NOTES

FROM THE

LEYDEN MUSEUM.

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FOUNDED BY THE LATE

Prof. H. SCHLEGEL,

CONTINUED BY

Dr. F. A. JENTINK,
Director of the Museum.

VOL. XI.

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MAMMALIA.

AVES.

PISCES.

INSECTA.

COLEOPTERA.

1) Correction: p. 204, line 13 (from bottom), for "*Nestra*" read "*Netrodera*".

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NOTE I.

DESCRIPTION OF A SUMATRAN SPECIES OF THE LUCANOID GENUS NIGIDIUS.

BY

C. RITSEMA Cz.

Nigidius Hageni, nov. spec. ♂.

This species, the second hitherto described from the Malayan Archipelago [1]), belongs to Parry's [2]) Section A (mandibles robust, with a recurved process at the base), *a* (prothorax punctate, with a central fovea), *(anterior angles of the prothorax non-emarginate), and is therefore allied to *cornutus* Macl., *distinctus* Parry and *obesus* Parry. — From the latter it differs by its narrower and more elongate shape, by its finer punctuation, by the otherwise shaped sides of the head and front angles of the prothorax, by the presence of a tubercle on the centre of the front margin of the thorax, etc. — From *cornutus* and *distinctus* it differs in the shape of the mandibles, of the sides of the head and of the prothorax; this latter shows moreover a much finer punctuation, whereas the central fovea is smaller and very shallow.

Length (without mandibles) 15 mm., breadth at the shoulders $5^3/_4$ mm. — Elongate, parallel, glossy black. — The head very densely punctured on the raised occipital parts, much finer and sparser on the anterior portion of the depressed part, the flattened sides vaguely punctured,

1) Notes Leyd. Mus. Vol. I (1879). p. 129: *Nigidius Lichtensteinii* Rits. from North Celebes.

2) Trans. Ent. Soc. London. 1873. p. 343.

their outer margin slightly thickened or thrown up. The mandibles show, as in *obesus* Parry [1]), at the base on the outside a blunt tooth or tubercle which is absent in *cornutus* Macl. and *distinctus* Parry; the top of the recurved process of the mandibles is faintly bifid which is not the case in the three allied species. The expansed sides of the head are rounded, but show a small emargination in their anterior half; in *cornutus* the sides of the head are entire, in *distinctus* strongly and widely emarginate, forming two distinct acute angles.

The prothorax is provided with a distinct tubercle in the centre of the anterior margin; the central fovea is rather small, shallow, and provided with a few large and deep punctures; the punctures on the disk are very fine and sparse, becoming larger and denser set towards the sides; the anterior lateral angles are not emarginate but slightly dilated; beyond the dilatation the sides are slightly bent inwards, consequently the sides of the prothorax are neither straight nor parallel as in *distinctus*. The scutellum is somewhat broader than in *distinctus* and likewise provided with a few punctures; the elytra are somewhat more elongate, but their sculpture quite agrees; they have likewise minutely pointed shoulders.

The undersurface is strongly and densely punctured, the legs however finer and sparser. The middle- and hind tibiae have each three acute spines about the middle externally.

Hab. Sumatra orient.: Deli (Dr. B. Hagen).

1) Trans. Ent. Soc. London. 1874. Pl. 3, fig. 5*a*.

NOTE II.

NEUE COLEOPTEREN AUS DEM LEYDENER MUSEUM.

BESCHRIEBEN VON

E. REITTER.

1. *Batrisus (Arthmius) cristatifrons*, n. sp.

Ferrugineus, nitidus, vix punctatus, parce subtilissime pubescens, antennis tenuibus thoracis basin superantibus, articulis intermediis haud transversis, vix oblongis, tribus ultimis sensim incrassatis, ultimo majore, subovato, apice acuminato; capite thorace latitudine, vix punctato, inter oculis bifoveolato, antice late transversim impresso, impressione antice parum elevata, carinula oblonga distincta in medio, antice et postice abbreviata, instructo; prothorace subcordato, vix transverso, sulco basali integro, lateribus ante sulcam breviter foveolato, haud canaliculato; elytris cum abdomine oblongo-ovatis, thorace duplo latitudinis, stria suturali integra, discoidali nulla, basi foveolis minutissimis tribus punctiformibus impressis, humeris rotundatis, callo humerali nullo; pedibus mediocribus, tibiis posticis antice tenuibus, postice sensim parum crassioribus et leviter arcuatis, apice breviter calcaratis. — Long. 1.6—1.7 mm.

Aus Brasilien (E. Heyne).

Dieser *Arthmius* ist mit *carinatus* Schauf. und *carinifrons* Schauf. wegen der Sculptur des Kopfes verwandt, allein er unterscheidet sich schon von beiden durch seine doppelt kleinere Körperform.

2. *Batrisus* (*Arthmius*) *cristulatus*, n. sp.

Rufus, nitidus, vix punctatus, parce subtilissime pubescens, antennis gracilibus, dimidio corporis longitudine, articulis intermediis haud transversis, alternis perparum magis incrassatulis, duabus penultimis apicem versus parum incrassatis, ultimo majore, ovato, apice acuminato; capite cum oculis fortiter granulatis et prominulis thorace fere latiore, inter antennas bifoveolato, foveolis cum sulco transverso magno et lato plus minusve conuexis, fronte in medio prope vertice breviter cristato; prothorace subcordato, nitido, haud transverso, sulco basali integro, sulco laterali nullo, sed foveola sublaterali perspicua; elytris thorace duplo latitudinis, cum abdomine ovato-gibbosis; stria suturali, suturam valde approximata, integra, discoidali nulla, basi trifoveolata, foveolis punctiformibus, humeris obtuse productis; femoribus clavatis, tibiis posticis apice breviter calcaratis. — Long. 1.7 mm.

Mas. fronte sulco transverso antice magis dense fulvo puberulo.

Ein ♂ aus Brasilien (E. Heyne).

Mit *Batr. lubricus* Reitt. und *dichrous* Reitt. verwandt, von dem letzteren durch die Färbung, von dem ersteren durch grösseren Körper und die Sculptur des Kopfes abweichend.

3. *Cyathiger juvencus*, n. sp.

Opacus, valde convexus, brunneus, fortiter profunde punctatissimus, pube fere inconspicua, subtilissime parce tectus, antennis grandibus, thoracis basin fere superantibus, clava uniarticulata maxima, subtus partim excavata, brevissime subovata, margine postice indistincte obtuse angulata, articulis 2—6 transversis; capite thorace vix angustiore, clypeo apice subemarginato, oculi sat parvuli, temporibus mediocribus, postice sensim subangustatis; prothorace valde gibboso, haud transverso, lateribus rotun-

dato, basi medio non cristato; elytris thorace valde latioribus et fere sesqui longioribus, cum abdomine ovalibus, stria suturali nulla, discoidali valde abbreviata, his basi foveola punctiformi impressa; abdomine aequali, haud carinata; pedibus minus robustis. — Long. 1 mm.

Sumatra occid.: Tambang-Salida (J. L. Weyers).

Von den 3 bekannten und verwandten Arten aus Borneo: *Simonis*, *Baumeisteri* und *Schaufussi* durch die äusserst kleine Körperform, und von *Simonis*, mit dem diese Art in der Punktur der Oberseite übereinstimmt, durch die doppelt längeren Fühler etc. verschieden.

4. *Hybocephalus clavatus*, n. sp.

Opacus, brunneus, confertissime punctatus, brevissime pubescens, pube sericea sat dense tectus, capite cum oculis thorace fere latioribus, inter oculos bipunctato, oculis grandibus, valde prominentibus, antennis robustis, thoracis basin longe superantibus, articulo primo suboblongo, secundo vix transverso, articulis 3—8 perparum angustioribus, valde transversis, ultimis tribus clavam valde abruptam maximam formantibus, articulo nono quadrato aut oblongum quadrato, decimo transverso, ultimo oblongo, apice oblique angustato et rotundato; prothorace subcordato, convexo, haud transverso; elytris thorace valde latioribus, convexis, lateribus leviter rotundatis, sutura anguste nitida, stria suturali nulla, discoidali brevissima, basi foveolis minutis, punctiformibus quatuor impressis; abdomine angustato, immarginato, segmento primo dorsali secundo plus quam duplo longiore, segmentis marginibus apice brevissime, magis dense fulvo-ciliatis; palpis pedibusque paullo dilutioribus. — Long. fere 2 mm.

Eine neue Art, welche sich durch ihre Grösse, die stark abgesetzte, abnorm grosse Fühlerkeule, deren Glieder eine verschiedene Länge besitzen, und durch die feine braungelbe, seidenartige Behaarung des Körpers von allen bekannten vortheilhaft auszeichnet.

Es liegt mir nur ein einzelnes, zu Tambang-Salida, West-Sumatra, von Herrn J. L. Weyers gesammeltes Exemplar vor.

Baeoceridium, nov. gen.

Fühler haarförmig, ihr drittes Glied klein. Halsschild vor der Basis ohne Querlinie. Schildchen nicht sichtbar. Flügeldecken mit feinem Nahtstreifen. Schenkel verbreitert, oval, flach, die Schienen kurz, die mittleren gebogen, alle deutlich bedornt und mit kräftigen Endspornen. Tarsen schlank, etwa von der Länge der Schienen. Oberseite äusserst dicht und fein, staubartig behaart. Körperform von *Baeocera* und *Scaphisoma*.

Unterscheidet sich von *Baeocera*, *Scaphisoma* und *Scaphicoma* durch die fein behaarte Oberseite, die verbreiterten Schenkel und die bedornten Schienen [1]).

5. *Baeoceridium depressipes*, n. sp.

Subovalis, latum, subdepressum, nigrum, subnitidum, confertim, subtilissime, vix perspicue punctulatum, pube brevissima, pulvinata, obscura sat dense obtectum; subtus cum pedibus pygidioque dilute brunneis, capite parvo, antice ferrugineo; antennis testaceis, pilosis; prothorace leviter transverso, antice valde angustato, angulis posticis subrectis, basi in medio lobatim producto; elytris apice sensim subrecte angustatis, apice truncatis, lateribus distincte tenuiter marginatis, linea suturali integra, simplicia, subtus subtiliter punctatum, brevissime minus dense fulvopuberulum. — Long. 3 mm.

Africa trop. occ.: Humpata (D. D. Veth & P. J. van der Kellen).

Scaphisoma quadratum Oberthür, Coleopt. novitates, I,

1) Eine Uebersicht der bekannten Gattungen der Scaphidier lieferte ich in den Verhandlungen des Naturf. Ver. Brünn. Tom. XVIII. pg. 1—15.

pg. 13, aus Transvaal, muss dieser Art nahe stehen; aber *quadratum* hat nach der Beschreibung eine kahle Oberseite. — Ueber die Beine wird nichts erwähnt.

6. *Scaphidium Picconii* Gestro, var. nov. *sexmaculatum*.

Scaph. Picconii simile sed antennarum articulo ultimo nigro, concolore, secundo haud infuscato, pedibus nigropiceis, tibiis anticis tarsisque ferrugineis. — Long. 4.2 mm.

Nigrum, nitidum, prothorace macula laterali, elytris macula magna subbasali rotundata aliaque apicali rufo-flavis.

Ist vielleicht eine von *Picconii* specifisch verschiedene Art. Die Fühlergeissel ist gelb. Flügeldecken fast reihenweise, deutlich punktirt. Halsschild und Flügeldecken mit den gewöhnlichen punktirten, tief eingedrückten Linien.

Sumatra occid.: Tambang-Salida (J. L. Weyers).

7. *Cerylon torosum*, n. sp.

Magnum, subdepressum, piceo-ferrugineum, nitidum, glabrum, antennis brevibus, robustis, ferrugineis, dimidio thoracis haud attingentibus, articulo tertio haud oblongo, capite parvo, fronte subtiliter parce punctata; prothorace subquadrato, coleopteris haud angustiore, longitudine distincte latiore, lateribus subrecto, angulis anticis subrotundatis, deflexis, posticis rectis, supra subtiliter punctato, prope lateribus valde profunde impresso, impressione antice paullo abbreviata, postice introrsum perparum oblique paullo latiora et basin attingente; scutello semirotundato, laevi; elytris oblongo-ovatis, subtiliter striatis, striis crenato-punctatis, lateralibus profundioribus, apice sensim magis abbreviatis, stria suturali integra, apice profunde impressa, interstitiis subtilissime subseriatim punctulatis; pedibus ferrugineis. — Long. 3.2 mm.

In der Nähe des Seitenrandes des Halsschildes befindet sich ein furchenartiger Längseindruck, der die Basis etwas

schräg nach innen erreicht und erst kurz vor der Spitze abgekürzt erscheint. Die Seitenränder erscheinen dadurch förmlich gewulstet.

Sumatra occid.: Tambang-Salida (J. L. Weyers).

8. *Stenelmis semirubrum*, n. sp.

Elongatum, parallelum, opacum, sanguineum, elytris nigris; supra vix perspicue pubescens, prothorace coleopteris parum angustiore, oblongo, subparallelo, antice perparum magis angustato, medio canaliculato, dorso utrinque prope basin oblique biimpresso; angulis anticis acutis productis, haud deflexis, posticis acuto-rectis, basi bisinuata; scutello sanguineo; elytris parallelis, apice breviter conjunctim acuminatis, supra leviter convexis grosse punctato-striatis, punctis striarum subquadratis, dense dispositis, striis valde approximatis, interstitiis alternis partim elevatis: interstitia 1 et 3 prope basin, 5 apicem versus carinato; sutura anguste, ante apicem magis late sanguinea. — Long. 3 mm.

Sumatra occid.: Tambang-Salida (J. L. Weyers).

Matt, blutroth, Flügeldecken schwarz mit schmal blutrother Naht; die rothe Färbung hinter der Mitte etwas ausgebreitet. Die abwechselnden Zwischenräume der sehr dichten und groben Punktstreifen zum Theile erhaben; so ist der erste und dritte an der Basis kielförmig; der letztere ist auch weiterhin, bis hinter die Mitte, als ein feineres Kielchen zu verfolgen; der 5. ist vor der Spitze als undeutlicher, der 7. als deutlicher Kiel vorhanden. Die Unterseite ist etwas heller roth und glänzender.

9. *Stenelmis Ritsemae*, n. sp.

Elongatus, parallelus, opacus, haud carinatus, nigrofuscus, pube brevissima, subfulva, sericea sat dense tectus, antennis tarsisque testaceis, antennarum articulo primo obscuriore, prothorace subquadrato, latitudine parum longiore, antrorsum paullo magis angustato, haud canali-

culato, confertissime obscure punctulato, dorso utrinque prope basin indistincte oblique impresso, angulis anticis acutis, subdeflexis, posticis fere rectis, basi bisinuata; scutello nigro, elytris thorace vix aut perparum latioribus, magis dense fulvo-puberulis, regulariter punctato-striatis, apice subacuminatis, subtus nigro-brunneus. — Long. 3.2 mm.

Sumatra occid.: Tambang-Salida (J. L. Weyers).

Der *Stenelmis bicolor* Reitt. (Notes from the Leyd. Mus. Vol. VIII. pg. 213) ausserordentlich ähnlich, aber durch den Mangel der Längsfurche in der Mitte des Halsschildes zu unterscheiden.

Die Behaarung auf den Flügeldecken ist etwas dichter und wohl auch länger, gelb seidenartig, wodurch diese heller gefärbt erscheinen als der übrige Körper.

NOTE III.

ON A NEW SPECIES OF THE LONGICORN GENUS ZONOPTERUS, HOPE.

BY

C. RITSEMA Cz.

Zonopterus consanguineus, nov. spec. ♀.

