Esq.

One Common Viper, two Common Snakes.

Randall, Mr. G.

One Common Gannet.

Richardson, Miss.

One Rhesus Monkey.

Richardson, Miss Mary J.

One Roseate Cockatoo.

Ringrose, E. M., Esq.

One Black-crested Cardinal.

Ritchie, Capt. James.

Two Yellow-billed Sheathbills.

Roberts, F., Esq.

Two Common Carp, one Pike, one Common Carp.

Robertson, Mr. Robert Ross.

One Chacma Baboon.

Robinson, J. C., Esq.

Two Young Turtles.

Robinson, Capt. J. C.

One Black-footed Penguin.

Rocke, Mrs.

One Common Badger.

Rogers, A. R., Esq.

Three Common Chameleons.

Romer, Capt.

One Red-fronted Lemur.

Rooke, Major.

Two Spanish Terrapins.

Rose, C. A., Esq.

One Malbrouck Monkey.

Russell, Lord Arthur, M.P., F.Z.S. Two Edible Snails.

Russell, Claud, Esq.

Two Green Lizards.

Sandeman, Fleetwood, Esq., F.Z.S. Two Spanish Ichneumons.

Sandford, Sir Hubert.

Two Laughing Kingfishers.

Sandford, L. A., Esq.

One Common Viper.

St. John, Col., F.Z.S.

One Bactrian Camel.

St. Quintin, W. H., Esq.

One Gold Pheasant.

Scott, W. Macmillan, Esq. One Mona Monkey.

Seaton, George, Esq. One Pike.

Sewell, C. Drake, Esq.

One White-fronted Capuchin.

Sexton, J., Esq.

One Stanley Crane, one Senegal Chameleon.

Seyd, Richard, Esq., F.Z.S.

One Orange-winged Amazon.

Sharpe, J. E., Esq.

One Central-American Agouti.

Sherleck, H. P., Esq.

Two Malbrouck Monkeys.

Shewell, H. W. M., Esq.

One Sykes's Monkey.

Short, R. J., Esq.

One Macaque Monkey.

Skarrett, C. E., Esq.

One Diamond Snake.

Smith, Sir Charles C., Bart. One Roscate Cockatoo.

Smith, Mrs. Martin.

One Leadbeater's Cockatoo.

Smith, Mr. C. R.

One Grey Ichneumon.

Smith, Capt. C. Holled.

One Black-backed Jackal.

Smyth, Frank, Esq.

One Rhesus Monkey.

Snow, Mr. J.

One Common Adder.

Southey, the Hon.

One Tawny Eagle.

Stanley, Mr. W. K.

One Common Kestrel, one Common Hare.

Steer, Capt. T. G.

One White-crested Touracou.

Stevenson, George, Esq.

Two Common Peafowls.

Stewart, A. D. M., Esq.
One Common Rhea.

Stewart, C., Esq.

One Common Marmoset, one Black-eared Marmoset.

Stockham, Capt. H. H.

One Black-footed Penguin. Stradling, Dr. Arthur, C.M.Z.S.

Two Talpacoti Ground-Doves, one Plumbeous Snake, two Taraquira Lizards, one Orange-shanked Tree-Frog, three Horrid Rattlesnakes, ten Ocellated Bladder-Frogs, one d'Orbigny's Snake, one Longheaded Snake, one Common Ocelot, one Thicknecked Tree-Boa, one Deadly Snake, one Brazilian Tanager.

Streatfield, A. E. C., Esq.

Two Stock-Doves.

Supple, Mrs.

One Red-and-Blue Macaw.

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One Bonnet-Monkey.

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One Macaque Monkey.

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One Pileated Jay.

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One American Tapir.

#### Conclusion.

In concluding their fifty-third Report, the Council have to acknowledge, with many thanks, the assistance they have received from the Committee of Publication, and from the gentlemen who have served upon the Committees of Finance and Audit during the past year.

#### Signed (for the Council),

P. L. Sclater,

Secretary.

11 Hanover Square, April 29th, 1882.

#### REPORT

OF THE

#### AUDITORS OF THE ACCOUNTS

OF THE

### ZOOLOGICAL SOCIETY OF LONDON,

Appointed January 19, 1882.

THE Committee of Auditors to the Zoological Society having fully examined the Accounts, inspected the Books, and seen Vouchers for all the various Payments ordered by the Council for the year ending December 31st, 1881, respectfully submit to the Society an abstract of the Accounts, together with a Statement of the Assets and Liabilities at the close of the year, and a Report thereon.

#### RECEIPTS.

Balance brought from Dec. 31, 1880		*****************	£ s. d. 879 14 2
INCOME.	0.1	0	
1877 Garden Sales	£ s. d.	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
187S { Admission Fees	5 0 0 3 0 0	8 0 0	
1879 { Garden Sales	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		
( Rent for Freehold Premises	75 0 0	57 19 0	
Garden Sales  1880 { Admission Fees Subscriptions Publication Sales	264 3 0 85 0 0 54 0 0	COO O S	
Admissions to Gardens Rent for Refreshment Rooms Rent for Freehold Premises Garden Sales Admission Fees Compositions Subscriptions Ivory Tickets Publication Subscriptions Publication Sales Dividends (Davis Bequest)	1,084 6 S 225 0 0 172 10 3 510 0 0 600 0 0 6,328 13 0 37 6 0 528 3 0 291 8 8 74 3 7	622 8 S	
Miscellaneous	. 114 0 0	24,985 11 2	
Publication Subscriptions	15 15 0	130 16 0	
INCOME RECEIVED IN 1881		25,810 14 10	25,810 14 10
Temporary Loans from the Bankers			1,200 0 0
			27,890 9 0

#### PAYMENTS.

	1								
		В	elo	nging to					
EXPENDITURE.	18	80.		18	81.		T	otal.	
EXPENDITORE.	£		d	0			0		
Rent, Rates, Taxes, and InsurancesGardens Ditto dittoOffice Salaries, Wages, and PensionsGardens	281	s. 12	8	828	18	5 7	1,109 95	0	4
Ditto dittoOffice			••••	$\begin{array}{c c} 3,439 \\ 1,822 \end{array}$		6	1,822		-
Cost and Carriage of Animals	342		3			6 5	1,199 $4,970$		10 8
Menagerie Expenses Keepers' Dresses	232	$\frac{3}{10}$	8	3,193	10	0	3,425 157	13	8
Works, Materials	400	0	9	2,888	1	10	3,288	2	7
Garden Expenses	42 10	$\bar{2}$	8	886	10 6	$\frac{6}{10}$	121 896	9	2 1
Advertisements Band Expenses		17	11	200 221	11	5 0	245 221	$\frac{9}{8}$	4 0
House and Office ExpensesGardens Ditto dittoOffice		19 4	3 5		$\frac{15}{2}$	3	257 438	14 6	6 9
Stationery Printing	$\begin{array}{c} 14 \\ 22 \end{array}$	9	9	64	11	11	79	1 5	8
Cost of Publications	224	15	0	2,355	14	10	393 2,580	9	6 10
Returned Subscriptions		10		422 26	9 7	$\frac{2}{0}$	514 26	19 7	5 0
Grant to the Zoological Record Association Law Expenses	3	 13	2	50	0	0	50 3	0 13	$\frac{0}{2}$
Expenditure of Davis Bequest				$\begin{array}{c} 76 \\ 273 \end{array}$		9	76 273	18	0
							2,0	••	J
-	2,153	6	7	23,533	19	1	25,687	5	8
						_			
Repaid Messrs. Drummond on account of Mo	rtgage :	Deb	t	••••••	••••	•••	1,000	0	0
Cash at the Banker's, December { General 2 31, 1881, viz. Petty Cas	Account h Accou	nt	•••	£686 517	2 1	4			
							1,203	3	4
							27,890	9	0

### Comparison of Receipts in 1880 and 1881.

	Rec	eipts.		
	Incom	ne of	Increase.	Decrease.
	1880.	1881.	Increase.	Decrease.
Admission Fees:  Past	## 8. d. 90 0 0 615 5 0 63 0 0 6,508 8 0 138 3 0 1,020 0 0 39 18 0 15,786 12 0 329 10 3 1,107 0 0 300 0 0 975 11 4	### 8. d. 90 0 0 510 0 0  93 0 0 6,328 13 0 114 0 0 600 0 0 33 7 0 15,113 17 6 462 13 3  1,084 6 8  300 0 0 981 11 4	20 0 0 0 133 3 0	£ s. d.  105 5 0  179 15 0 24 3 0 420 0 0 1 11 0 672 14 6
Dividends Miscellaneous	74 6 9 340 5 11	25,810 14 10 1,577 5 5	169 3 0 Ded. Incr.	1,746 8 5 169 3 0
	27,388 0 3	27,388 0 3		1,577 5 5
Total Pa	ceipts in 1881 yments in 1881. over Payments			·
$\overline{Dr}$ .	C	ash		
To Balance brought from To Income received in the To Temporary Loans from	Year			£ s. d. 879 14 2 25,810 14 10 1,200 0 0

## Comparison of Payments in 1880 and 1881.

	Payr	nents.		
	Exper	diture of		
	1880.	1881.	Increase.	Decrease
Arrears of previous years Rent, Rates, Taxes, and In		£ s. d. 2,153 6 7	£ 8. d	· · · · · · · · · · · · · · · · · · ·
Salaries, Wages, and Pen	. 857 5 4	900 5 0	42 19 8	
Cost and Carriage of Animal Provisions Menagerie Expenses Keepers' Dresses Works, Repairs, and Mate	5,160 1 2 1,494 14 5 4,676 13 4 2,808 17 6	5,262 8 10 867 5 6 4,627 14 5 3,193 10 0 154 12 0	384 12 6 10 0 0	627 8 11 48 18 11
rials Garden Expenses Advertisements Band Expenses House and Office Expenses Stationery and Account Books Printing (Miscellaneous) Publications Library Expenses Returned Subscriptions Grant in aid of Science Expenditure of Davis Bequest Interest on Mortgage-debt	3,922 0 11 792 18 0 213 18 11 223 4 0	2,967 12 4 856 6 10 200 11 5 221 8 0 611 17 7 64 11 11 370 11 6 2,355 14 10 422 9 2 26 7 0 50 0 0 76 18 0 273 14 9	93 8 10 520 3 11 2 17 0	954 8 7  13 7 6 1 16 0 29 7 5 6 4 3 26 12 9  241 18 5 88 8 0
Decrease	26,579 7 4	25,687 5 8 892 1 8	1,185 7 8 Dcd. Incr.	2,077 9 4 1,185 7 8
	26,579 7 4	26,579 7 4		892 1 8
Ordinary Payments Extraordinary ditto	24,753 9 5 1,825 17 11	24,651 4 3 1,036 1 5	••••••	102 5 2 789 16 6
	26,579 7 4	25,687 5 8	••••••	892 1 8
	Cont	ra		Cr.
By Expenditure paid in the year By Repayment to Messrs. Dru By Balance at Bankers', Decer	mmond on accounter 31, 1881	ant of Mortgage.	25	£ s. d. 5,687 5 8 1,000 0 0 0 1,203 3 4

## The Assets and Liabilities of the Society on the 31st of December 1881 were as follow:—

				A	SS	Έ	TS.												
		A	rre	ars of			Freeh			Cas	e1		Tota	1.					
		Previous Years.										Funded Property.			211+	ł	1 Stail		
Cashat the Banker's Cost of £1900 Lond. & South- western Ry. Co's										£ 1203			£ 1203		d. 4				
New 4 per Cent. Preference Stock (Davis Trust) Freehold Premises. Annual Subscrip-	•••••						1,9 *24,7						1,938 24,745	9	6 0				
tionsIvory Tickets	34	1	0	3	3	0								4					
Publication Sales Garden Sales	19	11 13	6	145		4 9					•••••	•	165 68						
Rent for Refresh- ment Rooms Rent for Freehold		• • • •	•••	48	10	0							48	10	0				
Premises		• • • •	•••	75	0	0							75	0	0				
	58	5	6	475	11	1	26,6	83	9 6	1203	3	4	28,420	9	5				

#### LIABILITIES.

	Debts.	
Bills, &c., estimated at—  For the Gardens, say  Office, say	£ s. d. 1013 9 2 231 13 5 1245 2	
Rent and Taxes unpaid—  For the Gardens, say  Office, say	272 18 10 25 18 0 298 16	
Messrs. Drummond, Mortgage Debt  Temporary Loan had November 18, 1881	200	0 0
Ditto ditto December 21, 1881	8743 19	

<sup>\*</sup> This is the estimate of Messrs. Widnell and Trollope plus the addition of £225 annually until the expiration of Messrs. Purdey's lease. The sum paid was £22,225 on June 24, 1877.

The Auditors are sorry to have to report that the income of the Society has suffered some diminution during the past year. The Admissions to the Gardens have yielded £672 less than in the previous year. The severity of last winter and the bad weather throughout the greater part of the year will, in a measure, account for this. But, notwithstanding this drawback, the Expenditure has been kept well within the Income; the only items of expenditure which appear somewhat large are those under the heads of "Menagerie" and "Publications."

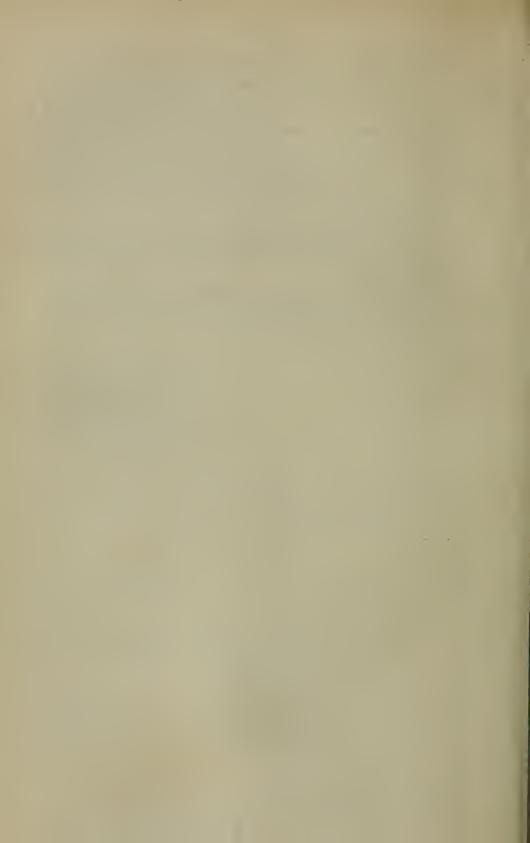
It should be remembered that in the statement of Assets no account of the most valuable property of the Society (namely, its collection of Animals and its extensive Library) has been entered.

The Auditors have much pleasure in expressing their satisfaction with the manner in which the Books have been placed before them by Mr. Barrow, the Society's Accountant.

JOHN BIDDULPH.
ALFRED E. CRAVEN.
HERBERT DRUCE.
CHARLES H. GATTY.
W. H. HUDLESTON.

11 Hanover Square, W. February 23, 1882.





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1865, ,,					27s. 6d.	
1866, ,,					27s.6d	
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1007 1 1					To Fellows. T	
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					32s. 6d	
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1870, ,,			11s. 6d	14s. 6d	32s. 6d	47s. 6d.
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#### REPORT

OF THE

#### COUNCIL AND AUDITORS

OF THE

### ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1882.

READ AT THE ANNUAL GENERAL MEETING,

APRIL 30TH, 1883.



#### LONDON:

PRINTED BY TAYLOR AND FRANCIS,

RED LION COURT, FLEET STREET.

1883.

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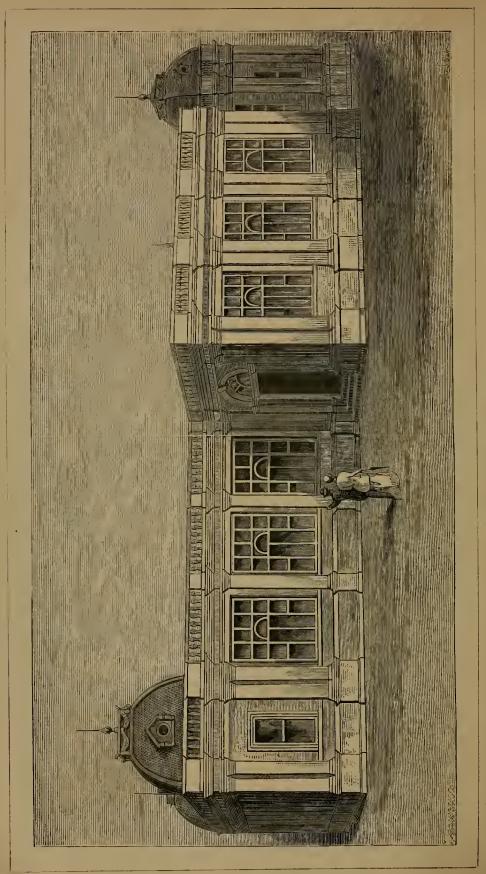
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### REPORT

OF THE

SIR1 600

#### COUNCIL

OF THE

### ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1882.

READ AT THE ANNUAL GENERAL MEETING,

APRIL 30th, 1883.



#### LONDON:

PRINTED BY TAYLOR AND FRANCIS,

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1883.

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#### REPORT OF THE COUNCIL.

April 30, 1883.

THE Council have the pleasure of submitting to the Fellows their fifty-fourth Annual Report upon the pro-

gress of the Society.

This, in accordance with previous Reports, is divided into three heads, the first of which relates to the General Condition of the Society and its Finances, the second to the business transacted at the Office in Hanover Square, and the last to the state of the Gardens in the Regent's Park.

#### I. GENERAL CONDITION OF THE SOCIETY.

#### 1. STATE OF THE ROLL OF MEMBERS.

#### a. Fellows.

The number of Fellows and Fellows Elect at the close of the year 1882 was 3213, the same as at the corresponding period in 1881. Of these there were:—

Compounders who have paid	£20	•			41
Ditto ditto	£30	•		•	870
Compositions remitted			•	•	17
Paying annual contributions					
Ditto ditto	£3	•	•	٠	2089
Dormant		•		•	128
Admission-fees unpaid			•	•	23
					3213

The state of the Society during the past Ten years, as regards the number of its Ordinary Members, is given in the subjoined Table.

A 2

Comparative Statement of Elections, Deaths, Resignations, and Removals during the past Ten years, with the number of Fellows at the end of each Year.

	or sed.		Died.					esigne	d.	R	d.	be .	of 8,				
Years.	Elected or Re-admitted	Con	apound	lers.	Subsc	ribers.	Subscribers. Signature		Subscribers.		Mission Fees		ubscribers. 5 Subscribers. 5		mission Fees npaid.	eased to Fellows.	Number of Fellows, December 31
	Elec Re-ac	£20.	£30.	Fee re- mitted	£2.	£3.	£2.	£3.	Admission Fees Unpaid.	£2. £3.		Admission Fees Unpaid.	Ceas	Nur Fe			
1873	216	5	7		6	38		34			2	1	93	3173			
1874.	221	7	6	1	8	60		33			74	8	197	3197			
1875.	180	8	16	•••	8	57		36				11	136	3211			
1876.	224	9	28		4	63		49	1				154	3311			
1877.	228	3	23		9	63		20		1	58	6	182	3358			
1878.	176	6_	12		5	52	1	40	1			1	118	3416			
1879.	145	9	17		7	46		54			50	6	189	3364			
1880.	153	4	18	1	4	65		74	•••		38	4	208	3309			
1881.	138	24	31		5	78		65	3	1	27		234	3213			
1882.	164	3	23	1	4	61		48			11	13	ji64	3213			

#### b. Corresponding Members.

The following six Corresponding Members were elected in 1882:—

Dr. Edward Brandt, of the Zoological Museum, St. Petersburg.

C. A. Craven, Esq., of Pernambuco, Brazil.

Alfred Everett, Esq., of Papar, Borneo.

Professor Rütimeyer, of Basle, Switzerland.

Dr. Staudinger, of Blasewitz, near Dresden. M. Léon Vaillant, of the Jardin des Plantes, Paris.

#### 2. STATE OF THE FINANCES.

#### a. Income.

The Income of the Society for the past year was swollen by unexpected circumstances, which will be spoken of in a subsequent part of the Report, and attained the large total of £34,270 17s. 8d. Only once before during the existence of the Society has the amount of receipts been so large, namely in 1876, when the income was £34,955 4s. 1d.

The subjoined Table contains a comparison of the various

heads of income in 1881 and 1882:—

#### Comparison of Receipts in 1881 and 1882.

	Income of									
	1881.			1882.			Incr	eas	٥.	Decrease.
Admissions to Gardens	15,113 1,084 300 462 90 510 93	17 6 0 13 0 0	8	20,691 1,307 300 2,280 100	10 3 0 10 0 0	d. 0 4 0 0 0 0 0 0	5,577 222 1,817 10 110	16 0 0	9 0 0	36 0 0
Future Compositions Ivory Tickets Publications Dividends Elephant-riding receipts Miscellaneous	114 600 38 981 74	0 0 7 11 3	0 0 0 4 7	108 1,170 37	0 6 4 8 10 7	0 0 0 5 8 9 6 8	570 71 305 43 8,728	0 5 10	0	31 16 0 6 0 0 1 1 0 193 6 11

It will be observed that the total increase of Income of 1882 over 1881 amounted (after deducting the decrease under certain small heads of £268 3s. 11d.) to £8460 2s. 10d.

Adding to the Income of 1882 the balance (£1203 3s. 4d.) carried forward from 1881, we find the total amount of £35,474 1s. available for the expenditure of the year 1882.

#### b. Expenditure.

This amount was disposed of in the following manner:—The sum of £26,109 9s. was required for the ordinary expenditure of the year. The extraordinary expenditure during the same period amounted to £3266 17s. Two sums of £201 13s. 4d. and £1004 3s. 4d. were devoted to paying off two short loans borrowed from the Society's Bankers in November and December 1881, and the interest thereof. The sum of £1000 was paid to Messrs. Drummond on account of their mortgage on the Society's House and Premises. This left a balance at the Society's Bankers of £1391 18s. 4d. and a balance on the Deposit Account at the London and County Bank of £2500, which were carried forward for the benefit of the present year.

This result is shortly set forth in the subjoined Table.

Receipts, 1882.	Expenditure, 1882.
By Balance brought from December 31, 1881	### By Expenditure paid in the Year 29,376 6 0 By Repayment of Loans 1,205 16 8 By Repayment of Mortgage-debt Balance left on Deposit Account at London and County Bank 2,500 0 0 Balance left at the Bankers', December 31, 1882 1,391 18 4  35,474 1 0

The subjoined Table gives the various items of expenditure of 1882, and a comparison of each of them with the corresponding amount paid in 1881:—

	J	Exp	end	liture o	f		Incr	0990		Decr	0994	
	188	81.		1882.						Door on or		
Arrears of previous years	£ 2,153	8. 6	d. 7	£ 1,749	8. 4	d. 2	£	8.	d.	£	s. 2	<i>d</i> . 5
Rent, Rates, Taxes, and Insurance Salaries, Wages, and Pensions Provisions	900 5,262 4,627	5 8 14	0 10 5	1,110 5,442 4,638	1	8 5 6	210 179 10		8 7		••••	••••
Cost and Carriage of Animals Menagerie Expenses Keepers' Dresses	867 3,193 154	5 10	6 0	2,299 3,138 191	11 15	8 1 11	1,432	6 17	2 11	24	14	11
Works, Materials, &c. Buildings Garden Expenses	2,967		10	2,907 2,665 807	18 2	7 0 10:	2,665		0	59 79	13 2	9
Advertisements.  Band Expenses  House and Office Expenses	200 221 611	11 8	5 0 7	219 239 643	8 17	7 0 3	18 18 31	17 9 13	2 0 8			
Stationery and Account Books Printing (Miscellaneous) Cost of Publications	64 370 2,355		11 6 10	65 394 2,122	7 18 9	3 2	0 24	15 6	8	233	5	9
Library Expenses	422 26	9 7	0	370 29	12 5 18	3 0 6		18 18	0		16	
Law Expenses	50	0	0	30	10 15	ĭ 		10		50 6	0 3	0
Expenditure of Davis Bequest Interest on Mortgage Debt	273		9	234		0			••••	39	9	9
Increase	25,687 3,689	5 0	8	29,376	6	0	4,667 978	8 8	10 6	978 Ded.	Dec	6 er.
	29,376	6	0	29,376	6	0	3,689	0	4			
Ordinary Payments	24,651 1,036		3 5	26,109 3,266	9 17	0	1,458 2,230		9		• • • • • • • • • • • • • • • • • • • •	
	25,687	5	8	29,376	6	0	3,689	0	4			

The extraordinary expenditure of 1882 consisted of the following items, which will be fully explained in subsequent passages of the Report:—

#### Extraordinary Expenditure paid in 1882.

Works,	£	8.	d,	£	8.	d.
1. Additional rooms to Prosector's	07	_	_			
Office (balance)	31	1	$\frac{7}{2}$			
2. Reserve Cattle-sheds	216					
3. Glass roof to Kangaroo-sheds 4. New Hot-water apparatus in	115	17	1			
Monkey-house	31	9	1			
				394	12	9
New Buildings.						
New Reptile-house		,		2665	2	0
Publications.						
Index to 'Proceedings,' 1871-1880				207	2	3
				3266	17	0
				===		=

#### c. Assets and Liabilities.

The Assets and Liabilities of the Society on December 31, 1882, were estimated as follows:—

#### ASSETS.

Animals in the Menagerie in the Regent's Park Books in the Library at Hanover Square Unsold Publications Freehold Premises	£ 21,629 15,000 10,900 25,000	0	d. 0 0 0 0
Cost of £1,900 Londou and South-Western Railway New 4 per cent. Preference Stock (Davis' Trust Fund)	1,938	9	6
Deposit Account, London and County Bank	2,500 1,391		$\frac{0}{4}$
Publication Sales			
Rent for Refreshment Rooms 128 10 0 Rent for Freehold Premises 75 0 0			
	560	12	7
·	£78,920	5	5

#### LIABILITIES.

Rent and Taxes unpaid:— $\pounds$ s. d. For the Gardens, say	£	s.	d.
,, Office, say	262	14	6
For the Gardens, say			
,	$\frac{1,171}{5,000}$		
Messrs. Drummonds, Mortgage Debt  Balance of Contract on Reptile-house	2,180		
Hot-water Apparatus for ditto	242	0	0
	£8,856	12	7

As regards the Assets it will be observed that credit is given under several heads which have not been inserted in

previous statements of this kind.

The valuation of the animals in the Menagerie has been made by the Superintendent, who has had great experience in such matters, and is believed to represent, as nearly as possible under the circumstances, the amount they would be likely to fetch in case of realization.

That of the books (£15,000) has been made by the Librarian, and is calculated to be the sum the Library

would produce if sold by auction.

As regards the Society's Publications remaining in stock, those issued prior to 1860 have been valued at half their published prices, those issued subsequently at the reduced prices at which they are sold to Fellows of the Society.

#### II. OFFICE, 11 HANOVER SQUARE.

#### 1. Oxford-Street Premises.

Messrs. Purdey's lease of the Oxford-Street premises having been prolonged by special agreement from Michaelmas 1882 until the 1st of February of the present year fell in on that date, and possession of them was received by the Society.

The Council have appointed a special sub-committee to consider how these premises may be most conveniently

utilized for the Society's interests.

#### 2. Scientific Meetings.

To the fifteen meetings for the despatch of scientific business held in the Society's Rooms in Hanover Square in 1882, 138 communications were made. Of these, 106 were from Fellows, and 7 from Corresponding Members of the Society. The remaining 25 papers were from individuals not belonging to the Society, and were communicated to it by the Secretary or by other Members. The corresponding number of communications in the year 1881 was 121.

These communications were submitted to the Committee of Publication, by whom the following orders were made respecting them: 3 were ordered to be printed entire in the 'Transactions' of the Society, and 100 in the 'Proceedings,' such illustrations being in each case allowed as the Committee considered necessary for the purpose. Of the remaining communications, abstracts or extracts were considered to be sufficient for publication.

#### 3. SCIENTIFIC PUBLICATIONS.

The volume of 'Proceedings' for 1882 is on the table. It contains 827 pages illustrated by 61 plates. In the following table are given the number of pages and plates of the volumes of 'Proceedings' for the past ten years:—

			plates.	pages.
1873			69	842
1874			84	728
1875			72	726
1876	•		82	864
1877			85	893
1878			62	1056
1879			64	868
1880			64	743
1881		·	$7\overline{2}$	1056
1882			61	827
		•	O.L	02/

Two Parts of the Society's 'Transactions' were issued during the year 1882, namely:—

#### Vol. XI. Part VI. (January, 1882).

On the Structure and Development of the Skull in the Urodeles. By W. K. Parker, F.R.S. (with six coloured plates).

#### Vol. XI. Part VII. (October, 1882).

Observations on some rare Reptiles and a Batrachian now or lately living in the Society's Menagerie. Albert Günther, F.R.S., V.P.Z.S. (with three uncoloured and two coloured plates).

Description of a Specimen of Schedophilus medusophagus, a Fish new to the British Fauna. By Dr. Albert Günther,

F.R.S., V.P.Z.S. (with one coloured plate).

Notes on the External Characters and Anatomy of the Californian Sea-lion (Otaria gillespii). By W. A. Forbes, B.A., Fellow of St. John's College, Cambridge, Prosector to the Society (with one uncoloured and two coloured plates).

The Index to the ten volumes of the 'Proceedings' from 1871 to 1880, which was announced to be in preparation in the last Report, has been completed and issued to all Subscribers to the Publications.

#### 4. LIBRARY.

The Library, under the superintendence of Mr. F. H. Waterhouse, the Society's Librarian, has been in constant use during the past year by many working zoologists.

Many important additions have been made to it, among which attention may be called to the following donations:-

Caton. Antelope and Deer of America. (Revised Edition.) 1881. Presented by the Author.

Godwin-Austen. Land and Freshwater Mollusca of India. Parts

i. to iii. Presented by the Author. Hidalgo. Moluscos del Viaje al Pacifico. Entrega i. Presented by the Author.

-. Catalogo de los Moluscos terrestres de España, Portugal y las Baleares. Entrega i. Presented by the Author.

Hopley. Snakes: Curiosities and Wonders of Serpent Life. Presented by the Authoress.

Journal of the Straits Branch of the Royal Asiatic Society. Nos. 5 to 9. Presented by Major-Gen. Sir Harry St. George Orde.

Leem's Lappones Finmarchiæ. Presented by Professor Newton, M.A.

Central Nervous System of certain Reptiles and Batra-Mason. chians of America. Presented by the Author.

Moore's Lepidoptera of Ceylon. Parts iv., v., vi. Presented by the Government of Ceylon.

Norske Nordhavs-expedition 1876-78. Parts iv. to vii. Presented by Prof. H. Mohn.

Phillips. Birds of Breconshire. 1882. Presented by the Author.

Raimondi, El. Perú. Tomo ii. 1876. Presented by Colonel Almonte.

Romanes. Animal Intelligence. 1882. Presented by the Author. Sinclair and Fyfe. Handbook of Jamaica, 1882. Presented by Edward Newton, Esq., C.M.G.

The following is a list of zoological works in course of publication of which parts were purchased in 1882:-

André. Spécies d. Hyménoptères. Fasc. i.-xv.

Booth. British Birds. Part ii. Bronn's Thierreich. Band V. Abth. ii. Lief. 4-8; Band VI. Abth. iii. Lief. 22-34; Band I. (Protozoa) Lief. 10-16; Band II. (Porifera) Lief. I.
'Challenger,' Voyage of H.M.S. Narrative, Vol. ii.; Zoology,

Vols. iv., v.

Cory. Beautiful and Curious Birds. Parts iii., iv.

Day. Fishes of Great Britain. Parts iv., v.

Distant. Rhopalocera. Parts i.-iii.

Dobson. Monograph of the Insectivora. Part i.

Doderlein. Manuale Ittiologico. Part ii.

Dubois. Oiseaux de Belgique. Livr. 40-44, Ecker. Anatomie des Frosches. Abth. iii. (completed).

Edwards. Butterflies of North America. Part x.

Elliot. Felidæ. Parts ix., x.

Fischer. Manuel de Conchyliologie. Fasc. i.-v. Giglioli. Avifauna Italica. Parts xiii.-xviii.

Godman and Salvin. Biologia Centrali-Americana. Zoology, Parts xv.-xx.; Botany, Parts xi.-xiv.

Gould's Birds of Asia. Part xxxiii.

Birds of New Guinea. Part xiii.
Supplement to the Trochilide. Part iii.

Kirby. European Butterflies and Moths. Nos. 46-58. Jager. Handwörterbuch der Zoologie, &c. Band ii. Jan et Sordelli. Ophidiens. Lief. 51 (completed). Janson's Cistula Entomologica. Parts xxv., xxvi.

Koch. Arachniden Australiens. Lief. xxix., xxx. Lang. Butterflies of Europe. Parts vi.-x.

Marshall and de Niceville. Butterflies of India, Burmah, and Ceylon. Part i.

McCoy. Prodromus of the Zoology of Victoria. Decade v., vi. Meyer. Abbildungen von Vögel-Skeleten. Lief. ii., iii.

Milne-Edwards et Grandidier. Mudagascar. Oiseaux: Tome I., Texte pt. 2; Tome III., Atlas pt. 2; Tome IV., Atlas pt. 3. Müller. Thiere der Heimath. Lief. i.-xxii.

Newton. Yarrell's British Birds. Part xv. Rolland. Faune Populaire de la France. Tome v., vi. Rossmässler. Inconographie. N. S. Band i. Lief. 1, 2.

Salvadori. Ornitologia della Papuasia c delle Molucche. Part iii.

Reichenow. Vogelbilder aus fernen Zonen. Lief. ix., x. Seebohm. British Birds. Part i. Semper. Reisen im Archipel der Philippinen. Theil II. Bd. iv. Heft 6.

Sharpe's Edition of Layard's Birds of South Africa. Part v. Waterhouse. Aid to the Identification of Insects. Parts xi,-xv.

Some of the most important additions to the Society's Library, purchased since the last Anniversary, are the following :-

Annalen des Weiner Museums. (Zool. Abhandl.) 4to, 1841.

Barboza du Bocage. Ornithologie d'Angola. 8vo, 1881.

Bischoff. Beiträge zur Biologie. 8vo, 1882.

Blainville. Manuel de Malacologie. Text and Atlas. 8vo, 1825. Bloch. Histoire Naturelle des Poissons. 10 vols. 12mo, 1801.

Bonizzi. Catalogo degli Uccelli del Modenese. 8vo, 1868.

Brown. Illustrations of Conchology of Great Britain and Ireland. Royal 8vo, 1845.

Brunner von Wattenwyl. Prodromus der europäischen Orthopteren.

8vo, 1882.

Buckley. Winners in Life's Race. 8vo, 1882. Life and Her Children. 8vo, 1882.

Camerano. Anatomia degli Insetti. 8vo, 1882.

Cantor. Zoology of Chusan. 4to, 1842.

Clemens. Tineina of North America. 8vo, 1872. Cones. Check-List of N.-American Birds. 8vo, 1882.

Dahlbom. Hymenoptera Europæa. 2 vols. 8vo, 1844-54. Dallas. Natural History of the Animal Kingdom. 8vo, n. d.

Dillwyn. Descriptive Catalogue of Recent Shells. 2 vols. 8vo, 1817.

Donovan's British Shells. 8vo, 1800-04.

Drury. Illustrations of Natural History. 3 vols. 4to, 1770-82.

Earle. New Zealand. 8vo, 1832.

Ellis. Corallines. 4to, 1756.

Encyclopædia Britannica. 9th Ed. Vol. xiv. 4to, 1882.

Entomologist (The). 1864-82.

Fabricius. Mantissa Insectorum. 8vo, 1787. —. Systema Entomologiæ. 8vo, 1775.

Fatio. Faune des Vertébrés de la Suisse (Poissons). 8vo, 1882.

Floyer. Unexplored Baluchistan. 8vo, 1882.

Foster's Synoptical Catalogue of British Birds. 8vo, 1817.

Fox. Synopsis of the Newcastle Museum. Svo, 1825. Geoffrey. Histoire abrégée des Insectes. 2 vols. 4te, 1799.

Gerstäcker. Bericht über die wissenschaftlichen Leistungen im

Gebiete der Entomologie. 8vo, 1855-73. Gmelin. Gemeinnützig systematische Naturgeschichte. (Säugethiere et Vögel.) 2 vols. 8vo, 1805-06.

Goeze. Entomologische Beyträge. 4 vols. 8vo, 1777-81.

Gould. Otia Conchologica. 8vo, 1862.

Graaf. Construction des Phalangiens. 4to, 1882. Graff. Monographie der Turbellarien. Folio, 1882. Graves. Ovarium Britannicum. Royal 8vo, 1816.

Grote. North-American Entomologist. Vol. i. 8vo, 1879-80.

Hagen. Bibliotheca Entomologica. 2 vols. 8vo, 1862.

Harlan. Fauna Americana. 8vo, 1825.

Harris. Insects Injurious to Vegetation. 8vo, 1862. Hasse. Elasmobranchier. 4to, 1882.

Heinemanu. Schmetterlinge Deutschlands. 3 vols. 8vo, 1859 77 Huxley. Science and Culture. 8vo, 1882.

Imhoff, Koleoptern, 8vo, 1856.

Im Thurn. Birds of Marlborough. Svo, 1870. Jan. Elenco sistematico degli Ofidi. 8vo, 1863. Johnston's Introduction to Conchology. 8vo, 1850. Jordan. Manual of the Vertebrates. Third Ed. 8vo, 1880.

Jurine. Hyménoptères et les Diptères. 4to, 1807. Kaluza. Ornithologia Silesiaca. 12mo, 1815.

Klein. Ova Avium. 4to, 1766.

Koch. System Myriapoden. 12mo, 1847.

- Deutschlands Crustaceen, Myriapoden und Arachniden. 12mo, 1835-41.

— und Hahn. Die Arachniden. 16 vols. 8vo, 1831-48.

Krukenberg. Vergleichend-physiologische Studien. Reihe i. and Reihe ii. Abth. 1-3. 8vo, 1880-82.

Lamont. Yachting in the Arctic Seas. 8vo, 1876. Lansdell. Through Siberia. 2 vols. 8vo, 1882. Latreille. Cours d'Entomologie. 8vo, 1831.

—. Genera Crustaceorum et Insectorum. 4 vols. 8vo, 1806-09. —. Histoire naturelle et particulière des Crustacés. 14 vols. 8vo, 1802-05.

Locard. Mollusques Vivants de France. 8vo, 1882.

Magendie et Desmoulins. Anatomie des Systèmes Nerveux. Text, 2 vols., 8vo; Atlas, 4to, 1825. Mittheilungen der schweizerischen entomologischen Gesellschaft.

Vols. I.-VI. pt. 1-7. 8vo, 1862-82.

Mivart. Nature and Thought. 8vo, 1882.

Mulsant et Rey. Punaises de France. 8vo, 1865-79.

Nicols. Zoological Notes. 8vo, 1883. Nilsson. Skandinavisk Fauna. 8vo, 1820–42. - Ornithologia Suecica. 8vo, 1817-21.

Oberthür. Etudes d'Entomologie. Royal Svo, 1876-81.

Olivi. Zoologia Adriatica. 4to, 1792.

Ormerod. Manual of Injurious Insects. 8vo, 1881.

Owen. Archetype and Homologies of the Vertebrate Skeleton. 8vo, 1848.

Palisot de Beauvois. Insectes recueillis en Afrique et en Amérique. Folio, 1805.

Payne-Gallwey. The Fowler in Ireland. 8vo, 1882.

Peters. Reise nach Mossambique. iii. Amphibien. 4to, 1882.

Rafinesque. Analyse de la Nature. 8vo, 1815. Redtenbacher. Fauna Austriaca. Royal 8vo, 1849.

Reisinger. Specimen Ichthyologiæ. Svo, 1830.

Révoil. Faune et Flore des Pays Comalis. 8vo, 1882. Richthofen. China. Tome ii. & iv. 4to, 1882-83.

Sabatier. Etudes sur le Cœur et la Circulation. 4to, 1873.

Salvin's Catalogue of the Birds in Strickland's Collection. 8vo, 1882.

Samuels. Catalogue of the Birds of Massachusetts. 8vo, 1864.

Schäffer. Elementa Entomologica. 4to, 1778.
Schönher. Synonymia Insectorum. 4 vols., 8vo, 1806–17.
Sepp. Nederlands Insecten. 8 vols., 4to, 1762–1860.
Smith. Tailed Amphibians. 8vo, 1877.
Snellen. De Vlinders van Nederland (Microlepidoptera). 2 vols., 4to, 1882.

Stack. Six Months in Persia. 2 vols.

Stainton. Tineina of South Europe. 8vo, 1869.

Stein. Entwickelungsgeschichte und Parasitismus d. menschlichen Cestodon. 4to, 1882. Stephens. Manual of British Coleoptera. 8vo, 1839.

St. John's Natural History and Sport in Moray. New Edition. 4to, 1882.

Stoll. Cicaden. 4to, 1788.

Straus-Dürckheim. Anatomie du Chat. Text, 2 vols., 4to; Atlas, folio, 1845.

Strebel. Mexikanischer Conchylien. Theil v. 4to, 1882.

Sulzer. Die Kennzeichen der Insekten. 4to, 1761. —. Abgekürze Geschichte der Insekten. 4to, 1776.

Swainson's Exotic Conchology. 4to, 1841. Tegetmeier's Pheasants. 2nd Ed. Small folio, 1881.

Temminck. Catalogue systématique du Cabinet d'Ornithologie et de Quadrumanes. 8vo, 1807.

Veidovsky. Thierische Organismen der Brunnenwässer von Prag. Šmall folio, 1882.

Weismann. Studies in the Theory of Descent. 8vo, 1880-81.

White. Cameos from Silver-Land. Vol. ii. 8vo, 1882. Wolff. Icones Cimicum. 4to, 1800.

Yarroll. British Fishes. 1st Edition. 2 vols., 8vo, 1836.

Zoologischer Jahresbericht für 1880-81. 8vo.

The following is a list of the periodicals received in 1882 from the various Societies and Institutions with which this Society is in correspondence.

#### AMERICA.

The American Association for the Advancement of Science. Proceedings, 29th Meeting, Boston, 1881.

The American Academy of Arts and Sciences, Boston.

Proceedings, New Series, vol. ix. Memoirs, New Series, vol. x. part 2; xi. part 1.

The Boston Society of Natural History, Boston.

Proceedings, vol. xxi. parts 2, 3. Memoirs, vol. iii. nos. 4, 5.

The Buffalo Society of Natural Sciences, Buffalo. Bulletin, vol. iv. nos. 1-3.

The Museum of Comparative Zoology, Harvard College, Cambridge, Mass.

Bulletin, vol. vi. no. 12; vol. ix. nos. 1-8; vol. x. no. 1. Memoirs, vol. vii. no. 2, parts 2, 3; vol. ix. part 1. Annual Report, 1881–82.

- The Argentine Zoological Society, Cordova.

  Periodico Zoologico, tomo iii. entrega 4.
- The Nova-Scotia Institute of Natural Sciences, Halifax.
  Proceedings and Transactions, vol. v. part 4.
- The Connecticut Academy of Arts and Sciences, New Haven.

Transactions, vol. iv. part 2; vol. v. part 2.

- New York Academy of Sciences, New York. Annals, vol. i. no. 14; vol. ii. nos. 1-6.
- The Academy of Natural Sciences, Philadelphia. Proceedings, 1882.
- The American Philosophical Society, Philadelphia. Proceedings, vol. xix. no. 109; vol. xx. nos. 110, 111.
- The Peabody Academy of Sciences, Salem, Mass. Memoirs, vol. i. nos. 5, 6.
- The Franklin Institute, Washington. Journal, 1882.
- The Smithsonian Institution, Washington.

  First Annual Report of the Bureau of Ethnology (1879-80).

  Annual Report, 1880.

  List of Foreign Correspondents, 1882.
- The United States National Museum, Washington.
  Proceedings, 1882.

#### AUSTRIA.

- The Imperial Academy of Sciences, Vienna.

  Sitzungsberichte, Band lxxxiii. Heft 5; Band lxxxiv. Heft 1-5.

  Denkschriften, Band xliii., xliv.
- The Zoological and Botanical Society, Vienna. Verhandlungen, Band xxxi. 1881 (1882).

### AUSTRALIAN COLONIES.

The Royal Society of Victoria, Melbourne.
Transactions and Proceedings, vol. xviii.

- The Linnean Society of New South Wales, Sydney.

  Proceedings, vol. vi. parts 3, 4; vol. vii. parts 1, 2.
- The Royal Society of New South Wales, Sydney.

  Journal and Proceedings, vol. xv.

  Statistical and Descriptive Account of the Colony.
- The Royal Society of Tasmania.

  Monthly Notices of Papers and Proceedings for 1880.
- The New-Zealand Institute, Wellington.
  Transactions, vol. xiv.

#### BELGIUM.

- The Entomological Society of Belgium, Brussels.

  Annales, tom. xxv.

  Compte-Rendu, 1882.
- The Royal Museum of Natural History, Brussels.

  Annales, tome iii. part 1, Text and Atlas; tome vii. part 3,

  Text and Atlas.
- The Malacological Society of Belgium, Brussels.

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fessor G. Canestrini; Messrs, Cassell, Petter, and Galpin: V. T. Chambers, Esq.; Robert Collett, Esq.; The Colonial Museum of New Zealand; The Rev. W. Deans Cowan; Messieurs H. Crosse et P. Fischer; Professor James D. Dana; Francis Day, Esq.; George Dimmock, Esq.; Dr. G. E. Dobson; Monsieur L. Dollo; Monsieur Alph. Dubois; R. Edward Earll, Esq.; Dr. A. Ernst; Professor W. H. Flower; Dr. Luis Jorge Fontana; Professor H. H. Giglioli; Lt.-Col. H. H. Godwin-Austen; R. J. L. Guppy, Esq.; Dr. F. V. Hayden; Dr. James Hector; Dr. E. Holub; The Trustees of the Indian Museum; The Editors of the Journal of Science; the Liverpool Free Public Library; Dr. A. W. Malm; Manchester Public Free Library; Professor Alph. Milne-Edwards; New York State Library; New York State Museum of Natural History; Monsieur E. Oustalet; Professor J. Reinhardt; Dr. L. Rütimeyer; E. C. Rye, Esq.; Dr. T. Salvadori; Dr. R. Schomburgk; P. L. Sclater, Esq.; the Editors of the 'Scottish Naturalist'; Dr. Jacob Spangberg; Henry Stevenson, Esq.; Dr. H. Troschel; Professor W. Turner; the University College of London; U.S. Commission of Fish and Fisheries; and H. B. Woodward, Esq.

## III. GARDENS, REGENT'S PARK.

## 1. Buildings and Works.

## a. New Reptile-house.

In several preceding annual reports the Council have spoken of the necessity of providing a new Reptile-house, and have announced that a spot in the south-eastern corner of the Gardens, near the reservoir, had been selected for the site of the proposed building. The clearing of the ground and the burning of the clay into ballast for this purpose was commenced in December 1880, and certain sums (£31 8s. 3d. and £177 3s. 3d.) were expended on these preliminary works in 1880 and 1881. The great increase in the receipts which took place last year at length gave the Council the long-wished-for opportunity of commencing the building; and in August last a contract was entered into with Messrs. Holland and Hannen for the construction of the principal portions of the struc-

ture (exclusive of floors and fittings) for the sum of £4680. The work is now very far advanced, the roof being covered in and the windows inserted; and sums, together amounting to £4500, have been paid to the contractors on account of the work performed, of which £2550 were charged to extraordinary expenditure in 1882.

The plans for the new Reptile-house have been pre-

pared by Mr. C. B. Trollope.

The building measures 120 feet by 60, and is provided with a large porch with double entrance at the front, and with keepers' and workers' rooms at the rear. It is built of brick, with Corsehill-stone dressings. The roof is of iron, slated on the north slopes, and with skylights on the south slopes. The building will be fitted with fixed cages on three sides, leaving a passage in the rear for the keepers. The space of the interior clear of the cages is 100 feet by 50 feet; and the roof over this portion is in two spans of 25 feet each.

There will be about ten large cages on the north side and ten smaller cages at the ends. The fronts of the cages, which will be constructed not to open, will be glazed with plate-glass; the only access to the cages will be from the keepers' passage in the rear, to which the

public will not have access.

The south front of the building will be reserved for small movable cases, such as are now used in the Insecthouse.

The cages will be placed on a platform, about table high, of slate, supported on brick walls. The space under the slate platform will form a chamber for the hot-water pipes, thus confining the heat to the cages as much as possible.

There will be a large oval tank, about 25 feet by 12 feet, for Crocodiles in the centre of the building, and two smaller

ones at the sides.

## b. Other special Works.

The other special works executed in 1882, and charged to extraordinary expenditure, were as follows:—The sum of £216 5s. was expended in building a reserve-shed at the back of the Cattle-sheds, for the purpose mainly of accommodating duplicate specimens bred in the Gardens,

pending their disposal, and for the use of such animals as might upon occasions not be desirable for public exhibi-A glass roof was prepared and fixed over the Kangaroo-sheds at a total cost of £115 17s. 1d. This will, it is believed, effect a material saving in the amount of straw consumed in this house, besides being of much advantage to the Kangaroos, which require, above all things, to be kept dry. The balance expended on the final completion of the studies in the Prosector's Office, concerning which full details were given in the last Report, amounted to £31 1s. 7d. Finally, a sum of £31 9s. 1d. was devoted to the preliminary works upon a new boiler for the Monkey-house, which has been completed during the present year. These four items make up the total of £394 12s, 9d. devoted to extraordinary expenditure in the Gardens in 1882, besides the sum expended on the new Reptile-house as already mentioned.

## c. Repairs and General Maintenance.

The ordinary repairs of the numerous buildings, roads, walks, railings, and enclosures in the Society's Gardens necessitate the employment of a considerable staff of workmen and a large expenditure on material; and the continual additions made to the buildings and walks obviously cause a corresponding increase to the cost of their maintenance, and require greater exertions to be made to keep the whole establishment in an efficient state. This, however, it is believed, was effectually performed in 1882 at a total cost of £2579 17s. 11d. against a sum of £2592 3s. 9d. expended in a similar way in 1881.

The principal buildings thoroughly renovated and repaired in 1882 were the Marsupial-house, the Brush-Turkeys'-house and enclosure, and the Fish-house. In the latter a large new tank has been built, expressly constructed to show the movements of diving birds (such as Auks, Guillemots, and Penguins) under the water.

These and various other smaller works, renovations, and repairs kept the Society's staff of workmen fully employed in 1882.

### 2. STAFF.

The permanent Staff of the Society's Gardens remains

nearly the same as at the last Anniversary. It consists of:—

1 Superintendent.

1 Assistant Superintendent.

1 Head Keeper.

6 Keepers (1st class).

7 Keepers (2nd class).

9 Keepers (3rd class).

4 Money-takers.

1 Storekeeper.

1 Cook.

1 Office Clerk.

1 Prosector's Assistant.

1 Head Gardener.

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Besides these there are 20 Helpers in the Menagerie, 13 Garden-labourers, 8 Artisans, 7 Painters, 13 Labourers 1 Butcher, 1 Fireman, 2 Night-Watchmen, and 2 Time-keepers employed at weekly wages; so that the number of the whole staff may be reckoned at about 100 persons.

#### 3. Visitors.

The total number of visitors to the Society's Gardens during the year 1882 was 849,776, as will be seen by the following Table, which gives the corresponding numbers of entrances under each head for 1881 and 1882:—

## Visitors to the Gardens.

	1881.	1882.	Comparison.
Fellows and Friends	180,324 148,489	213,883 207,172	Incr. 33,559 Incr. 58,683
Paying On Mondays and other days at 6d. each	249,423	336,379	Incr. 86,956
Children under 12 years at 6d. each	56,768	75,559	Incr. 18,791
School Children (admitted free)	13,690	16,783	Incr. 3,093
	648,694	849,776	Incr. 201,082

The only year in which the number of visitors has been larger was 1876, on the occasion of the exhibition of the Prince of Wales's Indian Menagerie.

This is shown in the subjoined Table, which contains a statement of the Number of Visitors to the Society's Gardens during each year, from the year 1828 to the year 1882.

Number of Visitors to the Gardens, 1828-82.

Year. Number. 1828 98.605	Year. Number.
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	1856 344,184
$1829 \dots 189,913$	$1857 \dots 339,217$
$1830 \dots 223,420$	1858 351,580
$1831 \dots 262,193$	$1859 \ldots 364,356$
$1832 \dots 206,652$	1860 394,906
1833 211,343	1861 381,837
$1834 \dots 208,583$	†1862 682,205
1835 210,068	1863 468,700
$1836 \dots 263,372$	$1864 \dots 507,169$
1837 173,778	$1865 \dots 525,176$
$  1838 \dots 179,197    $	$1866 \dots 527,349$
1839 158,432	$1867 \dots 556,214$
1840 141,009	1868 573,186
1841 132,616	1869 572,848
$  1842 \dots 107,459    $	1870 573,004
1843 98,280	1871 595,917
1844 101,527	1872 648,088
$  1845 \dots 99,615    $	1873 713,046
$1846 \dots 100,045$	$1874 \dots 706,907$
$1847 \dots 93,546$	, , , , , , , , , , , , , , , , , , , ,
1848 143,630	
1849 168,895	
$1850 \dots 360,402$	
*1851 667,243	
1852 305,203	
1853 409,076	1880 675,979
1854 407,676	1881 648,694
1855 315,002	1882 849,776
* Year of the Great Exhibition	† Year of the International Exhibition.  1 Year of the exhibition of the Prince of Wales's Indian Menagerie.

# 4. New Regulations as to Riding on the Elephants and Camels.

At the General Meeting, held on the 19th April last, the Council called the attention of the Society to the new regulations which they proposed to introduce concerning the riding on the Elephants and Camels in the Gardens. Under the new arrangement, which was commenced on the 1st of May last year, these rides are restricted to persons who have provided themselves with tickets sold for the purpose, at a price of twopence each. The money arising from the sale of these tickets is subsequently di-

vided between the attendants and the Society.

The Council have the pleasure of announcing that the new system seems to have been much appreciated, and has proved to be a great success. Not one single complaint or remonstrance against it has been made. It has also proved profitable to the Society; the total sum received under this head during the eight months of last year in which the new regulations were in force having amounted, as will be seen by the table of receipts (p. 5), to £305 10s. 9d.

It should be added that one slight alteration has been deemed advisable in the regulations for the present season, the price of the Camel-tickets having been reduced from twopence to one penny each.

#### 5. ZOOLOGICAL LECTURES.

The Zoological Lectures, to which the proceeds of the Davis Trust-fund have been devoted for several years, will be given in the Lecture-room in the Society's Gardens, on Thursdays at 5 P.M., commencing June 7th.

The following is a list of the lecturers and subjects:-

Date.					Subject.	Lecturer.		
1.	Thursday,				The Evolution of Ungulate	Prof. Flower, LL.D., F.R.S.		
2. 3.	<b>,</b> , _	,,	14		Our Snakes and Lizards	Prof. Mivart, F.R.S.		
3.	37	,,	21		The Lamprey and its Kin-	n en la Eng		
4.	,,	,,	28		dredBirds and Light-houses	J. E. Harting, Esq., F.L.S.		
4. 5.	"	July	5	•••	African Birds	R. Bowdler Sharpe, Esq., F.L.S.		
6.	,,	,,	12	•••	South-American Animals	P. L. Sclater, Esq., M.A., Ph.D., F.R.S.		
7.	"	,,	19	•••	Siberian Birds			

These Lectures will be free to Fellows of the Society and their Friends, and to other Visitors to the Gardens.

#### 6. MENAGERIE.

## a. Sale of the male African Elephant.

The sale of the large male African elephant "Jumbo" was an event connected with the Menagerie in 1882, which, as it excited great public attention to the Society's affairs, and had, consequently, a very beneficial effect on the Garden-receipts, cannot pass unalluded to in the present

Report.

It was not surprising to the Council that so general a regret should have been expressed by visitors to the gardens and the public generally at the prospect of losing the great African elephant. No one shared in this regret more than the members of the Council, and they would not have consented to part with the animal unless satisfactory reasons for so doing had been placed before them by the responsible executive of the gardens.

## b. Additions to the Menagerie in 1882.

The number of animals belonging to the first three classes of Vertebrates living in the Society's Menagerie at the close of 1882 was 2355. The corresponding number on the 31st of December, 1881, was 2294, as will be seen by the subjoined Table:—

	Decem	ber 31.	Companion	
	1881.	1882.	Comparison.	
Quadrupeds Birds Reptiles	647 1389 258	750 1364 241	Incr. 103 Decr. 25 Decr. 17	
	2294	2355	Incr. 61	

The total number of registered additions to the Menagerie in 1882 was 1423, of which 772 were acquired by presentation, 402 by purchase, 113 were bred in the Gardens, 111 were received on deposit, and 25 obtained in exchange.

The mode in which these figures compare with those of

previous years is shown in the subjoined table:—

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1870.	386	529	160	218	40	1333
1871.	496	434	138	129	90	1287
1872.	460	527	195	110	52	1344
1873.	483	457	191	231	188	1530
1874.	425	296	214	242	25	1202
1875.	559	557	-156	143	43	1458
1876.	533	316	171	172	27	1219
1877.	506	324	181	181	68	1260
1878.	511	272	150	178	71	1182
1879.	550	421	-115	124	56	1266
1880.	624	515	148	161	40	1488
1881.	565	310	167	136	35	1213
1882.	772	402	113	111	25 $ $	1423

The following is a list of the most noticeable additions made to the Menagerie during the year 1882:—

#### JANUARY.

1. A young male Gayal, born in the Gardens, January 6th, being the produce of the fine pair received in exchange, in October 1880, from the Zoological Gardens, Calcutta. This is believed to be the first instance of this animal having bred in Europe.

2. A young female Markhoor (Capra megaceros), from Afghanistan, presented by Lieut.-Col. Sir Oliver B. C. St. John

K.C.S.I., F.Z.S., January 17th.

## FEBRUARY.

3. Four Warty-faced Honey-eaters (Xanthomyza phryyia), and

4. Two Musk-Ducks (*Biziura lobata*), purchased February 8th. Both these Australian species were new to the Society's Collection.

5. A young Tapir born in the Gardens February 12th, and thriving well, was the produce of our male *Tapirus roulini* (received May 25th, 1878) and the large female *Tapirus americanus* from Paraguay, received January 16th, 1873. It is the first of the genus born in the Society's Gardens.

6. A female Mule Deer (Cervus macrotis) from the Western United States, presented by Dr. J. D. Caton, C.M.Z.S., and re-

ceived February 15th.

Thanks to Dr. Caton's kind exertions, we have now two fine pairs (besides an odd male) of this beautiful Deer, and shall, we trust, succeed in breeding them. The female just received is in excellent health and very tame.

In recognition of Dr. Caton's valuable assistance in this matter the Council have awarded the Silver Medal of the Society to their

excellent Correspondent.

#### MARCH.

7. A Radiated Fruit-Cuckoo (Carpococcyx radiatus) from Su-

matra, purchased March 31st.

The gait and actions of this remarkable Ground-Cuckoo remind one more of a Gallinaceous bird or of a Gallinule than of any of its arboreal relatives of the same family. The form is quite new to the Society's Collection.

#### APRIL.

8. A Rifle-bird (*Ptilorhis paradisea*), purchased April 4th. This is a male bird in immature and worn plumage, changing very slowly into the adult dress, but apparently in good health.

9. A pair of Black-headed Tragopans (Ceriornis melanocephala), received April 5th. This is the first pair of this fine species that has reached us, although several examples of this Tragopan have been previously received in Europe; and there is said to have been a single specimen of it many years ago in the Gardens.

10. Four Rüppell's Parrots (Paccephalus rueppelli), from

Western Africa, purchased April 15th.

11. A Western Black Cockatoo (Calyptorhynchus naso), conspicuously differing from the eastern C. banksi, of which we have also examples, in its smaller size.

12. A male Cabot's Tragopan (*Ceriornis caboti*), purchased April 18th, making a fine addition to the Gallinaceous series.

13. Two of the recently described Green Horned Parrakeet (Nymphicus uvæensis), purchased April 27th. These have been placed in the Parrot-house next to our living examples of Nymphicus cornutus, and afford a fine opportunity for the comparison of those two closely allied species.

#### MAY.

14. Four Pygmy Hogs (*Porcula salvania*) (one male and three females), purchased May 15th. These are the first examples of this rare and interesting animal which have been received by the Society.

15. A Mediterranean Seal (Monachus albiventer), presented to the Society by M. Yeats Brown, Esq., H.B.M. Consul at Genoa. This Seal is the first example of this scarce species that has been received at the Gardens. Unfortunately it did not long survive its arrival.

16. Two male Argus Pheasants (Argus giganteus), presented to the Menagerie by Major M'Nair, C.M.G., and J. M. Vermont, Esq., May 18th. This arrival is especially acceptable, as we had previously only two unmated females of this magnificent bird in the Collection.

17. A Koala (*Phascolarctos cinereus*), purchased May 23rd. This is the second example of this interesting and delicate animal which we have received.

18. A Jackass Penguin (Spheniscus magellanicus) from the Falkland Islands, purchased May 25th. This is an adult bird in fine plumage, and is the first example of this species of Penguin that has been acquired.

19. A fine pair of Great Anteaters (Myrmecophaga jubata),

purchased May 31st.

#### JULY.

20. A young male African Elephant (*Elephas africanus*), purchased July 8th. This animal is supposed to be from three to four years old. When received it was about 4 ft. 2 in. in height; and is perfectly tame and quiet.

21. A Kolbe's Vulture (*Gyps kolbii*) from South Africa, purchased July 15th, being the first example of this species of Vul-

ture that we have received.

22. A Heloderm Lizard (*Heloderma horridum*) from Arizona, presented by Sir John Lubbock, Bart., M.P., F.R.S., F.Z.S., July 16. This Lizard, which is new to the Collection, is remarkable as being the only known venomous species of the Lacertian Order. It has been ascertained by actual experiment that its bite is fatal to small mammals and very injurious to man.

### August.

23. A pair of young River-Hogs (*Potamochærus africanus*) from Zulu-land, presented by Col. J. H. Bowker, F.Z.S., and Mr. John Dunn, and received August 28th.

### SEPTEMBER.

24. An example of a species of *Canis*, said to have been received from the Amazons, and remarkable for its short hair and short ears. Being unable to identify this peculiar animal with any described form, the Secretary has given it the provisional name of the Short-eared Fox (*Canis microtis*).

25. A cock and two hens of Elliot's Pheasant (*Phasianus ellioti*) from China, purchased of the Jardin d'Acelimatation of Paris, September 27th. These are young birds, bred in France, and are the first specimens of this fine Pheasant that have reached

us.

26. Eight Lemurs from Madagasear were received on deposit, September 30th. These animals belong to a species of *Chirogaleus* new to our Collection, apparently to *C. coquereli* (Poll. et v. Dam).

#### NOVEMBER.

27. A collection of Reptiles from the Western States of North America, presented by Samuel Garman, Esq., C.M.Z.S., November 3rd. Amongst these were examples of several species new

to the Society's Collection.

28. A young Lynx, from Ballistan, presented by Capt. Baldock, R.A., November 23rd. This Lynx is doubtless referable to Felis isabellina, Blyth; and it seems doubtful whether Mr. Elliot is correct in considering this form to be merely a variety of Felis lynx.

c. List of Species new to the Collection exhibited during the year 1882.

#### MAMMALS.

1 Moloch Teetee (Callithrix moloch).

- 1 Black-fronted Teetee (Callithrix nigrifrons).
- 8 Coquerel's Lemurs (Chirogaleus coquereli).

1 Marbled Cat (Felis marmorata).

- 1 Isabelline Lynx (Felis isabellina).
- 1 Pardine Genet (Genetta pardina). 1 Small-eared Fox (Canis microtis).
- 1 Mediterranean Seal (Monachus albiventer).
- 2 Mexican Sousliks (Spermophilus mexicanus).

1 Oak Dormouse (Myoxus dryas). 4 Barbary Mice (Mus barbarus).

24 Brown-tailed Gerbilles (Gerbillus erythrurus).

2 Canadian Porcupines (Erethizon dorsatus).

1 Cuvier's Lagotis (Lagotis cuvieri). 4 Pygmy Hogs (Porcula salvania).

1 Black-fronted Antelope (Cephalophus nigrifrons).

1 Philander Opossum (Didelphys philander).

### BIRDS.

2 Brown Thrushes (Turdus leucomelas).

1 Redstart (Ruticilla phænicurus).

6 Northern Marsh-Tits (Parus borealis).

1 Cedar-bird (Ampelis cedrorum).

- 1 Four-eoloured Shrike (Laniarius quadricolor).
- 4 Warty-faced Honey-eaters (Xanthomyza phrygia).
- 2 Blue-faced Honey-eaters (*Entomyza cyanotis*). 2 Grey-backed White-eyes (*Zosterops dorsalis*).

1 Striated Tanager (Tanagra striata).

1 Allied Saltator (Saltator similis).

2 Beautiful Waxbills (Estrelda formosa).

1 Black-breasted Sparrow (Passer diffusus). 2 Eastern Goldfinches (Carduelis orientalis).

2 Eastern Columnenes (Out aucus of teath

1 Singing Fineh (Crithagra musica).

4 White-headed Bullfinch Larks (Pyrrhulauda verticalis).

2 Spotted Bower-birds (Chlamydodera maculata).

1 Rifle-bird (Ptilorhis paradisea).

1 Black-backed Piping Crow (Gymnorhina tibicen).

1 American Kingbird (Tyrannus pipiri).

2 Malabar Hornbills (Buceros malabaricus).

1 Radiated Fruit-Cuekoo (Carpococcyx radiatus). 1 Western Black Cockatoo (Calyptorhynchus naso).

1 Three-coloured Lory (Lorius tricolor).

- 4 Uvæan Parrakeets (Nymphicus uvæensis).
- 1 Saisset's Parrakeet (Cyanorhamphus saisseti). 4 Rüppell's Parrot (Paocephalus rueppelli).
- 1 Mercenary Amazon (Chrysotis mercenaria).
- 2 American Scops Owls (Scops asio).

1 Bengal Vulture (*Gyps bengalensis*). 1 Kolbe's Vulture (*Gyps kolbii*).

3 Shags (Phalacrocorax graculus).

1 Great American Heron (Ardea herodias).

1 Black-necked Heron (Ardea atricollis).

2 Musk-Ducks (Biziura lobata).

1 Ring-tailed Pigeon (Columba caribbæa). 3 Elliot's Pheasants (Phasianus ellioti).

2 Black-headed Tragopans (Ceriornis melanocephala).

1 Cabot's Horned Tragopan (Ceriornis caboti).

1 Greater Shearwater (Puffinus major).

1 Jackass Penguin (Spheniscus magellanicus).

### REPTILES.

1 Spinose Land-Emys (Geomyda spinosa).

1 Oldham's Terrapin (Clemmys oldhami).

1 Galeated Pentonyx (Pelomedusa galeata).

1 Lace Monitor (Varanus varius).

1 Sonoran Heloderm (Heloderma suspectum).

4 Sharp-headed Lizards (Lacerta oxycephala).

18 Rough-sealed Lizards (Zonurus cordylus).

10 Sepiform Lizards (Pleurostrichus sepiformis).

1 Streaked Euprepes (Euprepes vittatus).

1 Bipes (Scelotes bipes).

5 Delalande's Geekos (Tarentola delalandii).

21 Ocellated Geckos (Pachydactylus ocellatus).

5 Garman's Lizards (Sceloporus garmani).

8 Douglass's Horned Lizards (Phrynosoma douglassi).

1 Orbicular Horned Lizard (Phrynosoma orbiculare).

6 Spotted Lizards (Holbrookia maculata).
1 Striped Snake (Tropidonotus sirtalis).

11 Spot-bellied Snakes (Zamenis ventrimaculatus).

1 Banded-tailed Tree-Snake (Ahætulla liocercus).

3 Confluent Rattlesnakes (Crotalus confluentus).

#### AMPHIBIANS.

1 Channelled Toad (Bubo canaliferus).

4 Slender-fingered Frogs (Leptodactylus pentadactylus).

11 Variable Leaf-Frogs (Phyllomedusa dacnicolor).

1 Greenish Newt (Notophthalmus viridescens).

#### FISHES.

1 Littoral Calliehthys (Callichthys littoralis).

d. List of Animals bred in the Gardens during the year 1882.

### MAMMALS.

1 Hybrid Maeaque Monkey. (Between *Macacus cynomolgus* ♂ and *M. erythræus* ♀.)

1 Australian Fruit-Bat (Pteropus poliocephalus).

3 Collared Fruit-Bats (Cynonycteris collaris).

1 Hybrid Paradoxure (Between Paradoxure).

1 Hybrid Paradoxure. (Between Paradoxurus larvatus and P. leucomystax.)

1 Two-spotted Paradoxure (Nandinia binotata).

4 Australian Dingo Dogs (Canis dingo).

2 Common Badgers (Meles taxus).

3 Black Rats (Mus rattus).

1 Hybrid Tapir. (Between Tapirus roulini ♂ and T. americanus ♀.)

1 American Bison (Bison americanus).

1 Gayal (Bibos frontalis).

1 Cape Buffalo (Bubalus caffer).

1 Eland (Oreas canna).

1 Muscat Gazelle (Gazella muscatensis).

1 Four-horned Antelope (Tetraceros quadricornis).

1 Cashmere-shawl Goat (Capra hireus, var.).

2 Mouflons (Ovis musimon).

1 Burrhel Wild Sheep (Ovis burrhel).

1 Hybrid Muntjac. (Between Cervulus muntjac ♂ and C. lacrymans ♀.)

1 Red Deer (Cervus elaphus).

1 Wapiti Deer (Cervus canadensis).

2 Japanese Deer (Cervus sika).

1 Sambur Deer (Cervus aristotelis).

1 Molucca Deer (Cervus moluccensis).

1 Axis Deer (Cervus axis).

4 Short-headed Phalangers (Belideus breviceps).

1 Squirrel-like Phalanger (Belideus sciureus).

1 Red Kangaroo (Macropus rufus).

1 Bennett's Wallaby (Halmaturus bennetti).

2 Rufous Rat Kangaroos (Hypsiprymnus rufescens). 1 Gaimard's Rat Kangaroo (Hypsiprymnus gaimardi).

#### BIRDS.

4 Banded Grass-Finches (Poëphila cincta).

1 Turquoisine Parrakeet (Euphema pulchella).

5 Undulated Grass-Parrakeets (Melopsittacus undutatus).

2 Common Cormorants (Phalacrocorax carbo).

1 Egyptian Goose (Chenalopex ægyptiaca).

1 Ruddy-headed Goose (Berniela rubidiceps). 2 Variegated Sheldrakes (Tadorna variegata).

4 Slender Ducks (Anas gibberifrons).

3 Chilian Pintails (Dafila spinicauda).

3 Chiloe Wigeons (Mareca chiloensis).

8 Summer Ducks (Aix sponsa).

5 Mandarin Ducks (Aix galericulata). 6 Geoffroy's Doves (Peristera geoffroyi).

2 Himalayan Monals (Lophophorus impeyanus).

6 Swinhoe's Pheasants (Euplocamus swinhoii).

4 Horned Tragopans (Ceriornis satyra).

2 Peacock Pheasants (Polyplectron chinquis).

2 Herring-Gulls (Larus argentatus).

### REPTILES.

2 Mocassin Snakes (Tropido notus fasciatus).

c. List of the Donors and their several Donations for the year 1882.

His Royal Highness the Prince of Wales, K.G.

101 Restless Cavies.

His Royal Highness Prince Christian.

One Hybrid Mouflon.

Abrahams, Mr. J.

Two Beautiful Finches, one Black-breasted Sparrow, one White-throated Sccd-eater, two Grey-backed White-eyes.

Adams, Capt.

One Four-rayed Snake.

Adams, L., Esq.

One Hairy-footed Jerboa.

Angas, G. F., Esq., C.M.Z.S.

Twenty-five Madeira Snails, four Undulated Snails.

Astashoff, General.

One Glutton.

Atkinson, W. C., Esq. Two Coekateels.

horough Mrs

Attenborough, Mrs.

One Blue-and-Yellow Macaw.

Austin, H. G., Esq.

1 Laughing Kingfisher.

Bacon, Major-Gen. E. A.

Two Silver-backed Foxes.

Baillie, W. M., Esq.

Two Common Buzzards.

Baldock, Capt., R.A.

One Isabelline Lynx.

Baldwin, J. L., Esq., F.Z.S.

One Rufous-necked Weaverbird, one Common Lap-wing.

Balfour, H., Esq.

One Spanish Terrapin.

Barfield, H., Esq.

One Chaema Baboon.

Barnes, C. S., Esq.

Two Pileated Jays.

Bartlett, Mr. A. D.

Five Delalande's Geckos, two Sharp-headed Lizards, a collection of Sea-Anemones.

Bassett, Mr., and Lieuts. Fisher and Farquhar. One Egyptian Cat.

Battersby, F., Esq.

One Chacma Baboon.

Battersby, Mr.

One Lanner Falcon.

Battiscombe, A., Esq. One Land-Rail.

Bayes, W., Esq.

Three Common Hedgehogs.

Beauclerk, Mrs.

Three Zebra Finches, one Crimson-eared Waxbill, two Amaduvade Finches, one Shining Weaverbird, one Singing Finch, one Nonpareil Finch.

Bemmelen, Heer A. A. van, C.M.Z.S.

Two Coypu Rats.

Benison, F. H. W., Esq. One Carrion-Crow.

Bennett, L., Esq.

Two Macaque Monkeys.

Bennett, Master.

One Mississippi Alligator.

Benwell, H. J., Esq.

One Common Viper.

Beyts, N. H., Esq., C.M.Z.S. Two Striped Hyænas.

Biddle, Dr. Thomas.

One Egyptian Fox.

Biehl, J., Esq.

One Purple-headed Glossy Starling, two Californian Quails, one Amherst Pheasant.

Blackiston, F. W., Esq.

One Bonnet-Monkey.

Blasius, Dr. Rudolph, C.M.Z.S. Two Goshawks.

Blyth, A. W., Esq.

One Two-spotted Paradoxure.

Bolau, C. G., Esq.

One White Pelican.

Boljohn, Messrs. L. & J.

One Diana Monkey.

Boulenger, G. A., Esq.

Three Midwife Toads, Fourteen Alpine Newts, nine Fire-bellied Toads, one Back-marked Snake, one Lacertine Snake.

Bower, C. T. H., Esq.

One Black-faced Kangaroo.

Bowes, H. T., Esq.

One Common Partridge.

Bowker, Col. J. H., F.Z.S., and J. Dunn, Esq.

Two Southern River-Hogs.

Bowker, Col. J. H., F.Z.S.

One Four-coloured Shrike.

Boyd, Dr. Robert, F.Z.S.

Two Common Barn-Owls.

Boyton, Sir Henry S., Bart.

Two Grey Lag Geese, one Black-backed Kaleege

Braddick, Capt.

One Indian Cobra.

Branieki, The Count Constantin. One Northern Lynx.

Brewer, Mrs. E.

Two Long-eared Owls.

Bridges, W. F., Esq. One Rude Fox.

Brindley, Mrs.

Two Lesser Black-backed Gulls.

Brodie, W. L., Esq.

One Grey Ichneumon.

Brooke, Major H. Langford.
Two Tovi Parrakects.

Brooksbank, Col. A.

One Peregrine Falcon.

Broune, T., Esq.

One Peregrine Falcon.

Brown, G., Esq.

One Chinese Tiger.

Brown, M. Yeats, Esq.

One Mediterranean Scal.

Browne, J. W., Esq.

One Chaema Baboon.

Brownrigg, Mrs. Studholme. One Common Fox.

Bryant, W. E., Esq.

One Black Rat.

Buchanan, Sir George Leith, Bart. One Common Raven.

Burnaby, T. A., Esq.

Six Common Kingfishers.

Burness, Miss L.

Three European Tree-Frogs.

Bury, F. G., Esq.

One Common Raven, two Lesser Black-backed Gulls.

Caravossi, C., Esq.

One Rufous Rat Kangaroo.

Carew, B. H., Esq.

One Oldham's Terrapin, one Burmese Tortoise.

Carmichael, T. D. G., Esq., F.Z.S.

Seven Italian Scorpions, two Axolotls, five Carpathian Scorpions, three European Pond-Tortoises.

Caton, Dr. J. D., C.M.Z.S. One Mule Deer.

Cheetham, J. H., Esq., F.Z.S.

One African Brush-tailed Porcupine.

Christy, R. M., Esq.

One Short-eared Owl.

Church, J. C. J., Esq.

One Three-toed Sand-Skink.

Clark, W. Marston, Esq.

One Vulpine Phalanger.

Clark, Master G. H.

One Bonnet-Monkey.

Clements, H. J., Esq.

Two Sharp-headed Lizards.

Cobb, F. E., Esq., C.M.Z.S.

Two Upland Geese, five Ruddy-headed Geese, one Loggerhead Duck.

Cole, Mr.

One Moor-Harrier.

Collison, A., Esq.

One Yellow Baboon.

Conklin, W. A., Esq., C.M.Z.S.
Two Canadian Porcupines.

Coope, E. J., Esq.

One Himalayan Bear.

Cornély, Mons. J. M., C.M.Z.S.

Two Hybrid Red-headed Pochards.

Cornet, A., Esq.

Two Macaque Monkeys.

Costa Ricci, The Chevalier da, F.Z.S.
One Herring-Gull.

Cotton, N., Esq.

Two Bonnet-Monkeys.

Court, Miss E. à.

Two Common Waxbills.

Crane, Mrs. Walter.

One Common Peafowl.

Craven, C. A., Esq., C.M.Z.S.

One Banded-tailed Tree-Snake, one Hairy Armadillo, one Wood-Brocket.

Crawford, Mrs.

One Macaque Monkey.

Crawshay, Lieut. R.

One Puff-Adder.

Crompton, H. D., Esq.

One Common Night-Heron.

Crosbie, Miss Mabel.

One Yellow-bellied Liothrix.

Cross, Mr. Wm.

One Hawk's-billed Turtle.

Cumberleye, Mrs.

One Malbrouck Monkey.

Dalrymple, Sir Hugh, Bart.

Six Common Guillemots.

Davis, Mr. G.

Four Common Kingfishers.

Davis, F. L., Esq.

One Martinique Waterhen.

Davison, Mrs.

One Black-eared Marmoset.

Dixon, Mrs. F.

One Nisnas Monkey.

Dowson, Mrs. H. C.

One Rhesus Monkey.

Drabble, G. W., Esq.

One Common Marmoset.

Draper, S., Esq.

One Bauer's Parrakect.

Dunton, Mr. F. E.

One Common Raven.

Dykes, B., Esq.

One Sykes's Monkey.

Edson, G., Esq.

One Canada Goose.

Ekman, C. D., Esq.

Four Speckled Terrapins.

Elliott, F. W., Esq.

One Common Adder.

Elwood, Capt. R.

One Radiated Tortoise.

Elyard, S. J., Esq.

One Common Raven.

Escaré, Mr. M.

One Squirrel Monkey.

Evans, Mrs.

One Toque Monkey.

Faed, J., Esq.

Two Common Buzzards.

Farmer, Capt.

One Cape Zorilla.

Finch-Hatton, The Hon. M. E. G., F.Z.S. One Cinereous Sea-Eagle.

Finlay, Major.

Eleven Museovy Ducks.

Fisk, The Rev. G. H. R., C.M.Z.S.

One Semiserrated Tortoise, eighteen Rough-scaled Lizards, ten Sepiform Lizards, twenty-one Ocellated Geckos, one Streaked Euprepes, one Dwarf Chamcleon, two Hoary Snakes, twenty-nine Spotted Slowworms, forty-one Rosaeeous Snails, one Bipes, one Crossed Snake, one Rhomb-marked Snake, one Blackneeked Heron.

Fitch, A. P., Esq.

Two Macaque Monkeys.

Fitz-Simons, Mrs. R. H. One Capybara.

Forbes, W. A., Esq., F.Z.S.

One Painted Terrapin, three Confluent Rattlesnakes.

Ford, Mr. W. J.

Three Common Chameleons.

Forman, Mr. F.

One Macaque Monkey.

Forrer, A., Esq.

Two Pennsylvanian Mud-Terrapins, two Adorned Terrapins.

Fox, Mrs. F.

Two Blossom-headed Parrakeets.

Freeman, Mrs.

One Grey Ichneumon.

Fremlin, W. T., Esq.

One Bonnet-Monkey.

Gain, E. W., Esq.

One Crimson-crowned Weaverbird.

Garman, Samuel, Esq., C.M.Z.S.

Eight Douglass's Horned Lizards, five Garman's Lizards, six Spotted Lizards, two Confluent Rattlesnakes, three Say's Snakes, one Striped Snake, one American Box-Tortoise.

Garratt, G. H., Esq.

One Crested Porcupine.

Gibbs, V., Esq.

One Spotted Cavy.

Gissing, A. S., Esq.

One Bonnet-Monkey.

Golden, Master.

Two Common Barn-Owls.

Gourlay, T. W., Esq.

One Vervet Monkey.

Grant, H., Esq.

One Yellow Wagtail, one Marsh-Tit, two Common Nightingales, one Blackcap Warbler.

Grant, Owen E., Esq.
One Azara's Fox.

Gratton, Mrs.

One Green Monkey.

Graves, Capt. T. W.

One Black-faced Spider Monkey.

Grosvenor, Dr. A. O.

One Red-legged Partridge.

Gunning, H., Esq.

One Sykes's Monkey.

Hamer, H. B., Esq.

One Bonnet-Monkey.

Hames, Mrs.

Two Silver Pheasants.

Hance, Theo. A. W., Esq., C.M.Z.S.

Three Gold Pheasants, six Bamboo-Partridges, one Common Moorhen, one Black Kite.

Hardcastle, H. T., Esq.

One Vervet Monkey.

Harding, C. W., Esq.

Óne Thicknee.

Harraden, H., Esq.

One Three-coloured Lory.

Harris, Rev. C.

One Campbell's Monkey, one Diana Monkey.

Harting, J. E., Esq., F.Z.S. One Lanner Falcon. Harvey, C. J., Esq.

Two Leadbeater's Cockatoos.

Hawes, Capt.

One Golden Eagle.

Hawtayne, G. H., Esq., C.M.Z.S.

One Shining Buzzard-Hawk, three Chimachima Milvagos, one Collared Peccary.

Heath, Mrs.

One Moustache Monkey.

Henderson, W. H., Esq.

One Common Heron.

Hill, Major-Gen.

One Greater Vasa Parrakect.

Hill, Mrs.

One Macaque Monkey.

Hills, E. W., Esq.

One Macaque Monkey.

Howard, Miss Maud.

One Passerine Owl.

Jackson, Sir Louis S., F.Z.S.

One Common Paradoxure.

Jacobs, G., Esq.

Two Common Marmosets, one Silky Hangnest.

James, Messrs.

One Arabian Baboon.

Jamrach, Mr. A. H.

Six Northern Marsh-Tits.

Jamrach, Mrs. A. H.

One Slender Loris, one Sharp-nosed Crocodile.

Jellicoe, Capt. J. One Puma.

Jones, Capt.

One Brazilian Cariama.

Jones, G. H., Esq., F.Z.S. One Vervet Monkey.

Jones, Capt. E.

One Black-backed Jackal.

Keighley, Capt. H. Hope. One Jardine's Parrot.

Kennedy, Master J.

One Allen's Porphyrio.

Kessels, Mr.

One Bonnet-Monkey.

Kilmorey, The Earl of, F.Z.S.
One Great Eagle-Owl.

King, Capt. D., R.N.

Two Nilotie Crocodiles.

King's Royal Rifles, I Company, 3rd Batt.

One Black-headed Lemur, one Black Lemur.

Knight, J., Esq.

One Macaque Monkey.

Krehl, A., Esq.

Two Crimson-winged Waxbills.

Laing, W. Perey, Esq.

One Bonnet-Monkey.

Lake, Miss.

One Naked-eared Deer.

Lamprey, Mrs.

One Rhesus Monkey.

Lane, Miss.

One Puffin.

Langton, H. E., Esq.

One Common Raven.

Lauder, Mrs. Dick.

One Ceylonese Jungle-fowl.

Laws, Capt.

One Indian Python.

Lawson, G., Esq., F.Z.S.

One Rose-hill Parrakeet.

Layard, E. L., Esq., F.Z.S.

Two Uvæan Parrakeets, one Saisset's Parrakeet.

Lea, Dr. J., M.R.C.S.

One Ring-tailed Lemnr.

Lentaigne, Dr. H. W.

Two Slender Lories.

Leportier, Capt. Th.

One Bengal Vulture.

Levy, C., Esq.

One Ring-tailed Pigeon.

Lilford, Lord, F.Z.S.

Six Spanish Blue Magpies, three Pleurodele Newts, one Loggerhead Turtle.

Little, G., Esq.

One Littoral Callichthys.

Londesborough, Lord, F.Z.S.

Two Common Snakes.

Lubbock, Sir John, Bart., F.Z.S. One Sonoran Heloderm.

Lubbock, A., Esq.

One Red-sided Eclectus.

M'Aldonie, Dr. A. M.

One Forster's Milvago.

McEwan, A. J., Esq.

One Weeper Capuchin.

MeNair, Major, C.M.G., and J. M. Vermont, Esq.

Two Argus Pheasants. Maepherson, H. A., Esq.

One Ring-Ouzel.

Maitland, Miss Eva.

One Bauer's Parrakeet.

Manigault, Dr. G. E., C.M.Z.S.

Six Florida Tortoises, two Alligator Terrapins, one American Box-Tortoise, one Serrated Terrapin.

Mapleson, A., Esq.

One Orbicular Horned Lizard.

Mason, W., Esq.

One Pig-tailed Monkey.

Meek, E., Esq.

One Vulpine Phalanger.

Meltzer, C. R., Esq. Two Badgers.

Mills, R., Esq.

One Malbrouck Monkey.

Monro, R. W., Esq.

A collection of Sea-Anemones.

Morris, Mrs.

One Bonnet-Monkey.

Morson, Miss.

One Roseate Cockatoo.

Munt, A., Esq., F.Z.S.

Two Active Amazons.

Napier, Master C. E.

One Horned Lizard.

Nash, W., Esq.

One Bonnet-Monkey.

Newton, F. J., Esq.

Two Macaque Monkeys.

Nicholls, C. Kerry, Esq., F.Z.S.

Two Greater Sulphur-crested Coekatoos.

Nieholson, Mrs.

One Bonnet-Monkey.

North, Miss M.

One Java Sparrow.

Oliver, Lieut. A. H., R.N.

Two Martinique Waterhens.

Owen, Capt. H.

One Puff-Adder.

Paget, Lieut., R.N.

Twenty-four Brown-tailed Gerbilles, nine Hairy-footed Jerboas.

Paris, The Count de.

Five Wild Boars.

Paris, Mrs.

One Macaque Monkey.

Park, Capt.

One Leopard.

Parkyns, Lady.

One Macaque Monkey.

Parr, J. Charlton, Esq.

One Bauer's Parrakeet.

Paul, Mr. G.

One Common Barn-Owl.

Pemberton, R. Leigh, Esq. One Great Eagle-Owl.

Penney, W., Esq.

One Lesser White-nosed Monkey, one Smooth Snake.

Pichot, Mons.

Four Barbary Mice.

Pilcher, W., Esq.

One Horned Lizard.

Pillans, E., Esq.

One Egyptian Cobra.

Pillans, H., Esq.

One Ring-hals Snake, one Rhomb-marked Snake.

Pirie, F. Logie, Esq.

One Macaque Monkey.

Powys, The Hon. L. W. H., F.Z.S. One Common Squirrel.

Poyer, J. Poyer, Esq.

One Common Snake, two Slowworms.

Rabbetts, R. H., Esq.

Two Common Herons.

Ramsay, Mrs.

One Roscate Cockatco.

Reading Angling Association.
Three Young Otters.

The Roy A

Reece, The Rev. A.

One Common Barn-Owl.

Reynardson, Lieut.-Col. Birch.

One Common Jay.

Richardson, Mrs.

One Macaque Monkey.

Robson, Miss C. G.

One Spinose Land-Emys.

Rocke, J. C. S., Esq.

One Common Buzzard.

Rokeby, H. R., Esq.

One Common Cuckoo.

Rowell, D., Esq.

One Horned Lizard.

Russell, Lord Arthur, F.Z.S.
One Æsculapian Snake.

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St. John, Lieut.-Col. Sir Oliver B. C., K.C.S.I., R.E., F.Z.S. One Markhoor.

St. Leger, R. A., Esq.

One Malbrouck Monkey.

St. Quintin, W. H., Esq. One Waxwing.

Salvin, Capt.

One Goshawk.

Sandbach, H., Esq.

One Red Brocket.

Sargent, Miss.

One Greenish Newt.

Sawyer, G. V., Esq.

One Rhesus Monkey.

Schliger, Herr J.

Six Sand-Lizards.

Schroedler, Capt. F. W.

One Sykes's Monkey.

Scrutton, Percy E., Esq.

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Spellerberg, F. E., Esq.

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Stanley, W. K., Esq.

One Ring-necked Parrakeet, one Water-Vole.

Staveley, Miss R. M.

One Pig-tailed Monkey.

Sterndale, R. H., Esq.

One Three-striped Paradoxure.

Stevens, Capt. E. B., R.N.
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Stoddart, The Hon. John.

One Indian Chevrotain.

Tarbat, Viscount, F.Z.S.

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Thomas, J., Esq.

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Thomason, Miss K.

One Common Marmoset.

Tilleard, Miss.

One Black-eared Marmoset.

Tollemache, Lady Sibyl.

One Macaque Monkey.

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Verinder, J., Esq., F.Z.S.

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One Common Paradoxure.

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One Chacma Baboon.

Worth, H., Esq.

One Bonnet-Monkey.

Wright, Mrs. A.

One Common Baru-Owl.

Wrzesniowsky, Prof.

One Oak Dormouse.

Wylde, Beyts & Co., Messrs.

Four Egyptian Ouarans, one Ocellated Skink, eleven Spot-bellied Snakes.

Youle, F., Esq.

One King Vulture, one Sclater's Curassow.

#### Conclusion.

The Council cannot conclude their Report without acknowledging, with many thanks, the assistance they have received from the Committee of Publication, and from the gentlemen who have served upon the Committees of Finance and Audit during the past year.

Signed (for the Council),

P. L. SCLATER,

Secretary.

11 Hanover Square, April 30th, 1883.

#### REPORT

OF THE

#### AUDITORS OF THE ACCOUNTS

OF THE

# ZOOLOGICAL SOCIETY OF LONDON,

Appointed January 18, 1883.

The Committee of Auditors to the Zoological Society having fully examined the accounts, inspected the books, and seen vouchers for all the various payments ordered by the Council for the year ending December 31st, 1882, respectfully submit to the Society an abstract of the accounts, together with a statement of the Assets and Liabilities at the close of the year, and a report thereon.

### RECEIPTS IN 1882.

	IN 1002.					
Balance brought from December 31, 1881		•••••••••		£ 1,203	s. 3	$\frac{d}{4}$
INCOME.		.e	ا ہے			
1874 Publication Sales	£ s. d.	£ s 13 5	6 6			
1878 Admission Fees		5 (	0			
1879 Garden Sales		2 (	0			
1880 { Garden Sales	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	13 (	0 0			
Rent for Refreshment Rooms Rent for Freehold Premises Garden Sales Admission Fees Subscriptions Publication Sales	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		4 1			
Admissions to Gardens Rent for Refreshment Rooms Rent for Freehold Premises Garden Sales Admission Fees Compositions Subscriptions Ivory Tickets Publication Subscriptions Publication Sales Dividends (Davis Trust) Interest on Deposit Account Elephant and Camel Riding Receipts	1,258 13 4 225 0 0 2,217 5 3 620 0 0 1,170 0 0 6,296 17 0 498 15 0 120 2 7 74 8 4 71 0 4 305 10 9	•				
Miscellaneous	108 0 0 1 1 0	33,648 1 121 1				
INCOME RECEIVED IN 1882		34,270 1	7 8	34,270	17	8
				35,474	1	0

### PAYMENTS IN 1882.

		Bel	long	ging to					
	188	1.		188	2.	_	То	tal.	
EXPENDITURE.									_
	£	s.	d.	€	s.	d	€	s.	d.
Rent, Rates, Taxes, and Insurance Gardens		2	2	1,027		9	1,281		11
Ditto dittoOffice		1	3	82		11	$\frac{106}{3.619}$	17	2 5
Salaries, Wages, and Pensions Gardens		• • • • •	•••	3,619		$\frac{5}{0}$	1,822	7	0
Ditto dittoOffice	539	19	4	1,822	7	6	5,178		10
Provisions			6	2,299		8	2 5 1 3	4	2
Menagerie Expenses	308		9	3,138		1	3,447	10	10
Keepers' Dresses				191	9	11	191	9	11
Works, Materials, &c.		12	1		18	7	2,974	10	8
Buildings				2,665	2	0	2,665	2	0
Garden Expenses	2	8	0	807	4	10	809		10
Advertisements	42	1	6	219	8	7	261		1
Band Expenses			••••	239	-	0	239		0
House and Office ExpensesGardens	36	10	3	239	6	1	275 418		$\frac{4}{2}$
Ditto dittoOffice			0	404	5	2	72	10	4
Stationery		2	3	65 394	7	3. 2	421		5
Printing  Cost of Publications	_	3	6	2.122	9	1	2,262		7
Library Expenses		-	4	370		3	437	3	7
Returned Subscriptions				29	5	0	29	5	0
Cost of Medal				4		6	4	18	6
Law Expenses	5	14		30	10	1	36	4	3
Zoological Lectures (Davis Bequest)				70	15	0	70		0
Interest on Mortgage Debt		• • • • •	•••	234	5	0	234	5	0
					_				
	1,749	4	2	27,627	1	10	29,376	6	0
				0000	• •				
Jan. 18. Repayment of Loan had Nov. 18, 1	881	• • • • • •	• • • •	£201	13	4			
" 23. Ditto ditto Dec. 21, 1	881	• • • • •	• • • •	1,004	3	4	1,205	16	8
Repaid Messrs. Drummond on account of M	ortgage	Deb	t				1,000	0	0
Dill D MA M. I	O4- 1	D		CC 000	0	0			
Paid to Deposit Account with London and	County 1	bank	ζ:	2 500	0	0			
Less withdrawals					- 0		2,500	0	0
Datatice December 01, 1002			••••				_,	Ĭ	Ŭ
Cash at the Banker's, December   General	Account			£911	0	4			
31, 1882, viz. Petty Cas						0			
					_	-	1,391	18	4
							35,474	1	0

# Comparison of Receipts in 1881 and 1882.

	Rec	eipts.		
	Incom	me of	Increase.	Decrease.
	1881.	1882.	Increase.	Decrease.
Admissions to Gardens Rent for Refreshment Rooms Rent for Premises in Oxford Street Garden Sales Admission Fees: Past Present Annual Subscriptions: Past. Past.	£ s. d. 15,113 17 6  1,084 6 8  300 0 0 462 13 3  90 0 0 510 0 0	### 8. d. 20,691 10 0  1,307 3 4  300 0 0 2,280 10 0  100 0 0 620 0 0  57 0 0	£ s. d. 5,577 12 6 222 16 8  1,817 16 9 10 0 0 110 0 0	£ s. d.
Present Future Compositions Ivory Tickets Publications Dividends Elephant-riding receipts Miscellaneous.	6,328 13 0 114 0 0 600 0 0 38 7 0 981 11 4 74 3 7	6,296 17 0 108 0 0 1,170 0 0 37 6 0 788 4 5 145 8 8 305 10 9 63 7 6	71 5 1 305 10 9 43 5 0	31 16 0 6 0 0 1 1 0 193 6 11
Increase	25,810 14 10 8,460 2 10 34,270 17 8	34,270 17 8	8,728 6 9 268 3 11 8,460 2 10	268 3 11 Ded. Decr.
Receipts	over Payments		4,894 11 8	
Dr.	C	ash		···
Fo Balance brought from Fo Income received in the	December 31, 1 Year	881		£ s. d. 1,203 3 4 34,270 17 8
				35,474 1 0

# Comparison of Payments in 1881 and 1882.

Expenditure of   1881.   1882.   Increase.   Decrease.	Payments.											
Arrears of previous years   ## s. d.   ## s. d.			Ex	pend	liture of	_		Incr	2250	Dec	rease	
Arrears of previous years		188	31.		188	2.		11101				
Sions.	Rent, Rates, Taxes, and In-	2,153	6	7	1,749	4	2		••••	. 404		
House and Office Expenses.   611 17 7   643 11 3   31 13 8   Stationery and Account Books   64 11 11   65 7 3   0 15 4   Stationery and Account Books   70 11 6   394 18 2   24 6 8   Stationery and Account Books   2,355 14 10   2,122 9 1   233 5 9	sions Provisions Cost and Carriage of Animals Menagerie Expenses Keepers' Dresses Works, Materials, &c. Buildings Garden Expenses Advertisements	4,627 867 3,193 154 2,967 886 200	14 5 10 12 12 12  6	5 6 0 0 4  10 5	4,638 2,299 3,138 191 2,907 2,665 807 219	7 11 15 9 18 2 4 8	6 8 1 11 7 0 10 7	36 2,665	13 1 6 2 17 11 2 0	54		
25,687 5 8   29,376 6 0   4,667 8 10   978 8 6   Ded. Decr.	House and Office Expenses. Stationery and Account Books Printing (Miscellaneous). Cost of Publications Library Expenses Returned Subscriptions Cost of Medals Law Expenses Grant in aid of Science. Expenditure of Davis Bequest	611 64 370 2,355 422 26 50	17 11 11 14 9 7  0 18	7 11 6 10 2 0  0	643 65 394 2,122 370 29 4 30	11 7 18 9 12 5 18 10	3 3 2 1 3 0 6 1	31 0 24 2 4	13 8 15 4 6 8  18 0 18 6	233 51 . 50 6	16 11 0 0 3 0	
Ordinary Payments       24,651 4 3 1,036 1 5 3,266 17 0 2,230 15 7         Extraordinary ditto       25,687 5 8 29,376 6 0 3,689 0 4             Contra         Cr.         By Expenditure paid in the year.       \$\mathref{\mathref{E}}\$ s. d.         29,376 6 0       1,205 16 8         By Repayment of Loans       1,205 16 8         By Repayment of Morteage-debt       1,000 0 0	Increase				29,376	6	0					
Extraordinary ditto		29,376	6	0	29,376	6	0	3,689	0 4			
Contra         £ s. d.           By Expenditure paid in the year.         29,376 6 0           By Repayment of Loans         1,205 16 8           By Repayment of Mortgage-debt         1,000 0										_		
### S. d.  By Expenditure paid in the year. 29,376 6 0  By Repayment of Loans 1,205 16 8  By Repayment of Mortgage-debt 1,000 0 0		25,687	5	8	29,376	6	0	3,689	0 4	ļ		
By Expenditure paid in the year.       29,376 6 0         By Repayment of Loans       1,205 16 8         By Repayment of Mortgage-debt       1,000 0 0			(	Con	tra					(	Cr.	
By Balance at the Bankers', December 31, 1882	By Repayment of Mortgage- By Balance on Deposit Accou	debt nt at Lo	ndo	n ar	d Count	 у В	ank	• • • • • • •		29,376 1,205 1,000 2,500 1,391	6 0 16 8 0 0 0 0 18 4	

## Assets and Liabilities of the Society on December 31, 1832.

### ASSETS.

	£	s.	d.
Animals in the Menagerie in the Regent's Park	21,629	5	0
Books in the Library at Hanover Square	15,000	0	0
Unsold Publications	10,900	0	0
Freehold Premises	25,000	0	0
Cost of £1,900 London and South-Western Railway New 4 per			
cent. Preference Stock (Davis' Trust Fund)	1,938	9	6
Deposit Account, London and County Bank	2,500	0	0
Cash at the Bankers (Messrs. Drummonds)	1,391	18	4
Arrears considered good:— $\pounds$ s. d.			
Annual Subscriptions 105 0 0			
Ivory Tickets			
Publication Sales 135 6 3			
Garden Sales 113 13 4			
Rent for Refreshment Rooms 128 10 0			
Rent for Freehold Premises 75 0 0			
	560	12	7
	£78,920	5	5

### LIABILITIES.

Rent and Taxes unpaid:— £ s. d.	£	<i>s</i> .	d.
For the Gardens, say			
,, Office, say 27 0 7			
•	262	14	6
Bills, &c., estimated at:—			
For the Gardens, say			
- " Office, say			
	1,171	18	1
Messrs. Drummonds, Mortgage Debt	5,000	0	0
Balance of Contract on Reptile House	2,180	0	0
Hot-water Apparatus for ditto	242	0	0
	£8,856	12	7

The Auditors have much pleasure in congratulating the Society on the very satisfactory state of its finances, the total receipts of 1882 having been exceeded in one previous year only. This they ascribe in part to the great interest taken by the public in the events connected with the removal of a favourite animal, whose departure has thus proved to be very remunerative to the Society. There has been a total increase of animals to the number of 61. Additional accommodation for the reptile collection is being made at a cost of £2,665 already paid, and of £2,180 still due, amounting altogether to £4,845. This still leaves a handsome balance out of the increased income received by the Society.

The Auditors have much pleasure in expressing their satisfaction with the manner in which the Books have been placed before them by Mr. Barrow, the Society's Accountant.

ALFRED E. CRAVEN.
G. E. DOBSON, M.A., M.B.
HERBERT DRUCE.
CHARLES H. GATTY.
W. H. HUDLESTON.
The Rev. Jas. H. Lang, M.A.
L. C. Stewart, Surgeon-General.

11 Hanover Square, W.

February 27, 1883. PRESENTED

24 APR 1993





# PROCEEDINGS OF THE SCIENTIFIC MEETINGS OF THE ZOOLOGICAL SOCIETY OF LONDON.

		Comp	olete.	Letterpres To Fellows.	s only.	Illustratio	ne only
		To Fellows.	To the	To	To the	To	To the
1861,	eloti		ATo	Fellows.	Public.	Fellows.	Public.
1862,			47.	4s. 6d	$\dots$ $0s$ $\dots$	$\dots 27s.6d\dots$	41s.
1863,	"	20-	4/5	4s. 6d	6s	$\dots 27s. 6d.\dots$	41s.
1864,	"	928	4/S	4s.6d	$\dots$ 6 $s$	27s. 6d	418.
	,,,	528	4/5	4s. 6d	6s	$\dots 27s. 6d.\dots$	41s.
1865,	,,	52S	4/s	$\dots$ 4 $s$ , $6d$	6s	. 27c 6d	A1a
1866,	21	32s	47s	4s.6d	$\dots$ 6 $s$	27s. 6d	41s.
				With Illustratio Uncoloured.		Coloured	10113
1967	1 - 41.						
1060	notn	•••••••		18. 0a 14s	. 6d.	89 e 6d - 57 e	· 6d
1000,	23		• • • • • • • •	l Is. 6d 14s	. 6d 3	19 e 64 - 47 e	6.7
1869,	2.5	**********		l Is. 6d 14s	$.~6d.~\dots$ $?$	32 c 6d 47 c	· fid
1870,	,,,			l 1s. 6d 14s	$.~6d.~\dots$ 3	$32s.\ 6d.\\ 47s$	. 6d.
Index,	186	1-18/0		4s. 6d 6s	0d		
18/1, 0	cloth	• • • • • • • • • • • • •	. <b>.</b> 1	1s. 6d 14s.	6d3	2s. 6d   47e	6d
10/2,	33		<b>.</b> 1	1s. 6d $14s$ .	$6d. \dots 3$	2s 6d 47s	Gd
1873,	,,		1	ls. 6d 14s.	$6\vec{a}$ 3	2s 6d 47s	ed.
1874,	,,	• • • • • • • • • • • • • • • • • • • •	1	1s. 6d 14s.	6d = 3	Se 6d 50e	. 0u.
1875,	3)		1	1s. 6d 14s.	6d 3	Se 6d 500	61*
1876,	33	******	1	ls. 6d 14s.	6d 3	Se 6d 500	0α." C.J.*
1877,	••	*****		1s. 6d 14s.	6d 30	20 6d 50-	. 0α. ~
1878,	11			1s. 6d 14s.	64 3	28. 00 50s.	na.
1879,	11		1	1s. 6d 14s.	67 20	os. 0a ous.	00.
1880,	••		1	ls. 6d 14s.	67 2	58. 0a 50s.	bd.
Index,	1871	-1880		$4s. 6d. \dots 6s.$	0a5i	os. $0a50s.$	od.
	loth			1s. 6d 14s.	64 00	0.7 50	4.1
1882.			1	10. 6d 14s.	6.1 38	s. 6d 50s.	6d.
	35 .	**********	1	1s. 6d 14s.	0a38	ss. 6d 50s.	6d.

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## REPORT

OF THE

#### COUNCIL AND AUDITORS

OF THE

# ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1883.

READ AT THE ANNUAL GENERAL MEETING,

APRIL 29th, 1884.



LONDON:

PRINTED BY TAYLOR AND FRANCIS,

RED LION COURT, FLEET STREET.

1884.

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29	XXI.	1853.	,,	4s.	6d.	•••	6s.		,,	0	18	0	•••	ı	4	0		
11	XXII.	1854.	,,	4s.	6d.	•••	6s.	•••	22	l	0	0		1	6	0		
,,	XXIII.	1855.	,,	4s.	6d.	•••	6s.		11	1	7	6*		ì	18	()*		
,,	XXIV.	1856.	,,	4s.	6d.	•••	6s.	•••	11	1	i	0		1	7	6		
"	XXV.	1857.	1,	4s.	6d.		6s.		,,	1	1	0		1	7	6		
11	XXVI.	1858.	23	4s.	6d.		6s.		11	1	12	0		2	2	0		
	XXVII.	1859.	,,	4s.		•••	6s.	•••	11	1	12	0*		2	2	()*		
	XVIII.	1860.	23	4s.			6s.		"	1	12	0		2	2	0		
Inde	x 1848–6	60.	,,	<i>4s.</i>		•••	6s.	•••	,,									

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Mollusca 1 ve	ol., 0	15	9	l	1	0		,,	1	3	0		1	10	0
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# REPORT

- OF THE

#### COUNCIL

OF THE

# ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1883.

READ AT THE ANNUAL GENERAL MEETING,

APRIL 29тн, 1884.



#### LONDON:

PRINTED BY TAYLOR AND FRANCIS,

RED LION COURT, FLEET STREET.

1884.

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# REPORT OF THE COUNCIL.

April 29, 1884.

THE Council have now the pleasure of submitting to the Fellows their fifty-fifth Annual Report upon the pro-

gress of the Society.

This, in accordance with previous Reports, is divided into three heads, the first of which relates to the General Condition of the Society and its Finances, the second to the business transacted at the Office in Hanover Square, and the last to the state of the Gardens in the Regent's

# I. GENERAL CONDITION OF THE SOCIETY.

# 1. STATE OF THE ROLL OF MEMBERS.

#### a. Fellows.

The number of Fellows and Fellows Elect at the close of the year 1883 was 3210, classified as follows:-

•	,	~	*001	110	u as	10	1101	1.2	:
Compounders	who hav	'e	pai	d a	£20				36
Compositions 1	aitto remitted			ě	£30	•	•	•	875
- "Jang annual	COLLITION	LLIG	JIIS	OI.	£2				11
Ditto Dormant Admission force	GILLO				4.3				0000
Admission food		•	•	•	•	•	•	•	117
Admission-fees	unpaid	•	•	٠	•	•	•	•	25
									9010

The state of the Society during the past Ten years, as regards the number of its Ordinary Members, is given in the subjoined Table.

Comparative Statement of Elections, Deaths, Resignations, and Renevals during the past Ten years, with the number of Fellows at the end of each Year.

	or ted.		Died. Resigned. Removed.							pe .	of s, 31.			
Years.	ا ت. ت	Cor	npound	lers.	Subsc	ribers.	Subsc	ribers.	Imission Fees npaid.	Subsc	ribers.	mission Fees npaid.	sed to	Number c Fellows Jecember
	Elea Re-a	£20.	£30.	Feere- mitted	£2.	£3.	£2.	£3.	Admission Fees Unpaid.	£2.	£3.	Admission Fees Unpaid.	Ceased	Nur Fe Dece
1874.	221	7	6	1	8	60		33			74	8	197	3197
1875.	180	8	16		8	57		36		•••	•••	11	136	€241
1876.	224	9	28		4	63	•••	49	1				154	3311
1877.	225	3	23		9	63		20	•••	•••	58	6	182	3354
1878.	176	6	12		5	52	1	40	1			1	118	3412
1879.	144	9	17		7	52		54			50	6	195	3361
1880.	153	4	18	1	4	€5		74			38	4	208	3306
1881.	138	24	31		5	75		65	3	1	27		231	3213
1882.	164	3	23	1	4	61		48			11	13	164	3213
1883.	159	4	25		3	53	•••	38			33	4	162	3210

#### b. Corresponding Members.

The following gentlemen were elected Corresponding Members during the year 1883:—

1. Dr. R. W. Coppinger, R.N., of Dublin.

2. Samuel Garman, Esq., of the Museum of Comparative Zoology, Cambridge, Massachusetts, U.S.A.

3. M. Fernand Lataste, Vice-President of the Zoological

Society of France, Paris.

- 4. Albert A. C. Le Souëf, Esq., Honorary Secretary to the Zoological and Acclimatization Society of Victoria, Melbourne.
- 5. N. H. Beyts, Esq., of Jeddah, Arabia.

6. Dr. Rudolph Blasius, of Brunswick.

7. Surgeon-Major George Bidie, C.I.E., Superintendent of the Museum, Madras.

8. Dr. F. H. Bauer, of Batavia, Java.

9. Capt. William Brydon, 42nd Native Infantry, British India.

## c. Foreign Members.

Three Foreign Members were elected in 1883 to fill vacancies in the list.

1. Dr. Christian F. Lütken, of the Royal University, Copenhagen.

2. Dr. Joseph Leidy, of the Academy of Natural Sciences,

Philadelphia, U.S.A.

3. Dr. Rudolph Leuckart, Director of the Zoological Institute, Leipzig.

#### 2. STATE OF THE FINANCES.

#### a. Income.

The Income of the Society in 1883, although falling short of that of the preceding year, which was swollen by special circumstances, attained the large total of £28,966 1s. 5d., a considerably greater amount than that of 1879, 1880, or 1881, and far exceeding the general average of ordinary years, as will be seen by the following Table:—

# Annual Income of the Society during the past 20 years.

Year.	Total Income.	Year.	Total Income.
	${m \pounds}$		£
1864 .	$\dots 21,713$	1874	28,417
1865 .	$\dots 23,457$		28,738
1866 .	$\dots 24,379$		34,955
	25,041		30,983
1868	24,958	1878	27,944
1869	22,768	$1879 \dots$	26,463
1870	23,257		27,388
	24,620		25,810
	26,728		34,270
	28,099		28,966
			-,

The subjoined Table contains a comparative statement of the various heads of income in 1882 and 1883:—

## Comparison of Receipts in 1882 and 1883.

		In	con	ne of		_	Daguaga	
	188	32.		188	3,		Increase.	Decrease.
Admissions to Gardens	£ 20,691 1,307		$\begin{array}{c} d. \\ 0 \\ 4 \end{array}$	£ 17,239 1,253	8	d. 6 4	£ s. d.	£ s. d. 3,452 1 6 54 0 0
Rent for Premises in Oxford Street	300 2,280	0	0	150 424		0		150 0 0 1,856 2 0
Admission Fees:— Past Present	100 €20	0	0	105 595	0	0	5 0 0	25 0 0
Annual Subscriptions:— Past Present	6,296		0	43 6,256		0 0		9 0 0 40 0 0
Future  Compositions  Ivory Tickets	37	6	0 0	111 810 39	0 19	0	2 13 0	300 0 0
Publications Dividends Elephant-riding receipts	145 305	8 10	5 8 9	141 429	17 2	11 10 9		3 10 <b>1</b> 0
Miscellaneous				139 431	4	1	75 16 6 431 4 1	
Decrease	34,270	• • • • •	····	28,966 5,304	16	_	644 18 1 Ded. Incr.	5,949 14 4 614 18 1
	34,270	17	S	34,270	17	8		5,804 16 8

The balance at the Society's Bankers carried forward from 1882 was £1391 18s. 4d. To this must be added the following sums: £2500 left at the close of 1882 on deposit at the London and County Bank, and transferred in 1883 to the Society's General Account at Messrs. Drummond's; and £16,614 15s., being the nett proceeds of the sale of the Society's former premises after payment thereout of the amount (£5,000) remaining due to Messrs. Drummond on their mortgage.

These additions raised the total amount available for the expenditure of the year 1883 to the sum of £49,472 14s. 9d.

#### b. Expenditure.

This amount was disposed of in the following manner:— The sum of £38,040 8s. 2d. was required for the ordinary and extraordinary expenditure of the year. The sum of £33 6s. 8d. was spent on the interest of a temporary Loan of £2000 borrowed from Messrs. Drummond. The sum of £4250 was the balance of the cost of the new freehold premises No. 3 Hanover Square, less the amount of £12,000 advanced to the Society by Messrs. Drummond upon the mortgage thereof. The sum of £4993 15s. was invested in the purchase of £5000 Reduced 3 per cents. These operations left a balance on the Society's account at the close of the year 1883 of £2155 4s. 11d., which was carried forward to the benefit of the present year. This result is shortly set forth in the subjoined Table.

Receipts, 1883.		Expenditure, 1883.
To Balance brought from December 31, 1882 1,391 18 To Income received in 1883 25,965 1 To transfer from Deposit Account 2,700 0 To Nett Proceeds of sale of Free hold Premises 16,614 15	5 0 0	By Cost of Freehold Premises (No. 3

The subjoined Table contains the various particulars of the expenditure of 1883, and a comparison of each of them with the corresponding amounts paid in the previous year:—

		Exp	eno	liture o	of		Inci	1026	ο	Decrease	
	18	82.		18	83.		110,1	· Cası	٠.	Decrease	í• 
Arrears of previous years	£ 1,749	8. 4		£ 1,486		. d.	£	ε.	d.	£ s. 262 11	d.
Rent, Rates, Taxes, and Insurance	1,110	13 1	8 5	1,154 5,400	19	11 6	4.1	6	3	42 0 1	
Salaries, Wages, and Pensions Provisions	4,638	7	6	4,303	10	10			•••••	334 16	8
Cost and Carriage of Animals Menagerie Expenses	0,108		8 1 11	1,242 3,052 139		4 2 0				85 19 1	
Works, Materials, &c.	2.907		7	3,672	1	4 6	761		9	52 5 1	
Buildings	807		10 7	12,105 822 203	7	6 5	9,441 15		8	11 1	
Advertisements	239	17	0 3		3	0 10	21	6	0	30 11	2
House and Office Expenses Stationery and Account Books	65	7	3 2	72 401		8	7	3	5		
Printing (Miscellaneous) Publications	2,122	9	1 3	2,026 489	8	1 5	119	7		96 1	0
Returned Subscriptions	29	5	6	58		ő	29		ō	4 18	6
Cost of Medals Law Expenses Expenditure of Davis Bequest	30	10	1	50 74		9	20	7 15	8	***************************************	
Interest on Mortgage Debt	234	5	ŏ	402		7	168	6	7		
Increase	29,376 8,664		$\frac{0}{2}$	38,040		2	10.641 1,977		$\frac{4}{2}$	1,977 15 Ded. Decr	2
	38,040	8	2	38,040	8	2	8,664	2	2		-
Ordinary Payments Extraordinary ditto	25,109 3,266	9 17		25,175 12,865	0 8	0 2	9,598	11	2	934 9 Ded. Deer	0
	29,376	6	0	38,040	8	2	8,664	2	2		

It will be observed that the ordinary expenditure of 1883, under which head are classed all payments necessary for the carrying on of the various operations of the Society in a thoroughly efficient way, amounted to £25,175, being £934 9s. less than the ordinary expenditure of 1882.

The extraordinary expenditure of 1883 amounted to £12,865 8s. 2d., the greater part of which was devoted to the new Reptile-house and the new Offices, as will be seen by the subjoined statement, and as will be explained in a

subsequent part of the Report:-

#### Extraordinary Expenditure paid in 1883.

New Buildings.	£	8.	đ.	£	s.	d.
Reptile-house	6509	9	6			
Offices, No. 3 Hanover Square		10		12,106	19	ß
Special Works.				12,100	10	Ü
New Boiler to Monkey-house	361					
Flooring dens at Lion-house	124	10	4	486	3	8
Special Publication.						
New List of Vertebrates		1		272	5	0
				12,865	8	$\frac{}{2}$
				,	-	

#### c. Assets and Liabilities.

The Assets and Liabilities of the Society on December 31, 1883, were estimated as follows:—

#### ASSETS.

	£	s.	d.
Animals in the Menagerie in the Regent's Park		0	
Books in the Library at Hanover Square	15,444 11,100	6	9
Unsold Publications	11,100	7	1
Freehold Premises	21,550	0	0
Cost of £1,900 London and South-Western Railway New 4			
per cent. Preference Stock (Davis' Trust Fund)	1,938		
Cost of £5,000 Reduced 3 per Cents	4,993		
Cash at the Bankers (Messrs. Drummond)	2,155	4	11
Arrears considered good:— $\pounds$ s. d.			
Annual Subscriptions			
Ivory Tickets 5 5 0			
Publication Sales			
Garden Sales			
Rent for Refreshment Rooms			
	442	0	7
	£79.254	3	10

#### LIABILITIES.

Rent and Taxes unpaid:-	£ s. d.	£	s.	đ.
For the Gardens, say				
,, Office, say	167 10 0			
72'11 4 4 4 7 1		349	15	5
Bills, &c., estimated at:				
For the Gardens, say	789 16 10			
,, Office, say	2,319 13 7			
		3,109	10	5
Messrs. Drummond, Mortgage Debt		12,000	0	0
		£15.450		10
		£10,100	U	10
Messrs. Drummond, Mortgage Debt		$\frac{3,109}{12,000}$ £15,459	0	0

## II. OFFICE, 3 HANOVER SQUARE.

#### 1. NEW PREMISES.

At the Anniversary Meeting last year the Council announced that they had appointed a special sub-committee to consider how the Oxford-Street premises, at the back of the Society's former Offices, could be most conveniently utilized. The most pressing wants of the Society at that period were, as announced in previous Reports, a more convenient meeting-room and better accommodation for the Society's zoological library, which is in constant use by working naturalists. After Messrs. Purdey had finally given up the Oxford-Street premises, and a thorough survey could be made, it was found that the above-mentioned requirements could not be efficiently met by the utilization of part of the Oxford-Street premises, as had previously been expected would be the case. It was manifest that the width available was not sufficient for a convenient meeting-room, that there would be a difficulty in the erection of such a room, on account of interference with the lights in the adjoining houses, and that the necessary space for the proper accommodation of the Society's library could not be obtained in this manner. After much deliberation it was finally decided that the proposed addition to the Society's old premises on the back would be unsatisfactory in its character and would be merely temporary in its nature, without any prospect of affording permanent escape from the embarrassments occasioned by restricted space. It was resolved, therefore, to be from every point of view more advisable to ascertain whether a better site for the Society's future operations could not be obtained in the same neighbourhood.

The freehold house, No. 3 Hanover Square, where we

are assembled today, appearing, after careful survey, to be likely to meet all the Society's requirements for many years to come, the Council ultimately agreed to purchase it for the sum of £16,250. The house had been vacant for many years, and was in a very dilapidated state, or, it is manifest, could not have been acquired on the above-mentioned terms. It would be therefore necessary to spend a considerable sum on its repairs and on fitting it up for the Society's use. At the same time it was obvious that the accommodation which it presented would be ample for the Society for many years, and that the burden of increased expenditure would be materially lightened by the prospect of having several sets of rooms to let to other scientific societies.

The Council are quite confident that the Fellows who have inspected the premises in which we are now lodged will agree that a wise decision has been arrived at in moving into the present house. The accommodation for the Library, Publications, and Offices is ample, and is likely to remain so for many years. The Meeting-room, as will be acknowledged by those now present, is in all respects suitable for the Society's requirements, and affords every necessary convenience. At the same time there are three sets of rooms not at present required for the Society's operations, which will produce a rental of about £350 per annum, and will thus materially lessen the gross burden of the whole premises.

The Council wish to acknowledge their obligations to Mr. Frederick W. Waller, the architect employed on this occasion, for the excellent plans which he has drawn up for the arrangement of the new premises, and for the efficient superintendence which he has devoted to the carrying-out of these plans by Messrs. Smith & Co., of

South Street, Grosvenor Square.

The amount devoted to the new Offices in 1883 was £5597 10s., which, as will be seen by the Table given above, was charged to extraordinary expenditure. A further sum of £4375 15s. has already been paid this year; and the Council are now only awaiting the Contractors' final accounts in order to discharge the remaining liability.

Of the total amount of £16,250 required for the purchase of the new freehold premises, the sum of £12,000 was advanced upon mortgage at 4 per cent. by Messrs.

Drummond. Of this amount £1000 will be paid off on the 6th of June in every year; so that at the end of twelve years the Society will be completely free from debt and in possession of an unencumbered freehold estate of not much less than £25,000 in value.

## 2. Scientific Meetings.

To the thirteen meetings for the despatch of scientific business held in the Society's Rooms in Hanover Square in 1883, 103 communications were made. Of these, 66 were from Fellows, and 12 from Corresponding Members of the Society. The remaining 25 papers were from individuals not belonging to the Society, and were communicated to it by the Secretary or by other Members. The corresponding number of communications in the year 1882 was 138.

These communications were submitted to the Committee of Publication, by whom the following orders were made respecting them: 2 were ordered to be printed entire in the 'Transactions' of the Society, and 67 in the 'Proceedings,' such illustrations being in each ease allowed as the Committee considered necessary for the purpose. Of the remaining communications, abstracts or extracts were considered to be sufficient for publication.

## 3. Scientific Publications.

The volume of 'Proceedings' for 1883 is on the table. It contains 704 pages illustrated by 61 plates. In the following table are given the number of pages and plates of the volumes of 'Proceedings' for the past eleven years:—

*					plates.	pages.
1873	•				69	842
1874					84	728
1875			Ť	·		*
	•	•	•	•	72	726
1876					82	864
1877					85	893
1878				Ť		
	•		•	•	62	1056
1879					64	868
1880					64	
	•	•	•	•		743
1881	•			•	72	1056
1882					61	827
1883						
1000	•	•	•	•	61	704

Two Parts of the Society's 'Transactions' were issued during the year 1883, namely:—

## Vol. XI. Part VIII. (January, 1883).

On Dinornis (Part XXIII.): containing a Description of the Skeleton of Dinornis parvus, Owen. By Prof. Owen,

C.B., F.R.S., F.Z.S., &c. (with eight plates).

On Dinornis (Part XXIV.): containing a Description of the Head and Feet, with their dried Integuments, of an Individual of the Species Dinornis didinus, Owen. By Prof. Owen, C.B., F.R.S., F.Z.S., &c. (with three plates).

#### Vol. XI. Part IX. (October, 1883).

On the Structure and Development of the Skull in the Crocodilia. By W. K. Parker, F.R.S., F.Z.S. (with ten plates, mostly coloured).

Besides the journals, a new edition of the List of Animals in the Society's Gardens (being the 8th of the series) was prepared and issued in 1883, at a total cost of £272 5s., which was charged to extraordinary expenditure. An examination of this volume shows that during the 22 years ending 31st of December, 1882, examples of 667 Mammals, 1447 Birds, 307 Reptiles, 48 Batrachians, and 88 Fishes (in all, 2557 Vertebrate animals) have been exhibited in the Society's Gardens.

#### 4. LIBRARY.

The Society's valuable collection of zoological books and pamphlets has been carefully transferred into the first floor of the present house, the whole of which is devoted to it. It will, the Council think, be acknowledged by all that the suite of rooms which it now occupies are at once elegant in appearance and admirably adapted for their purpose. The whole Library has been re-classified and arranged by Mr. F. H. Waterhouse, the Librarian, and was ready for use within a few days after its removal into the present building.

A supplement to the Catalogue of the Library, containing the additions that have been made since the preparation of the last Catalogue, has been printed and issued.

Many important additions were made to the Library during 1883, among which attention may be called to the following donations:—

Le Naturaliste Canadien. Vols. ii. to vii., xi. to xiv. Nos. I-3. Presented by Edward C. Rye, F.Z.S.

Canefri. Fauna Malacologica della Nuovo Guinea e delle Isole

adiacenti. Part i. Presented by the Author.

Godwin-Austen. Land and Freshwater Mollusca of India. Part iv. Presented by the Author.

Handbook of Jamaica for 1883. Presented by the Editors.

Journal of Comparative Medicine and Surgery. Vols. i. to iv. Presented by the Editor.

Moore's Lepidoptera of Ceylon. Parts vii., viii. Presented by the

Government of Ceylon.

Norske Nordhavs-expedition 1876-78. Parts viii. to x. Presented by Prof. H. Mohn.

The following is a list of zoological works in course of publication of which parts were purchased in 1883:-

André. Spécies d. Hyménoptères. Fase. xvi.

Berlese. Acari, Miriapodi e Scorpioni Italiani. Fasc. i.-viii.

Booth. British Birds. Parts iii., iv. Bronn's Thierreich. Band V. Abth. ii. Lief. 9, 10; Band VI. Abth. iii. Lief. 35-40; Band I. (*Protozoa*) Lief. 17, 19; Band II. (Porifera) Lief. 2; Band VI. Abth. v. Lief. 26.

'Challenger,' Voyage of H.M.S. Zoology, Vols. vi.-xii.

Cory. Beautiful and Curious Birds. Parts v.-vii. (completed).

Part i. D'Aubusson. Oiseaux de la France. Day. Fishes of Great Britain. Parts vi., vii.

Distant. Rhopalocera. Parts iv.-vi.

Dobson. Monograph of the Insectivora. Part ii.

Dubois. Oiseaux de Belgique. Livr. 45-47. Edwards. Butterflies of North America. Part xi.

Elliot. Felidæ. Part xi. (completed).

Fischer. Manuel de Conchyliologie. Fasc. vi. Fol. Recueil Zoologique Suisse. Tome I. Part i.

Giglioli. Avifauna Italica. Parts xix.-xxi.

Godman and Salvin. Biologia Centrali-Americana. Zoology, Parts xxi.–xxvii.; Botany, Parts xv., xvi.

Gould's Birds of Asia. Parts xxxiv., xxxv. (completed).

— Birds of New Guinea. Part xiv. Greene. Parrots in Captivity. Parts i.-vi.

Hayek. Handbuch der Zoologie. Band III. Lief. 1-3.

Kirby. European Butterflies and Moths. Nos. 59-61 (completed). Kobelt. Iconographie der schalentragenden europäisehen Meeresconchylien. Hefte 1, 2.

Janson's Cistula Entomologica. Part xxvii. Koch. Arachniden Australiens. Lief. xxxi. Lang. Butterflies of Europe. Parts xi.-xvi.

Marshall and de Niceville. Butterflies of India, Burmah, and Ceylon. Part ii.

Martini und Chemnitz. Conchylien-Cabinet. Lief. 320-326.

Meyer. Abbildungen von Vögel-Skeleten. Lief. iv., v. Müller. Thiere der Heimath. Lief. xxvii.-xxx. (completed).

Oates. Birds of Burmah. Vols. i., ii. (completed).

Oberthür. Etudes d'Entomologie. Livr. vii. Rossmässler. Iconographie. N. S. Band I. Lief. 3, 4. Reichenow. Vogelbilder aus fernen Zonen. Lief. xi.

Russ. Fremdlandische Stubenvögel. Band IV. Lief. 3.

Schiödte. Zoologia Danica. Heft 3.

Schneider. Zoologische Beiträge. Band I. Heft 1. Seebohm. British Birds. Parts ii., iii. Semper. Reisen im Archipel der Philippinen. Theil II. Bd. iv. Erste Hälfte.

Sowerby's Thesaurus Conchyliorum. Parts xxxix., xl.

Sundman. Finska Fogelägg. Häft 5.

Tryon. Manual of Conchology. Parts xvii.-xx.

Vogt et Yung. Traité d'Anatomie Comparée. Lief. 1-3. Waterhouse. Aid to the Identification of Insects. Parts xvi.-xx.

Yarrell's British Birds. Parts xvi.-xx.

Some of the most important additions to the Society's Library, purchased since the last Anniversary, are the following:-

Adamson. Another Book of Scraps. 4to, 1882.

Albers. Heliceen. Two editions. 8vo, 1851 and 1861.

American Entomologist. Vols. i. & ii. Royal 8vo, 1868-70.

André. Structure des Insectes Hyménoptères. 8vo, 1882.

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Ray. Synopsis Animalium Quadrupedum. 8vo, 1693.

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Thomson. Essai de la Famille des Cérambycides. 8vo, 1860. — Skandinaviens Coleoptera. 10 vols. 8vo, 1859-68. Systema Cerambycidarum. 8vo, 1864.

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Weber. Nomenclator Entomologicus. 12mo, 1795.

Weekly Entomologist. 8vo, 1862-63.

Wheeler. Explorations and Surveys West of the 100th Meridian. (Zoology.) 4to, 1875.

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#### AFRICA.

The South African Philosophical Society, Cape Town. Transactions, vol. ii. part 3.

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- The American Association for the Advancement of Science.
  Proceedings, 30th Meeting, Cincinnati, 1882.
- The Boston Society of Natural History, Boston.

  Proceedings, vol. xxi. part 4; vol. xxii. part 1.

  Memoirs, vol. iii. nos. 6, 7.
- The Museum of Comparative Zoology, Harvard College, Cambridge, Mass.

Bulletin, vol. vii. nos. 9, 10; vol. x. nos. 2-6; vol. xi. nos. 1-4. Memoirs, vol. viii. nos. 2 & 4; vol. ix. no. 2. Annual Report, 1882-83.

The Davenport Academy of Natural Sciences, Davenport, Iowa.

Proceedings, vol. iii. nos. 1, 2.

- The Minnesota Academy of Natural Sciences, Minneapolis, Minn.
- The American Museum of Natural History, New York.

  Bulletin, vol. i. nos. 1-4.
  Annual Report, 1882-83.
- The New York Academy of Sciences, New York.

  Annals, vol. ii. nos. 7-9.

  Transactions, vol. i. nos. 2-8.
- The Academy of Natural Sciences, Philadelphia. Proceedings, 1883, part 1.
- The American Entomological Society, Philadelphia. Transactions, vols. ix., x. no. 1.

- The American Philosophical Society, Philadelphia. Proceedings, vol. xx. no. 112.
- The Franklin Institute, Washington. Journal, 1883.
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  Miscellaneous Collections, vols. xxii.-xxvii.
  Annual Report, 1881.
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#### AMERICA (SOUTH).

- The National Museum of Buenos Aires.
  Anales, tomo iii. entr. 1.
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#### Austria.

- The University of Cracow.

  Proceedings, Band xvi.
- The Imperial Academy of Sciences, Vienna. Sitzungsberichte, Band lxxxv. Heft 1-5.
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#### Australian Colonies.

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  Transactions and Proceedings, vols. iv., v.
- The Royal Society of Victoria, Melbourne.
  Transactions and Proceedings, vol. xix.
- The Linnean Society of New South Wales, Sydney.
  Proceedings, vol. vii. parts 3, 4; vol. viii. parts 1, 2.
- The Royal Society of Tasmania.

  Monthly Notices of Papers and Proceedings for 1881 (1882).
- The New-Zealand Institute, Wellington.
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#### BELGIUM.

#### The Entomological Society of Belgium, Brussels.

Annales, tom. xxvi. Compte-Rendu, 1883.

## The Royal Museum of Natural History, Brussels.

Annales, tome x. Bulletin, tome i. nos. 1-3; tome ii. nos. 1, 2.

#### The Royal Academy of Sciences, Brussels.

Mémoires des Membres, 4to, tome xlii. part 2, tome xliv. Mémoires couronnés et des savants étrangers, 4to, tom. xlii., xliii., xliv., xlv. part 2. Mémoires couronnés et autres Mémoires, 8vo, tom. xxxi.,

xxxiii., xxxv. Bulletins, sér. 3, tom. i., ii.

Annuairé, 1882-83.

Tables Générales (Bulletins), sér. 2, tom. xxi.-l. (1867-80).

#### EAST INDIES.

# The Royal Society of the Dutch East Indies, Batavia. Natuurkundig Tijdschrift, deel xli.

## The Geological Survey of India, Calcutta.

Records, vol. xvi. parts 1-3.

Memoirs, vol. xix. parts 2-4; vol. xxii.

Memoirs (*Palæontologia Indica*), Series 10, vol. ii. parts 4, 5;

Series 12, vol. iv. part 1; Series 13, vol. i. part 4.

#### The Asiatic Society of Bengal, Calcutta.

Proceedings, 1882, nos. 9, 10; 1883, nos. 1–8. Journal, vol. li. nos. 249–251; vol. lii. nos. 252–254. Also extra part for 1882.

#### FRANCE.

## The Academy of Sciences, Lyons.

Annales, 5° série, tome iv.

## The Museum of Natural History, Lyons.

Archives, tome iii.

#### The Entomological Society of France, Paris.

Annales, 6º sér. tome ii.

- The Museum of Natural History, Paris. Nouvelles Archives, sér. 2, tome v. fasc. 1, 2.
- The Society Philomatique, Paris. Bulletin, sér. 7, tome vii.
- The Zoological Society of Acclimatation, Paris. Bulletin, 1883.
- The Natural-History Society of Toulouse. Bulletin, 1881-82.

#### GERMANY.

- The Royal Prussian Academy of Sciences, Berlin.
  Sitzungsberichte, 1883.
  Abhandlungen, 1882–83.
- The Society of Friends of Natural History, Berlin. Sitzungs-Berichte, 1882.
- The Natural-History Union of Rhenish Prussia and Westphalia, Bonn.

Verhandlungen, 1882, 1883, Hälfte 1.

The Senckenbergian Natural-History Society, Frankfort a. M.

Bericht, 1882-83. Abhandlungen, Band xiii. Heft 1, 2.

- The New Zoological Society, Frankfort a. M. Der Zoologische Garten, Jahr. xxiv. (1883).
- The German Malacological Society, Frankfort a. M. Jahrbücher, 1883.
- The Royal Society of Sciences, Göttingen.
  Abhandlungen, Band xxix.
  Nachrichten, 1882.
- The Natural-History Society, Halle.
  Abhandlungen, Band xvi. Heft 1.
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- The Medical and Natural-History Society, Jena. Jenaische Zeitschrift, Band xvi. Heft 1, 2.
- The Academy of Metz.

  Mémoires, sér. 3, Année ix. (1879-80).
- The Royal Bavarian Academy of Sciences, Munich.
  Sitzungsberichte, 1882, Heft 5; 1883, Heft 1, 2.
  Abhandlungen, Band xiv. Abth. 1.
- The Natural History Union, Würtemberg.
  Württembergische Jahreshefte, Jahrg. xxxix. (1883).

#### GREAT BRITAIN AND IRELAND.

The Belfast Natural-History and Philosophical Society, Belfast.

Proceedings, Sessions 1881-82, 1882-83.

The Cambridge Philosophical Society, Cambridge.
Transactions, vol. xiii. parts 2, 3.
Proceedings, vol. iv. parts 2-6.

The Royal Dublin Society.

Scientific Transactions, ser. 2, vol. i. nos. 15-19, vol. ii. Scientific Proceedings, n. s., vol. iii. part 5.

The Royal Irish Academy, Dublin.

Transactions (Science), vol. xxviii. nos. 11-13. Proceedings (Science), vol. iii. nos. 9, 10. —— (Polite Literature), vol. ii. no. 4.

- Royal Geological Society of Ireland, Dublin. Journal, vol. vi. part 2.
- The Epping Forest and County of Essex Naturalists' Field Club, Essex.

Transactions, vol. iii. part 7.

The Hertfordshire Natural-History Society, Hertford.
Transactions, vol. ii. parts 2-4.

#### The Royal Society, London.

Proceedings, vol. xxxiv. nos. 222, 223; vol. xxxv. nos. 224-226. Philosophical Transactions, vols. elxxiii., elxxiv. Library Catalogue, parts 1, 2.

#### The Linnean Society, London.

Transactions (Zoology), vol. ii. parts 5, 6.

—— (Botany), vol. ii. parts 2-4.

Journal (Botany), vol. xx. nos. 125-129.

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Proceedings, Nov. 1880 to Oct. 1883.

List of Fellows.

#### The Royal Geographical Society, London.

Proceedings, vol. v. (1883).

#### The Geological Society, London.

Quarterly Journal, vol. xxxix. List of Fellows of the Society, 1883.

#### The Royal Institution of Great Britain, London.

Proceedings, vol. x. part 1. List of Fellows of the Society, 1883.

#### The British Association for the Advancement of Science, London.

Report for 1882.

#### The Royal Asiatic Society of Great Britain and Ireland, London.

Journal, new series, vol. xv.

## The Royal Agricultural Society of England, London. Journal, ser. 2, vol. xix. parts 1, 2.

## The Entomological Society, London.

Transactions, 1882, parts 4, 5; 1883, parts 1-4.

#### The Quekett Microscopical Club, London.

Journal, series 2, vol. i. no. 4-6. Catalogue of the Library.

## The Royal Microscopical Society, London.

Journal, series 2, vol. iii.

The Plymouth Institution and Devon and Cornwall Natural-History Society, Plymouth.

Annual Report and Transactions, vol. viii. part 1.

The Royal Institution of Cornwall, Truro. Journal, vol. vii. parts 3, 4.

The Yorkshire Philosophical Society, York.
Annual Report, 1882.

The Yorkshire Naturalists' Union, York.
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#### HOLLAND.

The Royal Academy of Sciences, Amsterdam.

Verslagen en Mededeelingen (Natuurkunde), tweede reeks, deel xvii.; (Letterkunde), tweede reeks, deel xi. Jaarboek, 1882. Verhandelingen, deel xxii.

The Dutch Society of Sciences, Haarlem.

Archives Néerlandaises, tom. xvii. livr. 3-5; tom. xviii. livr. 1. Natuurkundige Verhandelingen, ser. 3, tome iv. no. 2.

The Entomological Society of the Netherlands, The Hague.
Tijdschrift voor Entomologie, deel xxvi. afl. 1, 2.

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#### ITALY.

The Italian Society of Sciences, Milan. Atti, vol. xxiv.; xxv. fasc. 1, 2.

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#### PORTUGAL.

- The Royal Academy of Sciences, Lisbon.
  Jornal, no. 34.
- The Geographical Society of Lisbon.
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#### Russia.

- The Natural-History Society, Dorpat.

  Sitzungsberichte, Band vi. Heft 2.

  Archiv, Serie 1, Band ix. Lief. 1, 2; Ser. 2, Band viii. Lief. 4.
- The Imperial Society of Naturalists, Moscow. Bulletin, 1882, nos. 2-4; 1883, no. 1.
- The Royal Academy of Sciences, St. Petersburg.

  Bulletin, tome xxviii. nos. 2, 3.

  Mémoirés, 7e série, tome xxx. nos. 9-11; tome xxxi. nos. 1-4.

#### SCANDINAVIA.

- The Royal Danish Society of Sciences, Copenhagen.

  Oversigt, 1882, no. 3; 1883, nos. 1, 2.

  Mémoires, 6° sér. vol. ii. nos. 4, 5.
- The Natural-History Society of Copenhagen. Videnskabelige Meddelelser, Aaret 1882.

#### SPAIN.

The Spanish Natural-History Society, Madrid. Anales, tomo xi. cuad. 3; tomo xii. cuad. 1, 2.

#### SWITZERLAND.

- The Natural-History Society of Bern, Bern. Mittheilungen, Jahre 1882.
- The Helvetic Society of Natural Sciences, Bern. Verhandlungen, 1881-82.
- The Physical and Natural-History Society, Geneva. Mémoires, tome xxviii. part 1.

The Society of Natural Sciences, Lausanne. Bulletin, 2<sup>e</sup> série, vol. xviii. no. 88.

The Society of Natural Sciences, Neuchâtel.
Bulletin, tom. xiii.

The Natural-History Society, St. Gall. Bericht, 1880-81.

Donations, Memoirs, and Papers have also been received from :- The Editors of the 'American Journal of Science'; the Editors of the 'American Naturalist'; the Trustees of the Australian Museum; Professor J. V. Barboza du Bocage; W. T. Blanford, Esq.; Dr. R. Blasius; Dr. W. Blasius; Dr. Bolau; the Trustees of the British Museum; Dr. H. Burmeister; Professor Giovanni Canestrini; The Royal Norwegian University of Christiania; Robert Collett, Esq.; the Editors of the 'Journal of Conchology'; the Editors of the 'Journal of Science'; Dr. G. E. Dobson; Monsieur L. Dollo; Professor P. Martin Duncan; Edward R. Earll, Esq.; Professor Flower; Lieut.-Col. H. H. Godwin-Austen; Edward Hargitt, Esq.; Dr. James Hector; Dr. Emil Holub; Monsieur William Jamrach; D. Knight, Esq.; Monsieur Fernand Lataste; Dr. L. Lortet; Dr. John J. Mason; the Editor of 'Studies in Microscopical Science'; John Mitchell-Mitchell, Esq.; the Trustees of the State Library, New York; Thomas Parkin, Esq.; John Robinson, Esq.; Alfred Sanders, Esq.; Dr. Wradislaw Schier; P. L. Sclater, Esq.; Dr. C. Semper; Captain T. A. B. Spratt; Professor Ralph Tate; Dr. F. H. Troschel; The United States Fish Commission; The University College of London; and J. Whitaker, Esq.

# III. GARDENS, REGENT'S PARK.

## 1. Buildings and Works.

a. New Reptile-house and other special Works.

The new Reptile-house was fully described in the Council's Report read at the last Anniversary Meeting. It was finally completed and opened to the public in

August last, and now affords ample accommodation for the Society's collection of Reptiles and Batrachians. The house seems to have answered the purpose for which it was intended in every way, and affords great facilities for the examination by the public of these animals, which were very inconveniently lodged in the former wooden building. The crowds which frequent the house every day, and the increased Garden-receipts, seem to prove that the new building is thoroughly appreciated.

The amount paid on account of the new Reptile-house in 1883 was £6509 9s. 6d., the amount previously expended was £2665 2s., making the total cost of the building and approaches as at present arranged £9,174 11s. 6d.

A further expenditure will be required for the removal of the Pheasant cages, which stand in front of the present building, and of the large shed now used for wintering animals, standing at its back. These improvements the Council hope to be able to carry out shortly, as well as the transference of the Tortoise-house from the other side of the Gardens to the immediate proximity of the Reptile-house.

Besides the completion of the new Reptile-house, two other special works in the Gardens were undertaken in 1883 and charged to Extraordinary expenditure. first of these was the erection of a new boiler in the The Monkey-house was previously Monkey-house. heated by pipes connected with the boiler at the Terrace. But this plan had been found for several years to be inefficient, the temperature to be attained thereby not being sufficiently high in severe weather. It was therefore determined to put in such a new heating-apparatus at the back of the Monkey-house as would ultimately serve also to heat a building devoted to the special accommodation of the Anthropoid Apes, which it is in contemplation to erect in the immediate vicinity, when the funds of the Society shall permit. The new heating-apparatus and stoking-hole, together with the necessary alterations and improvements in the heating-pipes inside the Monkeyhouse, cost the sum of £361 7s. 4d., which was charged to the Extraordinary Expenditure of 1883.

The only other special work undertaken in the Gardens in 1883 was the covering of the asphalt floors in the Lions' dens with wood at a cost of £124 16s. 4d. It was believed that this alteration might conduce to the

comfort and health of the animals in the Lion-house; and such seems to have been the result, although it is obvious that greater care will have to be taken that the wooden floors shall be efficiently cleaned at stated intervals.

It may be interesting to the Fellows, in connection with the completion of the new Reptile-house, to have laid before them the subjoined list of the ten principal buildings erected in the Society's Gardens since 1860, and their approximate cost, whereby it will be seen that since that date the large sum of £50,554 has been devoted to the permanent improvement of this important part of the Society's Establisment.

1860-1862. 1862-1878. 1863-1865. 1863-1865. 1863-1865. 1867-1868. 1868-1870. 1872-1873. 1875-1877.	New wing of Antilope-house New Refreshment-rooms Eastern Aviary New Monkey-house New Entrance-lodges Wapiti-house Elephant-house New North Lodge and Entrance Gate Lion-house and Outer Cages	8193 2688 5095 1402 2421 6355
1882–1883.	Reptile-house	11643 9174

## b. Repairs and General Maintenance.

The principal buildings thoroughly renovated and repaired in 1883 by the ordinary staff of workmen were the lobby to the Hippopotamus-house, the Pheasantries in the South Gardens, the Llama-house, and the Pelicans' Besides this, a new cart-shed was built in the upper yard, and a new greenhouse added in the Gardener's department. One of the large outdoor cages at the back of the Lion-house was repainted, and nearly the whole of the dwarf fencing throughout the Gardens was taken up, painted, and refixed.

These and various other smaller works and repairs kept the Society's staff of workmen fully engaged in 1883, and caused an increase in the expenditure on works and materials for 1883 of £764 2s. 9d. over the previous year.

#### 2. STAFF.

The permanent Staff of the Society's Gardens has been slightly increased since the last Anniversary. It consists of:—

1 Superintendent.

1 Assistant Superintendent.

1 Head Keeper.

6 Keepers (1st class).

8 Kcepers (2nd class).

10 Keepers (3rd class).

4 Money-takers.

1 Storekeeper.

1 Cook.

1 Office Clerk.

1 Prosector's Assistant.

1 Head Gardener.

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Besides these there are 19 Helpers in the Menagerie, 13 Garden-labourers, 8 Artisans, 4 Painters, 11 Labourers, 1 Butcher, 1 Fireman, 2 Night-Watchmen, and 1 Time-keeper employed at weekly wages; so that the number of the whole staff may be reckoned at about 96 persons.

## 3. Visitors.

The total number of visitors to the Society's Gardens during the year 1883 was 743,485, as will be seen by the following Table, which gives the corresponding numbers of entrances under each head for 1882 and 1883:—

## Visitors to the Gardens.

	1882.	1883.	Comparison.
Fellows and Friends	213,883 207,172	208,358 171,641	Decr. 5,525 Decr. 35,531
Paying On Mondays and other days at 6d. each	336,379	292,730	Dccr. 43,649
6d. each	75,559	50,221	Decr. 25,338
School Children (admitted free)	16,783	20,535	Incr. 3,752
	849,776	743,485	Decr. 106,291

The subjoined Table contains a statement of the Number of Visitors to the Society's Gardens during each year, from the year 1828 to the year 1883.

## Number of Visitors to the Gardens, 1828-83.

Year. Number.  1828 98,605  1829 189,913  1830 223,420  1831 262,193  1832 206,652  1833 211,343  1834 208,583  1835 210,068  1836 263,372  1837 173,778  1838 179,197  1839 158,432  1840 141,009  1841 132,616  1842 107,459  1843 98,280  1844 101,527  1845 99,615  1846 100,045  1847 93,546	Year.         Number.           1857         339,217           1858         351,580           1859         364,356           1860         394,906           1861         381,837           †1862         682,205           1863         468,700           1864         507,169           1865         525,176           1866         527,349           1867         556,214           1868         573,186           1869         572,848           1870         573,004           1871         595,917           1872         648,088           1873         713,046           1874         706,907           1875         699,918           ‡1876         915,764
1836 263,372	1865 525,176
1838 179,197	1867 556,214
1840 141,009	1869 572,848
1842 107,459	1871 595,917
1844 101,527	1873 713,046
1846 100,045	1875 699,918
1848 143,630	1877 781,377
1849 168,895 1850 360,402	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
*1851 667,243 1852 305,203	1880 675,979 1881 648,694
1853 409,076 1854 407,676 1855 315,002	1882 849,776 1883 743,485
1856 344,184	† Year of the International Exhibition.  1 Year of the exhibition of the Prince
* Year of the Great Exhibition.	of Wales's Indian Menagerie.

#### 4. Zoological Lectures.

The Zoological Lectures, to which the proceeds of the Davis Trust-fund have been devoted for several years, will be given this year in the Lecture-room in the Society's Gardens, on Thursdays at 5 P.M., commencing June 5th.

The following is a list of the lecturers and subjects:-

Date.	Subject.	Lecturer.		
2. " " 12 3. " " 19 4. " " 26 5. " July 3 6. " " 10	Man, zoologically considered Hands and Feet Instinct Hedgehogs, Moles, and Shrews. Dogs, ancient and modern Birds-nests Reptiles	Prof. Mivart, F.R.S. G. J. Romanes, Esq., LL.D., F.R.S. Prof. Parker, F.R.S. J. E. Harting, Esq., F.L.S. Henry Seebohm, Esq., F.L.S.		

These Lectures will be free to Fellows of the Society and their Friends, and to other Visitors to the Gardens.

#### 5. MENAGERIE.

## a. Additions to the Menagerie in 1883.

The number of animals belonging to the first three classes of Vertebrates living in the Society's Menagerie at the close of 1883 was 2398. The corresponding number on the 31st of December, 1882, was 2355, as will be seen by the subjoined Table:—

	December 31.		Commonican		
	1882.	1883.	Comparison.		
Quadrupeds. Birds Reptiles	1364	731 1398 269	Decr. 19 Iner. 34 Iner. 28		
	2355	2398	Incr. 43		

The total number of registered additions to the Menagerie in 1883 was 1388, of which 637 were acquired by presentation, 376 by purchase, 128 were bred in the Gardens, 219 were received on deposit, and 28 obtained in exchange.

The me	ode in which	these figures	compare w	ith those of
previous	years is show	va in the subj	oined table	<del>:</del>

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1874. 1875. 1876. 1877. 1878. 1879. 1880. 1881. 1882.	425 559 533 506 511 550 624 565 772	296 557 316 324 272 421 515 310 402	214 156 171 181 150 115 148 167 113	242 143 172 181 178 124 161 136	25 43 27 68 71 56 40 35 25	1202 1458 1219 1260 1182 1266 1488 1213 1423
1883.	637	376	128	219	28	1388

The following is a list of the most noticeable additions made to the Menagerie during the year 1883:—

1. A female Panolia Deer (*Cervus eldi*) from Siam, received in exchange from the Jardin d'Acclimatation, Paris, February 10th. The only previous specimen of this Deer in the Society's Collection was the male presented by Mr. A. Grote, F.Z.S., in 1867.

2. A young male Thar (Capra jemlaica), presented by Lieut. Col. Alex. A. A. Kinloch, C.M.Z.S., February 17. We are specially obliged to Col. Kinloch for sending us this animal, as we have two females, mother and young, already in the Collections of the collect

tion, and a male is consequently most acceptable.

3. A male Blyth's Tragopan (*Ceriornis blythi*), presented by Capt. W. Brydon, and received through the kind mediation of the Zoological Gardens, Calcutta, February 17th. The only example of this splendid species previously received was that presented by Major Montagu in 1870.

4. Three Sirens (Siren lacertina) from South Carolina, pre-

sented by Dr. G. E. Manigault, C.M.Z.S., March 21st.

- 5. A Madagascar Lemur, of the genus *Hapalemur* (probably *H. griseus*), purchased March 31st, also new to the Society's Collection.
- 6. A female Mule Deer (Cariacus macrotis), presented by Dr. J. D. Caton, C.M.Z.S., received April 6th. The accession of this animal gives us two pairs of this fine Deer now living in the Society's Gardens. The present specimen was obtained in Northwestern Nebraska, and forwarded through the kind courtesy of Mr. W. A. Conklin, C.M.Z.S., of the Central Park Menagerie, New York.
- 7. A hen Cabot's Tragopan (*Ceriornis caboti*), from South-west China, purchased May 18th, being the first example of the female of this fine Pheasant which we have received.
  - 8. Four Pygmy Hogs (Porcula salvania), born in the Gardens,

May 23rd. These diminutive Pigs did not, unfortunately, long survive their birth; but the fact of the species having bred in captivity is of great interest.

9. A fine example of the Surucucu or Bush-master Snake of South America (*Lachesis mutus*), presented by J. Y. Barkley,

Esq., of Pernambuco, on the 22nd May.

10. A Rough-billed Pelican (*Pelecanus trachyrhynchus*), from Mexico, purchased July 3rd, being the first example of this

species which we have received.

11. A male and two female Babirussas (Babirussa alfurus), from Celebes, presented by Dr. F. H. Bauer, C.M.Z.S., and received July 23rd. One of the female Babirussas produced a young one shortly before the termination of the voyage home, which reached England safely in company with its mother.

12. Two young Mule Deer (Cariacus macrotis), born in the Gardens, August 12th, from the specimens presented to the Society by Dr. J. D. Caton, C.M.Z.S. This is believed to be the first instance of the breeding of this fine American Deer in

Europe.

13. A young female Chimpanzee, purchased October 24th, which seems perhaps referable to the form named by M. Du Chaillu *Troglodytes calvus* (Proc. Boston Soc. of Nat. Hist. vol. vii. p. 296). The head is very sparingly covered with hairs, the ears are longer and more prominent than in the ordinary Chim-

panzee, and the hands and feet are quite black.

14. A young pair of the singular Deer of Mantchuria called Père David's Deer (*Cervus davidianus*), purchased November 16th of the Société d'Acclimatation of Paris. The only previous specimens of this animal in the Society's Menageric were the pair presented in 1869 by Sir Rutherford Alcock, K.C.B.\* The present pair were bred in the Zoological Garden of Berlin from imported parents.

## b. List of Species new to the Collection.

The following list contains the specimens exhibited in 1883 which are referable to species not included in the last (eighth) edition of the List of Animals.

#### MAMMALS.

## Genus Callithrix.

94a. Callithrix gigot, Spix. Grey Teetee. Hab. South America.

a. Purchased, March 31, 1883.

<sup>\*</sup> See P. Z. S. 1869, p. 468.

#### Genus Mycetes.

103a. Mycetes caraya (Humb.). Black Howler. Hab. South America.

a. Purchased, July 14, 1883.

#### Genus Lemur.

118a. Lemur xanthomystax, Gray. Yellow-whiskered Lemur.

Hab. Madagascar.

a. Purchased, May S, 1883.

118b. Lemur albimanus, Geoffr. White-handed Lemur. Hab. Madagascar.

a. Male. Purehased, Dec. 14, 1883.

#### Genus HAPALEMUR.

125 a. Hapalemur griseus (Geoffr.). Grey Lemur. Hab. Madagascar.

a. Purehased, March 31, 1883.

#### Genus Chirogaleus.

126 a. Chirogaleus typicus, Smith. Typical Mouse Lemur. Hab. Madagascar.

a, b. Purchased, June 11, 1883.

#### Genus Herpestes.

202 a. Herpestes gracilis, Rüppell. Slender Ichneumon. Hab. South Africa.

a. Presented by Col. J. H. Bowker, F.Z.S., Sept. 19, 1883.

## Genus Canis.

240a. Canis vetulus, Sund. Hoary Fox. Hab. Brazil.

a. Presented by Mrs. H. E. Hunt, Oct. 23, 1883.

## Family SORECIDÆ.

#### Genus Crocidura.

297a. Crocidura cærulescens (Shaw). Bluish Shrew. Hab. India.

a. Purchased, April 19, 1883.

#### Genus Spermophilus.

351a. Spermophilus tridecemlineatus (Mitchell). Thirteenstriped Souslik.

Hab. North America.

a-e. Purchased, Oct. 23, 1883. From Michigan.

#### Genus Gerbillus.

364a. Gerbillus shawi (Lataste). Shaw's Gerbille. Hab. North Africa.

a. Received in exchange, Oct. 23, 1883.

#### Genus Dipodillus.

381a. Dipodillus simoni, Lataste. Simon's Dwarf Jerboa. Hab. Algeria.

a. Received in exchange, June 29, 1883.

b. Male; c. Female. Received in exchange, Oct. 23 1883.

#### BIRDS.

#### Genus Turdus.

5a. Turdus mustelinus, Gm. Wood-Thrush. Hab. North America.
a-d. Purchased, Jan. 1, 1883.

12a. Turdus cardis (Temm.). Grey Thrush. Hab. Japan.

a, b. Purchased, Jan 17, 1883.

#### Genus Parus.

47a. Parus varius, Temm. & Schl. Red-sided Tit. Hab. Japan.

a, b. Purchased, Jan. 17, 1883.

#### Genus Zosterops.

95a. Zosterops palpebrosus (Temm.). Indian White-eye. Hab. India.

a, b. Received in exchange, July 19, 1883.

#### Genus Sturnus.

330a. Sturnus sericeus, Gm. Silky Starling. Hab. China.

a. Purchased, Jan. 17, 1883.

#### Genus Melanerpes.

427 a. Melanerpes erythrocephalus (Linn.). Red-headed Woodpecker.

Hab. North America.

a. Purchased, April 4, 1884.

#### Genus Pionus.

687a. Pionus chalcopterus (Fraser). Bronze-winged Parrot. Hab. Columbia.

a, b. Purchased, June 2, 1883.

#### Genus Pelecanus.

864a. Pelecanus trachyrhynchus, Lath. Rough-billed Pelican.

Hab. Mexico.

a. Purchased, July 3, 1884.

#### Genus Sula.

868 a. Sula piscator (Linn.). White Gannet. Hab. South America.

a. Purchased, April 21, 1883.

#### Genus Columbula.

1098a. Columbula picui (Temm.). Picui Dove. Hab. South America.

a-c. Purchased, July 4, 1883.

#### Genus Geophaps.

1116 a. Geophaps scripta (Temm.). Partridge Bronzewinged Pigeon. Hab. Australia.

a. Presented by Mrs. Abrahams, Aug. 21, 1883.

#### Genus Bambusicola.

1155 a. Bambusicola fytchi, Anderson. Fytch's Francolin.
Hab. Upper Assam.
a. Presented by Capt. Brydon, Feb. 17, 1883.

#### Genus Podiceps.

1406 a. Podiceps cristatus (Linn.). Crested Grebe.
Hab. British Islands.
a, b. Purchased, Jan. 3, 1883.

#### Genus Uria.

1413 a. Uria grylle (Linn.). Black Guillemot.
Hab. British Islands.
a, b. Presented by H. Beeher, Esq., July 14, 1883.
c-f. Presented by H. Beeher, Esq., July 26, 1883.

#### REPTILES.

## Genus Crocodilus.

94 a. Crocodilus porosus, Schn. Porose Crocodile.

Hab. Straits Settlements.

a, b. Presented by Capt. Martin Thackeray, Dec. 31, 1883.

#### Genus Phrynocephalus.

154 a. Phrynocephalus helioscopus, Kaup. Ural Phrynocephale.

Hab. East shore of the Caspian Sea.

a-d. Presented by Dr. A. Strauch, F.M.Z.S., Oct. 6, 1883.

#### Genus Ctenosaura.

- 161 a. Ctenosaura interrupta, Dugès. Dugès's Comb Lizard. Hab. South America.
  - a. Purchased, July 3, 1883.

#### Genus Phrynosoma.

173 a. Phrynosoma coronatum, Blainville. Crowned Horned Lizard.

Hab. California.

a. Presented by Martin R. de Selincourt, Esq., Jan. 10, 1883.

#### Genus Typhlops.

- 184 a. Typhlops lalandii, Schl. Lalande's Ground-Snake. Hab. South Africa.
  - a. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., Oct. 15, 1881.
  - b. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., July 2, 1883.

#### Genus Gongylophis.

- 202 a. Gongylophis conicus (Schneid.). Conical Snake. Hab. India.
  - a. Purchased, May 22, 1883.

## Genus Heterodon.

235 a. Heterodon nasicus (Baird & Girard). Long-nosed Snake.

Hab. North America.

a. Presented by Samuel Garman, Esq., C.M.Z.S., Nov.12, 1883. From Western Kansas.

#### Genus Zamenis.

251 a. Zamenis diadema (Schl.). Crowned Snake. Hab. India.

a. Presented by Col. C. S. Sturt, C.M.Z.S., May 8, 1883.

#### Genus Herpetodryas.

254 a. Herpetodryas flavigularis (Hallow.). Yellow-throated Snake.

Hab. North America.

a, b. Presented by Samuel Garman, Esq., C.M.Z.S., Nov. 12, 1883. From Western Kansas.

#### Genus Boodon.

277 a. Boodon infernalis, Günth. Infernal Snake. Hab. South Africa.

a. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., Dec. 31, 1883.

#### Genus Hoplocephalus.

278a. Hoplocephalus nigrescens, Güntli. Black Death-Adder. Hab. Australia.

a. Purehased, Sept. 25, 1883.

## Genus Vermicella.

285 a. Vermicella annulata, Gray. Annulated Worm-Snake.

Hab. Australia.

a. Purchased, Sept. 25, 1883.

#### Genus VIPERA.

288 a. Vipera latastii, Bosca. Lataste's Viper. Hab. South Europe.

a-e. Presented by the Lord Lilford, F.Z.S., Oct. 14, 1883. f-k. Born in the Menagerie, Oct. 28, 1883.

#### BATRACHIAN.

## Genus Pelodytes.

27 a. Pelodytes punctatus (Daud.). Spotted Mud-Frog. Hab. South of France.

a. Presented by H. P. Cambridge, Esq., June 28, 1883.

## c. List of Animals bred in the Gardens during the year 1883.

#### MAMMALS.

- 2 Levaillant's Cynictis (Cynictis penicillata).
- 3 Collared Fruit-Bats (Cynonycteris collaris).
- 6 Long-fronted Gerbilles (Gerbillus longifrons).

10 Coypu Rats (Myopotamus coypus).

- 1 Hybrid Tapir. (Between Tapirus roulini and T. americanus.)
- 1 Hybrid Wild Ass. (Between Equus hemippus and E. onager.)

1 Zebu (Bos indicus).

1 Gayal (Bibos frontalis).

1 Indian Gazelle (Gazella bennetti).

- 2 Four-horned Antelopes (Tetraceros quadricornis).
- 1 Hybrid Lühdorf's Deer. (Between Cervus luehdorfi and C. canadensis.)
- 2 Sambur Deer (Cervus aristotelis).