This species, of which I have three female specimens before me, is most nearly allied to and strongly resembles the type of the genus: *Zonopterus flavitarsis* Hope [1]). It is of the same size and general form, but the sides of the prothorax, which are distinctly bisinuate in *flavitarsis*, are more regularly rounded in the new species. The latter has moreover a narrower scutellum which is hollowed along the middle and has raised sides, whereas the sculpture by which it is covered is much less dense, even almost absent at the base. The femora, which are coarsely punctured in *flavitarsis*, have a much finer punctuation in the new species.

But besides by these structural characteristics the two species may be at once separated by the different distribution of the colours on the antennae: in *flavitarsis* the *four* basal joints and a spot at the base of the fifth, in the new species, however, the *six* basal joints are black. Moreover the first yellow band of the elytra is decidedly narrower in the new species than in *flavitarsis*.

Hab. Himalaya (coll. R. Oberthür).

1) Trans. Linn. Soc. London. Vol. XIX. p. 111; tab. X, fig. 7. Silhet. — I have seen male specimens of this species which have the abdomen ferruginous.

NOTE IV.

ON A REMARKABLE SYLLIS-BUD WITH EXTRUDIBLE SEGMENTAL ORGANS.

BY

Dr. R. HORST.

(Plate 1, and plate 2, fig. 1).

Among a number of pelagic Annelids, collected in the Malayan Archipelago by Mr. D. S. Hoedt, I met with some fragments of a *Syllis*-species, characterized as well by its large orange-coloured eyes, as by a series of distinct brown spots on each side of the body. The largest fragment has a length of about 13 m.m., and is composed of 47 segments; another specimen, that seems to have an anal segment, measured only 9 m.m., the number of its segments amounting to 41.

The head shows a deeply notched anterior margin, and is furnished dorsally and ventrally with two eyes of considerable size, resembling those of the *Alciopidae*; no cephalic processes are visible, neither tentacles nor palpi. Each foot (fig. 1) presents a dorsal and a ventral cirrus. The dorsal cirri are articulated and of a very different length, being in one segment thrice, in the other only once as long as the foot; the largest number of its articulations is 28. The ventral cirrus is smooth, acute conical, projecting somewhat beyond the apex of the foot. The feet are furnished with a fascicle of 4 to 6 bristles of the type, common amongst the Syllidae, with an elongated terminal appendage, bifid at the tip and beset with short

hairs at the inner border (fig. 2*a*); the length of this terminal piece is not the same in all bristles, being in some of them one third longer as in others. Besides, the setigerous region of the foot possesses a dorsal tuft of long, translucent, paddle-shaped epitocous bristles; the tip of these ordinarily is bend and sometimes has a fimbriated appearance (fig. 2*b*).

The condition of the anal region is open to doubt; in one specimen I observed an anal segment without feet or terminal cirri, but with wing-shaped processes along its lateral sides (fig. 3).

In the base of each foot, except in that of the first segment, a large dark-brown coloured sac is situated, which appears to be capable of being extruded through a small opening at the ventral surface; at least in some segments this sac was nearly totally everted, whereas in others I found only a part of it turned outward (fig. 4). The largest extruded pouch measures about 0.24 m.m. in length. Not doubting that these bodies represented the segmental organs, I tried to find out the internal openings of them. In consequence of the transparency of the body I succeeded to recognize the internal mouth of the first segmental organ, situated in the second segment (fig. 5). This mouth has the shape of a rather large, shallow funnel, corresponding by a short, broad duct with the body of the pouch. The wall of this duct appeared to be composed of cells and its external surface shows a thin layer of pigment; in the posterior region of the body the segmental duct was therefore recognizable as a thin brown stripe. In transverse sections (fig. 6) each segmental pouch appeared to have a somewhat renal shape, being provided with a notch at its base; this basal region usually is not pigmented, the remaining portion of the sac being covered with a thick layer of dark-brown pigment, which seemed to be enclosed in an external layer of polygonal cells. The internal surface (fig. 7) of the pouch is covered with a layer of high, cylindrical cells with a granular protoplasma and

of a glandular appearance; though in some of them I could recognize a very distinct oval nucleus, the limits of the cells could not always be distinguished. Between the external and the internal layer of cells a hyaline membrane is to be found. The internal cavity of the pouch is filled up with a mass of small granules, which are very darkly stained by the alum carmine. At first I presumed that this mass might consist of spermatozoa, which often have been met with in the nephridia of the Syllidae: however the matter could not be fixed, because I found no sexual products in the body cavity, and many of those granules appeared to me to extend into the interior of the epithelium cells, and therefore should be considered as the product of secretion of these cells.

I regret that I cannot enter more fully into the minute structure of these curious bodies, the material being very scanty and not in too best a state of preservation, after having been for about 25 years in alcohol.

In the figure 8 I have given two diagrammatical views of a segmental organ, to illustrate the supposed manner of extrusion of this organ; I presume that by the pressure of the fluid of the body cavity the largest portion of the segmental pouch is everted outward, while a small portion, fixed by the internal duct, remains into the body cavity. A muscular fascicle, which I believe could be observed sometimes, may have the function to withdraw the pouch and bring her back in the previous situation. Of course it remains somewhat questionable, whether the extruding of the pouches is a normal habit of the living animal, or whether it may be caused by the heavy contraction of the body, as it was plunged in the alcohol. However the last supposition seems not very probable to me, because in that case undoubtedly tearing of the internal parts should have taken place, which I could not observe. Moreover it may be remembered that this is not the only example of extrudible pouches observed in Annelids, for Ehlers found in the feet of several *Glycera*-species

bladder-shaped bodies, capable of being extruded, which he believes to be respiratory organs [1]).

The eyes (fig. 9) of our worm, though not so highly developed as those of the Alciopidae, however seem to have a more differentiated structure as the large eyes of *Genetyllis oculata* described by Mac Intosh [2]). There is no lens, but the total eye-cavity is occupied by a vitreous body, composed of exquisitely delicate fibrils, which eradiate from the fundus of the eye to the corneal surface. Immediately within the vitreous, and not always distinctly separated from it, is a layer of short fibres, thicker as those of the vitreous and darker stained, which undoubtedly corresponds to the rod-layer of the retina in the eye of the Alciopidae. Outside of the rod-layer we have a layer of orange-coloured pigment, resting on the outer layer of the retina, which contains numerous nuclei, while the cells are not well-defined.

Concerning the systematical position of these *Syllis*-specimens, there can be no doubt that they are originated by budding; this may be concluded from the presence of bristles in the first segment of the body, from the total absence of tentacular processes on the head, from the structure of the alimentary tract, having no proper pharynx and proventriculus. This may also be presumed from the extraordinary development of the segmental organs, for we know from Ehlers' researches, that in the posterior segments of the body of the Syllidae, which contain the generative products, the segmental organs become much enlarged [3]).

Albert mentions also about the segmental organs of the swimming bud of *Haplosyllis spongicola* Gr., that their middle region acquires a glandular appearance and much

1) Die Borstenwürmer, p. 659 and 676.
2) Challenger Report, Zoology, Vol. XII, p. 170, pl. XXXIII, A, figs. 1—8.
3) loc. cit. p. 231.

increases in size, occupying accordingly a good deal of the body cavity [1]).

Segmental organs coloured by a dark pigment seem to have been observed also by Grube in *Odontosyllis hyalina* [2]), a worm which probably also must be considered as a bud; here he found in the posterior region of the body, situated on each side of the nerve-cord, black coiled tubes, opening on the ventral side. However by the shape of its bristles, and its smooth dorsal cirri, this species is quite different from our specimens.

1) Mittheil. aus der Zool. Station zu Neapel, Bd. VII, p. 20.

2) Beiträge zur Anneliden-fauna der Philippinen, p. 129. Taf. VII, fig. 1.

EXPLANATION OF THE PLATES.

PLATE 1.

Fig. 1. Foot of the *Syllis*-bud. × 90 diam.

" 2. *a*. Ventral bristle; *b*. tips of three dorsal epitocous bristles. Enlarged.

" 3. Anal region of one specimen. × 36 diam.

" 4. Ventral view of three feet, showing the different state of extrusion of the segmental organs. × 36 diam.

" 5. Segmental organ of the second segment with its funnel. Highly enlarged.

" 6. Lateral half of a transverse section of the body, showing the position of the segmental organ;
c. nerve-cord; *i*. intestine; *n*. segmental organ.

" 7. Transverse section of a segmental organ. × 90 diam.

" 8. Diagrammatical view of a segmental organ: *a* in state of rest;
b. in state of extrusion; *e*. epidermis; *m*. muscle.

" 9. Transverse section (not quite vertical) through the head, showing one dorsal and one ventral eye;
p. pigment-layer of retina; *r*. rod-layer of the same; *re*. layer of retinal cells; *v*. vitreous body. × 90 diam.

PLATE 2.

Fig. 1. Ventral view of the head and anterior region of a *Syllis*-bud, showing the extruded segmental organs. × 10 diam.

NOTE V.

ON FILARIA-SPECIMENS FROM THE RIGHT VENTRICLE OF THE HEART OF FELIS ONCA.

BY

Dr. R. HORST.

Some time ago Mr. J. H. Spitzly kindly forwarded to our Museum a few bottles with parasitic worms, collected by him in Surinam. Among them there was a bottle, containing some Nematodes found in the heart of a young female Jaguar, that was killed by a hunter. In reference to these parasites Mr. Spitzly wrote to me: »on incising the remarkably thin walls of the right ventricle, I was astonished to find the whole cavity fully packed with long white worms, laying in bundles more or less parallel to each other in the direction of heart's apex to endings of pulmonary arteries. By slitting open the pulmonary arteries I found that some of them extended from the heart along the arteries far into the substance of the lungs."

These worms bear a great resemblance to *Filaria inmitis* Leidy, observed by several investigators in the right ventricle and the pulmonary arteries of our common dog. Having no individuals of this species at my disposal, the specimens could only be identified from the short description, published by Schneider in his »Monographie der Nematoden" pag. 87 [1]); therefore the Jaguar-filaria's afterwards perhaps may prove to belong to another species. However because Nematodes never have been mentioned from the heart of *Felis onca*, as far I am aware off, I thought it not without interest to call the attention of helminthologists on this fact.

1) I much regret that I had no opportunity of consulting Welch's description of the thread-worm, in the Monthly Microscopical Journal, Vol. X.

NOTE VI.

ON A COLLECTION OF MAMMALS FROM EAST-SUMATRA.

BY

Dr. F. A. JENTINK.

November 1888.

Dr. B. Hagen, the well known passionate naturalist, lived several years in Tandjong-Morawa, later in Medan, East-Sumatra, Deli. He published in »Das Ausland, 1881" a paper, entitled »Vorläufige Mitteilungen über die Fauna Ost Sumatras." In this paper he solely treated the Mammals, especially based upon the collections made by himself and by his hunters. Afterwards he presented his whole immense collection to the Leyden Museum, several thousands specimens of Mammals, Birds, Reptiles and Insects.

Up to the investigations made by Dr. Hagen about nothing was known concerning the Mammals of the eastern part of Sumatra, and so I think that a review of his collections will be very wellcome to naturalists, the more as the Fauna of Sumatra is one of the bases upon which Wallace built his wide-stretching speculations.

Wallace (the Malay Archipelago, 1869) made inquiries about the Orang-Utan (not Orang-Outang as Blanford writes, see the Fauna of British India, a. s. o., Mammalia, Part I, 1888, p. 4), but none of the natives had ever heard of such an animal, nor could he find any of the Dutch officials who knew anything about it. He concluded therefore, that it does not inhabit the great forest plains in the East of Sumatra, but is probably confined to a limited region in the north-west. Von Rosenberg (Der Malayische Archipel, 1878) related: »der Orang-

Utan wird nur in den flachen, sumpfigen Küstenwäldern angetroffen, welche nördlich von Tapanoli das Land bis Singkel überziehen und ihrer Unzugänglichkeit wegen nur selten von einem menschlichen Fusse betreten werden." Some years ago there was living in the Rotterdam-Zoological Gardens an Orang-Utan from the interior of Padang, West-Sumatra. In 1875 my brother-in-law hunted in Langkat, Deli, East-Sumatra, a very stout Orang-Utan, but unhappily the chinese-workmen had cut it to pieces before he could prevent it.

Dr. Hagen wrote in *Das Ausland*: »Unter den Affen müssen wir billigerweise zuerst erwähnen den Orang-Utan. Jeder Malaye hier auf der Ostküste kennt seinen Namen, Mawas oder Mauas, aber Alle stimmen ebenso darin überein, dass er auf der Ostküste nur etwa noch in der Provinz Oberlankat gegen Atjeh hin vorkomme. Vor einigen Tagen noch besuchte mich ein Malaye, der bei seinen Wanderungen in den naheliegenden Bergen, etwa vier Tagereisen von Tandjong-Morawa, ein Mawas-paar in einer tiefen Waldschlucht entdeckte, und sich anheischig machte, eines der Thiere zu erlegen. Einer meiner Diener, ein gesetzter, glaubwürdiger Malaye aus der Gegend von Kap Tamian, erzählte mir, vor mehreren Jahren habe ein grosser Mawas aus seinem Kampong ein kleines Kind ergriffen, mit seinen Armen erdrückt und bei der sofort angestellten Verfolgung sich mit der Leiche auf einen nahen, nicht besonders hohen Baum geflüchtet, allwo er von den wütend nachsetzenden Malayen, worunter auch mein Gewährsmann sich befand, mit Spiessen und spitzen Bambus erstochen wurde. Das der Orang-Utan früher auf der Ostküste viel häufiger vorkam, ist für mich schon wegen der allgemeinen Kenntniss seines Namens ausser allem Zweifel; von dem Schrabrakentapir z. B., der auch nur sehr lokal vorkommt, hat kein Eingeborner hiesiger Gegend eine Ahnung."

From the foregoing facts we are allowed to conclude, that the Orang-Utan is to be found along the coasts of the northern half of East- and West-Sumatra.

In Dr. Hagen's collections are several Mammals hitherto not recorded from Sumatra, but known from Borneo, f. i. *Arctogale stigmatica*, *Hemigalea derbyana*, *Herpestes brachyurus*, *Cynogale bennettii*, *Ptilocercus lowii* and *Rhizomys dekan*.

Leaving the bats out of consideration we see that the more our knowledge increases the more the uniformity of the Borneo- and Sumatra-fauna comes to light, but at the same time it appears that the Mammalian Fauna of East-Sumatra agrees much more with the Borneo- than with the West-Sumatra Fauna. West-Sumatra has several species hitherto not found in East-Sumatra and Borneo, so Borneo has several species not recorded from West-Sumatra, but with two or three insignificant exceptions East-Sumatra has all its Mammals in common with Borneo, meanwhile none of the above named characteristic species in Hagen's collection from Deli has been found in the tolerably well known Western half of Sumatra. Dr. Hagen observed in Deli, besides the species enumerated below and the above mentioned *Simia satyrus*, the following species: *Felis tigris*, n. i. *Rimau* or *Harimau*; *Felis pardus*, var. *melas*, n. i. *Rimau kombang*; *Ursus malayanus*, n. i. *Bruang*; *Sorex* sp.? and *Mus* sp.? n. i. *Tikus*. With five exceptions all the Mammals, collected by Dr. Hagen, are from Deli, Serdang, Tandjong-Morawa; one is from the Toba-plains, and four are from Bengkalis and Siak, the two latter localities opposite Singapore.

Simiae.

1. *Hylobates syndactylus* Cuvier.

Tandjong-Morawa, Marolam and Bander Labuan. n. i. *Imbau*, rarely *Siamang*.

Hab. Sumatra and perhaps nowhere else, as the localities, Southern Tenasserim and Malayan Peninsula, given by Helfer and Wallace are very doubtful.

2. *Semnopithecus albocinereus* Schinz.