2 Axis Deer & (Cervus axis).

2 Hybrid Mesopotamian Deer. (Between Dama mesopotamica and D. vulgaris.)

2 Japanese Deer (Cervus sika).

2 Mule Deer (Cariacus macrotis).

1 Water Chevrotain (Hyomoschus aquaticus).

4 Pygmy Hogs (Porcula salvania).

2 Hybrid Peccaries. (Between Dicotyles labiatus and D. tajaçu.)

1 Bennett's Wallaby (Halmaturus ualabatus). 2 Vulpine Phalangers (Phalangista vulpina).

1 Gaimard's Rat-Kangaroo (Hypsiprymnus gaimardi).

#### BIRDS.

- 2 Cockateels (Calopsitta novæ-hollandiæ).
- 3 Upland Geese (Bernicla magellanica).

2 Black Swans (Cygnus atratus).

- 1 Variegated Sheldrake (*Tudorna variegata*). 10 Australian Wild Ducks (*Anas superciliosa*).
- 5 Chilian Pintails (Dafila spinicauda).

7 Summer Ducks (Aix sponsa).

2 Mandarin Ducks (Aix galericulata).

2 Red-erested Whistling Ducks (Fuligula rufina). 2 Wonga-Wonga Pigeons (Leucosarcia picata).

2 Barred-shouldered Doves (Leptoptila humeralis).

6 Prairie-Grouse (Tetrao cupido).

1 Impeyan Pheasant (Lophophorus impeyanus).

8 Gold Pheasants (Thaumalea picta).

6 Amherst's Pheasants (Thaumalea amherstiæ).

2 Hybrid Jungle-fowls. (Between Gallus stanleyi and G. bankiva.)

1 Herring-Gull (Larus argentatus).

#### REPTILES.

5 Ring-hals Snakes (Sepedon hæmachetes).

5 Common Vipers (Vipera berus).

6 Lataste's Vipers (Vipera latastii).

# d. List of the Donors and their Donations for the year 1883.

Abrahams, Mrs.

One Partridge Bronze-winged Pigeon, One Modest Grass-Finch.

Abrahams, Mr. J.

Two Bar-breasted Finches.

Aitchison, A., Esq.

Two Bullfinches, one Spanish Terrapin.

Anderson, A., Esq.

One Slender-billed Cockatoo.

Andrews, Mrs.

One Herring-Gull.

Archer, Mrs.

One Common Marmoset.

Ardran, John, Esq.

One Sclater's Curassow.

Argyll, His Grace the Duke of, K.T., F.R.S. One North-American Turkey.

Astley, H. D., Esq., F.Z.S. Two Bearded Titmice.

Baldwin, J., Esq.

One Jackdaw.

Balfour, F. R. S., Esq.

Onc Common Rhea.

Baring, Thomas, Esq.

Five Mississippi Alligators.

Barker, J. H., Esq.

One Toque Monkey.

Barkley, J. Y., Esq.

One Surucueu or Bush-master.

Barnes, C. S., Esq.

One Geoffroy's Cat, one Chilian Sea-Eagle.

Bateman, Clement J., Esq. One Rough Fox.

Baner, Dr. F. H., C.M.Z.S.

Four Babirussas.

Baultbee, Chas. E., Esq.

Two Pintails, two Wigeons.

Baxter, J. E., Esq. One Gannet.

Beach, A. W. Hieks, Esq. One Isabelline Bear.

Beale, Miss.

One Globose Curassow.

Becher, H., Esq.

Six Black Guillemots, three Puffins.

Bentley, Ernest L., Esq.

Four Barred-shouldered Doves.

Bessemer, Sir Henry.

One Fallow Deer.

Bibby, Miss.

One Ring-necked Parrakeet.

Biddle, Mrs. A. C.

One Slender-billed Coekatoo.

Bishop, George, Esq., F.Z.S.

One American Black Bear.

Blacklock, H. H., Esq.

One Common Night-Heron.

Blomefield, E. H., Esq.

One West-Indian Rail, two Violet Tanagers.

Bourdillon, F. W., Esq.

One Malabar Parrakeet.

Bower, T. H. Bowyer, Esq., F.Z.S. Two Short-headed Phalangers, two Bicheno's Finehes, two Crimson Finehes, one Modest Grass-Finch, one Saisset's Parrakect, one New-Zealand Parrakect, two

Crested Pigeons.

Bowes, H. T., Esq.

Three Common Pheasants.

Bowker, Col. J. H., F.Z.S.

One Slender Ichneumon.

Bowl, D., Esq.

Two Red-backed Shrikes.

Brackenburg, H. V., Esq. One Kinkajou.

Brassey, Lady.

Two Persian Sheep, one Indian Antelope.

Bridges, F., Esq.

Four Moorish Toads.

Bridgett, Ronald, Esq. One Alligator.

Brown, J., Esq.

Two Rufous Tinamous.

Brown, Mr. W. M.

One Turtle-Dove.

Browne, A. H., Esq.

Two Golden Eagles.

Browne, C. R., Esq.

One Bonnet-Monkey.

Bryant, Mr. M.

One Land-Rail.

Brydon, Capt. W.

One Blyth's Tragopan (3), one Fytch's Francolin.

Burgess, A., Esq.

One Philippine Paradoxure.

Cambridge, H. P., Esq.

One Spotted Mud-Frog.

Camp, Mr.

One Black Rat.

Campbell, Mrs.

One Common Squirrel.

Carleton, the Hon. Mrs. Pigott. One Bonnet-Monkey.

Carrington, J. T., Esq.

One Black Hornbill.

Caton, Dr., C.M.Z.S. One Mule Decr.

Cheetham, Joseph H., Esq., F.Z.S.

One White-erested Tiger-Bittern.

Church, J. C. J., Esq.

Three Viperine Snakes, one Dark-Green Snake.

Clark, Miss Grace Gordon.

One Grey Ichneumon (3).

Cole, Capt. E.

Two Stink-pot Terrapins, one Pennsylvanian Mud-Terrapin, one Mississippi Alligator, one Sharp-nosed Crocodile, three Mexican Deer.

Colebrook, John, Esq., F.Z.S.

One Kestrel.

Colman, S. J. W., Esq.

One Laughing Kingfisher.

Connor, Capt.

One Himalayan Bear.

Cookson, J. S., Esq.

Two Common Buzzards.

Corbett, Vincent W., Esq.
One Grey-Lag Goose.

Corder, G. A., Esq.

Two Round-faced Monkeys.

Courage, Mrs.

Two Ring-Doves.

Cowan, Geo. D., Esq.

One Getulian Ground-Squirrel.

Crabtree, Miss P.

One Rhesus Monkey. Craven, C. A., Esq., C.M.Z.S.

One South-American Rat-Snake, two Porto-Rico Pigeons, one Orange-winged Dove, two Broad-snouted Caymans.

Cross, Mr. Wm.

One Ourang-Outang.

Crow, J. S., Esq.

One Black-backed Jackal.

Cuninghame, Mr.

Two Kittiwake Gulls, one Common Guillemot.

Curteis, F. A., Esq.

Two Sloth-Bears.

Dadswell, F. C. H., Esq.

One Grey Ichneumon.

Dance, Mr. E.

One Ring-tailed Coati.

Daniel, Capt. A. North.

One Common Genet.

Davidson, T. W., Esq.

One Macaque Monkey.

Davis, Miss Annie Maud.

One Macaque Monkey.

Davis, C., Esq.

One Common Magpie.

Day, Mrs.

Two Cockateels.

De Grey, the Earl.

One Crested Poreupine.

De Selincourt, Martin R., Esq.

One Crowned Horned Lizard.

Dent, A., Esq.

Two Indian Brush-tailed Porcupines.

Dickinson, Murray, Esq.

One Grey Ichneumon.

Digby, Mrs. K.

One Lesser Sulphur-crested Cockatoo.

Dixon, T. H., Esq.

Two Green Monkeys.

Dodgshon, J. J., Esq. One Grey Seal.

Doke, Joseph J., Esq.

One Crested Porcupine.

Dothie, Mr. J. E.

One Vulpine Phalanger.

Douglas, Dr.

One Macaque Monkey.

Dowling, Mr. R.

One Purple Gallinule.

Duncan, Mrs.

One Wood-Owl.

Dutton, the Hon. and Rev. F. G. Three Common Kingfishers.

Dyer, —, Esq.

One Long-eared Owl.

Eden, H. H. Forbes, Esq.

Two Common Marmosets.

Eldon, the Earl of.

One Common Raven.

Enslie, C. Wallis, Esq.

Two St. Thomas's Conurcs.

Evelyn, W. J., Esq.

One Bohor Antelope ( $\mathfrak{P}$ ).

Exton, Dr. Hugh.

Two Maholi Galagos.

Fair, John, Esq.

Two Common Rheas.

Fayrer, Sir Joseph, F.Z.S. One Indian Crocodile.

Fenner, N. II., Esq.

One Night-Heron.

Fisk, The Rev. G. H. R., C.M.Z.S.

Three Angulated Tortoises, one Geometric Tortoise, one Areolated Tortoise, three Robben-Island Snakes, one Lalande's Ground-Snake, six Ring-hals Snakes, one Egyptian Cobra, one Rhomb-marked Snake, one Many-spotted Snake, one Smooth-bellied Snake, one Hissing Sand-Snake, one Infernal Snake, one Spotted Slowworm, one Rufescent Snake, two Hoary Snakes.

Flatan, J. N., Esq.

One Mona Monkey.

Flindell, Mrs. F. R.

One Grey Ichneumon.

Fordham, Percy F., Esq.

Two Long-eared Owls.

Francis, Ernest, Esq.

One Ring-tailed Coati, one Kinkajou.

Frost, Miss A. M.

One Common Squirrel.

Galpin, George L., Esq., M.D. One Rüppell's Parrot.

Gamble, Capt.

Two Pilcated Jays.

Garle, Henry, Esq., F.Z.S. Three Wall-Lizards.

Garman, Samuel, Esq., C.M.Z.S.

Six American Box-Tortoises, one Stink-pot Terrapin, one Alligator Terrapin, seven Spotted Lizards, one Long-nosed Snake, two Striped Snakes, two Yellowthroated Snakes.

Garwood, Miss.

One Rhesus Monkey.

Gibbons, E. J., Esq.

One Snow-Bunting.

Giglioli, Prof. H. H.

Seven European Phyllodactyles, six Brown Newts.

Godner, Mr. T. E.

One Arabian Baboon.

Gordon, C. D., Esq.

One Malbrouck Monkey.

Grantham, The Rev. H. D.

One Long-eared Owl.

Griffiths, R. Glynn, Esq.

One Egyptian Cat.

Gunn, Mr. T. E.

Twelve Ruffe or Pope, one Red-throated Diver, one Kestrel, two Moorhens, one Sparrow-Hawk, two Common Kingfishers.

Günther, Dr., F.R.S.

One Herring-Gull, one Common Curlew, one Shag.

Gurney, J. H., Esq., F.Z.S. Ore Corn-Crake.

Hagen, Bertram B., Esq. One Golden Eagle.

Hall, Capt. E.

One Wood-Owl.

Hamilton, R. G., Esq.

One Ring-tailed Coati.

Hammond, Mrs. J. W. Two Pileated Jays.

Hanaeur, Mr. H.

Óne Common Barn-Owl.

Hargreaves, J., Esq.

Three Common Swans.

Harley, Mrs.

One Ocelot.

Harris, Miss.

Two Spotted Salamanders.

Harris, J., Esq.

One Common Adder.

Harrison, Capt.

One White-fronted Capuchin.

Hart, Dr. D. Hume.

One Royal Python.

Hastings, Lord.

One Grivet Monkey.

Hawtayne, G. H., Esq., C.M.Z.S.
One Rough Fox.

Heat, Mr. C.

One Hobby.

Henry, A. G., Esq.

One Lconine Monkey.

Henry, J. Snowdon, Esq., F.Z.S.

Three Peregrine Falcons, one Lesser Sulphur-crested Cockatoo, one Common Badger.

Henshaw, C. F., Esq.

One Rhesus Monkey.

Hill, Mrs. Florence A.

One Macaque Monkey.

Hirsch, A. F., Esq., F.Z.S.

Twenty Barbary Turtle-Doves.

Hoëy, F., Esq.

One White-throated Capuchin.

Holmwood, F., Esq.
One Leopard.

Honey, Ernest, Esq.
One Blau-bok.

Horne, C. Chas., Esq. One Hog-Deer.

Horny, C., Esq.

One Æsculapian Snake.

Houghton, F., Esq.

Three Common Kingfishers.

Howard, Miss Maud. One Proteus.

Humphry, Mrs.

One Ring-tailed Parrakeet.

Hunt, Capt. R. Brooke.

One Indian Antclope (♀).

Hunt, Mrs. H. E.

One Hoary Fox.

Hussey, Major J. H.

One Lanner Falcon.

Jackson, Sir Louis S., F.Z.S. Two Maugé's Dasyures.

James, J. H., Esq.
One Fennec Fox.

James, Mr. C.

One Bonnet-Monkey.

Jamrach, Mrs. A. H.

One Australian Crow, two Bronze Fruit-Pigeons.

Johnson, Cuthbert, Esq.

One Mississippi Alligator.

Keele, R., Esq.

One Slender-billed Cockatoo.

Keen, Mr. T.

One Gannet.

Kelsall, Mr. J. E.

Five Palmated Newts.

Kettlewell, C. T., Esq. One Brown Bear.

King, Captain.

One White-fronted Capuchin Monkey.

Kinloch, Col. Alex. A. A., C.M.Z.S.

One Thar (3).

Lang, Mr. George.

Three Weasels.

Langworthy, E. M., Esq.

Two Rufous Tinamous, three Spotted T amous.

Leite, Adelino Pinto, Esq., F.Z.S.

Two Hairy-rumped Agoutis, one Spotted Cavy, one Martinique Waterhen.

Leith, C. G., Esq. One Ocelot.

Lewin, Mrs.

One King Parrakeet.

Lidbury, Mr. A.

Two Hedgehogs, one Common Kestrel.

Lilford, Lord, F.Z.S.

Five Lataste's Vipers, one Viperine Snake.

Ling, Mr. Edward.

One Olive Weaver-bird.

Linklater, Capt. H.

Two Rough-legged Buzzards, one Merlin.

Londesborough, Lord, F.Z.S.
Two Common Snakes.

Low, Hugh, Esq.

One Nicobar Pigeon.

Lucking, J. W., Esq.

One Macaque Monkey.

Luxmore, Capt. Percy, R.N., C.B.

One Leopard.

Lynch, Mrs.

One Common Marmoset.

Mackenzie, Donald F., Esq.

Two Common Marmosets, two Brazilian Caracaras.

Macleay, The Hon. W.

One White-bellied Sea-Eagle.

Manigault, Dr. G. E., C.M.Z.S.

Three Sirens.

Mann, Capt.

One Australian Cassowary.

Mansell, Miss.

One Margined Tortoise.

Manuel, Mrs. M. B.

One European Tree-Frog, one Larger Hill-Mynah.

Marks, Commander, R.N.
One Radiated Tortoise.

Marquis, Ernest H., Esq. One Striped Hyæna.

Marsden, A. P., Esq. One Leopard.

Marsh, Mr. W.

One Blackbird.

Marshall, Dr.

One Corn-Crake.

Maydon, John, Esq.

Two Silver-backed Foxes.

Metcalf, J., Esq.

Two Tawny Owls.

Mitchison, Mrs. M. J.

One Common Squirrel.

Moloney, Capt. A.

One Philantomba Antelope, one Duyker-bok.

Moore, A. M., Esq.

One Malbrouck Monkey.

Morant, Miss.

One Bonnet-Monkey.

Morison, J. W., Esq.
One Corn-Crake.

Morris, L., Esq.

One Malbrouck Monkey.

Morris, W. H. B., Esq.

One Macaque Monkey, one Bonnet-Monkey.

Mosse, Surgeon A. M. D.

One Blotched Genet, one Long-nosed Crocodile.

Mueller, Baron Ferdinand von, C.M.Z.S. Seven Black-and-Yellow Cyclodus.

Mummery, Mr. S.

Two Common Hedgehogs.

Nash, Henry, Esq.

Six Prairie-Grouse, one Sharp-tailed Grouse.

Nelson, F., Esq.

One Bonnet-Monkey.

Nicholls, Capt.

One Woodcock.

Norman, Mrs.

One Greater Sulphur-crested Cockatoo.

Northcote, Gordon S., Esq.

One Vulpine Phalanger.

Packe, R. C., Esq.

One King Penguin.

Pain, W. H. B., Esq.

Three Smooth Snakes, one Common Viper.

Pariss, A., Esq.

Two Common Marmosets.

Parker, S. Sandbach, Esq.

One Black-eared Marmoset.

Paterson, Wm., Esq.

One Common Boa.

Payne, F. L. B., Esq.

One Common Chameleon.

Peacock, T., Esq.

Two Grey-breasted Parrakeets.

Pillans, H., Esq.

One Cape Bucephalus.

Pitcairn, Robert, Esq.

One Baubaline Antelope, one Domestic Goat.

Plummer, Dr.

One Osprey.

Pollock, C. T., Esq.

One Rhesus Monkey.

Powell, F., Esq.

One North-African Jackal.

Pretyman, H., Esq.

Two Squirrel-like Phalangers.

Priestley, Mrs. A. Browning.

Two Sea-Mice.

Priestley, Alfred C., Esq.

Two Red-tailed Guans.

Purnchard, C., Esq.

Three Long-eared Owls.

Quail, Mr. W.

One Ring-necked Parrakeet.

Radcliffe, Lt.-Col. E. Delmé.

Two Marsh-Harriers.

Ramsay, E. P., Esq., C.M.Z.S.

One Stair's Ground-Dove.

Ravenscroft, The Hon. W. H.

Two Javan Adjutants, two Indian Tantalus.

Reynardson, Lieut.-Col. C. Birch.
One Common Wigeon.

Roberts, The Rev. G. R.

One Bonnet-Monkey.

Robins, Mrs.

One Golden-headed Conure.

Robinson, J. C., Esq.

One Brant Goose, one Dwarf Chameleon.

Rose, H. G., Esq.

One Bonnet-Monkey.

Rose, Thomas L. M., Esq.
One Sykes's Monkey.

Ross, A., Esq.

One Tennant's Squirrel.

Russell, Lord Arthur, M.P., F.Z.S.

One Margined Land-Tortoise, two Common Snakes.

St. Aubyn, Edmund E., Esq. One Cocteau's Skink.

Sandeman, Fleetwood, Esq., F.Z.S.

One Green Turtle.

Sanderson, Capt. J. S.

Two Grey Monitors.

Sarawak, H.H. The Rajah of.

Two Pig-tailed Monkeys.

Schorlemmer, Mr. Carl.

Twelve European Tree-Frogs.

Seago, Frank, Esq.

One Common Pintail.

Sewell, J., Esq.

One Arabian Gazelle.

Sheppard, Mr. J. H.

One Vervet Monkey.

Sheridan, Dudley, Esq.

One Ring-tailed Coati.

Shute, G. E., Esq.

One Indian Python.

Sims, Mrs.

One Roseate Cockatoo.

Slaney, P. K., Esq. Two Grisons. Small, Capt. W. F.

One Grey Ichneumon.

Smith, Miss J. D.

One Masked Parrakeet.

Smith, C. W. Jervis, Esq. Two Common Gulls.

Smith, W. Bowden, Esq.
One Black-necked Hare.

Smith, Robert, Esq.
One Pig-tailed Monkey.

Smith, Mr. H.

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Southey, R., Esq.

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Sprague, Mrs. E. J. H.

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Stewart, Miss.

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One Bonnet-Monkey.

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Strauch, Dr. A., F.M.Z.S.

Four Ural Phrynocephales.

Sturt, Col., C.M.Z.S.

One Carpet Viper, one Crowned Snake, one Punjab Wild Sheep, two Edible Snails.

Suckling, Capt. C. R.

Two Herring-Gulls.

Sutherland, C. L., Esq.

One Rook, one Magpie.

Sutton, Miss M.

One Macaque Monkey.

Symonds, Mrs. M. E. One Alligator.

Tanner, Miss A.

One White-fronted Capuchin.

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Three Common Vipers.

Taylor, Lieut.-Col. Mitchell. One Egyptian Cat.

Taylor, Dr. Rogers W.

One Small Hill-Mynah.

Temple, W. R., Esq.

One Common Cormorant.

Thackeray, Capt. Martin.

Two Porose Crocodiles.

Thick, Mr.

One Alligator.

Thiele, H. H., Esq.

One Feline Douroucouli.

Thomas, E. D., Esq.

One Black-backed Jackal.

Thompson, F. J., Esq.

Three Passenger-Pigeons, one Hog-nosed Snake.

Todd, Capt. R.

One Earl's Weka Rail, one Black-backed Porphyrio.

Townsend, A., Esq.

One Mocking-bird.

Trevor, H. H., Esq.

Two Duyker-boks.

Trimen, Roland, Esq., F.Z.S. One Tawny Eagle.

Tyler, Sir H. W.

Two Gold Pheasants.

Vaughan, H., Esq.

One Common Fox.

Verinder, J., Esq.

Two Bonnet-Monkeys.

Vermont, J. M., Esq.

One Ourang-Outang.

Vicars, Miss Ella.

One Herring-Gull.

Wainwright, H. G., Esq.

One Macaque Monkey.

Waite, Miss M. A.

One Malbrouck Monkey.

Waldo, E. G. B. Meade, Esq. One Water-Rail.

Waldon, J. L., Esq.

One Macaque Monkey.

Walsh, Theo., Esq.

One Crab-eating Racoon.

Ward, J. A., Esq.

Five Martinican Doves.

Ward, Rowland, Esq., F.Z.S.

One Daubenton's Curassow.

Webster, Master C. B.

One Common Squirrel.

Webster, C. H., Esq.

One Peregrine Falcon.

Weede, Walter Van, Esq.

One Campbell's Monkey.

Weguelin, H. W., Esq.

One Common Chameleon.

Wellington, Her Grace the Duchess of. One Yellow Conure.

Wethered, The Rev. F. T.

Two Fringe-lipped Lamperns.

Whiteley, W., Esq. ·

One Common Seal.

Whithard, B. M., Esq.

One Puma. Wicks, F. J., Esq.

One Bonnet-Monkey.

Williams, J. F., Esq.

One Green Monkey.

Willoughby, The Rev. W. C.

One Lesser White-nosed Monkey.

Wilson, Mr. Stanley.

Six Common Trout.

Wilson, Mrs.

One Earl's Weka Rail.

Wilson, Capt.

One Indian Civet.

Witte, John G., Esq.

Two Horned Lizards.

Wootten, Charles H., Esq.

One Suricate.

Wormald, John, Esq.

One Black-footed Penguin.

Wrzesniowski, Mons. A.
One Oak Dormouse.
Zurcher, Fritz, Esq.
One Collared Peccary.

#### Conclusion.

The Council cannot conclude their Report without congratulating the Fellows on their assembling for the first time in their new house. As already stated, the former quarters on the opposite side of the Square, after occupation for a period of forty-one years, were found to be no longer sufficient for the Society. The Council believe that the Fellows will agree with them in considering that the accommodation provided in the new house is in every respect superior, and not only now ample for the purpose, but likely to meet our requirements for many In justification of the somewhat large expenditure involved in this removal, it is perhaps only necessary to point out that the total income of the Society when we entered into occupation of No. 11 Hanover Square, in 1843, was £9137, whereas in the year just passed, without the intervention of any extraordinary circumstances, it has reached the sum of £28,966.

The Council cannot conclude their Report without acknowledging, with many thanks, the assistance they have received from the Committee of Publication, and from the gentlemen who have served upon the Committees of Finance and Audit during the past year.

Signed (for the Council),

P. L. SCLATER,

3 Hanover Square, April 29th, 1884.

Secretary.



## REPORT

OF THE

## AUDITORS OF THE ACCOUNTS

OF THE

# ZOOLOGICAL SOCIETY OF LONDON,

Appointed January 17, 1884.

THE Committee of Auditors to the Zoological Society having fully examined the accounts, inspected the books, and seen vouchers for all the various payments ordered by the Council for the year ending December 31st, 1883, respectfully submit to the Society an abstract of the accounts, together with a statement of the Assets and Liabilities at the close of the year, and a report thereon.

## RECEIPTS IN 1883.

Balan	ce brought from December 31, 1882	••••••			• • • • • • • • • • • • • • • • • • • •	••••	• • • •	£ 1,391	s. 18	$rac{d.}{4}$
	INCOME.			7			2			
1878	Publication Sales	£	<i>S</i> .	d.	± 5	<i>s.</i> 8	<i>d</i> . 0			
1880	Garden Sales	•••••	••••	••••	0	10	6			
1881	Garden Sales	5 18	0	0	93	0	0			
1882 {	Rent for Refreshment Rooms Rent for Freehold Premises. Garden Sales Admission Fees Subscriptions Publication Sales	128 75 108 105 30 120	$\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \end{array}$	$0 \\ 0 \\ 4 \\ 0 \\ 0 \\ 0$	567		4			
1883 {	Admissions to Gardens Rent for Refreshment Rooms Rent for Freehold Premises Garden Sales Admission Fees Compositions Subscriptions Ivory Tickets Publication Subscriptions Publication Sales Dividends (Davis Trust) Interest on Deposit Account Elephant and Camel Riding Receipts Compensation for Dilapidations Miscellaneous	1,124 75 310 595 810 6,256 38 499 141 73	$\begin{array}{c} 0 \\ 17 \\ 0 \\ 0 \\ 17 \\ 18 \\ 16 \end{array}$	6 4 0 2 0 0 0 0 0 11 11 11 11 0	28,233		7			
1884	Subscriptions Ivory Tickets Publication Subscriptions	111 1 24	0 1 3	0 0 0	136	4	0			
INCOM	ME RECEIVED IN 1883				28,966	1	5	28,966	1	5
Transferred from Deposit Account			2,500 12,000 2,000 22,000	0 0 0 0	0 0 0					
								68,857	19	9

## PAYMENTS IN 1883.

	Belon		
	1882.	1883.	Total.
Rent, Rates, Taxes, and InsuranceGardens Ditto ditto	# s. d. 248 8 2 29 1 1  284 6 6 192 18 2 271 7 0  147 1 4  2 8 0 35 5 6  25 18 10 15 16 2 10 2 6 17 9 6 37 16 2 105 13 3  63 0 8	£ s. d. 1,058 4 2 96 15 9 3,527 6 4 1,872 14 2 4,303 10 10 1,242 3 4 3,052 15 2 139 4 0 3,672 1 4 6,509 9 6 5,597 10 0 822 7 6 208 7 5 261 3 0 246 16 11 366 2 11 72 10 8 401 9 6 2,026 8 1 489 19 5 58 16 0 50 17 9 74 10 0 402 11 7	£ s. d. 1,306 12 4 125 16 10 3,527 6 4 1,872 14 2 4,587 17 4 1,435 1 6 3,324 2 2 139 4 0 3,819 2 8 6,509 9 6 5,597 10 0 824 15 6 243 12 11 261 3 0 272 15 9 381 19 1 82 13 2 418 19 0 2,064 4 3 595 12 8 58 16 0 113 18 5 74 10 0 402 11 7
Expenditure paid in 1883	1,486 12 10	36,553 15 4	38,040 8 2
Paid for Freehold Premises, No. 3 Hanover, Messrs. Drummond remainder of Mc Expenses on Sale of Freehold Premise 287 Oxford Street	ortgage of £10, s, 11 Hanover ad Interest	000 r Square and	16,250 0 0 5,000 0 0 385 5 0 2,033 6 8 4,993 15 0
Cash at the Banker's, December 31, 1883:- General Account Petty Cash Account		£16,72 15 3 482 9 8	2,155 4 11
			68,857 19 9

## Comparison of Receipts in 1882 and 1883.

Receipts.					
	Incor	ne of	Increase.	Decrease.	
	1882.	1883.			
Admissions to Gardens	£ s. d. 20,691 10 0	£ s. d. 17,239 8 6	£ 8. d.	£ s. d. 3,452 1 6	
Rent for Refreshment Rooms Rent for Premises in	1,307 3 4	1,253 3 4		54 0 0	
Oxford Street Garden Sales	300 0 0 2,280 10 0	150 0 0 424 8 0		150 0 0 1,856 2 0	
Admission Fees:— Past Present	100 0 0 620 0 0	105 0 0 595 0 0	5 0 0	25 0 0	
Annual Subscriptions:— Past Present	57 0 0 6,296 17 0	48 0 0 6,256 17 0		9 0 0	
Future	108 0 0 1,170 0 0	111 0 0 810 0 0	3 0 0	360 0 0	
Ivory Tickets Publications Dividends	37 6 0 788 4 5 145 8 8	39 19 0 791 16 11 141 17 10	2 13 0 3 12 6	3 10 10	
Elephant-riding receipts Miscellaneous		429 2 9 139 4 0	123 12 0 75 16 6		
Compensation for dilapidations		431 4 1	431 4 1		
Decrease	34,270 17 8	28,966 1 5 5,304 16 3	644 18 1 Ded. Incr.	5,949 14 4 644 18 1	
	34,270 17 8	34,270 17 8		5,304 16 3	
	ceipts in 1883 yments in 1883.				
Payment	s over Receipts		9,074 6 9		
Dr.	C	ash			
### ### ##############################					
				51,472 14 9	

# Comparison of Payments in 1882 and 1883.

Payments.												
		Ex	pend	liture of			T	Decrees				
	188	32.		188	33.		Increase.	Decrease.				
Arrears of previous years	£ 1,749	8. 4	d. 2	£		d. 10	£ 8. d	£ s. d. 262 11 4				
Rent, Rates, Taxes, and Insurance	1,110	13	8	1,154	19	11	44 6 3					
sions Provisions	5,442 4,638	7	5 6	5,400 4,303	10	6 10						
Cost and Carriage of Animals Menagerie Expenses Keepers' Drcsses	2,299 3,138 191	15	8 1 11	1,242 3,052 139		4 2 0		. 1,057 8 4 7 . 85 19 11 . 52 5 11				
Works, Materials, &c Buildings	2,907 2,665	18 2	7	3,672 12,106	1	6	764 2 9 9,441 17 6					
Garden Expenses	807 219 239	4 8 17	10 7 0	822 208 261	7 7 3	6 5 0	15 2 8 21 6 0	. 11 1 2				
House and Office Expenses Stationery and Account Books Printing (Miscellaneous)	643 65 394	7	3 3 2	612 72 401	19 10 9	10 8 6	7 3 5 6 11 4	30 11 5				
Publications	2,122 370	$\frac{9}{12}$	1 3	2,026 489	8 19	1 5	119 7 2	96 1 0				
Returned Subscriptions Cost of Medals Law Expenses	29 4 30	5 18 10	0 6 1		16 	0	29 11 0	4 18 6				
Zoological Lectures (Davis Bequest)	70 234	15 5	0	74 402	10 11	0 7	3 15 0 168 6 7					
Increase	29,376 8,664	6 2	0 2	38,040	8	2	10,641 17 4 1,977 15 2	1,977 15 2 Ded. Decr.				
	38,040	8	2	38,040	8	2	8,664 2 2	-				
Ordinary Payments Extraordinary ditto	26,109 3,266	9 17	0	25,175 12,865	0 8	0 2	9,598 11 2	934 9 0 Ded. Decr.				
	29,376	6	0	38,040	8	2	8,664 2 2					
		(	Con	tra				Cr.				
By Expenditure paid in the ye By Repayment of Loan and I By Cost of £5000 Reduced 3	nterest.	ts.			• • •			£ s. d. 38,040 8 2 2,033 6 8 4,993 15 0				
By Cost of Freehold Premise £12,000 by Bankers By Balance carried to 1884	s (No. 3		anor	ver Squa	re),	, les	s advance of	4,250 0 0 2,155 4 11				
							-	51,472 14 9				

# Assets and Liabilities of the Society on December 31, 1883.

# ASSETS.

	£	8.	d.
Animals in the Menagerie in the Regent's Park	21,630	0	0
Books in the Library at Hanover Square	15,444	6	9
Unsold Publications	11,100	7	1
Freehold Premises	21,550	0	0
Cost of £1,900 London and South-Western Railway New 4 per			
cent. Preference Stock (Davis' Trust Fund)	1,938	9	6
Cost of £5,000 Reduced 3 per Cents	4,993	15	0
Cash at the Bankers (Messrs. Drummonds)	2,155	4	11
Arrears considered good:— $\pounds$ s. d.			
Annual Subscriptions			
Ivory Tickets 5 5 0			
Publication Sales 124 14 3			
Garden Sales 83 18 0			
Rent for Refreshment Rooms 79 3 4			
	442	0	7
	£79,254	3	10
			_

# LIABILITIES.

Rent and Taxes unpaid:—	£	s.	d.	£	\$.	d.
For the Gardens, say	182	5	5			
,, Office, say	167	10	0			
				349	15	5
Bills, &c., estimated at:—						
For the Gardens, say	789	16	10			
,, Office, say						
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				3,109	10	5
Messrs. Drummonds, Mortgage Debt		••••	•••	12,000	0	0
				015 450	-	10
				£15,459	5	10

The Auditors have again the pleasure of congratulating the Society on the satisfactory state of its finances in 1883, as compared with previous years. Putting out of comparison the abnormally swollen returns of the year 1882, the Admissions to the Gardens for the past year show an increase of over £2000 as compared with those of 1881; and the Subscriptions and Compositions taken together exhibit no decrease. There is an excess of payments over receipts due to the extraordinary expenditure of nearly £5,600 on the new Offices in Hanover Square and upwards of £6000 on the new Reptile-house.

The Auditors have to express their satisfaction at the manner in which the Books have been placed before them by Mr. Barrow, the Society's Accountant.

W. T. Blanford.
Herbert Druce.
Charles H. Gatty.
James H. Lang.
Howard Saunders.
L. C. Stewart, Surgeon-General.

11 Hanover Square, W. March 3, 1884.

PRESENTED 24 APR. 1903





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#### LISTS OF THE ANIMALS IN THE SOCIETY'S GARDENS.

- List of Vertebrated Animals Living in the Gardens of the Zoological Society of London. 8vo. 1862. Price 1s. 6d.
- List of Vertebrated Animals Living in the Gardens of the Zoological Society of London. (Second Edition.) 8vo. 1863.

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List of the Vertebrated Animals now or lately Living in the Gardens of the Zoological Society of London. (Eighth Edition.) 8vo. 1883. Price 3s. 6d.

Such of these publications as are in stock may be obtained at the Society's Office (3 Hanover Square, W.), at Messrs. Longmans', the Society's publishers (Paternoster Row, E.C.), or through any bookseller.

# REPORT

OF THE

COUNCIL

OF THE

# ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1884.

READ AT THE ANNUAL GENERAL MEETING,

APRIL 29TH, 1885.



LONDON:

PRINTED BY TAYLOR AND FRANCIS,

RED LION COURT, FLEET STREET.

1885.

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# REPORT

OF THE

#### COUNCIL

OF THE

# ZOOLOGICAL SOCIETY

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FOR THE YEAR 1884.

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## REPORT OF THE COUNCIL.

April 29, 1885.

THE Council have now the pleasure of submitting to the Fellows their fifty-sixth Annual Report upon the pro-

gress of the Society.

This, in accordance with previous Reports, is divided into three heads, the first of which relates to the General Condition of the Society and its Finances, the second to the business transacted at the Office in Hanover Square, and the last to the state of the Gardens in the Regent's Park.

#### I. GENERAL CONDITION OF THE SOCIETY.

#### 1. STATE OF THE ROLL OF MEMBERS.

#### a. Fellows.

The number of Fellows and Fellows Elect at the close of the year 1884 was 3255, classified as follows:—

Compounders who have paid £20			35
$\hat{\mathbf{D}}$ itto ditto $\hat{\mathbf{\pounds}}$ 30			
Compositions remitted			18
Paying annual contributions of £2	•		39
Ditto ditto £3			
Dormant		•	126
Admission-fees unpaid			
*			

The state of the Society during the past ten years, as regards the number of its Ordinary Members, is given in the subjoined Table.

Comparative Statement of Elections, Deaths, Resignations, and Removals during the past Ten Years, with the number of Fellows at the end of each Year.

				Died.			F	esigne	d	R	emove	pe .	of 8, 31.	
Years.	Elected or Readmitted	Cor	npoun	lers.	Subsc	Subscribers.		Subscribers.		Subsc	Subscribers.		eased to Fellows.	Number of Fellows December
	Elected	£20.	£30.	Feere- mitted	£2.	£3.	£2.	£3.	Admissic Fees Unpaid	£2.	£3.	Admission Fees Unpaid.	Ceae	Nui F. Dece
1875.	180	8	16		8	57		36				11	136	3241
1876.	224	9	28		4	63		49	1				154	3311
1877.	225	3	23		9	63		20		•••	58	6	182	3354
1878.	176	6	12		5	52	1	40	1	•••		1	118	3412
1879.	144	9	17		7	52		54			50	6	195	3361
1880.	153	4	18	1	4	65	•••	74		•••	38	4	208	3306
1881.	138	24	31		5	75		65	3	1	27		231	3213
1882.	164	3	23	1	4	61		48		•••	11	13	164	3213
1883.	159	4	25		3	55	***	38			33	4	162	3210
1884.	183	1	28		5	53	•••	37	ļ	1	7	6	138	3255

It will be observed that the new Fellows elected or readmitted in 1884 were 183, against 159 in 1883, and that the total number of Fellows upon the roll of the Society on the 31st of December last was consequently larger than it has been since 1880.

#### b. Honorary Members.

The following gentlemen were elected Honorary Members of the Society in 1884:—

- 1. Lieut.-Gen. Sir Arthur Purves Phayre, G.C.M.G., C.B., K.C.S.I.
- 2. Sir Henry Barkly, G.C.M.G., K.C.B.

## c. Foreign Members.

The distinguished naturalist Professor Ludwig Rütimeyer, of Basle, was elected a Foreign Member last year, to fill up the vacancy caused by the death of Professor H. Schlegel of Leyden.

# d. Corresponding Members.

The following Corresponding Members were elected in 1884:—

- 1. Professor T. Jeffery Parker, of the Otago University Museum, Dunedin, New Zealand.
- 2. The Hon William Macleay, of Elizabeth Bay, Sydney.

3. Dr. Gustav Radde, of Tiflis.

#### e. Medallists.

The Silver Medal of the Society was conferred, on the 16th of January last year, on the Rev. George H. R. Fisk, of Cape Town, one of the Society's most active Corresponding Members, in acknowledgment of his numerous donations to the Society's collection of living Reptiles.

#### 2. STATE OF THE FINANCES.

#### a. Income.

The Income of the Society has been well maintained in 1884, the total amount of receipts (£28,939 8s. 8d.) having been only £26 12s. 9d. less than that of the very favourable year 1883. A slight decrease in the Garden receipts (£319) was more than counterbalanced by a very gratifying increase (£480) in the receipts for Compositions. During the past twenty years the Annual Income of the Society has only four times been higher than in 1884, as will be seen by reference to the following Table:—

# Annual Income of the Society during the past 20 years.

Year.	Total Income.	Year.	Total Income.
1865	$\dots 23,457$	1875	28,738
1866	24,379		34,955
	25,041	*1877	30,988
	24,958	1878	27,944
	22,768	1879	26,463
	23,257		27,388
	$\dots 24,620$		25,810
	26,728	*1882	$\dots 34,270$
	28,099	*1883	28,966
1874	28,417		28,939

The next Table contains a comparative statement of the various heads of income in 1883 and 1884:—

		In	con	ne of						
	188	3.	i. 1		884.		Increase.	Decrease.		
Admissions to Gardens	£ 17,239 1,253 150 424 105 595	8. 8 3 0 8	d. 6 4 0 0 0 0 0	£ 16,920 1,214 135 466	0 0 15 2	d. 0 0 0 6 0 0	£ s. d.	£ 319 39 14	8. 8 3 5	d. 6 4 0 0 0 0
Annual Subscriptions:— Past Present Future Compositions Ivory Tickets		0 17 0 0 19	0 0 0 0	30 6,350 108 1,290 49	3 0 0 8	0 0 0 0 0	93 6 0 480 0 0 9 9 0	18	0	0
Publications Dividends Elephant-riding receipts Miscellaneous Compensation for dilapidations.	791 141 429 139	16 17 2 4 4	11 10 9 0 1	770 177 418 149	7 4 17 11	0 7 3 4	35 6 9 10 7 4	21 10 431		11 6
Decrease	28,966	••••	••••	28,939 26 28,966	12	8 9 5	Ded. Incr.	861 835 26		4 7 9

## b. Expenditure.

After adding to the Income of 1884 the balance carried forward from 1883 (£2156 4s. 11d.) and the proceeds of the sale of £5000 Reduced 3 per cents. purchased in 1883 (£4998 15s.), it will be found that the sum of £36,093 8s. 7d. was available for the expenditure of 1884. This amount was disposed of in the following manner:—The ordinary payments in 1884 amounted to £26,539 4s. 1d., and the extraordinary to £7306 14s. 4d., making a total expenditure of £33,845 18s. 5d. The sum of £1000 was paid to Messrs. Drummond in reduction of the Mortgage Debt of £12,000 secured on the Society's new freehold premises. This left a balance of £1247 10s. 2d. on the 31st of December last to be carried over for the benefit of the present year, as will be seen by the following abstract of the Balance-sheet:—

# Abstract of Receipts and Payments, 1884.

Receipts, 1884.		Payments, 1884.					
Balance from 1883 Income received 1884 By Sale of Stock	£ 2,155 28,939 4,998	<b>4</b> 8	0	Expenditure:—  Ordinary			
	36,093	8	_	36,093 8 7			

The next Table contains the various particulars of the expenditure of 1884, and a comparison of each of them with the corresponding amounts paid in the previous year:—

	]	Expen	diture	of	_ Increase.	Decrease.
	18	83.	18	384.		
Arrears of previous years Rent, Rates, Taxes, and Insurance Salaries, Wages, and Pensions Provisions Cost and Carriage of Animals Menagerie Expenses Keepers' Dresses Works, Materials, &c. Buildings Garden Expenses Advertisements. Band Expenses House and Office Expenses Stationery and Account Books. Printing (Miscellaneous) Priblications Library Expenses Returned Subscriptions Cost of Medals Law Expenses Zoological Lectures (Davis Bequest) Interest on Mortgage Debt	1,154 5,400 4,303 1,242 3,052 12,106 822 208 261 612 72 401 2,026 489 58	19 11 0 6 10 10 3 4 15 2 4 0 1 4 19 6 7 6 3 0 19 10 10 8 9 6 8 1 19 5 16 0	4,479 1,400 5,918 4,338 1,424 3,118 157 2,667 4,766 210 213 803 64 475 1,597 674 34	13 5 2 10 5 19 7 17 0 18 2 14 1 3 8 18 1 1 0 0 0 19 4 9 9 11 0 0 2 3 2 5 5 10 6 6 18 6 18 0	### 8. d.  2,992 7 3  245 13 6  518 4 8  34 19 7  182 0 2  66 4 2  60 2  137 16 2  2 10 8  190 19 6  74 1 6  184 3 0  4 18 6  7 8 0  4 6 18 5	£ s. d.  1.004 3 2 7,340 5 5  48 3 0 8 0 11  429 5 10  24 5 6  47 4 3
Decrease	38,040	8 2	33,845 4,194 38,040	18 5	4,706 18 4 Ded. Incr.	8,901 8 1 4,706 18 4 4,194 9 9
Ordinary Payments	25,175 12,865	0 0 8 2	26,539 7,306		1,364 4 1	5,558 13 10
	38,040	8 2	33,845	18 5		4,194 9 9

The result shows that there was an increase of £1364 4s. 1d. in the ordinary payments of 1884, owing to the unusual amount of bills left outstanding at the end of the

year 1883, and a decrease of £5558 13s. 10d. in extraordinary payments as compared with those of the pre-

vious year.

The extraordinary expenditure of 1884 (£7306 14s. 4d.) consisted entirely of payments on account of the New Offices. The balance due under this head was wholly paid off in 1884, with the exception of a small unsettled claim of about £75. So soon as this has been liquidated, this account will be finally closed.

#### c. Assets and Liabilities.

The Assets and Liabilities of the Society on December 31, 1884, were estimated as follows:—

#### ASSETS.

	£	s.	d.
Animals in the Menagerie in the Regent's Park	21,630	0	0
Books in the Library at Hanover Square	12,000	0	0
Unsold Publications	2,500		0
Freehold Premises	25,000	0	0
Cost of £1,900 London and South-Western Railway New 4			
per cent. Preference Stock (Davis Trust Fund)	1,938		6
Cash at the Bankers' (Messrs. Drummond)	1,247	10	2
Arrears considered good:— $\pounds$ s. d. Annual Subscriptions			
Annual Subscriptions			
Ivory Tickets         5         5         0           Publication Sales         153         13         5			
Garden Sales			
Rent for Refreshment Rooms			
Rent for Freehold Premises			
	554	3	4
	£64,870	3	0
	£64,870	3	0
	£64,870	3	0
	£64,870	3	0
LIABILITIES.	£64,870	3	0
Rent and Taxes unpaid:— $\pounds$ s. d.	£64,870 £		d.
Rent and Taxes unpaid:— $\pounds$ s. d. For the Gardens, say			
Rent and Taxes unpaid:— $\pounds$ s. d.	£	s.	
Rent and Taxes unpaid:—       £ s. d.         For the Gardens, say       185 14 3         ,, Office, say       32 16 3         Bills, &c., estimated at:—		s.	<i>d</i> ,
Rent and Taxes unpaid:—       £ s. d.         For the Gardens, say       185 14 3         ,, Office, say       32 16 3         Bills, &c., estimated at:—       1,227 10 6	£	s.	<i>d</i> ,
Rent and Taxes unpaid:—       £ s. d.         For the Gardens, say       185 14 3         , Office, say       32 16 3         Bills, &c., estimated at:—	£	s.	<i>d</i> ,
Rent and Taxes unpaid:—       £ s. d.         For the Gardens, say       185 14 3         , Office, say       32 16 3         Bills, &c., estimated at:—	£ 218	s. 10	d. 6
Rent and Taxes unpaid:—       £ s. d.         For the Gardens, say       185 14 3         ,, Office, say       32 16 3         Bills, &c., estimated at:—       1,227 10 6	£ 218	s. 10	d. 6

£12,862 8

# II. OFFICE, 3 HANOVER SQUARE. 1. New Premises.

As mentioned above, the remaining liabilities on the Society's New House (except the small unsettled claim referred to) were discharged in 1884, by the payment of £6855 19s. 1d. on account of the works, and of £450 15s. 3d., the amount of the legal expenses connected with the sale of the former House and the purchase of the New House. There remains, therefore, only the mortgage debt of £11,000, which, as arranged by the terms of agreement, will be paid off by annual instalments of £1000 on the

1st of June in every year.

Although the necessary expenditure on New Premises has been very heavy, few Fellows acquainted with the circumstances of the case will, as the Council believe, hesitate to allow that the sums thus expended (amounting altogether, inclusive of the cost of fittings, to about £12,600) have been well and wisely invested. The Society are now owners of a set of Offices which, for convenience of situation and arrangement, are in every respect adapted to their requirements, and are likely to remain so for many years. The valuable Zoological Library is also admirably housed and arranged, and there is ample space for its future extension. The large stock of publications has been removed from its inconvenient storage in the Gardens into the convenient receptacles now provided for it, and has been thoroughly arranged and placed in order.

Three sets of rooms in the New House are for the present not required for the Society's purposes, and when fully occupied by kindred Societies or otherwise, will, it is estimated, produce a rental of £350 per annum. Of these, two sets have been already let to permanent tenants, and the third set, it is anticipated, will not long remain vacant.

## 2. Scientific Meetings.

To the thirteen meetings for the despatch of scientific business held in the Society's Rooms in Hanover Square in 1884, 119 communications were made. Of these, 92 were from Fellows, 2 from Foreign Members, and 11 from Corresponding Members of the Society. The remaining 14 papers were from individuals not belonging to the Society, and were communicated to it by the Secretary or by other Members. The corresponding number of

communications in the year 1883 was 103.

These communications were submitted to the Committee of Publication, by whom the following orders were made respecting them: 5 were ordered to be printed entire in the 'Transactions' of the Society, and 79 in the 'Proceedings,' such illustrations being in each case allowed as the Committee considered necessary for the purpose. Of the remaining communications, abstracts or extracts were considered to be sufficient for publication.

#### 3. Scientific Publications.

The volume of 'Proceedings' for 1884 is on the table. It contains 645 pages illustrated by 58 plates. In the following table are given the number of pages and plates of the volumes of 'Proceedings' for the past ten

years:—

					plates.	pages.
1875	•	•	•		72	726
1876		•	•		82	864
1877					85	893
1878					62	1056
1879		•			64	868
1880					64	<b>74</b> 3
1881					72	1056
1882		•			61	827
1883	•			•	61	704
1884					58	645

In consequence of delay caused by the revise of the MS. of Prof. Lankester's memoir on the "Muscular and Endoskeletal Systems of Limulus and Scorpio," it has not been found possible to publish any Part of 'Transactions' since the last Anniversary. But Parts 10 and 11 of Vol. X1. are in a very forward state, and will be shortly ready for issue. These parts will complete the eleventh Volume of the Society's 'Transactions.'

#### 4. LIBRARY.

The Society's collection of zoological books and pamphlets has been carefully catalogued and valued during the past year. Its total value was estimated to be at least

£12,000, which sum has been accordingly adopted as its equivalent in the annual valuation of the Assets of the Society.

Many important additions were made to the Library during 1884, among which attention may be called to the

following donations:—

Godwin-Austen. Land and Freshwater Mollusca of India. Part v. Presented by the Author.

Handbook of Jamaica for 1884. Presented by the Editors.

Retzius. Das Gehörorgan der Wirbelthiere. Vol. ii. Presented by the Author.

Newton. On Ornithology. From the 'Encyclopædia Britaunica,' ed. 9. Presented by the Author.

Original Drawings for Edwards's 'Ornithology.' Presented by Dr. Edward Hamilton, F.Z.S.

Journal of Comparative Medicine and Surgery. Vol. v. nos. 1-4. Presented by the Editor.

Moore's Lepidoptera of Ceylon. Part ix. Presented by the Government of Ceylon.

Norske Nordhavs-expedition 1876-78. Part xi. Presented by Prof. H. Mohn.

The following is a list of zoological works in course of publication of which parts were purchased in 1884:-

André. Spécies d. Hyménoptères. Fasc. xvii.-xxiii.

Berlese. Acari, Miriapodi e Scorpioni Italiani. Fasc. ix.-xv.

Bogdanow. Conspectus Avium Imperii Rossici. Fasc. i.

Booth. British Birds. Parts v., vi.

Bronn's Thierreich. Band V. Abth. ii. Lief. 11-15; Band VI. Abth. iii. Lief. 41, 42; Band I. (*Protozoa*) Lief. 20-27; Band II. (Porifera) Lief. 3-6; Band VI. Abth. v. Lief. 27.

'Challenger,' Voyage of H.M.S. Zoology, Vols. ix., x.; Physics and Chemistry, Vol. i.

Carus. Prodromus Faunæ Mediterraneæ. Pars i. Cory. Birds of Haiti and San Domingo. Parts i.-iii. Day. Fishes of Great Britain. Parts viii., ix. (completed).

Distant. Rhopalocera. Part vii. Dresser. Meropidæ. Parts i.-iii.

Edwards. Butterflies of North America. Part xii.

Encyclopædia Britannica. Vols. xvi., xvii. Fischer. Manuel de Conchyliologie. Fasc. vii.

Fol. Recueil Zoologique Suisse. Tome I. Parts 2-4.

Gerlach. Beiträge zur Morphologie und Morphogenie. Part i. Godman and S. lvin. Biologia Centrali-Americana. Zoology, Parts xxviii.-xxxiv.; Botany, Part xvii.

Gould's Birds of New Guinea. Parts xv.-xviii.

Grandidier. Histoire de Madagascar. Vol. i.; Atlas, part i. fasc. 8.

Greene. Parrots in Captivity. Parts vii.-xvii.

Hayek. Handbuch der Zoologie. Band III. Lief. 1-3.

Hoffer, Die Hummeln Steiermarks. Hälfte i., ii.

Janson's Cistula Entomologica. Part xxviii.

Lang. Butterflies of Europe. Parts xvii.-xx. (completed).

Martini und Chemuitz. Conchylien-Cabinet. Lief. 327-332. Mexique. Mission Scientifique. Batraciens, Livr. 2, 3; Reptiles, Livr. 8.

Meyer. Abbildungen von Vögel-Skeleten. Lief. vi., vii.

Oberthiir. Etudes d'Entomologie. Livr. viii., ix.

Olphe-Galliard. Contributions à la Faune Ornithologique de l'Europe Occidentale. Fasc. i.

Radde. Ornis Caucasica. Lief. 1-21 (completed). Rochebrune. Faune de la Sénégambie (Oiseaux). Romanoff. Mémoires sur les Lépidoptères. Tome i.

Rossmässler. Iconographie. N. S. Band I. Lief. 5, 6. Russ. Fremdlandische Stubenvögel. Band IV. Lief. 4, 5.

Saalmiiller. Lepidopteren von Madagascar. Abth. i.

Schneider. Zoologische Beiträge. Band I. Heft 2. Seebohm. British Birds. Part iv. Selenka. Studien über Entwickelungsgeschichte. Heft 3.

Semper. Reisen im Archipel der Philippinen. Theil II. Bd. ii. Heft 15; Bd. iv. zweite Hälfte.

Sharpe's edition of Layard's Birds of South Africa. Part vi. (completed).

Les Arachnides de Frauce. Tome v. parts 2, 3. Sowerby's Thesaurus Conchyliorum. Parts xli., xlii.

Staudinger. Exotische Schmetterlinge. Lief. 1-5. Sundman. Finlands Fiskar. Parts 1, 2.

Finska Fogelägg. Häft 5.

Thompson. Opuscula Entomologica. Part ix. Tryon. Manual of Conchology. Parts xxi.-xxiv.

Midden-Sumatra. Parts i.-vii.

Vogt et Yung. Traité d'Anatomie Comparée. Lief. 4, 5.

Waterhouse. Aid to the Identification of Insects. Parts xxi., xxii. Yarrell's British Birds. Parts xxi.-xxvi.

Some of the most important additions to the Society's Library, purchased since the last Anniversary, are the following :---

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Agassiz and Gould. Outlines of Comparative Physiology. 8vo,

Annales du Musée d'Histoire Naturelle, Marseille. 4to, 1883.

Artedi. Ichthyologia. 8vo, 1738; ed. 2, 3 vols. 1788–93.

Baird, Brewer, and Ridgway. Water-birds of North America. 2 vols. 4to, 1884.

Barbut. The Genera Vermium. 4to, 1783.

Bartram. North and South Carolina, Georgia, &c. 8vo, 1792.

Baudi et Truqui. Studi Entomologici. 8vo, 1848.

Blaine. Rural Sports. 8vo, 1852.

Bloch. Fische Deutschlands. 8vo, 1783–85.

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Bock. Temples and Elephants. 8vo, 1884. Boheman. Insecta Caffrariæ. 2 vols. 8vo, 1848-57.

Boisduval. Spécies Général des Lépidoptères. 8vo. 1836.

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Bolton. Harmonia Ruralis. 2 vols. folio, 1794-96.

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Borkhausen. Naturgeschichte der Europäischen Schmetterlinge. 5 vols. 8vo, 1788-94.

Bourguignat. Mollusques Nouveaux. 8vo, 1863-70.

Bowdich. Mission from Cape Coast Castle to Ashantee. 4to, 1819. Brown. Illustrations of the Conchology of Great Britain. Folio, 1827.

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Dupont. Monographie des Trachydérides. 8vo, 1839. Dupuy. Mollusques. 2 vols. 4to, 1847-52. Ellis. Polynesian Researches. 2 vols. 8vo, 1829.

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Eyton. Catalogue of Birds in his possession. 8vo, 1856. . Natural History of the Oyster. 8vo, 1858.

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-. Die Familie der Seeschlaugen. 4to, 1856.

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Hitchcock. Geology, Zoology, &c. of Massachusetts. Text 8vo., Atlas 4to, 1883.

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Murray. Vertebrate Zoology of Sind. 8vo, 1884.

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Nicholson. Manual of Zoology. Ed. 5. 8vo, 1878. Nouveau Dictionnaire d'Hist. Nat. 24 vols. 8vo, 1803-4.

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Prejevalsky. Reisen in Tibet. 8vo, 1884. Pritchard. Animalcules. 8vo, 1834; new ed. 8vo, 1852.

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Quain's Anatomy. Ed. 9. 2 vols. 8vo, 1882.

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and Martius. Delectus Animalium Articulatorum. 4to, 1830.
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Insecta Britannica. Tineina. 8vo, 1854.

Tineina of Syria. 8vo, 1867.

Steindachner. Catalogue des poissons d'eau douce de Portugal. 4to, 1864–65.

Sterndale. Natural History of the Mammalia of India. 8vo, 1884. Stretch. Zygænidæ and Bombycidæ of North America. 8vo, 1872 - 73.

Sturm. Käfer. 23 vols. 8vo, 1805-57. Sweet. The British Warblers. 8vo, 1823. Syme. Song Birds. 8vo, 1823.

Taczanowski. Ornithologie du Pérou. T. i. 8vo. 1884.

Tenison-Woods. Fish and Fisheries of New South Wales. 8vo,

Tiedemann. Anatomie der Böhren-Holothurie. Folio, 1816.

Theobald. Catalogue of Recent Shells. 8vo, 1860. Thompson. Zoological Researches. 8vo, 1829.

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Tristram. Fauna and Flora of Palestine. 4to, 1884.

Tryon. Structural and Systematic Conchology. Vol. iii. 8vo, 1884.

Tschudi. Classification der Batrachier. 4to, 1838.

Turton. Conchological Dictionary of the British Islands. 8vo,

Manual of Shells. 8vo, 1857.

Verhandlungen des Naturforschenden Vereines in Brünn. Band i.xx. 8vo, 1863-82. Verteuil. Trinidad. 8vo, 1884.

Voet. Catalogus systematicus Coleopterorum. 2 vols. 4to, 1806.

Vogt. Les Mammifères. 4to, 1883.

Westwood. Butterflies of Great Britain. 8vo, 1855. -. The Entomologist's Text Book. 12mo, 1838.

White. Crustacea. 8vo, 1857.

—. Natural History of Selborne. Ed. E. Blyth. 8vo, 1836.

Wiedemann. Archiv für Zoologie. 5 vols. 8vo, 1800-6. Wilde. Narrative of a Voyage to Madeira. 8vo, 1840. Willughby. Ornithologiæ libri tres. Sm. folio, 1676.

Wilson. Natural History of Birds. 4to, 1839. Wood. British Song-birds. 8vo, 1836.

—. General Conchology. 8vo, 1815. Zoography. 3 vols. 4to, 1807.

Wollaston. Variation of Species. 8vo, 1856. Zeitschrift für Entomologie. 8vo, 1847-61.

The following is a list of the periodicals received in 1884 from the various Societies and Institutions with which this Society is in correspondence.

#### Africa.

The South African Philosophical Society, Cape Town.

Transactions, vol. ii. part 3.

# AMERICA (NORTH).

- The Academy of Natural Sciences, Philadelphia.

  Journal, ser. ii. vol. ix. no. 1.

  Proceedings, 1883, parts 2, 3; 1884, parts 1, 2.
- The American Academy of Arts and Sciences, Boston. Proceedings, n. s., vol. x.; vol. xi. parts 1, 2.
- The American Association for the Advancement of Science.
  Proceedings, 31st Meeting, Montreal, 1882.
- The American Entomological Society, Philadelphia. Transactions, vol. x. nos. 2-4.
- The American Museum of Natural History, New York.

  Bulletin, vol. i. no. 5.
  Annual Report, 1884.
- The Linnean Society, New York.
  Transactions, vols. i., ii.
- The American Philosophical Society, Philadelphia.

  Proceedings, vol. xx. no. 113; vol. xxi. nos. 114, 115.

  Transactions, n. s., vol. xvi. no. 1.
- The Connecticut Academy of Arts and Sciences, Connecticut.

Transactions, vol. vi. part 1.

- The Boston Society of Natural History, Boston.

  Proceedings, vol. xxii. parts 2-4.

  Memoirs, vol. iii. nos. 8-10.
- The Davenport Academy of Natural Sciences, Davenport, Iowa.

Proceedings, vol. iii. no. 3.

- The Franklin Institute, Washington. Journal, 1884.
- The Royal Society of Canada.

  Transactions and Proceedings, vol. i.

The Museum of Comparative Zoology, Harvard College, Cambridge, Mass.

Bulletin, vol. xi. nos. 5-10. Memoirs, vol. viii. no. 3; vol. ix. no. 3; vol. x. nos. 1, 3. Annual Report, 1883-84.

The New York Academy of Sciences, New York.

Annals, vol. ii. nos. 10-13.

Transactions, vol. ii.

The Nova Scotia Institute of Natural Science.
Proceedings and Transactions, vol. vi. pt. 1.

The Philosophical Society of Washington.
Bulletin, vols. iv.-vi.

The Smithsonian Institution, Washington.
Annual Report, 1882.

# AMERICA (SOUTH).

The National Academy of Sciences of Cordoba, Buenos Aires.

Actas, tomo v. entr. 1. Boletin, tomo v. entr. 4; tomo vi. entr. 1-3. Informe del Presidente, 1883.

#### Australian Colonies.

The Royal Society of South Australia, Adelaide.
Transactions and Proceedings, vol. vi.

The Royal Society of Queensland, Brisbane. Proceedings, vol. vi. no. 9.

The Royal Society of Victoria, Melbourne.
Transactions and Proceedings, vol. xx.

The Linnean Society of New South Wales, Sydney. Proceedings, vol. viii. parts 3, 4; vol. ix. parts 1, 2.

The Royal Society of New South Wales.

Journal and Proceedings, vols. xvi., xvii.

- The Royal Society of Tasmania.

  Monthly Notices of Papers and Proceedings for 1882, 1883.
- The New-Zealand Institute, Wellington.
  Transactions and Proceedings, vol. xvi.
- The Colonial Museum and Geological Survey of New Zealand.

Reports of Geological Explorations, 1882-84. Annual Report (1883).

#### AUSTRIA.

- The University of Cracow.

  Proceedings, Band xvii.
- The Hungarian Academy of Sciences. Berichte, Band i., 1882-83.
- The Imperial Academy of Sciences, Vienna.

  Denkschriften, Band xlv., xlvi.
  Sitzungsberichte, Band lxxxvi. Heft 1-5; Band lxxxvii. Heft 1-5.
- The Zoological and Botanical Society, Vienna. Verhandlungen, Band xxxiii., 1883 (1884).

#### BELGIUM.

- The Entomological Society of Belgium, Brussels.
  Annales, tom. xxvii.
- The Royal Museum of Natural History, Brussels. Bulletin, tome ii. nos. 3, 4; tome iii. no. 1.
- The Royal Malacological Society of Belgium, Brussels.
  Annales, tome xvii. (1882).

#### EAST INDIES.

The Royal Society of the Dutch East Indies, Batavia.

Natuurkundig Tijdschrift, deel xlii., xliii.

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Proceedings, 1883, nos. 9, 10; 1884, nos. 1-9. Journal, vol. lii. part 1, nos. 3, 4; part 2, nos. 2-4; vol. liii. part 1, nos. 1, 2; part 2, nos. 1, 2.

The Geological Survey of India, Calcutta.

Records, vol. xvii. parts 1-4.

Memoirs, vol. xx. parts 1, 2.

Memoirs (*Palæontologia Indica*), Series 10, vol. ii. part 6; vol. iii. parts 1-5; Series 14, vol. i. fasc. 3, 4.

#### FRANCE.

The Academy of Sciences, Lyons.
Annales, sér. 5, tome iv.

The Museum of Natural History, Lyons.

Archives, tome iii.

The Agricultural Society, Lyons.
Annales, sér. 5, tome v.

The Linnean Society of Normandy, Caen. Bulletin, sér. 3, vol. vii.

The Entomological Society of France, Paris.
Annales, sér. 6, tome iii.

The Museum of Natural History, Paris.

Nouvelles Archives, sér. 2, tome vi. fasc. 1, 2.

The Society Philomatique, Paris.
Bulletin, sér. 7, tome viii. nos. 1-3.

The Zoological Society of Acclimatation, Paris. Bulletin, 1884.

The Natural-History Society of Toulouse. Bulletin, 1883-84.

#### GERMANY.

The Royal Prussian Academy of Sciences, Berlin.
Sitzungsberichte, 1884.
Abhandlungen, 1883.

- The Society of Friends of Natural History, Berlin. Sitzungs-Berichte, 1883.
- The Natural-History Union of Rhenish Prussia and Westphalia, Bonn.

Verhandlungen, 1883, Hälfte 2; 1884, Hälfte 1.

The Imperial Leopoldino-Carolinian Academy of Naturalists, Halle.

Nova Acta Leopoldina, Band xliv. Heft 18.

The Senckenbergian Natural-History Society, Frankfort a. M.

Abhandlungen, Band xiii. Heft 3, 4.

- The New Zoological Society, Frankfort a. M. Der Zoologische Garten, Jahr. xxv. (1884).
- The German Malacological Society, Frankfort a. M. Jahrbücher, 1884, nos. 1, 2, 4.
- The Royal Society of Sciences, Göttingen.
  Abhandlungen, Band xxx.
  Nachrichten, 1883.
- The Natural-History Society, Halle.
  Abhandlungen, Band xvi. Heft 2.
  Bericht, 1883.
- The Medical and Natural-History Society, Jena.

  Jenaische Zeitschrift, Band xvii. Heft 3, 4; Band xvii. Heft 3, 4; Band xviii. Heft 1.

  Sitzungsberichte, 1882, 1883.
- The Academy of Metz.
  Mémoires, 1880-81.
- The Royal Bavarian Academy of Sciences, Munich.
  Abhandlungen, Band xiv. Abth. 3.
- The Natural History Union, Würtemberg. Württembergische Jahreshefte, Jahrg. xl. (1884).

#### GREAT BRITAIN AND IRELAND.

The Belfast Natural-History and Philosophical Society, Belfast.

Proceedings, Sessions 1883-84.

The Birmingham Philosophical Society, Birmingham.

Proceedings, vol. iii. parts 1, 2; vol. iv. part 1.

#### The Royal Dublin Society.

Scientific Transactions, ser. 2, vol. iii. nos. 1-3; ser. 3, vol. i. nos. 20-25.
Scientific Proceedings, n. s., vol. iii. parts 6, 7; vol. iv. parts 1-4

## The Royal Irish Academy, Dublin.

Transactions (Science), vol. xxviii. nos. 14-16. Proceedings (Science), vol. iv. nos. 1, 2. —— (Antiquities), vol. ii. no. 5.

## The Royal Society, Edinburgh.

Proceedings, 1881–82, 1882–83. Transactions, vol. xxx. parts 2, 3; vol. xxxii. part 1.

# The Royal Physical Society, Edinburgh.

Proceedings, Sessions 1882-83, 1883-84.

#### The Essex Field Club.

Transactions, vol. iii. part 8. Report of Council, 1883.

# The Literary and Philosophical Society of Liverpool.

Proceedings, vols. xxxv.-xxxvii.

# The Royal Society of Literature, London.

Transactions, ser. 2, vol. xiii. part 1.

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Philosophical Transactions, vol. clxxv. part 1.

## The Linnean Society, London.

Transactions (Zoology), vol. ii. parts 7-10, 13; vol. iii. parts 1, 2.

—— (Botany), vol. ii. parts 5-7.

Journal (Botany), vol. xx. nos. 130, 131 vol. xxi. nos. 132-135.

—— (Zoology), vol. xvii. no. 102; vol. xviii. nos. 103-106.

# The Royal Geographical Society, London.

Proceedings, vol. vi. (1884).

# The Geological Society, London.

Quarterly Journal, vol. xl. List of Fellows of the Society, 1884.

# The Royal Institution of Great Britain, London.

Proceedings, vol. x. parts 2-3. List of Fellows of the Society, 1882, 1883.

#### The British Association for the Advancement of Science, London.

Report for 1883.

#### The Royal Asiatic Society of Great Britain and Ireland, London.

Journal, new series, vol. xvi.

# The Royal Agricultural Society of England, London. Journal, ser. 2, vol. xx. parts 1, 2.

# The Entomological Society, London.

Transactions, 1883, part 5; 1884, parts 1-4.

# The Quekett Microscopical Club, London.

Journal, ser. 2, vol. i. nos. 7, 8; vol. ii. nos. 9, 10.

# The Royal Microscopical Society, London.

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# The Literary and Philosophical Society, Manchester.

Proceedings, vols. xx.-xxii. Memoirs, ser. 3, vols. vii., ix.

# The Tyneside Naturalists' Field Club, Newcastle.

Transactions, vol. viii. part 1.

- The Norfolk and Norwich Naturalists' Society, Norwich. Transactions, vol. iii. parts 4, 5.
- The Plymouth Institution and Devon and Cornwall Natural-History Society, Plymouth.

  Annual Report and Transactions, vol. viii. part 3.

The Royal Institution of Cornwall, Truro.

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#### HOLLAND.

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Donations, Memoirs, and Papers have also been received from: - Professor Albrecht; the Editors of the 'American Journal of Science'; the Editors of the 'American Naturalist'; Professor John Anderson; the Editors of the 'Archiv für Naturgeschichte'; the Trustees of the Australian Museum; Professor J. V. Barboza du Bocage; T. W. Blakiston, Esq.; Dr. W. Blasius; the Trustees of the British Museum; Dr. H. Burmeister; Dr. L. Camerano; the Geological and Natural History Survey of Canada; Professor Giovanni Canestrini; Professor P. Martin Duncan; Robert Collett, Esq.; the Editor of the 'Entomologisk Tidskrift'; Sir Joseph Fayrer; Professor Flower; S. Garman, Esq.; Dr. H. H. Giglioli; Lieut.-Col. H. H. Godwin-Austen; J. H. Gurney, Jr., Esq.; Dr. James Hector; Dr. J. G. Hidalgo; A. W. Hill, Esq.; Dr. Emil Holub; the Editors of the 'Journal of Comparative Medicine and Surgery'; the Editors of the 'Journal de Conchyliologie'; the Editors of the 'Journal of Science'; Monsieur Fernand

Lataste; Professor Lilljeborg; the Library Committee of the Liverpool Public Library; Professor S. Lovén; F. P. Marrat, Esq.; W. M. Maskell, Esq.; Professor H. Mohn; John Murray, Esq.; the Royal Norwegian University of Christiania; Sir Richard Owen; E. C. Phillips; Monsieur Napoleone Pini; Dr. Gustav Radde; Dr. Gustaf Retzius; Professor L. Rütimeyer; E. C. Rye, Esq.; P. L. Sclater, Esq.; Thomas Southwell, Esq.; Dr. J. E. Spångberg; the Royal College of Surgeons; Dr. F. H. Troschel; the United States Entomological Commission; the United States Commission of Fish and Fisheries; the United States Fish Commission; the United States Geological Survey; the University College of London; and F. H. Waterhouse, Esq.

# III. GARDENS, REGENT'S PARK.

#### 1. WORKS AND REPAIRS.

In consequence of the large expenditure upon the New Offices, it was not thought advisable to undertake any important new buildings in the Society's Gardens in 1884. But the ordinary staff of workmen was kept fully employed throughout the year on various small works and repairs, and the numerous buildings and yards have been kept in good order. Amongst the chief buildings overhauled and repaired in 1884 may be mentioned the Clock-tower, the Elephant-house, the Greenhouses used by the Gardener, and the Head Keeper's Lodge. A set of new cases for smaller objects was prepared and fixed in the Reptile-house. A large part of the iron Boundary Fence between the Gardens and the Park has been repaired, scraped, and repainted. A new shed for the Gardener's use has been erected in place of one accidentally destroyed by fire on the first of May last. The old boiler and adjoining pipes at the Bears' dens have been taken out and replaced, and the whole of the heating-apparatus put into thorough repair. The remaining portions of the Kangaroo sheds have been rebuilt on a better form, and the yards extended and covered with glass, and part of the Western Aviary has been repaired and painted.

#### 2. STAFF.

The permanent Staff of the Society's Gardens remains the same as at the last Anniversary. It consists of:—

1 Superintendent.

1 Assistant Superintendent.

1 Head Keeper.

6 Keepers (1st class).

9 Kcepers (2nd class).

9 Keepers (3rd class).

4 Money-takers.

1 Storekeeper.

1 Cook.

1 Office Clerk.

1 Prosector's Assistant.

1 Head Gardener.

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Besides these there are 19 Helpers in the Menagerie, 13 Garden-labourers, 7 Artisans, 4 Painters, 9 Labourers, 1 Butcher, 2 Firemen, 2 Night-Watchmen, and 1 Time-keeper employed at weekly wages; so that the number of the whole staff may be reckoned at about 94 persons.

#### 3. VISITORS.

The total number of visitors to the Society's Gardens during the year 1884 was 745,460, as will be seen by the following Table, which gives the corresponding numbers of entrances under each head for 1883 and 1884:—

#### Visitors to the Gardens.

	1883.	1884.	Comparison.
Fellows and Friends	208,358 171,641	225,874 175,691	Incr. 17,516 Incr. 4,050
Paying On Mondays and other days at 6d. each	292,730	252,021	Decr. 40,709
6d. each	50,221	71,896	Incr. 21,675
School Children (admitted free)	20,535	19,978	Decr. 557
	743,485	745,460	Incr. 1,975

The subjoined Table contains a statement of the Number of Visitors to the Society's Gardens during each year, from the year 1828 to the year 1884.

Number of Visitors to the Gardens, 1828-84.

Year, Number.	Year. Number.
1828 98,605	1857 339,217
1829 189,913	1858 351,580
1830 223,420	1859 364,356
1831 262,193	1860 394,906
1832 206,652	1861 381,837
1833 211,343	†1862 682,205
1834 208,583	1863 468,700
1835 210,068	1864 507,169
1836 263,372	1865 525,176
1837 173,778	1866 527,349
1838 179,197	1867 556,214
1839 158,432	1868 573,186
1840 141,009	1869 572,848
1841 132,616	1870 573,004
1842 107,459	$1871 \dots 595,917$
1843 98,280	$1872 \dots 648,088$
1844 101,527	$1873 \dots 713,046$
1845 99,615	$1874 \dots 706,907$
1846 100,045	1875 699,918
1847 93,546	‡1876 915,764
1848 143,630	$1877 \dots 781,377$
1849 168,895	1878 706,713
$1850 \dots 360,402$	1879 643,000
*1851 667,243	1880 675,979
1852 305,203	1881 648,694
1853 409,076	1882 849,776
1854 407,676	1883 743,485
1855 315,002	1884 745,460
1856 344.184	† Year of the International Exhibition.
* Year of the Great Exhibition.	Year of the exhibition of the Prince of Wales's Indian Menagerie.
<u>                                    </u>	

#### 4. PROSECTOR'S DEPARTMENT.

Mr. F. E. Beddard, the Prosector to the Society, reports that the number of deaths in the Menagerie during the present year was 1102, being an increase of 46 upon last year.

Among the more important deaths are noticed:-a

male Hapalemur griseus, from Madagascar, which had lived for exactly one year in the Society's Gardens. A few notes upon the anatomy of this interesting and little-known Lemur have been published by the Prosector in the 'Pro-The late keeper Lecomte was sent by the Society to Patagonia in the year 1868 to capture specimens of the Patagonian Sea-Lion (Otaria jubata). The specimen brought home on this occasion died in March last. having, therefore, lived for 16 years in the Gardens. proved, on dissection, to be a female, and probably died of old age, as there was no ascertainable cause of death. is generally the case with these animals, the stomach contained an immense number of small stones, weighing altogether 28 lbs. A female of the Cape Sea-Lion (Otaria pusilla), presented to the Society in 1871, was found, on post-mortem examination, to be gravid. The large size of the embryo calf was possibly the cause of its death. animal was sent after death to Mr. J. W. Clark, of Cambridge, who has promised a communication on the subject to the Society. A male Babirussa only survived for 9 months; the skin was sent to Mr. Collett for the Christiania Museum. A striking instance of the longevity of Parrots is afforded by one of the Society's specimens of the Greater Vasa Parrot (Coracopsis vasa), which had lived for 54 years in the Gardens; the death of this specimen (a female) seems to have been simply due to old age. American Tapir (Tapirus terrestris) and an Echidna conclude the list of the more important deaths of the year 1884.

The additional rooms built on to the Prosector's department have been utilized by several gentlemen for the pur-Mr. Frederick Treves, F.Z.S., has been poses of research. engaged in investigating the mesentery and visceral bloodsupply of mammals; some of his results have been embodied in a course of lectures on the intestine delivered before the College of Surgeons. Materials from these Gardens have been supplied to Dr. Hoggan, Dr. Cuningham, Prof. Turner, and Prof. Wiedersheim, and specimens have been sent to the following Museums: - British Museum; Oxford University Museum; Queen's College, Galway; University College, Dundee, besides those already mentioned. pathological material has been handed over to Mr. J. B. Sutton, F.Z.S., and papers on his results have been published in the 'Proceedings' and elsewhere.

#### 5. ZOOLOGICAL LECTURES.

The Zoological Lectures, to which the proceeds of the Davis Trust-fund have been devoted for several years, were continued in 1884. They will likewise be given this year in the Lecture-room in the Society's Gardens, on Thursdays at 5 P.M., commencing June 4th.

The following is a list of the lecturers and subjects for the present year:—

Date.	Subject.	Lecturer.			
2. " " 11 3. " 18 4. " 25 5. " July 2 6. " 9	Rhinoceroses and their extinct Allies Apes and Lemurs The Structure of the Swan The Domestic Cat Recent Advances in Zoology The Ancestors of Birds The Animals of New Guinea	Prof. Flower, LL. D., V. P. R. S. Dr. St. George Mivart, F. R. S. Prof. W. K. Parker, F. R. S. J. E. Harting, Esq., F. L. S. Prof. F. Jeffrey Bell, M. A. F. E. Beddard, Esq., M. A.			

These Lectures will be free to Fellows of the Society and their Friends, and to other Visitors to the Gardens.

#### 6. MENAGERIE.

#### a. Additions to the Menagerie in 1884.

The number of animals belonging to the first three classes of Vertebrates living in the Society's Menagerie at the close of 1884 was 2501. The corresponding number on the 31st of December, 1883, was 2398, as will be seen by the subjoined Table:—

	Decem	ber 31.	Comparison.		
	1883.	1884.	Comparison.		
Quadrupeds Birds Reptiles	1398	731 1423 347	Incr. 25 Incr. 78		
	2398	2501	Incr. 103		

The total number of registered additions to the Menagerie in 1884 was 1706, of which 646 were acquired by presentation, 524 by purchase, 174 were bred in the Gardens, 229 were received on deposit, and 133 obtained in exchange.

The mode in which these figures compare with those of previous years is shown in the subjoined table:—

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1874.	425	296	214	242	25	1202
1875.	559	557	156	143	43	1458
1876.	533	316	171	172	27	1219
1877.	506	324	181	181	68	1260
1878.	511	272	150	178	71	1182
1879.	550	421	115	124	56	1266
1880.	624	515	148	161	40	1488
1881.	565	310	167	136	35	1213
1882.	772	402	113	111	25	1423
1883.	637	376	128	219	28	1388
1884.	646	524	174	229	133	1706

The following is a list of the most noticeable additions made to the Menagerie during the year 1884:—

1. A young female Babirussa (Babirussa alfurus), born January 16th, of one of the females presented by Dr. F. H. Bauer, C.M.Z.S., in July last. This is the first instance of this singular animal having bred in the Society's Gardens.

2. A young example of a small species of Cormorant, apparently the African Cormorant (*Phalacrocorax africanus*), purchased January 31st, and said to have been received from Sierra Leone.

This species was new to the Society's Collection.

3. A young specimen of the Red-eared Monkey (Cercopithecus erythrotis), purchased February 14th. This Cercopithecus was originally described by Mr. Waterhouse in our 'Proceedings' for 1838 from an imperfect skin, and subsequently figured by Fraser in his 'Zoologia Typica,' plate iv.

4. A fine female example of what appears to be Martin's Monkey (*Cercopithecus martini*) from Fernando Po, purchased February 19th. This species is a close ally of the Lesser White-

nosed Monkey (Cercopithecus petaurista).

5. An example of a rare Ichneumon from Ceylon, Maccarthy's Ichneumon (*Herpestes maccarthice*), purchased February 23rd.

6. Two Nepalese Hornbills (Aceros nepalensis), purchased April 4th, being the first examples of this fine species of Hornbill that have been acquired by the Society.

7. A fine Gigantic Salamander of Japan (Megalobatrachus

maximus), purchased April 23rd.

8. A series of animals collected by C. T. Kettlewell, Esq., F.Z.S., during the voyage of the yacht 'Marchesa' in the Eastern Archipelago, amongst which were three examples of the Lesser Bird of Paradise (*Paradisea minor*). These are still living in excellent condition.

9. A fine example of the Mediterranean Seal (Monachus albiventer), an animal now growing scarce and difficult to procure, purchased April 26th.

10. A Banded Gymnogene (*Polyboroides typicus*), purchased April 30th. This is the first example of this very curious bird

of prey that has been acquired for the Collection.

11. A Tree-Porcupine, purchased May 1st, probably referable to Sphingurus spinosus, which is new to the Society's Collection.