Dr. Hagen (Das Ausland, 1881, p. 554) wrote: »zwei blaugraue *Semnopitheci* mit langen Schwänzchen und weisser Brust und Bauch. Der eine, von den Eingebornen *Lutong* genannt, ist sehr häufig, der andere, mit fleischfarbenen Gesicht, dessen obere Hälfte schmutzig ultramarin blau ist, mit samtschwarzen Hand- und Fuss-tellern, ist ebenfalls nicht selten, aber sehr scheu und verborgen. Sein Jugendkleid ist goldgelb. Er heisst bei den Malayen *Gjak-gjak* wegen seines Geschreis, das, langsam beginnend, allmählich schneller wird; es ist ein lautes, helles, gellendes Gjak-gjak-gjak-gjakjakjakjak. Morgens und gegen Abend hörtt man dasselbe am häufigsten."

In Dr. Hagen's collections from Tandjong-Morawa are four skulls labeled *Lutong*, and three labeled *Gjak-gjak*. The *Lutong*-skulls agree with the skulls of *Semnopithecus albocinereus* in our Museum, a monkey with white breast and belly and known from Malacca and East-Sumatra.

Prof. Schlegel (Simiae, 1876, p. 39) observed: »le squelette du *S. albocinereus* diffère de celui du *S. mitratus* en ce qu'il offre une paire de côtes de plus, savoir treize paires", but here he was not correct, for one of the skeletons (Schlegel, N°. 9) has 13 pairs of ribbs and the other (Schlegel, N°. 10) presents 12 pairs and no trace of a 13th pair. So that in this, like in the next species, the number of ribbs is very variable.

The skulls *f*, *g* and *h* (Jentink, Catalogue Ostéologique, 1887, p. 10) belong to *S. albocinereus* and not to *S. ferrugineus*.

3. *Semnopithecus melalophus* Raffles.

Tandjong-Morawa.

Prof. Schlegel (Simiae, 1876, p. 42) separated under the name *Semnopithecus ferrugineus* the Monkeys from Padang from their congeners living in the neighborhood of

Bencoelen and Indrapore, and distinguished exteriorly by a slight difference in tinge, but according to Schlegel *S. ferrugineus* has 13 pairs of ribbs, meanwhile *S. melalophus* presents 12 pairs.

Our Museum procured from the Dutch Scientific Expedition to Sumatra skins and skeletons of a Monkey, from the interior of Padang, belonging to *S. melalophus*. The skeletons (Jentink, Catalogue Ostéologique, 1887, p. 10) however present the following numbers of ribbs: sk. *b* has 13 ribbs to the left side and 12 to the right side, sk. *c* has 12 to the left and 13 to the right, sks. *d* and *e* present 12 ribbs to the right and 12 to the left. Moreover in sk. *c* of the so called *S. ferrugineus* I find 13 ribbs to the right and 12 to the left, and not 13 pairs of ribbs as Schlegel stated in his Catalogue. There is thus no reason to accept Schlegel's new species, as the number of ribbs, being preponderant in Schlegel's opinion, is so very inconstant.

The young of Hagen's Monkey being *golden-yellow* and the skulls of the adult specimens agreeing very well with the skulls in our collection, I refer these individuals to the above named species, so that *S. melalophus* now is known from the Malayan Peninsula and from East- and West-Sumatra.

4. *Cercocebus cynamolgos* Schreber.

Tandjong-Morawa. n. i. *Kara*.

In our Museum are specimens from Rangoon, Cambodga, Malacca, Sumatra, Borneo, Java, Timor and the Philippines.

5. *Macacus nemestrinus* Desmarest.

Tandjong-Morawa. n. i. *Bru*.

Hab. Tenasserim, Malayan Peninsula, Sumatra, Banka and Borneo.

6. *Nycticebus tardigradus* Linnaeus.

Tandjong-Morawa. n. i. *Bukang* or *Piucha tingaling*.

Hab. Bengal, Malayan Peninsula, Sumatra, Borneo and Java.

Although I cannot accept with Schlegel a separation of the Java-specimens under the name of *Nycticebus javanicus* Geoffroy, as I find no difference whatever in the skulls or other bony parts and as the supposed difference in color is merely a difference in tinge, it however is a fact, that, at least in our skeletons — two of *N. tardigradus* and five of *N. javanicus* — the number of dorsales and lumbares is 24 in the Java-specimens, meanwhile it is 22 in the true *N. tardigradus* (Schlegel, Monographie, Simiae).

7. *Galeopithecus volans* Linnaeus.

Tandjong-Morawa.

Hab. Tenasserim, Siam, Malayan Peninsula, Sumatra, Banka, Borneo, Java and the Philippines.

Carnivora.

8. *Felis macrocelis* Temminck.

Tandjong-Morawa. n. i. *Rimau kitchil* or *akar*.

Known from Sumatra and Borneo.

9. *Felis planiceps* Vigors and Horsfield.

Deli.

Hab. Sumatra and Borneo.

10. *Felis minuta* Temminck.

Tandjong-Morawa.

Hab. Bengal, Ceylon, Siam, Malayan Peninsula, Sumatra, Borneo and Java.

11. *Paradoxurus musanga* Gray.

Tandjong-Morawa.

Hab. Burma, Siam, Malayan Peninsula, Sumatra, Borneo, Java, Bavean-islands, Timor, Ceram and Sulla-Bessie.

12. *Paradoxurus leucomystax* Gray.

Toba-plains.
Known from Sumatra and Borneo.

13. *Arctogale stigmatica* Temminck.

Tandjong-Morawa.
As I remarked in the Notes from the Leyden Museum, 1885, p. 34, this species was formerly only known from Borneo.

14. *Hemigalea derbyana* Gray.

Tandjong-Morawa.
Gray described in 1837 an animal from an unknown locality under the name of *Paradoxurus derbyanus* and another new species, *Paradoxurus? zebra*, from a drawing. In the »Verhandelingen, 1839—1844", an animal has been figured which had been described in 1838 by S. Müller as *Viverra boiei* from Borneo. Later on (P. Z. S. L. 1864) Gray united his two new species with Müller's species under the name of *Hemigalea hardwickii*: under that title, *Viverra hardwickii*, Gray had described a drawing said to have been made after an animal from Malacca, found in the collection of Major Farquhar, cf. Spic. zool. 1830.
In our Museum are specimens from the two certain localities, Sumatra and Borneo.

15. *Herpestes brachyurus* Gray.

The *Musang turon*, as this species is called on the Malayan Peninsula, seems to be a very rare animal in the countries where it lives, or very difficult to procure, as only the following few specimens have been recorded.
The type-specimen is in the British Museum and described by Gray in 1837 as inhabiting Indian islands. Cantor, 1846, recorded this species in his Catalogue from the Ma-

layan Peninsula. Another specimen, figured by Gray in 1849, was one of the scientific results of the Voyage of the Samarang; it had been collected in Borneo. The lower jaw of a skull of another specimen has been figured by de Blainville in his Ostéographie, but he did not mention the origin.

I have a third locality to add to the two hitherto known ones, viz.: Siak, as Dr. Hagen presented to the Museum a beautiful adult female with its skull from that locality. Length of the skull 91 mm., width at zygomatic arches 52 mm.; also about the dimensions given by Gray in his Catalogue of Carnivorous a. s. o. Mammalia, 1869, p. 154.

16. *Cynogale bennettii* Gray.

Gray described this species after a specimen in the British Museum from Sumatra, as he wrote in 1837; it seems however that the named locality was incorrect, for in the Catalogue of the Bones of Mammalia, 1862, the skull, belonging to a specimen of this species in the British Museum had Borneo for locality, agreeing with the habitat given by Gray for the specimen in the Catalogue of Carnivorous a. s. o. Mammalia, 1869. In the »Verhandelingen, etc." has been described and figured another specimen, under the name of *Potamophilus barbatus*, too from Borneo. So that up to the year 1882 Borneo was the certain patria. In 1882 however Dr. Hagen procured a young specimen from Tandjong-Morawa, Deli. Its skull is in our Museum.

17. *Putorius nudipes* Cuvier.

Specimens from Tandjong-Morawa.

It is not very clear why Dr. Gray changed Cuvier's specific title and called the species *Gymnopus leucocephalus*, see P. Z. S. L. 1865, p. 119.

Known from Sumatra and Borneo.

18. *Aonyx leptonyx* Horsfield.

Tandjong-Morawa. n. i. *Bomprang.*
Known from Sumatra, Borneo and Java.

Ruminantia.

19. *Russa equina* Cuvier.

Tandjong-Morawa. n. i. *Rusa.*
Known from Sumatra, Banka and Borneo.

20. *Cervulus muntjac* Zimmermann.

Tandjong-Morawa. n. i. *Ketjang.*
Known from Sumatra, Borneo and Java.

21. *Tragulus kanchil* Raffles.

Tandjong-Morawa.
Known from Sumatra, Malacca and Java.

22. *Tragulus napu* Cuvier.

Tandjong-Morawa.
Known from Sumatra, Banka and Borneo.

Pachydermata.

23. *Sus vittatus* S. Müller.

Tandjong-Morawa. n. i. *Babi-Utan.*
Known from Sumatra and Java.

24. *Cerathorhinus sumatrensis* Cuvier.

Tandjong-Morawa. n. i. *Balsdak.*
Hab. Sumatra and Borneo.

25. *Elephas sumatranus* Temminck.

Tandjong-Morawa. n. i. *Gadja.*
Known from Ceylon, Sumatra and Borneo.

Rodentia.

26. *Pteromys nitidus* Geoffroy.

Tandjong-Morawa. n. i. *Gurupung.*

There are in our Museum specimens from Sumatra, Malacca, Borneo and Java.

Besides skulls, unmistakebly belonging to this species, there is in Dr. Hagen's collection a skin, *without skull*, which I refer with some doubt to this species. It is apparently a young individual, as the feet are too large in proportion to the rest of the animal. Head, upperparts, tail and feet are black with a reddish tinge, underparts brownish red. As there is only a single species of *Pteromys* known as inhabiting Sumatra, viz.: *Pteromys nitidus*, and as Dr. Hagen collected this species too in Tandjong-Morawa, so I regard his young specimen as representing a black variety of *Pteromys nitidus* Geoffroy. Length of head and body 280 mm., length of tail with tuft 440 mm., length of hind foot with claws 57 mm.

27. *Sciuropterus hageni* n. sp.

Deli.

This new species is a good deal larger than *Sciuropterus setosus* Temminck (*Sciuropterus pearsonii* Gray) from Sumatra, nay than any other *Sciuropterus*-species from the Malayan Archipelago and thus at first sight is distinguished by its size.

Length of head and body	. . .	313 mm.
» » tail with tuft	. . .	245
» » hindfoot	. . . . .	45
» » skull	. . . . .	54
» » nasals	. . . . .	16
» » palate	. . . . .	25
» » upper molar series	.	11
Width at zygomatic arches	. .	34

In the upper molar series the small first premolar is present. Incisors orange colored.

Hairs of head and upperparts striking coarse, longer on the parachute; tail markedly distichous.

Hairs of upperparts of head dark slaty, brown tipped, with a subapical white ring; a broad band of black hairs runs from the middle of the nose round the eyes to the ears. Hairs of back dark slaty, brown tipped, with a yellow brown subapical ring. Hairs of parachute and legs black with a broad red-brown tip; sides of parachute fringed with pure white hairs. Feet brown.

Underparts of head, sides of neck, belly and inside of legs of a pure white, with a reddish tinge however towards the abdomen and hind feet. The hairs of the tail are white at their base and have brown colored tips.

28. *Sciurus bicolor* Sparrmann.

Deli.

Hab. Tenasserim and Malayan-Peninsula (Oldfield Thomas), Sumatra and Java.

29. *Sciurus albiceps* Desmarest.

Bengkalis.

Known from the Malayan-Peninsula, Sumatra, Borneo and Java.

30. *Sciurus tenuis* Horsfield.

East-Sumatra.

Hab. Malayan-Peninsula, Sumatra and Borneo.

31. *Sciurus prevostii* Desmarest.

Siak.

Known from the Malayan-Peninsula, Sumatra, Banka, Biliton, Borneo, Java and Celebes.

32. *Sciurus badjing* Kerr.

Deli.

In our Museum are specimens from China, Nepal, Malayan-Peninsula, Sumatra, Borneo, Java and Celebes.

33. *Mus decumanus* Pallas.

Siak.

A very badly preserved skin, without skull. It is reddish brown, tail blackish. I think it to be *Mus decumanus*.

34. *Rhizomys dekan* Temminck.

Tandjong-Morawa.

Known from Siam, the Malayan-Peninsula and Sumatra.

This species had hitherto not been found to exist in Sumatra. A skull in Dr. Hagen's collection demonstrates that the species is living there.

35. *Acanthion mülleri* Jentink.

Tandjong-Morawa.

Hab. Sumatra.

36. *Acanthion javanicum* Cuvier.

Tandjong-Morawa. n. i. *Lanta*.

Hab. Sumatra (Borneo?) and Java.

Insectivora.

37. *Tupaja javanica* Horsfield.

Tandjong-Morawa.

In our Museum are specimens from Sumatra, Banka, Borneo and Java. In the British Museum are specimens from Salangore and Johore (Oldfield Thomas, P. Z. S. L. 1886, p. 73).

38. *Tupaja tana* Raffles.

Deli.

Known from Sumatra and Borneo.

39. *Tupaja ferruginea* Raffles.

Deli.

Known from Tenasserim and the Malayan-Peninsula (apud Oldfield Thomas, l. c.), Sumatra, Borneo and Java.

Dr. Günther, P. Z. S. L., 1876, p. 427, distinguished three varieties of *Tupaja tana* Raffles, viz.: *tana*, *speciosa* and *chrysura*. The latter is from the Mainland of Borneo, opposite to Labuan and figured on Plate XXXVI. I find in Dr. Hagen's collection a specimen of *T. ferruginea* with a golden yellow tail, with a reddish tinge, like Dr. Günther's variety of *T. tana*. If naturalists think it necessary to give a name to every variety of a given species, what is impracticable in my view, the mentioned specimen may be entitled *Tupaja ferruginea*, var. *chrysura*.

40. *Ptilocercus lowii* Gray.

Tandjong-Morawa.

Known from Sumatra, Banka and Borneo.

Dr. Hagen's specimen is the first representative of the species in Sumatra. Cf. Notes from the Leyden Museum, 1885, p. 37.

41. *Gymnura rafflesii* Vigors and Horsfield.

Tandjong-Morawa.

Hab. Malayan-Peninsula and Sumatra.

Chiroptera.

42. *Pteropus edulis* Geoffroy.

Tandjong-Morawa.

In our Museum are specimens from Malacca, Sumatra, Banka, Borneo, Celebes, Philippine-islands, Java, Bali, Lombock, Timor and Banda.

43. *Macroglossus minimus* Geoffroy.

Deli.

In our Museum are specimens from Sumatra, Java, Celebes, Amboina, Arou-islands, and New Brittain. According to Dobson from the Himalaya through Burma to North- and West-Australia.

44. *Cynopterus marginatus* Geoffroy.

Deli and Siak.

In the Leyden Museum are specimens from Ceylon, Bengal, Sumatra, Borneo, Java, Celebes, Sanghi-islands, and Sulla-Bessie.

45. *Rhinolophus affinis* Horsfield.

Deli.

In our Museum are specimens from Calcutta, Sumatra, Java and Celebes. According to Dobson also known from the Himalaya to Cape Comorin, Ceylon and Borneo.

46. *Vesperus pachypus* Temminck.

Deli.

The types from Java are in our Museum, and one specimen from Celebes.

47. *Vesperugo abramus* Temminck.

Deli.

In our Museum are specimens from Brunswick, St. Gothard, Sarepta, Triest, Madagascar, South-Africa, Japan, Ceylon, Java, Timor, Ceram and the Arou-islands.

48. *Emballonura semicaudata* Peale.

Deli.

Known from Goram, Pelew, New Hebrides, Fiji-islands and Navigators' islands.

49. *Nyctinomus mops* Cuvier.

Deli.

A very rare species, only known from Sumatra.

NOTE VII.

ON HELOGALE PARVULA, SUNDEVALL.

BY

Dr. F. A. JENTINK.

November 1888.

Helogale parvula Sundevall.

Dr. Gray created in 1861 (P. Z. S. L. p. 308) the genus *Helogale* and thus separated three small species of African Mungooses with the dental formula I. $\frac{3}{3}$, C. $\frac{1}{1}$, P. M. $\frac{3}{3}$, M. $\frac{2}{2} = 36$, from the other true *Herpestidae*. The three species are: *Herpestes parvulus* Sundevall (1846), collected by Wahlberg in the neighborhood of Natal, *Herpestes undulatus* Peters (1852) from Mossambique, and *Ichneumon taenionotus* Smith (1835) from S. Africa (Natal apud Gray). A skull (P. Z. S. L. 1861, p. 308), belonging to a skeleton (Catalogue of the bones, 1862, p. 76) of one of Smith's types, was in the British Museum, but it seems that the skeleton has been lost, for in P. Z. S. L., 1864, p. 565, Gray states that in the British Museum is a skull only; meanwhile the teeth had increased in number, from 36 (in 1861) to 40 (in 1864)! Now Gray thought it correct to give another genus-name to that highly interesting skull and called it *Ariela taenionota* and under the very name he cited it in the Catalogue of the Carnivorous a. s. o. Mammalia, 1869, p. 163. Later on the number of teeth again decreased from 40 (in 1869) to 36 (in 1882) and finally Oldfield Thomas (on the African Mungooses, P. Z. S. L. 1882, p. 90) placed it under the synonyma of *Crossarchus fasciatus* Desmarest, where I hope that it will be buried for ever.

As Oldfield Thomas observed in the above named excellent monograph, there are in most of the larger European Museums typical specimens of Sundevall's *Herpestes parvulus*; so we possess too one of these type-specimens with its skull.

In comparing this skull with the figure of the skull of *Helogale parvula* on p. 308 (P. Z. S. L. 1861) or with that given by Peters on pl. XXV (Reise nach Mossambique) of *Herpestes undulatus*, I find no difference at all. Oldfield Thomas wrote (l. c., 1882) that in *H. parvula* the skull is larger and the last molar smaller in proportion, but Thomas gives the length of a skull of *H. parvula* = 1.82 inches, meanwhile Peters said that the skulls of the types of *undulatus* measure 48 and 46 mM., or 1.9 and 1.82 inches (the Taita-skull, see Thomas, seems to be $^1/_{10}$ of an inch larger), so that I state that there is no difference in length between the skull of *H. parvula* in the British Museum (and I may add also in the Leyden Museum, as our skull measures too 1.82 inches) and that of one of the types of *H. undulata* in the Berlin Museum; the other in the Berlin Museum being somewhat larger and the Taita-specimen in the British Museum is a still larger specimen. The difference in size between the last molars of the two supposed species is too small to take in consideration (*H. parvula*, *a* has $M^2 = 4.0$, *b* has $M^2 = 4.1$, and *H. undulata*, *a* has $M^2 = 4.0$, cf. Thomas, P. Z. S. L., 1882, p. 80).

According to Gray, Peters and Thomas there is however a difference in color between *H. parvula* and *H. undulata*, but I remember that it is a well known fact that there is often an enormous variation in color in the different specimens of a given species belonging to the *Herpestes*-group (see Temminck and Oldfield Thomas), so that color alone is in this case a character of second order in distinguishing species.

In my opinion therefore there is known only a single species of *Helogale*, *H. parvula* Sundevall; this opinion is

supported by two specimens, belonging to a *Helogale*-species, received the other day from Gambo or Gambos (interior of Mossamedes) by Mr. v. d. Kellen.

One of these specimens, the skin and skeleton of an adult male, has the skull exactly agreeing in size and shape with the skull of Sundevall's type-specimen in our Museum, but the color of the fur is less dark, more reddish-yellow, than in Sundevall's: the other, a much younger individual with a not yet fully developed dentition, has the fur darker tinged than v. d. Kellen's adult one, somewhat intermediate between the latter and Sundevall's. The skeleton presents 7 cervicales, 13 costales, 7 lumbares, 3 sacrales and 28 caudales; that are the same numbers as Peters found in the skeleton of his *Herpestes undulatus*, the only difference being 3 caudales less in Peters' specimen.

The habitat of *Helogale parvula* is perhaps the whole Southern part of Africa, as we know it from Mossambique, Natal and the interior of Mossamedes.

NOTE VIII.

ON A NEW OWL FROM LIBERIA.

BY

J. BÜTTIKOFER.

Amongst the last birds received from Mr. Stampfli, there was a very peculiar new Owl, which I propose to name *Bubo lettii*, after its discoverer Mr. Lett, our former landlord and huntsman at Schieffelinsville. This Owl shows no affinity to any of the Owls at present known from the old world, but might rather be compared with the West-Indian *Bubo cristatus*, on account of the exceedingly long ear-tufts and the white alar spots.

General color rufous, forehead, superciliary streak, chin and upper throat pearly gray, slightly vermiculated with earthy brown, which latter color predominates on occiput, hind neck and ear-tufts. Eye-lashes and feathers in front of the eye black, cheeks and ear-coverts rufous, with darker vermiculations. Sides of throat white, each feather broadly tipped with black. Mantle, back, rump and upper tail-coverts uniform rufous, tail rufous, with seven broad black bars. Wings rufous, the quills and wing-coverts broadly barred with black. Four of the median wing-coverts have a large white oval spot on the outer web near the tip. Lesser wing-coverts and primary coverts almost black, tipped with rusty brown; scapulars rufous, strongly vermiculated with pearly and dark brown, the outer ones white on the outer web, with a broad black terminal edge, forming together a conspicuous longitudinal white row. Under wing-coverts rufous, with a patch of dark brown near the edge of the wing. Entire chest rufous, with paler vermiculations, breast and flanks pale fulvous, with very conspicuous dark brown shaft-streaks, abdomen, vent, thighs, tarsi and under tail-coverts uniform fulvous. Iris, bill and toes yellow, claws flesh-color. Wing 28 cm., tail 15, tarsus 3,5, middle toe without claw 3, culmen in straight line 2,6.

NOTE IX.

DESCRIPTION D'UNE NOUVELLE PÉDICULINE.

PAR

E. PIAGET.

(Plate 2, fig. 2).

Laemobothrium setigerum, nov. spec.

La tête conique, tronquée, émarginée en avant et pourvue de soies aplaties, moins nombreuses chez le mâle et qui caractérisent cette espèce (fig. *a* grossie); les antennes courtes, entièrement cachées sous la protubérance latérale, le 3e article étranglé, le 4e arrondi avec de fins poils sensoriaux (fig. *c*); les yeux doubles avec un fin poil; les tempes un peu aiguës en arrière, avec quelques longues soies et une rangée de poils en arrière de l'oeil; l'occiput rentrant et saillant au milieu avec une bande en avant presque parallèle au bord; deux bandes un peu convergentes en arrière, allant de l'occiput à l'extrémité antérieure et se bifurquant pour contourner la tempe; les mandibules relativement petites et très aiguës, avec une fine bande ondulée en avant et une autre transverse, semicirculaire en arrière; les palpes courtes et épaisses, 4-articulées, avec un mamelon à la base (fig. *b* grossie), le 4e article le plus long et légèrement coloré.

Le thorax composé de deux segments: le prothorax élargi vers le milieu, avec quelques soies et une bande qui contourne l'avant et s'arrête après le milieu; au prosternum une tache médiane et deux bandes en ς qui bordent la base des hanches antérieures; le métathorax en cloche, avec un sillon médian incolore et en dessous des bandes qui entourent les hanches; le bord postérieur est rentrant. Les pattes longues et robustes; les fémurs avec une tache dorsale et terminale et une série de soies implantées sur des pustules incolores; les tibias recourbés à la base, clavifor-

mes et obliquement tronqués à l'extrémité, avec une série de poils au bord interne et quelques soies externes; les tibias antérieurs sont pourvus d'une touffe de poils à l'extrémité; les tarses longs et claviformes, avec deux onglets recourbés à la pointe; les palettes larges, triangulaires, la supérieure plus colorée que l'inférieure.

L'abdomen elliptique très-allongé, composé de 10 segments d'inégale longueur, les moyens les plus longs, tous avec un sillon longitudinal non-interrompu; les bandes latérales élargies aux deux extrémités; les angles des segments ne font pas saillie et portent une forte soie à partir du 6e; les segments, colorés surtout aux bords jusqu'à peu de distance de la suture antérieure, offrent une série de pustules sétigères dont les 2 moyennes sont plus spatieuses que les autres; les bords de l'abdomen sont armés en dessus de poils épineux un peu aplatis, sauf le 9e dont les poils sont fins, le dernier segment court, un peu tronqué (♀), bordé de longues soies. A la face ventrale la vulve est bilobée, bordée de courts poils, avec une rangée de courtes soies. Chez le mâle, dont toutes les dimensions sont moindres, le dernier segment est arrondi, les appendices externes du pénis robustes, renflés au milieu, recourbés en crochet à l'extrémité et flanqués d'une légère protubérance garnie de soies serrées dirigées vers le milieu (fig. *d*).

La teinte générale est châtain-foncé, les bandes noirâtres.

Dimensions: long. totale: ♀ 0,084, ♂ 0,072

longueur:	♀	♂	largeur: ♀	♂
tête	0,015 —	0,015	0,012 —	0,011
thorax	0,0162—	0,013	0,012 —	0,010
abdomen	0,053 —	0,043	0,016 —	0,0135
3e fémur	0,017 —	0,014	0,005 —	0,0045
3e tibia	0,011 —	0,010	0,0035—	0,003
3e tarse	0,005 —	0,004		
antenne	0,0015			
palpes	0,0022			

Sur une *Ibis Cayennensis*. Les exemplaires de cette curieuse espèce ont été recueillis par M. le Dr. H. ten Kate.

NOTE X.

CONTRIBUTIONS TOWARDS THE KNOWLEDGE OF THE ANNELIDA POLYCHAETA.

BY

Dr. R. HORST.

II [1]).

On *Arenicola*-specimens from the Gulf of Naples.

(Plate 3).

Some time ago a finely preserved collection of Annelids was procured by our Museum from the Zoological Station at Naples; among them I observed some specimens of *Arenicola*, which in their characters do not agree with the species, hitherto known from the European coast. Going over the litterature about this genus, I saw that not only there reigns a good deal of confusion in the description of the different species, but that we want even an accurate knowledge of the feature of the bristles and branchiae of our European species. Almost all the authors have given an erroneous account of the appearance of the branchiae of the common *A. marina*; nevertheless Williams [2]) in the year 1851 already stated: »they are commonly described as forming an arborescent tuft; the division of the vessels is however regulated by a fixed principle. When fully injected with blood, the vessels of each branchia form a single plane etc." Even a superficial examination is able to convince us of the correctness of Williams' assertion, though his drawing is not very accu-

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1) For Part I see Vol. VIII, p. 157.

2) On the British Annelida; Report of the British Association for 1851, p. 195, pl. 4, fig. 13.

rate. Indeed each branchia of the common lug-worm consists of about 12 secundary branchiae, connected by a membrane at their base and situated next to each other in the same plane, like the divisions of a palmated leaf; these secondary branchiae are not irregularly branched, but possess a middle axis, furnished on each side with 3 or 4 tufts of filaments (fig. 2).

If the number of those lateral tufts much increases, as is to be observed in some species of *Arenicola*, and the middle axis bears on each side, in stead of 4, 12 or more racemous tufts, the secondary branchiae resemble a feather (fig. 6). Therefore a South-American species, provided with such plumous branchiae, was named by Lütken *Pteroscolex*, which he wishes to be considered as a sub-genus of *Arenicola* [1]). However if we would retain this name, as proposed by Levinsen [2]), then also our *A. marina* ought to be ranged in that sub-genus, because there is only a gradual difference between the branchiae of *A. antillensis* and *marina*. Claparède seems not to have rightly understood Lütken's description; otherwise he would not have written [3]): »toutes les branchies sont disposées dans un même plan, comme les nervures d'une feuille, et ne forment pas de buisson touffu. Ce caractère a été relevé chez une Arénicole des Antilles par M. Lütken etc."

Branchiae, which are really arborescent, are to be met with in *A. Grubii* (fig. 12), probably also in *A. branchialis*, *Boeckii* a. o.; in those species the branchiae are branching directly at their base, and no real secundary branchiae or branchial leafs are formed.

Arenicola Claparedi Levinsen (fig. 1 and 1*a*). — loc. cit. p. 137, note; *Arenicola marina* L. var. *minor* Clprd. — loc. cit. p. 40, pl. XIX, fig. 3.

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1) En ny vestindisk Sandorm, *Arenicola* (*Pteroscolex*) *antillensis* Ltk.; Vidensk. Meddelels. fra Naturh. Forening i Kjöbenhavn, 1864, p. 120.

2) System.-geogr. Oversigt over de Nordiske Annulata, ibidem, 1883, p. 137.

3) Les Annélides Chétopodes du Golfe de Naples, 2e Partie, p. 41.

In the Gulf of Naples a species of *Arenicola* is to be found, which in the number of its setigerous and branchiferous segments agrees with our northern *A. marina*, but in its other characters shows too much differences, to be identified with this species.

Claparède seems to have already presumed this, for he writes: »une étude comparée plus approfondie ne révélera-t-elle pas des différences spécifiques entre les individus de la mer du Nord ou de l'Océan et ceux de la Méditerranée?" However Levinsen has been the first, who considered the Mediterranean specimens to be specifically different from the northern form and named it *A. Claparedi*; he also pointed out some characters by which this species is distinguished from *A. marina*.

The only specimen I could examine has a length of 75 m.m., the caudal region measuring 6 m.m.; on the contrary our *A. marina* attains sometimes a length of 250 m.m. This agrees with Claparède's statement: »mais ce sont de véritables pygmées relativement aux Arénicoles du Nord. La longueur moyenne des adultes mûrs est de six à sept centimètres." *A. Claparedi* resembles *A. marina* in the presence of 19 setigerous segments, of which only the posterior 13 are provided with branchiae; I do not understand how Levinsen can write about this species: »gjaeller findes paa 12—13 ringe", for all naturalists, who examined this worm, agree with each other in this point. It is true, Pennant [1]) as well as Dalyell [2]) have figured *A. marina* only with 12 pairs of branchiae, but we have no doubt that the drawer has overlooked the first pair of branchiae on the 7th segment, which is much smaller than the others; for we read in Dalyell's description p. 136: »thirteen pair of beautiful vermilion branchiae rise from the back."

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1) British Zoology; copied in the Encyclopédie méthodique, Vers, pl. 34, fig. 16.

2) The powers of the Creator, Vol. II. pl. XIX, fig. 1.

In *A. Claparedi* the branchiae are generally more developed as in *A. marina*, and the first pair of them, though not so large as those of the middle body-segments, are rather large. The branchiae consist of about 18 branchial leafs, situated in the same plane, and connected at their base by a common membrane; each branchial leaf bears on its sides about six branched filaments, of which the inferior are somewhat longer than those at the tip. The ventral bristles (fig. 1) can easely be distinguished from those of *A. marina*; they are characterized by an obvious enlargement, serrated at its convex side beneath the hook-like curved tip (fig. 1*a*). In *A. marina* the ventral bristles are not quite smooth as commonly described by the authors, but they show at the convex side one or more faint serrations (figs. 3 and 4). The dorsal bristles resemble those of *A. marina*, which have been accurately described and figured by Grube. Their distal portion is furnished along one side of the shaft with numerous short hairs, giving it a finely serrated appearance, whereas the other side is provided with a narrow membrane. Probably this membrane is composed of hairs, lying densely near each other, for examined with a high power it shows faint, transverse lines and a serrulated edge (fig. 5).