12. Four Soft-billed Ducks (Hymenolæmus malacorhynchus), received May 17th from the Acclimatization Society of Canterbury, New Zealand. Of this fine species we have previously had

but one living specimen.

13. Two pairs of Francolins, obtained by Mr. E. Lort Phillips, F.Z.S., on the Somali Coast, and presented by him May 23rd. One pair of these birds is referable to the Red-throated Francolin (Francolinus rubricollis), of which a single specimen has been previously in the Society's Collection; the other pair seem to belong to the rare Kirk's Francolin (Francolinus kirki).

14. Two Red-cheeked Colies (Colius erythrometon), purchased June 12th. We have only once before received living examples of this peculiar African type, and the present species is new to

the Collection.

15. Two Chaplain Crows (Corvus capellanus), presented June 25th by B. T. Ffinch, Esq., from Fao, Persian Gulf. We are glad to receive fresh examples of this interesting Crow, which was first described from living specimens in the Society's Gardens in 1876.

16. A second specimen of the Heloderm Lizard (Heloderma suspectum), received in exchange from the Central-Park Mena-

gerie, New York, U.S.A., July 3rd.

17. A collection of Snakes from Japan and North America, brought home and presented to the Society by Gerald Waller, Esq., F.Z.S., July 22nd, amongst which are representatives of five species new to the Collection, viz.:—The Four-banded Snake (Elaphis quadrivirgata) and Blomhoff's Snake (Trigonocephalus blomhoff), from Japan: the American Black Snake (Coluber constrictor), the Mexican Snake (Pituophis mexicanus), and the Cyclopion Snake (Tropidonotus cyclopion), from North America.

18. A young female Cape Sea-Lion (Otaria pusilla), from South Africa, presented to the Society by Capt. John Hewat, Superintendent of the Docks, Cape Town, July 25th. This Seal formed a particularly acceptable addition to the Collection, as we had just lost our former specimen of the Cape Sea-Lion, which was presented to the Society by Sir Henry Barkly, C.M.Z.S., and

lived nearly thirteen years in the Gardens.

19. An African Barbet (*Trachyphonus purpuratus*), purchased July 29th, being the first example of this form of Barbet we have received alive.

20. A Somali Wild Ass (Equus somalicus), from Somali Land,

received in exchange August 11th.

21. Two Blue Snow-Geese (*Chen cærulescens*), from Alaska, obtained by purchase August 11th. These birds are exhibited for the first time in the Society's Gardens.

22. A Fringed Gecko (*Ptychozoon homalocephalum*), from Java, and six Black-spotted Toads (*Bufo melanostictus*), also from Java. Presented to the Society by Dr. F. H. Bauer, C.M.Z.S.

23. A pair of Tasmanian Wolves (*Thylacinus cynocephalus*), obtained by purchase from Mr. B. Crowther, of Launceston, Tasmania, and received November 14th, being the first examples of this animal received since the pair presented by Mr. Ronald Gunn in 1863. These animals are apparently nearly adult, in good condition, and seem likely to do well.

24. An example of the Red-tailed Amazon (Chrysotis erythrura), being the second we have received of this rare species.

the locality of which has not yet been ascertained.

25. A Muntjac, deposited by Mr. H. E. Dresser, F.Z.S., on December 20th, which appears to belong to a species distinct from any yet described, and has been described by the Secretary as the Hairy-fronted Muntjac (Cervulus crinifrons, sp. n.). This animal is readily distinguishable from the Muntjacs hitherto known to us by the long hairs which spring from the forehead and summit of the head, and almost conceal the short horns, and by its much longer tail. The single male specimen received was transmitted to this country by A. Mitchie, Esq., of Ningpo, China, and was doubtless obtained in that part of China.

26. A young male Nubian Ibex (*Capra nubiana*), presented December 30th by Mrs. Laing, of Thornhill, Sunderland. This Ibex is accompanied by a Domestic Goat, with which it has bred and produced a male hybrid, which closely resembles its male

parent. The species is new to the Society's Collection.

#### b. List of Species new to the Collection.

The following list contains the specimens exhibited in 1884 which are referable to species not included in the last (eighth) edition of the List of Animals.

#### MAMMALS.

- 33 a. Cercopithecus martini, Waterh. Martin's Monkey. Hab. Fernando Po.
  - a. Female. Purchased, Feb. 19, 1884. See P. Z. S. 1884,
     p. 176, pl. xiv.

34a. Cercopithecus erythrotis, Waterh. Red-eared Monkey.

Hab. Fernando Po.

- a. Female. Purchased, Feb. 14, 1884. See P.Z. S. 1884,
   p. 176; and P.Z. S. 1838, p. 59.
- 200 a. Herpestes jerdoni, Gray. Jerdon's Ichneumon. Hab. India.
  - a. Purchased, April 22, 1884.
- 200b. Herpestes maccarthiæ, Gray. Maccarthy's Ichneumon.

Hab. Ceylon.

- a. Purchased, Feb. 23, 1884. See P. Z. S. 1884, p. 176.
  b. Purchased, July 17, 1884.
- 307 a. Pteropus scapulatus, Peters. Scapulated Fruit-Bat. Hab. Thursday Island, Australia.

  a. Purchased, May 27, 1884.
- 311 a. Vespertilio noctula, Schreber. Great Bat. Hab. British Islands.

a-f. Presented by Mr. W. Atkinson, Sept. 23, 1884. g, h. Presented by Capt. W. St. George Ord, Sept. 30, 1884.

399a. Sphingurus spinosus, F. Cuvier. Spiny Tree-Porcupine.

Hab. Brazil.

- a. Received in exchange May 1, 1884. See P.Z.S. 1884, p. 389, pl. xxxIII
- 438a. Equus asinus somalicus, Sclater. Somali Wild Ass. Hab. Somali-Land,
  - a. Male. Received in exchange, Aug. 11, 1884. See P.Z.S. 1884, pp. 540, 542, pl. L. fig. 1.
- 475 a. Gazella mohr (Bennett). Mohr Gazelle. Hab. North Africa.
  - a. Female. Purchased, July 22, 1884.

- 511 a. Capra nubiana, F. Cuvier. Nubian Ibex. Hab. Nubia.
  - a. Male. Presented by Mrs. Laing, Dec. 30, 1884. From the Soudan. See P. Z. S. 1885, p. 2.
- 524a. Cervulus crinifrons, Sclater. Hairy-fronted Muntjac.

Hab. China.

a. Male. Purchased, Dec. 20, 1884. See P. Z. S. 1885,p. 1, pl. 1.

#### BIRDS.

- 12a. Turdus castaneus (Gould). Grey-headed Thrush. Hab. Nepal.
  - a. Purchased, April 4, 1884.
- 56a. Anthus obscurus (Latham). Rock-Pipit.Hab. British Islands.a, b. Purchased, Dec. 1, 1884.

#### Genus Cochoa.

- 89 a. Cochoa viridis, Hodgson. Green Cochoa.Hab. Nepal.a. Purchased, April 4, 1884.
- 95 a. Zosterops simplex, Swinh. Chincse White-eye. Hab. China.
  - a. Presented by Mr. J. Abrahams, April 11, 1884.

#### Genus Chlorophanes.

101a. Chlorophanes atricapilla, Reichenb. Black-headed Sugar-bird.

Hab. Brazil.

a. Male. Presented by P. A. Fraser, Esq., Sept. 13, 1884.

#### Genus Stephanophorus.

118 a. Stephanophorus leucocephalus (Vieill.). Bluecrested Tanager.

Hab. Brazil.

a. Purchased, July 1, 1884.

197a. Hyphantornis superciliosus. Eyebrowed Weaver-bird.

Hab. West Africa.

a. Purchased, Feb. 15, 1884.

227a. Spermophila collaria (Vigors). Collared Finch. Hab. Brazil.

a. Male; b. Female. Purchased, Feb. 6, 1884.

244a. Ligurinus sinicus (Linn.). Japanese Greenfinch. Hab. Japan.

a. Male; b. Female. Purchased, May 8, 1884.

288 a. Emberiza striolata, Rüppell. Striolated Bunting. Hab. Africa.

a-c. Deposited, July 16, 1884.

#### Genus Junco.

294. Junco hyemalis (Linn.). Snow-bird.

Hab. North America.

a-d. Presented by F. J. Thompson, Esq., July 3, 1884.

374a. Cyanocitta yucatanica, Du Bois. Yucatan Blue Jay.

Hab. Yucatan.

a, b. Purchased, April 30, 1884.

387 a. Dendrocitta himalayensis, Blyth. Himalayan Tree-Pie.

Hab. Himalayas.

a, b. Purchased, April 4, 1884.

- 432a. Colius erythromelon, Vieill. Red-cheeked Coly. Hab. South Africa.
  - a, b. Purchased, June 12, 1884. See P. Z. S. 1884, p. 475, pl. xlv.
- 432 b. Colius nigricollis, Vieill. Black-necked Coly. Hab. West Africa.
  - a. Purchased, Oct. 20, 1884. See P. Z. S. 1884, p. 475, pl. xlv.
- 435 a. Halcyon smyrnensis, Steph. White-breasted Kingfisher.

Hab. India.

- a. Purchased, Sept. 22, 1884.
- 437a. Dacelo leachi (Lath.). Leach's Laughing King-fisher.

Hab. Queensland.

a. Presented by Dr. Carl Lumholtz, May 20, 1884.

#### Genus Aceros.

- 446a. Aceros nepalensis, Hodgs. Nepalese Hornbill. Hab. Nepal.
  - a, Male; b. Female. Purchased, April 4, 1884. See P. Z. S. 1884, p. 251.

#### Genus Trachyphonus.

- 472a. Trachyphonus purpuratus, Verr. African Barbet. Hab. West Africa.
  - a. Purchased, July 29, 1884.
- 617 a. Ara severa (Linn.). Severe Macaw. Hab. South America.
  - a. Purchased, April 22, 1884.
  - b. Deposited, Aug. 14, 1884.

- 646 a. Conurus perlatus (Spix). Pearly Conure. Hab. Lower Amazons. a, b. Purchased, Aug. 6, 1884.
- 743 a. Circus melanoleucus (Gmel.). Black-and-White Harrier. Hab. India.
  - a. Presented by Lord Lilford, F.Z.S., Dec. 9, 1884.
- 799a. Accipiter pileatus (Temm.). Pileated Sparrow-Hawk. Hab. Brazil. a. Purchased, Feb. 6, 1884.
- 806a. Astur tachiro (Daud.). Tachiro Goshawk. Hab. Africa.
  - a. Presented by Lord Lilford, F.Z.S., Nov. 24, 1884.

#### Genus Polyboroides.

- 840 a. Polyboroides typicus, Smith. Banded Gymnogene. Hab. South Africa.
  - a. Purchased, April 30, 1884. See P. Z. S. 1884, p. 251. b. (Young.) Deposited, Dec. 13, 1884.
- 872 a. Phalacrocorax africanus (Gm.). Pigmy Cormorant. Hab. West Africa.
  - a. Purchased, Jan. 31, 1884. See P. Z. S. 1884, p. 55.
- 953 a. Chen albatus (Cassin). Lesser Snow-Goose. Hab. North America. a-c. Purchased, Nov. 21, 1884.
- 953b. Chen cærulescens (Linn.). Blue Snow-Goose. Hab. Alaska. a, b. Purchased, Aug. 11, 1884.

- 998 a. Querquedula cyanoptera (Vieill.). Blue-winged Teal. Hab. South America.
  - a. Male. Received in exchange, Nov. 5, 1884.
- 1081 a. Turtur tigrinus (Temm.). Tigrine Turtle-Dove.

  Hab. Borneo.

  a, b. Purchased, May 5, 1884.
- 1146a. Francolinus kirki, Hartl. & Finsch. Kirk's Francolin.

Hab. Somali-Land.

- a, b. Presented by E. Lort Phillips, Esq., F.Z.S., May 23, 1884. See P. Z. S. 1884, p. 389.
- 1306 a. Fulica americana, Gm. American Coot.
  Hab. North America.
  a. Presented by F. J. Thompson, Esq., July 3, 1884.

#### REPTILES.

#### Genus Gehyra.

- 102a. Gehyra mutilata (Wiegm.). Maimed Gecko. Hab. Java.
  - a. Deposited, Sept. 29, 1884.

#### Genus Ptychozoon.

99a. Ptychozoon homalocephalum (Creveldt). Flying Gecko.

Hab. Java.

- Presented by Dr. F. H. Bauer, C.M.Z.S., Aug. 15, 1884.
- 110 a. Varanus bengalensis (Daud.). Bengal Monitor. Hab. Bengal.
  - a, b. Received in exchange, Oct. 20, 1884.

#### Genus Tropidosaura.

123 a. Tropidosaura algira (Linn.). Algerian Tropidosaure. Hab. North Africa.

a, b. Presented by W. C. Tait, Esq., C.M.Z.S., June 23, 1884. From South Portugal.

#### Genus Acanthodactylus.

123b. Acanthodactylus vulgaris, Dum. et Bibr. Spine-foot Lizard.

Hab. North Africa.

a-c. Presented by W. C. Tait, Esq., C.M.Z.S., June 23, 1884. From South Portugal.

160 a. Iguana rhinolophus, Wiegm. Nose-crested Iguana. Hab. Nicaragua.

a. Presented by Albert Vidler, Esq., Feb. 11, 1884.

#### Genus Cyclura.

161 a. Cyclura nubila, Gray. Clouded Iguana. Hab. Cuba.

a. Received in exchange, July 3, 1884.

#### Genus Basiliscus.

161 b. Basiliscus vittatus, Wiegm. Banded Basilisk. Hab. Nicaragua.

a. Presented by Albert Vidler, Esq., Feb. 11, 1884.

192a. Boa imperator, Daud. Emperor Boa. Hab. Central America.

a. Deposited, May 27, 1884.

#### Genus Ungalia.

199a. Ungalia maculata (Bibron). Maculated Snake.

Hab. Island of New Providence, Bahamas.

a, b. Presented by Mrs. Blake, July 3, 1884.

231a. Tropidonotus cyclopion, Dum. et Bibr. Cyclopion Snake.

Hab. North America.

- a. Presented by Gerald Waller, Esq., F.Z.S., July 22, 1884.
- 238a. Pituophis mexicanus, Dum. et Bibr. Mexican Snake.

Hab. Mexico.

- a. Presented by Gerald Waller, Esq., F.Z.S., July 22, 1884.
- 242 a. Coluber constrictor, Linn. American Black Snake. Hab. North America.
  - a-c. Presented by Gerald Waller, Esq., F.Z.S., July 22, 1884.
- 243a. Elaphis quadrivirgata (Boie). Four-banded Snake. Hab. Japan.
  - a-f. Presented by Gerald Waller, Esq., F.Z.S., July 22, 1884.
- 288a. Vipera aspis, Latr. Asp Viper. Hab. Italy.

a. Purchased, May 13, 1884.
b-d. Purchased, June 6, 1884.
e-j. Purchased, June 17, 1884.

- 306a. Trigonocephalus blomhoffi, Boie. Blomhoff's Snake. Hab. Japan.
  - a. Presented by Gerald Waller, Esq., F.Z.S., July 22, 1884.

#### BATRACHIANS.

1a. Rana fortis, Boulenger. River-Frog. Hab. Germany.

a-d. Presented by G. A. Boulenger, Esq., F.Z.S., May 27, 1884.

16a. Bufo melanostictus, Schneid. Black-spotted Toad. Hab. Java.

*a-f.* Presented by Dr. F. H. Bauer, C.M.Z.S., Aug. 15, 1884.

c. List of Animals bred in the Gardens during the year 1884.

#### MAMMALS.

1 Black Lemur (Lemur macaco).

1 White-fronted Lemur (Lemur albifrons).

2 Ring-tailed Lemurs (Lemur catta).

1 Maholi Galago (Galago maholi).

4 Lions (Felis leo).

- 1 Levaillant's Cynictis (Cynictis penicillata).
- 3 Collared Fruit-Bats (Cynonycteris collaris). 3 Canadian Beavers (Castor canadensis).
- 42 Long-fronted Gerbilles (Gerbillus longifrons).

15 Coypus (Myopotamus coypus).

1 Canadian Porcupine (Erithizon dorsatus).

1 Zebu (Bos indicus).

1 Three-quarter-bred American Bison. (Bred between male Bison americanus and a female bred between a male Bison americanus and a female hybrid between Bos frontalis and Bos indicus.)

1 Gayal (Bibos frontalis).

1 Philantomba Antelope (Cephalophus maxwelli).

1 Burrhel Wild Sheep (Ovis burrhel).

2 Red Deer (Cervus elaphus).

1 Wapiti Deer (Cervus canadensis).

- 1 Hybrid Lühdorf's Deer. (Between Cervus luehdorfi and C. canadensis.)
- 2 Japanese Deer (Cervus sika).

1 Hog-Deer (Cervus porcinus).

2 Axis Deer (Cervus axis).

1 Mesopotamian Fallow Deer (Dama mesopotamica).

1 Hybrid Mesopotamian Fallow Deer. (Between Dama mesopotamica and Dama vulgaris.)

1 Three-quarter-bred Mesopotamian Fallow Deer. (Between Dama mesopotamica and hybrid Dama vulgaris.)

2 Virginian Deer (Cariacus virginianus).

1 Mexican Deer (Cariacus mexicanus).

2 Mule Deer (Cariacus macrotis).

1 Pygmy Hog (Porcula salvania).

1 Babirussa (Babirussa alfurus).

2 Vulpine Phalangers (Phalangista vulpina).

1 Red Kangaroo (Macropus rufus).

1 Great Kangaroo (Macropus giganteus).

#### BIRDS.

4 Chinese Blue Magpies (Cyanopolius cyanus).

6 Cockateels (Calopsitta novæ-hollandiæ).

- 6 Magellanic Geese (Bernicla magellanica). 3 Common Sheldrakes (Tadorna vulpanser).
- 2 Variegated Sheldrakes (*Tadorna variegata*). 4 Australian Wild Ducks (*Anas superciliosa*).

5 Chilian Pintails (Dafila spinicauda). 6 Chiloe Wigeon (Mareca chiloensis).

5 Summer Ducks (Æx sponsa).

1 Mandarin Duck (Æx galericulata).

4 Himalayan Monauls (Lophophorus impeyanus).

5 Sonnerat's Jungle-Fowl (Gallus sonnerati).

12 Hybrid Ceylonese Jungle-Fowls. (Between Gallus stanleyi and Gallus bankiva.)

1 Argus Pheasant (Argus giganteus).

2 Emus (Dromæus novæ-hollandiæ).

## d. List of the Donors and their Donations for the year 1884.

Abrahams, Mrs.

One Javan Maja Finch.

Abrahams, Mr. J.

One Chinese White-eye, one Brush-tailed Kangaroo, two Swift Parrakeets.

Adams, Master W. T.

One Banded Ichneumon.

Airey, Mr. George.

One Macaque Monkey.

Aitchison, A., Esq.

One Common Hedgehog.

Alldridge, Mrs. E. A.

One Lesser White-nosed Monkey.

Alldridge, Thos. J., Esq.

Two Angolan Vultures, one African Tantalus, one White-necked Stork.

Allen, R. F. J. Corbett, Esq., F.Z.S. Two Common Peafowl.

Aloof, S., Esq.

Three Herring-Gulls.

Andrade, Mrs.

Two Alligators.

Armytage, Richard, Esq.

One Rhesus Monkey.

Ash, E. C., Esq.

Two Undulated Grass-Parrakeets.

Astley, Hubert D., Esq., F.Z.S. One White Stork.

Atkinson, Mr. W.

Six Great Bats.

Baldwin, Mr. J.

One Wood-Owl.

Bamford, H., Esq.

One Common Buzzard, one Peregrine Falcon.

Barrow, G. S. Malet, Esq. One Brown Capuchin.

Batchelder, Mrs.

One Toque Monkey.

Battam, Miss K. M.

One Ring-tailed Coati.

Bauer, Dr. F. H., C.M.Z.S.

Six Black-spotted Toads, one Two-banded Monitor, one Flying Gecko, one Reticulated Python, one Java Porcupine, one Two-streaked Python.

Baum, F. E., Esq. One Kestrel.

Begg, Mr. A.

One Alligator, one Horrid Rattlesnake.

Bennett, Mr. W. J.

One Macaque Monkey.

Benthal, Dr.

One Pig-tailed Monkey.

Bentley, J. H., Esq.

Two Black-eared Marmosets.

Berg, Mr. Emil.

Three Eastern Turtle-Doves, two Barred Doves.

Biehl, J., Esq.

One Ring-necked Parrakeet.

Blake, Mrs.

One Pale-headed Tree-Boa, one Antillean Suake, two Maculated Snakes.

Blaker, W. E., Esq.

Four Common Vipers.

Bloar, F., Esq.

One Black-footed Penguin.

Blyth, Master Arthur.

One Great Grey Shrike.

Boljohn, Mrs. J. N. L.

One Bonnet-Monkey.

Boon, A., Esq., F.R.C.S.

Three Violaceous Night-Herons.

Boulenger, G. A., Esq., F.Z.S. Four River-Frogs.

Bowden, A., Esq.

One Green Monkey, one Ludio Monkey.

Brainthwaite, Harrison, Esq., M.D. One Macaque Monkey.

Brassey, Lady, F.Z.S.

One Common Rhea.

Brassey, Miss Mary Adelaide.

One Crab-eating Opossum.

Brassey, Miss Muriel Agnes.

One White-fronted Capuchin.

Brierly, Master A.

One Spanish Terrapin.

Brinkley, W. G., Esq.

One Common Chameleon.

Broderick, G. A., Esq.

One Moustache Monkey.

Brown, Lieut., H.M.S. 'Malabar.' One Arabian Gazelle.

Browne, Major-Gen. H. A. One Golden Eagle.

Brunton, Miss E.

Five European Tree-Frogs.

Buck, E. C., Esq., C.M.Z.S. One Cheer Pheasant.

Bulkeley, T. A., Esq.

One Indian Wild Dog.

Bulteel, J., Esq.

One Vervet Monkey.

Burch, W., Esq.

Two Daubenton's Curassow, one Common Guineafowl.

Burrows, O., Esq.

One Short-eared Owl.

Burrows, Mr. W. G.

One Rose-ringed Parrakeet.

Cameron, J. A., Esq.

One Vervet Monkey.

Chapman, J. R., Esq.

Two Cape-crowned Cranes.

Cheadle, W. B., Esq., F.Z.S.

Two St.-Helena Seed-eaters.

Cheetham, J. H., Esq., F.Z.S. Two Diana Monkeys.

Church, H., Esq.

Two Barn-Owls.

Clark, Mr. W. P.

One Tawny Owl.

Clifton, Charles, Esq., F.Z.S.

Two Javan Peafowls, six Amherst Pheasants, two Rose-crested Cockatoos, eight Himalayan Monauls, one White-backed Piping-Crow, one Blue-and-Yellow Macaw, one Red-sided Eclectus, three Leadbeater's Cockatoos, three Greater Sulphur-crested Cockatoos, One Siamese Blue Pie.

Colvin, R. B., Esq.

One Anubis Baboon, one Barbary Ape.

Conklin, W. A., Esq., C.M.Z.S.

One Hutchin's Goose, one King Vulture.

Cooper, Miss Elise.

One Black-headed Gull.

Cooper, Percy H.

One Himalayan Bear.

Courage, C. M., Esq.

One Ring-tailed Coati.

Craven, the Countess of.

One Barbary Ape.

Crawford, Lieut.-Col., R.A.
One Asiatic Wild Ass.

Cree, H. E., Esq., M.D. One Herring-Gull.

Cresswell, S.

One Leopard.

Cross, Mr. Wm.

One Common Viper.

Cumberland, Charles, Esq., F.Z.S.

Two Chinchillas.

Currie, Sir Donald, K.C.M.G. Two Sociable Vultures.

Dallymeyer, Master O.

One Long-eared Owl.

Dalmege, A. A., Esq., F.R.G.S. One Indian Python.

Daws, Thomas, Esq.

One Herring-Gull.

DeStafford, Edward, Esq. One Pine-Marten.

Dixon, J. W., Esq.

One Rose-Hill Parrakeet, one Cockateel.

Dobbin, W. R., Esq.
Three Suricates.

Drew, E., Esq.

One Macaque Monkey.

Drew, J. B., Esq.

One Grey Ichneumon.

Dring, J. W., Esq.

One Purple-faced Monkey.

Dundas, Mrs.

One Squirrel-Monkey.

Dunford, Miss J.

One Herring-Gull.

DuHeaume, Mrs.

One White-collared Mangabey.

Dunnage, Miss Laura.

One Herring-Gull.

Early & Co., Messrs. Chas.

One Common Otter.

Edwards, Mrs. A.

One Rhesus Monkey.

Edwards, Mrs.

Two Yellow-bellied Liothrix, one Goldfinch.

Egan, G. T., Esq.

One Bengalese Cat.

Eley, Thomas, Esq.

One Vervet-Monkey.

Elliott, J. B., Esq.

One Spur-winged Goose.

Elliott, Capt. J. Grant.

One Cape Hunting-Dog, one West-African Python, one Bosman's Potto.

Ellis, J. L., Esq.

One Bonnet-Monkey.

Evans, Dr.

Two Laughing Kingfishers.

Feilden, Major H. W., C.M.Z.S.

One Common Gull, three Black-headed Gulls, three Greater Black-backed Gulls, one Herring-Gull.

Fenwick, Miss Ethel.

Two Pig-tailed Monkeys.

Fergusson, Miss M. L.

One Greek Tortoise.

Ffinch, B. F., Esq., C.M.Z.S. Two Chaplin Crows.

Fisk, The Rev. G. H. R., C.M.Z.S.

Five Angulated Tortoises, four Geometric Tortoises, two Areolated Tortoises, two Secretary Vultures, two Robben-Island Snakes, two Spotted Slowworms.

Frank, Mrs.

One Marsh-Ichneumon, two Jackdaws.

Fraser, Mrs. Keith.

One Bonnet-Monkey.

Fraser, P. A., Esq.

Two Yellow-winged Sugar-birds, one Black-headed Sugar-bird.

Freeman, Miss H.

One Tawny Owl.

Fridrich, Mrs.

Two Herring-Gulls.

Frith, J. W., Esq.

One Huanaco.

Furness, Miss.

One Macaque Monkey.

Garrett, G. H., Esq.

One Barn-Owl.

Garrett, Major Newson D.
One Vervet Monkey.

German, H., Esq.

One Common Viper.

Getty, W., Esq.

One Indian Civet.

Gildea, Col.

One Chacma Baboon.

Gittens, Mrs. W.

One Barn-Owl.

Gliddon, A., Esq., LL.D.

One Canadian Porcupine.

Graeme, Mr. W.

One Bonnet-Monkey.

Green, A. McDonnett, Esq.

One Rhesus Monkey.

Grover, Mrs.

One Common Squirrel.

Gunn, Mr. T. E.

One Kestrel, one Water-Rail, one Sparrow-Hawk, one Long-eared Owl, one Heron, one Meadow-Pipit, eight Lesser Redpoles, one Moorhen, one Water-Rail, one Greater Black-backed Gull, one Linnet, one Common Tench, twenty-one River-Lampreys, two Slowworms, six Twites.

Gurney, J. H., Esq., F.Z.S. One Mute Swan.

Hagerman, Mr. J. M.

One Black Kite, one Macaque Monkey.

Haig, Miss Bertha.

One Common Fox.

Hairby, Capt.

One Adorned Ceratophrys.

Hairby, Mrs. E.

One West-Indian Rail.

Hale, F., Esq., F.Z.S.

One Undulated Grass-Parrakeet.

Halst, P. A., Esq.

One Common Squirrel.

Hambro, Chas., Esq.

Two Common Roes.

Hanauer, Mr.

Four Blue Titmice.

Hanrott, Master Conrad.

One Slowworm.

Hanrott, Master Harcourt.

Two Common Jackdaws.

Harbord, Miss.

One Rhesus Monkey.

Harling, J. H., Esq.

One Malbrouck Monkey.

Harris, The Rev. Chas.

Two Smooth Snakes.

Harris, J. M., Esq.

One Nilotic Crocodile, one Broad-fronted Crocodile.

Harrison, F., Esq.

One Macaque Monkey.

Hawtayne, G. H., Esq., C.M.Z.S.

One Crested Curassow, one Rough Fox, one Anaconda, one Guianan Tree-Porcupine.

Hay, Sir John H. Drummond -, K.C.B., C.M.Z.S.

One Striped Hyæna.

Haynes, Thos. H., Esq.

One Nicobar Pigeon.

Hayter, Lady.

One Razorbill.

Hemming, F. R., Esq.

Two Angulated Tortoises.

Henderson, Surg.-Major G. One Tuatera Lizard.

Henderson, J., Esq.

One Common Marmoset.

Hervey, C. H. A., Esq.

One Silvery Gibbon.

Hewat, John, Esq.

One Cape Sea-Lion.

Hobday, Lieut. E. A. P.

One Himalayan Bear.

Hoblyn, C., Esq.

One Pike.

Holloway, E. T., Esq.

One Grey Parrot.

Holub, Dr., C.M.Z.S.

One Dusky Ichneumon, one Marsh-Ichneumon.

Hopkins, Mr. C. G.

One Hedgehog.

Hudson, The Rev. Walter.

One Macaque Monkey.

Hutton, Miss Ethel A.

One Lesser White-nosed Monkey.

James, Lieut.-Col. W. Hill.

One Spotted Bower-bird.

Jamrach, Mrs. W.

Two White-breasted Gallinules.

Jamrach, Mr. W.

One Hodgson's Partridge, two Indian Kites.

Jay, T., Esq.

One Vulpine Phalanger.

Jennings, F. H., Esq.

One Common Chameleon, one Smooth Snake, one Common Viper.

Johnson, Cuthbert, Esq.

One Hardwicke's Mastigure.

Johnson, H., Esq.

One Rhesus-Monkey.

Jones, Mr. A.

One Martinique Waterhen.

Jones, Capt. Edward, R.N.R.

One Chacma Baboon, one Yellow Baboon.

Keilich, Mr. H.

One Blackcap.

Kelly, Mrs. Constance.

One Coypu. Kettlewell, C. T., Esq., F.Z.S.

Three Lesser Birds of Paradise.

Kettner, Madam.

One Bonnet-Monkey, one Macaque Monkey.

King, Capt. H.

One Harpy Eagle, one Red-billed Whistling Duck.

King, Mrs. J. M. A.

One Squirrel-Monkey.

King, N., Esq.

One Bonnet-Monkey.

Kingdom, H. W., Esq.

One Blue-and-Yellow Macaw.

Knowles, Lieut. James, R.N. One Garnet's Galago.

Knox, Col., C.B., and the Officers 1st Battalion Scots Guards. One Mouflon.

Laing, Mrs.

One Nubian Ibex, one Hybrid Nubian Ibex, one Domestic Goat.

Lake, G. R., Esq.

One Naked-footed Owl.

Lane, Howard, Esq.

One Macaque Monkey.

Lane, Wm., Esq.

One Leopard-Tortoise.

Langworthy, F., Esq.

One White-backed Piping Crow.

Larner, Capt.

One Spotted Eagle-Owl.

Lataste, Mons. F., C.M.Z.S.

One Shaw's Gerbille.

Latham, J., Esq.

One Bronze-winged Pigeon.

Latimer-road Mission, Committee of the.

One Bonnet-Monkey, one Rhesus Monkey.

Lawder, A. H., Esq.

One Vulpine Phalanger.

Lawson, Miss.

One Grand Eclectus.

Lax, W. T., Esq.

One Hawk-billed Turtle, one Sharp-nosed Crocodile.

Lee, G. H., Esq.

One Pig-tailed Monkey, one Bonnet-Monkey.

Leech, J. H., Esq.

One Tuberculated Iguana, one Green Lizard.

Lees, J. Compton. Esq. Two Choughs.

Legg, Mr. Thomas.

One Common Fox.

Levi, Samuel, Esq.

One Rhesus-Monkey.

Lewis, Mr.

One White-tailed Buzzard.

Lewis, L. B., Esq.

One Axis Deer.

Lilford, The Lord, F.Z.S.

One Tachiro Goshawk, four Allen's Porphyrios, one Black-and-White Harrier.

Livermore, H., Esq.

One Vulpine Phalanger.

Londesborough, The Lord, F.Z.S.

One Common Viper (black variety).

Long, Capt. D. C.

One Australian Fruit-Bat.

Lonsdale, Capt. Rupert La T.

One Ground-Hornbill.

Lumholtz, Dr. Carl.

One Leach's Laughing Kingfisher.

McArthur, Mrs. L.

One Common Paradoxure.

McCance, David, Esq.

One Bonnet-Monkey.

M'Clellan, Mr.

One Vulpine Phalanger.

McGregor, Allan, Esq.

Two Loggerhead Turtles.

Maegregor, G. D., Esq.

Two Herring-Gulls.

Maekern, Mrs. M. E.

One Bonnet-Monkey.

M'Gregor, James, Esq.

One Sambur Deer, one European Flamingo.

Makins, H. F., Esq., F.Z.S.

Three Black-eared Marmosets.

Mansel-Pleydell, J. C., Esq. One Common Roe.

Martin, C. J., Esq.

One Vulpine Phalanger.

Mcek, E., Esq.

Two King Parrakeets.

Meldrum, James, Esq.

Two Ring-tailed Coatis, one Tigrine Cat.

Mends, Capt. H.

One Horned Lizard.

Messum, Mr.

Two White-fronted Capuchins.

Middleton, C. D., Esq.

Two Black-eared Marmosets.

Middleton, R. Morton, Jun., Esq.

One Herring-Gull, one Alligator.

Miers, John W., Esq.

One Red-crested Cardinal.

Milles, W. J., Esq. One Proteus.

Mitchell, Mrs. St. John.

Two Bonnet-Monkeys.

Moir, Dr. Byres.

One Kinkajou.

Moir, Mrs. W.

One Laughing Kingfisher.

Moon, J. W., Esq.

One Vervet Monkey.

Moore, Mrs.

One Grey-breasted Parrakee+

Moray, Lieut.-Col. Drummond.

Two Peregrine Falcons.

Morgan, Dr. Llewellyn A.

Two Violet Tanagers.

Morris, D., Esq.

Two Red-tailed Buzzards.

Mortimer, Mrs. F.

One Macaque Monkey.

Mosely, F. S., Esq., F.Z.S.

Two North-American Flying-Squirrels.

Mossop, T. S., Esq.

One Common Cormorant.

Neill, Master A. J.

One Rhesus Monkey.

Netherwood, J. B., Esq.

One Arabian Baboon.

Nettleship, Mrs.

Two Red-beaked Weaver-birds.

Newman, Mrs.

One Rose-ringed Parrakeet.

Nind, F. L., Esq.

One North-African Jackal.

Norman, Mr. C. L.

One Bonnet-Monkey.

Oates, Eugene W., Esq., F.Z.S.

One Blossom-headed Parrakeet, one Banded Parrakeet, six Alexandrine Parrakeets.

Obicini, G. W., Esq., F.Z.S.

One European Tree-Frog.

Ogilby, R. O. L., Esq.

One Greater Sulphur-crested Cockatoo.

Oliver, Lieut. A. H., R.N. One Grey Ichneumon.

Oliver, E. R., Esq.

One Laughing Kingfisher.

Ord, Capt. W. St. George. Two Great Bats.

Packard, Mrs. A. M.

One Laughing Kingfisher.

Page, Robert, Esq.

One Bittern.

Pain, W. H. B., Esq.

Seven Smooth Snakes, five Common Vipers, two Common Snakes, one Slowworm.

Painter, E. A., Esq., F.Z.S.

One Green Turtle.

Parish, Frank, Esq., F.Z.S.

Two Rufous Tinamous, two Patagonian Cavies, one Hairy-rumped Agouti, one Ring-tailed Coati, two Tuberculated Iguanas, two Huanacos, one Coypu, two Peba Armadillos.

Parr, Master Julian George.

One Pampas Deer.

Parr-Charlton, Esq.

One Brush Bronze-winged Pigeon.

Paterson, W. H. J., Esq.

Two Spanish Terrapins.

Payne-Gallwey, Sir R. W., Bart. One Rough-legged Buzzard.

Payze, R., Esq.

One Prairie Wolf.

Perry, Miss.

One Ring-necked Parrakeet.

Petre, G. Glynn, Esq., F.Z.S. Two Rhesus Monkeys.

Petty, Mr. W.

One Argentine Tortoise.

Phillips, E. Lort, Esq., F.Z.S.

Two Kirk's Francolins, two Red-throated Francolins.

Phillips, W., Esq.
One Bonnet-Monkey.

Pigou, Mrs.

Two Herring-Gulls.

Pillans, C. B., Esq.

Eight Hoary Snakes.

Pillans, E., Esq.

One Cape Adder.

Plummer, H. P., Esq.

One Black-backed Jackal.

Pottier, Mr. George.

One Common Hare.

Pratt, J., Esq., F.Z.S.

One Great Grey Shrike.

Price, Mrs. C.

Two King Parrakeets, two Cockateels.

Pringle, Reginald, Esq.
One Dow's Tapir.

Prior, O. J., Esq.

One Red-and-Yellow Macaw.

Reed, F., Esq.

One Gold Pheasant.

Ricardo, P. R., Esq.

One Dingo.

Rickards, Rev. T.

One Bonnet-Monkey.

Roberts, Mr. John.

One Bonnet-Monkey, one Macaque Monkey.

Robertson, R. A., Esq.

One Robben-Island Snake.

Robinson, F. W., Esq.

One Ludio Monkey.

Rogers, Mr. A. R.

One Common Chameleon.

Rope, G. T., Esq.

Four Harvest Mice.

Roth, H. Ling, Esq.

One Wedge-tailed Eagle.

Rubie, George, Esq.
One Partridge.

Rundall, Gen., R.E.

One Rose-crested Cockatoo.

Russell, Claude, Esq.

One Brown Mud-Frog.

Russell, Mrs. E. A.

One Rhesus Monkey.

Russell, Mrs. S.

One Horned Lizard.

St. Aubyn, J. T., Esq. (Grenadier Guards).

Two Common Camels.

Sandwith, Thomas B., Esq.

One Grecian Ibex.

Satcherd, Mr. J.

Two Spotted Salamanders, one European Pond-Tortoise.

Scherren, H., Esq.

One Common Slowworm.

Scott, Colin W., Esq.

One Black-handed Spider-Monkey.

Shand, C. Arthur, Esq.

Two Black-billed Tree-Ducks.

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#### Conclusion.

In concluding their Report, which, the Council believes, gives, on the whole, a satisfactory account of every branch of the Society's affairs, the Council wish to acknowledge the assistance received from the Fellows of the Society in carrying on the business of the past year.

The labours of the Committee of Publication, in whom according to the By-Laws the control of the Scientific Meetings and Publications is vested, claim the Society's

recognition.

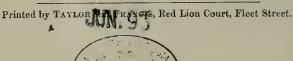
The Council have also to ask the Meeting to record their thanks to those Fellows who have served on the Committees of Finance and Audit during the past twelve months.

Signed (for the Council),

P. L. SCLATER,

Secretary.

3 Hanover Square, April 29th, 1885.



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OF LONDON,

FOR THE YEAR 1885.

READ AT THE ANNUAL GENERAL MEETING,

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Any Fellow, having paid all free due to the Society, is at liberty to withdraw his name upon giving withing to the Secretary.

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### REPORT

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OF LONDON,

FOR THE YEAR 1885.

READ AT THE ANNUAL GENERAL MEETING,

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### REPORT OF THE COUNCIL.

April 29, 1886.

THE Council have now the pleasure of submitting to the Fellows their fifty-seventh Annual Report upon the pro-

gress of the Society.

This, in accordance with previous Reports, is divided into three heads, the first of which relates to the General Condition of the Society and its Finances, the second to the business transacted at the Office in Hanover Square, and the last to the state of the Gardens in the Regent's Park.

### I. GENERAL CONDITION OF THE SOCIETY.

### 1. STATE OF THE ROLL OF MEMBERS.

### a. Fellows.

The number of Fellows and Fellows Elect at the close of the year 1885 was 3193, classified as follows:—

Compounders who have	paid £20	0.			33
Ditto ditto	£30	0.			894
Compositions remitted .			•		18
Paying annual contribut	ions of $oldsymbol{\pounds}$	2.		•	31
Ditto ditto					
Dormant		•	•	•	131
Admission-fees unpaid .		•	•	٠	13

The state of the Society during the past ten years, as regards the number of its Ordinary Members, is shown by the subjoined Table.

Comparative Statement of Elections, Deaths, Resignations, and Removals during the past Ten Years, with the number of Fellows at the end of each Year.

	್ಟಕ			Died.			Resigned. Removed.						pe .	of 31.						
Years.	Elected or Readmitted	Cor	npound	lers.	Subsc	ribers.	Subscribers.		Subscribers.		Subscribers.		Subscribers.		Subscribers. Carlo Fees Unpaid.		ribers.	ibers		Number of Fellows, December 3.
	Elected Readmit	£20.	£30.	Fee re mitted	£2.	£3.	£2.	£3.	Admissic Fees Unpaid	£2.	£3.	Admission Fees Unpaid.	Ceased to l Fellows.	N. F. Dece						
1876.	224	9	28		4	63		49	1		•••	•••	154	3311						
1877.	225	3	23		9	63		20		•••	58	6	182	3354						
1878.	176	6	12		5	52	1	40	1	•••		1	118	3412						
1879.	144	9	17		7	52		54		•••	50	6	195	3361						
1880.	153	4	18	1	4	65		74	•••	•••	38	4	208	3306						
1881.	138	24	31		5	75		65	3	1	27		231	3213						
1882.	164	3	23	1	4	61	•••	48			11	13	164	3213						
1883.	159	{ 4	25		3	55		38			33	4	162	3210						
1884.	183	1	28		5	53		37		1	7	6	138	3255						
1885.	111	2	17	•••	5	69	2	55		1	20	2	173	3193						

It will be observed that the number of Fellows elected and readmitted in 1885 was only 111 (being considerably below the average of the preceding years), while the number of withdrawals by death and otherwise was 173. This made the total number of Fellows on the 31st of December last 3193, against 3255 at the corresponding date in 1884.

### b. Honorary Members.

The following gentlemen were elected Honorary Members of the Society in 1885:—

- 1. The Hon. Sir Arthur Hamilton-Gordon, G.C.M.G.
- 2. Sir John Hay Drummond-Hay, K.C.B.
- 3. Sir William C. F. Robinson, K.C.M.G.
- 4. Sir Walter Elliot, K.C.S.I.

### c. Foreign Members.

The following Foreign Members were elected to fill vacancies in 1885:—

- 1. Dr. Anton Dohrn, of the Zoological Station, Naples.
- 2. Dr. Edward von Martens, of the Royal Zoological Museum, Berlin.

### d. Corresponding Members.

The following 13 Corresponding Members were elected in 1885:—

- 1. B. F. Ffinch, Esq., of the Persian Gulf Telegraphs, Karachee.
- 2. Professor H. A. Pagenstecher, of the Natural History Museum, Hamburg.

3. Lt.-Col. Crawford, Deputy Commissioner, Thar and Parker Districts, Hyderabad.

4. Dr. C. Hart Merriam, Secretary to the American Ornithologists' Union, Lewis Co., New York.

5. R. E. Minchin, Esq., Director of the South-Australian Zoological and Acclimatization Society.

6. Professor Gustaf Retzius, M.D., of the Medico-Chirurgical Institute, Stockholm.

7. J. M. Vermont, Esq., of Batu Kawan Estate, Penang.

8. Surgeon-General Benjamin Simpson, C.B., of the Bengal Medical Service.

9. Captain John Hewat, Dock Superintendent, Cape Town.

10. Frederic Holmwood, Esq., H.B.M. Consul, Zanzibar.

11. Captain Richard C. Packe.

- 12. Dr. A. Boon, F.R.C.S., of Basse Terre, St. Kitts, West Indies.
- 13. Everard F. im Thurn, Esq., Pomeroon River, British Guiana.

### 2. STATE OF THE FINANCES.

### a. Income.

The Council regret to have to announce a considerable falling off in the Income of the Society during the past year, the total receipts from every head having only amounted to £25,809 10s. 1d. against £28,939 8s. 8d. for the year 1884.

The several heads under which decrease has taken place are shown in the subjoined Table:—

Comparative State of Income in 1884 and 1885.

		In	icor	ne of						
	1884.			1885.			Increase.	Decrease.		
	£	8.	d.	£	8.		£ s. d.	£	8.	
Admissions to Gardens	16,920	0	0	14,891	6	6		2,028	13	6
Elephant and Camel-riding receipts	418	17	3	449	8	5	30 11 2			
Garden Sales		2	6			11	114 15 5		· · · • ·	
Rent for Refreshment-rooms		0	0	1,101	6	8		112	13	4
Rent for Freehold Premises	135	15	0	<b>25</b> 3	15	0	118 0 0			
Admission Fees:-	100	0	0	70	O	0		20	^	
Past	760	0	0	425	0	0	•••••••	30 335	0	0
Annual Subscriptions:—	, , ,	·	·	120	·		••••	555	·	
Past		0	0	27		0		3	0	0
Present			0	6,244		0		106	3	-0
Future	108	0	0	150	0	0	42 0 0		٠٠	
Compositions	4.0	8	0	630 19	$\frac{0}{19}$	0	•••••	660	9	0
Publications		7	ő	791	3	4	20 16 4		IJ	V
Dividends		4	7	73	17	3	20 10 1	103	7	4
Miscellaneous	149	11	4	101	16	0		47	15	4
	00,000		_	25 000						_
Decrease	28,939	8	8	$\begin{vmatrix} 25,809\\ 3,129 \end{vmatrix}$		7	020 22	3,456	1	6
Decrease		****	• • • • •	0,129	10	- 1	Ded. Incr.	326		11
	28,939	8	8	28,939	8	8		3,129	18	7
				<u> </u>				-,		

It will be observed that the principal falling off has been in the Garden Receipts and in the amounts received for Admission and Composition Fees from newly elected Fellows. There can be little doubt that the widespread depression that has prevailed throughout the past year was the cause of this diminution of the Society's Income in common with that of other bodies of a similar character.

### b. Expenditure.

After adding to the Income of 1885 the balance carried forward from 1884 (£1247 10s. 2d.), it will be found that the sum of £27,057 0s. 3d. was available for the expenditure of 1885. This amount was disposed of in the following manner:—The ordinary payments in 1885 amounted to £24,593 11s. 8d., and the extraordinary to £491 0s. 6d., making a total expenditure of £25,084 12s. 2d. The sum of £1000 was paid to Messrs. Drummond in reduction of the Mortgage Debt of £11,000 secured on the Society's new freehold premises. This left a balance of £972 8s. 1d. on the 31st of December last to be carried over for the benefit of the present year, as will be seen by the following abstract of the Balance-sheet:—

### Abstract of Balance-sheet, 1885.

Receipts, 1885.			Payments, 1885.			
To Balance brought from December 31, 1884	£ 1,247 25,809 27,057	10 1	By Expenditure paid in the year By Repayment of Mortgage-debt By Balance at the Bankers', December 31, 1885	£ 25,084 1,000 972 27,057	8	d· 2 0 1

The next Table contains the various particulars of the expenditure of 1885, and a comparison of each of them with the corresponding amounts paid in the previous year:—

	E	xpen	d	iture (	of	_	Increase.	Dec	reas	se.
	188	4.		18	85.			_		
Arrears of previous years Rent, Rates, Taxes, and Insurance Salaries, Wages, and Pensions. Provisions Cost and Carriage of Animals Menagerie Expenses Keepers' Dresses Works, Materials, &c. Buildings, Office Garden Expenses Advertisements. Band Expenses House and Office Expenses Stationery and Account Books. Printing (Miscellaneous)	1,400 5,918 4,338 1,424 3,118 157 2,667 4,766 960 210 213 803 64	0 1 13 5 5 2 10 5 19 7 17 0 18 2 14 1 18 1 18 1 19 4 9 9		198	15 1 17 12 8 4 16 16 1 17 6 8 1	9 1 4 1 6 3 0	£ s. d.	£ 2,5244 287 53 371 259 11 140 4,766 188 12 127 8 206	15 17 7 18 15 1 1 1 1 0 0	6
Publications Library Expenses. Returned Subscriptions Cost of Silver Medal Law Expenses Zoological Lectures (Davis Bequest) Interest on Mortgage Debt	1,597 674 34 1 4 1 3 1 81 2	2 3 2 5 10 6 18 6 13 6		1,976 530 26	10 11 1 15	9	379 8 1	143 7 4 3	10 14 18 13 10	7 9 6 6 0 4
Decrease	33,845			25,084 8,761 33,845	6	3	400 18 9 Ded. Incr.	9,162 400 8,761	18	0 9 3
Ordinary Payments Extraordinary ditto	26,539 7,306	4 1		24,593 491	11 0	3		1,945 6,815		5 10
	33,845	18 5	2	5,084	12	2		8,761	6	3

It will be observed that both under Ordinary and Extraordinary Heads a considerable reduction of expenditure was effected in 1885. The Ordinary Expenditure of the Society, which contains every item necessary to keep the Establishment in a state of perfect efficiency,

amounted in 1885 to £24,593 11s. 8d. against £26,539 4s. 1d. in 1884. The Extraordinary Expenditure in 1884 was limited to the sum of £491 0s. 6d., of which the particulars are subjoined.

### Extraordinary Expenditure paid in 1885.

Balance due on new Offices, No. 3 Hanover Square  New Sheep-sheds in Gardens  Dens for Small Cats'-house in Gardens	$\begin{array}{c} 175 \\ 257 \end{array}$	s. 5 5 10	5 1
	£491	0	6

### c. Assets and Liabilities.

The Assets and Liabilities of the Society on December 31, 1885, were estimated as follows:—

ASSETS.			
	£	s.	d.
Animals in the Menagerie in the Regent's Park		0	0
Books in the Library at Hanover Square	12,884	Ō	ŏ
Unsold Publications	2,500	ŏ	Ŏ
Freehold Premises	25,000	ŏ	Ŏ
Cost of £1,900 London and South-Western Railway New 4		V	
per cent. Preference Stock (Davis Trust Fund)	1,938	9	6
Cash at the Bankers' (Messrs. Drummond)	972	8	ĭ
Arrears considered good:— $\pounds$ s. d.	012	O	
Annual Subscriptions			
Ivory Tickets			
Publication Sales			
Garden Sales			
Rent for Refreshment Rooms			
Rent for Freehold Premises			
Rent for Freehold Fremises		10	7
	440	10	1
	£65,365	15	8
	200,000	10	0
LIABILITIES.			
Rent and Taxes unpaid:— £ s. d.	£	S.	d.
For the Gardens, say 404 19 7	_	•	
,, Office, say			
,, o 2200, saj	455	9	10
Bills, &c., estimated at:—	100		-
For the Gardens, say 928 8 0			
,, Office, say			
,, 520, 50, 50, 50, 50, 50, 50, 50, 50, 50, 5	1,538	11	11
Messrs. Drummond, Mortgage Debt		0	0
Transfer De Laminolita, mortgago Door	10,000	0	
	£11,994	1	9

### II. OFFICE, 3 HANOVER SQUARE.

### 1. Scientific Meetings.

To the thirteen meetings for the despatch of scientific business held in the Society's Rooms in Hanover Square in 1885, 122 communications were made. Of these, 95 were from Fellows, 1 from a Foreign Member, and 12 from Corresponding Members of the Society. The remaining 14 papers were from individuals not belonging to the Society, and were communicated to it by the Secretary or by other Members. The corresponding number of communications in the year 1884 was 119.

These communications were submitted to the Committee of Publication, by whom the following orders were made respecting them: 4 were ordered to be printed entire in the 'Transactions' of the Society, and 82 in the 'Proceedings,' such illustrations being in each case allowed as the Committee considered necessary for the purpose. Of the remaining communications, abstracts or extracts were considered to be sufficient for publication.

### 2. SCIENTIFIC PUBLICATIONS.

The volume of 'Proceedings' for 1885 is on the table. It contains 991 pages illustrated by 62 plates. In the following table are given the number of pages and plates of the volumes of 'Proceedings' for the past ten years:—

				plates.	pages.
	•	•	•	82	864
			•	85	893
				62	1056
	•	•		64	868
•	•			64	743
				72	1056
•				61	827
			•	61	704
				58	645
				62	991
					82 85 62 64 64 72 61 61 58

Two Parts of the Society's 'Transactions' were issued during the year 1885, namely:—

### Vol. XI. PART X. (June, 1885).

On the Muscular and Endoskeletal Systems of *Limulus* and *Scorpio*; with some Notes on the Anatomy and Generic Characters of Scorpions. By E. Ray Lankester, M.A., LL.D., F.R.S., Jodrell Professor of Zoology, assisted by W. B. S. Benham and Miss E. J. Beck (with twelve plates).

### Vol. XI. Part XI. (concluding the volume) (November, 1885).

A Monograph of the Odontolabini, a subdivision of the Coleopterous family Lucanidæ. By Frank Leuthner, Ph.D., Member of the Imperial Royal Zoological and Botanical Society of Vienna (with fourteen plates).

Along with the last Part was also issued the titlepage, contents, and index for the eleventh volume of the Society's

Transactions, rendering this volume complete.

Two more Parts of the 'Transactions' (Parts 1 and 2 of Vol. XII.) have been already issued during the present year, and several other parts are in a forward state. It is hoped and expected, therefore, that the arrears in this branch of the Publications, which have been occasioned by difficulties connected with bringing out one of the memoirs in the eleventh volume, will be shortly made good.

### 3. LIBRARY.

The Library, under the superintendence of Mr. Water-house, has been kept in good order during the past year, and has been in constant use by working zoologists.

A new edition of the Library Catalogue is in preparation,

and will be ready for issue in 1887.

Many important additions were made to the Library during 1885, among which attention may be called to the following donations:—

Bell. Comparative Anatomy and Physiology. 1885 Presented by the Author.

Boulenger. Catalogue of Lizards in the British Museum. 2 vols. 1885. Presented by the Trustees of the British Museum. Handbook of Jamaica for 1885–86. Presented by the Editors.

Hele's Notes or Jottings about Aldeburgh, Suffolk. 1870. Pre-

sented by J. H. Gurney, Esq.

Heude. Notes sur les Mollusques terrestres de la Vallée du Fleuve Bleu. Parts 2, 3. 1882–85.—Mémoire sur les Trionyx. Part 1. 1880.—Conchyliologie fluviatile de la Province de Nanking et de la Chine Centrale. Parts 5-I0. 1879-84. Presented by the

Journal of Comparative Medicine and Surgery. Vol. vi. Presented

by the Editor.

Lydekker. Catalogue of Fossil Mammalia in the British Museum.
Part i. 1885. Presented by the Trustees of the British Museum.
Marsh. Dinocerata. 1884. Presented by the Author.

Moore's Lepidoptera of Ceylon. Parts x., xi. Presented by the Government of Ceylon.

Norske Nordhavs-expedition, 1876-78. Parts xii.-xiv. Presented

by Prof. H. Mohn.

Scientific Results of the Second Yarkand Mission. Araneidea by Rev. O. Pickard Cambridge. 1885. Presented by the Author. Sharpe. Catalogue of Birds in the British Museum. Vol. x. 1885. Presented by the Trustees of the British Museum.

### The following is a list of zoological works in course of publication of which parts were purchased in 1885:—

Berlese. Acari, Myriapodi e Scorpioni Italiani. Fasc. xvi.-xxii. and Notes 1-3.

Blasius und Hayek. Ornis. Jahr. I. Heft 1.

Booth. British Birds. Parts vii.—ix. Bronn's Thierreich. Band I. (*Protozoa*), Lief. 28–31; Band II. (Porifera), Lief. 7-11; Band VI. Abth. i. (Pisces), Lief. 4; Abth. iii. (Reptilien), Lief. 43-47; Abth. iv. (Aves), Lief. 10. 'Challenger,' Voyage of H.M.S. Zoology, Vols. xi.-xiii.; Botany,

Vol. i.; Narrative, Vol. i.

Carns. Prodromus Faunæ Mediterraneæ. Pars ii. Cory. Birds of Haiti and San Domingo. Part iv. (completed). Clessin. Malakozoologische Blätter. N. F. Band VIII. Bog. 1-3.

Rhopalocera. Parts viii.-x. Meropidæ. Part iv. Distant.

Dresser.

Edwards. Butterflies of N. America. Ser. ii. Part xiii. Encyclopædia Americana. Vol. ii. Encyclopædia Britannica. Vols. xviii., xix. Fischer. Manuel de Couchyliologie. Fasc. viii. Fol. Recueil Zoologique Suisse. Tome ii.

Giglioli. Iconografia dell' Avifanna Italica. Fasc. xxii.-xxvii. Girard. Traité élémentaire d'Entomologie. Tome iii. Fasc. ii. Godman and Salvin. Biologia Centrali-Americana. Zoology, Parts

xxxv.-xliii.; Botany, Parts xviii.-xx. Gould's Birds of New Guinea. Parts xix., xx. Supplement to the Trochilidæ. Part iv.

Grandidier. Histoire de Madagascar. Vol. xii. Tome i.; Vol. xix. Tome ii.; et Atlas, Part i.

Greene. Parrots in Captivity. Part xviii. (completed).

Hamann. Beiträge zur Histologie der Echinodermen. Heft ii.

Hayek. Handbuch der Zoologie. Lief. 18, 19.

Herman. Naturhistorische Hefte. Band VIII. Heft 4; Band IX. Heft 1.

His. Anatomie menschlicher Embryonen. Abth. iii. und Atlas. Kingsley. The Standard Natural History. Vols. i.-vi.

Kobelt. Iconographie der schalentragender europäischen Meeresconchvlien. Heft iii.

Rossmässler's Iconographie der europäischen Land- und Süsswasser-Mollusken. N. F. Band II. Lief. i., ii.

Koch. Arachniden Australiens. Lief. 32.

Lichtenstein. Les Pucerons. Part i.

Lilford. British Birds. Part i.

Martini und Chemnitz. Conchylien-Cabinet. Lief. 333, 334. McCoy. Natural History of Victoria. Zoology. Decade x.

Meyer. Abbildungen von Vögel-Skeletten. Lief. viii., ix.

Oberthür. Etudes d'Entomologie. Livr. x.

Olphe-Galliard. Contributions à la Faune Ornithologique de l'Europe Occidentale. Fasc. v., xxxiii.

Railliet. Eléments de Zoologie. Fasc. i.

Ratzeburg. Lehrbuch der Mitteleuropäischen Forstinsecktenkunde. Abth. i.

Rochebrune. Faune de la Sénégambie (Reptiles et Amphibiens).

Romanoff. Mémoires sur les Lépidoptères. Tome ii.

Russ. Fremdlandische Stubenvögel. Band IV. Lief. 6.

Schiödte. Zoologica Danica. Heft iv.

Schneider. Zoologische Beiträge. Band I. Heft 3. Seebohm. British Birds. Parts v., vi. (completed). Semper. Reisen im Archipel der Philippinen. Theil II. Band iv.

Abth. iii.

Sharpe and Wyatt. Monograph of the Hirundinidæ. Part i.

Staudinger. Exotische Schmetterlinge. Lief. 6-12.

Sundman. Finlands Fiskar. Parts 3-6. Thomson. Opuscula Entomologica. Part x.

Tryon. Manual of Conchology. Parts xxv.-xxviii.; Ser. 2. Parts i.–iv.

Veth. Midden-Sumatra. Deel IV. Ged. 3, 4.

Vogt et Yung. Traité d'Anatomie Comparée. Lief. 6, 7.

Waterhouse. Aid to the Identification of Insects. Parts xxiii.-xxv. Yarrell's British Birds. Parts xxvii.-xxx. (completed).

Zittel. Handbuch der Paläontologie. Band I. Abth. ii. Lief. iv.

Some of the most important additions to the Society's Library, purchased since the last Anniversary, are the following:—

La Conchyliologie. 3 vols. 4to, 1780. Argenville.

Faune Entomologique de Madagascar, Bourbon et Boisduval. Maurice.

ice. Royal 8vo, 1833. Testacea Musei Vindobonensis. Folio, 1780.

Bridgewater Treatises. 12 vols. 8vo, 1833-37.

Cetti. Storia Naturale di Sardegna. 3 vols. 8vo, 1774-77.

Claus. Traité de Zoologie. 2nd French edition. By G. Moquin-Tandon. Royal Svo, 1884.

Elementary Text-book of Zoology. Translation by Adam Sedgwick. 2 vols. 8vo, 1884-85.

Cory. A List of the Birds of the West Indies. 4to, 1885.

Cuvier. Recherches sur les Ossemens fossiles de Quadrupèdes. 4 vols. 4to, 1812.

Darluc. Histoire Naturelle de la Provence. 3 vols. 8vo. 1782-86.

Donovan. British Insects. 16 vols. 8vo, 1802–13.

Esper. Die auslandischen oder aussereuropäischen Schmetterlinge. Ãto, 1801.

Forbes. A Naturalist's Wanderings in the Eastern Archipelago. 8vo, 1885.

Forbes's Scientific Papers. By F. E. Beddard, with a Preface by P. L. Sclater. Royal Svo, 1885.

Gray. Descriptions and Figures of some new Lepidopterous Insects from Nepal. Svo, 1846.

Hayes. Natural History of British Birds. Folio, 1775.

Herold. Entwickelungsgeschichte der Schmetterlinge. Text and Atlas, 4to, 1815.

Hoeven. Handbuch der Zoologie. 2 vols. 8vo, 1850-56.

Hübner. Beiträge zur Geschichte der Schmetterlinge. 2 vols. 8vo. 1786–89.

Jablonsky und Herbst. Natursystem aller bekannten in- und auslandischen Insekten. Text, 10 vols. 8vo; Atlas, 4to, 1785–1806. Johnston. The Kilima-njaro Expedition. Royal 8vo, 1886. Kinloch. Large Game-shooting in Thibet. 4to, 1885. Lansdell. Russian Central Asia. 2 vols. Royal 8vo, 1885.

Lewin. Natural History of the Lepidopterous Insects of New South Wales. 4to, 1822.

Macleay. Horæ Entomologicæ. 8vo, 1819-21. Pennant. Arctic Zoology. 3 vols. 4to, 1792.

Phillips. Manual of Geology. Edited by R. Etheridge and H. G. Seeley. 2 vols. Royal 8vo, 1885.

Quarterly Journal of Microscopical Science. 30 vols. 8vo, 1853-82.

Say. American Entomology. 3 vols. Royal 8vo, 1824–28.

Spix. Cephalogenesis. Folio, 1815.

Animalia nova, sive species novæ Lacertarum. Sm. folio, 1825.

Strecker. Lepidoptera, Rhopaloceres and Heteroceres, indigenous and exotic. 15 parts (all published). 4to, 1872-77.

Butterflies and Moths of North America. 8vo, 1878.

Transactions of the Royal Microscopical Society of London. 19 vols. 8vo, 1840-68.

Vejdovský. System und Morphologie der Oligochæten. 1884.

Wagner. Die Wirbellosen des Weissen Meeres. Band i. Folio, 1885.

Wood. Index Testaceologicus. 8vo, 1825. Yarrell. A History of British Fishes. Second edition. 2 vols. 8vo, 1841.

The following is a list of the periodicals received in 1885 from the various Societies and Institutions with which this Society is in correspondence.

### AFRICA.

The South African Philosophical Society, Cape Town.
Transactions, vol. iii.

### AMERICA (NORTH).

- The Academy of Natural Sciences, Philadelphia. Proceedings, 1884, part 3; 1885, parts 1, 2.
- The American Academy of Arts and Sciences, Boston.

  Proceedings, n. s., vol. xii.

  Memoirs, vol. xi. part ii. no. 1.
- The American Association for the Advancement of Science.
  Proceedings, 32nd Meeting, Minneapolis, 1883.
- The American Entomological Society, Philadelphia. Transactions, vol. xi.; vol. xii. no. 1.
- The American Museum of Natural History, New York.
  Bulletin, vol. i. no. 6.
- The American Philosophical Society, Philadelphia. Proceedings, vol. xxi. no. 116; vol. xxii. nos. 117-120.
- The Connecticut Academy of Arts and Sciences, Connecticut.

Transactions, vol. vi. part 2.

- The Brookville Society of Natural History, Richmond. Bulletin, 1885, no. 1.
- The Boston Society of Natural History, Boston.

  Proceedings, vol. xxiii. part 1.

  Memoirs, vol. iii. no. 11.
- The Academy of Natural Sciences, Minnesota. Bulletin, 1880–82.

The Franklin Institute, Washington. Journal, 1885.

The Smithsonian Institution, Washington.

Annual Report, 1883. Smithsonian Contributions to Knowledge, vols. xxiv., xxv.

The Museum of Comparative Zoölogy, Harvard College, Cambridge, Mass.

Bulletin, vol. vii. nos. 2-8, 11; vol. xi. no. 11; vol. xii. nos. 1, 2. Memoirs, vol. xi. no. 1; vols. xii., xiii. Annual Report, 1884-85.

The Peabody Academy of Science, Salem. Annual Reports, 1874–84.

The New York Academy of Sciences, New York.
Annals, vol. iii. nos. 3-6.

The Nova Scotia Institute of Natural Science, Halifax. Proceedings and Transactions, vol. vi. pt. 2.

### AMERICA (SOUTH).

The National Academy of Sciences of Cordoba, Buenos Aires.

Boletin, tomo vi. entr. 4; tomo vii.; tomo viii. entr. 1.

### AUSTRALIAN COLONIES.

The Royal Society of South Australia, Adelaide.
Transactions and Proceedings, vol. vii.

The Royal Society of Queensland, Brisbane. Proceedings, vol. i. parts 2-4.

The Royal Society of Victoria, Melbourne.
Transactions and Proceedings, vol. xxi.

The Linnean Society of New South Wales, Sydney.

Proceedings, vol. ix. parts 3, 4; vol. x. parts 1, 2.
List of Members, 1885.

- The Royal Society of New South Wales, Sydney.

  Journal and Proceedings, vol. xviii.
- The Royal Society, Tasmania.

  Papers and Proceedings for 1884.
  Catalogue of the Library, 1885.
- The New-Zealand Institute, Wellington. Transactions and Proceedings, vol. xvii.
- The Colonial Museum and Geological Survey, New Zealand.

Annual Report, 1883-84 (1885).

### AUSTRIA.

The University, Cracow.

Proceedings, Band. xviii., xix.

The Imperial Academy of Sciences, Vienna.

Denkschriften, Band xlvii.

Sitzungsberichte, Bänd. lxxxviii., lxxxix.

The Zoological and Botanical Society, Vienna.

Verhandlungen, Band xxxiv.; Band xxxv. Halbjahr 1.

### BELGIUM.

The Entomological Society of Belgium, Brussels.

Annales, tome xxviii., tome xxix. part 1.

The Royal Academy of Sciences, Letters, and Fine Arts of Belgium, Brussels.

Annuaire, l, li.
Bulletins, tomes vi.-viii.
Mémoires, tome xlv.
Mémoires couronnés, tome xlvi.
Mémoires couronnés et autres Mémoires, tome xxxvi.

The Royal Museum of Natural History, Brussels.

Bulletin, tome iii. nos. 2-4; tome iv. no. 1. Annales, tome ix. part 4 et Atlas; tome xi. part 5 et Atlas.

The Royal Malacological Society of Belgium, Brussels.

Annales, tomes xv., xviii., xix.

Procès-Verbaux, tomes xiii., xiv.

### CHINA.

The China Branch of the Royal Asiatic Society, Shanghai.

Journal, vol. xvii. part 2; vol. xviii.; vol. xix. part 1; vol. xx.

nos. 1-3.

### EAST INDIES.

The Royal Society of the Dutch East Indies, Batavia.

Natuurkundig Tijdschrift, deel xliv. Catalogus der Bibliotheek, 1884.

The Asiatic Society of Bengal, Calcutta.

Proceedings, 1884, nos. 10, 11; 1885, nos. 1-8. Journal, vol. liii. part 1, nos. 3, 4; part 2, no. 3; vol. liv. part 1, nos. 1, 2; part 2, nos. 1, 2. Centenary Review, 1784-1883 (1885).

The Geological Survey of India, Calcutta.

Records, vol. xviii.
Memoirs, vol. xxi.

Memoirs (*Palæontologia Indica*), Series 4, vol. i. parts 4, 5; Series 10, vol. iii. part 6; Series 13, vol. i. part 4 (fasc. 3-5); Series 14, vol. i. part 3 (fasc. 5).

### FRANCE.

The Agricultural Society, Lyons.
Annales, sér. 5, tome vi.

The Museum of Natural History, Paris.
Nouvelles Archives, sér. 2, tome vii. fasc. 1, 2.

The Society Philomathique, Paris.

Bulletin, sér. 7, tome viii. no. 4; tome ix. nos. 1, 2.

The Zoological Society of Acclimatation, Paris. Bulletin, sér. 4, tome ii. nos. 1-10.

The Natural-History Society, Toulouse.
Bulletin, Année xviii. (1884).

### GERMANY.

The Royal Prussian Academy of Sciences, Berlin. Sitzungsberichte, 1885, nos. 1-39.

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### III. GARDENS, REGENT'S PARK.

### 1. WORKS AND REPAIRS.

In view of the reduced receipts during the past year the Council thought that it would be prudent to restrict the expenditure on new works in the Gardens within narrow The ordinary staff of workmen was, however, kept busily engaged on renewals and repairs throughout the year, and the following amongst other less important improvements were effected. The remaining portion of the Kangaroo-sheds were rebuilt and covered with a glass roof, so as to correspond with the first section, which was treated in a similar way in 1884. The Pheasantries were repaired and re-netted. A new Water-main was laid from the South Entrance to the Western Aviary. the Hippopotamus-house was repaired and made good throughout. During the winter a large quantity of clay at the back of the Reptile-house was burned and converted into ballast.

Besides these works two other more important improvements were carried out by the Society's staff, and the materials employed thereon were charged to Extraordinary Expenditure. These were:

### a. The New Sheep-yard.

The accommodation in the present Sheep-sheds being insufficient, and it being evident that more space should be given for the exhibition of these interesting animals, a large circular enclosure has been constructed at the further end of the Broad Walk, near the outer fence of the Gardens. The house for the Sheep, placed in the centre of this enclosure, has been covered with rock-work, and makes a large elevated mound very suitable to the habits of these rock-loving animals. It was hoped that the first tenants of the new Sheep-yard would have been some Big-horn Sheep from the Rocky Mountains (Ovis canadensis), which the Council were expecting to receive last summer. These animals failing to arrive, the Sheep-yard is for the present occupied by a family of the Burrhel

Sheep of the Himalayas (Ovis burrhel), which appear to enjoy their new quarters very much. The amount expended on the materials for the new Sheep-yard was £257 5s. 1d., as already mentioned under the head of extraordinary expenditure.

### b. The Smaller Cats'-house.

The only other item of extraordinary expenditure in 1885 was caused by the thorough repair of the old Reptilehouse, and its conversion into a house for the smaller Carnivora.

The separation of the Carnivorous Animals from the Rodents and other Frugivorous Mammals, which have been hitherto placed all together in the small Mammal-house, has long been considered very desirable. The vacancy caused by the removal of the Reptiles to the new Reptile-house on the other side of the Gardens afforded an opportunity for the partial realization of this plan. After having been thoroughly repaired and refloored, the former Reptile-house has been fitted up with cages suitable for the Exhibition of the smaller Cats and allied Carnivora. The actual cost of these cages (£58 10s.) has been charged to extraordinary expenditure, the repairs having been executed by the ordinary staff of workmen.

In order to relieve the small Mammal House still further from its hitherto crowded condition, it is proposed to build a new house for the wild species of the genus Canis, embracing the Wolves, Dogs, and Foxes, which are now scattered about in various parts of the Gardens. It is hoped that this work may be accomplished during the present summer, the plans for the new Dog-kennels, prepared by Mr. Trollope, having been already settled and approved of. When this has been done, the former small Mammal House will furnish good accommodation for the Porcupines, Squirrels, and numerous other animals of the Rodent order, which are not habitually of a Carnivorous nature.

### 2. STAFF.

The permanent Staff of the Society's Gardens remains nearly the same as at the last Anniversary. It consists of:—

1 Superintendent.

1 Assistant Superintendent.

1 Head Keeper.

6 Keepers (1st class).

7 Keepers (2nd class).

11 Keepers (3rd class).

4 Money-takers.

1 Storekeeper.

1 Cook.

1 Office Clerk.

1 Prosector's Assistant.

1 Head Gardener.

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Besides these there are usually 19 Helpers in the Menagerie, 13 Garden-labourers, 9 Artisans, 3 Painters, 11 Labourers, 1 Butcher, 2 Firemen, 2 Night-Watchmen, and 1 Time-keeper employed at weekly wages; so that the number of the whole staff may be reckoned at about 97 persons.

### 3. Visitors.

The total number of visitors to the Society's Gardens during the year 1885 was 659,896, as will be seen by the following Table, which gives the corresponding numbers of entrances under each head for 1884 and 1885:—

### Visitors to the Gardens.

	1884.	1885.	Comparison.
Fellows and Friends	225,874 175,691	192,299 147,785	Decr. 33,575 Decr. 27,906
Paying On Mondays and other days at 6d. each Children under 12 years at	252,021	249,496	Decr. 2,525
$ \begin{pmatrix} \text{Children under 12 years at} \\ 6d. \text{ each} \dots \end{pmatrix} $	71,896	49,097	Decr. 22,799
School Children (admitted free)	19,978	21,219	Incr. 1,241
	745,460	659,896	Decr. 85,564

The subjoined Table contains a statement of the Number of Visitors to the Society's Gardens during each year, from the year 1828 to the year 1885.

Number of Visitors to the Gardens, 1828-85.

1	
Year, Number.	Year. Number.
1828 98,605	1858 351,580
1829 189,913	1859 364,356
$1830 \dots 223,420$	1860 394,906
1831 262,193	1861 381,837
$1832 \dots 206,652$	†1862 682,205
1833 211,343	1863 468,700
1834 208,583	1864 507,169
1835 210,068	1865 525,176
1836 263,372	1866 527,349
1837 173,778	1867 556,214
1838 179,197	1868 573,186
1839 158,432	1869 572,848
1840 141,009	1870 573,004
1841 132,616	1871 595,917
1842 107,459	1872 648,088
1843 98,280	1873 713,046
1844 101,527	$1874 \dots 706,907$
1845 99,615	1875 699,918
$1846 \dots 100,045$	<b>±</b> 1876 915,764
1847 93,546	1877 781,377
1848 143,630	1878 706,713
1849 168,895	1879 643,000
1850 360,402	1880 675,979
*1851 667,243	1881 648,694
$1852 \dots 305,203$	1882 849,776
1853 409,076	1883 743,485
1854 407,676	1884 745,460
1855 315,002	1885 659,896
1856 344.184	
1857 339,217	† Year of the International Exhibition.
,	† Year of the exhibition of the Prince of Wales's Indian Menageric.
* Year of the Great Exhibition.	os i dece o santial sacringostes
	T/

It will be observed that the number of Visitors in 1885 is less than that of the three past years, but has exceeded that of 1881 by 11,202.

### 4. PROSECTOR'S DEPARTMENT.

Mr. F. E. Beddard, the Prosector to the Society, reports that the number of deaths during the year amounted to 990, being a decrease of 112 as compared with the previous year.

The only two deaths of importance were the Sondaic Rhinoceros, and one of the two Sumatran Rhinoceroses that

were purchased by the Society on April 1st, 1885.

The Sondaic Rhinoceros died on June 23rd, the apparent cause of death being an inflammation of the stomach. The animal was dissected by the Prosector and Mr. Frederick Treves, F.R.C.S., and an account of its anatomy will

appear in the 'Transactions.'

The Sumatran Rhinoceros died on May 22nd quite suddenly; the cause of death was found to be a rupture of the cæcum. By the kindness of the authorities at the London Hospital, a tank in their dead-house was allowed to be used for the body of the Rhinoceros; and it has therefore been possible to preserve the animal for a considerable period, and to study the myology. It is proposed to offer to the Society a detailed account of the muscular anatomy of this Rhinoceros: this will form a supplement to the paper on the Javan Rhinoceros, which dealt exclusively with the visceral anatomy.

Material from this Department has been supplied, for the purposes of research, to Mr. Treves, Dr. Hoggan, Dr. Beevor, and Prof. Windle; for museum purposes, to the Royal College of Surgeons, the Natural-History Museum, Prof. d'Arcy Thompson, Prof. G. B. Howes, and University

College, London.

Mr. Treves has continued his investigations into the mammalian alimentary tract and mesenteries, and has put forward his results in a series of lectures on that subject, delivered in the College of Surgeons.

Mr. J. B. Sutton has utilized most of the pathological material, and his results have been published in the So-

ciety's 'Proceedings' and elsewhere.

The Prosector has read and published the following papers during the year 1885:—"On the Structure of the Cuckoos"; "On the Heart of Apteryx"; "Notes on the Visceral Anatomy of Birds."

### 5. ZOOLOGICAL LECTURES.

The Zoological Lectures, to which the proceeds of the Davis Trust-fund have been devoted for several years, were continued in 1885. They will likewise be given this year in the Lecture-room in the Society's Gardens, on Thursdays at 5 P.M., commencing June 3rd.

The following is a list of the lecturers and subjects for the present year:—

Date.	Subject.	Lecturer.
2. ", ", 10 3. ", ", 17 4. ", ", 24 5. ", July 1 6. ", ", 8	Pigs and their Allies The Study of Zoology Scorpions Beavers Some of the ways in which Animals breathe Eyes. Swifts and Swallows	Dr. St. George Mivart, F.R.S. Prof. E. R. Lankester, F.R.S. J. E. Harting, Esq., F.L.S. Prof. F. Jeffrey Bell, M.A. F. E. Beddard, Esq., M.A.

These Lectures will be free to Fellows of the Society and their Friends, and to other Visitors to the Gardens.

### 6. MENAGERIE.

### a. Additions to the Menagerie in 1885.

The number of animals belonging to the first three classes of Vertebrates living in the Society's Menagerie at the close of 1885 was 2551. The corresponding number on the 31st of December, 1884, was 2501, as will be seen by the subjoined Table:—

	December 31.		Communican	
Quadrupeds Birds Reptiles	1884.	1885.	Comparison.	
	731 1423 347	756 1366 429	Incr. 25 Decr. 57 Incr. 82	
	2501	2551	Incr. 50	

The total number of registered additions to the Menagerie in 1885 was 1451, of which 762 were acquired by presentation, 251 by purchase, 241 were bred in the Gardens, 135 were received on deposit, and 62 obtained in exchange.

The mode in which these figures compare with those of previous years is shown in the subjoined table:—

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1874.	425	296	214	242	25	1202
1875.	559	557	156	143	43	1458
1876.	533	316	171	172	27	<b>1</b> 219
1877.	506	324	181	181	68	1260
1878.	511	272	150	178	71	1182
1879.	550	421	115	124	56	1266
1880.	624	515	148	161	40	1488
1881.	565	310	167	136	35	1213
1882.	772	402	113	111	25	1423
1883.	637	376	128	219	28	1388
1884.	646	524	174	229	133	1706
1885.	762	251	241	135	62	1451

The following is a list of the most noticeable additions made to the Menagerie during the year 1885:—

1. A Black-and-Yellow Hawfinch (Mycerobas melanoxanthus) from Northern India, and an Andaman Starling (Sturnia andamanensis) from the Andaman Islands, purchased January 10.

- 2. A young male European Moose (Alces machlis), presented by Evelyn Hubbard, Esq., January 22nd. Mr. Hubbard informs us that this animal was captured on the Ladoga, Russia, when evidently but just dropped, in June 1884. It has been placed in the Gardens in company with an American specimen of the Moose, purchased in April 1884, so that the two forms of this animal, sometimes supposed to be of different species, may now be seen side by side.
- 3. A pair of Yaks (Poephagus grunniens), purchased January 23rd.
- 4. A Viverrine Phalanger (Phalangista viverrina) from Australia, purchased February 10th, new to the Society's Menagerie.

5. An Isabelline Lynx (Felis isabellina), received in exchange

from the Zoological Gardens, Calcutta, February 27th.

6. Two Brown Pelicans (*Pelecanus fuscus*), purchased February 28th. The acquisition of these birds renders the Society's series of Pelicans very nearly complete, as it now comprises examples of seven species.

7. A female Roan Kangaroo (Macropus erubescens), being the third specimen of this Kangaroo acquired by the Society, and the

first of the female sex.

8. Six Wattled Starlings (Dilophus carunculatus) from South Africa, purchased March 20th and 27th. These are the first examples we have received of this curious Starling, which is remarkable for the extreme development of the wattles in the

adult male in breeding-plumage.

9. Two Striated Colies (*Colius striatus*), purchased March 20th. These are the first examples of this Coly yet received; they have been placed in the Parrot House along with the specimens of other species of the same genus.

10. Two Gouldian Grass-Finches (*Poëphila gouldia*), both believed to be of the male sex, presented by Mr. C. N. Rosenfeld,

April 18th, and new to the Society's Collection.

11. Four Pucheran's Guinea-fowls (Numida pucherani) from Eastern Africa, presented by Commander C. E. Gissing, R.N., H.B.M. Vice-Consul at Zanzibar. This fine species has not lately been represented in the Society's series.

12. A Spurred Chameleon (*Chameleon calcarifer*), presented by Major J. W. Yerbury, R.A. Major Yerbury writes from Aden (April 8th, 1885) that this fine Chameleon was eaught a

few miles from Aden.