Levinsen gives the following characteristics of *A. Claparedi*: »branchiae, which are connected at their base only by a very short membrane, stretched, with 10 pair of branches; dorsal bristles with very faintly developed hairs, ventral bristles with more acutely pointed, somewhat separated tip. The branchiae, as stated afterward, agreeing in their structure with those of *Pteroscolex antillensis*, above referred to." Though this description does not quite agree with my own observations, nevertheless I hesitated to propose another name. Perhaps he confounded with *A. Claparedi* individuals of the following species, which possesses branchiae, agreeing in structure with those of *A. antillensis*.

A. cristata Stimpson (figs. 6—11). — Proceed. Boston

Society of Nat. History, Vol. V, 1856, p. 114; *A. antillensis* Lütken, loc. cit.

Among the *Arenicola*-specimens of Naples there are two individuals, agreeing with *A. marina* in feature and size of the body, but plainly distinguished from it by several characters. The number of setigerous segments is only 17, of which the posterior 11 are provided with branchiae. The first branchiae, situated on the 7th segment, as in *A. marina*, are less developed than the following. The branchiae consist of about 12 branchial leafs, situated next to each other in the same plane, but scarcely connected by a membrane at their base; each branchial leaf has a long middle axis and a great number (to 20) of short, branched filaments on each side, resembling a feather. The bristles of the dorsal fascicles have about the same length as those of *A. marina*, but they are more numerous and darker coloured; they are arranged in two distinct transverse rows, the bristles of the posterior row being twice as long as those of the anterior one. The bristles are more hairy as those of *A. marina*; the transversely striated membrane along the distal portion of the bristles in this species, is substituted here by a broad row of distinct hairs, and also along the other side of the bristle short hairs are to be found (fig. 9). The anterior two setigerous segments seem to want the ventral fascicles, at least they are not visible externally. The ventral bristles are slender, with a more or less curved tip; at a short distance beneath the tip they are a little enlarged and furnished at the convex side with a great number of faint serrations (figs. 7 and 8).

The proboscis is covered over its whole surface with large rounded, triangular papillae.

Length of the largest specimen 230 m.m.; length of its caudal region 85 m.m.

A. cristata, described by Stimpson from the shore of Maurice-Island (South Carolina), seems to agree in its main characters with our specimens; therefore, though Stimpson

gives no figures or detailed descriptions of bristles or branchiae, I believe our specimens are referable to this species. It seems to me very probable that *A. antillensis*, accurately described by Lütken, may be identical with *A. cristata*; that the former species has a wider geographical distribution is already stated by Ehlers (Florida-Annelida, p. 173) who mentions it from the coast of Florida. Lütken seems not to have known Stimpson's description, at least he does not mention it. His *A. antillensis* is characterized in the following manner: »annulis setigeris 17, anterioribus 6 ebranchiis, ceteris branchiferis, branchiis e foliis plumiformibus c. 15 compositis, fasciculis filorum respiratoriorum ad latera trunci mediani collocatis plumas singulas formantibus; annulis caudalibus 8 nudis (sine setis et branchiis), papilliferis. Longitudo usque ad 0.35 M. Hab. ad oras Ins. Antillarum."

There is only one character in Lütken's description, that is open to doubt; this is the presence of long, projecting papillae at the ventral side of the caudal region, which are identified by Levinsen with branchial filaments. Ehlers, however, makes no mention of those papillae.

Two other small specimens of *Arenicola* are to be mentioned, which agree with this species in the number of setigerous and branchiferous segments, but which present some other different characters; therefore I am somewhat dubious if they should be considered either as immature specimens of *A. cristata* or as another species. The largest specimen has only a length of 60 m.m., its caudal region measuring about 12 m.m. The branchiae consist of 10 to 12 branchial leafs, not connected at their base; they are not so slender as those of the larger foregoing specimens, their inferior filaments being more branched and longer as those of the tip. The dorsal bristles are not so hairy and resemble those of *A. marina* (fig. 11). The proboscis is densely covered with acute, conical papillae; only at the base there is a region of about 5 series of obtuse triangular papillae.

Arenicola Grubii Clprd. (figs. 12—15). — Claparède, loc. cit. p. 36, pl. XIX, fig. 2*B*, 2*I*.

This species seems to be very common in the Gulf of Naples, for among thirty *Arenicola*-specimens from this locality, which I could examine, twenty-five belonged to *A. Grubii*[1]). Grube first met with those worms at the shore of Catania; therefore Claparède, who found them afterward at Naples, named the species in honour of that distinguished investigator of Annelids *A. Grubii*. It is to regret that a singular mistake seems to have crept into Claparède's description, for we read there: »segmentis anticis branchiis destitutis decem" and afterward »dans l'espèce napolitaine, la première paire de branchies est toujours au dixième sétigère"[2]); however those numbers are quite at variance with the description of Grube, who writes: »ich zählte 38 paar Borstenbündel, von denen die ersten 11 isolirt, die übrigen 27 mit Kiemen zusammenstanden." The exactness of Grube's statement could be confirmed by me, for I found the first pair of branchiae without any exception situated behind the 12th dorsal bristle-fascicle. The largest specimen has 38 setigerous segments. The first pair of branchiae is not smaller as those of the following segments; however in the posterior region of the body the branchiae gradually decrease in size, and the posterior segments want them totally, or they are only represented by a small filament with a couple of short branches. The branchiae do not consist of secundary branchial leafs, but are arborescent, branching directly at their base; they show 3 or 4 main stems, which divide dichotomously and terminate in numerous filaments. The dorsal fascicles con-

1) By the liberality of Prof. Hubrecht the *Arenicola*-specimens of the Utrecht Museum were also placed in my hands for examination.

2) This erroneous description is repeated in Carus' Prodromus Faunae mediterraneae; it is an example to illustrate the dubious valour of such a catalogue drawn up without any critic; had the author could limit himself to a simple enumeration of the species and the litterature, his work should have been less painful for himself, and as useful for the public.

sist only of a small number of bristles; those are rather smooth, a narrow membrane along their distal portion is scarcely visible and the tip is covered with some scaly hairs. The ventral bristles resemble somewhat those of *A. marina*, but they are furnished at the convex side of the hook-shaped tip with a secundary tooth, behind which some faint serrations are visible (fig. 13); Claparède has recognized this character, but his figure is not very correct. In this species the ventral bristle-fascicles of the anterior body-region are not much smaller as those of the posterior branchiferous region, like in the foregoing species, but they have about the same dimension, and reach nearly to the median ventral line; whereas f. i. in *A. marina* the 5th ventral fascicle contains about 20 bristles, in this species the number of them will amount to about 100.

The proboscis is covered with acute conical papillae; only at its base there are about 5 series of large and more obtuse ones.

From Prof. Oliveira of Coimbra I received for identification an *Arenicola*-specimen from la Granja (Coast of Portugal); this specimen agrees in many regards with *A. Grubii*, therefore I am not inclined to base a new species upon it. The worm has a length of 105 m.m., but it wants a portion of the posterior region. There are 34 setigerous segments. The branchiae agree in their feature with those of *A. Grubii*; the first pair of them is also situated on the 12th setigerous segment, but is not so developed as in the last species. The bristles show some small differences; the dorsal bristles have an obvious membrane along their distal portion (fig. 15) and the ventral ones have only a single tooth without serrations behind (fig. 14). Perhaps it may be considered as a local variety of *A. Grubii*.

EXPLANATION

OF

Plate 3.

Fig. 1. Ventral bristle of *Arenicola Claparedi* Levins. (alcoh. spec.). × 175 diam.
Fig. 1*a*. Tip of the foregoing, surface view.
Fig. 2. Branchial leaf of *Arenicola marina* L. (alcoh. spec.). × 20 diam.
Fig. 3. Ventral bristle of the same, XIXth fascicle. × 90 diam.
Fig. 4. Ventral bristle of the same, Ist fascicle.
Fig. 5. Dorsal bristle of the same. Magnified.
Fig. 6. Branchial leaf of *Arenicola cristata* Stimps. (alcoh. spec.). × 17 diam.
Fig. 7. Ventral bristle of the same, XVIIth fascicle. Magnified.
Fig. 8. Ventral bristle of the same, anterior region of the body.
Fig. 9. Dorsal bristle of the same.
Fig. 10. Ventral bristle of a small specimen of *A. cristata*?
Fig. 11. Dorsal bristle of the same.
Fig. 12. One of the branchiae of *Arenicola Grubii* Clprd. (alcoh. spec.). × 15 diam.
Fig. 13. Ventral bristle of the same. × 175 diam.
Fig. 14. Ventral bristle of a specimen from the Coast of Portugal. × 175 diam.
Fig. 15. Dorsal bristle of the foregoing specimen.

NOTE XI.
RÉPONSE À M. JOH. SCHMIDT.

PAR

S. de MARSEUL.

Dans les »Notes du Musée de Leyde", Vol. X, p. 121, Mr. Joh. Schmidt publie des observations sur deux Histérides: *Hololepta sternincisa* et *Hister Leseleuci*, dont j'ai donné la description dans cette même Revue (Vol. VIII, p. 149).

Dès 1876, j'avais décrit l'*Hister Leseleuci* sur un exemplaire du Graud-Bassam, mais la description était restée dans mes cartons, lorsque Mr. Ritsema m'envoya en communication 12 exemplaires provenant de Libéria et 5 de Humpata, que je crus devoir y rapporter, les premiers particulièrement, malgré quelques légères différences. Mr. Schmidt prétend que les exemplaires de Humpata appartiennent à une espèce différente de ceux de Libéria, qu'ils sont identiques à son *Mechowi*, et de plus que le *Leseleuci* n'est qu'un synonyme du *tropicalis*.

Je ne connais le *Mechowi* que par la description publiée dans le Berl. Ent. Zeits. (Vol. XXVII, p. 147), mais malgré les nouvelles explications de mon ardent émule en Histérographie, cette description reste pour moi un énigme. En effet il rapproche son espèce de l'*unicolor* avec lequel elle n'a aucun rapport, et du *tropicalis* qui lui est inconnu puisqu'il n'a pas vu le type; au lieu d'être légèrement arqué sur les côtés, celui-ci est dilaté-arrondi au milieu et par suite rétréci devant et derrière, et son pygidium n'est point couvert de points serrés et presque rugueux, mais de points faibles et écartés. — Je veux bien en croire Mr. Schmidt sur son affirmation, mais je crains qu'elle ne soit hasardée, comme la plupart de ses synonymies récentes.

Quant à l'*Hololepta sternincisa*, ce n'est qu'avec beaucoup d'hésitations, que j'y ai rapporté comme variété les exemplaires amoindris, tout en les désignant sous le nom provisoire de *parvifossa*. Les explications de Mr. Schmidt me laissent encore tous mes doutes.

NOTE XII.

ON AN OVERLOOKED EAST-INDIAN SPECIES OF THE GENUS CHELONARIUM, FABR.

(COLEOPTERA: FAM. BYRRHIDAE).

BY

C. RITSEMA Cz.

Consulting a few days ago W. S. Macleay's »Annulosa javanica" (London, 1825) I was surprised to find in this work (p. 48) the description of a *Chelonarium*-species. This description seems to be overlooked, as the species is not mentioned neither in the Munich Catalogue (vol. III, p. 930) nor by Reitter [1]), Chevrolat [2]) and Fleutiaux [3]) who have described other Oriental species of this genus. I therefore believe it not without interest to give here Macleay's description of the first known oriental representative of this interesting genus.

»*Genus* **Chelonarium**, Fab.

94. *Villosum. C. nigropiceum nitidum subpunctatum, elytris substriatis, tarsis rufescentibus, antennarum articulis ultimis pallidis.* — Long. corp. $\frac{1}{4}$.

Insectum totum villo denso cinereo obtectum.

Obs. The occurrence in Java of genera like this, hitherto supposed to be peculiar to America, is a circumstance im-

1) Notes Leyd. Mus. Vol. II, p. 43; Vol. III, p. 73 and Vol. VIII, p. 219 (*Ch. orientale* Reitt., Sumatra, Borneo; *conspersum* Reitt., Java; *unifasciatum* Reitt., *fascicolle* Reitt. and *irroratum* Reitt., Sumatra).

2) Le Naturaliste. 2me Ann. p. 261 (*Ch. adspersum* Chevrl., Malakka).

3) Ann. Soc. Ent. France. 1887. p. 62 (*Ch. hirtum* Fleut., Hué).

portant in entomological geography, and which we shall frequently have occasion to allude to. In the mean time I shall observe that the antennae of the only specimen in the East-India Company's collection have lost their last joints, having only two of that setiform part which so singularly distinguishes this genus from all others known. (Vide *Lat. Gen. Ins. et Crust.* Vol. 2. p. 44). Such antennae agree in scarcely any respect with those of other *Chilopodomorpha*, and I am therefore by no means convinced of the propriety of placing this insect here, and must consider the matter as undecided until a more accurate investigation shall have been made from an unmutilated specimen."

NOTE XIII.

A NEW SPECIES OF THE LONGICORN GENUS PACHYTERIA, SERV.

DESCRIBED BY

C. RITSEMA Cz.

Pachyteria Vandepolli, nov. spec. ♀.

A small species which is allied to *Pachyteria parallela* Rits. (Notes Leyd. Mus. 1881. p. 36).

Length 19 mm.; breadth at the shoulders 5 mm. — The head, the prothorax and the scutellum bright metallic green; the smaller basal half of the elytra ochreous, with faint purplish tinges, the greater apical half dark bluish green, brighter towards the apex, and provided just before its middle with a slightly waved, narrow, transverse, ochreous band which touches neither the sutural nor the outer margins; the two basal joints and the basal third of the 3rd joint of the antennae black, the remaining joints ochreous; the meso- and the metasternum as well as the legs and the abdomen violaceous blue, the latter tinted with green. The vertex of the head, a transverse band and a semicircular spot on the pronotum, and the dark coloured part of the elytra densely covered with a very short black pubescence, which is however sparser on the apex of the elytra; the anterior tarsi brown and as well as the inside of the tibiae of the same pair of legs covered with a pale glittering pubescence. The undersurface of the body covered with a silvery pile forming bands across the hind margin of the four basal abdominal segments.

The inter-antennary ridge, which is divided by a deep

but very narrow groove, and the vertex of the head opaque in consequence of a very dense though fine sculpture; the clypeus smooth and impunctate along the middle, provided with large punctures at the sides; the mandibles on the outside and the space between the eyes and mandibles sparsely punctured; the punctures beyond the eyes placed between longitudinal wrinkles: the undersurface of the head transversely wrinkled. The antennae rather short and thick, not quite reaching the narrow ochreous band in the dark coloured half of the elytra; the scape is short and thick, above rugose, beneath strongly punctured; the 3rd joint equal in length to the 4th and 5th joints taken together, the 4th joint distinctly shorter than the 5th, the subsequent joints slightly decreasing in length.

The prothorax armed on each side behind the middle with a rounded tubercle which is separated from the disk by a narrow groove; the disk coarsely sculptured, the pubescent parts opaque; the sides glossy, sparsely punctured; beneath transversely wrinkled. The scutellum broadly triangular with curvilinear sides, densely and irregularly sculptured.

The elytra parallel, conjointly rounded at the apex, and provided with three faint longitudinal costae; the ochreous basal half densely and irregularly punctured, whereas the sculpture of the dark apical half is very fine and dense.

The anterior and intermediate femora are covered with large and deep punctures, which are not densely set; the posterior femora are very densely punctured on the outside, much sparser on the inside; the sculpture on the tibiae is very fine and dense.

The apical (5th) ventral segment is rounded at the tip and provided with a few punctures on the apical half.