- 13. A fine series of Australian Reptiles, received in exchange from the Zoological Society of New South Wales on June 11th, and containing examples of two species of Lizards and six species of Snakes; of the latter, three species (viz. Diemenia psammophis, Hoplocephalus curtus, and Dendrophis punctulatus) were new to the Collection.
- 14. A collection of Javan animals, presented by Dr. F. H. Bauer, of Buitenzorg, Java, C.M.Z.S., and containing examples of an Owl (*Phodilus badius*) and of three Reptiles and a Batrachian, all new to the Society's series.

15. A collection of North-American Reptiles, presented by F. J. Thomson, Esq., amongst which were examples of the Alleghany Snake, *Coluber alleghaniensis*, new to the Society's

Collection.

16. Several collections of Reptiles from the Cape Colony, presented by the Rev. G. H. R. Fisk, C.M.Z.S., amongst which was an example of a species of Elaps (*Elaps hygia*) from Uitenhage, Cape Colony, new to the Collection.

17. An example of the Black-eyebrowed Albatross (Diomedea melanophrys), obtained in False Bay, Cape Colony, and presented

to the Society by W. Ayshford Sanford, Esq., F.Z.S.

18. A male Cheetah (Cynælurus jubatus), received December 8th, presented to the Society by Nawab Mirza Hassim Ali Khan, of the Afghan Frontier Survey. A pair of feline animals captured, in November 1884, near the Istoi Pass on the Perso-Afghan Frontier, when quite young, after the mother had been shot, by some of the members of the Afghan Boundary Commission, were believed at the time to be Snow-Leopards (Felis uncia), and forwarded to Pisheen, where they were kindly kept through last summer by Mr. H. J. Barnes, Political Agent at

Quetta. The survivor of them having arrived in this country proves to be not a Snew-Leopard but a fine young male Cheetah (Cynælurus jubatus).

19. A female Tiger from Turkestan, deposited by J. E. T. Aitehison, Esq., M.D., Naturalist to the Afghan Boundary Com-This specimen seems to belong to the small and densely furred form of Felis tigris prevalent in northern latitudes.

20. Four young Gazelles obtained during the Survey of the Boundary of Northern Afghanistan, and deposited by the same gentleman. These Gazelles are probably referable to Gazella subgutturosa, but seem to differ somewhat from our previously

received specimens of the same species.

21. Two curious hybrid Ducks, bred, in 1884, at the Prince of Wales Hotel, Cannes, between the Ruddy Sheldrake (Tadorna rutila) and the Egyptian Goose (Chenalopex ægyptiaca). This pair of hybrids was presented to Dr. T. E. Charles, of Cannes, by Madame de la Blanchetein of the same place. Dr. Charles presented them to Sir Joseph Fayrer, who has kindly transferred them to the Society's Collection.

### b. List of Species new to the Collection exhibited during the year 1885.

The following list contains the specimens exhibited in 1884 which are referable to species not included in the last (eighth) edition of the List of Animals.

### i. MAMMALS.

- 5 a. Hylobates pileatus, Gray. Siamese Gibbon. Hab. Siam.
  - a. Purchased, Jan. 1, 1885.
- 229a. Canis pallidus, Rüpp. Pale Fennec Fox. Hab. Soudan.
  - a, b. Presented by Capt. J. S. Talbot, 1st Shrop. Lt. Inf., Nov. 24, 1885. See P. Z. S. 1885, p. 851.
- 246 a. Urocyon virginianus (Erxl.). Virginian Fox. Hab. North America.
  - a. Received in exchange, Jan. 17, 1885. From Dakota, U.S.A.

342a. Xerus rutilus (Cretzschm.). Ruddy Ground-Squirrel.

Hab. Africa.

a. Presented by Mrs. Blair, June 4, 1885.

362a. Hydromys leucogaster, Geoffr. White - bellied Beaver Rat.

Hab. Australia.

a. Received in exchange, May 18, 1885.

363 a. Gerbillus campestris (Vieill.). Field Gerbille. Hab. Nubia.

a, b. Presented by Major J. A. Shaw, Aug. 19, 1885. From Suakim.

370 a. Mus bandicota (Bechst.). Bandicoot Rat. Hab. India.

a, b. Presented by Col. C. S. Sturt, C.M.Z.S., June 18, 1885 (white varieties).

376a. Arvicola pratensis, F. Cuv. Bank-Vole. Hab. British Islands.

a. Presented by E. Rosling, Esq., Sept. 7, 1885.

421 a. Lepus sylvaticus, Bachm. Wood-Hare. Hab. North America.

a, b. Presented by J. F. Thompson, Esq., Feb. 28, 1885

459a. Tragelaphus gratus, Sclater. Pleasant Antelope. Hab. West Africa.

a. Female. Purchased, June 18, 1885. See P. Z. S. 1885,p. 717.

634a. Phalangista viverrina, Ogilby. Viverrine Phalanger.

Hab. Australia.

a. Female. Purchased, Feb. 10, 1885. See P. Z. S. 1885, p. 245.

### ii. BIRDS.

38a. Cichlherminia densirostris (Vieill.). White-eyed Mock Thrush.

Hab. St. Kitts, W. I.

a. Presented by Dr. A. Boon, F.R.C.S., C.M.Z.S., May 12 1885.

167 a. Poëphila gouldiæ, Des Murs. Gouldian Grass-Finch.

Hab. Australia.

a, b. Males. Presented by Chas. N. Rosenfeld, Esq., April 18, 1885. See P. Z. S. 1885, p. 421.

242 a. Mycerobas melanoxanthus (Hodgs.). Black-and-Yellow Hawfinch.

Hab. North India.

a. Female. Purchased, Jan. 10, 1885. See P. Z. S. 1885,p. 168.

264a. Serinus tottus (Gmel.). Brown Canary. Hab. South Africa.

a. Presented by Mr. J. Abrahams, March 20, 1885.

337 a. Sturnia and amanensis (Tytler). And aman Starling. Hab. And aman Islands.

a. Purchased, Jan. 10, 1885. See P. Z. S. 1885, p. 168.

340 a. Dilophus carunculatus (Gm.). Wattled Starling. Hab. South Africa.

a, b. Males; c, d. Females. Purchased, March 20, 1885.
e, Male; f. Female. Purchased, March 27, 1885. See P. Z. S. 1885, p. 322.

346a. Paradisea apoda, Linn. Great Bird of Paradise. Hab. Arrow Islands.

a. Male. Deposited, Oct. 1, 1885.

432 c. Colius capensis, Gm. Cape Coly. Hab. South Africa.

a, b. Purchased, March 20, 1885. See P. Z. S. 1885, p. 322.

432 d. Colius striatus, Gm. Striated Coly. Hab. South Africa. a. Purchased, July 3, 1885.

700a. Phodilus badius (Horsf.). Bay Wood-Owl. Hab. Java.

a. Presented by Dr. F. H. Bauer, C.M.Z.S., Aug. 15, 1885.

720. Bubo orientalis (Horsf.). Oriental Eagle-Owl. Hab. Siam.

a. Presented by Dr. F. H. Bauer, C.M.Z.S., Aug. 15, 1885.
 From Java. See P. Z. S. 1885, p. 718.

826a. Tinnunculus dominicensis, Cab. Dominican Kestrel. Hab. West Indies.

a. Presented by Dr. A. Boon, F.R.C.S., C.M.Z.S., May 12, 1885. From St. Kitts, W. I.

b-e. Presented by Dr. A. Boon, F.R.C.S., C.M.Z.S., July 27, 1885. From St. Kitts, W. I.

f-j. Presented by Dr. A. Boon, F.R.C.S, C.M.Z.S., Aug. 9, 1885. From St. Kitts, W. I.

834 a. Elanus cæruleus (Desf.). Black-shouldered Kite. Hab. Africa.

a. Received in exchange, Dec. 1, 1885.

- 1830 a. Carpophaga pacifica (Gm.). Pacific Fruit-Pigeon. Hab. Solomon Islands.
  - a. Presented by T.H. Bowyer Bower, Jun., Esq., June 27, 1885.
- 1033a. Carpophaga rufigula, Salvad. Vinous-throated Fruit Pigeon.

Hab. Solomon Islands.

- a. Presented by T. H. Bowyer Bower, Jun., Esq., June 27, 1885.
- 1040 a. Ptilopus porphyraceus (Forst.). Purple-crowned Fruit-Pigeon.

Hab. New Guinea.

- a. Deposited, Aug. 6, 1885.
- 1405 a. Diomedea melanophrys, Temm. Black-eyebrowed Albatross.

Hab. Antarctic seas.

a. Presented by W. Ashford Sanford, Esq., F.Z.S., Oet. 29, 1885. From False Bay, South Africa. See P. Z. S. 1855, p. 833.

## iii. REPTILES.

- 71a. Pelomedusa subrufa (Latr.). Reddish Pentonyx. Hab. South Africa.
  - a. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., Oct. 8, 1885.
- 141 a. Euprepes carinatus (Schneid.). Keeled Euprepes. Hab. South Africa.
  - a. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., Oct. 29, 1885.

- 148a. Calotes gutturosus (Merr.). Guttural Lizard. Hab. Java.
  - a, b. Presented by Dr. F. H. Bauer, C.M.Z.S., Aug. 15, 1885.
- 177 a. Chamæleon calcarifer, Peters. Spurred Chameleon. Hab. Arabia.
  - a. Presented by Major J. W. Yerbury, R.A., June 3, 1885.See P. Z. S. 1885, pp. 717, 833.
- 178a. Trogonophis wiegmanni, Kaup. Wiegmann's Amphisbæna.

Hab. North Africa.

- a. Presented by J. H. Leech, Esq., F.Z.S., May 31, 1885.
- 242a. Coluber getulus, Linn. King Snake. Hab. North America.
  - a. Deposited, Aug. 27, 1885.
- 242b. Coluber alleghaniensis, Holbr. Alleghany Snake. Hab. North America.
  - a, b. Presented by F. J. Thompson, Esq., Oct. 2, 1885. From Indiana. See P. Z. S. 1885, p. 833.
- 267 a. Dendrophis punctulatus (Gray). Punctulated Tree-Snake.

Hab. New South Wales.

- a. Received in exchange, June 11, 1885. See P. Z. S. 1885, p. 717.
- 270a. Dryophis prasina (Reinw.). Grass-green Tree-Snake.

Hab. Java.

a. Presented by Dr. F. H. Bauer, C.M.Z.S., Aug. 15, 1885.

278b. Hoplocephalus curtus (Schleg.). Short Death-Adder.

Hab. New South Wales.

- a. Received in exchange, June 11, 1885. See P. Z. S. 1885, p. 717.
- 279 a. Diemenia psammophis (Schl.). Schlegel's Sand-Snakes.

Hab. New South Wales.

*a-d.* Received in exchange, June 11, 1885. See P. Z. S. 1885, p. 717.

284a. Elaps hygiæ (Shaw). Hygian Snake.

Hab. South Africa.

a. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., Oct. 8, 1885. From Uitenhage, Cape Colony. See P. Z. S. 1885, p. 833.

### iv. BATRACHIANS.

1a. Rana agilis, Thomas. Agile Frog. Hab. South Europe.a-f. Purchased, April 10, 1885.

4a. Rhachophorus maculatus (Gray). Spotted Tree-Frog.

Hab. Java.

a-c. Presented by Dr. F. H. Bauer, C.M.Z.S., Aug. 15, 1885.

39a. Salamandrina perspicillata, Savi. Spectacled Salamander.

Hab. Italy.

α-l. Presented by Prof. H. H. Giglioli, C.M.Z.S., Nov. 28, 1885. See P. Z. S. 1885, p. 851.

#### v. FISHES.

69a. Cobitis tænia, Linn. Ground-Loach. British fresh waters.

c. List of Animals bred in the Gardens during the year 1885.

#### MAMMALS.

1 Bonnet Monkey (Macacus sinicus).

1 Black Lemur (Lemur macaco).

1 White-fronted Lemur (Lemur albifrons). 2 Coquerel's Lemur (Cheirogaleus coquereli).

3 Lions (Felis leo).

1 Leopard (Felis pardus).

- 1 Hybrid Common Genet. (Between Genetta vulgaris and Genetta pardina.)
- 4 Collared Fruit-Bats (Cynonycteris collaris).

2 Prairie Marmots (Arctomys ludovicianus).

3 Canadian Beavers (Castor canadensis).

22 Long-fronted Gerbilles (Gerbillus longifrons).

5 Coypus ( $Myopotamus\ coypus$ ).

1 Zebu (Bos indicus).

- 1 Three-quarter-bred American Bison. (Bred between Bison americanus and a female bred between Bison americanus and a hybrid between Bos frontalis and Bos indicus.)
- 1 Yak (Poephagus grunniens).

1 Gayal (Bibos frontalis).

1 Beisa Antelope (Oryx beisa).

1 Duyker-Bok (Cephalophus mergens).

- 2 Four-horned Antelopes (Tetraceros quadricornis).
- 1 Hybrid Nubian Ibex. (Between Capra nubiana and Capra hircus.)

1 Thar (Capra jemlaica).

1 Hybrid Lühdorf's Deer. (Between Cervus luehdorfi and C. canadensis.)

1 Burrhel Wild Sheep (Ovis burrhel).

2 Japanese Deer (Cervus sika).

1 Sambur Deer (Cervus aristotelis).

1 Hog-Deer (Cervus porcinus).

1 Molucca Deer (Cervus moluccensis).

4 Axis Deer (Cervus axis).

1 Mesopotamian Fallow Deer (Dama mesopotamica).

1 Three-quarter-bred Mesopotamian Fallow Deer. (Bred between a hybrid female Dama mesopotamica and Dama vulgaris, and a male Dama mesopotamica.)

1 Virginian Deer (Cariacus virginianus).

2 Mule Deer (Cariacus macrotis). 3 Pygmy Hogs (Porcula salvania).

2 Vulpine Phalangers (Phalangista vulpina).

2 Squirrel-like Phalangers (Belideus sciureus).

1 Bennett's Wallaby (Halmaturus bennetti).

#### BIRDS.

2 Northern Mocking Birds (Minus polyglottus).

4 Snow-Birds (Junco hyemalis).

4 Upland Geese (Bernicla magellanica).

3 Black Swans (Cygnus atratus).

1 Variegated Sheldrake (Tadorna variegata).

4 Wild Ducks (Anas boschas).

7 Australian Wild Ducks (Anas superciliosa).

4 Chilian Pintails (Dafila spinicauda). 1 Chiloe Wigeon (Mareca chiloensis).

7 Mandarin Ducks (Æx galericulata).

- 3 Red-crested Whistling Ducks (Fuligula rufina).
- 2 Triangular Spotted Pigeons (Columba guinea). 1 Barred-shouldered Dove (Geopelia humeralis).

1 Common Crowned Pigeon (Goura coronata).

1 Herring-Gull (Larus argentatus).

## REPTILES.

49 Striped Snakes (Tropidonotus sirtalis).

5 Common Vipers (Vipera berus).

20 Spotted Salamanders (Salamandra maculosa).

30 Pleurodele Newts (Molge walti).

d. List of Donors and their Donations for the year 1885.

H.R.H. The Prince of Wales, K.G.

Two Rhesus Monkeys, two Grey-breasted Parrakeets.

H.R.H. Prince Albert Victor of Wales.

One West-Indian Agouti.

H.R.H. Prince Frederick George of Wales.

One West-Indian Agouti.

H.R.H. The Duke of Edinburgh, K.G. One Mouflon.

Abbott, Mrs.

One Alexandrine Parrakeet.

Abrahams, Mr. J.

One Narrow-barred Finch, two St. Helena Seedeaters, one Grey-necked Serin Finch, one Brown Canary Finch, two Yellowish Finches, one Russ's Weaver-bird.

Abrahams, P. S., Esq., F.R.C.S.I. Two Short-headed Phalangers.

Alldridge, T. J., Esq., F.Z.S.

One Serval, one African Civet Cat.

Allen, F., Esq.

One Long-eared Owl.

Allen, Mr.

One Common Boa.

Allison, Mrs.

One Barbary Ape.

Allpress, F. J., Esq.

One Common Harc.

Angel, M. C., Esq., F.Z.S.

Three Young Green Turtle.

Appleton, Mrs. A. One Coypu.

Arauz, Mons. Rodolfo.

One Puma.

Archer, H., Esq.

One Gannet.

Arkwright, W., Esq., F.Z.S.
Four Black Water-Voles.

Astley, H. D., Esq., F.Z.S. One Chattering Lory.

Barnes, G. C., Esq.

One Vervet Monkey.

Bartlett, Mr. A. D.

One Common Toad.

Bath, The Marquis of, F.Z.S.

Two Sly Siluri.

Bauer, Dr. F. H., C.M.Z.S.

One Common Paradoxure, two Javan Cats, one Bay Wood-Owl, one Oriental Eagle-Owl, two Guttural Lizards, two Mutilated Geckos, one Grass-Green Tree-Snake, three Spotted Tree-Frogs.

Baxter, J. G., Esq.

One Grey Ichneumon. One Vulpine Phalanger.

Bedford, Miss.

One Barbary Ape.

Bellamy, A., Esq.

Two Three-striped Squirrels.

Berens, Mrs.

One Macaque Monkey.

Berry, Mrs.

One Rhesus Monkey.

Berthould, A. H., Esq.

One Royal Python.

Best, A., Esq.

Óne Blau-bok.

Blair, Mrs.

One Ruddy Ground-Squirrel.

Blake, Mrs.

Two Martinican Doves.

Bland, F., Esq.

Two Common Chameleons.

Boon, Dr. A., F.R.C.S.

Eleven Martinican Doves, four Moustache Ground-Doves, ten Dominican Kestrels, one Violaceous Night-Heron, two Virginian Colins, two Green Bitterns, six Dominican Kestrels, one White-eyed Mock Thrush, one Tuberculated Iguana.

Boutcher, Wm., Esq.

One Red-billed Duck.

Bovill, Miss Maude.

One Tennent's Squirrel.

Bowyer-Bower, T. H., Esq., F.Z.S.

One Vinous Fruit-Pigeon, one Pacific Fruit-Pigeon, one Australian Cassowary.

Bradley, J., Jun., Esq.

One Raven.

Brassey, Lady, F.Z.S.

Two Common Foxes.

Brassey, Miss Mary Adelaide.

Two Laughing Kingfishers.

Brassey, Miss Muriel Agnes.
Two Hooded Crows.

Bratton, Mrs. A.

Two European Tree-Frogs.

Brown, Mr. A. R.

One Macaque Monkey.

Brown, C. G., Esq., M.R.C.S. One Sharp-nosed Crocodile.

Buckley, W., Esq.

One Common Polecat.

Buist, Miss.

Two Grey-breasted Parrakeets.

Buller, Col. E. M. M.

Two Common Badgers.

Buller, W. L., Esq., C.M.Z.S. Two Tuatera Lizards.

Bulwer, Sir Henry E., G.C.M.G. Two Cape Crowned Cranes.

Burrows, W. G., Esq.

Two Indian Cobras.

Cambridge, the Rev. O. P., C.M.Z.S.

One Smooth Snake.

Canfor, C., Esq.

One Macaque Monkey.

Carder, J., Esq.

One Kinkajou.

Carnegie, Mrs. M. Strachan.

One Bonnet Monkey, one Macaque Monkey.

Carpenter, E. G., Esq.

Two Great Eagle-Owls.

Cater, J. S., Esq.

One Persian Gazelle.

Cavell, Mrs. Strutt.

One Slender-billed Cockatoo.

Charsley, Miss F. A.

One White-backed Piping Crow.

Chittenden, J. F., Esq., M.R.C.S., C.M.Z.S.

Twelve Cascaduras.

Church-Dixon, J., Esq.

One Pig-tailed Monkey, one Macaque Monkey, one Vulpine Phalanger.

Clare, Mr. H.

One Common Magpie.

Clark, Montague C., Esq.

One Malbrouck Monkey.

Clark, Mr. W. P.

One Barn Owl.

Clift, Mr. W. E.

One Malbrouck Monkey.

Clifton, Charles, Esq., F.Z.S.

Three Siamese Blue Pies, one Chinese Jay Thrush, one Brazilian Hangnest, one Hunting Crow, one Poë Honey-eater.

Coleman, Miss.

Two Java Sparrows.

Coles, S. G., Esq.

One Macaque Monkey.

Collins, Cromwell, Esq.

One Cuvier's Podargus.

Colliver, G. V., Esq.

One Green Lizard.

Constable, J., Esq.

One Levaillant's Cynictis, one Suricate.

Conyngham, Miss Lenox.

One Æsculapian Snake.

Cook, John M., Esq., F.Z.S.

Four Proteus.

Cook, W., Esq.

One Getulian Ground-Squirrel.

Cooper, Mrs.

One Bonnet-Monkey.

Cornély, Mons. J. M., C.M.Z.S.

Two Eyed Lizards, one Hybrid Ruddy Sheldrake, one Hybrid Pochard.

Cornet, A., Esq.

One Macaque Monkey.

Cotton, Masters W. B. and A. S.

One Common Lizard.

Courage, Mrs.

One Common Peafowl.

Cowley, The Countess.

One Common Marmoset.

Crawley, G. A., Esq.

One Galeated Curassow.

Cree, H. E., Esq.

One Nilotic Crocodile.

Crisp, Geo., Esq.

One Vervet Monkey, two Long-eared Owls, one Tawny Owl.

Czarnikow, C., Esq., F.Z.S.

One Great Kangaroo, one Roan Kangaroo, one Rufous Rat-Kangaroo.

Daly, R. Forrester, Esq.

One Collared Peccary.

Dart, Master C. G.

One Common Chameleon.

Davis, Col. Howell.

Two Common Marmosets.

Debenham, F., Esq.

One Macaque Monkey.

Denny, H., Esq.

One Egyptian Monitor.

Devonshire, The Duke of, K.G., F.Z.S.

One Common Badger.

Dickson, W. E. R., Esq.

Two Black-bellied Sand-Grouse, two Bonham's Partridges.

Doran, Alban, Esq., F.R.C.S.

One Sly Silurus, one Thunder-fish, one Barbet, one Ground-Loach, one River-Bullhead.

Douglas, Mrs.

One Ring-necked Parrakeet.

Dudley, Cecil, Esq.

Two White-faced Tree-Ducks.

Dundas, Mrs.

One Grey Ichneumon.

East, Mrs.

One Malbrouck Monkey.

Edmonds, Mr. F. J.

One Rhesus Monkey.

Edson, G., Esq.

One Glaucous Gull.

Edwards-Moss, T. C., Esq.

Four Demararan Cocks of the Rock, one Squirrel-Monkey.

Egerton of Tatton, The Lord, F.Z.S.

One Common Badger.

Elliott, F. W., Esq.

One Common Viper.

Ellis, Miss Margaret.

One Rhesus Monkey.

Erskine, Capt. J. E., R.N.

One Emu.

Essex Regiment, Officers of the 1st Battalion.
One Sambur Deer.

Eyre, H. S., Esq.

One Crossbill.

Farren, R., Esq.

One Long-eared Owl.

Fayrer, Sir Joseph, K.C.S.I., F.Z.S.
Two Hybrid Ruddy Sheldrakes.

Feilden, Major H. W., C.M.Z.S. One Pink-footed Goose.

Fellows, The Rev. Spencer.

One Macaque Monkey.

Fielding, J. H., Esq.

One Rhesus Monkey,

Fisk, The Rev. G. H. R., C.M.Z.S.

Eight Robben-Island Snakes, one Aurora Snake, six Hoary Snakes, one Hygian Snake, seven Geometric Tortoises, one Reddish Pentonyx, one Rufescent Snake, one Keeled Euprepes, five Rough-scaled Zonures, two Millipedes, ten Angulated Tortoises, one Many-spotted Snake, one Areolated Tortoise, one Blackish Sternothere.

Fleming, Mr. James.

One Macaque Monkey.

Flower, Stanley S., Esq.

One Common Lizard.

Franks, Capt. T. H.

One Javan Cat.

Fraser, A. D., Esq.

One Loggerhead Turtle.

Fraser, J. C., Esq.

Two West-Indian Rails.

Frodsham, F. L., Esq.

One Cereopsis Goose, one Black Swan.

Gibson, J. W., Esq.

Two Mute Swans.

Giglioli, Prof. H. H., C.M.Z.S.

Twelve Spectacled Salamanders.

Gissing, Comm. C. E., R.N.

Four Pucheran's Guinea-fowls.

Gorton, J., Esq.

Onc Cape Buffalo.

Graham, Miss L. M.

Two Black-eared Marmosets.

Graham, W., Esq., F.Z.S.

One Manx Shearwater.

Grant, H., Esq.

One Leadbeater's Cockatoo.

Graves, Major Frank (20th Hussars).
One Common Camel.

Greathead, E., Esq.

One Purple-faced Monkey.

Greeven, Master C. A.

One Horned Lizard.

Griffith, T. Risely, Esq.

One Sooty Mangabey.

Gunn, Mr. T. E.

Eleven Bramblings, two Chaffinches, two Tree-Sparrows, one Black-headed Bunting, two Siskins, one Reed-Bunting, eight Lesser Redpolls, two Common Kestrels, two Common Hedgehogs, one Common Viper.

Gunter, R., Esq.

One Common Slow-worm.

Guy, F. J., Esq.

Two West-Indian Agoutis, seven Crab-eating Opossums, two Rough Terrapins, two Brazilian Tortoises, two Teguexin Lizards, two Tuberculated Iguanas, nine Giant Toads, two Slow-worms.

Hall, Mr. T. W.

One Macaque Monkey.

Hamilton, Miss Payne.

One Macaque Monkey.

Hammond, F. J. Esq.

One Humboldt's Lagothrix.

Hanauer, Mr. H.

One Common Stoat, four Common Lizards.

Hanrott, Master C.

One Common Hedgehog.

Hare, Mr. J.

Two Turtle-Doves.

Harrison, J., Esq.

One Crested Pigeon.

Hassim Ali Khan, The Nawab Mirza.

One Cheetah.

Hawes, Capt. A. B.

One Barbary Ape.

Hawtayne, G. H., Esq., C.M.Z.S.

One Anaconda, three Rufous-vented Guans.

Hay, Mr. W.

One Alexandrine Parrakeet.

Haynes, T. H., Esq.

One Binturong.

Heimlicher, Miss.

One Alligator.

Henderson, Miss.

One Common Marmoset.

Heseltine, C., Esq.

One Common Fox.

Hillier, J., Esq.

One Tawny Owl.

Hodder, W., Esq.

One Mealy Amazon.

Hodges, Mrs. Henrietta.

One Leopard Tortoise.

Hodgson, Miss.

One Green Monkey.

Holden, C. W., Esq.

One Yellow-footed Rock-Kangaroo.

Holdsworth, Walter, Esq. Two Brown Bears.

Hope, Mr. W.

One Levaillant's Cynictis.

Hopwood, C. H., Esq., Q.C.

Two Common Guinea-fowls.

Hubback, T. C. C., Esq.
One Booted Eagle.

Hubbard, Evelyn, Esq.

One Moose.

Hudson, Thompson, Esq.

Two Larger Hill-Mynahs.

Humphries, Mr.

One Black-headed Gull.

Hunt, Col. E. D.

One Golden Eagle.

Hyrzan, Miss.

One Red-crested Cardinal.

Isaacson, R. E. Wootton, Esq.

One Black Wallaby.

Jameson, J. S., Esq.

One Lesser White-nosed Monkey.

Jamrach, Mrs. A. H.

Seven Striped Snakes.

Jamrach, Mr. W.

Six Indian Fruit-Bats.

Janin, Mrs.

One Silver Pheasant.

Johnson, Cuthbert, Esq.

One Common Badger, one Nightjar.

Jones, R. J., Esq.

One Chilian Sea-Eagle.

Keilich, Mr. H.

One American Robin.

Kensington, the Lady.

One Blue-fronted Amazon.

Knowles, Miss.

One Common Marmoset.

Kühne, Mrs. Herman.

Four Red-faced Weaver-birds, one Grenadier Weaver-bird.

Laidlaw, Miss.

One Rufous Rat-Kangaroo.

Laing, Warrington, Esq. One Indian Python.

Lambert, F. D., Jun., Esq.
One African Wild Ass.

Lampard, Miss G.

One Larger Hill-Mynah.

Lee, H., Esq.

Two Tawny Owls.

Leech, J. H., Esq., F.Z.S. One Scops Owl.

Leech, —, Esq.

One Wiegmann's Amphisbæna.

Le Sueur, Mr. T.

One Mitred Guinea-fowl.

Lewis, Rev. W. G.

One Raven.

Lyon, G. Leith, Esq. One Cuckoo.

Lyster, Miss.

One Campbell's Monkey.

McArthur, Miss Lucy.

One Macaque Monkey.

McCowans, A. J., Esq.

Two Macaque Monkeys.

M'Ilwraith, A., Esq., F.Z.S. One Great Kangaroo.

M'Niven, C. T., Esq.

Three Wild Ducks.

Malony, C. A., Esq., C.M.G. One African Lepidosiren.

Marriott, C. A., Esq.

Two Rooks, one Kestrel.

Marshall, E. Luxmore, Esq.

One White-fronted Capuchin Monkey.

Marsham, C. A. O., Esq.

One Greater Sulphur-crested Cockatoo.

Marton, G. B. H., Esq.
One Mexican Deer.

Mathews, Mrs. E. C.

One Indian Kite.

Merriam, Dr. C. Hart, C.M.Z.S.
Two Canadian Skunks.

Middleton, Cuthbert D., Esq.

Two Golden-crowned Conures.

Morgan, Mrs.

One Ring-necked Parrakeet.

Morgan, Capt.

One Osprey.

Morgan, Dr. L.

One Common Marmoset.

Mosely, F. S., Esq., F.Z.S.

Two Common Gulls, two Black-headed Gulls.

Murphy, Mr. John.

One Indian Crocodile.

Murray, Mrs. A.

One Macaque Monkey.

Murray, R. W., Esq.

One Brown Hyæna.

Napier, Master Charles E.

Two Crowned Horned Lizards.

National Fish Culture Association.

Two Cat-fish, one Common Seal.

Newenham, E. North, Esq.

Two Madagascar Porphyrios.

Nicholls, C. Kerry, Esq., F.Z.S.

One Alexandrine Parrakeet.

Nicholson, A. H., Esq.

One Yellow Conure.

Norris, Major.

One Purple-faced Monkey.

Northesk, The Earl of.

Two Emus.

Nujac, Madlle. de.

One Undulated Grass Parrakeet.

Ockey, W., Esq.

One Vervet Monkey.

O'Donaghue, Miss Ethel.

One Malbrouck Monkey.

O'Halloran, J. C., Esq.

One Bonnet-Monkey.

Oldfield, G. W., Esq., F.Z.S.

Two Harvest-Mice.

Oliver, Lieut. A. H., R.N. One Palm-Squirrel.

Ostle, Mr. W.

One Barn-Owl.

Pain, W. H. B., Esq.

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One Mexican Souslik.

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One Herring-Gull.

Taylor, Capt. W. R.

One Bonelli's Eagle.

Tennent-Tennent, H., Esq.
One White-tailed Eagle.

Thimbleby, H. J., Esq.

One Macaque Monkey.

Thomas, Mrs.

One Bonnet-Monkey.

Thompson, F. J., Esq.

Four Hog-nosed Snakes, two Alleghany Snakes, one American Black Snake, one Say's Snake, two Wood Hares, one American Badger.

Tunnard, Lieut. W. F., R.N.
One Ring-tailed Coati.

Urquhart, Mrs.

One Pig-tailed Monkey.

Vaill, Capt. E. E.

Two Vulpine Squirrels.

Wainewright, Miss.

One Undulated Grass-Parrakeet.

Waite, Mrs. S.

One Red-throated Amazon.

Wall, Mrs.

One Green Monkey.

Walsh, Theo., Esq.

Two Pileated Jays.

Ward, J., Esq.

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#### Conclusion.

The Council cannot conclude their Report without acknowledging the assistance they have received from the Committee of Publication, upon whom is devolved, in accordance with the By-Laws, the arrangement and supervision of the Society's Scientific Publications.

The Council have also to ask you to thank those Fellows of the Society who during the past year have audited the

Accounts and served on the Finance Committee.

Although the past year has not been so favourable to the interests of the Society as those which have immediately preceded it, the Council have had the satisfaction of being able to meet the current expenditure, and at the same time to pay off £1000 of the debt remaining due on the freehold premises.

Signed (for the Council), P. L. SCLATER,

Secretary.

3 Hanover Square, W., April 29th, 1886.





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## REPORT

OF THE

## COUNCIL AND AUDITORS

OF THE

## ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1887.

READ AT THE ANNUAL GENERAL MEETING,

APRIL 30TH, 1888.



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1888.

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## REPORT

OF THE

#### COUNCIL

OF THE

## ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1887.

READ AT THE ANNUAL GENERAL MEETING,

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1888.

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#### REPORT OF THE COUNCIL.

April 30, 1888.

THE Council have the pleasure of submitting to the Fellows their fifty-ninth Annual Report upon the progress

of the Society.

This, in accordance with previous Reports, is divided into three heads, the first of which relates to the General Condition of the Society and its Finances, the second to the business transacted at the Office in Hanover Square, and the last to the state of the Gardens in the Regent's Park.

#### I. GENERAL CONDITION OF THE SOCIETY.

#### 1. STATE OF THE ROLL OF MEMBERS.

#### a. Fellows.

The number of Fellows and Fellows Elect on the 1st of January, 1888, was 3104, classified as follows:—

Compounders who have	ve	paid	1 1	£20				25
Ditto ditto		•	4	E30		•		900
Compositions remitted				•		•		20
Paying annual contribu	uti	ions	of	£2	•	•		20
Ditto ditto								1963
Dormant			•	•	•	•	•	153
Admission-fees unpaid		•	•	•	•	•		23
								3104

The number of Fellows at the corresponding date in 1887 was 3146, showing a decrease of 42 during the year 1887.

Comparative Statement of Elections, Deaths, Resignations, and Removals during the past Ten Years, with the number of Fellows at the end of each Year.

				Died.			R	esigne	d.	R	emoved	1	be s.	of r <sup>3</sup> 31.
Years.	ed or	Cor	npoun	ders.	Subsc	ribers.	Subsci	ibers.	Admission Fees Unpaid.		ibers.	Admission Fees Unpaid.	Ceased to Fellows.	Number C Fellows December
	Elected or Readmitted	£20.	£30.	Fee re- mitted.	£2.	£3.	£2.	£3.	Admissic Fees Unpaid	£2.	£3.	Admis Fe Unpa	Cen	Na F Dec
1070	176		12		5	52	1	40	1			1	118	3412
1878.	144	9	17		7	52		54			50	6	195	3361
1879.	153	4	18	1	4	65		74			38	4	208	3306
1880.		24	31		5	75		65	3	1	27		231	3213
1881.	138	3	23	1	4	61		48			11	13	164	3213
1882.	164		-		3	55		38			33	4	162	3210
1883.	159	4	25		5	53	***	37		1	7	6	138	3255
1884.	183	1	28		_		2	55		1	20	2	173	3193
1885.	111	2	17	•••	5	69	2	1		1	12	5	170	3146
1886.	123	4	22		4	64		59	•••	***	} _		1	
1887.	138	4	20	•••	7	68	1	67	1	<u> </u>	10	3	180	3104

## b. Foreign Members.

One Foreign Member was elected in 1887, namely:— Dr. Karl Möbius, Director of the Royal Zoological Museum of Berlin.

### c. Corresponding Members.

The following Corresponding Members were elected in 1887, to fill vacancies in the List, namely:—

Herbert Musgrave Phipson, Esq., of Bombay.

Dr. Alfred G. Bourne, Ph.D., Professor of Biology in the Presidency College, Madras.

Dr. Alfred R. C. Selwyn, C.M.G., Director of the Geo-

logical Survey of Canada, Ottawa.

William Brewster, Esq., of the Museum of Comparative Zoology, Cambridge, Mass., U.S.A.

Dr. Emin Pasha.

Capt. John Fairchild, of Wellington, New Zealand.

Dr. Michel Menzbier, of the Imperial Society of Naturalists, Moscow.

Prof. Theophilus Studer, of Berne.

Edgar Thurston, Esq., Director of the Government Central Museum, Madras.

Dr. Oscar Bættger, of Frankfort-o.-M.

Dr. Lorenzo Camerano, of the Royal Zoological Museum, Turin.

Dr. Walter F. Dale, Falkland Islands.

Dr. George Brown-Goode, of the United-States National Museum, Washington.

Dr. H. A. Alford Nicholls, of Dominica, West Indies. Monsieur Pierre A. Pichot, of 132 Boulevard Hausmann, Paris.

#### 2. STATE OF THE FINANCES.

#### a. Income.

The Council regret to have to announce a serious decrease in the Income of the Society during the past year, caused mainly by the large falling-off of the Receipts from admissions to the Gardens. The sum received from this source in 1887 was only £12,138 5s. 6d., instead of £14,974 4s., the corresponding amount in 1886. Council cannot attribute this falling-off of the Society's most important source of revenue to any defects in the Garden-establishment, which, as they believe, was kept up in its usual high state of efficiency throughout the year. But they are inclined to think that the usual number of excursionists did not visit London during the summer and autumn of the past year, and that many of those who did come were led away from their usual visit to the Society's Gardens by rival attractions in other parts of the metropolis.

The other variations under the other heads of Income hardly call for special remarks; but the Council are pleased to be able to point out an increase of the sum received for compositions, which was £180 more in 1887 than in the

previous year.

The total Income of the Society for 1887 was £23,102 15 s. 6d., being less than that of 1886 by the sum of £2684 4s. 10d., as shown by the subjoined Table:—

		ne of										
	1887.			188	86.		Incr	ease	₽•	Decr	eas	e.
	£				8.	d.	£	8.	d.	£	8.	d.
Admissions to Gardens	12,138	5	6	14,974	4	0				2,835	18	б
Elephant and Camel-riding		_			_							
receipts	419			454		1						11
Garden Sales	446		2			6						4
Rent for Refreshment-rooms						4		• • • • •	• • • •	136	0	0
Rent for Freehold Premises	255	0	0	255	0	U	• • • • • • • • • • • • • • • • • • • •	••••	••••		• • • • •	• • • • •
Admission Fees:-	~-				^	0		_	_			
Past	75		-	45		0		0				• • • • •
Present	515	0	0	445	0	0	70	0	U		••••	• • • • •
Annual Subscriptions:—	10	^	0	10	^	٥						
Past	18	0	0	18		0		•••••	••••	193	•••	• ••••
Present		0	0	6,080		0	40				U	U
Future		6	0	180 620	0			0	0		••••	• • • • •
Compositions		U	υ Ω	47	6	0	180	U	U	15	••••	
Ivory Tickets		10	11	739	8	5	04					-
Publications			4	199	0	Ð	86 301		4			
Zoological Record			11	73	9	4	301	10	- 供		••••	• • • • •
Dividends			2	85		8	108		6		••••	• • • • •
Miscellaneous	190			00	U	0	108		0		••••	• • • • •
	23,102	15	6	25,787	0	4	818	3	11	3,502	8	9
Decrease				20,101			Ded.			818		11
Decrease !!!!!!!												
	25,787	0	4	25,787	0	4				2,684	4	10

### b. Expenditure.

The ordinary Expenditure of the Society in 1887, under which head is included every item necessary to keep up the whole establishment in a perfect state of efficiency, was £23,876 9s. 1d., being £562 8s. 8d. less than in 1886. On the other hand, a sum amounting altogether to £1259 1s. 1d. was devoted to certain special works and objects, which will be explained in subsequent portions of the Report. These were as follows:—

#### Extraordinary Expenditure paid in 1887.

Buildings:	£	s.	d.
New Wolves' Dens	. 446	7	0
Works:—			
Night-Heron's Aviary	. 309	8	1
Publications:—			
Library Catalogue	. 244	1	11
Jubilee Reception Expenses	. 259	4	1
	£1259	1	1

On adding the Ordinary and Extraordinary Expenditure together it will be seen that the total Expenditure of the year 1887 was £25,135 10s. 2d., the particulars of which, together with a comparison of the corresponding amounts paid in 1886, are given in the subjoined Table:—

		Exp	ene	diture	of	Increase.	Decrease.	
	18	87.		18	386.			
D 1 D 1 m 1 m	£		. d.		8.		£ 8. d	
Rent, Rates, Taxes, and Insurance	1,434			1,700		7		. 265 14 9
Salaries, Wages, and Pensions Provisions	5,919		8	5,937		9		. 18 3 1
Cost and Carriage of Animals	3,932 961		10 5	4,041 803		4 6	158 10 11	108 14 6
Menagerie Expeuses	3,324		3	3,551		5	158 10 11	237 10 2
Keepers' Dresses	200		8	167		6	33 6 2	20, 10 2
Works, Materials, &c.	2,518		6	2,585		4	00 0 2	67 5 10
Buildings	446	7		_,000			446 7 0	01 5 10
Garden Expenses	[-791]	12	5	791	17	9		0 5 4
Advertisements	265		11	234		2	31 4 9	
Band Expenses	167	2	0	225		0		58 10 U
House and Office Expenses	802	18	0	786	4	4	16 13 8	
Stationery and Printing (Miscella-	00~			00.	_			
neous) Cost of Publications	$\frac{385}{1,987}$		11	387		0		$\begin{bmatrix} 2 & 0 & 1 \end{bmatrix}$
Cost of Zoological Record	717	7	6	2,108	4	3		120 10 9
Library Expenses		7	7	633	2	8	717 7 4	
Expenditure of Davis Bequest	79			80		6		59 15 1
Interest on Mortgage and Loan		4	8	367	6	8	**********	$\begin{bmatrix} 1 & 8 & 7 \\ 28 & 2 & 0 \end{bmatrix}$
Reception Expenses		4	ĭ				259 4 1	20 2 0
Grant in aid of Science				100	0	υ		100 0 0
Miscellaneous	28	11	8	56	8	0		27 16 4
	—— — 25,135	10	2	24,568	12	9	1,662 13 11	1,095 16 6
Increase				5ชช		5	I,095 16 6	Ded. Decr.
	05 195	10	-			_		
	25,135 ———	10	اك	25,135 	10	2	566 17 5	
Ordinary Payments	23,876	9	1	24,438	17	9		562 8 8
Extraordinary ditto	1,259	1	1	129		Ū	1,129 6 1	
	25,135	10	2	24,568	12	9	566 17 5	

In order to meet the Expenditure of 1887 it was found necessary towards the close of the year to obtain a temporary loan of £3000 from the Society's Bankers. This temporary loan, which it is proposed to pay off during the present and two succeeding years, will not interfere with the operation of extinguishing the remaining mortgagedebt of £8000 on the Society's House, which, according to the arrangement made at the time of its purchase, will be effected by annual instalments of £1000 on the 15th of June in each year, so that the whole will be paid off in June 1895.

Thus the total receipts and payments of the past year may be summarized as follows:—

Receipts, 1887.				Payments, 1887.	
Balance brought from December 31, 1886	1,190 <b>2</b> 3,102	15 0	8 6 0	Expenditure paid in the year 25,135 10 Repayment of Mortgage-debt 1,000 0 Balance, carried over to 1888 1,158 1	d. 2 0 1

#### c. Assets and Liabilities.

The Assets and Liabilities of the Society on December 31, 1887, were estimated as follows:—

## ASSETS. Animals in the Menagerie in the Regent's Park

ASSETS.			_
	£	s.	d
Animals in the Menagerie in the Regent's Park	25,902	0	0
Books in the Library at Hanover Square	13,764	0	0
	3,058	ŭ	ŏ
Unsold Publications	,	ő	0
Stock of the Zoological Record	1,000		
Freehold Premises	25,000	0	0
Cost of £1,900 London and South-Western Railway New			
4 per cent. Preference Stock (Davis Trust Fund)	1,938	9	6
Cash at the Bankers' (Messrs. Drummond)	1,158	1	0
Arrears considered good:— $\pounds$ s. d.	,		
Rent for Refreshment Rooms			
Rent for Freehold Premises 88 15 0			
20020 201 21002004 210221000111111111111			
Garden Sales			
Annual Subscriptions			
Publication Sales			
Zoological Record Sales 27 10 0			
	492	6	11
			_
	£72,312	17	5
	212,012	11	U
	-		_
LIABILITIES.			
Rent and Taxes unpaid:— £ s. d.	t.	s.	d
	ند	٥.	α.
For the Gardens, say 266 7 6			
" Office, say	010		0
	312	12	6
Bills, &c., estimated at:—			
For the Gardens, say			
,, Office, say	2,028	18	4
,, Office, say	2,028		
,, Office, say	3,000	0	0
,, Office, say		0	
,, Office, say	3,000	0	0

#### II. OFFICE, 3 HANOVER SQUARE.

#### 1. Scientific Meetings.

To the fourteen meetings for the despatch of scientific business held in the Society's Rooms in Hanover Square, in 1887, 133 communications were made. Of these, 95 were from Fellows and 11 from Corresponding Members of the Society. The remaining 27 papers were from individuals not belonging to the Society, and were communicated to it by the Secretary or by other Members. The corresponding number of communications in the year 1886 was 117.

These communications were submitted to the Committee of Publication, by whom the following orders were made respecting them: 5 were ordered to be printed entire in the 'Transactions' of the Society, and 91 in the 'Proceedings,' such illustrations being in each case allowed as the Committee considered necessary for the purpose. Of the remaining communications, abstracts or extracts were considered to be sufficient for publication.

#### 2. Scientific Publications.

#### a. Proceedings.

The volume of 'Proceedings' for 1887 is on the table. It contains 730 pages illustrated by 55 plates. In the following table are given the number of pages and plates of the volumes of 'Proceedings' for the past ten years:—

					plates.	pages.
1878					62	1056
1879	•		•		64	868
1880		•			64	743
1881	•			•	72	1056
1882	•				61	827
1883	•	•			61	704
1884				•	<b>5</b> 8	645
1885		•	·		62	991
1886					60	716
1887					55	730

#### b. Transactions.

Only one part of 'Transactions' was published in 1887, namely:—

Vol. XII. Part VI. (April, 1887), containing the following memoirs.

On the Anatomy of the Sondaic Rhinoceros. By Frank E. Beddard, M.A., F.R.S.E., F.Z.S., Prosector to the Society, Lecturer on Biology at Guy's Hospital, and Frederick Treves, F.R.C.S., F.Z.S., Hunterian Professor at the Royal College of Surgeons, Surgeon to the London Hospital (with five Plates).

On some new Exotic Amphipoda from Singapore and New Zealand. By the Rev. Thomas R. R. Stebbing,

M.A. (with two Plates).

Memoirs which will occupy five more parts of the Society's 'Transactions' were ordered for publication in 1887. One of these has been already issued, and most of the others are in a forward state.

#### c. Zoological Record.

The arrangements made by the Council for taking over the old stock of the 'Zoological Record,' and for carrying on the future publication of that work, were fully explained to the Members in the last Annual Report. Owing to the late date at which some of the Recorders were set to work, and to other slight obstructions, it was not found possible to issue the 'Record' for 1886 until early in the present The volume has now been sent out to about 140 Subscribers, consisting of Members of this Society and of the former "Zoological Record Association," and of certain Learned Societies and Institutions who have likewise the privilege of subscription. Besides this, 33 complete sets of the former years' issues have been sold, at the price of £5 10s. a set, together with a number of odd volumes required by purchasers to complete their sets.

The Council are pleased to think that the Society's efforts to continue the publication and augment the circulation of a work so useful to zoologists have been so far

successful; but they trust that as the value of the work becomes better known, a much greater increase in its circulation will take place.

#### 3. LIBRARY.

The Library has been kept in good working order during the past year, and has been much used by working

zoologists.

The new edition of the Library Catalogue, spoken of in the last Annual Report as ready for issue, was published last summer. It has been long required, owing to the large additions recently made to the Library, and has been found to be most useful.

The cost of its preparation and printing was £244 1s. 11d., which has been charged to the Extraordinary Expenditure

of 1887.

During the year 1887 many important additions were made to the Library, among which attention may be called to the following donations:-

Boulenger. Catalogue of the Lizards in the British Museum. Vol. iii. 1887. Presented by the Trustees of the British Museum.

urmeister. Atlas de la description physique de la République Argentine. Mammifères. Livr. 3. 1886. Presented by the Burmeister. Author.

Canestriui. Prospetto dell' Acarofauna Italiana. 1886. Presented by the Author.

Cotes and Swinhoe. A Catalogue of the Moths of India. Part i. Sphinges. Presented by the Trustees of the Indian Museum.

Cunningham. The Lumbar Curve in Man and the Apes. 1886.

Presented by the Royal Irish Academy.

Dijmphna. Togtets zoologisk-botaniske Udbytte. 1887. Presented by Dr. C. F. Lütkeu.

Godwin-Austen. Land and Freshwater Mollusca of India. Part vi.

(Plates.) 1887. Presented by the Author. Johnson. Treatise on the Medicinal Leech. 1816. Presented by the Royal Society.

Journal of Comparative Medicine and Surgery. Vol. viii. No. 4.

1887. Presented by the Editors. Lubbock. Scientific Lectures. 1879. Presented by W. C. Dale,

Catalogue of the Fossil Mammalia in the British Lydekker. Museum. Part iv. 1886. Presented by the Trustees of the British Museum.

Moore's Lepidoptera of Ceylon. Part xiii. (completed). 1887. Presented by the Government of Ceylon.

Muhr. Die Mundtheile der Insecten. 1878. Presented by Dr. Emil Holub.

Norske Nordhays-expedition, 1876-78. Parts xvii. & xviii., a, b.

1887. Presented by Prof. H. Mohn. Riley. A Collection of Entomological Papers. Presented by the Author.

Taránek. Monographie der Nebeliden Bohmen's. 1882. Presented by Dr. Emil Holub.

The following is a list of the principal zoological works in course of publication of which parts were purchased in 1887:—

Berlese. Acari, Myriapodi e Scorpioni Italiani. Fasc. xxxii.-xlv. Blasius und Hayek. Ornis. Jahr. II. Heft 4; Jahr. III. Heft. 1-3.

Booth. British Birds. Parts xiv., xv. (completed). Bronn's Thierreich. Band I. (*Protozoa*), Lief. 35–40; Band II. (Porifera), Lief. 12-16; Band IV. (Vermes), Lief. 1-6; Band VI. Abth. iii. (Reptilien), Lief. 54-56; Abth. iv. (Vögel), Lief. 16, 17; Abth. v. (Säugethiere), Lief. 29.

Bucquoy, Dautzenberg, et Dollfus. Mollusques marins du Rous-

sillon. Tome i.

Buller. Birds of New Zealand. Parts 1, 2.

'Challenger,' Voyage of H.M.S. Zoology, Vols. xvii.-xxii. Botany, Vol. ii.

Clessin. Malakozoologische Blätter. N. F. Band IX. Bog. 2-4; X. Bog. 1.

—. Die Mollusken-Fauma Oesterreich-Ungarns und der Schweiz. Lief. 1, 2.

Edwards. Butterflies of North America. Ser. 3. Parts 1-4.

Encyclopædia Britannica. Vol. xxii.

Fauna und Flora des Golfes von Neapel. Monogr. xiv.

Fischer. Manuel de Conchyliologie. Fasc. xi. (completed).

Fol. Recueil Zoologique Suisse. Tome iv.

 ${
m Fowler.}$ Coleoptera of the British Isles. Parts 3-13.

Giglioli. Iconografia dell' Avifauna Italica. Fasc. xxxii.-xxxvii. Godman and Salvin. Biologia Centrali-Americana. Zoology, Parts liv.-lxiv.; Botany, Parts xxii.-xxiv.

Gould's Birds of New Guinea. Part xxiii.

Trochilidæ. Suppl. Part v. (completion).

Grandidier. Histoire de Madagascar. Vol. xviii. Tome i., Texte. (*Lépidoptères*.) Greene. Parrots in Captivity. Vol. iii.

Gruber. Beobachtungen aus der menschlichen und vergleichenden Anatomie. Heft. I-8.

Haeckel. Die Radiolarien. Theil 2.

Hamann. Beiträge zur Histologie der Echinodermen. Heft 3. Helmerson und Schrenck. Beiträge zur Kenntniss des Russischen Reiches. Folge 3. Band II.

Herman. Naturhistorische Hefte. Band X. Heft 4; Band XI.  ${
m Heft} \ 1.$ 

Janson's Cistula Entomologica. Part xxxix.

Prodromus Faunæ Molluscorum Testaceorum maria Kobelt. Europæa inhabitantium. Fasc. i.-iv.

Iconographie der schalentragender europäischen Meeres-

conchylien. Heft. v.-vii.

Rossmässler's Iconographie der europäischen Land- und Süsswasser-Mollusken. N. F. Band III. Lief. i.-iv. Koch. Arachniden Australiens. Lief. 35, 36.

Lescuver. Mélanges d'Ornithologie. Parts 1-4.

Lilford. British Birds. Parts iv., v. Martini und Chemnitz. Conchylien-Cabinet. Lief. 342-354. Meinert. Entomologiske Meddelelser. Bind I. Hefte 1, 2. Nordenskiöld. Vega-Expeditionens. Bände iv., v.

Oberthür. Études d'Entomologie. Part xi.

Olphe-Galliard. Contributions à la Faune Ornithologique de l'Europe Occidentale. Fasc. ii., vi.-xi., and xxii.

Paetel. Catalog der Conchylien-Sammlung. Lief. 1-4. Pelzeln und Madarász. Monographie der Pipridæ. Lief. 1. Pryer. Rhopalocera Nihonica. Part i.

Rochebrune. Faune de la Sénégambie. Supplement. Fasc. i.

Mémoires sur les Lépidoptères. Tome iii. Romanoff,

Russ. Vögel der Heimat. Lief. 10-17.

Ergebnisse naturwissenschaftlicher Forschungen auf Sarasin. Ceylon. Band I. Heft 1; Band II. Heft. 1, 2.

Schiödte. Zoologia Danica. Hefte 5.

Schneider. Zoologische Beiträge. Band II. Heft 1.

Selenka. Studien über Entwickelungsgeschichte der Thiere. Heft iv. Hälfte 2.

Semper (C.). Reisen im Archipel der Philippinen. Theil II. Band ii. Suppl. Heft iii. Hälfte 1; Band v. Lief. 2.

Semper (G.). Die Schmetterlinge der Philippinischen Inseln. Band i. Lief. 1, 2.

Sharpe and Wyatt. Monograph of the Hirundinidæ. Parts v., vi. Smith and Kirby. Rhopalocera Exotica. Parts i., ii.

Sowerby. Thesaurus Conchyliorum. Part xliv. Spengel. Zoologische Jahrbücher. Band ii. Heft. 2-4; Band iii. Heft 1.

Staudinger. Exotische Schmetterlinge. Lief. 17-19; Theil II. Lief. 3.

Sundman. Finska Fogelägg. Häft. vii. --. Finlands Fiskar. Häft. vii., viii.

Taschenberg. Bibliotheca Zoologica ii. Lief. iii., iv.

Tryon. Manual of Conchology. Parts xxxiii.-xxxvi.; Ser. 2. Parts ix.-xi.

Veth. Midden-Sumatra. Deel iv. Afd. 5.

Vogt et Yung. Traité d'Anatomie Comparée. Livr. 9, 10.

—. Lehrbuch der Anatomie. Lief. 8-12.

Waterhouse. Aid to the Identification of Insects. Part xxviii. Westerlund. Fauna der in der Paläarctischen Region. Binnen-conchylien. Part iii.

Zittel. Handbuch der Paläontologie. Abth. i. Band III. Lief. 1; Abth. ii. Lief. 5.

Some of the most important additions to the Society's

Library, purchased since the last Anniversary, are the following :—

Annali di Storia Naturale and Nuovi Annali delle Scienze Naturali, Bologna. 34 vols. 8vo, 1829-54.

Barnes. Handbook to the Birds of Bombay. 8vo, 1885.

Bonnanus. Museum Kircherianum. 2 vols. Folio, 1773-82.

Capen. Oology of New England. Folio, 1886.

Claus. Die Platysceliden. Folio, 1887.

Collins. An Account of the English Colony of New South Wales. 2 vols. 4to, 1798–1802.

Cope. The Origin of the Fittest. 8vo, 1887.

Darwin. The Life and Letters of Charles Darwin. 3 vols. 8vo,

Day. British and Irish Salmonidæ. Royal 8vo, 1887. Dixon. Voyage round the World. 4to, 1789.

Fritsch. Die elektrischen Fische. Abth. I. Folio, 1887.

Green. Ocean Birds. 4to, 1887.

Guillemard. The Cruise of the 'Marchesa.' 2 vols. 8vo, 1886.

Guppy. The Solomon Islands. 2 vols. Royal 8vo, 1887.

Haddon. An Introduction to the Study of Embryology. 8vo, 1887.

Harvie-Brown and Buckley. A Vertebrate Fauna of Sutherland, Caithness, and West Cromarty. 8vo, 1887.

Kirby and Spence. Introduction to Entomology. 4 vols. 8vo. 1815-26.

Maund and Holl. The Naturalist. 5 vols. Royal 8vo, 1837-39. Meyer. Unser Auer-, Rackel- und Birkwild und seine Abarten. Text, folio; Plates, Elephant folio, 1887.

Mulsant et Rey. Histoire Naturelle des Coléoptères de France. 16 vols. 8vo, 1854-79.

Pallas. Icones Insectorum. 4to, 1781. Philosophical Transactions. Vols. xc.-cx. 4to, 1800-20.

Ridgway. Manual of North-American Birds. Royal 8vo, 1887. Rösel. Der monatlich - herausgegebenen Insecten - Belustigung. Theil. I.-IV., in 6 vols. 4to, 1746-61.

Schaeffer. Icones Insectorum. 3 vols. 4to, 1766. Seebohm. The Geographical Distribution of the Charadriidæ. 4to, 1887.

The Birds of Wiltshire. 8vo, 1887.  ${f Smith.}$ 

Spencer. The Principles of Psychology. 2nd edition. 2 vols. 8vo, 1870-72.

Trimen and Bowker. South-African Butterflies. 2 vols. Royal 8vo, 1887.

Waterton. Wanderings in South America. 4to, 1825.

Wiedersheim. Lehrbuch der vergleichenden Anatomie der Wirbelthiere. Zweite Auflage. 8vo, 1886.

Wilkes. English Moths and Butterflies. 4to, 1772.

The following is a list of the periodicals received in 1887 from the various Societies and Institutions with which this Society is in correspondence.

### AMERICA (NORTH)

The American Academy of Arts and Sciences, Boston.

Proceedings, n. s., vol. xiv., parts 1, 2. Memoirs, vol. xi., part 4, no. 5.

The Buffalo Society of Natural Sciences, Buffalo-Bulletin, vol. v., no. 2.

The Museum of Comparative Zoölogy, Harvard College, Cambridge, Mass.

Bulletin, vol. xiii., nos. 2-5. Memoirs, vol. xvi., nos. 1, 2. Annual Report, 1886-87.

The Elliott Society of Science and Art, Charleston. Proceedings, 1875-86.

The Nova Scotia Institute of Natural Science, Halifax.

Proceedings and Transactions, vol. vi., pt. 4.

The "Antonio Alzate" Scientific Society, Mexico. Memorias, tomo i., cuad. 1-4.

The Geological and Natural History Survey of Minnesota, Minneapolis.

Annual Reports, 13, 14.

The Royal Society of Canada, Montreal.

Proceedings and Transactions, vols. iii., iv.

The Connecticut Academy of Arts and Sciences, New Haven.

Transactions, vol. vii., part 1.

The American Museum of Natural History, New York.

Bulletin, vol. i., no. 8; ii., no. 1. Annual Report, 1886-87.

The New York Academy of Sciences, New York.

Annals, vol. iii. nos. 11, 12; iv., nos. 1, 2. Transactions, vol. iv.; v., nos. 7, 8.

The Geological and Natural-History Survey of Canada, Ottawa.

Annual Report, n. s., vol. i.

- The Academy of Natural Sciences, Philadelphia. Proceedings, 1886, part 3; 1887, parts 1, 2.
- The American Entomological Society, Philadelphia. Transactions, vol. xiii., nos. 3, 4.
- The American Philosophical Society, Philadelphia. Proceedings, vol. xxiii., no. 124; xxiv., no. 125.
- The Franklin Institute, Philadelphia.
  Journal, 1887.
- The Wagner Free Institute of Science, Philadelphia. Transactions, vol. i.
- The American Association for the Advancement of Science, Salem.

  Proceedings, 34th and 35th Meetings, 1886, 1887.
- The Peabody Academy of Science, Salem.
  Annual Report, 1887.
- The California Academy of Science, San Francisco. Bulletin, vol. ii., nos. 6, 7.
- The Trenton Natural-History Society, Trenton. Journal, vol. i., no. 2.
- The Biological Society, Washington.
  Proceedings, vol. iii.
- The Philosophical Society, Washington.
  Bulletin, vol. ix.
- The Smithsonian Institution, Washington.

  Annual Report, 1884, part 2; 1885, part 1.

  Annual Report of the Bureau of Ethnology, 1882-83.

#### AMERICA (SOUTH).

The National Academy of Sciences of Cordoba, Buenos Ayres.

Boletin, tomo ix., entr. 1–4. Actas, tomo v., entr. 3.

#### AUSTRALIAN COLONIES.

- The Royal Society of Tasmania, Hobart.
  Papers and Proceedings for 1886.
- The Linnean Society of New South Wales, Sydney.

  Proceedings, ser. 2, vol. i., parts 3, 4; vol. ii., parts 1, 2.
- The Royal Society of New South Wales, Sydney.

  Journal and Proceedings, vol. xix.
- The New-Zealand Institute, Wellington.
  Transactions and Proceedings, vol. xix.

#### AUSTRIA.

- The Academy of the University, Cracow.

  Sprawozdanie komisyi fizyjograficznej, tome xx.
- The Imperial Academy of Sciences, Vienna.

  Denkschriften, Bänd. l.-lii.
  Sitzungsberichte, Bänd. xcii-xciv.
- The Zoological and Botanical Society, Vienna.

  Verhandlungen, Band xxxvi., Quartal 3, 4; xxxvii., Quartal 1, 2.

#### BELGIUM.

The Entomological Society of Belgium, Brussels.

Annales, tome xxx.

The Royal Academy of Sciences, Letters, and Fine Arts, Brussels.

Annuaire, lii., liii.
Bulletins, sér. 3, tomes ix.-xiii.
Mémoires, tome xlvi.
Mémoires couronnés (4to), tomes xlvii., xlviii.
Mémoires couronnés (8vo), tomes xxxviii., xxxix.

The Royal Malacological Society of Belgium, Brussels.

Annales, tome xxi. Procès-Verbaux, tome xvi., pp. i-lxxx.

The Royal Museum of Natural History, Brussels.

Bulletin, tome iv., no. 4. Annales, tome xiii., part 5.

#### CHINA.

The China Branch of the Royal Asiatic Society, Shanghai. Journal, vol. xxi., nos. 3-6.

#### EAST INDIES.

The Royal Society of the Dutch East Indies, Batavia.

Natuurkundig Tijdschrift, deel xlvi.

The Bombay Natural-History Society, Bombay. Journal, vol. ii., nos. 2, 3.

The Asiatic Society of Bengal, Calcutta.

Proceedings, 1886, nos. 8-10; 1887, nos. 1-8. Journal, vol. liv., part 2, no. 4; lv., part 2, nos. 3-5; lvi., part 2, no. 1.

The Geological Survey of India, Calcutta.

Records, vol. xx., parts 1-3. Memoirs (*Palæontologia Indica*), ser. 12, vol. iv., part 2; ser. 13, vol. i., part 6.

#### FRANCE.

- The Agricultural and Natural History Society, Lyons. Annales, sér. 5, tomes vii., viii.
- The Museum of Natural History, Lyons.

  Archives, tome iv.
- The Society Philomathique, Paris.

  Bulletin, sér. 7, tome x., nos. 3, 4; xi., nos. 1-3.
- The National Society of Acclimatation, Paris. Bulletin, sér. 4, tome iv.
- The Entomological Society, Paris.

  Annales, sér. 6, tomes v., vi.
- The Natural History Society, Toulouse. Bulletin, 1886; 1887, part 1.

#### GERMANY.

- The Royal Prussian Academy of Sciences, Berlin. Sitzungsberichte, 1886, nos. 40-53; 1887, nos. 1-39. Abhandlungen, 1886.
- The Society of Friends of Natural History, Berlin. Sitzungs-Berichte, 1886.
- The Natural-History Union of Rhenish Prussia and Westphalia, Bonn.

  Verhandlungen, Jahr. xliii., Hälfte 2; xliv., Hälfte 1.
- The German Malacological Society, Frankfort a. M. Jahrbücher, xiv., Heft. 1, 2.
- The New Zoological Society, Frankfort a. M. Der Zoologische Garten, Jahr. xxviii., nos. 1-10.

The Senckenbergian Natural-History Society, Frankfort a. M.

Bericht, 1887.

The Royal Society of Sciences, Göttingen.

Abhandlungen, Band xxxiii. Nachrichten, 1886.

The Imperial Leopoldino-Carolinian Academy of Naturalists, Halle.

Nova Acta, Bänd. xlvii., xlviii. Leopoldina, Heft. 21, 22.

The Natural History Society, Halle.

Abhandlungen, Band xvi., Heft 4. Bericht, 1885–86.

The Natural History Union, Hamburg.

Abhandlungen, Band ix., Heft. 1, 2.

The Society of Natural History Conversation, Hamburg. Verhandlungen, Band vi.

The Medical and Natural-History Society, Jena.

Jenaische Zeitschrift, Band xx.

The Academy of Metz.

Mémoires, sér. 3, ann. xiii.

The Royal Bavarian Academy of Sciences, Munich.

Abhandlungen, Band xvi., Abth. 1. Sitzungsberichte, 1886, Heft. 1–3; 1887, Heft. 1, 2. Inhaltverzeichniss der Sitzungsberichte, 1871–85.

The Westphalian Provincial Union of Science and Art, Münster.

Jahresbericht, xv.

The Natural-History Union, Würtemberg.

Jahreshefte, Jahrg. xliii.

GREAT BRITAIN AND IRELAND.

The Belfast Natural-History and Philosophical Society, Belfast.

Report and Proceedings, Sessions 1886-87.

- The Birmingham Philosophical Society, Birmingham. Proceedings, vol. v., part 2.
- The Essex Field Club, Buckhurst Hill, Essex.
  Transactions, vol. iv., part 2.
  The Essex Naturalist, vol. i., nos. 1, 2, 5-11.
- The Philosophical Society, Cambridge.

  Proceedings, vol. v., part 6; vi., parts 1, 2.

  Transactions, vol. xiv., part 2.
- The Royal Dublin Society, Dublin.

  Scientific Transactions, ser. 2, vol. iii., parts 11–13.

  —— Proceedings, n. s., vol. v., parts 3–6.
- The Royal Geological Society of Ireland, Dublin. Journal, n. s., vol. viii., part 2.
- The Royal Irish Academy, Dublin.

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Donations, Memoirs, and Papers have also been received from:—Prof. Paul Albrecht; the Editors of the 'American Journal of Science'; the Editors of the 'American Naturalist'; the Editors of the 'Archiv für Naturgeschichte'; the Editors of the 'Athenæum'; A. F. Baillie, Esq.; T. S. Barrett, Esq.; Edward Bartlett, Esq.; Dr. G. Baur; Dr. R. Blasius; Rev. L. Blomefield; T. B. Blow, Esq.; Dr. H. Bolau; the Brazilian Legation; the Trustees of the British Museum; Dr. H. Burmeister; F. M. Campbell, Esq.; the Geological and Natural History Survey of Canada; the Editors of the 'Canadian Record'; Prof. E. D. Cope; Dr. A. Dubois; Dr. A. Ernst; The National Central Library, Florence; H. J. K. Gaskoin, Esq.;

J. H. Gurney, Jun., Esq.; Dr. Holub; the Geological Survey of India; the Editors of the 'Journal de Conchyliologie'; Sydney T. Klein, Esq.; Prof. A. Kölliker; Dr. H. Lansdell; Mons. F. Lataste; Dr. R. Leuckart; Dr. C. Lütken; R. Lydekker, Esq.; Professor K. Möbius; Prof. H. Mohn; the Editors of the 'Naturalist'; the Editors of 'Nature'; the Colonial Museum of New Zealand; the Nottingham Naturalists' Society; the Oxford and Cambridge Club; Dr. Paul Pelseneer; Prof. C. V. Riley; Alfred Sanders, Esq.; Dr. R. Scharff; P. L. Sclater, Esq.; Dr. R. W. Shufeldt; the South Australian Zoological and Acclimatization Society; Dr. Michele Stossisch; E. E. Thompson, Esq.; the United States Fish Commission; the United States Geological Survey; the University College of London; F. H. Waterhouse, Esq.; and the Zoological Society of Philadelphia.

## III. GARDENS, REGENT'S PARK.

#### 1. WORKS AND REPAIRS.

Two important additions were made to the buildings in the Society's Gardens during the past year, and seem in each case to have fully answered the purposes for which

they were intended.

The foundations of the new Dog-kennels or "Wolves-and-Foxes Dens" were laid in 1886, and the plan for their erection was spoken of in the last annual Report. The Council thought it unadvisable to delay the completion of this building any longer, and the Society's workmen were accordingly employed upon it during the greater part of the past autumn. Only the iron-work and the stone-work were let out, the rest of the building having been erected by the Society's staff, under the supervision of Mr. Trollope, by whom the plans were drawn. The whole building was completed in November last, and is now tenanted by a series of representatives of the genus Canis, which were previously lodged in several different parts of the Gardens. The building consists of a centre with four larger dens (12 ft. by 11), and two wings, each

containing five smaller dens (8 ft. by 10). It is placed on the extreme southern edge of the Gardens, beyond the Lion-House. The following is a list of the representatives of the various species of Dogs, Foxes, and Wolves now exhibited in it, or to be removed thereto, when vacancies occur.

#### List of Specimens of the Genus Canis in the Society's Gardens.

- 1, 2. Canis lupus, of Q. Received in exchange, Dec. 5, 1887.
- 3. Canis lupus, S. Presented by C.S. Hardy, Esq., Dec. 14, 1887.
- 4. Canis niger, 3. Received in exchange from the Zool. Gardens, Calcutta, May 5, 1883, to which institution it was presented by Major Fred. Clowes.
- Canis vulpes. Presented by Mr. Thos. Legge, July 30, 1884.
- 6. Canis vulpes. Presented by Lady Brassey, F.Z.S., Feb. 21, 1885.
- 7. Canis vulpes. Presented by A. B. Priestly, Esq., July 3, 1886.
- 8. Canis vulpes. Presented by C. Heseltine, Esq., July 8, 1885.
- 9, 10, 11. Canis lagopus. Presented by T. Nordenfelt, Esq., C.E., Sept. 27, 1887.
- 12. Canis javanicus, J. Purchased, Sept. 29, 1887.
- 13. Canis aureus. Presented by J. Smith, Esq., Aug. 22, 1878.
- 14. Canis aureus, ♀. Presented by Capt. W. Greake, Sept. 23, 1887.
- 15. Canis griffithii. Presented by Lt.-Col. Sir O. B. St. John, Dec. 29, 1887.
- 16. Canis anthus, &. Presented by Capt. W. F. Wardroper, Dec. 4, 1882.
- 17. Canis anthus, ♀. Presented by A. T. Marsh, Esq., Sept. 14, 1886.
- 18, 19. Canis mesomelas, ♂♀. Presented by F. Mosenthal, Esq., May 12, 1886.
- 20, 21. Canis lateralis, ♂♀. Purchased, May 28, 1886.
- 22. Canis pallidus. Presented by Capt. J. S. Talbot, Nov. 24, 1885.
- 23. Canis chama. Purchased, June 26, 1886.
- 24. Canis latrans. Presented by R. Payze, Esq., July 8, 1884.
- 25. Canis latrans, 3. Presented by Prof. C. M. Vincent, Aug. 21, 1887.

26. Canis latrans, ♀. Presented by Baron Ferdinand de Rothschild, F.Z.S., Dec. 5, 1885.

27. Canis fulvus. Deposited, Nov. 10, 1876.

- 28. Canis fulvus. Presented by Messrs. Ensor, Weber, & Co., July 23, 1886.
- 29. Canis fulvus. Presented by Miss Cameron, Sept. 24, 1887.

30. Canis velox. Received in exchange, Jan. 17, 1885.

31. Canis virginianus. Received in exchange, Oct. 23, 1886.

32. Canis azara. Purchased, June 16, 1885.

33. Canis rudis, c. Presented by Capt. J. Smith, Sept. 30, 1886.

34. Canis rudis. Purchased, Dec. 2, 1886.

 Canis fulvipes? (Tierra del Fuego). Presented by Miss M. M. Wroughton, Sept. 26, 1887.

36. Canis dingo, ♀. Deposited July 4, 1887.

A second noteworthy addition to the buildings in the Gardens made during the past year is the New Aviary for flying birds, which has been erected on the Water-fowls' Lawn, opposite the Eastern Aviary. The object of it is to enclose a space so large and high that the birds which inhabit it may be induced to use their wings, and to lead a more natural life and show off their habits better than they can be expected to do in ordinary Aviaries. New Aviary or "Night-herons' Pond," as it is proposed to call it, is 105 feet long and 62 broad, and rises to a height of 27 feet in the centre of the roof, which is formed of galvanized wire. It encloses a pond and a number of trees and shrubs, in which it is hoped that the tenants may be induced to build their nests. Although the birds were not placed in it until the month of June last, a pair of Ibises made a nest in one of the trees, and successfully reared two young birds. This year it is hoped that Nightherons and other selected tenants of the Night-herons' Pond will follow the good example set them.

Besides these two new buildings, various repairs and renovations were carried out by the Society's staff of workmen during the year 1887. Amongst these may be mentioned the general repair of the roof of the Eastern Aviary, the repair and re-glazing of the roof of the Ostrichhouse, and the painting outside of the new Reptile-house. Besides these, a quantity of ballast was burnt for the repairs of the roads and paths, and many other and

smaller works and improvements were carried out.

#### 2. STAFF.

The permanent Staff of the Society's Gardens consists of:

1 Superintendent.

1 Assistant Superintendent.

1 Head Keeper.

6 Keepers (1st class).

10 Keepers (2nd class).

8 Keepers (3rd class).

3 Money-takers.

1 Storekeeper.

1 Cook.

1 Office Clerk.

1 Prosector's Assistant.

1 Head Gardener.

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Besides these there are usually 19 Helpers in the Menagerie, 10 Garden-labourers, 7 Artisans, 2 Painters, 6 Labourers, 1 Butcher, 2 Firemen, 2 Night-Watchmen, and 1 Time-keeper employed at weekly wages; so that the number of the whole staff may be reckoned at about eighty-five persons.

#### 3. VISITORS.

The total number of visitors to the Society's Gardens during the year 1887 was 562,898, as will be seen by the following Table, which gives the corresponding numbers of entrances under each head for 1886 and 1887:—

#### Visitors to the Gardens.

	1887.	1886.	Comparison.	
Fellows and Friends	176,401 119,325	181,637 155,021	Decr. 5,236 Decr. 35,696	
	206,825	228,863	Decr. 22,038	
	38,631	58,013	Decr. 19,382	
	21,716	16,140	Incr. 5,576	
	562,898	639,674	Decr. 76,776	

The subjoined Table contains a statement of the Number of Visitors to the Society's Gardens during each year, from the year 1828 to the year 1887.

Number of Visitors to the Gardens, 1828-87.

Year. Number.	Year. Number.
$1828 \dots 98{,}605$	$1859 \dots 364,356$
$1829 \dots 189,913$	1860 394,906
$1830 \dots 223,420$	1861 381,837
1831 262,193	†1862 682,205
$1832 \dots 206,652$	$1863 \dots 468,700$
1833 211,343	$1864 \dots 507,169$
1834 208,583	$1865 \dots 525,176$
1835 210,06S	$1866 \dots 527,349$
1836 263,372	1867 556,214
1837 173,778	1868 573,186
1838 179,197	1869 572,848
1839 158,432	1870 573,004
1840 141,009	1871 595,917
1841 132,616	1872 648,088
<b>1</b> 842 107,459	$1873 \dots 713,046$
1843 98,280	$1874 \dots 706,907$
1844 101,527	$1875 \dots 699,918$
$1845 \dots 99,615$	‡1876 915,764
$1846 \dots 100,045$	$  1877 \dots 781,377  $
1847 93,546	$1878 \dots 706,713$
1848 143,630	1879 643,000
1849 168,895	1880 675,979
1850 360,402	1881 648,694
*1851 667,243	1882 849,776
$1852 \dots 305,203$	1883 743,485
1853 409,076	$1884 \dots 745,460$
1854 407,676	1885 659,896
1855 315,002	$1886 \dots 639,674$
1856 344,184	1887 562,898
$1857 \dots 339,217$	
1858 351,580	† Year of the International Exhibition. † Year of the exhibition of the Prince
* Year of the Great Exhibition.	of Wales's Indian Menagerie.

#### 4. PROSECTOR'S DEPARTMENT.

The Prosector (Mr. F. E. Beddard) reports as follows:— The number of deaths in the Society's Menagerie during the year 1887 was 925, showing a decrease of 152 as compared with those of the previous year.

The most important deaths which have occurred during

the year were the following:-

1. A Hooker's Sea-Lion (Otaria hookeri), one of three males presented to the Society in January 1887. A paper upon the external characters and anatomy of this little-known Sea-Lion has been read before the Society and will shortly be published in the "Transactions."

2. The young Gorilla purchased on the 24th of Oct. 1887, died on the 9th December following, having thus lived for a period of about two months in the Gardens. Its body was purchased by the Royal College of Surgeons.

3. A Lion, purchased by the Society in 1878, died,

apparently of peritonitis.

4. Two Hoffmann's Sloths, which had lived for eleven

years in the Menagerie.

Two examples, a male and a female, of Michie's Tufted Deer and two Camels complete the list of the more important animals which have been lost during the past year.

A large amount of the constantly accumulating material of the Prosector's stores has been utilized for various

purposes.

The greater part of the pathological material has been studied by Mr. J. Bland Sutton and Mr. Sibley. Mr. Storer Bennett has also acquired specimens illustrating the diseases of teeth for the Dental Museum.

Material has also been supplied for Museum purposes to Prof. Flower (Natural History Museum, South Kensington); Mr. Stewart (Royal College of Surgeons Museum); Prof. Macintosh (St. Andrews University); Prof. D'Arcy Thompson (University College, Dundee), and Prof. Milne-Edwards (Paris). Specimens for purpose of research have been sent to Prof. W. K. Parker and Prof. B. C. Windle.

#### 5. ZOOLOGICAL LECTURES.

The arrangements for the Davis Lectures on zoological

subjects for the present year are as follows:-

A course of 10 Lectures, which commenced April 19th, is being delivered in the Lecture-room in the Society's Gardens, Regent's Park, on Thursdays, at 5 P.M., by

Mr. F. E. Beddard, M.A., Prosector to the Society and Davis Lecturer. Subject: Reptiles, Living and Extinct.

These Lectures are a continuation of the series given last year in connection with the London Society for the Extension of University Teaching. In accordance with the method adopted by that Society, each Lecture is followed by a Class, which is occupied by an inspection and study of the animals referred to in the Lecture.

The Fee for the Course (including admission to the Gardens on the days of Lecture) is 10s. The Course is free to Fellows of the Society. Tickets for the Course may be obtained from Mr. F. E. Beddard, Zoological

Society's Gardens, Regent's Park, N.W.

#### 6. The Jubilee Fête of 1887.

In celebration of the Fiftieth Anniversary of Her Majesty's reign, and in accordance with a general desire to mark this epoch in some special manner, it was determined by the Council to hold the General Meeting of the Society in June last in the Gardens, and at its conclusion to have a general Reception of the Fellows of the Society

and other invited guests.

This plan was carried out in a manner which, the Council believe, was allowed on all sides to be very successful. At the General Meeting which was first held, after the usual formal business the Silver Medal, awarded to the Maharajah of Kuch-Behar, in acknowledgment of his donations to the Society's Menagerie, was presented to His Highness in person, and suitably acknowledged. Before concluding the Meeting the President of the Society delivered an address upon the progress of the Society since its commencement. The address, which will be found in the form of an Appendix to the present Report, was received with much interest, and the vote of thanks to Prof. Flower for preparing it was moved by Sir Joseph Fayrer, F.R.S., and seconded by the Maharajah of Kuch-Behar, F.Z.S.

The Reception held after the General Meeting was numerously attended by Fellows of the Society and their friends and other specially invited guests, amongst whom may be mentioned the Queen of Hawaii and Princess Liliokalani, His Highness the Thakore Sahib of Limbdi, His Highness the Prince Devawongse, and the Maharajah of Bhurtpore.

#### 7. REFRESHMENT DEPARTMENT.

The long-standing contract between the Society and Messrs. F. Trotman & Sons for the supply of refreshments in the Society's Gardens having come to an end by mutual agreement on the 31st of December last, the Council determined to invite an offer from Messrs. Spiers and Pond, the well-known refreshment-contractors, to succeed to the vacant tenancy. After some negotiation an agreement was arrived at which the Council trust will be satisfactory to both parties, and Messrs. Spiers and Pond, accordingly commenced the supply of refreshments in the Society's Gardens on the 1st of January of the present year. The well-known position of the firm of Messrs. Spiers and Pond in this class of business renders it quite unnecessary for the Council to say more on this subject, further than that they have every reason to believe that the business will be carried on in a style creditable to the Society and satisfactory to the Fellows and to the Visitors.