The described female specimen originates from Malacca and belongs to Dr. Baden's collection which is now in the possession of Mr. Neervoort van de Poll to whom I dedicate this pretty species.

NOTE XIV.

DYTISCIDAE ET GYRINIDAE NOUVEAUX OU RARES DE LA COLLECTION DU MUSÉE ROYAL DE LEYDE.

PAR

M. RÉGIMBART.

Dytiscidae.

Hydrocanthus micans Wehncke, Deuts. Ent. Zeits. 1883, p. 149. — Long. $5^1/_2$—6 mill. — Grande espèce voisine de l'*H. indicus* Wke., mais néaumoins distincte par sa taille plus grande et par sa forme beaucoup plus régulièrement ovale et moins atténuée en arrière, l'autre espèce étant sensiblement dilatée au niveau de la jonction du pronotum et des élytres; de plus la ligne enfoncée qui suit le bord antérieur du pronotum est garnie de cils beaucoup moins longs et moins serrés. Quant à la sculpture, je n'observe aucune différence: elle consiste en une réticulation d'une extraordinaire finesse et très peu imprimée dont les linéoles extrêmement serrées et longitudinales s'anastomosent fréquemment; la couleur est la même, extrêmement brillante, noire sur les élytres, avec la tête et le pronotum plus ou moins rougeâtres, les pattes, antennes et le dessous du corps d'un ferrugineux plus ou moins foncé.

Afrique tropicale occidentale: Humpata (van der Kellen). — Se retrouve aussi à Wydah, Côte d'or, où il a été pris par le R. P. Ménager (coll. Oberthür et Régimbart).

Hydrocanthus indicus Wehncke, Deuts. Ent. Zeits. 1876, p. 223. — Je signale de cette espèce une variété noire qui n'a de ferrugineux que le devant de la tête, l'extrême bord du pronotum et les pattes et antennes; outre cette

coloration foncée, les quelques exemplaires que j'ai vus et qui sont tous de Sumatra se font remarquer par leur forme plus robuste et plus large au niveau des épaules. Le type se trouve aussi à Sumatra conforme aux exemplaires de Cochinchine.

Laccophilus taeniolatus, n. sp.

Long. $4^1/_2$ mill. — *Ovalis, parum latus, postice attenuatus, parum convexus subtilissime reticulatus, rufo-testaceus, pronoto antice et postice breviter transversim nigro notato, elytris lineolis longitudinalibus valde undulatis et irregularibus, ante apicem magis coalescentibus irroratis, margine externo testaceo.*

Espèce très voisine du *L. posticus* Aubé, mais de taille beaucoup plus grande et de forme plus allongée.

Un seul exemplaire de Humpata (van der Kellen).

Je possède quelques exemplaires du Sénégal, Cap Vert, que m'a donnés le Dr. Roussel et que je rapporte à cette espèce: ils sont un peu plus petits (4—$4^1/_2$ mill.), peut-être un peu plus étroits et exactement semblables comme coloration. Deux d'entre eux constituent cependant une variété bien distincte: les lignes noires onduleuses sont brusquement interrompues en arrière du milieu en un espace de forme un peu arquée entièrement pâle; cette variété se rapproche beaucoup de la forme ordinaire du *L. Sharpi* Régb. (*flexuosus* $\frac{+}{+}$ Sharp) dont elle se distingue néanmoins par sa forme moins dilatée aux épaules et par l'absence de l'interruption basale des lignes flexueuses.

Laccophilus trilineola, n. sp.

Long. $5^2/_3$ mill. — *Ovalis, postice minus attenuatus, subdepressus, subtiliter reticulatus, fulvo-testaceus, capite in vertice, pronoto antice et postice leviter adumbratis; elytris sat dense fusco irroratis, margine externo, lineola humerali obliqua et medium vix attingente, secunda lineola brevissima fere*

in medio baseos, tertia ad suturam minus brevi, rufo-flavis.

Régulièrement ovale, moins atténué en arrière, ce qui porte la plus grande largeur presque au milieu du corps; réticulation fine, à mailles irrégulières et assez larges; coloration d'un testacé fauve, avec le sommet de la tête, les bords antérieur et postérieur du pronotum un peu rembrunis et les élytres couvertes d'irrorations brunes assez serrées qui s'arrêtent à la marge latérale; elles sont ornées chacune de trois linéaments d'un jaune fauve, très-fins et plus ou moins interrompus çà et là par une ou deux irrorations du fond, le premier, huméral, situé près du bord externe, oblique en dedans et atteignant presque le milieu de la longueur, le second, basal, situé un peu en dehors du milieu de la largeur et extrêmement court, le troisième assez près de la suture et n'atteignant guère qu'un quart de la longueur de l'élytre. Il est possible que ces linéaments varient d'un individu à l'autre, celui que j'ai sous les yeux étant unique.

Humpata (van der Kellen).

Laccophilus flavò-pictus, n. sp.

Long. $3^3/_4$ mill. — *Ovalis, sat latus, postice attenuatus, persubtilissime reticulatus; subtus ferrugineus, pedibus antennis et capite fulvis; pronoto flavo, antice et postice late nigro; elytris nigris, margine laterali ante medium, vitta transversa postbasali, regulari et suturam non attingente, maculis duabus ad latera, guttulaque ad apicem vix conspicua flavis.*

Cette jolie espèce rappelle par sa coloration le *L. notatus* Bohem. d'Amérique méridionale; mais sa forme est un peu plus allongée et surtout plus atténuée en arrière; la réticulation est extrêmement fine et en outre se trouve enfermée dans une autre réticulation à mailles larges, formée de linéaments extrêmement fins et peu imprimés. Le pronotum est assez largement noir en avant et en arrière; les élytres sont noires, avec la moitié antérieure du bord externe, une bande postbasale transversale, assez régu-

lière et interrompue avant de toucher la suture, une tache latérale médiane, quadrangulaire, suivie immédiatement d'une seconde plus petite divisée en deux et une très-petite tache apicale peu apparente, jaunes.

Humpata (van der Kellen).

Bien que ces deux dernières espèces ne me soient connues que par un seul exemplaire, elles m'ont paru si bien caractérisées, que j'ai cru devoir les décrire.

Hydrovatus parallelus, n. sp.

Long. $3^4/_5$ mill. — *Oblongo-ovalis, elongatus, fere parallelus, postice acuminatus, transversim convexus, tenuissime et obsolete reticulatus, nitidus, omnino rufo-ferrugineus. Capite magno, tenuiter et parce punctulato, utrinque ad oculos oblique foveolato, clypeo fortiter marginato; pronoto brevi, in regione scutellari angulatim fortiter producto, obsolete punctulato, ad apicem utrinque ad basin et ad latera fortius punctato; elytris acuminatis, obsolete et parcissime punctulatis, triseriatim dense punctatis, serie externa duplici, et cæterum in medio disci punctis majoribus et valde remotis uniseriatim dispositis impressis. Pedibus anticis et intermediis sat robustis, tarsis dilatatis et duabus cupularum seriebus instructis.*

Cette espèce est absolument unique jusqu'ici par sa forme oblongue, allongée, à côtés presque parallèles, brusquement arrondie en avant, non moins brusquement rétrécie et acuminée en arrière, peu convexe dans le sens longitudinal. Tout le dessus du corps est couvert d'une réticulation fine et peu imprimée. La tête est relativement très grosse, finement et lâchement pointillée, garnie en avant de chaque côté d'un sillon oblique plus fortement punctué, le clypeus est fortement marginé et modérément curviligne; le pronotum est court, obsolètement pointillé, garni d'une forte rangée de points serrés le long du bord antérieur, d'une rangée courte de gros points de chaque côté de la base, et d'une autre rangée oblique et double près

du bord externe. Les élytres présentent le même pointillé obsolète et encore plus fin; elles sont pourvues de trois séries longitudinales de points très serrés, dont l'externe est double, et de plus on remarque entre la série interne et la moyenne une rangée de gros points très écartés. Les pattes antérieurs sont relativement robustes, cequi me ferait supposer que le seul exemplaire à ma disposition est un mâle, d'autant plus que les quatre tarses antérieurs sont larges et garnis en dessous d'une double rangée de cupules bien distinctes. Le dessous du corps et notamment les hanches postérieures sont lisses avec quelques rares petits points.

Humpata (van der Kellen).

Derovatellus africanus, n. sp.

Long. $4^1/_4$—$4^1/_3$ mill. — *Ovalis*, *valde elongatus*, *antice fortiter attenuatus*, *subopacus*, *undique fortiter et dense rugoso-punctatus*, *supra nigricans*, *capite antice et pronoto ad latera rufo-ferrugineis*, *elytris ad latera utrinque aliquoties guttula ferruginea ornatis; subtus fusco-ferrugineus*, *epipleuris rufis*, *pedibus et antennis nigricantibus*, *femoribus anticis et intermediis rufis.*

La trouvaille en Afrique d'un *Derovatellus* est un fait des plus intéressants, car, à part le *D. orientalis* Wke., découvert dans ces dernières années à Borneo, le groupe des Vatellini était jusqu'alors exclusivement américain. Cette espèce est plus grande que les deux autres (*D. lentus* Wke. et *orientalis* Wke.); sa forme est longuement ovale, très atténuée en avant et assez convexe, la couleur est presque mate, noire ou noirâtre, avec le devant de la tête et les côtés du pronotum d'un roux ferrugineux, et quelquefois une petite tache ferrugineuse sur le côté et en arrière du milieu de chaque élytre; le dessous est ferrugineux foncé, les épipleures et les quatre cuisses antérieures roux; les pattes antérieures et intermédiaires sont longues et leurs tarses dépassent en longueur les tibias; chez le mâle les deux premiers articles sont sensiblement dilatés. Tout le corps est couvert de gros points rugueux très serrés.

Humpata (van der Kellen). — Quelques exemplaires des deux sexes.

Pachydrus cayennensis (Cast.?) Aubé, Spec. p. 456. — Long. 4 mill. — Ovale, très large, mais sensiblement atténué en avant et en arrière, très convexe, d'un brun noir très foncé, avec la tête, le pronotum et les pattes roux ferrugineux. Tout le corps est couvert d'une ponctuation assez fine et médiocrement serrée, mais bien imprimée, plus fine sur la tête dont le clypeus est arrondi, finement rebordé et un peu relevé, et sur le pronotum dont la surface est un peu inégale; les élytres présentent sur le disque une série ponctuée très peu visible. Cet insecte se rapporte bien à la description d'Aubé; mais il est douteux, ainsi que le fait remarquer le Dr. Sharp, que ce soit le même insecte que celui de Castelnau dont la description est d'une brièveté déplorable.

Paramaribo (J. H. Spitzly). — Un exemplaire.

Hyphydrus parvicollis Sharp, On aquat. carn. Col. or Dytisc. p. 375. — Espèce extrêmement remarquable par la petitesse excessive de son pronotum et par le développement énorme des épaules qui forment avec le pronotum un angle rentrant absolument droit.

Coloration d'un roux ferrugineux, avec le bord antérieur et la base du pronotum largement noirs au milieu; élytres jaune fauve avec la suture et deux bandes noires, séparées en avant mais largement réunies en arrière où la coloration noire envahit presque toute la surface, sauf le bord externe. La ponctuation est forte, serrée et régulière sur les élytres, plus fine et moins dense sur le pronotum et la tête dont le clypeus est finement rebordé et à peine arrondi en son milieu.

Humpata (van der Kellen). — Un exemplaire.

Hyphydrus cycloides, n. sp.

Long. $3^1/_3$—$3^1/_2$ mill. — *Ovalis*, *fere rotundatus*, *brevis-*

simus, convexus, crebre inaequaliter punctatus, punctis magnis valde impressis et minus densis, capite depresso, antice utrinque obsolete foveolato, fere æqualiter punctato. Capite, corpore subtus, antennis pedibusque rufo-ferrugineis, pronoto nigro, ad latera ferrugineo; elytris nigris fere sicut in Hygroto inaequali Fab. testaceo variegatis.

Espèce de forme très arrondie, distincte par la double ponctuation qui couvre les élytres: les gros points sont réguliers entre eux, très imprimés et médiocrement rapprochés, les petits points également égaux entre eux sont plus denses et bien moins imprimés; sur le pronotum les premiers n'occupent guère que le voisinage du sommet et de la base, tandis que les petits sont répandus partout; sur la tête la ponctuation est plus dense, bien imprimée, presque égale et intermédiaire. Comme coloration il ressemble beaucoup à l'*H. impressus* Klug (*Coquereli* Fairm.), de Madagascar, qui, comme lui, a la tête rousse, le pronotum noirâtre avec les côtés ferrugineux et les élytres noires, variées de testacé roûx avec une disposition analogue à celle qui existe chez l'*Hygrotus inaequalis* Fab. — Les mâles ne diffèrent des femelles que par un peu plus de largeur dans les tarses, et encore ce caractère est-il très subtil.

Humpata (van der Kellen). — Quelques exemplaires des deux sexes.

Herophydrus Ritsemae, n. sp.

Long. 5—5¼ mill. — *Regulariter ovalis, postice paululum attenuatus, parum convexus, subtiliter punctatus, fortius in elytris et in mesosterno, brevissime et vix visibiliter pubescens, rufo-ferrugineus, nitidulus, elytris fuscis, ad latera dilutioribus; clypei margine in medio angustiore sed nullo modo interrupto.*

Cette grande espèce se rapproche surtout de l'*Herophydrus guineensis* Aubé (*Hydrop. turgidus* Er., *hyphydroides* Perris), mais elle s'en distingue par sa taille plus grande,

sa forme plus atténuée en arrière et au contraire plus élargie en avant et par sa ponctuation relativement un peu moins grosse, mais aussi serrée; sa coloration est aussi moins foncée. Le clypeus présente cette particularité, unique entre toutes les espèces jusqu'ici connues, que son rebord est simplement rétréci, mais non interrompu au milieu. On remarque sur les élytres la trace d'une série ponctuée généralement peu apparente. En dessous du corps la ponctuation est grosse et fortement imprimée sur le mesosternum, plus fine et obsolète sur les hanches postérieures et les segments abdominaux.

Humpata (van der Kellen). — Quelques exemplaires.

Copelatus longicornis Sharp, l. c. p. 570. — Long. 5 mill., parfois un peu plus ou un peu moins. — Quatre exemplaires de Surinam: Para Riv. (J. H. Spitzly), absolument conformes à la description, c. à d. allongés, presque parallèles et très peu convexes, avec une ponctuation fine et presque effacée, et trois striès dont l'externe est aussi éloignée du bord externe que l'interne l'est de la suture. La coloration est d'un roux ferrugineux, un peu plus brun sur les élytres dont la base présente une bande basilaire plus pâle. Le mâle se fait remarquer par la dilatation très développée des quatre tarses antérieurs et par les genoux antérieurs qui sont robustes et échancrés en dedans auprès de l'articulation tibio-fémorale.

Copelatus debilis Sharp, l. c. p. 579. — Long. 4—$4^1|_2$ mill. — Espèce très variable et ayant une aire de distribution géographique très étendue, car on la trouve depuis le Mexique (Guanajuato) jusqu'au Brésil méridional. Le type qui se prend dans le Mexique méridional et l'Amérique centrale est brun assez foncé avec la tête et les côtés du pronotum roux et une bande basale fauve bien nette aux élytres qui sont pourvues, outre la strie submarginale, de cinq stries discales, dont l'interne est éloignée de la suture et qui sont d'autant plus rapprochées l'une de l'autre

qu'elles sont plus externes. Les exemplaires de Guanajuato, que m'a envoyés le Dr. Dugès (*C. obscurus* E. Dug. in litt.), sont beaucoup plus pâles et la bande basale des élytres est à peine indiquée ou même nulle. C'est de cette forme que se rapproche l'exemplaire que j'ai sous les yeux, de Surinam: Para Riv. (J. H. Spitzly); mais il a cette particularité qu'il présente une sixième strie occupant précisément le milieu du grand espace compris entre la strie interne et la suture et seulement dans la première moitié. Cette particularité, que je n'ai observée encore que sur ce seul exemplaire, fait que l'espèce peut être rangée indistinctement dans le 9e ou le 10e groupe de la Monographie du Dr. Sharp. Du reste cette espèce n'est pas la seule qui présente une variation dans le nombre des stries. J'en possède une autre de la Jamaique représentée par deux exemplaires: le mâle a les élytres absolument lisses, tandis que chez la femelle les élytres présentent en dehors cinq stries profondes extrêmement rapprochées, abrégées en avant et en arrière, et en plus deux autres rudiments de stries discales indiquées seulement par quelques points allongés rangés en série régulière. Ce dernier insecte, la ♀, a été soumis au Dr. Sharp qui supposait que ce devait être la femelle de son *insolitus*, dont les types ♂ sont de Cuba et San Domingo; je partage absolument son opinion, le mâle étant en tout conforme à sa description, sauf peut-être que les tibias antérieurs ont leur bord interne indistinctement émarginé.

Copelatus striatulus Aubé, Spec. p. 385. — Espèce très variable, surtout quant à la forme qui est tantôt largement ovale, tantôt oblongue et allongée, et quant à la ponctuation qui est chez les uns bien imprimée et chez les autres très obsolète, avec une réticulation extrêmement fine et également variable en intensité. Elle est caractérisée par la présence d'une strie submarginale fortement abrégée en avant et de six autres stries discales, dont l'interne n'existe que dans la seconde moitié et dont les deux

externes sont très rapprochées; l'écartement qui existe entre chacune des cinq premières stries à partir de la suture est le double de celui qui sépare la 5e de la 6e: or, sur deux exemplaires ♂ et ♀, de Humpata (van der Kellen), que j'ai ici devant moi, la femelle présente ce caractère extrêmement remarquable qu'elle possède à la base de chaque élytre le rudiment de quatre stries occupant juste le milieu de chaque grand intervalle; cette femelle présente donc en réalité dix stries. Entre l'interne et la suture, de même qu'entre l'externe et la submarginale, l'intervalle est assez large et si l'on y suppose la présence d'une strie dans chacun, on arrive ainsi au total de douze stries discales, plus une submarginale, ce qui peut être considéré comme la perfection dans la striation chez les *Copelatus*. Le *C. Aubei* Montrouz., de Nouvelle Calédonie, présente seul jusqu'ici et au plus haut degré cette perfection dans la sculpture des élytres.

Le *Copelatus striatulus* Aubé, à ma connaissance, a été trouvé au Sénégal, à la Côte d'or (Wydah), au pays des Achanti, dans la Guinée et au Congo intérieur, c'est à dire dans une grande étendue de l'Afrique tropicale occidentale.

Copelatus caelatipennis Aubé, Spec. p. 382. — Quatre exemplaires de Surinam: Para Riv. (J. H. Spitzly), bien conformes à la description du Dr. Aubé. C'est encore une espèce à habitat très étendu: Mexique (ma collection); Antilles (Aubé); Guyane (Musée de Leyde); Brésil: Santa Rita (ma collection) et Espirito Santo (Sharp).

Hydaticus sobrinus Aubé, Spec. p. 156, var. — Humpata (van der Kellen). — Ces quatre exemplaires constituent une intéressante variété distincte du type par les irrorations noires des élytres qui sont répandues régulièrement sans aucun point de condensation, tandisque chez le type elles se condensent en une bande post médiane vague et irrégulière et en une autre moins distincte antéapicale; la forme parait aussi un peu plus allongée.

Hydaticus Leander Rossi. — Belle série de cette espèce éminemment variable, aussi bien comme taille, que comme forme et coloration, tous de Humpata (van der Kellen). On peut y remarquer trois variétés assez tranchées.

Chez la première, $10^1/_2$—$11^1/_2$ mill., qui se rapproche le plus du type, les irrorations noires recouvrent régulièrement les élytres et c'est à peine si elles sont plus condensées le long de la suture.

Chez la seconde, 10—$10^3/_4$ mill., ces irrorations se condensent en une large plaque suturale noire n'atteignant pas tout à fait la région scutellaire et plus largement interrompue en arrière; de plus le pronotum est plus jaune et sa bande noire basilaire est plus intense.

Chez la troisième, $10^3/_4$—$11^1/_4$ mill., qu'on serait tenté de prendre pour une espèce distincte, les élytres sont noires avec une bordure rousse autour de laquelle seulement les irrorations se désagrégent; le pronotum est noirâtre avec une bordure jaune qui diminue d'intensité en dedans et laisse un reflet rougeâtre transversal sur le milieu.

Hydaticus dorsiger Aubé, Spec. p. 193. — Belle série également de cette jolie espèce; ces exemplaires ne diffèrent absolument du type de Madagascar, que par un peu moins d'ampleur dans la bande suturale noire.

Hydaticus exclamationis Aubé, Spec. p. 206. — Tous les exemplaires de la série se distinguent à la bande submarginale jaune qui est plus étroite que d'habitude et qui est presque toujours interrompue plus ou moins longuement en arrière, de façon à laisser un point jaune terminal isolé; deux d'entre eux ont cette bande plus large et l'un des deux y possède même une tâche noire humérale bien développée.

Hydaticus Petiti Aubé, Spec. p. 204. — Je ne puis que rapporter à cette espèce le seul exemplaire que j'ai sous les yeux: il a environ $15^1/_2$ mill. et diffère de l'espèce pré-

cédente par sa forme oblongue, beaucoup moins régulièrement ovale et beaucoup moins arrondie sur les côtés, sa bande jaune submarginale est entière et se termine avant l'extrémité des élytres. Cependant cet insecte ne me représente pas le grand et bel *Hydaticus Petiti* type, à large bande jaune plus ou moins interrompue avant sa terminaison, que je me rappelle avoir vu dans la collection du Muséum de Paris et qui est de Madagascar. L'exemplaire dont il est question ici vient du Transvaal (E. Heyne).

Cybister distinctus Régb., Ann. Soc. Ent. Fr. 5. VII. p. CLVII. — Un specimen ♂ de Liberia, Junk Riv. (Stampfli), très distinct du type ordinaire du Sénégal, par sa forme beaucoup plus allongée et par la dilatation des tarses antérieurs qui parait un peu moins considérable. Il ne serait pas impossible que ce fût une autre espèce, mais il faudrait avoir à sa disposition plusieurs individus des deux sexes pour trancher cette question.

Cybister immarginatus Aubé, Spec. p. 83. — Trois individus de Humpata (van der Kellen), remarquables par leur coloration très noire et par la grande dilatation de l'arrière corps. Le mâle est anormal et présente une grande atrophie de tout le côté gauche du prothorax.

Gyrinidae.

Orectogyrus Kelleni, n. sp.

Long. $7^1/_2$—$9^3/_4$ mill. — *Sat regulariter ovalis, parum elongatus, in regionibus laevibus subtilissime reticulatus, nigro-violaceus, in capite et pronoto aeneus et iridescens, anguste flavo-limbatus, infra nigricans, epipleuris et pectore medio flavo-testaceis, abdomine rufo-ferrugineo. Pronoto late ad latera punctato-tomentoso; elytris ad latera densissime, ad suturam multo minus dense punctato-tomentosis, spatio scutellari communi laevi,* ♂ *brevi et postice obtuse rotundato,* ♀ *multo longiore, postice bifido et paullo post medium desi-*

nente, costaque in disco laevi paullo post medium in utroque sexu desinente; truncatura convexa, extus sinuata, angulo externo subacuto, fere recto, postice paululum producto, suturali leviter obtuso, haud deleto. ♂ *latior et minus convexus, tibiis anticis sat robustis, angulo apicali externo obtusiusculo et anguste rotundato, tarso sat elongato, parallelo.*

Cette grande et belle espèce est tout à fait intermédiaire entre les *O. madagascariensis* Aubé et *suturalis* Régb. Elle diffère du premier par sa forme plus allongée, par l'espace scutello-sutural lisse bien développé et occupant environ le premier cinquième de la longueur chez le mâle, un peu plus large et bifide à son extrémité chez la femelle, et aussi par la côte plus large et moins élevée. Elle se distingue de l'*O. suturalis* par sa forme au contraire moins allongée et moins comprimée, par l'espace scutello-sutural et la côte moins prolongés en arrière dans les deux sexes et par la troncature plus arrondie, dont l'angle externe est moins aigu et l'interne un peu obtus; il en résulte que la jonction des deux élytres à l'extrémité de la suture forme un angle légèrement rentrant, tandis que chez l'autre espèce il est légèrement saillant.

Humpata (van der Kellen). — Quelques exemplaires des deux sexes.

Evreux, Décembre 1888.

NOTE XV.

SYNONYMICAL REMARKS ON CETONIIDAE.

BY

J. R. H. NEERVOORT van de POLL.

1. *Rhomborrhina gigantea* Kraatz (Deutsche Ent. Zeit. XXVII (1883) p. 380) = *Rhomborrhina resplendens* Swartz (Schönherr, Syn. Ins. I. 3. App. p. 51).

NB. *Rh. resplendens* Swartz is not identical with *Rh. heros* G. & P. (Mon. p. 155. t. 26. f. 3).

2. *Charadronota quadrilunulata* Kraatz (Deutsche Ent. Zeit. XXXII (1888) p. 413 [Part II published November 1888]) = *Charadronota curvata* Jans. (Notes fr. the Leyden Mus. X (1888) p. 110 [published April 1888]).

NB. I compared a typical specimen, received from Dr. Kraatz himself, with Mr. Janson's type at the Leyden Museum.

3. *Porphyrobapta tigrina* Kraatz (Deutsche Ent. Zeit. XXXII (1888) p. 411. t. V. f. 6) = *Diphrontis cruenta* Gerst. (Mitth. aus dem naturwissenschaftlichen Vereine von Neu-Vorpommern und Rügen. XIV (1883) p. 26).

NOTE XVI.

ON A NEW COLLECTION OF BIRDS FROM SOUTH WESTERN AFRICA.

BY

J. BÜTTIKOFER.

(Plate 4).

Shortly after my previous paper on South African Birds had left the press, our Museum received a new collection from Mr. van der Kellen, who seems still to stay at his head-quarters in the Colony of Boers at Humpata, in the Upper Cunene region. This recent collection contains the considerable number of 267 birds-skins, representing 103 different species, 49 of which are not contained in his former consignments and thus not mentioned in my previous list. Of these 49 species, which in this paper will be marked with an asterisk, two proof to be new to science.

All the birds are collected during the first trimester of 1888, and the only locality mentioned is Gambos, in the Upper Cunene region. The aforesaid 49 species added to those of the former consignments, the species we hitherto received from that country will reach the considerable number of 180.

1. *Aquila rapax* (Temm.). — Two females, one of which (N°. 429) has the upper surface, sides of head and neck and the breast very dark, with but few longitudinal stripes of fawn-color.

*2. *Nisaëtus spilogaster* (Dubus).

Spizaetus spilogaster, Schl. Mus. P.-B., Revue Accip. p. 59.
Nisaetus spilogaster, Sharpe, Birds S. Afr. p. 38; — Boc. Orn. d'Ang. p. 29.

Two females, one fully adult, the other somewhat younger, having the lower surface faintly, vent and thighs more strongly tinged with fulvous.

Iris yellow, bill black, cere and feet yellow.

3. *Melierax gabar* (Daud.). — Adult male and female.

4. *Astur polyzonoides* (Smith). — An immature male with some barred feathers on the chest.

5. *Cerchneis rupicola* (Daud.). — An adult male.

6. *Bubo lacteus* (Temm.). — An adult female.

7. *Bubo leucotis* (Temm.). — An adult male.

8. *Scops capensis*, Smith. — Three specimens.

9. *Noctua capensis* (Smith). — An adult female.

10. *Noctua perlata.* (Vieill.). — An adult male.

*11. *Caprimulgus europaeus*, Linn.

Sharpe, Birds S. Afr. p. 83.

An adult male.

Iris dark brown, bill and feet horn-color.

12. *Caprimulgus rufigena*, Smith. — Three females.

13. *Merops apiaster*, Linn. — Two adult males.

*14. *Coracias naevia*, Daud.

Sharpe, Birds S. Afr. p. 103; — Boc. Orn. d'Ang. p. 83.

An adult male. Iris clear brown, bill black, feet yellow.

15. *Coracias caudata*, Linn. — Four male specimens.

*16. *Ceryle rudis* (Linn.).

Sharpe, Birds S. Afr. p. 110; — Boc. Orn. d'Ang. p. 97.

An adult female.

*17. *Ceryle maxima* (Pall.).

Sharpe, Birds S. Afr. p. 111; — Boc. Orn. d'Ang. p. 98.

An adult female.

*18. *Halcyon semicoerulea* (Forsk.).

Sharpe, Birds S. Afr. p. 114; — Boc. Orn. d'Ang. p. 102.

Two adult and two immature specimens. All four differ from any other specimen of this species from more northern parts of Africa, especially by the gray color on head and neck, which is not tinged with fulvous, by the deep, nearly purplish blue on back, wings and tail, without any greenish tinge, and by the very pale rusty color on abdomen and under tail-coverts, while those parts are reddish brown in all the birds from more northern localities.

Iris brown, bill red, feet dull red.

19. *Halcyon cyanoleuca* (Vieill.). — Four males.

*20. *Lophoceros alboterminatus*, n. sp.

An adult male and two adult females, all three collected in February.

Adult male: Entirely similar to *L. melanoleucus*, as far as I can judge from a comparison with the descriptions of the latter, which is wanting in our collections; but differing constantly from it by its centre pair of tail-feathers being tipped with white in the same degree as the outermost pair. In looking through the rich literature of *L. melanoleucus*, I find only one place (Boehm, J. f. O. 1883, p. 168), where white-tipped centre tail-feathers are mentioned [1]). Wing 25,4 cm.

1) Professor Barboza du Bocage kindly informed me that in all the 8 specimens of *L. melanoleucus* at his disposal the innermost pair of tail-feathers is entirely black.

tail 23,5, bill in straight line from forehead 10, tarsus 3,8.

Adult female: Similar to the male, but remarkably smaller. Wing 23 cm., tail 23, bill 8,3, tarsus 3,4.

Iris brown, bill coral-red, a basal edge paler, feet black.

*21. *Lophoceros elegans* (Hartl).

Tockus flavirostris, Sharpe, Birds S. Afr. p. 130; — Boc. Orn. d'Ang. p. 119.
Lophoceros elegans, Shelley, Ibis 1888, p. 68.

Two males collected. Iris brown, bill yellow, feet black.

22. *Lophoceros erythrorhynchus* (Gm.).

Tockus erythrorhynchus, Bütt. N. L. M. 1888, p. 221.

Two males.

23. *Lophoceros epirhinus* (Sund.).

Tockus nasutus, Bütt. N. L. M. 1888, p. 221.
Lophoceros epirhinus, Shelley, Ibis 1888, p. 64.

An adult male.

24. *Upupa africana*, Bechst. — Adult male and female.

25. *Irrisor erythrorhynchus* (Lath.). — Three specimens.

26. *Irrisor cyanomelas* (Vieill.). — Six specimens.

27. *Cuculus gularis*, Steph. — Adult male.

28. *Coccystes jacobinus* (Bodd.). — A male specimen.

*29. *Chrysococcyx cupreus* (Bodd.).

Sharpe, Birds S. Afr. p. 153; — Boc. Orn. d'Ang. p. 143.

Several specimens. Iris red, in immature birds pale brown, bill and feet black.

30. *Indicator major*, Steph. — An adult female.