#### 8. MENAGERIE.

#### a. Additions to the Menagerie in 1887.

The number of animals belonging to the first three classes of Vertebrates living in the Society's Menagerie at the close of 1887 was 2525. The corresponding number on the 31st of December, 1886, was 2609, as will be seen by the subjoined Table:—

	December 31.		G	
	1887.	1886.	Comparison.	
Quadrupeds Birds Reptiles	1331	777 1429 403	Decr. 42 Decr. 98 Incr. 56	
	2525	2609	Decr. 84	

The total number of registered additions to the Menagerie in 1887 was 1135, of which 600 were acquired by presentation, 176 by purchase, 138 were bred in the Gardens, 135 were received on deposit, and 86 obtained in exchange.

The mode in which these figures compare with those of

previous years is shown in the subjoined table:-

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1875.	559	557	156	143	43	1458
1876.	533	316	171	172	27	1219
1877.	506	324	181	181	68	1260
1878.	511	272	150	178	71	1182
1879.	550	421	115	124	56	1266
1880.	624	515	148	161	40	1488
1881.	565	310	167	136	35	1213
1882.	772	402	113	111	25	1423
1883.	637	376	128	219	28	1388
1884.	646	524	174	229	133	1706
1885.	762	25 I	241	135	62	1451
1886.	851	236	171	232	48	1538
1887.	600	176	138	135	86	1135

The following is a list of the most noticeable additions made to the Menagerie during the year 1887:—

1. Two Blakiston's Owls (Bubo blakistoni), from Japan, pre-

sented by J. H. Leech, Esq., F.Z.S., January 20th.

2. Three Hooker's Sea-Lions (Otaria hookeri), from the Auckland Islands, presented by the Hon. W. J. M. Larnach, C.M.G., Minister of Marine of New Zealand, and received on the 26th January.

3. A Blue Penguin (Eudyptula minor), from Cook's Straits, New Zealand, presented by Bernard Lawson, Esq., January 26th, being the first example of this interesting little Penguin that

has been received by the Society.

4. A White-fronted Heron (Ardea novæ-hollandiæ), from Australia, presented by F. B. Dyas, Esq., February 25th, new

to the Society's Collection.

5. A young specimen of a Black-winged Kite (*Elanus caruleus*), taken from the nest by Mr. R. Southey, of Southfield, Plumstead, Cape of Cood Hope, and received February 28th. This species was likewise new to the Society's Collection.

6. Two Long-tailed Grass-Finches (*Poëphila acuticauda*) from Derby, King Sound, N.W. Australia, presented to the Collection

by Mr. Walter Burton, F.Z.S., March 18th.

7. A Fisk's Snake (Lamprophis fiski) and a Narrow-headed

Toad (Bufo angusticeps) from South Africa, presented to the Society by the Rev. G. H. R. Fisk, and received March 24th. Both of these were new to the Society's Collection, and Fisk's Snake, being new to science, has been named by Mr. Boulenger after its donor.

8. Two Crested Ducks (Anas cristata) from the Falkland Islands, received April 16th, presented by Frederick E. Cobb.

Esq., C.M.Z.S.

9. A Tooth-billed Pigeon (Didunculus strigirostris), brought home from the Samoan Islands, and presented to the Society by Mr. Wilfred Powell, C.M.Z.S., H.B.M.'s Consul for those Islands. But three specimens of this rare, and now nearly extinct, Pigeon have previously reached the Society's Collection.

10. A Red-and-White Flying Squirrel (*Pteromys alborufus*), from the province of Szechuen, in the interior of China, presented by Percy Montgomery, Esq., of Ichang, China, and received

September 9th.

11. An Urva Ichneumon (*Herpestes urva*), purchased September 17th. This Himalayan Carnivore was also new to us.

12. A young male Gorilla (Anthropopithecus gorilla), purchased October 10th of Mr. Cross of Liverpool, being the first Gorilla acquired by the Society. This animal was not strong on its arrival, and lived only about two months in the Gardens.

13. An Aye-Aye (Chiromys madagascariensis), purchased October 28th, being the second example of this rare animal

acquired by the Society.

## b. List of Species new to the Collection exhibited during the year 1887.

The following list contains the specimens exhibited in 1887 which are referable to species not included in the last (ninth) edition of the List of Animals.

#### i. MAMMALS.

- 1a. Anthropopithecus gorilla (Savage). Gorilla. Hab. West Africa.
  - a. Male. Purchased, Sept. 10, 1887. See P. Z. S. 1887
     p. 559.
- 75 a. Cebus apella, I. Geoffr. Horned Capuchin Monkey. Hab. South America.
  - a. Male. Purchased, Feb. 19, 1887.

75 b. Cebus flavescens, Gray. Yellowish Capuchin Monkey.

Hab. South America.

a. Presented by J. H. Williams, Esq., Aug. 26, 1887.

203a. Herpestes urva, Hodgs. Urva Ichneumon.

Hab. Nepal.

a. Purchased, Sept. 17, 1887. See P. Z. S. 1887, p. 559.

223a. Canis griffithi (Blyth). Griffith's Fox. Hab. Afghanistan.

a. Presented by Lieut.-Col. Sir Oliver B. C. St. John, K.C.S.I., R.E., F.Z.S., Dec. 29, 1887.

290 a. Otaria hookeri (Gray). Hooker's Sea-Lion.

Hab. Auckland Islands, New Zealand.

a-c. Males. Presented by the Hon. W. J. M. Larnach,
C.M.G., Jan. 26, 1887. See P. Z. S. 1887, p. 138.

333 a. Sciurus arizonensis, Coues. Arizona Squirrel.
Hab. New Mexico, U.S.A.
a. Presented by Dr. R. W. Shufeldt, July 21, 1887.

345 a. Pteromys alborufus, A. Milne-Edwards. Red-and-White Flying-Squirrel.

Hab. Szechuen, China.

a. Presented by Percy Montgomery, Esq., Sept. 9, 1887. See P. Z. S. 1887, p. 559.

#### ii. BIRDS.

167 c. Poëphila acuticauda (Gould). Long-tailed Grass-Finch.

Hab. N.W. Australia.

a. Male; b. Female. Presented by Mr. Walter Burton, F.Z.S., March 18, 1887.

237a. Passer arcuatus (Gm.). Cape Sparrow.Hab. South Africa.a, b. Purchased, June 2, 1887.

330a. Sturnus unicolor, Temm. Unspotted Starling. Hab. Spain.

a-h. Deposited, July 13, 1887.

576a. Platycercus cyanogenys, Gould. Blue-cheeked Parrakeet.

Hab. North Australia.

a. Received in exchange, May 13, 1887.

719a. Bubo blakistoni, Seebohm. Blakiston's Eagle-Owl. Hab. Yesso, Japan.

a, b. Presented by J. H. Leech, Esq., F.Z.S., Jan. 20, 1887. See P. Z. S. 1887, p. 138.

724a. Scops pennatus, Hodgson. Himalayan Scops Owl. Hab. Himalayas.

a. Presented by J. H. Leech, Esq., F.Z.S., Nov. 6, 1887.

834a. Elanus cæruleus (Desf.). Black-winged Kite. Hab. South Africa.

a. Presented by R. Southey, Esq., Feb. 28, 1887. See P. Z. S. 1887, p. 319.

890 a. Ardea novæ-hollandiæ, Latham. White - fronted Heron.

Hab. Australia.

a. Presented by F. B. Dyas, Esq., Feb. 25, 1887. See P. Z. S. 1887, p. 319.

995 a. Anas cristata, Gmelin. Crested Duck.

Hab. Falkland Islands.

a, b. Presented by Fred. E. Cobb, Esq., C.M.Z.S., April 16, 1887. See P. Z. S. 1887, p. 396.

- 1420a. Eudyptula minor (Temm.). Blue Penguin. Hab. New Zealand.
  - a. Presented by Bernard Lawson, Esq., Jan. 26, 1887. From Cook's Straits. See P. Z. S. 1887, p. 139.

#### iii. REPTILES.

98c. Hemidactylus turcicus (Linn.). Turkish Gecko. Hab. S. Europe.

a-d. Purchased, Aug. 8, 1887. From Sardinia.

124a. Eremias rubro-punctata, Dum. et Bibr. Red-spotted Lizard.

Hab. Egypt.

- a, b. Presented by G. Wigan, Esq., May 17, 1887. From Moses' Wells, Sinaitic Peninsula. See P. Z. S. 1887, p. 482.
- 145 a. Chalcides tridactylus, Laur. Three-toed Chalcis. Hab. South of Europe.a, b. Purchased, Aug. 8, 1887. From Sardinia.
- 272 a. Thamnodynastes nattereri (Boie). Natterer's Snake. Hab. Brazil.

  a, b. Purchased, May 3, 1887.
- 231 a. Tropidonotus erythrogaster (Shaw). Copper-bellied Snake.

Hab. North America.

a. Purchased, Sept. 8, 1887.

- 241a. Coluber quadrivittatus, Holbr. Chicken Snake. Hab. North America.
  - a. Presented by the Natural History Society of Toronto, Canada, Oct. 24, 1887. From Florida.

- 276a. Lamprophis fiski, Boulenger. Fisk's Snake. Hab. South Africa.
  - a. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., March 24, 1887.
     See P. Z. S. 1887, p. 397, pl. xxxiv.
- 300a. Crotalus adamanteus, Beauvais. Water Rattlesnake. Hab. Florida.
  - a. Presented by the Natural History Society of Toronto, Canada, Oct. 24, 1887.

#### iv. BATRACHIANS.

- 4a. Rana sylvatica, Leconte. Wood Frog. Hab. Canada.
  - a. Received in exchange, Oct. 24, 1887.
- 12a. Bufo angusticeps, Smith. Narrow-headed Toad. Hab. South Africa.
  - a. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., March 24, 1887.
  - 4a. Dendrobates typographus, Keferst. Scarlet Tree-Frog.

Hab. Costa Rica.

- a. Presented by C. H. Blomefield, Esq., May 29, 1887.See P. Z. S. 1887, p. 482.
- 24a. Hyla stepheni, Boulenger. Stephen's Tree-Frog. Hab. Port Hamilton, Corea.
  - a. Presented by Mr. George Stephen, H.M.S. Champion, June 17, 1887. See P. Z. S. 1887, p. 579, pl. li fig. 1.
- 27a. Discoglossus pictus, Otth. Painted Frog. Hab. Sardinia.

a-d. Purchased, Aug. 8, 1887.

e. Presented by Alban Doran, Esq., F.R.C.S., Sept. 8, 1887.

40a. Plethodon erythronotus (Green). Red-backed Sala-mander.

Hab. Canada.

a-i. Received in exchange, Oct. 24, 1887.

c. List of Animals bred in the Gardens during the year 1887.

#### MAMMALS.

1 Rhesus Monkey (Macacus rhesus).

2 Black Lemurs (Lemur macaco).

1 White-fronted Lemur (Lemur albifrons).

3 Lions (Felis leo).

8 Collared Fruit-Bats (Cynonycteris collaris).

4 Prairie-Marmots (Cynomys ludovicianus).

10 Long-fronted Gerbilles (Gerbillus longifrons).

2 Coypus (Myopotamus coypus).

1 Crested Porcupine (Hystrix cristata).

1 Chinchilla (Chinchilla lanigera).

8 Viscachas (Lagostomus trichodactylus).

6 Wood Hares (Lepus sylvaticus).

1 African Wild Ass (Equus tæniopus).

1 Yak (Poëphagus grunniens). 1 Gayal (Bibos frontalis).

1 Persian Gazelle (Gazella subgutturosa).

1 Burrhel Wild Sheep (Ovis burrhel).

1 Barbary Wild Sheep (Ovis tragelaphus).

2 Wapiti Deer (Cervus canadensis). 3 Japanese Deer (Cervus sika).

- 1 Sambur Deer (Cervus aristotelis).
- 1 Molucca Deer (Cervus moluccensis).

2 Axis Deer (Cervus axis).

2 Mule Deer (Cariacus macrotis).

1 Mesopotamian Fallow Deer (Dama mesopotamica).

1 Squirrel-like Phalanger (Belideus sciureus).

1 Red Kangaroo (Macropus rufus).

2 Bennett's Wallaby (Halmaturus bennetti).

3 Yellow-footed Rock-Kangaroos (Petrogale xanthopus).

#### BIRDS.

2 American Robins (Turdus migratorius).

2 Diuca Finches (Diuca grisea).

1 Cockateel (Calopsitta novæ-hollandiæ).

2 Hybrid Ibises (between Ibis strictipennis and Ibis bernieri).

1 Hybrid Ruddy Sheldrake (between Tadorna casarca and Chenalopex ægyptiaca).

- 1 Variegated Sheldrake (Tadorna variegata). 2 Australian Wild Duck (Anas superciliosa).
- 2 Slender Ducks (Anas gibberifrons). 6 Chilian Pintail (Dafila spinicauda). 2 Shoveller Ducks (Spatula clypeata). 1 Mandarin Duck (Æx galericulata).

9 Summer Ducks (Ex sponsa).

2 Red-crested Pochards (Fuligula rufina).

4 Hybrid Doves (between Zenaida maculata Zenaida auriculata).

1 Auriculated Dove (Zenaida auriculata).

1 Bronze-spotted Dove (Chalcopelia chalcospilos).

2 Crested Pigeons (Ocyphaps lophotes).

5 Blood-breasted Pigeons (Phlogenas cruentata). 1 Common Crowned Pigeon (Goura coronata).

1 Sonnerat's Jungle-fowl (Gallus sonnerati).

2 Yellow-legged Herring-Gulls (Larus cachinnans).

## REPTILES.

2 Dwarf Chameleons (Chameleon pumilis).

6 Mocassin Snakes (Tropidonotus fasciatus).

16 Puff-Adders (Vipera arietans).

## d. List of Donors and their Donations for the year 1887.

Absell, Mr.

One Common Chameleon.

Adams, J. A., Esq.

One Common Peafowl.

Adeney, Mr. F. A.

One Macaque Monkey.

Agassiz, Alex., Esq.

One Alligator Terrapin.

Alexander, W. M., Esq. One Cuckoo.

Allwright, Dr. and Mrs. F. W.

One Red-and-Blue Macaw.

Archer, C. W., Esq. Two Weasels.

Armbrecht, E. L., Esq., F.Z.S. Nine Barbary Turtle-Doves.

Armytage, O. F., Esq.

One Vulpine Phalanger.

Arnold, Mr. S. R.

One Common Crossbill.

Ashton, R. C., Esq.

One Yellow-billed Sheathbill.

Austen, F., Esq.

One Common Buzzard.

Austin, Miss.

One Rhesus Monkey.

Bacon, T. C., Esq.

One Spotted Ichneumon.

Barclay, Mrs. Robert.

One Black-tailed Godwit.

Barker, Miss.

Two Macaque Monkeys.

Barlow, Miss F. L.

Two Blue Tits.

Barnaby, Sir Nathaniel.

One Bare-eyed Cockatoo.

Barton, Miss.

One Goffin's Cockatoo.

Bates, E. Perey, Esq. One Black Bear.

Batchelor, Dr. A.

One Daubenton's Curassow.

Batson, Stanlake, Esq., F.Z.S. One Grey Ichneumon.

Beale, Mrs. J. S.

One Larger Hill-Mynah.

Bell, Mrs. Isaac, Jr.

One Common Fox.

Bellas, Hugh, Esq.
One Alligator.

Benett-Stanford, Mrs.

Two Patas Monkeys.

Benham, A. H., Esq.

One Dark-green Snake.

Bennitt, P. Wilmot, Esq., F.Z.S. One Larger Hill-Mynah.

Best, G., Esq.

Two Black-eared Marmosets.

Bingham, Mrs.

One Malayan Bear.

Bisset, Gen. J. J.

Three Blotched Genets.

Blackie, Maxwell, Esq.

Two Horned Lizards.

Blake, H. A., Esq.

One Pale-headed Tree-Boa.

Blomefield, E. H., Esq.

One Sharp-nosed Crocodile, one Scarlet Tree-Frog.

Blythe, G. S., Esq.

One Alligator Terrapin.

Bombay Natural History Society.

Two Striped Hyænas.

Bonnerville, Capt. J.

One Black-headed Lemur, one Grey Lemur.

Bourke, The Hon. Terence.

Two Egyptian Jerboas, one Moorish Toad.

Bowker, Col. J. H., F.Z.S.

One Crowned Hawk-Eagle.

Breton, Gen. W. H.

Two White-eared Bulbuls.

Brodrick, W., Esq.

Two Lanner Falcons.

Brooks, Mrs.

One Pennant's Parrakeet.

Brooks, Mr. N.

Two Turtle-Doves.

Brydon, Major W., B.S.C., C.M.Z.S.

One Blyth's Tragopan.

Buckworth, Miss Mildred.

Two Red-footed Foxes.

Buller, Sir Walter, K.C.M.G., C.M.Z.S. One Huia-bird.

Bunn, Mr. H.

One Corn-Crake, one Knot, one Common Guillemot.

Burton, Walter, Esq., F.Z.S.

Two Long-tailed Grass-Finches.

Callender, Gerald, Esq.

One Three-striped Paradoxure.

Cameron, Miss.

One Red Fox.

Castro, Wm. de, Esq.

Two Scaly Ground-Doves.

Chamberlain, V. I., Esq.

One Egyptian Mastigure.

Charrington, Mrs. M. V.

One Indian Autelope.

Clarke, S. A., Esq.

Two Green-winged Doves.

Clifton, Chas., Esq., F.Z.S.

One Great Eagle-Owl, one Virginian Eagle-Owl.

Cloutte, G., Esq.

One Green Monkey.

Cobb, F. E., Esq., C.M.Z.S. Two Crested Ducks.

Cook, J. M., Esq., F.Z.S.

One Larger Hill-Mynah.

Colls, A., Esq.

One Aldrovand's Skink.

Copeland, G. S., Esq.

One Bonnet-Monkey.

Corfield, Prof. W. H., M.A., F.Z.S.

One Proteus.

Cotton, T. A., Esq.

Five Common Gulls.

Craig, Wm. J., Esq.

One Mississippi Alligator.

Crick, J., Esq.

Two Black-eared Marmosets.

Crocker, Charles, Esq.

One Macaque Monkey.

Crossfield, H. A., Esq., F.Z.S.

Two Edible Frogs.

Czarnikow, C., Esq., F.Z.S.

One Chilian Sea-Eagle, one Golden Eagle, one Brazilian Caracara.

Dana, R., Esq.

Onc Martinique Gallinule.

Dawkins, Lieut.-Col. W. G., F.Z.S.

Three White-crowned Pigeons.

Deacon, Mr. J. W.

One Grey Ichneumon.

Dempsey, C. W., Esq.

One Green Monkey.

Dick, Mrs.

One Common Squirrel.

Dissawe of Tamankadua, The Adigar Dullewe.

One Leopard.

Doddrell, Mr. G.

One Brown Capuchin.

Donovan, H. C., Esq.

Two Schlegel's Doves.

Doran, Alban, Esq., F.R.C.S.

Two Crested Newts, two Alpine Newts, one Spotted Salamander, one Painted Frog, one European Pond-Tortoise.

Douglas, Capt. Archibald, R.N.
Two Vervet Monkeys.

Dudding, Miss.

One Grey Ichneumon.

Dudley, The Earl of. One Ocelot.

Duff-Gordon, —, Esq.

One Crowned Horned Lizard.

Dyas, F. B., Esq.

One White-fronted Heron.

Ellice, Mrs.

One Guilding's Amazon.

Elliott, Capt. J. B. Bowes, F.Z.S.

One Moustache Monkey, two Lesser White-nosed Monkeys, two White-crowned Mangabey Monkeys, one African Civet-Cat, one Blotched Genet, one Two-spotted Paradoxure, five Tambourine Pigeons, three Schlegel's Doves, one White-crested Tiger-Bittern, one Madagascar Porphyrio.

Ellis, G., Esq.

One Patas Monkey.

Eves, C. W., Esq.

One White-crowned Mangabey Monkey.

Farrer, F. Percival, Esq. One Grey Squirrel.

Fellowes, W. H., Esq.

One Blue-eyed Cockatoo.

Fisher, Mrs. C. J.

One Rhesus Monkey.

Fisk, The Rev. G. H. R., C.M.Z.S.

Nine Horned Vipers, seven Dwarf Chameleons, one Many-spotted Snake, one Rufescent Snake, seven Angulated Tortoises, two Hoary Snakes, two Robben-Island Snakes, one Fisk's Snake, one Narrow-headed Toad.

Flack, T. Sutton, Esq.

One Malbrouck Monkey.

Flower, Prof. W. H., C.B., F.R.S., President. Ten Short-nosed Sea-horses.

Foster, J. J., Esq.

One Black-eared Marmoset.

Frodsham, G. E., Esq.

One Laughing Kingfisher.

Garle, H., Esq., F.Z.S.

One European Pond-Tortoise.

Garman, Samuel, Esq., C.M.Z.S.

One Speckled Terrapin, one Black Snake.

Geake, Capt. W. G. J.

One Common Jackal.

Gilmour, W. J. Little, Esq.
One Brazilian Hangnest.

Green, F. W., Esq.

Five European Tree-Frogs.

Green, J. W., Esq.

One Algerian Tortoise.

Grieve, S. P., Esq.

One Pig-tailed Monkey.

Gunn, Mr. T. E.

One Common Viper, twenty Ruffes, one Great Crested Grebe.

Haines, The Rev. F. W.

Two Green Lizards, two Marbled Newts, two Viperine Snakes, one Bordeaux Snake.

Hall, John, Esq.

One Common Otter.

Hallett, J. H., Esq.

One Common Marmoset.

Hamilton, His Grace The Duke of, K.T., F.Z.S. One Crested Porcupine.

Hankey, Mrs. Alexander.

Two Common Squirrels.

Hanrott, Miss May.

One Common Squirrel.

Hardy, C. S., Esq. One Wolf.

Harrison, H. D., Esq.

Three American Flying Squirrels.

Hart, Edward, Esq., F.Z.S.

One Common Otter.

Hart, H., Esq.

One Purple-faced Monkey.

Hart, E. A., Esq.

One Crowned Hawk-Eagle.

Hawkshaw, J. C., Esq., F.Z.S. Two Burrowing Owls.

Hawtayne, G. H., Esq., C.M.Z.S. One Common Trumpeter.

Hill, Mrs.

One Ring-necked Parrakeet.

Hincks, S. C., Esq.

Two Corn-Crakes.

Hird, C. F., Esq.

One Grey Ichneumon.

Hoare, Miss.

Two Chinese Geese.

Hoendorff, Miss Constance.

One Common Marmoset.

Holding, Mr. R. E.

One Naked-footed Owlet.

Holland, W. M., Esq.
One Scops Owl.

Holms, W. L., Esq.

One Ring-hals Snake.

Holmwood, F., Esq., C.B., C.M.Z.S.

One Cheetah.

Holub, Dr. E., C.M.Z.S.

One Fettered Cat, one Spotte Eagle-Owl, one Hoary Snake, four Spotted Slowworms.

Howell, C. A., Esq.

One Red-throated Diver.

Hume, E., Esq.

Two Barn-Owls.

Humfrey, Major J., B.S.C., F.Z.S.

Two Indian Lions.

Humphries, Mr. R.

One Turtle-Dove.

Hurt, Miss R. M.

One Rhesus Monkey.

Ince, W. H., Esq.
One Magpie.

Ingram, Walter, Esq., F.Z.S.
Two Wood Hares.

James, Miss E.

One Bonnet-Monkey.

Jay, T., Esq.

One Virginian Deer.

Johnston, Capt. J. B.

One Tuberculated Iguana.

Joyce, Mr. W.

One Suricate.

Justice, H., Esq.

One Spotted Eagle-Owl.

Kane, C. E., Esq.

One Domestic Sheep (4-horned variety).

Keenan, Dr.

One Green Turtle.

Kent, Capt. A.

One Anubis Baboon, one Angolan Vulture.

Kenyon, T. H., Esq., R.N.

One Lesser White-nosed Monkey.

Kestell-Cornish, Mrs. M.

One Ruffed Lemur.

Keulemans, Mr. J. G.

One Peregrine Falcon.

Kiston, W. F., Esq.

Two Spotted Cavies.

La Primandage, Mrs.

One Bonnet-Monkey.

Larmer, Capt.

One Secretary Vulture.

Larnach, The Hon. W. J. M., C.M.G. Three Hooker's Sea-Lions.

Lawson, Bernard, Esq.

One Moustache Monkey.

Lawson, B., Esq.

One Blue Penguin.

Lee, H. H., Esq.

Two African Lepidosirens.

Leech, J. H., Esq., F.Z.S.

Two Blakiston's Eagle-Owls, one Himalayan Scops Owl.

Lewis, Mrs.

One Pig-tailed Monkey.

Lilford, The Lord, F.Z.S.

Two Hybrid Herring-Gulls, fifty-nine Pleurodele Newts, seven Marbled Newts.

Lister, G., Esq.

One Bonnet-Monkey.

Livingstone, Mrs.

One Rhesus Monkey.

Lock, W. F., Esq.

Two Rhesus Monkeys.

Lockwood, Miss P.

One Grand Eclectus.

Lloyd, Mr. John.

One White-tailed Buzzard.

Lynch, Mr. B.

One Pig-tailed Monkey.

Macdonald, R. E., Esq.

One Vervet Monkey.

McGregor, J., Esq.

One Green Turtle.

McIver, Robert, Esq.

One Ring-tailed Coati.

Mackenzie, T., Esq. One Serval.

MacLachlin, Mrs.

One Carrion-Crow.

Manger, W. T., Esq.

One Raccoon-like Dog, one Leopard.

Markham, W. H., Esq.

One Purple-faced Monkey.

Marks, H. Stacy, Esq., F.Z.S.

One Magpie.

Marquis, Ernest Heydon, Esq. One Striped Hyæna.

Marshall, Miss İda.

One Alexandrine Parrakeet.

Marshall, John, Esq.

Two Blue-headed Pigeons, one Black-winged Peafowl.

Mason, F. T., Esq.

One Ring-Dove, one Sand-Lizard.

Mathews, G. F., Esq., R.N., F.Z.S.

Two Lapwings.

Maude, Herbert, Esq.

One Short-tailed Wallaby.

Mayes, J., Esq.

One White-tailed Sea-Eagle.

Meadows, H. B., Esq.

One Common Squirrel.

Meyrick, Miss M.

One Green Bittern.

Millard, Claude A., Esq.

One Crowned Horned Lizard.

Miller, Mr. J.

One Three-striped Paradoxure.

Miller, Mr. W.

One Maugé's Dasyure.

Mitford, C. B., Esq.

One Campbell's Monkey.

Mitford, R. H., Esq.

One Vinaceous Dove.

Monckton, Francis, Esq.

Two Rufous Tinamous.

Monteith, Joseph, Esq.

Two Polar Bears.

Montgomery, Percy, Esq.

One Red-and-white Flying Squirrel.

Moore, J. H., Esq.

Two Turkey Vultures.

Morrell, L. G., Esq.

One Dusty Ichneumon.

Morshead, Lady.

One Grey-headed Porphyrio.

Natural History Society of Toronto.

One Water Rattlesnake, one Water Viper, two American Black Snakes, two Mocassin Snakes, one Chicken Snake.

Neilson, Miss Julia.

One Negro Tamarin.

Neville, Hugh, Esq., F.Z.S.

One Ceylonese Jungle-fowl.

Newberry, Mr. & Mrs.

One Secretary Vulture.

Newton, Master C. J.

Two Brown-throated Conures.

Nicholls, H. A. Alford, Esq., M.D., C.M.Z.S.

Two Common Boas.

Nicholson, M., Esq.

One Bronze-winged Pigeon.

Nicholson, S., Esq.

Two Cardinal Grosbeaks.

Nicholson, G., Esq.

One Carrion-Crow.

Nordenfelt, T., Esq., C.E.

Three Arctic Foxes.

Northumberland, His Grace the Duke of, F.Z.S. Two Cereopsis Geese.

Ogilby, R. O. L., Esq.

One Peaceful Dove.

Oldham, T. M., Esq.

One Common Cormorant.

Pain, W. H. B., Esq.

One Smooth Snake.

Pitman, E. A. B., Esq.

One Brown Capuchin.

Paul & Co., Messrs.

Two Green Lizards, twelve Spotted Salamanders, two Common Snakes, two Thunder-fiish, four Chub.

Pawelzig, Mrs.

One Red-fronted Lemur, one Vervet Monkey.

Poole, Major Rowland.

One Domestic Sheep (four-horned variety).

Powell, Wilfred, Esq., C.M.Z.S. One Tooth-billed Pigeon.

Prentice, W. L., Esq.

One Entellus Monkey.

Price, R. J. Lloyd, Esq., F.Ž.S. One Horned Tragopan.

Proger, T. W., Esq.

One Spotted Crake.

Pryer, H., Esq., C.M.Z.S.

One White-whiskered Swine.

Rankin, Master.

Two Greater Sulphur-crested Cockatoos.

Rawlinson, W. G., Esq.

One Black-headed Gull.

Reade-Revell, W., Esq.

One Blue-and-Yellow Macaw.

Reed, Miss Muriel.

One Common Squirrel.

Rhind, John, Esq.

Two Brown Bears.

Richman, Mrs. M. S.

One Australian Crane.

Rickards, Dr. E.

One Proteus.

Robinson, Capt. J. C.

One Blotched Genet, two Madagascar Porphyrios.

Russell, G., Esq.

One Ocellated Sand-Skink, One Horseshoe Snake.

Sadler, C., Esq.

Two White-backed Piping Crows.

St. John, Lt.-Col. Sir Oliver B. C., K.C.S.I., F.Z.S. One Griffith's Fox, two Spotted Ichneumons.

St. Quintin, W. H., Esq.

Two Crossbills, one Hawfinch.

Sawer, A. L., Esq.

One Common Pheasant.

Scovell, J., Esq.

One Common Toad.

Sheppard, W. R., Esq.

One Brown Capuchin.

Sherren, Mr. H. R.

One Bonnet-Monkey.

Shufeldt, Dr. R. W., C.M.Ž.S. One Arizona Squirrel.

Sibley, W. K., Esq.

Six Aurora Snakes, two Rough-scaled Lizards, one Hygian Snake.

Skeffington, C. N., Esq.

One Weeper Capuchin Monkey.

Skegg, Mr. G.

One Wall-Lizard.

Slatter, Mrs.

One Macaque Monkey.

Smith, Capt. J.

One Mexican Crocodile, one White-crested Guan.

Smith, S. G., Esq.

One Smooth Snake.

Southey, R., Esq.

One Black-winged Kite.

Spooner, Mr. W.

One Macaque Monkey.

Stephen, Mr. G.

One Stephen's Tree-Frog.

Streeter, Miss.

One Western Slender-billed Cockatoo.

Studart, Dr. William.

One Brazilian Tree-Porcupine.

Sumner, Allen, Esq.

One King Vulture.

Sutherland, C. L., Esq., F.Z.S.

One Ring-Dove, one Turtle-Dove.

Sykes, G. G., Esq. One Pike.

Taylor, R., Esq.

One Macaque Monkey.

Tegetmeier, W. B., Esq., F.Ž.S. Two Tree-Pipits.

Three Green Turtle

Three Green Turtles.

Thompson, F. J., Esq.

Two Daubenton's Curassows.

Thomson, W., Esq.

Two Little Guans.

Thornton, H., Esq.

Four Common Chameleons.

Townsend, A., Esq.

One Common Squirrel.

Travers, Capt.

One Bosch-Bok.

Travers, Mrs. M.

One Lesser Kestrel.

Trentler, Dr. J. W.
Three Kestrels.

Tudor, W., Esq.

One White-collared Mangabey Monkey.

Verner, Col.

One Chinese Jay-Thrush, two Crested Larks, one Fieldfare.

Verschoyle, A. R., Esq.

One American Flying-Squirrel.

Walters, Col. F. D.

Two Red-crested Cardinals.

Walton, Master H. J.

One Greenfinch, one Goldfinch, one Reed-Bunting.

Warburg, J. C., Esq.

One Eyed Lizard, three Lineated Chalcis.

Ward, Mr. R. T.

One Loggerhead Turtle.

Warwood, Mrs. H. A. One Suricate.

Wickenden, T. D., Esq.

One Rhesus Monkey.

Wickham, —, Esq.
One Barn-Owl.

Wigan, G., Esq.

Two Red-spotted Lizards.

Willett, J. A., Esq.

One Cape Zorilla.

Williams, Miss Grace.

One Squirrel-Monkey.

Williams, J. H., Esq.

One Capuchin Monkey.

Willows, J. B., Esq. Six Land-Rails.

Wilson, J. A., Esq., F.Z.S.

Two Hawk's-billed Turtles.

Wilson, Julius, Esq.

One Green Monkey.

Wood, Miss Kate.

One Lesser White-nosed Monkey.

Wroughton, E., Esq., F.Z.S.

Six European Tree-Frogs, one Larger Hill-Mynah.

Yard, Mr. F.

One Bonnet-Monkey.

Yeates, Mrs.

One Bonnet-Monkey.

Young, H. E., Esq. One Pike.

Zandt, F. van, Esq.

One Common Raccoon.

### APPENDIX.

# ADDRESS OF THE PRESIDENT, PROFESSOR FLOWER, C.B., LL.D., F.R.S.,

TO THE

#### GENERAL MEETING

HELD AT THE SOCIETY'S GARDENS,

JUNE 16th, 1887.

Nowhere has the progress which the world has made during the fifty years of Her Majesty's reign, the completion of which we are now happily celebrating, been more strikingly manifested than in the advance of that so-called "natural knowledge" for the improvement of which our Royal Society was instituted more than two centuries ago. Although there have been, without doubt, immense strides in other directions—in morals, in art, in historical and literary criticism—I venture to say that none of these can be compared with the marvellous progress that has been made in scientific knowledge and scientific methods.

The tangible results that have followed the practical applications of mechanics, physics, and chemistry have so deeply affected the material interests of mankind, that the progress of these branches of knowledge may seem to put into the shade the wonderful changes that have taken place in the kindred sciences. Nevertheless, I think we may safely say that Zoology, in a certain sense one of the oldest of human studies, has in these latter times undergone a new birth, which has not only changed the standpoint from which we view the special objects of our studies, but has also spread its influence far and wide, and profoundly modified our conceptions on many ques-

tions at first sight entirely remote from its sphere. The universal abandonment of the doctrine of fixity of species, which was an article of faith with almost every zoologist in 1837, has introduced new interests, as well, it must be confessed, as new difficulties, the extent of which we are only beginning to appreciate. The definite systems of classification and methods of nomenclature on which our fathers relied utterly fail before the wider field of vision which it is the privilege, as well as the embarrassment, of the present generation of zoologists to realize.

But it is no part of my intention, in the brief space of time for which I shall ask your patience, to attempt to give a history of the recent advances of zoological science in general, but only, as requested by your Council, to say a few words on the progress of the particular Institution established for its cultivation in which we are personally interested, and the duration of which is so nearly contem-

poraneous with that of Her Majesty's reign.

Before this Society was founded there was no distinct organization in the country devoted solely to collecting, recording, and discussing the facts upon which zoological The dignified parent of all our scientific science rests. Societies, the Royal, certainly undertook, as it does still, the discussion of many zoological subjects; but it could not be expected to treat them in any detail. The Linnean was a Society of great respectability, devoted solely to biological research, both zoological and botanical, already nearly forty years of age, and possessed of all the usual appurtenances of a scientific organization—meetings, library, and collections for reference. I cannot help thinking that if its leading Fellows had, at that time, displayed more energy, it might have kept in its hands the principal direction of the biological studies of the country, instead of allowing what has since proved so formidable a rival to spring up, and to absorb so large a portion of its useful functions. However, for reasons which it is perhaps not worth while to inquire into now, it did not supply all the needs of the lovers of Zoology; and in the year 1826 an active and zealous band united together and, as the Charter tells us, "subscribed and expended considerable sums of money for the purpose" of founding the Zoological Society of London.

The leading spirit of this band was Sir Stamford Raffles, then just returned from the administration of those Eastern islands of which the history, both natural and political, will ever be intimately associated with his name. He was chosen for the office of President, but his death, on the 4th of July, 1826, deprived the Society, while yet in its infancy, of his valuable services even some years before it acquired its Charter of Incorporation. In this deed, dated March 27th, 1829, Henry, Marquis of Lansdowne, is named as the first President of the chartered Society, Joseph Sabine as the first Treasurer, and Nicholas Aylward Vigors the first Secretary.

The Society appears to have acquired great popularity in a surprisingly short time. The first printed list of Members that I can discover (dated January 1st, 1829) contains the names of 1294 ordinary Fellows and 40 honorary and corresponding Members. The list is an interesting one from the number of names it includes of persons eminent either in science, art, literature, politics, or social life: indeed, there were not many people of distinction in the country at that time who are not to be found in it.

A piece of ground in the Regent's Park having been obtained from the Government at little more than a nominal rent, the Gardens were laid out, and opened in 1828, during which year 98,605 visitors are recorded as having entered. In the following (the first complete) year there were as many as 189,913 visitors, and this number

was increased in 1831 to 262,193.

While the menagerie of living animals was being formed in the Regent's Park, the Officers and Fellows of the Society were also engaged in establishing a Museum of preserved specimens, which soon assumed very considerable dimensions. A Catalogue printed as early as the year 1828 contains a classified list of 450 specimens of Mammalia alone; and it continued for many years to attract donations from travellers and collectors in all parts of the world, and became of great scientific importance, inasmuch as it contained very many types of species described for the first time in the publications of the Society. It was at first lodged in rooms of the Society's house in Bruton Street; but these becoming so crowded as to present the "confused air of a store rather than the appearance of an arranged Museum," premises were taken in 1836 in Leicester Square, the same which were formerly occupied by the Museum of John Hunter before its removal to the College of Surgeons. At this time the Museum is

reported to have contained as many as 6720 specimens of Vertebrated animals, and numerous additions were still being made both by donations and by purchase. The rooms in Leicester Square being found inconvenient for the purpose, it was finally resolved, after considerable discussion of various sites, to transfer the collection to the Gardens in the Regent's Park; and in 1843 the building on the north side of the Tunnel which is now occupied as a lecture-room on the upper floor and a store-room below was con-

structed and fitted up for its reception.

Although the Museum was at one time looked upon as a very important part of the Society's operations, being spoken of as "the centre of the Society's scientific usefulness" (Report of Council, 1837), and one upon which considerable sums of money were spent, it was afterwards a cause of embarrassment from the difficulty and expense of keeping it up in a state of efficiency; and when the Zoological Department of the British Museum acquired such a development as to fulfil all the objects proposed by the Society's collection, the uselessness of endeavouring to maintain a second and inferior zoological museum in the same city became apparent, and in 1856 it was, as I think very wisely, determined to part with the collection, the whole of the types being transferred to the National Museum, and the remaining specimens to other institutions where it was thought their value would be most appreciated.

Another enterprise in which the Fellows of the Society were much interested in its early days was the Farm at Kingston, the special object of which was thus defined:—
"It will be useful in receiving animals which may require a greater range and more quiet than the Gardens at the Regent's Park can afford. It is absolutely necessary for the purpose of breeding and rearing young animals and giving facilities for observations on matters of physiological interest and research, and, above all, in making attempts to naturalise such species as are hitherto rare or unknown in this country." The Farm, however, apparently not fulfilling the objects expected of it, and being a source of expense which the Society could not then well afford, was gradually allowed to fall into neglect, and was finally aban-

doned in 1834.

The mention of this establishment, however, causes me to allude to one of the objects on which the Society laid considerable stress at its foundation, and which is defined in the Charter as "the introduction of new and curious subjects of the Animal Kingdom," but which, as may be gathered from the Annual Reports of the Council and from other Documents, meant not only the temporary introduction of individuals for the purpose of satisfying curiosity about their external characters and structure, but also the permanent domestication of foreign animals which might become of value to man, either for their utility in adding to our food-supplies or for the pleasure they afford by their

beauty.

Abundant illustrations of the vanity of human expectations are afforded by the details of the hopes and disappointments recorded in the Reports of the Society relating to this subject. It is mentioned in the Report of the year 1832 that "the Armadillo has three times produced young, and hopes are entertained of this animal, so valuable as an article of food, being naturalized in this country." than fifty years have passed, and British-grown Armadillo has not yet appeared upon the menu-cards of our dinner-At one time the South-American Curassows and Guans were confidently looked upon as future rivals to our barn-door Fowls and Turkeys. Various species of Pheasants and other game-birds from Northern India, collected and imported at great expense, were to add zest and variety to the battue of the English sportsman. The great success which for many years attended the breeding of Giraffes in the Gardens not unnaturally led to the expectation that these beautiful creatures might become denizens of our parks, or at all events a source of continued profit to the Society; and it is possible that some who are here now may have been present at the feast, for which an Eland was sacrificed, amid loudly-uttered prognostications that the ready acclimatization of these animals would result, if not in superseding, at least in providing a change from our monotonous round of mutton, beef, and pork. Unfortunately for these anticipations, no Giraffe has been born in the Gardens during the last twenty years, and Elands are still far too scarce to be killed for food of man in England.

It is well that these experiments should have been tried; it may be well, perhaps, that some of them should be tried again when favourable opportunities occur; but it is also well that we should recognize the almost insuperable difficulties that must attend the attempt to introduce a new

animal able to compete in useful qualities with those which, as is the case with all of our limited number of domestic animals, have gradually acquired the peculiarities making them valuable to man, by the accumulation of slight improvements through countless generations of ancestors. While all our pressing wants are so well supplied by the animals we already possess, it can no longer pay to begin again at the beginning with a new species. This appears to be the solution of the singular fact, scarcely sufficiently appreciated, that no addition of any practical importance has been made to our stock of truly domestic animals since the commencement of the

historic period of man's life upon earth.

I now turn to the history of one of the most important features of the Society, the scientific meetings. In the early days of the Society there was only one class of general meetings for business of all kinds; and the exhibition of specimens and the communication of notices on subjects of zoological interest formed part of the ordinary proceedings at those meetings. The great extent, however, of the general business was soon found to interfere with such an arrangement. The number of the elections, and of the recommendations of Candidates, the reports on the progress of the Society in its several establishments during each month, and other business, were found to require so much time as to leave little for scientific communications, and the Council saw with regret that these were frequently and necessarily postponed for matters of more pressing but less permanent interest. To obviate this inconvenience and to afford opportunities for the reception and discussion of communications upon zoological subjects, the Council had recourse to the institution of a "Committee of Science and Correspondence," composed of such Members of the Society as had principally applied themselves to science; at the meetings of which Committee communications upon zoological subjects might be received and discussed, and occasional selections made for the purpose of publication.

The first Meeting of the Committee took place on the evening of Tuesday, November 9th, 1830, at the Society's house in Bruton Street, when a communication was received upon the Anatomy of the Urang Utan by a young, and then unknown, naturalist, Richard Owen by name, the first of that long series of memoirs, extending over a

period of more than fifty years, the publication of which in our 'Transactions' has done so much to advance the knowledge of comparative anatomy and to give an illustrious place to their author in the annals of science.

Among other well-known names of those mentioned as having taken part in the business of the Committee during the first year of its existence, either by their actual presence or by forwarding communications, are N. A. Vigors, W. Yarrell, J. E. Gray, J. Gould, E. T. Bennett, Andrew Smith, T. Bell, W. Martin, Joshua Brookes, W. Kirby, W. H. Sykes, Marshall Hall, W. Ogilby, John Richardson, and B. H. Hodgson, who, I am happy to see, is with us to-day.

The Committee continued in existence for two years, having met for the last time on December 11, 1832. success of its meetings was so great that it was thought desirable to make an alteration in the Bye-laws, by which the meetings of the Committee were replaced by the "General Meetings of the Society for Scientific Business." The first of these meetings took place on Tuesday, the 8th of January, 1833, and they have continued to be held on two Tuesdays in each month during the season to the present As long as the Society retained its house in Bruton Street, the meetings were held there. In 1843 the Society took another house, No. 11 Hanover Square, which it occupied for forty-one years; but its needs having outgrown the accommodation afforded there, it removed in 1884 to the far more spacious and commodious premises in No. 3 of the same square, which we at present occupy. meetings of the Society, which are open to all the Fellows and to friends introduced by them, have exercised a considerable influence upon the progress of zoological knowledge, not only by the reading and discussing of communications formally brought before them, but also by the interchange of ideas at the informal social gatherings over the coffee-table in the library afterwards, which have great value as affording a common meeting-ground and bond of union for all the working zoologists of the country, as well as of many visitors from foreign lands.

The more important scientific communications to these meetings have from the commencement been published in the form of quarto 'Transactions' and octavo 'Proceedings,' which constitute a series of inestimable importance both for the value of the material contained in them and for the excellence of the illustrations of new or rare

forms of animal life with which they are embellished. In later times they have also formed a vehicle for communicating to the world the important results obtained from the dissection of animals which have died at the Gardens, and which, since the establishment of the office of Prosector in 1865, have been systematically used for this purpose.

In connection with the scientific meetings must be mentioned the Library, the first formation of which is described in the Report of the Council for the year 1837, and which has been steadily growing ever since by donations of books, by exchange of publications with other learned societies, and by judicious annual expenditure of money, to be one of the best-selected, well-arranged, and most accessible collection of works of reference that it is possible for the zoological student to enjoy. Its value has been greatly increased by the publication within the past mouth of an excellent catalogue, which contains the titles of about 6560 publications.

The most recent addition to the functions that the Society has undertaken with a view to carry out the purposes of its foundation is the publication of an Annual Record of Zoological Literature, containing a summary of the work done by British and Foreign naturalists in the various branches of Zoology in each year, a publication of the utmost value to the working zoologist. Such a Record has been carried on for some years past by a voluntary association of Naturalists, but, owing to the difficulties met with in obtaining sufficient support, it was in danger of being abandoned, until the Council, after the full consideration which the importance of the subject deserved, resolved to take it in hand as part of the operations of the Society.

The Society has, however, not only been mindful of advancing scientific knowledge—it has also endeavoured to spread some of this knowledge in a popular manner by means of lectures. In former years these were only given in an occasional manner; but the liberal bequest of Mr. Alfred Davis to the Society in 1870 has enabled the Council to undertake a more regular and systematic method of instruction; and the Fellows and others have had every summer for several years past the opportunity of hearing many of our most eminent naturalists and able expositors upon subjects which they have made especially their own. I must, however, confess that the interest taken by the Society generally in these lectures has not quite equalled

the expectations that were raised when the question of establishing them was first brought before the notice of the Council.

Although, as will be seen by a consideration of the various subjects which I have already referred to, the Society has a wide sphere of operation and many methods by which the objects of its founders are carried out, it is undoubtedly the maintenance of the menagerie of living animals in the Gardens where we are now assembled, by which it is most known, both to the public as well as to a large number of our Fellows. It will be well therefore, before concluding, to add a few words upon some points of interest connected with the past history and present condition of this branch of the Society's operations, the one which is at the same time the largest source of its revenue and cause of expenditure.

The collection and exhibition of rare and little-known living animals has long been a subject of interest and instruction in civilized communities, and in many countries either the State or the Sovereign has considered it as part of their duty or privilege to maintain a more or less

perfect establishment of the kind.

Before the Zoological Society was formed the "Lions" at the Tower had been for centuries a national institution: and it may be interesting to those who derive pleasure in tracing the links between the present and the past, to be reminded that our collection is in some measure a lineal continuation of that time-honoured establishment, as it appears from the Reports of the Council that in the year 1831 His Majesty King William the Fourth "was graciously pleased to present to the Society all the animals belonging to the Crown lately maintained at the Tower." It is also recorded that in the previous year His Majesty had made a munificent donation of the whole of the animals belonging to the Royal Menagerie kept in Windsor Park. This may perhaps be the place to mention that in the Report read April 1837 the Council "had the gratification to call the special attention of the members to a donation from Her Royal Highness the Princess Victoria," consisting of a pair of those pretty and interesting little animals the Stanley Musk-deer. During the fifty years that have elapsed since this first-recorded mark of interest in the Society on the part of her present Majesty, the Queen and her family have never failed to show their regard

for its welfare whenever any opportunity has arisen, of which the acceptance of the Presidency by the late Prince Consort, on the death of the Earl of Derby in 1851, was one of the most signal instances. The advantages which the Society has received from the numerous donations to the Menagerie, and the constant kindly interest shown in its general progress by H.R.H. the Prince of Wales, are so continually before the observation of the Fellows, that I need scarcely do more than allude to them here, beyond stating that in no year of the Society's existence has the number of visitors to the Gardens or the Society's income been so great as in 1876, when the large collection of animals brought from India by His Royal Highness

formed the special object of attraction.

Except for the collection, necessarily of limited extent, exhibited in the Tower, and a few others having their origin in commercial enterprise, as Mr. Crosse's menagerie at Exeter Change and the various itinerant wildbeast shows, there were, before the foundation of the Society's Gardens, little means in the country of gaining knowledge of the strange forms of exotic animal life with which the world abounds. An extensive, well-arranged, and well-kept collection, where the circumstances of exhibition were more favourable than in the institutions just referred to seemed then to fulfil a national need, as the rapidly acquired popularity of the Society already alluded to testifies. Indeed, when we consider the amount of enjoyment and instruction which has been afforded to the 24,572,405 visitors who are registered as having entered our Gardens from their first opening in 1828 to the end of last year, it is easy to recognize what a loss the country would have sustained if they had not existed. There was a period, it is true, in which they fell rather low in popular favour, the record of 1847 showing both the smallest number of visitors and the lowest income of any year in the Society's existence. A new era of activity in the management of the Society's affairs was then happily inaugurated, which resulted in a prosperity which has continued ever since, with only slight fluctuations, arising from causes easy to be understood—a prosperity to which the scientific knowledge, zeal, and devotion to the affairs of the Society of our present Secretary, ably seconded in all matters of detail by the Resident Superintendent, have greatly contributed.

One of the greatest improvements which have been gradually effected in the Gardens in recent years is the erection of larger, more commodious, and more substantial buildings for the accommodation of the animals than those that existed before. A few examples will suffice to illustrate the successive steps that have been taken in this direction. The primary habitation of the Lions and other large feline animals was the building on the north side of the Tunnel, which many of us may remember as a Reptile-house, and which has been lately restored as a dwelling-place for the smaller Carnivora. The Council Reports of the period frequently speak of the bad accommodation it afforded to the inmates, the consequent injury to their health, and the disagreeable effects on visitors from the closeness of the atmosphere. In September 1843 the terrace, with its double row of cages beneath, was completed; and the Report of the following spring, speaking of this as "one of the most important works ever undertaken at the Gardens," congratulates the Society upon the fact that the anticipations of the increased health of this interesting portion of the collection, resulting from a free exposure to the external air and total absence of artificial heat, have been fully realized. The effects of more air and greater exercise were indeed said to have become visible almost immediately. Animals which were emaciated and sickly before their removal, became plump and sleek in a fortnight after, and the appetites of all were so materially increased that they began to kill and eat each other. This, however, led to an immediate increase in their allowance of food, since which time, it is stated, no further accidents of the kind have occurred. As this structure, looked upon at that period as so great an improvement upon its predecessors, still remains, though adapted for other inmates, we all have an opportunity of contrasting the size of its dens and the provision it affords generally for the health and comfort of the animals and the convenience of visitors, with those of the magnificent building which superseded it in 1876.

In the Report of the year 1840 it is stated that the only work of considerable magnitude undertaken since the last anniversary was the erection of the "New Monkey-house," and the Council speak with great satisfaction of the substantial nature of the structure and the superior accommodation which its internal arrangements are calculated to

afford to its inmates.

Many of us may remember this building, which stood on the space now cleared in the centre of the Gardens. Twenty-four years after its erection, in their Report, dated April 1864, we find the Council speaking of it as "what is at present perhaps the most defective portion of the Society's Garden establishment," and the erection of a second "New Monkey-house" was determined upon. This is the present light and comparatively airy and spacious building, the superiority of which over the old

one in every respect is incontestable.

Up to the year 1848 the only attempt which had been made to familiarize the visitors with the structure and habits of animals of the class Reptilia was by the occasional display of a pair of Pythons, which were kept closely covered in a box of limited dimensions in one of the In 1849 the building which smaller Carnivora-houses. had been rendered vacant by the removal of the Lions to the new terrace was fitted up with cases with plate-glass fronts on a plan entirely novel in this country, and which for many years afforded an instructive exhibition of the forms, colours, and movements of many species of Serpents, Lizards, and Crocodiles. This house was a vast improvement upon anything of the kind ever seen before; but the contrast between it and the present handsome and spacious building so recently erected in the south-eastern corner of the grounds affords another illustration of the great progress we are making.

If time allowed I might also refer to the Elephant-house, completed in 1870, to the Insect-house, opened in

1881, and to various others of less importance.

The erection of these houses has necessarily been a very costly undertaking; in fact, since what may be called the reconstruction of the permanent buildings of the Gardens, which commenced in the year 1860, more than £50,000 has been expended upon them. It is only in years of great prosperity, when the Society's income has considerably exceeded its necessarily large permanent expenditure, that works such as these can be undertaken.

Much as has been done in this direction, we must all admit that there is still more required. The buildings of to-day will, we may even hope, some day seem to our successors what the former ones appear to us. The old idea of keeping animals in small cramped cages and dens,

inherited from the Tower and travelling wild-beast shows. still lingers in many places. We have a responsibility to our eaptive animals, brought from their native wilds to minister to our pleasure and instruction, beyond that of merely supplying them with food and shelter. The more their comfort can be studied, the roomier their place of captivity, the more they are surrounded by conditions reproducing those of their native haunts, the happier they will be, and the more enjoyment and instruction we shall obtain when looking at them. Many of our newest improvements are markedly in this direction. I may especially mention the new inclosure for Wild Sheep near the Lionhouse in the South Garden, with its picturesque rockwork and fall of water, and the large Aviary for Herons and similar birds just completed on what used to be ealled the Water-Fowls, Lawn.

All such improvements can, however, only be carried out by the continued aid of the public, either by becoming permanently attached to the Society as Fellows or by visiting the Gardens. I hope that this brief record of the principal events of the Society's history will show that such support is not undeserved by those to whom the management of its affairs has been entrusted.

# THE ZOOLOGICAL RECORD.

THE object of the Zoological Record is to give, in an annual Volume, reports on, abstracts of, and an index to, the various Zoological publications which have appeared during the preceding year; to acquaint Zoologists with the progress of every branch of their science in all parts of the globe; and to form a repertory which will retain its value for the Student in future years.

The 'Zoological Record' is published for the Society by Messrs. Gurney and Jackson at the price of 30s. per volume. But all Members of the Zoological Society of London have the privilege of receiving it, including the cost of delivery (within the United Kingdom), at a subscription price of 20s. per annum. This Subscription is due on the 1st of July in every year, but the privilege of Subscription is forfeited unless the amount be paid before the 1st of December following.

The Zoological Society, having purchased the entire stock of the 'Zoological Record,' are able to supply complete sets of the first twenty-two volumes at the price of £5 10s., that is, at 5s. per volume. Volumes of any single year (exclusive of vol. vi. and the last two volumes) can likewise be supplied at 10s. per volume.

Members of the Society wishing to subscribe to the 'Record' are requested to apply at this office for a Form, to be returned when filled up and signed by the subscriber. In order to facilitate the payment of the subscription, a Banker's Order Form is also furnished to those who prefer that mode of payment. This order, when filled up and signed, should be sent to the Society's office for registration; it will then be sent to the Agents named therein.

Learned Societies and Institutions and members of the former Zoological Record Association are permitted to subscribe to the 'Record' on the same conditions as are accorded to Members of the Zoological Society.

P. L. SCLATER,

Secretary.

## REPORT

OF THE

## AUDITORS OF THE ACCOUNTS

OF THE

# ZOOLOGICAL SOCIETY OF LONDON,

Appointed January 19, 1888.

THE Committee of Auditors to the Zoological Society having fully examined the accounts, inspected the books, and seen vouchers for all the various payments ordered by the Council for the year ending December 31st, 1887, respectfully submit to the Society an abstract of the accounts, together with a statement of the Assets and Liabilities at the close of the year.

## RECEIPTS IN 1887.

Balanc	e brought from December 31, 1886	•••••		•	• • • • •		£ 1,190	s. 15	<i>d</i> . 8
1883	INCOME.  Garden Sales	£	s. d	. £	s. 5	d.			
1884	Garden Sales		•••••	. 10	7	0			
1885	Garden Sales	$\begin{array}{c c} 72 \\ 6 \end{array}$	17 6		10	c			
1886	Garden Sales Rent for Refreshment-Rooms Rent for Freehold Premises. Admission Fees Subscriptions Ivory Tickets Publication Sales	$\begin{array}{c c} 47 \\ 63 \\ 75 \\ 12 \\ 1 \end{array}$	7 10 6 8 15 0 0 0 1 0 19 0		9	6			
1887 -	Admissions to Gardens Riding Receipts Garden Sales Rent for Refreshment-Rooms Rent for Freehold Premises Admission Fees Compositions Subscriptions Ivory Tickets Publication Subscriptions Publication Sales Zoological Record Subscriptions Ditto ditto Sales Dividends Miscellaneous	419 297 843 191 515 810 5,887 28 535 104 83 218	6 8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6						
1888	Subscriptions	. 1	1	$\begin{bmatrix} 22,338 \\ 0 \\ 0 \\ - \end{bmatrix}$	18	6			
INCO	ME RECEIVED IN 1887			23,102	15	6	23,102	15	6
Messra	s. Drummond, Temporary Loan			• • • • • • • • • • • • • • • • • • • •			3,000	0	0
							27,293	11	2

## PAYMENTS IN 1887.

			_
TANDANDANDA			
EXPENDITURE. $\pounds$ s. d.	£	s.	d.
Rent, Rates, Taxes, and InsuranceGardens 1,212 8 4	-		
Ditt. 1:11-			- }
Salaries and Pensions			
Ditto dittoOffice 2,104 4 8			
Provisions			
Cost &c. of Animals			
Menagerie Expenses			
Keepers' Dresses			
Works, Materials, &c			
Ditto dittoOffice 132 9 9			}
Buildings 446 7 0			
Garden Expenses			
Advertisements			
Band Expenses 167 2 0			
House and Office ExpensesGardens 244 14 1			
Ditto dittoOffice 558 3 11			
Stationery			
Printing (Miscellaneous)			
Cost of Publications			1
Cost of Zoological Record			
Library Expenses 573 7 7			ł
Returned Subscriptions			
Davis Lectures			
Interest on Mortgage Debt			
Interest on Loan 9 11 9			
Law Expenses.			
Reception at the Gardens			
Cost of Silver Medal 5 1 0			
07 107 10 0	25,135	10	$_2$
EXPENDITURE PAID IN 1887 25,135 10 2	20,100	10	ا ئد
Paid Messrs. Drummond on account of Mortgage Debt	1,000	0	0
Tulu Brossis, Pranimona on account of Brossing Down	1,000	U	١
Cash at the Banker's, December 31, 1887:—			
General Account£596 5 7			
Petty Cash Account			
	1,158	1	0
	1,100	•	
	27,293	11	2

## Comparison of Receipts in 1886 and 1887.

	Rec	eipts.		
	Inco	me of	Increase.	Decrease.
	1887.	1886.	THE COURSE	
Admissions to Gardens Elephant and Camel	£ s. d. 12,138 5 6	£ s. d. 14,974 4 0	£ s. d.	£ s. d. 2,835 18 6
riding receipts Garden Sales Rent for Refreshment-	419 5 2 446 8 2	454 7 1 733 11 6		35 1 11 287 3 4
Rooms	890 13 4	1,026 13 4		136 0 <b>0</b>
mises	255 0 0 75 0 0	255 0 0 45 0 0	30 0 0	
Present Annual Subscriptions:—	515 0 0	445 0 0	70 0 0	
Past. Present Future Compositions Ivory Tickets Publications Zoological Record Dividends Miscellaneous.	18 0 0 0 5,887 0 0 222 0 0 810 0 0 32 1 0 825 16 11 301 10 4 73 10 11 193 4 2	18 0 0 6,080 0 0 180 0 0 630 0 0 47 6 0 739 8 5 	42 0 0 180 0 0 86 8 6 301 10 4 0 1 7 108 3 6	193 0 0
Decrease	23,102 15 6 2,684 4 10	25,787 0 4	818 3 11 Ded. Incr.	3,502 8 9 818 3 11
	25,787 0 4	25,787 0 4		2,684 4 10
Total Pa	ceipts in 1887 . yments in 1887. s over Rcceipts	·····		
Dr.	C	ash		
To Balance brought from To Income received in 18 To Temporary Loan from	87			£ s. d. 1,190 15 8 23,102 15 6 3,000 0 0
				27,293 11 2

## Comparison of Payments in 1886 and 1887.

		Exp	end	liture of				
	188	7.	Ī	188	6.		Increase.	Decrease.
	£	8.	d.	£	s.	d.	£ 8. d.	£ 8. d
Rent, Rates, Taxes, and Insurance	1,434	12	10	1,700	7	7		265 14 9
Salaries, Wages, and Pensions	5,919	1	8	5,937	4	9		18 3 1
Provisions	3,932		10	4,041	6	4		108 14
Cost and Carriage of Animals	961		5	803	ì	$\hat{6}$	158 10 11	
Menagerie Expenses	3,324	8	3	3,561		5		237 10 2
Keepers' Dresses	200	12	8	167	6	6	33 6 2	
Works, Materials, &c	2,518		6	2,585	19	4		67 5 10
Buildings	446	7	0		::-	• • •	446 7 0	
Garden Expenses	791		5	791		9		0 5 4
Advertisements	265 167	20 1	0	234 225	6	0	31 4 9	58 10 0
Band Expenses	802		0	786	4	4	16 13 8	29 10 0
Stationery and Printing (Miscellaneous)	385	6 1	11	387	7	0		2 0 1
Cost of Publications	1,987		6	2,108	4	3		120 10 9
Cost of Zoological Record	717	7	4	2,100			717 7 4	
Library Expenses	573	7	7	633	2	8		59 15 1
Davis Lectures Interest on Mortgage and		10 1		80	19	6		1 8 7
Loan	339 259	4	8	367	6	8	259 4 1	28 2 0
Grant in aid of Science	209	· · · · ·		100	0	0	203 1 1	100 0 0
Miscellaneous	28	11	8	56	8	ŏ		27 16 4
Increase	25,135		2	24,568 566		9	1,662 13 11 1,095 16 6	1,095 16 6 Ded. Decr.
	25,135		2	25,135		2	566 17 5	
Ordinara Parranta		-	3			_	300 17 3	-0-
Ordinary Payments Extraordinary ditto	23,876 1,259	9	1	24,438 129		9	1,129 6 1	562 8 8
	25,135	10	2	24,568	12	9	566 17 5	
		C	on	tra				Cr.
By Expenditure paid in the ye By Repayment of Mortgage-d By Balance at the Bankers, D	lebt							£ s. d. 25,135 10 2 1,000 0 0 1,158 1 1

## Assets and Liabilities of the Society on December 31, 1887.

## ASSETS.

	£	s.	d.
Animals in the Menagerie in the Regent's Park	25,902	0	0
Books in the Library at Hanover Square	13,764	0	0
Unsold Publications	3,058	0	0
Stock of the Zoological Record	1,000	0	0
Freehold Premises	25,000	0	0
Cost of £1,900 London and South-Western Railway New 4 per			
cent. Preference Stock (Davis Trust Fund)	1,938	9	6
Cash at the Bankers (Messrs. Drummond)	1,158	1	0
Arrears considered good:— £ s. d.			
Rent for Refreshment Rooms 57 3 4			
Rent for Freehold Premises			
Garden Sales			
Annual Subscriptions			
Publication Sales 133 9 9			
Zoological Record Sales 27 10 0			
	492	6	11
	£72,312	17	5

## LIABILITIES.

Rent and Taxes unpaid:-	£	s.	d.	£	s.	d.
For the Gardens, say	266	7	6			
,, Office, say		5	0			
				312	12	6
Bills, &c., estimated at:—						
For the Gardens, say	1,273	7	9			
,, Office, say	755	10	7			
			—	2,028	18	4
Messrs. Drummond, Temporary Loan				3,000	0	0
Messrs. Drummond, Mortgage Debt	••••••	••••	•••	8,000	0	0
				£13,341	10	10

We have examined the Vouchers and the accounts of receipts and expenditure, and certify that they are correct.

PHILIP J. BUTLER.
WALTER CROUCH.
HERBERT DRUCE.
H. BERKELEY JAMES.
JOHN T. TAYLOR.
J. JENNER WEIR.
CHAS. A. WRIGHT.

Committee of Auditors.

Zoological Society of London, 3 Hanover Square, W. February 23, 1888.





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## REPORT

OF THE

## COUNCIL

OF THE

# ZOOLOGICAL SOCIETY

OF LONDON,

FOR THE YEAR 1888.

READ AT THE ANNUAL GENERAL MEETING,

APRIL 29TH, 1889.....



LONDON:

PRINTED BY TAYLOR AND FRANCIS,

RED LION COURT, FLEET STREET.

1889.

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-	
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year 1888	
Conclusion	37 50
Contractor of the contract of	03()

## REPORT OF THE COUNCIL.

April 29, 1889.

THE Council have the pleasure of submitting to the Fellows their sixtieth Annual Report upon the progress

of the Society.

This, in accordance with previous Reports, is divided into three heads, the first of which relates to the General Condition of the Society and its Finances, the second to the business transacted at the Office in Hanover Square, and the last to the state of the Gardens in the Regent's Park.

## I. GENERAL CONDITION OF THE SOCIETY.

## 1. STATE OF THE ROLL OF MEMBERS.

#### a. Fellows.

The number of Fellows and Fellows Elect on the 1st of January, 1889, was 3076, classified as follows:—

Compounders who have	re	paid	d d	E20	•			24
Ditto ditto								920
Compositions remitted								20
Paying annual contribu	ati	ions	of	£2	•	•	•	17
Ditto ditto				£3			•	1920
Dormant								
Admission-fees unpaid		•	•	•		•	•	18
								3076

The number of Fellows at the corresponding date in 1888 was 3104, showing a decrease of 28 during the year 1888.

Comparative Statement of Elections, Deaths, Resignations, and Removals during the past Ten Years, with the number of Fellows at the end of each Year.

	r. rë			Died.			I	Resigne		R	lemove	be.	of s, 31.	
Years.	Elected or Readmitted	Co	mpoun	ders.	Subse	ribers.	Subse	Subscribers. Signature Fees		Subscribers.		ission said.		Number of Fellows December
	Elected Readmit	£20.	£30.	Fee re- mitted.	£2.	£3.	£2.	£3.	Admissio Fees Unpaid.	£2.	£3.	Admission Fees Unpaid.	Ceased to Fellows.	Nur Fe Dece
1879.	144	9	17		7	52	•••	54			50	6	195	3361
1880.	153	4	18	1	4	65	•••	74			38	4	208	3306
1881.	138	24	31		5	75	•••	65	3	1	27	•••	231	3213
1882.	164	3	23	1	4	61		48			11	13	164	3213
1883.	159	4	25		3	53	•••	38		•••	33 ,	4	162	3210
1884.	183	1	28		5	53	•••	37		1	7	6	138	3255
1885.	111	2	17		5	69	2	55		1	20	2	173	3193
1886.	123	4	22		4	64	•••	59			12	5	170	3146
1887.	138	4	20		7	68	1	67			10	3	180	3104
1888.	122	1	10	1 ]	3	58		54		•••	15	8	150	3076

## b. Honorary Member.

Sir John Kirk, G.C.M.G., formerly Fellow of the Society, having resigned his Fellowship, was elected an Honorary Member, in acknowledgment of his distinguished services to Science and his many valuable presents to the Society's Menagerie.

### c. Corresponding Members.

The following Corresponding Members have been elected to fill vacancies since the last Anniversary:—

Col. Euan Smith, C.S.I., H.B.M. Consul-General, Zanzibar.

D. D. Daly, Esq., of the British North Borneo Company's Service.

Lionel de Nicéville, Esq., of Calcutta.

Percy E. Montgomery, Esq., of Ichang, China.

Herbert Edward White, Esq., H.B.M. Consul, Tangier, Morocco.

#### 2. STATE OF THE FINANCES.

#### a. Income.

The Council have the pleasure of being able to announce that the Income of the Society, which suffered a serious diminution in 1887, has shown considerable improvement during the past year. The Receipts from admissions to the Gardens have risen from £12,138 5s. 6d. to £13,284 11s.; the fees received from riders on the Elephants and Camels have increased from £419 5s. 2d. to £685 10s. 5d.; and the Compositions paid in lieu of Annual Subscriptions from £810 to £870; so that, on the whole, the year 1888 has shown a much more favourable state of the Finances than that which immediately preceded it.

The total Income of the Society for 1888 was £24,025 10s. 8d., and exceeded that of 1887 by the sum of £922 15s. 2d., as shown by the subjoined Table:—

	1	Income of										
	18	1888.			887	•	Incr	eas	e.	Decrease.		
	£	8.	d.	£	8.	, d.	£	8.	d.	£	8.	d.
Admissions to Gardens	13,284	11	0	12,138	5	ថ	1,146	5	6		••••	••••
Elephant and Camel-riding	1									1		
receipts	685		5	419			266		3	J		
Garden Sales	. 523		6	446			76	14	4			
Rent for Refreshment-rooms			1	890						198	1	3
Rent for Freehold Premises	283	3	0	255	0	0	28	3	0		• • • • •	•••••
Admission Fees:—	70	0	0	75		0				_	_	_
Past		0	0	$\frac{75}{515}$		_		•••••	••••	5 45	0	
PresentAnnual Subscriptions:—	410	U	U	919	U	U		• • • • •	***	40	U	0
Past	24	0	0	18	0	0	G	0	0			
Present		0	ő	5.887			0	U	v	202	0	0
Future		ŏ	ŏ	222	ŏ	ŏ		•••••	****	120		
Compositions		ŏ	ŏ	810	ŏ	ő	60		0		·	0
Ivory Tickets		17	ŏ	32	ĭ	ŏ				14	4	0
Publications		5	1		16				••••		11	-
Zoological Record		16	0	301	10	4	86	5	8			
Dividends		17	3	73	10	11	0	6	4			
Miscellaneons		16	4	193	4	2				103	7	10
			_						_			
	24,025	10	8	23,102		6	1,670	0	1	747	4	11
Increase			••••	922	15	2	747	4	11	Ded.	De	cr.
	01.00	10		24.005	7.0			_	_			
	24,025	10	8	24,025	10	8	922	15	2	• • • • • • • • • • • • • • • • • • • •		•••••

## b. Expenditure.

In view of the falling off of Income exhibited in 1887 it was thought necessary by the Council during the past year to exercise more than ordinary economy in the Expenditure, particularly as regards those items which are not absolutely necessary for the efficiency of the Society's establishment. In this way the total Ordinary Expenditure for 1888 was reduced from £23,876 9s.1d., the amount

at which it stood in 1887, to £21,439 16s. 4d., showing a decrease of £2,436 12s. 9d. on the year.

As regards Extraordinary Expenditure, the only payments made in 1888 were under three heads for liabilities incurred during the previous year, and the total amount only reached £700 2s. 2d., namely:—

	£	S.	d.	
Completion of the New Wolves' Dens	232	6	3	
Completion of Repairs to Well and Engine	347	15	11	
Special acquisition to the Menagerie	120	0	0	
	£700	2	-2	

On adding the Ordinary and Extraordinary Expenditure together it will be found that the total Expenditure of the year 1888 was £22,139 18s. 6d., the particulars of which, together with a comparison of the corresponding amounts paid in 1887, are given in the subjoined Table:—

	Expenditure of						Increase.	Decrease.			
	1888.			188	37.						
Rent, Rates, Taxes, and Insurance	£	8. 14	<b>d.</b> 3	£ 1.434		$\frac{d}{10}$		£	8.	d.	
Salaries and Pensions	5.551		0	5,919	1	8	202 1 9	367	9	8	
Provisions	3,768	9	6	3,932	11	10		164	2	4	
Cost and Carriage of Animals	495		3	961	12	5		466	9	2	
Menagerie Expenses	3,024		9		8	3		300	1	6	
Keepers' Dresses	147	0	11	200		8		53		9	
Works, Materials, &c	2,056		2	2,518		6		462	2	4	
Buildings	232	6	3	446 791	7	0 5		214		9 8	
Garden Expenses. Advertisements.	704		6	265			33 19 7	86	19	8	
Band Expenses		7	6	167	2	10	12 5 6	•••••	•••••		
House and Office Expenses		_	7	802		o i	303 16 7		••••		
Stationery and Printing (Miscella-		••	ľ	0.2			000 10				
neous)	293	6	8	385	6	11		92	0	3	
Cost of Publications	969		5	1,987	13	6		1,018	7	1	
Cost of Zoological Record	527		6		7	4		190		10	
Library Expenses			2	573	7	7			14	5	
Expenditure of Davis Bequest			3		10	11		5	13	8	
Interest on Mortgage and Loan		8	11	0.00	4	8	48 4 3		•••••		
Reception Expenses		3.0	2	259	11	8	00.70.6	259	4	1	
Miscellaneous	58	10		28	11	- 8	29 18 6		•••••	••••	
	22,139	18	6	25,135	10	2	710 5 10	3,705	17	6	
Decrease	2,995		8				Ded. Incr.			10	
	25,135	10	2	25,135	10			2,995	11	8	
	-	_			_	_				_	
Ordinary Payments	21,439			23,876		1		2,436		9	
Extraordinary ditto	700	2	2	1,259	_1 	1 —		558	18	11	
	22,139	18	6	25,135	10	2		2,995	11	8	

It should be remarked that the decrease shown under the head of "Salaries" is mainly a matter of account, certain items formerly charged under that head having been transferred to "House and Office Expenses," where it will be seen that a nearly corresponding increase has

taken place.

To the Expenditure of the past year must be added the sum of £1000, devoted to part repayment of the temporary loan of £3000, obtained from the Society's Bankers at the close of 1887 under the circumstances mentioned in the Council's last Report, and the sum of £1000 paid on account of the principal of the Mortgage-debt on the Society's freehold premises according to usual practice. Adding these sums to the Expenditure it will be found that the total payments for the year 1888 were £24,139 18s. 6d. The Receipts of the year having been £24,025 10s. 8d., and the balance brought from the previous year £1158 1s., this left a balance at the Society's Bankers on the 31st of December last of £1043 13s. 2d., as shown by the following summary:—

Receipts, 1888.			Payments, 1888.
Balance brongbt from December 31, 1887 Income received in 1888	£ 1,158 24,025 25,183	10 8	Expenditure paid in the year 22,139 18 6 Repayment on account of Loan of £5000 1,000 0 0 Repayment of Mortgage-debt 1,000 0 0 Balance at the Bankers, Dec. 31,1888 1,043 13 2 25,183 11 8

#### c. Assets and Liabilities.

The Assets and Liabilities of the Society on December 31, 1888, were estimated as follows:—

### ASSETS.

	£	s.	d.
Animals in the Menagerie in the Regent's Park	25,798	0	0
Books in the Library at Hanover Square	14,096	0	0
Unsold Publications	3.182	0	0
Stock of the Zoological Record	1,000	0	0
Freehold Premises	25,000	0	0
£1,900 London and South-Western Railway New 4 per	•		
cent. Preference Stock (Davis Trust Fund)	2,375	0	0
Cash at the Bankers (Messrs. Drummond)	1,043	13	$^2$
Arrears considered good:— $\pounds$ s. d.			
Rent for Refreshment Rooms			
Rent of Rooms at Hanover Square 63 15 0			
Garden Sales 64 11 0			
Subscriptions			
Publication Sales 101 0 0			
Zoological Record Sales 19 17 6			
	385	3	6

£72,879 16 8

#### LIABILITIES.

Rent and Taxes unpaid:—  For the Gardens, say	£ 169	<i>s</i> . 8		£	8.	â.
,, Office, say	43	15	0	213	3	10
Bills, &c., estimated at:— For the Gardens, say	581 424					
Messrs. Drummond, Mortgage Debt				$\frac{1,005}{7,000}$	3	5 0
Messrs. Drummond, Temporary Loan	•••••	••••	•••	2,000		0
				£10,218	7	3

## II. OFFICE, 3 HANOVER SQUARE.

#### 1. Scientific Meetings.

To the thirteen meetings for the despatch of scientific business held in the Society's Rooms in Hanover Square, in 1888, 101 communications were made. Of these, 80 were from Fellows and 3 from Corresponding Members of the Society. The remaining 18 papers were from individuals not belonging to the Society, and were communicated to it by the Secretary or by other Members. The corresponding number of communications in the year 1887 was 133.

These communications were submitted to the Committee of Publication, by whom 75 were ordered to be printed entire in the 'Proceedings' of the Society, such illustrations being in each case allowed as the Committee considered necessary for the purpose. Of the remaining communications, abstracts or extracts were considered to

be sufficient for publication.

## 2. Scientific Publications.

## a. Proceedings.

The volume of 'Proceedings' for 1888 is on the table. It contains 717 pages illustrated by 32 plates. In the following table are given the number of pages and plates of the volumes of 'Proceedings' for the past ten years:—

				plates.	pages.
1879				64	868
1880				64	743
1881				$7\overline{2}$	1056
1882		•		61	827
1883				61	704
1884				58	645
1885				62	991
1886				60	716
1887			Ů	55	730
1888		Ţ	•	32	
		•	•	02	717

## b. Transactions.

Only one part of 'Transactions' was published in 1888, namely:—

Vol. XII. Part VII. (April, 1888), containing the following memoir.

On some Foraminifera from the Abrohlos Bank. By Henry B. Brady, F.R.S., W. Kitchen Parker, F.R.S., and T. Rupert Jones, F.R.S. (with eight Plates).

Another part of 'Transactions' (Vol. XII. pt. 8) has, however, been since published, and it has been decided by the Committee of Publication to issue two more parts (9 and 10), both of which are in a forward state, during the present year. The tenth part will conclude the twelfth volume of the Society's quarto 'Transactions,' and leave only one memoir ordered for publication in this form to stand over for the 13th volume.

## c. Zoological Record.

The volume of the 'Zoological Record' for 1888, containing a summary of the work done by British and Foreign Zoologists in 1887, was issued to the Subscribers early in the present year. The Council wish to express their thanks to the Editor, Mr. Beddard, and to the various contributors to the volume for their assiduity, and to point out to the Society that the 'Zoological Record' continues to appear far in advance of any other publication of a similar character.

It may be mentioned that since the stock of the old volumes was acquired by the Society and the sixth volume reprinted in order to render the series complete, 40 complete sets of the first 22 volumes of the 'Zoological Record' have been sold at the reduced price of £5 10s. per set. This, it is calculated, leaves a deficit of only about £190 on the total cost of the acquisition of the back stock and the reprinting of the missing volume. Against this deficit the Society hold a stock of 120 complete sets of the first 22 volumes still unsold, which, it is anticipated, will ultimately produce nearly, if not quite, the sum required to balance the account.

#### 3. LIBRARY.

An important event in connection with the Society's Library took place last year, the late Madame Cornély, widow of the late Mons. J. M. Cornély, of Tours, an old and valued Corresponding Member of the Society, having bequeathed to the Society her husband's Zoological Library, which was received from the Executors in October last.

The Cornély Library consists of about 840 volumes, of which 256 are new to the Society's Library. most valuable augmentation to the Society's Library has taken place, many of the works thus acquired being rare and difficult to obtain under ordinary circumstances.

Besides the Cornély Library many important additions were made to the Society's bookshelves in 1888, among which attention may be called to the following donations:

Armas. La Zoología de Colón. 1888. Presented by the Author. Atkinson. Notes on Indian Rhynchota. Nos. 3, 4. 1888. Presented by the Author.

Berce. Fauna Entomologique Française. Lépidoptères. 6 vols. 1867-78. Presented by W. C. Dale, Esq. Blanford. The Fauna of British India. Mammalia. Part 1. 1888.

Presented by the Author.

Cotes and Swinhoe. A Catalogue of the Moths of India. Parts ii., iii. 1887-88. Presented by the Trustees of the Indian Museum. Synopsis of the Families and Genera of the Hymenoptera of America, North of Mexico. 1887. Presented by the American Entomological Society.

Filippi. Animalia Vertebrata. Museum Mediolanense. Classis ii.

Aves. 1847. Presented by Count T. Salvadori.

Fürbringer. Untersuchungen zur Morphologie und Systematik der Vögel. 2 vols. 1888. Presented by the Royal Zoological Society, Natura Artis Magistra, Amsterdam.

Godwin-Austen. Land and Freshwater Mollusca of India. Part vi.

(Text.) 1888. Presented by the Author.

Goode. The Fisheries and Fishery Industries of the United States. Sect. ii. Geographical Review. 1887. Presented by the United States Commission of Fish and Fisheries.

Guerne. Excursions Zoologiques dans les Iles de Faval et de San

Miguel. 1888. Presented by Prince Albert of Monaco.

Journal of Comparative Medicine and Surgery. Vol. ix. 1888.

Presented by the Editors.

Lendenfeld. Descriptive Catalogue of the Medusæ of the Australian Seas. 1887. Presented by the Trustees of the Australian Museum.

Lilljeborg. Sveriges och Norges Fiskar. Haftet 5. 1888.

sented by the Author.

Linnæus. Oländska och Gothländska Resa. 1745. Presented by

Prof. Alfred Newton.

Lydekker. Catalogue of the Fossil Mammalia in the British Museum. Part v. 1887. Presented by the Trustees of the British Museum.

Catalogue of the Fossil Reptilia and Amphibia in the British Museum. Part i. 1888. Presented by the Trustees of

the British Museum.

McCoy. Prodromus of the Zoology of Victoria. Decades i.-xv.

1878-87. Presented by the Government of Victoria.

Moore. Descriptions of New Indian Lepidopterous Insects from the Collection of W. S. Atkinson. Part iii. 1888. Presented by the Asiatic Society of Bengal.

Sclater. Catalogue of the Birds in the British Museum. Vol. xiv.

Presented by the Trustees of the British Museum. 1888.

Sharpe. Catalogue of the Birds in the British Museum. Vol. xii. 1888. Presented by the Trustees of the British Museum.

Spencer. The Factors of Organic Evolution. 1887. Presented by W. C. Dale, Esq.

Tegetmeier. The New Game Bird. Pallas's Sand-Grouse. 1888.

Presented by the Author.

Thomson. Arcana Naturæ ou Recueil d'histoire naturelle. 1859. Presented by M. Auguste Sallé.

-. Musée Scientifique ou Recueil d'histoire naturelle.

1860. Presented by M. Auguste Sallé.

Thurston. Catalogue of the Batrachia Salientia and Apoda of Southern India. 1888. Presented by the Author.

Vejdovský. Thierische Organismen der Brunnenwässer von Prag. 1882. Presented by the Author.

-. System und Morphologie der Oligochaeten. 1884. Presented by the Author.

The following is a list of the principal zoological works in course of publication of which parts were purchased in 1888:-

André. Species des Hyménoptères. Fasc. 27-32.

Bartlett. Monograph of the Weaver-Birds and Finches. Parts 1, 2. Berlese. Acari, Myriapodi e Scorpioni Italiani. Fasc. xlvi.-xlviii.

Blasius and Havek. Ornis. Jahr. iii. Heft 4; Jahr. iv. Heft. 1-4. Bronn's Thierreich. Band I. (*Protozoa*), Lief. 41-52; Band V. Abth. ii. (*Arthropoda*), Lief. 18, 19; Band VI. Abth. iii. (*Rep*tilien), Lief. 57-64; Abth. iv. (Vögel), Lief. 18-22; Abth. v. (Säugethiere), Lief. 30, 31.

Bucquoy, Dautzenberg, and Dollfus. Mollusques marins du Rous-

sillon. Tome ii. Fasc. 1, 2.

Buller. Birds of New Zealand. 2nd ed. Parts 3-II.
'Challenger,' Voyage of H.M.S. Zoology, Vols. xxiii.-xxix.
Clessin. Malakozoologische Blätter. N. F. Band x. Bog. 2-4. 

Lief. 3.

Edwards. Butterflies of North America. Ser. 3. Parts 4, 5.

Encyclopædia Britannica. Vols. xxiii., xxiv.

Erichson. Naturgeschichte der Insecten Deutschlands. Abth. i.

(Coleoptera). Band VI. Lief. 5.

Ersch and Gruber. Encyklopädie. Sect. 2. Theil. 41, 42. Fauna und Flora des Golfes von Neapel. Monogr. xv., xvi. Fedtschenko. Reise in Turkestan. Zoologie. Lief. xv.-xvii. Fol. Recueil Zoologique Suisse. Tome iv. No. 4.

Fowler. Coleoptera of the British Isles. Parts 14-24. Giglioli. Iconografia dell' Avifauna Italica. Fasc. xxxviii.-xliii. Godman and Salvin. Biologia Centrali-Americana. Zoology, Parts

lv.-lxxii.; Botany, Part xxv. Gould's Birds of New Guinea. Part xxiv.

Grandidier. Histoire de Madagascar. Vol. xvi. (Poissons), Part 2, Atlas, Part I, Fasc. xvii. Vol. xxii. (Coléoptères), Tome ii., Atlas, Part I, Fasc. xvi.

Greene. Parrots in Captivity. Vol. iv. Parts 29, 30.

Haeckel. Die Radiolarien. Theil. 3, 4. Hatschek. Lehrbuch der Zoologie. Lief. i.

Helmerson and Schrenck. Beiträge zur Kenntniss des Russischen

Reiches. Folge 3. Bänd. iii.-v.

Kobelt. Iconographie der schalentragender europäischen Meeresconchylien. Heft viii.

-. Rossmässler's Iconographie der europäischen Land- und Süsswasser-Mollusken. N. F. Band iv. Lief. I, 2.

Leuckart and Chun. Bibliotheca Zoologica. Heft. i., ii.

Lilford. British Birds. Parts vi.-viii.

Martini and Chemnitz. Conchylien-Cabinet. Lief. 355–366.

Meinert. Entomologiske Meddelelser. Bind I. Hefte 3-5. Menzbier. Ornithologie du Turkestan. Livr. i., and Atlas, Livr. i. Mission Scientifique du Cap Horn. Tome vi. Zoologie (Insectes, Bryozoaires, Poissons, et Priapulides).

Oberthür. Études d'Entomologie. Part xii.

Olphe-Galliard. Contributions à la Faune Ornithologique de l'Europe Occidentale. Fasc. iii., iv., xvi., and xxiii.

Paetel. Catalog der Conchylien-Sammlung. Lief. 5-8.

Pelzeln, Madarász, and Lorenz. Monographie der Pipridæ. Lief. i. Przewalski. Wissenschaftliche Resultate der von N. M. Przewalski nach Central-Asien unternommen Reisen. Band i. (Säugethiere), Lief. 1; Band iii. Abth. 2 (Fische), Lief. I.

Reichenow. Handwörterbuch der Zoologie. Band v. Russ. Fremlandische Stübenvögel. Band iv. Lief. 8.

—. Vögel der Heimat. Lief. 18.

Ergebnisse naturwissenschaftlicher Forschungen auf Ceylon. Band I. Heft. 2, 3.

Saunders. Manual of British Birds. Parts 1–10. Schneider. Tablettes Zoologiques. Tome ii. Nos. 1, 2.

—. Zoologische Beiträge. Band ii. Heft 2.

Scudder. The Butterflies of the Eastern United States and Canada. Part i.

Seidlitz. Fauna Baltica. Die Käfer. Lief. 2, 3.

—. Fauna Transsylvanica. Die Käfer. Lief. 1, 2. Semper (C.). Reisen im Archipel der Philippinen. Theil II. Band ii.

Heft xvi. Hälfte 1; Band v. Lief. 3. Semper (G.). Die Schmetterlinge der Philippinischen Inseln.

Band i. Lief. 3.

Sharpe and Wyatt. Monograph of the Hirundinidæ. Parts vii., viii. Smith and Kirby. Rhopalocera Exotica. Parts iv.-vi.

Spengel. Zoologische Jahrbücher. Band iii. (Systematik), Heft. 2-6; (Anat.), Heft. 1-3.

Staudinger. Exotische Schmetterlinge. Lief. 20, 21; Theil II. Lief. 4.

Sundman. Finska Fogelägg. Häft. viii., ix.

—. Finlands Fiskar. Häft ix.

Taschenberg. Bibliotheca Zoologica ii. Lief. v., vi.

Thomson. Opuscula Entomologica. Fasc. xi., xii.
Tryon. Manual of Conchology. Parts xxxvii.-xxxix.; Ser. 2. Parts xiii.-xv.

Tunisie. Exploration Scientifique de la Tunisie. Malacologie et Diptères.

Vogt and Yung. Traité d'Anatomie Comparée. Livr. 11, 12.

—. Lehrbuch der Anatomie. Lief. 13, 14.

Waterhouse. Aid to the Identification of Insects. Part xxix.

Zittel. Handbuch der Paläontologie. Abth. i. Band III. Lief. 2; Abth. ii. Lief. 6.

Some of the most important additions to the Society's Library, purchased since the last Anniversary, are the following :—

Agassiz. The Three Cruises of the 'Blake.' 2 vols. 8vo. 1888. Bonvalot. Through the Heart of Asia. 2 vols. 8vo. 1889.

Bull. The Birds of Herefordshire. 8vo. 1888. Campana. Recherches d'Anatomie. 4to. 1875.

Cole. Studies in Microscopical Science. 2 vols. 8vo. 1883-84. Doughty. Travels in Arabia Deserta. 2 vols. 8vo. 1888, Dubois. Les Lépidoptères de la Belgique. 3 vols. Royal 8vo. 1874-84.

Duval. Atlas d'Embryologie. 4to. 1889.

Etheridge. Fossils of the British Islands. Vol. i. 4to. 1888.

Finsch. Samoafahrten. Text, 8vo.; Atlas, 4to. 1888.

Goode. American Fishes. Royal 8vo. 1888.

Haeckel. The Evolution of Man. 2 vols. 8vo. 1883.

Hofmann. Die Gross-Schmetterlinge Europa's. 4to. 1887.

James. The Unknown Horn of Africa. 8vo. 1888. Johnston's Royal Atlas. New Edition. Folio, 1887. Knorr, Verzameling van allerlev bekende Hoorens en Schulpen.

Deel. i.-vi. 4to. 1770-75.

Le Messurier. Game, Shore, and Water Birds of India. 8vo. 1888. Lewis. Physiological and Pathological Researches. Royal 8vo. 1888.

Mansel-Pleydell. The Birds of Dorsetshire. 8vo. 1888.

Marshall. Atlas der Tierverbreitung. Folio, 1887.

Meyer. Die Hirschgeweih-Sammlung im Königlichen Schlosse zu Moritzburg bei Dresden. Neue Folge. Folio, 1887.

Milne-Edwards. Expéditions Scientifiques du Travailleur et du

Talisman. Poissons par L. Vaillant. 4to. 1888.

Mcquin-Tandon. Monographie de la Famille des Hirudinées. Svo. 1846.

Panzer. Voet's Beschreibungen und Abbildungen hartschaaligter Insekten. Theil. i.-v. 4to. 1793–1802.

Pope. Upland Game Birds and Water-Fowl. Elephant Folio, Í878.

Ramsay. Tabular List of all the Australian Birds known to the Author. 4to. 1888.

Rolleston. Forms of Animal Life. 2nd edition. By W. H. Jackson. Royal 8vo. 1888.

Saint-Hilaire. Histoire naturelle des Oiseaux, par E. Le Maout. Royal 8vo. 1853.

Schneider. Symbolæ ad Monographiam Generis Chrysopæ. Royal 8vo. 1851.

Sclater and Hudson. Argentine Ornithology. Vol. i. Royal 8vo. 1888.

Sharpe. Birds in Nature. 4to. 1888.

Spencer. The Principles of Biology. 2 vols. 8vo. 1864-67.

—. First Principles. 3rd edition. 8vo. 1870. Zurn. Die Schmarotzer auf und in dem Korper unserer Haussäugetiere. Theil ii. 8vo. 1889.

The following is a list of the periodicals received in 1888 from the various Societies and Institutions with which this Society is in correspondence.

#### AFRICA.

The South-African Philosophical Society, Cape Town. Transactions, vol. v., part 1.

### AMERICA (NORTH)

The American Academy of Arts and Sciences, Boston. Proceedings, n. s., vol. xv., part 1. Memoirs, vol. xi., part 5, no. 6; part 6, no. 7.

The Boston Society of Natural History, Boston. Memoirs, vol. iv., nos. 1-6.

The Museum of Comparative Zoölogy, Harvard College, Cambridge, Mass.

Bulletin, vol. xiii., nos. 6-10; vols. xiv., xv., and xvii., nos. 1, 2. Memoirs, vol. xv.

- The Elliott Society of Science and Art, Charleston. Proceedings, 1886-88.
- The Nova Scotia Institute of Natural Science, Halifax. Proceedings and Transactions, vol. vii., parts 1, 2.
- The "Antonio Alzate" Scientific Society, Mexico. Memorias, tomo i., cuad. 5-12; tomo ii., cuad. 1-4.
- The Geological and Natural History Survey of Minnesota, Minneapolis.

Annual Report, 15. Bulletin, no. 4.

The Royal Society of Canada, Montreal.

Proceedings and Transactions, vol. v.

The Connecticut Academy of Arts and Sciences, New Haven.

Transactions, vol. vii., part 2.

- The American Museum of Natural History, New York.
  Annual Report, 1887–88.
- The New York Academy of Sciences, New York.

  Annals, vol. iv., nos. 3-8.

  Transactions, vol. i., no. 1; v., no. 1; vi. and vii., nos. 1-8.
- The Geological and Natural-History Survey of Canada, Ottawa.

Annual Report, n. s., vol. ii.

The Academy of Natural Sciences, Philadelphia.

Proceedings, 1887, part 3; 1888, parts 1, 2. Journal, ser. 2, vol. ix., part 2.

The American Entomological Society, Philadelphia. Transactions, vol. xiv.; xv., no. 1. The American Philosophical Society, Philadelphia.

Proceedings, vol. xxiv., no. 126; xxv., no. 127. Transactions, n. s., vol. xvi., part 2.

The Franklin Institute, Philadelphia. Journal, 1888.

The American Association for the Advancement of Science, Salem.

Proceedings, 36th Meeting, New York, 1887.

The California Academy of Science, San Francisco.

Bulletin, vol. ii., no. 8. Memoirs, vol. ii., no. 1.

The National Museum of the Republic of Costa Rica, San José.

Anales, tomo i.

The Trenton Natural-History Society, Trenton. Journal, vol. i., no. 3.

The Biological Society, Washington. Proceedings, vols. i.-iv.

The Philosophical Society, Washington.
Bulletin, vol. x.

The Smithsonian Institution, Washington.

Annual Report, 1885, part 2. Miscellaneous Collections, vols. xxxi.-xxxiii.

## AMERICA (SOUTH).

The National Academy of Sciences of Cordoba, Buenos Ayres.

Boletin, tomo x., entr. 1, 2; xi., entr. 1, 2.

## AUSTRALIAN COLONIES.

The Royal Society of South Australia, Adelaide.
Transactions and Proceedings, vols. ix., x.

- The Royal Society of Tasmania, Hobart.
  Papers and Proceedings for 1887.
- The Zoological and Acclimatization Society of Victoria, Melbourne.

Annual Report, 1887.

- The Linnean Society of New South Wales, Sydney.

  Proceedings, ser. 2, vol. ii., parts 3, 4; vol. iii., parts 1, 2.
- The Royal Society of New South Wales, Sydney.

  Journal and Proceedings, vols. xx., xxi., xxii., part 1.
- The New-Zealand Institute, Wellington.
  Transactions and Proceedings, vol. xx.

#### AUSTRIA.

The Academy of the University, Cracow.

Sprawozdanie komisyi fizyjograficznej, tome xxi. Antropologii, tome xi. Pamietnik, tome xiii. Rocznik, 1886, 1887. Rozprawy i Sprawozdania, tomes xv., xvi.

The Imperial Academy of Sciences, Vienna.

Denkschriften, Band liii.

Denkschriften, Band liii. Sitzungsberichte, Bänd. xcv., xcvi.

The Zoological and Botanical Society, Vienna.

Verhandlungen, Band xxxvii., Quartal. 3, 4; xxxviii., Quartal. 1, 2.

### Belgium.

- The Entomological Society of Belgium, Brussels.
  Table Générale des Annales, tomes i.-xxx.
- The Royal Museum of Natural History, Brussels.

  Bulletin, tome v., no. 1.

  Annales, tome xiv.

#### CHINA.

The China Branch of the Royal Asiatic Society, Shanghai. Journal, vol. xxii., nos. 1-5.

#### EAST INDIES.

- The Royal Society of the Dutch East Indies, Batavia.

  Natuurkundig Tijdschrift, deel xlvii.
- The Bombay Natural-History Society, Bombay. Journal, vol. ii., no. 4; iii., nos. 1-3.
- The Asiatic Society of Bengal, Calcutta.

  Proceedings, 1887, nos. 9, 10; 1888, nos. 1-8.

  Journal, vol. lvi., part 2, nos. 2-4; lvii., part 2, nos. 1-3.
- The Geological Survey of India, Calcutta.

  Records, vol. xx., part 4; xxi., parts 1-3.

  Memoirs, vol. xxiv., part 1.

  Memoirs (*Palæontologia Indica*), ser. 10, vol. iv., part 3; ser. 13, vol. i., part 7.

#### FRANCE.

- The Linnean Society of Normandy, Caen. Bulletin, ser. 4, vol. i.
- The Entomological Society, Paris.

  Annales, sér. 6, tomes iv., vii.
- The Museum of Natural History, Paris.

  Nouvelles Archives, sér. 2, tome ix., fasc. 2; x., fasc. 1.
- The National Society of Acclimatation, Paris. Bulletin, sér. 4, tome v.
- The Society Philomathique, Paris.
  Bulletin, sér. 7, tome xi., no. 4; xii., nos. 1, 3.
- The Natural History Society, Toulouse.

  Bulletin, 1887, Avril-Dec.; 1888 Jan.-Mars.
  Table des Matières, 1866-1886.

## GERMANY.

- The Royal Prussian Academy of Sciences, Berlin. Sitzungsberichte, 1887, nos. 40-54; 1888, nos. 1-37. Abhandlungen, 1887.
- The Society of Friends of Natural History, Berlin. Sitzungs-Berichte, 1887.
- The Natural-History Union of Rhenish Prussia Westphalia, Bonn.

Verhandlungen, Jahr. xliv., Hälfte 2; xlv., Hälfte 1.

- The German Malacological Society, Frankfort a. M. Jahrbücher, xiv., Heft 4.
- The New Zoological Society, Frankfort a. M. Der Zoologische Garten, Jahr. xxviii., nos. 11, 12; xxix.,
- The Senckenbergian Natural-History Society, Frankfort

Abhandlungen, Band xv., Heft. 1-3. Bericht, 1888.

The Royal Society of Sciences, Göttingen.

Abhandlungen, Band xxxiv. Nachrichten, 1887.

The Imperial Leopoldino-Carolinian Academy of Naturalists, Halle.

Nova Acta, Bänd xlix.-li. Leopoldina, Heft 23. Katalog der Bibliothek, Lief. 1.

- The Natural History Union, Hamburg. Abhandlungen, Band x. (Festschrift).
- The Zoological Society, Hamburg. Bericht, xxvi.

The Medical and Natural-History Society, Jena. Jenaische Zeitschrift, Band xxi.; xxii., Heft. 1, 2.

The Westphalian Provincial Union of Science and Art, Münster.

Jahresbericht der Zoologischen Sektion 1887-88.

The Natural-History Union, Würtemberg.
Jahreshefte, Jahrg. xliv.

#### GREAT BRITAIN AND IRELAND.

The Belfast Natural-History and Philosophical Society, Belfast.

Report and Proceedings, Session 1887-88.

The Essex Field Club, Buckhurst Hill, Essex.

The Essex Naturalist, vol. i., no. 12; ii., nos. 1-10.

The Philosophical Society, Cambridge.
Proceedings, vol. vi., parts 3, 4.

The Royal Dublin Society, Dublin.

Scientific Transactions, ser. 2, vol. iv., part 1.
—— Proceedings, n. s., vol. v., parts 7, 8; vi., parts 1, 2.

The Royal Geological Society of Ireland, Dublin. Journal, n. s., vol. vii., part 2.

The Royal Irish Academy, Dublin.

Proceedings (Science), ser. 2, vol. iv., no. 6.
—— (Polite Literature), ser. 2, vol. ii., no. 8.
Transactions (Science), vol. xxix., parts 1, 2.
Cunningham Memoirs, no. iv.

Royal Physical Society, Edinburgh.

Proceedings, Session 1886-87.

Royal Society, Edinburgh.

Proceedings, vol. xii., nos. 115-118; xiii., xiv. Transactions, vol. xxx., part 4; xxxi., xxxii., parts 2-4; xxxiii., parts 1, 2.

- The Hertfordshire Natural-History Society, Hertford. Transactions, vol. iv., parts 8, 9.
- The Philosophical and Literary Society, Leeds.
  Annual Report, 1887-88.
- The British Association for the Advancement of Science, London.

Report, 57th Meeting, Manchester, 1887.

The Entomological Society, London.
Transactions, 1887, parts 4, 5; 1888, parts 1-4.

The Geological Society, London.

Quarterly Journal, vol. xliv. List of Fellows of the Society, 1888.

The Linnean Society, London.

Transactions (Botany), ser. 2, vol. ii., parts 10, 13-16; iii., part 1.

— (Zoology), ser. 2, vol. ii., part 18; iii., parts 5, 6; iv., parts 2, 3; v., parts 1, 2.

Journal (Zoology), vol. xx., nos. 119, 120; xxi., nos. 130, 131; xxii., nos. 137-140.

— (Botany), vol. xxiii., nos. 153-155; xxiv., nos. 162-164.

General Index to Vols. i.-xx. (Botany).

List of Fellows, 1887-88, 1888-89.

The County of Middlesex Natural History and Science Society, London.

Transactions, Session 1887-88.

The Quekett Microscopical Club, London. Journal, ser. 2, vol. iii., nos. 21, 22.

- The Royal Agricultural Society of England, London. Journal, ser. 2, vol. xxiv., parts 1, 2.
- The Royal Asiatic Society of Great Britain and Ireland, London.

Journal, n. s., vol. xx., part 1.

The Royal Geographical Society, London.
Proceedings, vol. x.

The Royal Society, London.

Proceedings, vol. xliii., nos. 263–265; xliv., nos. 266–271. Philosophical Transactions, vol. clxxviii. List of Fellows, 1887.

The Royal United Service Institution, London. Journal, 1888.

The Society of Arts, London.
Journal, 1888.

The Literary and Philosophical Society, Manchester.

Proceedings, vols. xxv., xxvi. Memoirs, ser. 3, vol. x. Memoirs and Proceedings, ser. 4, vol. i.

The Tyneside Naturalists' Field Club, Newcastle.
Natural History Transactions, vol. ix., part 2.

The Marine Biological Association, Plymouth. Journal, no. 2.

The Plymouth Institution and Devon and Cornwall Natural-History Society, Plymouth.

Annual Report and Transactions, vol. x., part 1.

The Royal Institution of Cornwall, Truro. Journal, vol. ix., part 3.

The Yorkshire Philosophical Society, York.
Annual Report, 1887.

#### HOLLAND.

The Royal Academy of Sciences, Amsterdam.

Verhandelingen (Natuurkunde), deel xxvi. Verslagen en Mededeelingen (Natuurkunde), derde reeks, deel. iii., iv; (Letterkunde), derde reeks, deel iv. Jaarboek, 1886, 1887.

The Dutch Society of Sciences, Haarlem.

Archives Néerlandaises, tome xxii., livr. 4, 5; xxiii., livr. 1.

The Entomological Society of the Netherlands, The Hague.
Tijdschrift voor Entomologie, deel xxxi., afl. 1, 2.

#### ITALY.

- The National Central Library, Florence.
  Bollettino, 1887, num. 48, 49, and Index; 1888, num. 50-73.
- The Civic Museum of Natural History, Genoa.
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Donations, Memoirs, and Papers have also been received from :- the Editors of the 'American Journal of Science'; the Editors of the 'American Naturalist'; the Editors of the 'Archiv für Naturgeschichte'; the Editors of the 'Athenæum'; the Trustees of the Australian Museum; Prof. J. V. Barboza du Bocage; Dr. R. Blasius; Dr. W. Blasius; Rev. L. Blomefield; Dr. O. Boettger; the Trustees of the British Museum; the Geological and Natural History Survey of Canada; Prof. G. Canestrini; the Trustees of the Colombo Museum; Prof. E. D. Cope; the Great Eastern Railway Company; Prof. C. Gegenbaur; Prof. H. H. Giglioli; J. G. Goodchild, Esq.; Prof. G. Brown Goode; Dr. H. J. Hansen; the Hon. Miss Rose E. Hubbard; the Geological Survey of India; the India Office; the Trustees of the Indian Museum; the Royal College of Surgeons of Ireland; the Zoological Society of Ireland; the Editors of the 'Journal de Conchyliologie'; M. Fernand Lataste; R. T. Litton, Esq.; Dr. M. Menzbier; Dr. A. B. Meyer; Prof. K. Möbius; Dr. James Murie; the Editors of 'The Naturalist'; the Editors of 'Nature'; Prof. A. Newton; the New York State Library; the Colonial Museum and Geological Survey of New Zealand; Dr. F. C. Noll; the Nottingham Naturalists' Society; Prof. H. A. Pagenstecher; Dr. Paul Pelseneer; the Zoological Society of Philadelphia; M. E. L.

Ragonot; the Trustees of the Salford Museum; Count T. Salvadori; Dr. Carl Schmidt; P. L. Sclater, Esq.; Dr. R. W. Shufeldt; Mrs. Stirling; the Royal Swedish Academy of Sciences, Stockholm; Lewis R. S. Tomalin, Esq.; the United States Commission of Fish and Fisheries; the United States Geological Survey; the University College of London; and F. H. Waterhouse, Esq.

## III. GARDENS, REGENT'S PARK.

#### 1. WORKS AND REPAIRS.

As has been already mentioned, the Council, in view of the financial economy necessary to be observed under present circumstances, deemed it necessary to restrict to a certain degree the expenditure on works and repairs in the Gardens during the past year. Nevertheless the Society's staff of workmen, though somewhat reduced in numbers, was kept busily employed throughout the year, and a large number of repairs and renewals were carried out. Opportunity was taken of the change of tenancy in the Refreshment-rooms to thoroughly paint, repair, and redecorate the main Refreshment-building, both inside and out, besides which the roof was repaired, and the drains restored to perfect order.

The Hyænas' and Bears' dens were thoroughly cleaned, repaired, and painted, as were likewise the adjoining Bearpit and Polar-Bears' den; the lobby of the New Reptilehouse was painted and distempered; the walks near the Camel-house and Band-stand were altered, and a large new mound constructed and planted; the smaller Seal-Pond was altered and improved; the Eagle Aviary was thoroughly repaired and painted; and numerous other smaller repairs were carried out. Besides this, during the autumn a large quantity of ballast was burnt, formed by the clay removed from the bank at the back of the Reptilehouse, and much valuable material was thus acquired at a moderate cost for the repairs of the roads and paths.

#### 2. STAFF.

The permanent Staff of the Society's Gardens consists of:—

1 Superintendent.

1 Assistant Superintendent.

1 Head Keeper.

7 Keepers (1st class).

9 Keepers (2nd class).

8 Keepers (3rd class).

3 Money-takers.

1 Storekeeper.

1 Cook.

1 Office Clerk.

1 Prosector's Assistant.

1 Head Gardener.

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Besides these there are usually 19 Helpers in the Menagerie, 12 Garden-labourers, 7 Artisans, 5 Painters, 6 Labourers, 1 Butcher, 2 Firemen, 2 Night-Watchmen, and 1 Time-keeper employed at weekly wages; so that the number of the whole staff may be reckoned at about ninety persons.

### 3. VISITORS.

The Council are pleased to be able to point out a considerable increase in the number of visitors to the Society's Gardens in 1888. As will be seen by the subjoined Table, this increase has taken place under every one of the heads into which the entrances to the Gardens are divided for the purpose of registration.

#### Visitors to the Gardens.

	1888.	1887.	Comparison.
Fellows and Friends	176,609 123,746		Incr. 208 Incr. 4,421
Paying { On Mondays and other days } at 6d. each	232,012	206,825	Incr. 25,187
6d. each	49,021	38,631	Incr. 10,390
School Children (admitted free)	27,014	21,716	Incr. 5,298
	608,402	562,898	Incr. 45,504

The subjoined Table contains a statement of the Number of Visitors to the Society's Gardens during each year, from the year 1828 to the year 1888.

Number of Visitors to the Gardens, 1828-88.

		,	
Year.	Number.	Year.	Number.
1828	98,605	1859	364,356
1829	189,913	1860	394,906
1830	223,420	1861	381,837
1831	262,193	†1862	682,205
1832	206,652	1863	468,700
1833	211,343	1864	507,169
1834	208,583	1865	525,176
1835	210,068	1866	527,349
1836	263,372	1867	556,214
1837	173,778	1868	573,186
1838	179,197	1869	572,848
1839	158,432	1870	573,004
1840	141,009	1871	595,917
1841	132,616	1872	648,088
1842	107,459	1873	713,046
1843	98,280	1874	706,907
1844	101,527	1875	699,918
1845	99,615	±1876	915,764
1846	100,045	1877	781,377
1847	93,546	1878	706,713
1848	143,630	1879	643,000
1849	168,895	1880	675,979
1850	360,402	1881	648,694
*1851	667,243	1882	849,776
1852	305,203	1883	743,485
1853	409,076	1884	745,460
1854	407,676	1885	659,896
1855	315,002	1886	639,674
1856	344,184	1887	562,898
1857	339,217	1888	608,402
1858	351,580	† Year of the Intern	
* Year of the Gre	eat Exhibition.	† Year of the exhibit of Wales's Indian Men	tion of the Prince agerie.

#### 4. PROSECTOR'S DEPARTMENT.

The Prosector (Mr. F. E. Beddard) reports as follows:— The number of deaths in the Society's Menagerie during the year 1888 was 948, showing a small increase (23) over

the deaths of the year 1887.

The number of deaths for the year which can be considered as important was not large. A young Polar Bear, which was acquired in April 1887, died in January 1888; its companion, purchased at the same time, had to be killed

in consequence of its diseased condition.

The following deaths also occurred:—Two Leopards; a female Pygmy Hog, which was purchased in May 1882, and had therefore lived six years in the Gardens; two Secretary Vultures; a Spectacled Bear, which had lived fourteen years in the Society's Gardens, having been purchased in 1874; a Rhinoceros (Rh. sumatrensis), one of a pair which were purchased by the Society in 1885. Both of the latter were dissected by the Prosector and Mr. Treves; and an account of their anatomy has already been communicated to the Society, and will appear in the 'Proceedings' for 1889.

The following papers, based on work done in the Prosector's Laboratory, are among those which have been prepared by the Prosector during the past year:—"On certain points in the Visceral Anatomy of the Lacertilia;" "Notes on the Visceral Anatomy of Birds, part ii.;" and "On certain points in the Visceral Anatomy of Balæ-

niceps rex, bearing upon its Affinities."

Some of the materials in the Prosector's Department have been utilized by other workers, and others have been

applied to Museum purposes.

Professor Flower (Natural History Museum), Mr. Beddard (Guy's Hospital Museum), Mr. W. L. Sclater (Indian Museum, Calcutta), Professor D'Arcy Thompson (University College, Dundee), Professor Stewart (Royal College of Surgeons Museum), and Professor Macintosh (St. Andrew's University) have acquired specimens for Museum purposes.

The following gentlemen have been supplied with materials for the purposes of research:—Professor W. K. Parker, Professor Ferrier, Dr. J. Bland Sutton, Professor

Max Weber, and Professor Windle.

#### 5. ZOOLOGICAL LECTURES.

The arrangements for the Davis Lectures on zoological

subjects for the present year are as follows:-

A course of six Lectures will be delivered in the Lecture-room in the Society's Gardens, Regent's Park, on Thursdays, at 5 p.m., commencing May 2nd, by Mr. F. E. Beddard, M.A., Prosector to the Society and Davis Lecturer. Subject: Some of the more Interesting Animals in the Society's Collection.

The Fee for the Course (including admission to the Gardens on the days of Lecture) is 5s. The Course is free to Fellows of the Society. Tickets for it may be obtained from Mr. F. E. Beddard, Zoological Society's

Gardens, Regent's Park, N.W.

#### 6. MENAGERIE.

### a. Additions to the Menagerie in 1888.

The number of animals belonging to the first three classes of Vertebrates living in the Society's Menagerie at the close of 1888 was 2290. The corresponding number on the 31st of December, 1887, was 2525, as will be seen by the subjoined Table:—

	Decem	ber 31.	Commonican
	1888. 1887.		Comparison.
Quadrupeds Birds Reptiles	1280	735 1331 459	Decr. 69 Decr. 51 Decr. 115
	2290	2525	Decr. 235

The total number of registered additions to the Menagerie in 1888 was 1121, of which 572 were acquired by presentation, 143 by purchase, 158 were bred in the Gardens, 216 were received on deposit, and 32 obtained in exchange.

The mode in which these figures compare with those of

previous years is shown in the subjoined table:-

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1875.	559	557	156	143	43	1458
1876.	533	316	171	172	27	1219
1877.	506	324	181	181	68	1260
1878.	511	272	150	178	71	1182
1879.	550	421	115	124	56	1266
1880.	624	515	148	161	40	1488
1881.	565	310	167	136	35	1213
1882.	772	402	113	111	25	1423
1883.	637	376	128	219	28	1388
1884.	646	524	174	229	133	1706
1885.	762	251	241	135	62	1451
1886.	851	236	171	232	48	1538
1887.	600	176	138	135	86	1135
1888.	572	143	158	216	32	1121

The following is a list of the most noticeable additions made to the Menagerie during the year 1888:—

1. Four examples of a small and very beautiful Finch (Ery-

thrura psittacea) from New Caledonia, purchased.

2. Five examples of a fine Pheasant (*Phasianus principalis*) from Akeha, in Afghan-Turkestan, presented by Major Peacock, R.E., of the Afghan Frontier Commission; new to the Collection.

3. Two Penguins from the Auckland Islands, presented by

Capt. Sutcliff, R.M.S.S. 'Aorangi,' 19th April.

4. Two Indian Desert-Foxes (Vulpes leucopus), presented by Col. Alex. A. A. Kinloch, F.Z.S., and received 20th April. These Foxes form an acceptable addition to the series of Canidæ in the Society's Collection.

5. A fine example of the Spotted Hawk-Eagle (Spizaëtus nipalensis) of Northern India, also presented by Col. Kinloch, and

new to the Society's Collection.

- 6. Three specimens of Pallas's Sand-Grouse (Syrrhaptes paradoxus), captured out of the many flocks of this Asiatic bird that have lately visited the British Islands. One of these (received June 2nd) was taken near Berwick-on-Tweed, and presented by Mr. Howat Crane; the two others were obtained on the Island of Tiree, Argyllshire, and presented (June 16th) by Col. Irby, F.Z.S., and Capt. Saville Reid, F.Z.S.
- 7. A specimen of the Small-clawed Otter (*Lutra leptonyx*), presented by W. L. Sclater, Esq., F.Z.S., Deputy Superintendent, Indian Museum, Calcutta; new to the Society's Collection.
- 8. A Monkey of the genus Cercopithecus, from South Africa, apparently referable to the Samango Monkey (Cercopithecus samango): new to the Society's Collection.

9. A young Chimpanzee, purchased of Mr. Cross of Liverpool, December 6th. This is apparently of the same species as the

specimen purchased October 24th, 1883 (see P. Z. S. 1883, p. 464, and 1885, p. 673, pl. xli.), which is still living in the Society's Gardens, and is, so far as can be at present ascertained, referable to the Bald-headed Chimpanzee, *Anthropopithecus calvus* (Du Chaillu).

b. List of Species new to the Collection exhibited during the year 1888.

The following list contains the specimens exhibited in 1888 which are referable to species not included in the last (ninth) edition of the List of Animals.

#### i. MAMMALS.

24a. Cercopithecus samango, Sundevall. Samango Monkey.

Hab. South Africa.

- a. Presented by L. B. Lewis, Esq., Nov. 13, 1888. See P. Z. S. 1888, p. 564.
- 77 a. Cebus versicolor, Puch. Varied Capuchin. Hab. Colombia.
  - a. Male. Purchased, Feb. 19, 1887.
  - b. Presented by H. B. Whitmarsh, Esq., July 11, 1888.
- 270a. Lutra leptonyx, Horsf. Small-clawed Otter. Hab. India.
  - a. Presented by W. L. Sclater, Esq., F.Z.S., Nov. 10, 1888. See P. Z. S. 1888, p. 564.
- 338a. Sciurus pusillus, Geoffr. Dwarf Squirrel. Hab. British Guiana.
  - a, b. Presented by R. Forrester Daly, Esq., May 30, 1888. From Demerara.
- 646 a. Macropus ocydromus, Gould. West Australian Great Kangaroo.

Hab. West Australia.

a. Male. Received in exchange, June 6, 1888.

#### ii. BIRDS.

- 170a. Erythrura psittacea (Gm.). Parrot Finch.
  Hab. New Caledonia.
  a-d. Purchased, Feb. 15, 1888. See P. Z. S. 1888,
  p. 140.
- 244a. Montifringilla nivalis (Linn.). Snow-Finch. Hab. Europe.

  a, b. Presented by Lord Lilford, F.Z.S., Jan. 17, 1888.
- 724a. Scops lempiji (Horsf.). Horsfield's Scops-Owl. Hab. Malacca.
  a. Presented by C. B. Ricketts, Esq., F.Z.S., June 6, 1888.
- 737 a. Surnia ulula (Linn.). European Hawk-Owl. Hab. Northern Europe.
  - a. Presented by Lord Lilford, F.Z.S., Dec. 13, 1888. From Russian Finland.
- 789a. Spizaëtus nipalensis (Hodgs.). Spotted Hawk-Eagle. Hab. Northern India.
  - a. Presented by Col. Alex. A. A. Kinloch, F.Z.S., April 20, 1888. See P.Z.S. 1888, p. 265.
- 824a. Tinnunculus gracilis (Less.). Slender Kestrel. Hab. Seychelles.
  a, b. Deposited, May 25, 1888.
- 902 a. Botaurus lentiginosus (Mont.). American Bittern. Hab. North America.

  a, b. Presented by J. B. Williams, Esq., Nov. 13, 1888.
- 1051 a. Columba bollii, Godman. Bolle's Pigeon.
  Hab. Teneriffe.
  α-e. Deposited, June 21, 1888.

1146a. Francolinus nudicollis (Gm.). Bare-necked Francolin.

Hab. South Africa.

- a, b. Males; c-e. Females. Presented by Capt. Larmer, Oct. 10, 1888.
- 1189a. Phasianus principalis, Sclater. Prince of Wales' Pheasant.
  - Hab. Northern Afghanistan.
  - *a*, *b*. Males; *c*–*e*. Females. Presented by Major Peacock, R.E., Feb. 27, 1888. See P. Z. S. 1888, p. 140.
- 1420a. Eudyptes sclateri, Buller. Sclater's Penguin. Hab. Auckland Islands, New Zealand.
  - a, b. Presented by Capt. Sutcliffe, R.M.S.S. 'Aorangi,' April 19, 1888. See P.Z.S. 1888, p. 265, and 1889, p. 84.

#### iii. REPTILES.

19a. Homopus femoralis, Boulenger. Tuberculated Tortoise.

Hab. South Africa.

- *a-c.* Presented by the Rev. G. H. R. Fisk, C.M.Z.S., Feb. 27, 1888. See P.Z.S. 1888, p. 251, pl. xiv.
- 24a. Pyxis arachnoides, Bell. Pyxis Tortoise. Hab. Madagascar.
  - a. Presented by Col. J. H. Bowker, F.Z.S., Dec. 24, 1888. From Natal.
- 67 a. Sternotherus sinuatus, Smith. Natal Sternothere. Hab. Natal.
  - a. Presented by Col. J. H. Bowker, F.Z.S., Feb. 27, 1888.
- 104a. Phyllodactylus porphyreus (Daud.). Purplish Gecko. Hab. South Africa.
  - a. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., May 30, 1888.

165 a. Anolis carolinensis, Dum. & Bibr. Caroline Anolis. Hab. North America.

a, b. Presented by H. E. T. Glover, Esq., July 9, 1888.

238a. Pituophis vertebralis (Blainville). Black-marked Snake.

Hab. Mexico.

a. Presented by Jeremiah Garnett, Esq., July 23, 1888.

255 a. Cyclophis æstivus (Linn.). Summer Snake. Hab. Florida.

a. Presented by H. E. T. Glover, Esq., July 9, 1888.

260 a. Dromicus leucomelas, Duméril. Black-and-White Snake.

Hab. Dominica, W.I.

a. Presented by the West-Indian Natural History Exploration Committee, July 10, 1888.

272 a. Dipsas obtusa (Reuss). Blunt-nosed Snake. Hab. Egypt.

a. Presented by Capt. W. G. Burrows, Jan. 25, 1888.

#### iv. BATRACHIANS.

4 b. Rana fuscigula, Dum. & Bibr. Brown-throated Frog.

Hab. South Africa.

α-e. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., Feb. 27, 1888.

4 c. Rana grayi, Smith. Gray's Frog.

Hab. South Africa.

a-e. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., May 30, 1888.

14a. Bufo boreas, Baird & Gir. Californian Toad. Hab. California.

a. Presented by D. E. Cardinall, Esq., Nov. 22, 1888.

26a. Hylodes martinicensis, Tsehudi. Martinican Tree-Frog.

Hab. Martinique, W.I.

a-f. Presented by Capt. Woolward, July 23, 1888. From Barbados.

39a. Molye poireti (Gervais). Poiret's Newt. Hab. Algeria.

a. Male; b. Female. Presented by G. A. Boulenger, Esq., F.Z.S., April 4, 1888.

c. List of Animals bred in the Gardens during the year 1888.

#### MAMMALS.

2 Black Lemurs (Lemur macaco).

1 White-fronted Lemur (Lemur albifrons).

1 Puma (Felis concolor).

9 Suricates (Suricata tetradactyla).

4 Esquimaux Dogs (Canis familiaris).

2 North-African Jackals (Canis anthus).

7 Collared Fruit-Bats (Cynonycteris collaris). 4 Canadian Beavers (Castor canadensis).

4 Long-fronted Gerbilles (Gerbillus longifrons).

5 Chinchilla (Chinchilla lanigera).

2 Viscachas (Lagostomus trichodactylus).

1 Spotted Cavy (Cælogenys paca).

1 American Bison (Bison americanus).

1 Gayal (Bibos frontalis). 1 Eland (Oreas canna).

2 Persian Gazelles (Gazella subgutturosa).

1 Thar (Capra jemlaica).

1 Burrhel Wild Sheep (Ovis burrhel).

1 Barbary Wild Sheep (Ovis tragelaphus).

2 Wapiti Deer (Cervus canadensis).

3 Japanese Deer (Cervus sika).

1 Sambur Deer (Cervus aristotelis).

2 Hog Deer (Cervus porcinus).

1 Molucca Deer (Cervus moluccensis).

1 Axis Deer (Cervus axis).

4 Mule Deer (Cervus macrotis).

2 Vulpine Phalangers (Phalangista vulpina).

3 Red Kangaroos (Macropus rufus).

1 Great Kangaroo (Macropus giganteus).

2 Bennett's Wallabies (Halmaturus bennetti).

2 Yellow-footed Rock-Kangaroos (Petrogale xanthopus).

#### BIRDS.

- 3 Chinese Blue Magpies (Cyanopolius cyanus).
- 4 Cereopsis Geese (Cereopsis novæ-hollandiæ).

2 Australian Wild Duck (Anas superciliosa).

3 Slender Ducks (Anas gibberifrons).

- 5 Brazilian Teal (Querquedula brasiliensis).
- 17 Chilian Pintail (Dafila spinicauda).3 Chiloe Wigeon (Mareca chiloensis).

3 Summer Ducks (Æx sponsa).

3 Mandarin Ducks (Æx galericulata).

1 Bolle's Pigeon (Columba bollii).

- 5 Triangular-spotted Pigeons (Columba guinea). 4 Cambayan Turtle-Doves (Turtur senegalensis).
- 1 Crested Pigeon (Ocyphap's lophotes).
  3 Gold Pheasants (Thaumalea picta).

2 Brazilian Cariamas (Cariama cristata).

1 Yellow-legged Herring-Gull (Larus cachinnans).

1 Spotted Tinamou (Nothura maculosa).

#### REPTILES.

1 Æsculapian Snake (Coluber asculapii). 21 Horrid Rattlesnakes (Crotalus horridus).

d. List of Donors and their Donations for the year 1888.

Her Majesty the Queen.

Five Peafowls.

Allchin, F. A., Esq.

Two Long-eared Bats.

Allen, A., Esq.

One Moustache Monkey.

Anderson, G., Esq.

One Mexican Deer.

Arbib, Mrs. Eugenio.

One Gazelle.

Armstrong, R. H., Esq.

One Peregrine Falcon.

Austin, Mr. T.

One Common Kestrel.

Ayerst, W. E., Esq.

One Cardinal Grosbeak.

Ballard, Mrs. A.

One Macaque Monkey.

Barlow, Capt. J. Brabazon.

Two Poë Honey-eaters.

Barry, J. Wolfe, Esq.

One Lesser Sulphur-crested Cockatoo.

Batchelor, Dr. A., F.R.C.P.

One Kinkajou.

Bateman, C. J., Esq.

One Brazilian Tree-Porcupine.

Bates, E. Percy, Esq. One Ocelot.

Baumann, Miss Hilda.

One Malbrouck Monkey.

Baxter, J. G., Esq.

Twelve Black-headed Gulls, one Common Gull.

Bell, J. W., Esq.

One Ring-tailed Coati.

Bennett, R. F., Esq. Six Guinea-Pigs.

Bergman, Mrs.

One Common Teal.

Berry, G., Esq.

Onc Common Chameleon.

Bibby, Mr.

One Little Grebe.

Biehl, John, Esq.

Four Barbary Turtle-Doves.

Blaker, W. C., Esq.

One Smooth Snake.

Blandford, H. E., Esq.

One Tuberculated Iguana.

Blow, Miss Helena.

One Vervet Monkey.

Boles, F. J. Coleridge, Esq.

Two American Wild Turkeys.

Bone, Miss Jessie.

One Rhesus Monkey.

Bonneville, Capt. J.

Three Black-headed Lemurs.

Boon, Dr. A., F.R.C.S., C.M.Z.S. One Laughing Gull.

Booth, Charles, Esq.

One Scarlet Ibis, one Roseate Spoonbill.

Boulenger, G. A., Esq., F.Z.S.

Two Poiret's Newts, one Black Salamander.

Bourne, G. C., Esq.

Sea-Anemones and Corals.

Bowker, Col. J. H., F.Z.S.

One Natal Sternothere, one Pyxis Tortoise.

Brane, R. H., Esq.

One Maugé's Dasyure.

Bromley, Hugh, Esq.

One Common Barn-Owl.

Brown, —, Esq., M.I.C.E. One Hygian Snake.

Bryden, Miss Maud.

One Common Marmoset.

Bnchanan, Mrs. G. E.

One Macaque Monkey.

Buck, Sir E. C., C.M.Z.S.

One Tiger.

Buckle, Major Dudley, R.A. One Rhesus Monkey.

Buckley, Mrs. Maas.

Two Laughing Kingfishers.

Bunn, Mr. Howard.

One Little Grebe.

Burrows, Capt. W. G.

Three Egyptian Cobras, three Cerastes Vipers, two Hissing Sand-Snakes, one Clifford's Snake, one Egyptian Goose, one Blunt-nosed Snake.

Butler, H., Esq.

One Laughing Kingfisher.

Cameron, E. S., Esq.

Eight Wild Geese, one White-fronted Goose, one Herring-Gull.

Campbell, Lord Archibald.
One Grivet Monkey.

Cardinall, D. E., Esq.

One Californian Toad.

Carr, Sydney H., Esq.

One African Buzzard.

Chester, Miss.

One Macaque Monkey.

Cholmondeley, The Marchioness of. One Herring-Gull.

Christian, Capt.

One Common Quail.

Clifton, Charles, Esq., F.Z.S.

One Black-backed Piping Crow, one Common Magpie, two Himalayan Monauls, two Gold Pheasants, two Silver Pheasants, one Javan Peafowl, two Common Peafowl, one Rose-crested Cockatoo, two Leadbeater's Cockatoos, one Hyacinthine Macaw, one Blue-and-Yellow Macaw, one Great Eagle-Owl, four Common Herons, two Mandarin Ducks.

Clow, Austin, Esq., F.Z.S.

One Bonnet-Monkey, two Rhesus Monkeys, one Alpine Marmot, one Vulpine Phalanger.

Cobb, F. E., Esq., C.M.Z.S. Two Crested Ducks.

Cobb, Miss Ethel.

One Short-eared Owl.

Cole, Martin J., Esq.

One Purple-faced Monkey.

Cook, G. E. Pugh, Esq. One Pudu Deer.

Cooper, Leonard, Esq.

Three Black Tortoises.

Cotton, Thomas A., Esq.

Two Black-headed Gulls, two Herring-Gulls.

Crane, H. Howat, Esq.

One Pallas's Sand-Grouse.

Creser, A., Esq.

One Grey Ichneumon.

Crisp, J., Esq.

One Common Otter.

Currie, Sir Donald, K.C.M.G., M.P. One Cape Crowned Crane.

Daly, R. Forrester, Esq.
Two Dwarf Squirrels.

Davison, J., Esq.

Two Peregrine Falcons.

Dawson, Lieut. W. G.

Two Stock-Doves.

Dean, Mrs.

One Indian Kite.

Deintje, J. A., Esq.

Three Black-eared Marmosets.

Delacherois, Capt. D. L.
One Silvery Gibbon.

Dennehy, Dr. T.

One Nose-crested Iguana.

Dodington, R. M., Esq.

One Brown Capuchin.

Donaldson, Lady.

One Axis Deer.

Drew, J. M., Esq., F.Z.S. One Puffin.

Duncan, J., Esq.

One Pallas's Sand-Grouse.

Dunn, A., Esq.

One White-collared Mangabey.

Eagles, Capt. H. C., R.M.L.I. One Japanese Deer.

Eagles, F. Harston, Esq. One Common Roe.

Ellacott, Mr. C. W.

Two Pig-tailed Monkeys.

Eve, Miss.

One Rose-crested Cockatoo.

Exton, Hugh, Esq., M.D., F.G.S.

One Meyer's Parrot.

Faulkner, Mr. Charles.

One Hawfinch.

Felton, E., Esq., R.E.

Two Sooty Mangabeys.

Field, L., Esq.

One Common Boa.

Finch-Hatton, The Hon. Stormont.

Two Cockateels, two Pale-headed Parrakeets, one Red-winged Parrakeet, eight Peaceful Doves.

Fishlock, Mrs.

One Bare-eyed Cockatoo.

Fisk, The Rev. G. H. R., C.M.Z.S.

One Spotted Eagle-Owl, five Angulated Tortoises, three Tuberculated Tortoises, four Narrow-headed Toads, one Tent Tortoise, one Fisk's Tortoise, three Galeated Pentonyx, one Infernal Snake, one Rufous Snake, one Rufescent Snake, one Spotted Slowworm, five Round-throated Frogs, one Dwarf Chameleon, one Purplish Gecko, one Hoary Snake, five Gray's Frogs, twelve Robben-Island Snakes.

Ford, Mr. William.

One Starred Tortoise.

Forwood, Mrs. Ernest H.
One Imperial Eagle.

Forwood, E. H., Esq.

One Barbary Wild Sheep.

Frank, Miss Edith.

One Mona Monkey.

Garnett, Jeremiah, Esq.

One Black-marked Snake.

Gilles, W. C., Esq. Two Fulmars.

Gleig, Mrs.

One Pig-tailed Monkey.

Glover, H. E. T., Esq.

Two Hog-nosed Snakes, one Summer Snake, two Caroline Anolises.

Godden, F., Esq. One Pike.

Goodwin, Mr. H.

Seven Bream.

Gosling, G. C., Esq.

One Bonnet-Monkey. Green, Sir W. Kirby, K.C.M.G.

Two Black-bellied Sand-Grouse.

Griffith, W. Blandford, Esq.

One Lesser White-nosed Monkey.

Haddon, Mr.

One Smooth-headed Capuchin.

Hall, R., Esq.

One White-backed Piping Crow.

Hanauer, H., Esq., F.Z.S. One Lesser Kestrel.

Hanbury, Lionel, Esq., F.Z.S.

One Long-fronted Gerbille, one Bonnet-Monkey.

Hankey, H. A., Esq.

One Swainson's Lorikeet.

Hart, E., Esq., F.Z.S.

Two Common Barn-Owls, one Common Guillemot, one Common Kingfisher.

Hawkshaw, J. Clarke, Esq., F.Z.S.

Two Burrowing Owls.

Hayes, Miss.

One Blue-fronted Amazon.

Hele, N. F., Esq.

One Salt-water Terrapin.

Hepworth, Lieut. C. M., R. N.R. Three Derbian Wallabies.

Hibbert, Capt. R. F.

One Rhesus Monkey.

Hodge, David S., Esq.

Two Australian Waxbills, seven Spotted-sided Finches.

Hodson, Mrs. Ellen.

Two Toque Monkeys.

Holden, Mrs.

One Green Monkey.

Hoogerduyn, Mr. J. One Avocet.

Hopson, J., Esq.

One Eyed Lizard.

Hoste, Capt. H. F.

Two White-necked Crows, two Spotted Eagle-Owls.

Hughes, Miss D.

One Bonnet-Monkey.

Hunter, Richard, Esq.

Two Common Peafowl.

Hutchinson, P. S., Esq.

One Common Snake, one Common Slowworm.

Huthwaite, Mrs.

One Herring-Gull.

Irby, Col., F.Z.S., and Capt. Savile Reid, F.Z.S.

Two Pallas's Sand-Grouse.

Johnson, G. M., Esq.

One White-headed Sea-Eagle.

Johnston, H. H., Esq., F.Z.S.

One White-thighed Colobus, one Campbell's Monkey, one White-collared Mangabey, one Bosman's Potto, one Marabou Stork, one Black Sternothere.

Jones, W. A. W., Esq.

One Common Kestrel.

Kent, Capt. A.

One Egyptian Vulture.

King, Surgeon-Major W. G. Three Palm-Squirrels.

Kinloch, Col. Alex. A. A., F.Z.S.

One Indian Wolf, two Indian Desert-Foxes, one Spotted Hawk-Eagle.

Kirdy, J. M., Esq.

Two Vulpine Phalangers.

Knott, Reginald S., Esq. One Rhesus Monkey.

Kornatski, Mrs. M. von.

One Larger Hill-Mynah.

Kyrke, R. H. Venables, Esq.

Two White-tailed Sea-Eagles.

Lankester, Prof. E. Ray, F.R.S., F.Z.S. One Greater Black-backed Gull.

Larmer, Capt.

Five Bare-necked Francolius.

Lediard, Mrs. E. A.

One White-fronted Capuchin.

Leighton, Mrs.

One Common Marmoset.

Lemberg, Philip, Esq.

Two Common Genets.

Levy, Master Lewis.

One Patas Monkey.

Levy, Miss Ethel.

Two West-African Love-Birds.

Lewis, L. B., Esq.

One Samango Monkey.

Lilford, The Lord, F.Z.S.

One Common Genet, four Alpine Accentors, one European Hawk-Owl, two Snow-Finches.

Lindsay, Mr. H.

One Weka Rail.

Lister, Dr. C. E.

One Sulphur-and-white-breasted Toucan.

Lloyd, Mrs. Fanny.

Two Californian Quails.

Lockwood, Alfred J., Esq.

Two Common Chameleons.

McCall, Archibald, Esq.

Two Loggerhead Ducks.

Macnab, Mrs.

Three Grey-breasted Parrakeets.

Manger, W. T., Esq.

One Hawk's-billed Turtle.

Mare, Mrs. J. de la.

One Roseate Cockatoo.

Marr, Capt. John.

Two Short-eared Owls.

Marsh, Prof. O. C., C.M.Z.S.

Two American Box-Tortoises, two Alligator Terrapins, one Speckled Terrapin, four Sculptured Terrapins.

Matveieff, Mrs.

One Chipping Squirrel.

Meade-Waldo, E. G., Esq. One Smooth Snake.

Melville, The Hon. N. L.

One Orange-winged Amazon.

Merryweather, W., Esq.

One Pig-tailed Monkey.

Miles, Mr. George.

One Squirrel-Monkey.

Millard, Michel, Esq. One Alligator.

Miller, Capt. W.

One Axis Deer.

Mitford, R. H., Esq.

One Cape Dove, one Tambourine Pigeon.

Montgomery, Percy, Esq. One Indian Civet.

Morce, G. D., Esq.

One Brazilian Hangnest.

Naylor-Leyland, H. S., Esq., F.Z.S.

One Himalayan Bear.

Nelson, T. H., Esq.

One Razorbill.

Nicholls, Dr. H. A. A., C.M.Z.S. Seven Slender-fingered Frogs.

Nicholls, W., Esq.

One Crested Grebe.

Nicholson, Mr. C. L.

Two Slowworms.

Norman, W., Esq.

One Bonnet-Monkey.

Oates, H. C., Esq.

One Rhesus Monkey.

Ogg, Mr. G. P.

Two Philippine Paradoxures.

Oldham, F. M., Esq.

One Common Viper.

Palmer, Mrs. Alfred.

One Blue-and-Yellow Macaw.

Parker, A. B., Esq.

One Macaque Monkey.

Paul & Co., Messrs.

One Asp Viper.

Payne, Mr. G. J.

One Water-Rail.

Peacock, Major, R.E.

Five Prince of Wales's Pheasants.

Petrzywalski, Mr. C. One Raven.

Philp, Capt.

One Brush-tailed Kangaroo, one Laughing King-

Pichot, Mons. P. A., C.M.Z.S.

Two Hobbies.

Pierce, Miss.

Two Naked-footed Owlets.

Pilkington, Mr. F. W.

One Slowworm. Pollard, Mrs. J. H.

One Tayra.

Pollock, Miss B.

One Black-eared Marmoset.

Pope, Miss Kate Marion.
One Rhesus Monkey.

Pusey, Capt. E. B., R.N., F.Z.S. Two Striped Hyænas.

Ralph, Master Lester.

One Feline Douroucouli.

Reed, Master William.

One European Pond-Tortoise.

Reid, Capt. Savile, F.Z.S., and Col. Irby, F.Z.S.

Two Pallas's Sand-Grouse.

Richardson, The Rev. C. H.

One Drill Baboon.

Rickards, Mrs.

One Gannet, one Greater Black-backed Gull.

Ricketts, C. B., Esq., F.Z.S.

One Pagoda Owl, one Horsfield's Scops-Owl.

Robertson, Alexander, Esq.

One Small Hill-Mynah.

Rodger, J. P., Esq.

One Binturong.

Roper, F. C. S., Esq., F.Z.S. One Spotted Salamander.

Rose, F., Jun., Esq.

One Brazilian Cariama.

Ruck, G. A., Esq. One Alligator.

Rutherford, Miss A.

One Grey Ichneumon.

St. John, Col. Sir Oliver B. C., K.C.S.I., F.Z.S. One Indian Desert-Fox.

St. Quintin, W. H., Esq.

One Ortolan Bunting, two Common Quails.

Sclater, P. L., Esq., F.R.S., F.Z.S. Two Æsculapian Snakes.

Sclater, W. L., Esq., F.Z.S.

Two Spotted Ichneumons, one Small-clawed Otter, one Bengalese Cat.

Scott, The Rev. F. T.

Three Common Partridges.

Sentenally, Mr. Robert.

One Ring-tailed Coati.

Serrell, Miss.

One Gannet.

Sexton, Master Howard.

One Horned Lizard.

Shand, Harvey J. W., Esq., J.P. One Indian Antelope.

Shuter, W., Esq.

One Muscovy Duck.

Skegg, Mr. G.

One Sparrow-Hawk.

Slater, The Rev. H. H., F.Z.S. One Common Sheldrake. Slowly, Mr.

One Gannet.

Smith, Miss Felix.

One Macaque Monkey.

Smith, F. D. Lea, Esq., F.Z.S. One Common Polecat.

Smith, Capt. J.

One Peregrine Falcon, one Coati.

Smith, Mr. A. H. N.

One Common Viper.

Smith, F. C., Esq.

One Common Viper.

Somerford, Mr. George.

One Rhesus Monkey.

Sommer, Capt. J.

One Hawk's-billed Turtle.

Spalding, Mr. R. B.

Two Corn-Crakes.

Speedie, Alexander, Esq.

Two Pallas's Sand-Grouse.

Stather, Mr. W. H.

Two Spotted Cavies.

Steinhoff, F., Esq.

One Raven.

Stevenson, G., Esq.

One Common Seal.

Sturt, Col. C. S., C.M.Z.S. One Common Viper.

Sutcliff, Capt.

Two Sclater's Penguins.

Taaffe, Anthony, Esq.

One Brazilian Tapir.

Thompson, Lieut.-Col. Robert.
One Large Hill-Mynah.

Thomson, Mrs. G. A.

Three Barred Doves.

Tournay, W. T., Esq., F.Z.S.

Three Esquimaux Dogs.

Tufnell, T. R., Esq.

One Brazilian Hangnest.

Underwood, Mr.

One Common Chameleon.

Upcher, H. M., Esq., F.Z.S.

One Fulmar.

Urquhart, C. J., Esq.

One Common Raccoon.

Warburg, J. C., Esq.

Eight Moorish Geckos, one Three-toed Chalcis.

Warburg, Masters F. & O.

Two Moorish Geckos.

Warrand, Mrs.

One Blue-and-Yellow Macaw.

Waterman, Miss.

One Barbary Ape.

Watson, R. Grant, Esq.

One Common Squirrel.

Webster, Capt.

One African Civet Cat.

Weetman, H., Esq., F.Z.S. One Common Kestrel.

Wells, Licut. Lionel de Lautour, R.N.

One Black-backed Jackal, one Suricate.

West-Indian (Natural History) Exploration Committee.
One Tuberculated Iguana, two Common Boas, one
Black-and-White Snake, one Fer de Lance.

Weston, Mr. J.

One Tawny Owl.

Whately, G. F., Esq., R.N.

Three Virginian Opossums. White, Herbert E., Esq., C.M.Z.S.

One Striped Hyæna, three Lacertine Snakes, two Horseshoe Snakes, two Chameleons, one Puff-Adder, one African Cobra.

Whitmarsh, H. B., Esq.

One Varied Capuchin.

Whymper, Charles, Esq., F.Z.S.

One Knot.

Wilberforce, The Rev. Basil.

One Naked-footed Owlet.

Wilkins, A. J., Esq.

One Nankeen Kestrel.

Williams, E. A., Esq.

Two Sharp-nosed Crocodiles.

Williams, L. A., Esq.

Six European Tree-Frogs.

Williams, J. B., Esq.

Two American Bitterns.

Wilson-Barker, D., Esq., R.N.R., F.Z.S.

One Arabian Baboon, one Lesser Black-backed Gull.

Wiltshire, Mr. J.

One Bonnet-Monkey.

Wisely, Mrs.

Four Half-collared Doves.

Witham, J., Esq.

One Rhesus Monkey.

Wolf, Lieut.-Col. R.

One Grand Eclectus, one Red-sided Eclectus.

Wond, Mrs.

One Roseate Cockatoo.

Woolward, Capt.

Six Martinican Tree-Frogs.

Worms, Baron Henry de, M.P., F.Z.S.

Two Green Turtles.

Yarrow, Mrs.

One Blue-and-Yellow Macaw.

Young, Master H. B.

Two Squirrel-Monkeys.

Young, J., Esq.

One Nightingale.

#### Conclusion.

The Council cannot conclude their Report without acknowledging the assistance they have received from the Committee of Publication, upon whom is devolved, in accordance with the By-Laws, the arrangement and supervision of the Society's Scientific Publications.

The Council have also to ask you to thank those Fellows of the Society who during the past year have audited the Accounts and have served on the Finance Committee.

Signed (for the Council),

P. L. SCLATER,

Secretary.

3 Hanover Square, W., April 29th, 1889.

#### REPORT

OF THE

## AUDITORS OF THE ACCOUNTS

OF THE

# ZOOLOGICAL SOCIETY OF LONDON,

Appointed January 17, 1889.

THE Committee of Auditors to the Zoological Society having fully examined the accounts, inspected the books, and seen vouchers for all the various payments ordered by the Council for the year ending December 31st, 1888, respectfully submit to the Society an abstract of the accounts, together with a statement of the Assets and Liabilities at the close of the year.

## RECEIPTS IN 1888.

Balance brought from December 31, 1887		••••••	£ s. d. 1,158 1 0
INCOME.			
1885 Publication Sales	$\pounds$ s. d.	$\begin{bmatrix} \pounds & s. & d. \\ 1 & 17 & 6 \end{bmatrix}$	
Garden Sales Rent for Refreshment-Rooms Rent for Freehold Premises.  1887 { Admission Fees Subscriptions Publication Sales Zoological Record Sales	57 3 4 88 15 0 70 0 0 24 0 0 133 16 10	. 440 14 0	
Admissions to Gardens Riding Receipts Garden Sales Rent for Refreshment-Rooms Rent for Rooms at Hanover Square. Admission Fees Compositions Subscriptions Ivory Tickets Publication Subscriptions Publication Sales Zoological Record Subscriptions Ditto ditto Sales Dividends Miscellaneous	685 10 5 467 3 8 635 8 9 194 8 0 470 0 0 870 0 0 5,685 0 0 16 16 0 517 13 0 95 0 9 213 3 0 163 13 0 73 17 3 89 16 4	23,462 1 2	
$1889 \left\{ egin{array}{ll}  ext{Subscriptions} & & & & \\  ext{Ivory Tickets} & & & & \\  ext{Publication Subscriptions} & & & \end{array}  ight.$	$\cdot \mid  1  1  0$	120 18 0	
INCOME RECEIVED IN 1888		24,025 10 8	24,025 10 8
			25,183 11 8

## PAYMENTS IN 1888.

EXPENDITURE.  Rent, Rates, Taxes, and Insurance Gardens Ditto ditto Office Salaries and Pensions Gardens Ditto ditto Office Provisions Cost and Carriage of Animals Menagerie Expenses Keepers' Dresses	£ s. d. 1,485 0 10 231 13 5 3,652 12 0 1,899 0 0 3,768 9 6 495 3 3 3,024 6 9 147 0 11	£s	:. d.
Works, Materials, &c	1,999 19 2 56 12 0 232 6 3 704 16 9 299 10 6 179 7 6 442 16 5 663 18 2 293 6 8 969 6 5 527 2 6 547 13 2 30 7 0 73 17 3 28 3 2 292 2 2 95 6 9		
EXPENDITURE PAID IN 1888	22,139 18 6	22,139 1	8 6
Repaid Messrs. Drummond on account of temporary	Loan	1,000	0 0
Repaid Messrs. Drummond on account of Mortgage D	ebt	1,000	0 0
Cash at the Banker's, December 31, 1888:— General Account Petty Cash Account		1,043 1	3 2
		25,183 1	1 8

## Comparison of Receipts in 1888 with 1887.

		I	Rec	eipts.				
		Income of				Increase.	Decrease.	
	1888.			188	7.		Increaser	Decreases
Admissions to Gardens Elephant and Camel	£	s. 11	d. 0	£ 12,138	s. 5	d. 6	£ s. d	
riding receipts Garden Sales Rent for Refreshment-	685 <b>523</b>	10 2	5 6	419 446	5 8	$\frac{2}{2}$	266 5 3 76 14 4	
Rooms	692	12	)	890	13	4		. 198 1 3
over Square Admission Fees:—	283	3	0	255	0	0	28 3 0	
Past Present Annual Subscriptions:—	70 470	0	0	75 515	0	0		. 5 0 0 45 0 0
Past Present Future Compositions Ivory Tickets Publications	17	0 0 0 0 17 5	0 0 0 0 0	18 5,887 222 810 32 825	0 0 0 0 1 16	0 0 0 0 0	60 0 0	. 202 0 0 120 0 0
Zoological Record Dividends Miscellaneous	387 73 89	17	0 3 4	301		4	86 5 8 0 6 4	3
Increase	24,025	10	8	23,102 922		6 2	1,670 0 1 747 4 11	
	24,025	10	8	24,025	10	8	922 15 2	2
Total Pay	yments in	18	888.	• • • • • • •	• • •		£24,025 10 8 22,139 18 6 1,885 12 2	
Trecespes -	over 1 ay		1113	•••••		••	1,883 12 2	
Dr.			C	ash				
To Balance brought from To Income received in 18	Decembe	er 3	11, 1	887	• • • •	• • • •	•••••	£ s. d 1,158 1 0 24,025 10 8
								25,183 11 8

## Comparison of Payments in 1888 with 1887.

	j	Pα	ym	ents.				
Expenditure of						Increase.	Decrease.	
	188	1888.			37.		increase.	Decrease.
Part Pates Tores and In	£	ε.	d.	£	8.	d.	£ s. d.	£ s. d.
Rent, Rates, Taxes, and Insurance Salaries and Pensions Provisions	1,716 5,551 3,768	14 12 9	3 0 6	1,434 5,919 3,932	1	8	282 1 5	367 9 8 164 2 4
Cost and Carriage of Animals Menagerie Expenses		3 6	3	961 3,324	12 8	5	***********	466 9 2   300 1 6
Works, Materials, &c	147 2,056		11	200 2,518	13	8		53 11 9 462 2 4
Buildings Garden Expenses	232 704 299		3 9 6	446 791 265		0 5	33 19 7	214 0 9 86 15 8
Advertisements  Band Expenses  House and Office Expenses.	179 1,106	7	6	167 802	2	0	33 19 7 12 5 6 303 16 7	
Stationery and Printing (Miscellaneous)	293 969 527	6 6 2	8 5 6	385 1,987 717		6		92 0 3 1,018 7 1 190 4 10
Library Expenses Davis Lectures Interest on Mortgage and	547 73	13	2	573 79	7	7		25 14 5 5 13 8
Loan	387 58	8 	11 	339 259 28	4 4 11	8 1 8	48 4 3	259 4 1
Decrease	22,139 2,995		6 8	25,135		2 	710 5 10 Ded. Incr.	3,705 17 6 710 5 10
	25,135	10	2	25,135	10	2		2,995 11 8
Ordinary Payments Extraordinary ditto	21,439 700	16 2	4 2	23,876 1,259	9	1		2,436 12 9 558 18 11
	22,139	18	6	25,135	10	2		2,995 11 8
		_	Con	tra		_		Cr.
By Expenditure paid in the ye By Repayment on account of By Repayment of Mortgage-o By Balance at the Bankers, D	Loan of lebt	£3	000	• • • • • • • • • • • • • • • • • • •	• • • •			£ 8. d. 22,139 18 6 1,000 0 0 1,000 0 0 1,043 13 2
							5	25,183 11 8

## Assets and Liabilities of the Society on December 31, 1888.

## ASSETS.

Authoral to the Mosesser to to the The centre the of	£		d.
Animals in the Menagerie in the Regent's Park	25,798	0	0
Books in the Library at Hanover Square	14,096	0	0
Unsold Publications	3,182	0	0
Stock of the Zoological Record	1,000	0	0
Freehold Premises	25,000	0	0
£1,900 London and South-Western Railway New 4 per cent.			
Preference Stock (Davis Trust Fund)	2,375	0	0
Cash at the Bankers (Messrs. Drummond)	1,043	13	2
Arrears considered good:— $\mathcal{L}$ s. d.			
Rent for Refreshment Rooms 61 0 0			
Rent of Rooms at Hanover Square 63 15 0			
Garden Sales 64 11 0			
Subscriptions 75 0 0			
Publication Sales 101 0 0			
Zoological Record Sales 19 17 6			
	385	3	6
ó	£72,879	16	8

## LIABILITIES.

Rent and Taxes unpaid:—	£	s.	d.	£	s.	d.
For the Gardens, say	169	8	10			
" Office, say		15	0			
			_	213	3	10
Bills, &c., estimated at:—						
For the Gardens, say	581	2	0			
" Office, say	424	1	5			
				1,005	3	5
Messrs. Drummond, Mortgage Debt		••••	•••	7,000	0	0
Messrs. Drummond, Temporary Loan		• • • • •	•••	2,000	0	0
				610 010	7	

We have examined the Vouchers and the accounts of receipts and expenditure, and certify that they are correct.

WALTER CROUCH.
HERBERT DRUCE.
HENRY S. GORHAM.
RICHARD LYDEKKER.
EUGENE W. OATES.
HENRY H. SLATER.
JOHN T. TAYLOR.

Committee of Auditors.

ZOOLOGICAL SOCIETY OF LONDON, 3 Hanover Square, W. February 28, 1889. PRESENTED 24 APR. 1903



## THE ZOOLOGICAL RECORD.

**⊸∞;≥;∞**∽

THE object of the Zoological Record is to give, in an annual Volume, reports on, abstracts of, and an index to, the various Zoological publications which have appeared during the preceding year; to acquaint Zoologists with the progress of every branch of their science in all parts of the globe; and to form a repertory which will retain its value for the Student in future years.

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#### REPORT OF THE COUNCIL.

April 29, 1889.

THE Council have the pleasure of submitting to the Fellows their sixty-first Annual Report upon the pro-

gress of the Society.

This, in accordance with previous Reports, is divided into three heads, the first of which relates to the General Condition of the Society and its Finances, the second to the business transacted at the Office in Hanover Square, and the last to the state of the Gardens in the Regent's Park.

#### I. GENERAL CONDITION OF THE SOCIETY.

#### 1. STATE OF THE ROLL OF MEMBERS.

#### a. Fellows.

The number of Fellows and Fellows Elect on the 1st of January, 1890, was 3075, classified as follows:—

Compounders who have	re	pai	d d	E20				23
Ditto ditto		•	1	<b>E30</b>	•	•		930
Compositions remitted							•	20
Paying annual contribu	ıti	ons	of	£2		•		15
Ditto ditto				£3		•	•	1903
Dormant		•	•		•	•	•	164
Admission-fees unpaid		•	•	•	•	•	•	20
								3075
							. 6	`

The corresponding number of Fellows at the close of 1888 was 3076. The number of Fellows elected or readmitted in 1889 was 125, being 3 more than the corresponding number in 1888.

Comparative Statement of Elections, Deaths, Resignations, and Removals during the past Ten Years, with the number of Fellows at the end of each Year.

	å.	,		Died.			I	Resigne	d.	R	emove	d.	pe .	of 8,
Years.	Elected or Re-admitted.	Cor	mpoun	ders.	Subsc	ribers.	Subsc	ribers.	Admission Fees Unpaid.	Subsc	ribers.	Admission Fees Unpaid.	eased to Fellows	Number o Fellows, December 3
	Elected Re-admi	£20.	£30.	Fee re- mitted.	£2.	£3.	£2.	£3.	Admissio Fees Unpaid.	£2.	£3.	Admi Fe	Cear	Nu. Pecc
1880.	153	4	18	1	4	65		74			38	4	208	3306
1881.	138	24	31		5	75	•••	65	3	1	27		231	3213
1882.	164	3	23	1	4	61		48	•••		11	13	164	3213
1883.	159	4	25		3	55		38	•••		33	4	162	3210
1884.	183	1	28		5	53	•••	37		1	7	6	138	3255
1885.	111	2	17		5	69	2	55		1	20	2	173	3193
1886.	123	4	22		4	64	•••	59		•••	12	5	170	3146
1887.	138	4	20		7	68	1	67			10	3	180	3104
1888.	122	1	10	1	3	58		54		•••	15	8	150	3076
1889.	125	1	14	1	2	58	•••	36			12	2	126	3075

It will be observed by this table that the number of Fellows has now been slightly decreasing for several years, although it is satisfactory to find that the total for 1889 was

only less by one than that of the preceding year.

The Council, however, venture to suggest to the existing Fellows that it is very desirable that the Society should receive additional support; and, with a view of enabling them to propose new Members more easily, have given orders that a prospectus of the Society's objects and a form of proposal shall be circulated along with each copy of the present report.

### b. Honorary Member.

In recognition of his valuable present of the first specimen of the Indian Bison, or "Sladang," received alive in Europe, Sir Cecil Clementi Smith, K.C.M.G., the Governor of the Straits Settlements, was elected an Honorary Member in 1889.

#### c. Corresponding Members.

The following Corresponding Members have been elected to fill vacancies during the past year:—

Dr. C. Wünderlich, Director of the Zoological Garden, Cologne.

Surgeon-Major A. S. G. Jayakar, of Muscat, Arabia.

Surgeon-Major David Douglas Cunningham, Professor of Anatomy and Physiology in the Medical College, Calcutta.

Heer F. E. Blaauw, of Amsterdam.

John J. Quelch, Esq., of George Town, British Guiana. Charles M. Woodford, Esq., of Sydney, New South Wales.

#### d. Medallist.

An addition to our list of Medallists was made in 1889 in the person of Dr. Edward Dalzel Dickson, an old and valued Corresponding Member of this Society at Constantinople, in recognition of his zoological collections presented to the Society.

#### 2. STATE OF THE FINANCES.

#### a. Income.

The Income of the Society during the past year shows many encouraging features of improvement when compared with that of 1888, and may be said to have attained a very satisfactory increase. The Garden Receipts, which consist of the sums received on week-days from visitors to the Society's Gardens, reached a total of £14,891 16s. 6d., being in excess of the corresponding amount received in 1888 by £1607 5s. 6d. The amount realized by the fees received from the riders on the Elephants and Camels was likewise more by £38 17s. 1d., and the rent received from the Lessees of the Refreshment Departments was larger by the sum of £119 17s. 7d. These increases are due to the greater number of visitors to the Gardens, attributable, no doubt, in great measure to the fine summer weather of 1889.

On the other hand the sum received for Life Compositions for Fellowships was less by £150. This slight

falling-off was, however, more than compensated for by the large augmentation of the amount received from the sale of the Society's Publications, which reached the large total of £1291 6s. 7d., being £525 1s. 6d. more than in 1888.

The total Income of the Society for 1889 was £26,427 12s., and exceeded that of 1888 by the sum of £2402 1s. 4d., as shown by the subjoined Table:—

		In	con	ne of			T			Door		_
	18	89.		18	88.		Incr	ease		Decr	cas	е.
	£	8.				d.	£	8.	d.	£	8.	d.
Admissions to Gardens	14,891	16	b	13,284	11	0	1,607	5	6		••••	••••
Elephant and Camel riding	<b>#</b> 0.4			005	•	_						
receipts	$\begin{array}{r r} 724 \\ 322 \end{array}$		6	685 523		5			1		10	
Garden Sales		9				1	119	17	7	200	10	0
Rent for Freehold Premises				283		ō	110	11	•	25	0	0
Admission Fees:—	200		Ŭ	200	Ŭ	ŭ		•••••	••••		·	Ŭ
Past	80	0	0	70	0	0	10	0	0			
Present	470	0	0	470	0	0						
Annual Subscriptions:-												
Past	33		0		0	0	9	0	0		••••	
Present		0		5,685 102		0	•••••	•••••	••••	5	U	U
Future	$\begin{vmatrix} 102 \\ 720 \end{vmatrix}$	0	0	870		0		•••••	••••	150		
Compositions			ñ	17		0	5			100		v
Ivory Tickets			7	766	5	ĭ						••••
Zoological Record			6		_	ō				27		6
Dividends		2	0	73	17	3	0	4	9			
Miscellaneous		4	5	89	16	4	494	8	1			
						<u> </u>			-			
_	26,427	12	0	24,025						408		2
Increase		• • • • •	••••	2,402	1	4	4.08	9	2	Ded.	Dec	cr.
	96 497	19	0	26,427	19	0	2 402	1	1			
	20,421	ن. د		20,421			2,402	,	**		•••••	••••

The subjoined table shows the fluctuations of the Society's Income during the twenty years last past, tractions being omitted:—

Annual Income of the Society during the past 20 years.

Year.	Total Income.	Year.	Total Income.
	23,257	I .	27,388
	24,620 $26,728$		25,810 $$ 34,270
	28,099 $28,417$		28,966 28,939
1875	28,738	1885	25,809
1877	34,955 $30,988$	1887	$\dots 25,787$ $\dots 23,102$
	27,944 26,463		$\dots 24,025 \\ \dots 26,427$

### b. Expenditure.

The ordinary expenditure of the Society in 1889, under which is reckoned every item necessary to keep the whole establishment in a state of efficiency, was £22,683 4s. 3d. This was in excess of the corresponding amount paid in 1888 by the sum of £1243 7s. 11d.; the excess being due to the larger amounts spent on the Society's scientific publications, and on repairs and renewals in the Gardens, which seemed to be justified by the favourable state of the receipts. Besides the ordinary expenditure, a sum amounting altogether to £545 7s. was devoted to certain special works and objects, which will be explained in subsequent portions of the Report. These were as follows:—

Extraordinary Expenditure paid in 1889.

<ol> <li>Additions to the North Lodge</li> <li>New roof to the Monkey-house</li> <li>Grant in aid of Mr. Waterhouse's 'Index Generum Avium'</li> </ol>	248	18 8	6	
	65.45			

On adding the Ordinary and Extraordinary Expenditure together it will be seen that the total Expenditure of the year 1889 was £23,228 11s. 3d., the particulars of which, together with a comparison of the corresponding amounts paid in 1888, are given in the subjoined Table:—

	1	_				_				
<u>.</u>		Expenditure of					Increase.	Decrease.		
	18	1889.			388.			1 2000		
Post D / m D /	£		. d.		8.	d.	£ 8, d	£	8.	d.
Rent, Rates, Taxes, and Insurance	1,641		10	1,716	14	3		75		5
Salaries and Pensions	5,500		9	5,551	12	0		51		3
Provisions	3,603		6	3,768	9	6		164		0
Cost and Carriage of Animals	645		7	495	3	3	150 15 4		•	
Menagerie Expenses	3,200	8	11	3,024	- 6	9	176 2 2			
Leepers Uniforms	167	7	10	147	0	11	20 6 11			
Works, Materials, &c.	2,903	19	9	2,056	11	2	847 8 7		•••••	
Dulidings				232	6	3	[	232	6	3
Garden Expenses	752	8	10	704	16	y	47 12 1			1
Advertisements	180	6	6	299	10	6		119	4 (	0
Band Expenses	177	4	6	179	7	6		2	3 (	
House and Office Expenses	1,132	9	0	1,106	14	7	25 14 5		0 (	1
Stationery and Printing (Miscella-				_,			-0 11 0	· · · · · · · · · · · · · · · · · · ·	•••••	
	367	8	7	293	6	8	74 1 11			- 1
Cost of Publications	1.457	18	5	969	6	5	488 12 0	*********	• • • • • • •	٦.
Cost of Zoological Record	536	4	0	527	2	6	9 1 6		•••••	[
Library Expenses	529		3	547	_	2	<i>v</i> 1 0	18	1 11	Ш
Expenditure of Davis Bennest.	74	-3	ŏ	73		3	0 4 9	10	1 11	
Interest on Mortgage and Logu	305		6	387	8	บั	0 4 5	82	3 5	
Grant in aid of Science	25	ŏ	ŏ	901	0	••	25 0 0	02	9 6	1
Miscellaneous	27		6	58	10	$\frac{1}{2}$	20 0 0	****	10 0	. 1
		10	0	- 00	10	-		30	19 8	, l
	23,228	11	3	22,139	10	6	1,864 19 8	650	C 11	
Increase	~0,220	11	9	1,088		9		776		
		• • • • •	••••	1,033	12	9	776 6 11	Ded.	Decr	1
	23,228	11	3	23,228	11	3	1.088 12 9			
				20,220	11	9	1,000 12 9	• • • • • • • • • • • • • • • • • • • •	•••••	4
Ordinary Payments	22 683	4	3	21,439	16	4	1,243 7 11			
Extraordinary ditto	5.15	7	0		2	2	1,240 ( 11	15/1		
	049	'	U	100	2	2		154 1	5 2	
	23,228	11	3	22,139	10	6	1,088 12 9			
<u> </u>	20,220	11	01	22,109	10	V	1,000 12 9	• • • • • • • • • • • • • • • • • • • •	•••••	-

The balance brought forward from 1888 was £1043 13s. 2d. This, added to the Income received in 1889 (£26,427 12s.), gave a total sum of £27,471 5s. 2d. available for expenditure in the year 1889. Thus the Council were enabled, after payment of the ordinary and extraordinary expenditures of the year, not only to devote the usual sum of £1000 to the reduction of the mortgage-debt on the Society's freehold house (which now amounts to £6000 only), but also to completely extinguish the temporary loan had from the Society's bankers in 1878. After these several payments were made, a balance of £1242 13s. 11d. was left in the Society's favour and carried forward for the benefit of the present year, being a larger amount by £199 0s. 9d. than the balance brought forward from 1888.

Thus the total receipts and payments of the past year may be summarized as follows:—

Receipts, 1889.				Payments, 1889.			
Balance brought from December 31, 1888	£ 1,043 26,427	13	2	Expenditure paid in the year	2,000 1,000	0	0 0
	27,471	5	2		27,471	5	2

#### c. Assets and Liabilities.

The Assets and Liabilities of the Society on December 31, 1889, were estimated as follows:—

ASSETS.			
	£	s.	d.
Animals in the Menagerie in the Regent's Park	25,886		
Books in the Library at Hanover Square	14,444	0	0
Unsold Publications	4,424		
Stock of the Zoological Record	1,516		
Freehold Premises	25,000	0	0
Value of £1,900 London and South-Western Railway New			
4 per cent. Preference Stock (Davis Trust Fund)	2,365		0
Cash at the Bankers (Messrs. Drummond)	1,242	13 ]	(1
Arrears considered good:— £ s. d.			
Rent for Refreshment Rooms 60 7 6			
Rent for Rooms at Hanover Square 63 15 0			
Garden Sales			
Subscriptions			
Publication Sales 110 17 5			
Zoological Record Sales			
	443	4	9
		10	_

£75,320 18 8

#### LIABILITIES.

Rent and Taxes unpaid:— For the Gardens, say	£ s. d.	£	8.	d.
,, Office, say		213	3	10
Bills unpaid, estimated at:— For the Gardens, say	659 14 11			
,, Office, say	292 4 10	951	19	9
Messrs. Drummond, Mortgage Debt	••••••	6,000		
		£7,165	3	7

#### II. OFFICE, 3 HANOVER SQUARE.

#### 1. Scientific Meetings.

To the fourteen meetings for the despatch of scientific business held in the Society's Rooms in Hanover Square, in 1889, 123 communications were made. Of these, 99 were from Fellows and 8 from Corresponding Members of the Society. The remaining 16 papers were from individuals not belonging to the Society, and were communicated to it by the Secretary or by other Members. The corresponding number of communications in the year 1888 was 101.

These communications were submitted to the Committee of Publication, by whom 78 were ordered to be printed entire in the 'Proceedings' of the Society, such illustrations being in each case allowed as the Committee considered necessary for the purpose. Of the remaining communications, abstracts or extracts were considered to be sufficient for publication.

#### 2. Scientific Publications.

## a. Proceedings.

The volume of 'Proceedings' for 1889 is on the table. It contains 668 pages illustrated by 62 plates. In the following table are given the number of pages and plates of the volumes of 'Proceedings' for the past ten years:—

					plates.	pages.
1880		•			64	743
1881	•	•		•	72	1056
1882	•	•	•	•	61	827
1883	•	•	•	•	61	704
1884	•	•	•	•	<b>5</b> 8	645
1885		•	•	•	62	991
1886	•	•	•	•	60	716
1887	•	•	•	•	55	730
1888		•	•		32	717
1889	•	•	•	•	62	668

#### b. Transactions.

Two parts of the quarto 'Transactions' were published in 1889, namely:—

### Vol. XII. Part VIII. (February, 1889).

On a specimen of Ziphius recently obtained near Dunedin. By John H. Scott, M.D., F.R.S.E., and T. Jeffery Parker, B.Sc., C.M.Z.S., Professors in the University of Otago. (With three Plates.)

### Vol. XII. Part IX. (August, 1889).

A Revision of the Subfamily Libelluline, with descriptions of new genera and species. By W. F. Kirby, F.E.S., Assistant in the Zoological Department, British Museum.

(With seven Plates.)

The publication of the tenth part of Vol. XII. of the 'Transactions,' which it was intended also to have issued in 1889, was delayed by the absence in Australia of the author of the memoir. It has since been published, and contains also the titlepage and index for the volume, thus completing the twelfth volume of the Society's 'Transactions.'

#### c. Zoological Record.

The volume of the 'Zoological Record' for 1889, containing a summary of the work done by British and Foreign Zoologists in 1888, was issued to the Subscribers early in the present year. The Council wish to express

their thanks to the Editor, Mr. Beddard, and to the various contributors to the volume for their assiduity, and to point out to the Society that the 'Zoological Record' continues to appear far in advance of any other publication of a similar character. At the same time it is very desirable that the volume should, if possible, be published at a still earlier date; and as regards its future issue steps have been taken which, it is hoped, will effect this object.

#### 3. LIBRARY.

The Library has been kept in good working order during the past year, and has been much used by working

zoologists.

The Librarian, Mr. Waterhouse, has compiled during his leisure moments, and published, under the title of 'Index Generum Avium,' a very useful list of the genera of birds established since the days of Linnæus. acknowledgment of the value of this laborious piece of scientific work, the Council thought it right to vote the sum of £25 in aid of its publication, which amount has been charged to extraordinary expenditure.

Many important additions were made to the Society's Library in 1889, among which attention may be called to

the following donations:-

Atkinson. Notes on Indian Rhynchota, Heteroptera, No. 5.

1888. Presented by the Author.

Boulenger. Catalogue of the Chelonians, Rhynchocephalians, and Crocodiles in the British Museum. New edition. 1889. Presented by the Trustees of the British Museum.

Browne. The Vertebrate Animals of Leicestershire and Rutland.

1889. Presented by the Author.

Burmeister. Los Caballos fósiles de la Pampa Argentina. Supplemento. 1889. Presented by the Author.

Butler. Illustrations of Typical Specimens of Lepidoptera Heterocera in the Collection of the British Museum. Part vii. 1889. Presented by the Trustees of the British Museum.

Cotes and Swinhoe. A Catalogue of the Moths of India. Parts iv. -vii. 1888-89. Presented by the Trustees of the Indian Museum. Day. The Fauna of British India, including Cevlon and Burma.—

Fishes. 2 vols. 1889. Presented by the Author.

Foord. Catalogue of the Fossil Cephalopoda in the British Museum. Part i. Nautiloidea. 1888. Presented by the Trustees of the British Museum.

Giglioli. Primo Resoconto dei risultati della Inchiesta Ornitologica in Italia. Parte prima. Avifauna Italica. 1889. Presented by the Author.

Goode. The Fisheries and Fishery Industries of the United States. Sects, iii, & iv. 1887. Presented by the United States Commission of Fish and Fisheries.

Graells. Las Ballenas en Neustres Costas Oceanicas de España.

1889. Presented by the Author.

Natürliche Schöpfungs-Geschichte. Achte Auflage, 1889. Presented by the Author.

Journal of Comparative Medicine and Surgery. Vol. x. Nos. 1-3.

1889. Presented by the Editors.

Lendenfeld. Descriptive Catalogue of the Sponges in the Australian Museum. 1888. Presented by the Trustees of the Australian Museum.

Lilljeborg. Sveriges och Norges Fiskar. Häftet 6. 1889. Pre-

sented by the Author.

Linnæus. Systema Naturæ. Editio multo auction et emendation. 1756. Presented by Dr. D. Sharp.

Animalium specierum in classis, ordines, genera, species methodica dispositio. Tenth edition. 1759. Presented by Dr. D. Sharp.

Lord Howe Island: its Zoology, Geology, and Physical Characters. 1889. Presented by the Trustees of the Australian Museum.

Lydekker. Catalogue of the Fossil Reptilia and Amphibia in the British Museum. Part ii. 1888. Presented by the Trustees of the British Museum.

McCov. Prodromus of the Zoology of Victoria. Decades xvi.xviii. 1888-89. Presented by the Government of Victoria.

Hindu-Koh: wanderings and wild sports on and Macintyre,

beyond the Himalayas. 1889. Presented by the Author.
Monaco, Prince Albert the 1st of. Resultats des Campagnes scientifiques accomplies sur son Yacht. Publiés sous sa direction avec le concours du Baron Jules de Guerne. Fasc. i. Contribution à la Faune Malacologique des Iles Açores, par P. Dautzenberg, Presented by His Highness Prince Albert the 1st of Монасо.

Peek. A Collection of British Birds at Rousdon. 1888. Presented

by the Author.

Przewalski. Wissenschaftliche Resultate der von N. M. Przewalski nach Central-Asien unternommen Reisen. Band i. (Säugethiere). Lief. 1-3. Presented by the Imperial Academy of Sciences of St. Petersburg.

Steel. Outlines of Equine Anatomy. 1885. A Treatise on the Diseases of the Ox. Second edition. 1887. And a Treatise on the Diseases of the Dog. 1888. Presented by the Author.

Thomas. Catalogue of the Marsupialia and Monotremata in the British Museum, 1888, Presented by the Trustees of the British Museum.

Darwinism: an exposition of the theory of Natural Selection, with some of its applications. 1889. Presented by the Author.

Waterhouse. Index Generum Avium, 8vo. 1889. Presented by the Author.

Woodward. Catalogue of the Fossil Fishes in the British Museum, Part i. 1889. Presented by the Trustees of the British Museum.

The following is a list of the principal zoological works in course of publication of which parts were purchased in 1889:-

André. Species des Hyménoptères. Fasc. 33, 34.

Annals and Magazine of Natural History. Ser. 6. Vols. iii., iv. Auk. Vol. vi.

Aurivillius. Nordens Fjärilar. Haftet 1-6.

Bartlett. Monograph of the Weaver-Birds and Finches. Parts 3-5. Bellardi. Catalogo generale dei Molluschi del Piemonte e della Liguria. Parts iv., v.

Berlese. Acari, Myriapodi e Scorpioni Italiani. Fasc. xlix.-lvi.

Blasius and Hayek. Ornis. Jahr. v.

Bronn's Thierreich. Band I. (Protozoa), Lief. 53-64: Band II. Abth. ii. (Cælenterata), Lief. 1; Abth. iii. (Echinodermen), Lief. 1-4; Band IV. (Vermes), Lief. 7-11; Band V. Abth. ii. (Arthropoda), Lief. 20-24; Band VI. Abth. iii. (Reptilien), Lief. 65, 66; Abth. iv. (Vögel), Lief. 23-27; Abth. v. (Säugethiere), Lief. 32-34.

Bucquoy, Dautzenberg, and Dollfus. Mollusques marins du Rous-

sillon. Tome ii. Fasc. 3.
Buller. Birds of New Zealand. 2nd ed. Parts 12, 13. pleted.)

Carus. Prodromus Faunæ Mediterraneæ. Vol. ii. Part 1. 'Challenger,' Reports of the Voyage of H.M.S. Zoology, Vols. xxx.xxxii. Physics and Chemistry, Vol. ii.

Copepodenstudien. Heft 1.

Cleland, Mackay, and Young. Memoirs and Memoranda in Anatomy. Vol. i.

Clessin. Malakozoologische Blätter. N. F. Band xi. Heft i. Die Mollusken-Fauna Oesterreich-Ungarns und der Schweiz. Lief. 4.

Edwards. Butterflies of North America. Ser. 3. Parts 6-8.

Encyclopædia Americana. Vol. iv. (Completed.)

Encyclopædia Britannica. Ninth edition. Index. (Completed.)

Entomologist. Vol. xxii.

Entomologist's Monthly Magazine. Vol. xxv. Nos. 297-307. Ersch and Gruber. Encyklopädie. Sect. 2. Theil 43. Fol. Recueil Zoologique Suisse. Tome v. No. 1.

Fowler. Coleoptera of the British Isles. Parts 25-35. Giglioli. Iconografia dell' Avifauna Italica. Fasc. xliv.

Godman and Salvin. Biologia Centrali-Americana. Zoology, Parts lxxiii.-lxxxi.; Archæology, Part i.

Gould's Birds of New Guinea. Part xxv. (Completed.) Grandidier. Histoire de Madagascar. Vol. xvi. (Poissons), Part 2, Atlas, Part 2, Fasc. xix. Vol. xxviii. (Plantes), Tome ii., Atlas i., Part 2, Fasc. xviii.

Gruber. Beobachtungen aus der menschlichen und vergleichenden Anatomie. Heft ix.

Hamann. Beiträge zur Histologie der Echinodermen. Heft 4.

Hatschek. Lehrbuch der Zoologie. Lief. ii.

Hayek. Handbuch der Zoologie. Band iv. Abth. 1.

Helmerson and Schrenck. Beiträge zur Kenntniss des Russischen Reiches. Folge 3. Band vi.

Hudson and Gosse. The Rotifera. Supplement. (Completed.)

Ibis. Ser. vi. vol. i.

Journal für Ornithologie. Band xxxvi. Heft. 2-4; xxxvii. Heft. 1, 2.

Kobelt. Rossmässler's Iconographie der europäischen Land- und Süsswasser-Mollusken. N. F. Band iv. Lief. 3, 4.

Lang. Lehrbuch der vergleichenden Anatomie. Abth. i., ii. Leuckart and Chun. Bibliotheca Zoologica. Heft. iii.-v.

Lilford. British Birds. Parts ix.-xi.

Madarasz. Zeitschrift für die gesammte Ornithologie. Jahr. iv. Heft. 3, 4.

Marshall. Zoologische Vorträge. Heft. 1-4. Martens. Conchologische Mittheilungen. Band iii. Heft. 1, 2. Martini and Chemnitz. Conchylien-Cabinet. Lief. 367-372.

Meinert. Entomologiske Meddelelser. Bind I. Hefte 6; II. Hefte 1, 2.

Menzbier. Ornithologie du Turkestan. Livr. ii., and Atlas, Livr. ii. Meyer. Abbildungen von Vogel-Skeletten. Lief. xii., xiii.

Mission Scientifique du Cap Horn. Tome vi. Zoologie (Mollusques et Protozoaires).

Olphe-Galliard. Contributions à la Faune Ornithologique de l'Europe Occidentale. Fasc. xii., xvii.-xix., xxiv., and xxv.

Paetel. Catalog der Conchylien-Sammlung. Lief. 9, 10. Pleske. Ornithographia Rossica. Band ii. Lief. 1.

Romanoff. Mémoires sur les Lépidoptères. Tome v.

Salvadori. Aggiunte alla Ornitologia della Papuasia e delle Mo-Parte i. lucche.

Sarasin. Ergebnisse naturwissenschaftlicher Forschungen auf Ceylon. Band II. Heft 3.

Saunders. Manual of British Birds. Parts xi.-xx. (Completed.)

Schiödte. Zoologia Danica. Heft 6.

Scudder. The Butterflies of the Eastern United States and Canada. Parts ii.-xii. (Completed.)

Seidlitz. Fauna Baltica. Die Käfer. Zweite Auflage. Lief. 4. —. Fauna Transsylvanica. Die Käfer. Lief. 3, 4.

Semper (C.). Reisen im Archipel der Philippinen. Theil II. Band ii. Heft xvi. Hälfte 2; Band v. Lief. 4.

Semper (G.). Die Schmetterlinge der Philippinischen Inseln. Band i. Lief. 4.

Sharpe and Wyatt. Monograph of the Hirundinidæ. Parts ix., x. Smith and Kirby. Rhopalocera Exotica. Parts vii.-x.

Spengel. Zoologische Jahrbücher. Band iii. (Anat.), Heft. 4; iv. Heft. 1; iv. (Systematik), Heft. 1-4.
audinger. Exotische Schmetterlinge. Theil II. Lief. 5.

Staudinger.

Stray Feathers. Vol. xi. Nos. 1-4.

Taschenberg. Bibliotheca Zoologica ii. Lief. vii. Thomson. Opuscula Entomologica. Fasc. xiii.

Trimen and Bowker. South-African Butterflies. Vol. iii. (Completed.) Manual of Conchology. Parts xl., xli., xliii.; Ser. 2. Tryon. Parts xvi., xvii., xix.

Tunisie. Exploration Scientifique de la Tunisie. Echinides fos-

siles et Mollusques fossiles.

Vogt and Yung. Traité d'Anatomie Comparée. Livr. 13, 14. Lehrbuch der Anatomie. Baud ii. Lief. 1, 2.

Waterhouse. Aid to the Identification of Insects. Part xxx. Zittel. Handbuch der Paläontologie. Abth. ii. Lief. 7. Zoologist. Ser. 3, vol. xiii.

Some of the most important additions to the Society's Library, purchased since the last Anniversary, are the following:

Austant. Les Parnassiens de la Faune Paléarctique. 8vo. 1889. Boisduval. Icones Historique des Lepidoptères nouveaux ou peu connus. 2 vols. 8vo. 1832-34.

Bolton. Harmonia Ruralis. New edition. 2 vols. in 1. 4to. 1824.

Bryden. Kloof and Karroo: Sport, Legend, and Natural History in Cape Colony. 8vo. 1889.

Chapman. Bird-Life of the Borders. 8vo. 1889.

Claparède. Beobachtungen über Anatomie und Entwicklungsgeschichte wirbellosen Thiere. Folio, 1863.

Claus. Copepodenstudien. Heft i. Sm. folio, 1889.

Coquebert. Illustratis Iconographica Insectorum. 3 parts. 4to. ann. vii.-xii. (1799-1804).

Diesing. Systema Helminthum. 2 vols. 8vo. 1850-51. Harvie-Brown and Buckley. A Vertebrate Fauna of the Outer Hebrides. 8vo. 1888.

Hayes (C.). The Portraits of British Birds. 4to. 1808. Hayes (W.). Rare and Curious Birds. Folio, 1782.

Heilprin. The Bermuda Islands. 8vo. 1889. Hickson. A Naturalist in North Celebes. 8vo. 1889.

Hill. A Decade of Curious Insects. 4to. 1773.

Horsfield. Descriptive Catalogue of the Lepidopterous Insects in the Museum of the Honourable East India Company. 2 parts. 4to. 1828-29.

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- The Meriden Scientific Association, Meriden, Connecticut. Transactions, vol. iii.
- The "Antonio Alzate" Scientific Society, Mexico. Memorias, tomo ii., cuad. 5-11.
- The Geological and Natural History Survey of Minnesota, Minneapolis.

Annual Report, 16.

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The American Museum of Natural History, New York.

Bulletin, vol. ii., no. 2. Annual Report, 1888-89.

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- The Academy of Natural Sciences, Philadelphia. Proceedings, 1888, part 3; 1889, parts 1, 2.
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- The American Association for the Advancement of Science, Salem.

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- The Canadian Institute, Toronto.

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- The Trenton Natural-History Society, Trenton.
  Journal, vol. ii., no. 1.
- The Smithsonian Institution, Washington.
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- The Royal Society of Tasmania, Hobart.
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  Annual Report, 1888.
- The Linnean Society of New South Wales, Sydney.

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SPAIN.

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- The Society of Natural Science, Neuchâtel.
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  Vierteljahrschrift, Jahr. xxxi., Heft. 3, 4; xxxii., xxxiii., and xxxiv., Heft 1.

Donations, Memoirs, and Papers have also been received from:—the Agricultural Society of Lyons; the Editors of the 'American Journal of Science'; the Editors of the

'American Naturalist'; the Editors of the 'Archiv für Naturgeschichte'; the Editors of the 'Athenæum'; E. T. Atkinson, Esq.; the Trustees of the Australian Museum; Dr. R. Blasius; W. T. Blanford, Esq.; Dr. O. Boettger; the Trustees of the British Museum; Dr. H. Burmeister; F. M. Campbell, Esq.; the Geological and Natural History Society of Canada; Prof. G. Canestrini; the Carlos Ribeiro Society, Oporto; W. A. Conklin, Esq.; Prof. E. D. Cope; the East India Association; Dr. A. Ernst; J. G. Goodchild, Esq.; the Geological Survey of India; Dr. Mariam de la Par Graells; the Trustees of the Indian Museum; the Royal College of Surgeons of Ireland; the Zoological Society of Ireland; Martin Jacoby, Esq.; H. B. James, Esq.; the Editors of the 'Journal de Conchyliologie'; Prof. O. C. Marsh; Prof. K. Möbius; Dr. A. Mojsisovics; Prince Albert of Monaco; the Editors of 'The Naturalist'; the Editors of 'Nature'; the New York State Library; the Colonial Museum and Geological Survey of New Zealand; Dr. F. C. Noll; the Nottingham Naturalists' Society; Prof. F. P. Pascoe; Dr. Paul Pelseneer; C. G. J. Petersen, Esq.; the Zoological Society of Philadelphia; Bernard Quaritch, Esq.; Prof. L. Rütimeyer; Dr. R. Scharff; P. L. Sclater, Esq.; Prof. H. G. Seeley; R. Bowdler Sharpe, Esq.; Dr. R. W. Shufeldt; T. Southwell, Esq.; Prof. J. Steenstrup; Dr. Michell Stossich; the United States Fish Commission; the United States Geological Survey; Edwin A. Walford, Esq.; J. F. Walker, Esq.; F. H. Waterhouse, Esq.; and A. Smith Woodward, Esq.

### III. GARDENS, REGENT'S PARK.

#### 1. WORKS AND REPAIRS.

The only new works carried on, or commenced in the Society's Gardens in 1889, were (1) an addition to the North Lodge, and (2) the new roofing of the Monkeyhouse. The former of these cost the sum of £271 18s. 6d.; on the latter work the amount of £248 8s. 6d. was expended in 1889. Of the former item, it is only necessary to say that the accommodation previously provided in the

North Lodge was barely sufficient, and that on a favourable opportunity presenting itself for increasing it, the Council thought it right to take advantage of the occasion. As regards the re-roofing of the Monkey-house, it should be stated that the glass roof which was put up when the house was first erected 25 years ago, had long been in a most unsatisfactory state, and had occasioned a large annual expenditure on repairs. After a thorough survey, it was determined to be the best plan to put an entirely new glass roof on to the building, using much heavier glass and a modern system of glazing. This work was carried out for the Society by Messrs. Helliwell, and seems likely to answer its purpose in every way. Besides the roof, the larger cages in the Monkey-house were thoroughly repaired in 1889. But the old window-frames must still be renewed and various other repairs undertaken before the Monkey-house can be said to be in a thoroughly satisfactory state. These works, necessarily intermitted during the winter, will, it is hoped, be accomplished during the present summer.

The Society's ordinary staff of workmen was kept in active employ during the year 1889. The walk round the Seal-pond was raised so as to enable the visitors standing behind the front row better to see the feeding of the Sealions. The Deer-yards near the South Entrance were repaired, boarded, cleaned, and thoroughly painted. The gates, lodges, and fences at the Main and South Entrances of the Gardens were likewise repaired and painted. Opportunity was taken of a temporary vacancy in the Head-Keeper's Lodge to clean, paint, and put in thorough repair that building. Many other smaller repairs and renewals were effected in 1889, and in the autumn a large quantity of ballast was burnt and much valuable material was thus acquired for the repairs of the roads

and paths.

#### 2. STAFF.

An important change in the Staff of the Society's Gardens took place in 1889, owing to the retirement of Mr. Benjamin Misselbrook, who had served the Society as Head Keeper for twenty-one years, and had been sixty years and a half altogether in their employment. The Council thought it right to allow this old and valued

Officer, who had attained an advanced age in the Society's service, to retire on full pay, and are certain that they will receive the full approbation of the Fellows in adopting this course. As his successor in this important Office they have selected Mr. Arthur Thomson, son of Mr. James Thomson, formerly Head Keeper, who has filled various positions in the Society's Gardens during the past twenty years and has lately acted as the Superintendent's Clerk and Chief-Assistant.

The permanent Staff now consists of a Superintendent and Assistant Superintendent, a Head Keeper and twenty-three Keepers, three Money-takers, together with a Store-keeper, Cook, Prosector's Assistant, and Head Gardener—altogether 33 persons employed at monthly salaries. Besides these there are 20 Helpers in the Menagerie, 14 Garden-labourers, 8 Artisans, 6 Painters, 9 Labourers, 1 Butcher, 2 Firemen, 2 Night-Watchmen, and 1 Time-keeper employed at weekly wages; so that the number of the whole staff may be reckoned at about ninety-six persons.

#### 3. VISITORS.

The Council are pleased to be able to point out a considerable increase in the number of visitors to the Society's Gardens in 1889 as compared with 1888, as will be seen by the subjoined Table, the total number having risen from 608,402 to 644,679. The number of Schoolchildren admitted free, it may be remarked, was greater in 1889 than in any previous year.

#### Visitors to the Gardens.

	1889.	1888.	Comparison.
Fellows and Friends	167,984 154,164		Decr. 8,625 Incr. 30,418
Paying On Mondays and other days at 6d. each	224,819	232,012	Decr. 7,193
Children under 12 years at $6d$ . each	61,248	49,021	Incr. 12,227
School Children (admitted free)	36,464	27,014	Incr. 9,450
	644,679	608,402	Incr. 36,277

The subjoined Table contains a statement of the Number of Visitors to the Society's Gardens during each year, from the year 1828 to the year 1889.

Number of Visitors to the Gardens, 1828-89.

Year. Number		Number.
$1828 \dots 98,6$	1	$\dots 364,356$
$1829 \dots 189,9$		394,906
$1830 \dots 223,48$		381,837
$1831 \dots 262,18$		$\dots 682,205$
$1832 \dots 206,68$		468,700
1833 211,3-		507,169
$1834 \dots 208,58$		$\dots 525,176$
$1835 \dots 210,00$		527,349
1836 263,3		$\dots 556,214$
$  1837 \dots 173,7$		573,186
$1838 \dots 179,19$		572,848
1839 158,4;		$\dots 573,004$
1840 141,00		595,917
1841 132,61		648,088
1842 107,48		713,046
1843 98,28		706,907
1844 101,55		699,918
1845 99,61	15 # #1876	$\dots 915,764$
1846 100,04		781,377
1847 93,54		706,713
$1848 \dots 143,68$	30   1879	643,000
1849 168,89		675,979
1850 360,40		648,694
*1851 667,2-	1882	849,776
1852 305,20	1883	743,485
1853 409,07		745,460
$1854 \dots 407,67$	76   1885	659,896
1855 315,00		639,674
$1856 \dots 344,18$	1887	562,898
1857 339,21	1888	608,402
1858 351,58	80   1889	644,679
* Year of the Great Exhibit	† Year of the	International Exhibition. exhibition of the Prince an Menagerie.

#### 4. Prosector's Department.

The Prosector (Mr. F. E. Beddard) reports as follows:— The number of deaths during the year 1889 was 839, being less than that of the deaths during 1888 by 109.

The more noteworthy deaths were perhaps the following: On Jan. 17 a Westerman's Cassowary; on Nov. 16 a Condor which had lived for more than thirty years in the Gardens, having been purchased in April 1856; on Nov. 30 the surviving specimen of Hooker's Sea-lion; and on Nov. 22 a large Anaconda, which measured 15 feet

9 inches in length.

The following papers, prepared by the Prosector and published in the 'Proceedings' during the year, have been based upon materials furnished from the Gardens:—"On the Anatomy of Rhinoceros sumatrensis (in conjunction with Mr. Treves)"; "On certain Points in the Anatomy of the Accipitres"; "Some Notes upon the Anatomy of the American Tapir (Tapirus terrestris)"; "Notes upon the Anatomy of Picarian Birds.—Part I."; "On the Anatomy of Burmeister's Cariama."

Materials have been supplied to Prof. David Ferrier, F.R.S., and to Mr. W. K. Parker, F.R.S., for purposes of research; for Museum purposes to Prof. Flower, C.B., F.R.S., to Prof. d'Arcy Thompson, and to Prof. Herdman.

Some of the pathological material has been made use of by Mr. W. K. Sibley.

#### 5. Zoological Lectures.

The arrangements for the Davis Lectures on zoological

subjects for the present year are as follows:—

A course of six Lectures will be delivered in the Lectureroom in the Society's Gardens, Regent's Park, on Thursdays, at 5.30 P.M., commencing May 8th, by Mr. F. E. Beddard, M.A., Prosector to the Society and Davis Lec-Subject: The Colours of Animals. turer.

The Fee for the Course (including admission to the Gardens on the days of Lecture) is 5s. The Course is free to Fellows of the Society. Tickets for it may be obtained from Mr. F. E. Beddard, Zoological Society's

Gardens, Regent's Park, N.W.

#### 6. MENAGERIE.

#### a. Additions to the Menagerie in 1889.

The number of animals belonging to the first three classes of Vertebrates living in the Society's Menagerie at the close of 1889 was 2232. The corresponding number on the 31st of December, 1888, was 2290, as will be seen by the subjoined Table:—

	Decem	ber 31.	Commonican
	1889.	1888.	Comparison.
Mammals. Birds Reptiles	1411	666 1280 344	Decr. 147 Incr. 131 Decr. 42
	2232	2290	Decr. 58

The total number of registered additions to the Menagerie in 1889 was 1140, of which 581 were acquired by presentation, 242 by purchase, 118 were bred in the Gardens, 164 were received on deposit, and 35 obtained in exchange.

The mode in which these figures compare with those of previous years is shown in the subjoined table:—

	Presented.	Purchased.	Born.	Deposited.	Received in Exchange.	Total.
1875.	559	557	156	143	43	1458
1876.	533	316	171	172	27	1219
1877.	506	324	181	181	68	1260
1878.	511	272	150	178	71	1182
1879.	550	421	115	124	56	1266
1880.	624	515	148	161	40	1488
1881.	565	310	167	136	35	1213
1882.	772	402	113	111	25	1423
1883.	637	376	128	219	28	1388
1884.	646	524	174	229	133	1706
1885.	762	251	241	135	62	1451
1886.	851	236	171	232	48	1538
1887.	600	176	138	135	86	1135
1888.	572	143	158	216	32	1121
1889.	581	242	118	164	35	1140

The following is a list of the principal additions made to the Menagerie during the year 1889:—

1. A small collection of birds from Algeria, obtained by purchase from a dealer at Oran on January 10th. Among these were specimens of Clotbey's Larks (*Rhamphocorys clotbeyi*), the Algerian Shore-Lark (*Otocorys bilopha*), and the Rosy Bullfinch (*Erythrospiza githaginea*), all new to the Society's Collection.

2. Two White Ibises, purchased January 18th, and differing from the White Ibises previously in the Society's Collection in their larger size and bright red bills. They appear to be referable

to Eudocimus longirostris, Wagler.

3. A collection of Reptiles from the Cape Colony, presented, as have been many previous collections, by our Corresponding Member the Rev. G. H. R. Fisk. Amongst these were seven specimens of the new Tortoise, Homopus femoralis, lately described by Mr. Boulenger (P. Z. S. 1888, p. 251, pl. xiv.), and two of Homopus signatus, a species not previously received.

4. Four Marbled Polecats (Putorius sarmaticus), obtained in the vicinity of Quettah, and presented by Col. Sir Oliver B. C. St. John, K.C.S.I., R.E. This well-marked species is rare in most museums, and is quite new to the Society's Collection.

5. A fine specimen of Owen's Apteryx (Apteryx oweni), from the South Island of New Zealand, presented by Prof. T. Jeffery Parker, C.M.Z.S., of the University Museum, Otago, New Zealand.

6. A young Manatee (Manatus australis), said to have been received from the Amazons, purchased March 2nd, being the second example of this Sirenian obtained alive by the Society.

7. An Oriental Phalanger (Phalanger orientalis) from the Solomon Islands, received March 4th, and presented by C. M. Woodford, Esq., of Sydney.

8. A second specimen of Owen's Apteryx (Apteryx oweni),

presented by Capt. C. A. Findlay on March 5th.

9. A young male Sinaitie Ibex (Capra sinaitica), from Mount

Sinai, presented by Sir James Anderson, on April 1st.

10. A young male specimen of the Lesser Koodoo (Strepsiceros imberbis) from East Africa, presented by George S. Mackenzie, Esq., F.Z.S., April 18th.

11. An albino variety of the Cape Mole-Rat (Georychus capensis), presented May 1st by the Rev. G. H. R. Fisk, C.M.Z.S.

12. A fine male specimen of the Cocoa-nut Land-Crab of the East Indies (Birgus latro), presented by Commander Alfred Carpenter, R.N., and received June 14th.

13. A Short Python (Python curtus), from Malacca, presented July 2nd by Mrs. Bertha M. L. Bonser, new to the Collection.

14. A Prêtre's Amazon (Chrysotis prætrii), purchased July

23rd, also new to the Collection.

15. A young male Gaur (Bibos gaurus) from Pahang, one of the native States in the Malay Peninsula, presented to the Society by Sir Ceeil C. Smith, K.C.M.G., the Governor of the Straits Settlement.

The subjoined table, which shows the provisions consumed in the Society's Menagerie during the past ten years, has been prepared in response to frequent applications to know "how the animals are fed."

	1880.	1881.	1882.	1883.
Hay	182½ lds.	209½ lds.	179 lds.	165 lds.
Clover	113 lds.	1213 lds.	1093 lds.	$115\frac{3}{4} \text{ lds.}$
Straw	234½ lds.	$233\frac{3}{4} \text{ lds.}$	$187\frac{3}{4} \text{ lds.}$	193¾ 1ds.
Barley	30 quarters.	$25\frac{1}{4}$ quarters.	25 quarters.	$26\frac{1}{2}$ quarters.
Oats	138 qrs.	146 qrs.	142 <u>1</u> qrs.	147 qrs.
Wheat	43 qrs.	33 qrs.	$36\frac{1}{2}$ qrs.	36½ qrs.
Peas and Beans	$26\frac{1}{2}\mathrm{qrs}.$	28 qrs.	26 qrs.	19½ qrs.
Maize	76 qrs.	73½ qrs.	74 qrs.	75 qrs.
Bran	308 qrs.	287 qrs.	288 qrs.	278 qrs.
Canary	10½ qrs.	$9\frac{3}{4}$ qrs.	11½ qrs.	10 qrs.
Hemp	8 qrs.	8½ qrs.	ll qrs.	11 qrs.
Rape	6 bushels.	7 bushels.	1 qr.	1 qr.
Millet	$2\frac{1}{2}$ qrs.	23 qrs.	$3\frac{1}{2}$ qrs.	2½ qrs.
Buckwheat	$9^1_4$ qrs.	12 qrs.	10½ qrs.	$10\frac{1}{4}$ qrs.
Biscuit	302 cwt.	279 ewt.	253 cwt.	275 cwt.
Rice	100 cwt.	90 cwt.	86 ewt.	104 ewt.
Oatmeal	3/ <sub>4</sub> ewt.	1 <sup>1</sup> / <sub>4</sub> ewt.	13/4 cwt.	1 ewt.
Nuts	41 cwt.	43 cwt.	39½ cwt.	35 cwt.
Eggs	19,750	19,400	19,600	19,750
Milk	5646 qts.	5385 qts.	5210 qts.	5117 qts.
Whiting	16 tons 16 cwt.	18 tons 13 ewt.	18 tons 5 cwt.	17 tons 10 cwt.
Flounders	19 cwt. 2 qrs. 6 lbs.	19 cwt. 2 qrs. 6 lbs.	19 cwt. 2 qrs. 6 lbs.	19 cwt. 2 qrs. 6 lbs.
Rough Fish	75 cwt. 2 qrs. 5 lbs.	75 cwt. 2 qrs. 5 lbs.	75 cwt. 2 qrs. 5 lbs.	75 cwt. 2 qrs. 6 lbs.
Shrimps	313 galls.	313 galls.	313 galls.	313 galls.
Fowls' Heads	7512	7512	7512	7512
Horses killed	245	267	255	260
and Weighing	59 tons 8 cwt.	62 tons 9 cwt.	98 tons.	130 tons 17 ewt.
Goats killed	154	154	174	164
and Weighing	4 tons 7 cwt.	3 tons 11 cwt. 1 qr.	2 tons 15 cwt.	2 tons 13 cwt.
Bread	4603 qtns.	4497 qtns.	4370 qtns.	4488 qtns.
Oil-Cake	15 cwt.	20 cwt.	15 cwt.	15 cwt.
Rye Bread	*****	37½ cwt.	78 cwt.	78 cwt.
Mangel Wurzel	18 tons.	19 tons.	17 tons.	$19\frac{1}{2}$ tons.
Tares	1008 bundles.	976 bundles.	1005 bundles.	1640 bundles.
Potatoes	3 tons 18 cwt.	3 tons 18 cwt.	3 tons 18 cwt.	3 tons 18 cwt.
Carrots	7 tons 17 cwt.	7 tons 17 cwt.	7 tons 17 cwt.	7 tons 17 ewt.
Bunch Greens	3456 bunches.	3456 bunches.	3456 bunches.	3456 bunches.

	1884.	1885.	1886.	1887.	1888.	1889.
ľ	172 lds.	160 lds.	147 lds.	149 lds.	148 lds.	143 lds.
	120½ lds.	123 lds.	121½ lds.	129½ lds.	112 lds.	91½ lds.
l	198½ lds.	204½ lds.	185½ lds.	217 lds.	228 lds.	219 lds.
l	24½ quarters.	23 quarters.	24 quarters.	25‡ quarters.	26¼ quarters.	26 quarters.
	156 qrs.	144 qrs.	148 qrs.	145 qrs.	141 qrs.	140 qrs.
	$37\frac{1}{2}$ qrs.	41½ qrs.	38½ qrs.	35½ qrs.	40 qrs.	46 qrs.
	$26\frac{3}{4} \text{ qrs.}$	$23\frac{1}{4}$ qrs.	103 qrs.	6½ qrs.	5½ qrs.	$4\frac{3}{4}$ qrs.
	74½ qrs.	$74\frac{1}{2}$ qrs.	79 qrs.	84 qrs.	84 qrs.	75½ qrs.
	285 qrs.	250 qrs.	272 qrs.	276 qrs.	280 qrs.	341 qrs.
	11 qrs.	103 qrs.	113 qrs.	11½ qrs.	10 <sup>3</sup> qrs.	10½ qrs.
	10½ qrs.	10 qrs.	11½ qrs.	10½ qrs.	11½ qrs.	11½ qrs.
	6 bushels.	1 qr.	l qr.	6 bushels.	6 bushels.	6 bushels.
	$2\frac{1}{2}$ qrs.	2½ qrs.	2½ qrs.	2 qrs.	13 qrs.	$1\frac{3}{4}$ qrs.
	$6\frac{1}{2}$ qrs.	6 qrs.	5 <sup>3</sup> / <sub>4</sub> qrs.	63 qrs.	$7\frac{1}{4}$ qrs.	6 qrs.
	287 ewt.	281 ewt.	278 cwt.	273 cwt.	260 cwt.	254 ewt.
	104 cwt.	106 cwt.	94 cwt.	SS cwt.	S8 cwt.	92 ewt.
	1 cwt.	13 cwt.	½ cwt.	½ ewt.	½ cwt.	∂ <u>3</u> ewt.
	41 cwt.	39 <u>3</u> cwt.	42 cwt.	32 ewt.	34 cwt.	33 cwt.
	19,800	19,950	18,850	18,250	17,550	17,000
	4557 qts.	5055 qts.	5213 qts.	5409 qts.	5138 qts.	5060 qts.
	17 tons 4 cwt.	17 tons 2 cwt. 3 qrs.	17 tons 2 cwt. 1 qr.	17 tons 5 cwt. 3 qrs.	-	1
19	cwt. 2 qrs. 6 lbs.	19 cwt. 2 qrs. 6 lbs.	19 cwt. 2 qrs. 6 lbs.		19 cwt. 2 qrs. 6 lbs.	
<b>7</b> 5	ewt. 2 qrs. 6 lbs.	75 cwt. 2 qrs. 5 lbs.	75 cwt. 2 qrs. 5 lbs.	75 cwt. 2 qrs. 5 lbs.		78 cwt. 2 qrs. 19 lbs.
	313 galls.	313 galls.	313 galls.	313 galls.	313 galls.	313 galls.
	7512	7512	7512	7512	7512	7512
	274	291	298	290	281	203
	135 tons 7 cwt.	138 tons.	$144\frac{1}{4} \text{ tons.}$	1353 tons.	$124\frac{1}{4}$ tons.	105 tons.
	152	162	173	197	191	181
	2 tons 12 cwt.	2 tons 10 cwt.	2 tons 8 ewt.	2 tons 5 cwt.	2 tons 4 cwt.	2 tons 1 ewt.
	4534 qtns.	4480 qtns.	4870 qtns.	4840 qtns.	4684½ qtns.	4540 qtus.
	20 cwt.	15 cwt.	20 cwt.	20 ewt.	25 ewt.	40 ewt.
	67 ewt.	39 cwt.	39 cwt.	39 cwt.	40½ cwt.	10½ ewt.
	20 tons.	$18\frac{1}{2}$ tons.	19 tons.	20 tons.	19½ tons.	17½ tons.
2	2117 bundles.	2065 bundles.	2467 bundles.	2467 bundles.	1901 bundles.	2392 bundles.
6.0	tons 18 cwt.	3 tons 18 ewt.	3 tons 18 ewt.	3 tons 18 cwt.	3 tons 18 cwt.	3 tons 18 ewt.
7	tons 17 ewt.	7 tons 17 cwt.	8 tons 2 cwt.	8 tons 2 cwt.	8 tons 3 ewt.	8 tons 6 ewt.
3	456 bunches.	3456 bunches.	3456 bunches.	3456 bunches.	3744 bunches.	3744 bunches.
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b. List of Species new to the Collection exhibited during the year 1889.

The following list contains the specimens exhibited in 1889 which are referable to species not included in the last (eighth) edition of the List of Animals.

#### i. MAMMALS.

- 125 b. Avalis laniger (Gm.). Flocky Lemur. Hab. Madagascar.
  - a. Purehased, June 28, 1889.
- 254a. Putorius sarmaticus (Pallas). Marbled Polecat. Hab. Central Asia.
  - a-d. Presented by Col. Sir Oliver B. C. St. John, K.C.S.I., R.E., Feb. S, 1889. From Quettah. See P. Z. S. 1889, p. 85.
- 313a. Sciurus syriacus, Hempr. & Ehr. Syrian Squirrel. Hab. North Syria.
  - a-c. Deposited, Dec. 20, 1889.
- 366 a. Georychus capensis (Pallas). Cape Mole-Rat. Hab. Cape Colony, S. Africa.
  - a. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., May-1, 1889. See P.Z.S. 1889, p. 316.
- 450a. Bibos gaurus (Hamilton Smith). Gaur. Hab. India.
  - a. Male. Presented by Sir Cecil C. Smith, K.C.M.G., Oct. 23, 1889. From Pahang. See P. Z. S. 1889, p. 447.

634a. Phalanger orientalis (Pallas). Oriental Phalanger. Hab. Solomon Islands.

a. Presented by Charles M. Woodford, Esq., C.M.Z.S.,
 March 4, 1889. See P. Z. S. 1889, p. 161.

#### ii. BIRDS.

104a. Euphonia flavifrons (Sparrm.). Yellow-fronted Tanager.

Hab. West Indies.

a, b. Presented by Mrs. Herbert, May 20, 1889. From Dominica.

145 a. Spermestes nana, Pucheran. Dwarf Finch. Hab. Madagascar.a-d. Purchased, Nov. 1, 1889.

246a. Fringilla tintillon, Webb et Berth. Tintillon Chaffinches.

Hab. Teneriffe.

a, b. Deposited, June 20, 1889.

246b. Fringilla teydea, Webb et Berth. Teydean Chaffinch.

Hab. Canary Islands.

a-x. Deposited, Aug. 9, 1889.

270a. Erythrospiza githaginea (Licht.). Rosy Bullfinch. Hab. Algeria.

a, b. Purchased, Jan. 10, 1889. See P. Z. S. 1889, p. 26.

314a. Agelæus frontalis, Vieill. Chestnut-fronted Troupial.

Hab. Brazil.

a. Received in exchange, Dec. 13, 1889.

- 410a. Rhamphocorys clotbeyi (Bonap.). Clotbey's Lark. Hab. Algeria.
  - u-e. Purchased, Jan. 10, 1889. See P. Z. S. 1889, p. 26.
- 412 a. Otocorys bilopha (Temm.). Algerian Shore-Lark. Hab. Algeria.
  - a-e. Purchased, Jan. 10, 1889. See P. Z. S. 1889, p. 26.
- 656a. Chrysotis prætrii (Temm.). Prêtre's Amazon. Hab. Brazil.
  - a. Purchased, July 23, 1889. See P. Z. S. 1889, p. 394.
- 799 a. Micrastur ruficollis (Vieill.). Red-necked Hawk. Hab. Brazil.
  - a. Presented by J. E. Wolfe, Esq., Oct. 19, 1889.
- 807 a. Falco melanogenys, Gould. Black-cheeked Falcon. Hab. Australia.
  - a. Presented by Baron F. von Mueller, C.M.Z.S., May 18, 1889.
- 934a. Eudocimus longirostris (Wagler). Red-billed White Ibis.

Hab. America.

- a, b. Purchased, Jan. 18, 1888. See P. Z. S. 1889, p. 26.
- 1150 a. Francolinus natalensis, Smith. Natal Francolin. Hab. South Africa.
  - a. Male; b. Female. Presented by Capt. Henry F. Hoste, July 15, 1889.

#### iii. REPTILES.

19 c. Homopus signatus (Walbaum). Well-marked Tortoise.

Hab. South Africa.

a, b. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., Feb. 5, 1889. From the Clanwilliam Mountains.

c. Male; d-e. Females. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., July 22, 1889.

f, g. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., Oct. 14, 1889.

79 a. Trionyx muticus, Lesueur. Unarmed Trionyx. Hab. North America.

a. Received in exchange, March 3, 1889.

188a. Python curtus, Schleg. Short Python. Hub. Malacca.

a. Presented by Mrs. Bertha M. L. Bonser, July 2, 1889. See P.Z.S. 1889, p. 393.

221a. Helicops leopardinus (Schl.). Leopardine Snake. Hab. Brazil.

a. Purchased, July 23, 1889.

#### iv. BATRACHIANS.

4b. Breviceps gibbosus (Linn.). Humped Short-headed Toad.

Hab. South Africa.

a. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., Oct. 14, 1889.

4c. Breviceps verrucosus, Rapp. Warty Short-headed Toad.

Hab. South Africa.

a-d. Presented by the Rev. G. H. R. Fisk, C.M.Z.S., Oct. 14, 1889.

c. List of Animals bred in the Gardens during the year 1889.

#### MAMMALS.

1 Black Lemur (Lemur macaco).

1 Puma (Felis concolor).

5 North-African Jackals (Canis anthus).

1 Side-striped Jackal (Canis lateralis).

5 Collared Fruit-Bats (Cynonycteris collaris). 8 Long-fronted Gerbilles (Gerbillus longifrons).

2 Chinchillas (Chinchilla lanigera).

- 2 Viscachas (Lagostomus trichodactylus).
- 1 African Wild Ass (Equus tæniopus).
- 1 American Bison (Bison americanus).

1 Yak (Poëphagus grunniens).

1 Gayal (Bibos frontalis).

1 Eland (Oreas canna).

2 Persian Gazelles (Gazella subgutturosa).

1 Thar (Capra jemlaica).

2 Burrhel Wild Sheep (Ovis burrhel).

2 Barbary Wild Sheep (Ovis tragelaphus).

1 Indian Muntjac (Cervulus muntjac).

1 Wapiti Deer (Cervus canadensis). 1 Japanese Deer (Cervus sika).

2 Hog Deer (Cervus porcinus).

1 Molucca Deer (Cervus moluccensis).

1 Axis Deer (Cervus axis).

6 Mule Deer (Cariacus macrotis).

3 Vulpine Phalangers (Phalangista vulpina).

1 Red Kangaroo (Macropus rufus).

1 Great Wallaroo (Macropus robustus).

1 Great Kangaroo (Macropus giganteus).

2 Bennett's Wallabys (Halmaturus bennetti). 1 Derbian Wallaby (Halmaturus derbianus).

2 Yellow-footed Rock Kangaroos (Petrogale xanthopus).

#### BIRDS.

- 2 Grey Wagtails (Motacilla penelope).
- 2 Cockateels (Calopsitta novæ-hollandiæ).
- 3 Australian Wild Ducks (Anas superciliosa).

6 Chilian Pintail (Dafila spinicauda).

2 Chiloe Wigeon (Mareca chiloensis).

5 Summer Ducks (Æx sponsa).

8 Mandarin Ducks (Æx galericulata).

3 Triangular-Spotted Pigeons (Columba guinea).

1 Bolle's Pigeon (Columba bollii).

2 Cambayan Turtle Doves (Turtur senegalensis).

5 Crested Pigeons (Ocyphaps lophotes). 1 Nicobar Pigeon (Calanas nicobarica). 10 Gold Pheasants (Thaumalea picta).

1 Peacock Pheasant (Polyplectron chinquis).

3 American Wild Turkeys (Meleagris gallo-pavo).

1 Globose Curassow (*Crax globicera*). 1 Herring-Gull (*Larus argentatus*).

1 Yellow-legged Herring Gull (Larus cachinnans).

# d. List of Donors and their Donations for the year 1889.

Alder, G. W., Esq.

One Common Chameleon.

Allison, Mrs. M.

One Grey Ichneumon.

Anderson, Sir James.

One Sinaitic Ibex.

Arbib, Umberto, Esq. One Gazelle.

Baker, Mr. A.

Three Blue-crowned Hanging Parrakeets.

Bankes, W. R., Esq., F.Z.S.

One Hybrid Wild Swine.

Bannehe, W. J., Esq.

Two Alligators.

Barclay, Thomas, Esq.
One Golden Eagle.

Barker, The Hon. Mrs.

Two Cape Crowned Cranes.

Barron, E. E., Esq. One Axoloti.

Bason, Capt.

One Malayan Bear, one Gold Pheasant.

Basset, —, Esq. One Otter.

Baylis, Major T. Erskine, F.Z.S. Six Barbary Turtle-Doves.

Besant, Capt. W. W.

One Cape Gorilla.

Bibby, Mr.

One Corn-Crake.

Bird, W., Esq.

One Slender-billed Cockatoo.

Blandford, H. E., Esq.

One Hairy-rumped Agouti, one Tuberculated Iguana.

Boden, Mrs. Walter. One Ocelot.

Bonser, Mrs. Bertha M. L. One Short Python.

Boon, Dr. A. P., C.M.Z.S.

Thirteen Violaceous Night-Herons, One Green Bittern, One Dominican Kestrel, One Porto-Rico Pigeon.

Bostock, J. H., Esq.

One Brown Capuchin.

Breton, Miss E. H.

One Northern Mocking-Bird.

Brocklehurst, H. D., Esq.

One Tessellated Snake.

Brunsden, Mr.

Two Stone-Curlews.

Buckland, F., Esq.

One Vulpine Phalanger.

Buckland, Mr.

One Derbian Wallaby.

Burge, B., Esq.

Two Common Vipers.

Burrell, O., Esq.

One Common Marmoset.

Butler, Mr. T. B.

One Long-eared Owl.

Byng-Payne, Mrs.

Two Crimson-winged Parrakeets.

Carpenter, Commander Alfred, R.N., F.Z.S. One Cocoa-nut Land-Crab.

Carter, B., Esq.

One Jackdaw.

Cashel, E. Baldwin, Esq. One Common Fox. Cecil, The Lord William.

One Yellow-billed Amazon.

Chandler, W. Aubrey, Esq.
One Common Squirrel.

Clayton, J. E., Esq.

One Red-legged Partridge, one Redwing.

Clifton, Charles, Esq., F.Z.S.

One Crested Porcupine, two Nicobar Pigeons, two Rose-crested Cockatoos, one Fork-tailed Jungle-Fowl.

Collins, T. H., Esq.

Three Orbicular Horned Lizards.

Colvin, Miss.

One Grey Ichneumon.

Cookson, Capt. Treville.
Two Caracals.

Cookson, W. J., Esq., The Executors of the late. Two Great Eagle-Owls.

Coombs, J., Esq.

One Rough Fox.

Corlett, Stuart N., Esq. One Arctic Fox.

Cosh, Mrs.

One Pig-tailed Monkey.

Cousins, C. W., Esq.
One Turtle-Dove.

Cowley, J. H. B., Esq.
One Hybrid Polecat.

Cox, Harding, Esq., F.Z.S.

Two Black-footed Penguins.

Cox, Mrs.

One Macaque Monkey.

Creek, Col.

Three Bengal Foxes.

Cunnington, H. J., Esq.

One Macaque Monkey.

Curtis, C. L., Esq.

One Grey Ichneumon.

Curtis, H. Pelham, Esq.

Three Common Hedgehogs.

Cutting, Mr. J.
One Coot.

Dabbs, Mr. F.

One Macaque Monkey.

Dance, E., Esq.

Four European Sousliks.

Davy, Miss L.

One Grey Parrot.

Dugdale, Frank, Esq.

One Brown Bear.

Elliott, C., Esq.

One Stump-tailed Lizard.

Entwistle, Mr. James.

One Bonnet-Monkey.

Fairfax, Rear-Admiral Henry, R.N., C.B., F.Z.S.

Two Tuatera Lizards.

Farrell, Col. J. D. C.

One Rhesus Monkey.

Faulkner, Mrs. Arthur.

One Common Squirrel.

Feilden, Col., H. W., C.M.Z.S.

One Black Tortoise, one Rough-eyed Cayman.

Felstead, W. H., Esq.

One White-backed Piping-Crow.

Ffinch, B. T., Esq., C.M.Z.S.

One Indian Wolf, five Chaplain Crows, one Indian Python.

Ffoulkes, Mrs.

Two Vinaceous Turtle-Doves.

Findlay, Capt. C. A., R.N.R.

Three Owen's Apteryx. Fisk, The Rev. G. H. R., C.M.Z.S.

One Cape Mole-Rat, one Geometric Tortoise, one Areolated Tortoise, eleven Tuberculated Tortoises, seven Well-marked Tortoises, one Robben-Island Snake, two Infernal Snakes, five Rufescent Snakes, five Smooth-bellied Snakes, two Many-spotted Snakes, one Rhomb-marked Snake, one Hissing Sand-Snake, two Spotted Slow-worms, one Puff-Adder, one Cape Adder, four Warty Short-headed Toads, one Humped Short-headed Toad, six Narrow-headed Toads,

Fitz-Simons, Mrs. M.

One Kinkajou.

Flemyng, Miss Agnes.

One Smooth Snake.

thirty-four Gray's Frogs.

Gainsford, Mrs.

Onc Herring-Gull.

Gibson, Mr. Stanley.

Two Common Marmosets.

Gilbert, Dr. J.

Eight Indian Gerbilles.

Godfrey, J. E., Esq.

One Malabar Parrakeet.

Griffith, Lady Charlotte Brandford.
One Great-billed Touracou.

Gruchy, The Rev. J. de.

One Common Paradoxure.

Gunn, Mr. T. E.

One Tawny Owl.

Haines, The Rev. F. W.

Two Viperine Snakes, three Green Lizards, two Marbled Newts, two Spotted Salamanders, two Edible Frogs, three Green Tree-Frogs.

Hairby, Capt.

One Adorned Ceratophrys.

Hall, E. C., Esq.

One Common Fox.

Hanauer, H., Esq., F.Z.S. One Greek Partridge.

Harcourt, L. V., Esq.

Two Herring-Gulls.

Hart, E., Esq., F.Z.S.

One Short-eared Owl.

Hart, Miss L. C.

One Rhesus Monkey.

Harvey, Capt. J. V.

One Common Buzzard.

Hastie, A. H., Esq.

Twenty-two Gold Fish, four Carp.

Hastings, G. F., Esq., F.Z.S.

One Raven.

Hawtayne, G. H., Esq., C.M.Z.S.

One Lesser Razor-billed Curassow.

Hay, Thomas, Esq.

Two White Storks.

Hayley, J. Newton, Esq.

One Louisianian Meadow-Starling.

Hayward, G., Esq.

One Common Moorhen.

Henderson, Mrs.

One Macaque Monkey.

Henderson, Mr. T. G.

One Golden Eagle.

Henry, F. H. V., Esq.

One Brown Capuchin.

Hensman, F., Esq.

Two Manx Shearwaters.

Herbert, Mrs.

Two Yellow-fronted Tanagers.

Hewetson, H. B., Esq., M.R.C.S., F.Z.S.

Two Razorbills, six European Tree-Frogs.

Hoad, W., Esq., M.D.

One Peregrine Falcon.

Holmes, R. J., Esq.

One Long-nosed Crocodile.

Hopkins, The Rev. F.

One Long-eared Owl.

Hoste, Capt. Henry F.

Two Crested Porcupines, one Jackal Buzzard, two Natal Francolins.

Hughes, W. F., Esq.

One Malbrouck Monkey.

Hulme, G. H., Esq.

One Common Badger.

Hunt, Mrs.

One Slender-billed Cockatoo.

Hunter, H. C. V., Esq., F.Z.S.

One Serval.

Hunter, R., Esq.

One Common Peafowl.

Jamaica Institute, Jamaica, W. I.

One Sharp-nosed Crocodile.

James and Brown, Messrs.

Four Black Swans.

Jamrach, Mr. W.

One White-eared Fruit-Bat.

Janes, Capt.

Two Common Kestrels.

Jansen, Mr.

One Bewick's Swan.

Johnson, Cuthbert, Esq.

One Common Stoat, two Indian Jerboas.

Johnson, Mr. J. B.

One Tuberculated Iguana.

Jones, H. L., Esq.

One White-throated Monitor.

Keilich, Mr. E.

One Common Gull, one Black-headed Gull.

Kennedy, J. D., Esq.

Two Common Rheas.

Kent, Capt. A.

One Barbary Ape, one Saker Falcon, two Red-legged Partridges.

Kirk, Miss Dolly.

One Purple-crested Touracou.

Knight, Mr. J.

One Viperine Snake.

Lacy, Capt. W. Heathorn.

One Ocelot, one Brazilian Cariama.

Lang, Dr. Messiter.

One Malbrouck Monkey.

Larking, Col. Cuthbert, F.Z.S.

One Rhesus Monkey.

Lart, W. S., Esq.

One Common Wolf.

Latham, Commdr. W. M., R.N., F.Z.S.

Two Short-toed Larks, four Common Bluebirds.

Lechmere, Sir Edmund A. H., Bart., M.P.

One Brush-tailed Kangaroo.

Leith, Mrs.

One Dwarf Chameleon.

Lemberg, P., Esq.

One two-spotted Paradoxure.

Lilford, The Lord, F.Z.S.

One Cinereous Vulture, eight Spanish Blue Magpies.

Liming, Miss.

One Rose-crested Cockatoo.

Lishman, Mr.

One Green Monkey.

Lloyd, Mrs. Theodore.

One Gold Pheasant, one Silver Pheasant.

London, Chatham, and Dover Railway Co.

Four Common Snakes.

Lucas, C. J., Esq.

One Bar-tailed Pheasant.

Lucas-Shadwell, Mrs.

One Crested Porcupine.

Lumsden, Lieut.-Gen. Sir Harry B., K.C.S.I., F.Z.S. Two Long-fronted Gerbilles.

McCausland, W. J., Esq.

One Macaque Monkey.

MacDonald, Major C. M.

Two Schlegel's Doves.

Mackenzie, George S., Esq., F.Z.S.

One Leopard, one Lesser Koodoo, two White-crested Touracous.

Mackie, J. G., Esq.

Two Macaque Monkeys.

Mackinnon, Sir William, C.I.E., F.Z.S. One African Zebu.

Macnab, Mrs.

One Grey-breasted Parrakeet.

McNiven, C. F., Esq.

Ten Common Vipers.

Macpherson, The Rev. H. A. One Solitary Thrush.

Martin, Charles, Esq.

Two Prairie Wolves.

Martin, J. A., Esq.

One Ring-tailed Coati.

Mason, F. T., Esq.

One Spanish Terrapin.

Meade-Waldo, E. J., Esq.

Two Canary Finches, two Tintillon Chaffinches.

Meux, Lady, F.Z.S.

Two Red-and-Yellow Macaws, one Greater Sulphur-crested Cockatoo, one Roseate Cockatoo.

Meyrick, Miss Gladys E.

One Red-handed Tamarin.

Millward, Master H.

Two Natterjack Toads.

Morant, Mrs.

One Great Eagle-Owl.

Mudge, A., Esq.

One Chough.

Muëller, Baron F. von, C.M.Z.S. One Black-cheeked Falcon.

Newton, Miss C.

One Macaque Monkey.

Nicholson, Sir Richard.

Five Herring-Gulls.

Nicol, Mrs.

One Macaque Monkey.

Oakes, Mrs. Alfred.

One Red-billed Tree-Duck.

Paget, Commdr., R.N. One Sinaitic Ibex.

Pain, W. H. B., Esq.

Four Common Vipers.

Parker, Prof. T. Jeffery, C.M.Z.S. One Owen's Apteryx.

Peacock, Mrs. G.

One Alligator.

Pelly, C. O., Esq.

One White-fronted Lemur.

Pelly, Miss A. L.

Seven Common Slowworms.

Percy, C. Reid, Esq.

One Verreaux's Guinea-fowl.

Peregrine, Lawson N., Esq.

One Lesser White-nosed Monkey.

Permain, Thomas Watson, Esq. Two Cayenne Aracaris.

Petre, Mrs.

One Ring-tailed Coati.

Petrzywalski, Mr. Charles.

Two Common Marmosets.

Phillips, Mr. R.

One Short-eared Owl.

Pike, Arnold, Esq.

One Polar Bear.

Pitcairn, Dr. J. J., F.Z.S.

Two Common Toads.

Politzer, J. R., Esq., F.Z.S.
One Canadian Beaver.

Pullan, Mrs. Ayrton.

One Black-bellied Sand-Grouse.

Reeves, Mrs. E.

One Green Monkey.

Reynolds, Mr. H.

One Shag. Riach, Capt. M. S.

One Macaque Monkey.

Rigby, Mrs.

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One Common Perch.

Roberts, Mr. W. B.

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Rolleston, Major Villet, F.Z.S.

One Wood-Owl.

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Romney, The Earl of.

One Common Polecat,

Rose, Capt.

One Crested Porcupine.

Sainsbury, Mrs. Charles.

One Rhesus Monkey.

St. John, Col. Sir Oliver B. C., K.C.S.I., R.E., F.Z.S. Four Marbled Polecats.

St. Quintin, W. H., Esq., F.Z.S. One Cactus Conure.

Score, Mr. G.

One Indian Chevrotain.

Seton, Dr.

Two Ducorps' Cockatoos, two Slender-billed Cockatoos.

Shiell, William, Esq.

One Ring-tailed Coati.

Sibley, Dr. W. K.

One Vervet Monkey.

Siemens, Mrs.

One Black Swan.

Simon, Alfred M., Esq.

One Poë Honeyeater.

Sinclair, J. Robert, Esq.

Onc Wattled Crane.

Skipton, Major C. S., R.A. One Indian Wolf.

Smith, Sir Ceeil C., K.C.M.G., H.M.Z.S. One Gaur.

Smith, F., Esq.

One Jelerang Squirrel.

Smith, Dr. Gerard.

One Grey-headed Porphyrio.

Smith, Master M. A.

Two Natterjack Toads.

Sparrow, H. F., Esq.

One Common Fox.

Spence, J. F., Esq.

One Brown Bear.

Stephens, Capt. Stewart.

One Lesser White-nosed Monkey.

Stewart, Mr. C. S.

One Black-headed Lemur.

Streatfield, F., Esq.

One Puff-Adder.

Stutterd, S., Esq.

One Common Squirrel.

Suarez, Pedro, Esq.

One Tropical Squirrel.

Swinhoe, Col. C., F.Z.S.

One Ring-necked Parrakeet.

Tatham, Miss B.

One Common Squirrel.

Taylor, Capt. C.

One Formosan Deer, one Japanese Deer, two Three-striped Paradoxures, one Great Eagle-Owl.

Taylor, J. H., Esq.

One Purple-faced Monkey.

Taylor, J. T., Esq.

One Peregrine Falcon.

Taylor, Thomas, Esq.
Two Viscachas.

Taylor, Mr. Thomas.

One Chattering Lory.

Teil, R. M. J., Esq.
One Redshank.

Teil, Master W. P.

One Common Kestrel.

Terrot, R., Esq.

One Common Pintail.

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Four Angora Goats.

Thesiger, The Hon. Eric.

One Long-eared Owl.

Tholen, Mr.

One Indian Fruit-Bat.

Touche, J. de la, and G. Siemssen, Messrs.

One Imperial Eagle.

Tredegar, The Lord, F.Z.S.

One Common Fox.

Tudway, C. C., Esq.

One Common Trumpeter.

Tupper, Mrs.

One Macaque Monkey.

Tweedie, W., Esq.

One Palm-Squirrel.

Upcher, H. M., Esq., F.Z.S.

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Vernall, The Rev. James.

One Patas Monkey.

Vinton, Mr. J. W.

One Guinea Baboon.

Vokes, Miss.

One Grey Squirrel.

Waddell, James, Esq.

One Common Marmoset.

Walker, John, Jun., Esq.

One Serval.

Warburg, Masters F. & O.

Fifteen Moorish Geckos.

Waterbury Watch (Sales) Co., Limited, One Bonnet-Monkey.

Watkins, J., Esq.

One Common Chameleon.

Watson, Capt.

One Peregrine Falcon.

Webster, Capt.

One Cheetah.

Wedlake, Mr. H. B.

One Macaque Monkey.

West Indian (Natural History) Exploring Committee.
One Green Monkey.

Wethered, Col.

One Diana Monkey, one Campbell's Monkey, one Musanga Paradoxure.

Whitlow, Mr. C. H.

One Green Lizard.

Williams and Basevi, Lieuts., R.N.

One American Black Bear.

Williams, N. T., Esq.

One Ring-tailed Coati.

Wilson, Miss.

One Alexandrine Parakeet.

Wilson, Mr. J. T.

One Rhesus Monkey.

Wolfe, Mrs.

One Ocelot, one Red Broeket, one Brazilian Tree

Porcupine, one Acouchy, one Hairy Armadillo, one Yellow Hangnest, one Pileated Jay, one Blue-fronted Amazon, two White-eared Conures.

Wolfe, J. E., Esq.

One Red-necked Hawk.

Wood, J. M., Esq., C.E.

One Manx Shearwater. Woodford, C. M., Esq., C.M.Z.S.

One Vinous-throated Fruit-Pigeon, one Oriental Phalanger.

Wynn, Charles H., Esq.

One Otter.

Young, J., Esq., F.Z.S.

Two Nightingales, two Pine Grosbeaks, two Waxwings, two Nuthatches, two Fieldfares

#### Conclusion.

In concluding their Report the Council wish to acknowledge the assistance they have received from the Committee of Publication, upon whom is devolved, in accordance with the By-Laws, the arrangement and supervision of the Society's Scientific Publications.

The Council have also to ask you to thank those Fellows of the Society who during the past year have audited the Accounts and have served on the Finance Committee.

The temporary loan had from the Society's Bankers in 1887 having been now paid off, and the mortgage-debt on the freehold-house being reduced to £6000 (another £1600 of which will be repaid on the 15th of June next), the Council trust that they may soon be able to resume their former policy of adding to the permanent Buildings in the Gardens, which financial stress has obliged them to discontinue for several years.

Signed (for the Council),

P. L. SCLATER,

Secretary.

3 Hanover Square, W., April 29th, 1890.







#### REPORT

OF THE

### AUDITORS OF THE ACCOUNTS

OF THE

## ZOOLOGICAL SOCIETY OF LONDON,

Appointed January 16, 1890.

THE Committee of Auditors to the Zoological Society having fully examined the accounts, inspected the books, and seen vouchers for all the various payments ordered by the Council for the year ending December 31st, 1889, respectfully submit to the Society an abstract of the accounts, together with a statement of the Assets and Liabilities at the close of the year.

#### RECEIPTS IN 1889.

Balance brought from December 31, 1888	} <i>••••</i>	•••••••••••	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
INCOME.	0 7		
1886 Subscriptions	$\pounds$ s. d.	$ \begin{array}{c cccc} \pounds & s. & d. \\ 3 & 0 & 0 \end{array} $	
$1887 \left\{ egin{array}{ll}  ext{Subscriptions} & & & & & \\  ext{Publication Sales} & & & & & \\ \end{array}  ight.$	6 0 0 0 18 0	6 18 0	
1888 Garden Sales	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	6 18 0	
Subscriptions	24 0 0	398 4 8	
Admissions to Gardens Riding Receipts Garden Sales Rent for Refreshment-Rooms Rent for Rooms at Hanover Square Admission Fees Compositions 1889 { Subscriptions Ivory Tickets Publication Subscriptions Publication Sales Zoological Record Subscriptions Ditto ditto Sales Dividends Miscellaneous	$\begin{bmatrix} 724 & 7 & 6 \\ 251 & 1 & 6 \\ 751 & 7 & 4 \\ 194 & 8 & 0 \\ 470 & 0 & 0 \\ 720 & 0 & 0 \\ 5,680 & 0 & 0 \\ 23 & 13 & 0 \\ 516 & 12 & 0 \\ 665 & 9 & 7 \\ 151 & 0 & 0 \\ 208 & 17 & 6 \\ 74 & 2 & 0 \\ \end{bmatrix}$	25,906 19 4	
1890 { Subscriptions	102 0 0 10 10 0	112 10 0	- 1
		112 10 0	
INCOME RECEIVED IN 1889		26,427 12 0	26,427 12 0
			27,471 5 2

## PAYMENTS IN 1889.

EXPENDITURE.  Rent, Rates, Taxcs, and Insurance	239 17 3 3,601 3 9 1,899 0 0 3,603 14 6 645 18 7 3,200 8 11 167 7 10 2,764 3 10 139 15 11 752 8 10 180 6 6 177 4 6 470 16 6 661 12 6 367 8 7 1,457 18 5 536 4 0 529 11 3 12 2 0 74 2 0 10 10 0 4 18 6 51 15 6 253 10 0 25 0 0	£	
EXPENDITURE PAID IN 1889	23,228 11 3	23,228	11 3
Repaid Messrs. Drummond balance of Loan had Dec.	22, 1887	2,000	0 0
Repaid Messrs. Drummond on account of Mortgage 1	Debt	1,000	0 0
Cash at the Banker's, December 31, 1889:— General Account Petty Cash Account		1,242	13 11 5 2

## Comparison of Receipts in 1889 with 1888.

Admissions to Gardens   14,891 16 6	Receipts.									
1889.		Inco	me of	Increase.	Decrease					
Admissions to Gardens.   14,891 16 6   13,284 11 0   1,607 5 6		1889.	1888.							
Tiding receipts					£ 8. d.					
Rent for Rooms at Hanover Square	riding receipts Garden Sales			38 17 1	200 10 8					
Admission Fees:-	Rooms			119 17 7	• • • • • • • • • • • • • • • • • • • •					
Present   470 0 0   470 0 0	Admission Fees:—				25 0 0					
Past	Present			10 0 0	• • • • • • • • • • • • • • • • • • • •					
Compositions	Past Present Future	5,680 0 0 102 0 0	5,685 0 0 102 0 0	9 0 0	5 0 0					
Zoological Record   359 17 6   387 16 0   27 18 6   73 17 3   0 4 9	Ivory Tickets	23 13 0	17 17 0		150 0 0					
Increase	Zoological Record	359 17 6 74 2 0	387 16 0 73 17 3	0 4 9	27 18 6					
Total Receipts in 1889										
Total Receipts in 1889	Increase	26,427 12 0			408 9 2 Ded. Decr.					
Total Payments in 1889		26,427 12 0	26,427 12 0	2,402 1 4						
Dr.       Cash         To Balance brought from December 31, 1888	Total Rec Total Pay	eipts in 1889 ments in 1889	£	26,427 12 0 23,228 11 3						
To Balance brought from December 31, 1888	Receipts over Payments 3,199 0 9									
To Balance brought from December 31, 1888	Dr. Cash									
	To Balance brought from December 31, 1888									
27,471 5 2					7,471 5 2					

## Comparison of Payments in 1889 with 1888.

Payments.								
	Increase.	Decrease.						
	1889	٠.	188	38.	- Increase.	Decrease.		
Post Potes Town and In	£	s. d.	£	s. d.	£ s. d.	£ s. d.		
Rent, Rates, Taxes, and Insurance		8 10	1,716			75 5 5		
Salaries and Pensions	5,500 3,603 1	3 9	5,551			51 8 3 164 15 0		
Provisions	645 1		3,768 495	9 6	150 15 4	104 15 0		
Menagerie Expenses		8 11	3,024	6 9	176 2 2			
Keepers' Uniforms	167	7 10	147	0 11	20 6 11			
Works, Materials, &c	2,903 1	9 9	2,056		847 8 7			
Buildings	750	0.10	232	6 3	47.10.1	232 6 3		
Garden Expenses		8 10 6 6	704 299		47 12 1	119 4 0		
Band Expenses		4 6	179	7 6		2 3 0		
House and Office Expenses.		9 0	1,106		25 14 5			
Stationery and Printing (Mis-	- 0							
cellaneous)		8 7	293	6 8	74 1 11			
Cost of Publications Cost of Zoological Record	1,457 1 536	8 5	969 527	$\begin{array}{ccc} 6 & 5 \\ 2 & 6 \end{array}$	488 12 0			
Library Expenses	529 1		547		9 1 0	18 1 11		
Expenditure of Davis Bequest		2 0	73		0 4 9			
Interest on Mortgage and			•	•				
Loan		5 6	387	8 11		82 3 5		
Grant in aid of Science		0 0 0		10.00	25 0 0	20 10 0		
Miscellaneous	27 1			10 2		30 19 8		
	23,228 1	1 3	22,139	18 6	1,864 19 8	776 6 11		
Increase			1,088		776 6 11	Ded. Decr.		
					-			
0.11	23,228 1	1 3	23,228	11 3	1,088 12 9			
Ordinary Payments  Extraordinary ditto		4 3 7 0	21,439 700	16 4 2 2	1,243 7 11	154 15 2		
•	343					134 13 2		
	23,228 1	1 3	22,139	18 6	1,088 12 9			
Contra Cr.								
### 8. d.  23,228 11 3  By Repayment of Loan of #3000 (Balance) 2,000 0 0  By Repayment on account of Mortgage-debt 1,000 0 0  By Balance at the Bankers, December 31, 1889 1,242 13 11  27,471 5 2								

## Assets and Liabilities of the Society on December 31, 1889.

#### ASSETS.

	£	s.	d.
Animals in the Menagerie in the Regent's Park	25,886	0	0
Books in the Library at Hanover Square	14,444	0	0
Unsold Publications	4,424	0	0
Stock of the Zoological Record	1,516	0	0
Freehold Premises	25,000	0	0
Value of £1,900 London and South-Western Railway New 4			
per cent. Preference Stock (Davis Trust Fund)	2,365	0	0
Cash at the Bankers (Messrs. Drummond)	1,242	13	11
Arrears considered good:— $\pounds$ s. d.			
Rent for Refreshment-Rooms 60 7 6			
Rent for Rooms at Hanover Square 63 15 0			
Garden Sales 100 14 10			
Subscriptions 82 0 0			
Publication Sales			
Zoological Record Sales			
	443	4	9
	£75,320	18	8

#### LIABILITIES.

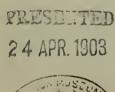
Rent and Taxes unpaid:—	£	s. d	. £	s.	d.
For the Gardens, say	<b>1</b> 69	8 10	)		
" Office, say	43	15 (	)		
_			213	3	10
Bills, &c., estimated at:—					
For the Gardens, say	659	14 13	l		
" Office, say	292	4 10	)		
-			951	19	9
Messrs. Drummond, Mortgage Debt	• • • • • •	•••••	6,000	0	0
			£7,165	3	7

We have examined the Vouchers and the accounts of receipts and expenditure, and certify that they are correct.

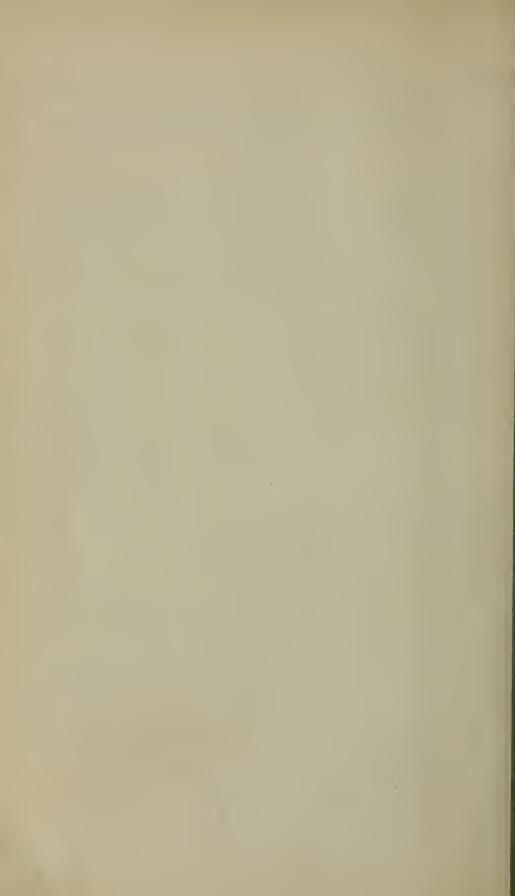
WALTER CROUCH.
PHILIP CROWLEY.
H. BERKELEY JAMES.
RICHARD LYDEKKER.
EUGENE W. OATES.
J. JENNER WEIR.

Committee of Auditors.

Zoological Society of London, 3 Hanover Square, W. February 27, 1890.







# PROCEEDINGS OF THE SCIENTIFIC MEETINGS OF THE ZOOLOGICAL SOCIETY OF LONDON.

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1868	9s.	12s		$\dots$ 45s.
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1882	98.	12s		$\dots$ 48s.
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<sup>\*</sup> No perfect copies in stock.

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## LISTS OF THE ANIMALS IN THE SOCIETY'S GARDENS.

- List of Vertebrated Animals Living in the Gardens of the Zoological Society of London. (First Edition.) 8vo. 1862. Price 1s. 6d.
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- List of Vertebrated Animals Living in the Gardens of the Zoological Society of London. (Third Edition.) 8vo. 1865. Price 1s. 6d.
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- Catalogue of the Library of the Zoological Society of London. (Fourth Edition.) 1887. Cloth, Svo. Price 4s.

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- The Zoological Record for the years 1864-1885. Twenty-two volumes. Price £5 10s.
- The Zoological Record for 1886; being Volume the Twenty-third of the Record of Zoological Literature. Edited by Frank E. Beddard, M.A., F.Z.S., Prosector and Davis Lecturer to the Zoological Society of London. Cloth, 8vo. 1887.

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- The Zoological Record for 1888; being Volume the Twenty-fifth of the Record of Zoological Literature. Edited by Frank E. Beddard, M.A., F.Z.S., Prosector and Davis Lecturer to the Zoological Society of London. Cloth, 8vo. 1890. Price 30s.

These publications may be obtained at the Society's Office (3 Hanover Square, W.), at Messrs. Longmans' (Paternoster Row, E.C.), or through any bookseller.