31. *Indicator minor*, Steph. — An adult male.

*32. *Prodotiscus regulus*, Sund.

Sharpe, Birds S. Afr. p. 171; — Boc. Orn. d'Ang. p. 542.

An adult male. Iris dark brown, bill and feet black.

33. *Pogonorhynchus torquatus* (Dumont). — An adult female.

34. *Campothera bennettii* (Smith). — Adult and immature male; the latter almost identical with the specimen mentioned in my first paper on Birds from S. W. Africa.

35. *Campothera smithii* (Malh.). — Adult male and female.

36. *Mesopicus namaquus* (Licht.). — Three females.

37. *Dendropicus cardinalis* (Gm.). — Seven specimens.

*38. *Agapornis roseicollis* (Vieill.).

Sharpe, Birds S. Afr. p. 192. — Boc. Orn. d'Ang. p. 73.

Several males and females. Iris brown, bill greenish white, feet horny.

*39. *Psittacus fuscicollis*, Kuhl.

Boc. Orn. d'Ang. p. 70.

An adult male. Iris brown, bill and feet pale gray.

*40. *Psittacus rueppellii*, Gray.

Sharpe, Birds S. Afr. p. 196; — Boc. Orn. d'Ang. p. 67.

Several adult males and females. Iris orange red, bill and feet dark gray.

*41. *Hypolais icterina* (Müll.).

Sharpe, Birds S. Afr. p. 295; — Boc. Orn. d'Ang. p. 556.

Adult female. Iris brown, bill horny, feet bluish gray.

42. *Turdus litsitsirupa*, Smith. — Five specimens, males and females, none of them tinged with salmon-red; all collected in February, thus at about the same time of the year as the former, salmon-colored specimens.

*43. *Erythropygia munda* (Cab.).

Sharpe, Birds S. Afr. p. 821; id. Cat. Birds Br. Mus. VII, p. 76. *Aedon leucophrys*, Boc. Orn. d'Ang. p. 275.

An adult and a somewhat younger male. Iris brown, bill horny brown, lower mandible whitish at base, feet pale brown.

44. *Pycnonotus layardi*, Gurney. — An adult female.

45. *Chlorocichla occidentalis*, Sharpe. — Four specimens. No difference between adult male and female.

*46. *Phyllostrophus fulviventris*, Cab.

Sharpe, Birds S. Afr. p. 814; — Boc. Orn. d'Ang. p. 248.

Two adult females. — Iris dark brown, bill horny, feet bluish gray.

*47. *Crateropus melanops*, Hartl.

Sharpe, Birds S. Afr. p. 251; — Boc. Orn. d'Ang. p. 214.

Two adult females. — Iris dark brown, bill and feet black.

48. *Aethocichla gymnogenys* (Hartl.).

Sharpe, Birds S. Afr. p. 215; — id. Cat. Birds Br. Mus. VII, p. 484, pl. 12. *Crateropus gymnogenys*, Boc. Orn. d'Ang. p. 253.

Five specimens, males and females.

The adult of both sexes have throat and fore-neck plain white; the dusky cross-bars on throat and fore-neck, mentioned by Mr. Sharpe, being found on specimens only, which have not fully assumed the adult stage.

Iris dark brown, bill and feet black.

*49. *Camaroptera brevicaudata*, Sund.

Boc. Orn. d'Ang. p. 280; — Sharpe, Cat. Birds Br. Mus. VII, p. 168.

Two males. Iris of one said to be dark brown, the other orange-red, bill blackish, feet horny.

50. *Cinnyris gutturalis* (Linn.). — Several males and females.

*51. *Cinnyris leucogaster* (Vieill.).

Nectarinia talatala, Sharpe, Birds S. Afr. p. 318; — Boc. Orn. d'Ang. p. 172.
Cinnyris leucogaster, vid. Shelley, Nectariniidae, p. XXXIX.

An adult male. Iris dark brown, bill and feet black.

52. *Parus niger*, Vieill. — An adult male.

53. *Batis molitor*, Sharpe.

Sharpe, Birds S. Afr. p. 348, pl. X, f. 1; — Boc. Orn. d'Ang. p. 198.
Batis pririt, Bütt. N. L. M. 1888, p. 232.

In my above quoted first paper on S. W. African Birds I by mistake mentioned the specimens of *Batis*, two males only, under the name of *B. pririt*. Having this time got a female of *molitor*, I found that the specimens in the former collection belong also to this species. The iris of the present female is said to be yellow.

54. *Laniotur dus torquatus*, Waterh. — Young specimens have all the quills strongly tipped with white, and the iris is said to be brown.

55. *Terpsiphone cristata* (Linn.). — Three adult females.

56. *Lanius minor* (Gm.). — Five specimens.

57. *Lanius collurio*, Linn. — Male and female.

58. *Urolestes melanoleucus* (Jard. & Selby). — Male and female.

59. *Laniarius sulphureipectus*, Less. — Two males.

60. *Laniarius atrococcineus*, Burch. — Six specimens.

61. *Dryoscopus guttatus*, Hartl. — Three females, all with some remains of immature plumage, and the outermost pair of tail-feathers tipped with white.

Observation: A re-examination of the specimens mentioned in my first paper on Birds from Mr. van der Kellen,

showed that in the specimen mentioned as having only two secondaries edged with white, this is only the case on the right wing, probably on account of the white edge of the third secondaries being worn off.

At this place may be mentioned as a peculiarity that in one of the immature specimens of *D. major*, collected by the late Governor Nagtglas on the Gold Coast, *three* secondaries are distinctly edged with white.

62. *Dryoscopus cubla* (Levaill.). — Two specimens. The young male and female, described in my last report, p. 234 and 235 as belonging to this species, belong to *Nilaus brubru.*

*63. *Nilaus brubru* (Lath.).

Sharpe, Birds S. Afr. p. 397; — Boc. Orn. d'Ang. p. 220.

Five specimens in different stages of plumage. Both the young specimens, mentioned in my previous paper (N. L. M. 1888, p. 234) under the name of *Dryoscopus cubla*, belong to this present species.

Iris dark brown, bill black, feet bluish gray.

*64. *Campephaga nigra*, Vieill.

Sharpe, Birds S. Afr. p. 398; — Boc. Orn. d'Ang. p. 206.

Three immature males with the plumage above and below strongly intermixed with glossy greenish black feathers, and a female with a more olive yellow coloration and showing no intention to become black. Iris in all the specimens dark brown, bill and feet black.

65. *Eurocephalus anguitimens*, Smith. — Five specimens.

66. *Bradyornis murina*, Finsch & Hartl.

Finsch & Hartl. Vög. O. Afr. p. 866; — Boc. Orn. d'Ang. p. 210; — Sharpe, Birds S. Afr. p. 844.

Bradyornis oatesi, Sharpe, in Oates' Matabele Land, p. 314, pl. B; — Bütt. N. L. M. 1888, p. 236.

Two adult females and an immature male, both the

first not differing from the specimens mentioned in my above cited first paper. A comparison of the specimens at hand with a fine specimen of *B. murinus*, kindly sent me by Prof. Barboza du Bocage, convinced me of the identity of both species. An immature male (N°. 408) differs from that of the following species by its superior size and stouter bill, and it has, moreover, the outer edge of the quills much paler than the latter.

*67. *Bradyornis mariquensis*, Smith.

Sharpe, Birds S. Afr. p. 401; — Boc. Orn. d'Ang. p. 209.

Three adult and two immature females. Outer edge of quills, especially in immature birds, darker, i. e. more rufous than those of the preceding species. The edges in the figure of the young bird on plate 113 in Smith's Zool. S. Afr. are decidedly too pale.

Iris brown, bill black, feet blackish brown.

68. *Prionops talacoma*, Smith. — Three adult females. Iris yellow, bill black, feet red.

69. *Oriolus notatus*, Peters. — An adult male and four females in different stages of plumage.

*70. *Buphaga africana*, Linn.

Sharpe, Birds S. Afr. p. 418; — Boc. Orn. d'Ang. p. 299.

An adult female. Iris blood-red, bill yellow, tip blood-red, feet black.

71. *Dilophus carunculatus* (Gm.). — A series of adult and immature specimens of both sexes. Iris of all brown, bare parts on the head of adult male black, except the occiput, which is yellow (v. d. K.).

*72. *Lamprotornis mewesi* (Wahlb.).

Sharpe, Birds S. Afr. p. 423; — Boc. Orn. d'Ang. p. 303.

Two adult specimens. Iris dark brown, bill and feet black.

*73. *Pholidauges verreauxii*, Boc.

Sharpe, Birds S. Afr. p. 428; — Boc. Orn. d'Ang. p. 314, pl. V.

A large number in different stages of plumage.

*74. *Ploceus velatus*, Vieill.

Hyphantornis velata, Sharpe, Birds S. Afr. p. 439; — Boc. Orn. d'Ang. p. 325.

Two adult and an immature male. Iris in the adult males orange, in the immature dark brown, bill in all black, feet flesh-color.

*75. *Textor erythrorhynchus*, Smith.

Sharpe, Birds S. Afr. p. 445; — Boc. Orn. d'Ang. p. 317.

Adult males and females. Iris brown, bill and feet red.

*76. *Hypochera chalybeata*, P. L. S. Müll.

Hypochera ultramarina, Sharpe, Birds S. Afr. p. 457.
Hypochera nitens, Boc. Orn. d'Ang. p. 348.
Hypochera chalybeata, Shelley, Ibis 1886, p. 338.

Three adult males, all with bluish gloss. Iris dark brown, bill and feet red.

*77. *Quelea quelea* (Linn.).

Sharpe, Birds S. Afr. p. 458; — Shelley, Ibis 1886, p. 356.
Ploceus sanguinirostris, Boc. Orn. d'Ang. p. 320.

An adult female. Iris brown, bill pale horny, feet yellowish horn-color.

*78. *Coliopasser albonotatus* (Cass.).

Penthetria albonotata, Sharpe, Birds S. Afr. p. 460; — Boc. Orn. d'Ang. p. 342.
Coliuspasser albonotatus, Shelley, Ibis 1886, p. 348.

An adult male. Iris dark brown, bill bluish horny, feet black.

79. *Pyromelana oryx* (Linn.). — Two females. Iris brown, bill and feet horny.

*80. *Pyromelana taha* (Smith).

Sharpe, Birds S. Afr. p. 465.
Euplectes taha, Boc. Orn. d'Ang. p. 338.

Adult male. Iris dark brown, bill black, lower mandible flesh-color, feet flesh-color.

*81. *Pytilia melba* (Linn.).

Sharpe, Birds S. Afr. p. 468; — Boc. Orn. d'Ang. p. 355.

An adult and an immature male, the latter like the adult male, but no scarlet on head and throat, which are uniform gray; chest uniform with the breast, instead of golden green. Iris and bill in both specimens red, feet flesh-color.

*82. *Passer diffusus*, Smith.

Sharpe, Birds S. Afr. p. 480; — Boc. Orn. d'Ang. p. 364.

Two males. Iris dark brown, bill black, feet horny.

*83. *Fringillaria flaviventris* (Vieill.).

Sharpe, Birds S. Afr. p. 491; — Boc. Orn. d'Ang. p. 370.

An adult male. Iris dark brown, bill and feet horny.

*84. *Mirafra apiata* (Vieill.).

Sharpe, Birds S. Afr. p. 515; — Boc. Orn. d'Ang. p. 375.

An adult male. Iris brown, bill and feet horny.

*85. *Mirafra cheniana*, Smith.

Sharpe, P. Z. S. 1874, p. 644; id. Birds S. Afr. p. 528.

An adult female. Three outermost pairs of tail-feathers white, inner web broadly margined with earthy brown; in the subsequent pair the whole outer web only is pure white, and the feathers of the third pair are but narrowly edged with white on the outer web. Iris brown, bill horn-color, feet flesh-color.

*86. *Anthus* sp.?

A moulting male specimen, which cannot be determined with certainty, having the wings incomplete.

87. *Treron calva* Temm. — Six specimens, all fully adult.

88. *Oena capensis* (Linn.). — Two adult males. Iris brown, bill dark red, paler at tip, feet red.

*89. *Pternistes rubricollis* (Gm.).

Sharpe, Birds S. Afr. p. 589; — Boc. Orn. d'Ang. p. 400.

Fully adult male and female. Iris brown, bill, naked parts on head and throat, and feet red.

*90. *Francolinus jugularis*, n. sp.

(Plate 4).

Adult male and female, Gambos, 25 February 1888.

This species, which I in vain tried to identify with any other known to me, is very similar to *F. gariepensis*, but may be easily distinguished by the black chest, each feather of which has a subterminal cordiform spot of white, in the same degree as this is the case throughout the whole lower surface of *F. lathami*. Moreover the whole upper surface has a grayer tinge, and the cross-bars are narrower, fainter and are rather mere vermiculations than real cross-bars.

Ad. ♂. Whole upper surface brownish gray; the feathers on head and hind neck with broad dark brown or even blackish centres, those of the back and upper wing-coverts irregularly blotched with dark brown, narrowly vermiculated with buff and, especially the scapulars and interscapulary feathers, broadly striped with fulvous or white shaft-streaks.

The outer pairs of tail-feathers are uniform earthy brown, the innermost ones and the upper tail-coverts are vermiculated in the same way as the back. The primary coverts

and the terminal half of the primaries are uniform earthy brown, the basal half of the latter shaded with vinous red, and also are the larger under wing-coverts. Like *F. gariepensis* this species is characterized by two bands of white and black feathers, the one running through the eye to the base of the neck, following the sides of occiput and hind neck, the other beginning at the base of the bill and encircling the pure white chin and throat. Both bands, bordering form above and below the fulvous ear-coverts and sides of neck, terminate into a broad black jugular patch, as is the case in *F. levaillanti*. Each feather of this jugular patch has a white cross-bar near the base and a large and very salliant cordiform subterminal spot of the same color. The rest of the lower surface is white with a strong tinge of buff, with very large black blotches on the breast In *F. gariepensis* these blotches are brown. Most of the very long feathers of the flanks are reddish brown on the inner vane and barred with gray on the outer one, both parts being separated by a broad white shaft-streak. Thighs faintly tinged with vinous, uniform, vent and under tail-coverts faintly barred with grayish brown. Lower surface of tail-feathers earthy brown. like the quills. Iris reddish brown, bill horny gray, feet yellow.

The female is similar to the male, the spur however is wanting.

	Wing	tail	tarsus	culmen
♂	15.4	6.8	3.5	3 cm.
♀	15.2	6.5	3.5	2.8 »

*91. *Porphyrio alleni* (Thomps.).

Boc. Orn. d'Ang. p. 485; — Sharpe, Birds S. Afr. p. 621.

An adult female. Iris brown, bill and feet red.

*92. *Glareola melanoptera*, Nordm.

Sharpe, Birds S. Afr. p. 650.

Two adult males and two females. The males have chest and breast strongly tinged with ochre, which is not the

case in the females. Iris brown, bill black, gape orange-red, feet black.

93. *Cursorius senegalensis* (Licht.). — Adult male and female.

*94. *Cursorius chalcopterus*, Temm.

Boc. Orn. d'Ang. p. 420; — Sharpe, Birds S. Afr. p. 656.

An adult male. Iris brown, bill orange-red, culmen and tip black, feet red.

*95. *Charadrius asiaticus*, Pall.

Boc. Orn. d'Ang. p. 430.
Eudromias asiaticus, Sharpe, Birds S. Afr. p. 665.

A female. Iris brown, bill horny black, feet greenish brown.

*96. *Chettusia coronata* (Gm.).

Boc. Orn. d'Ang. p. 426; — Sharpe, Birds S. Afr. p. 670.

Four adult males and one female. Iris pale brown, basal half of bill red, terminal half black, feet red.

97. *Actitis hypoleucos* (Linn.). — Two specimens.

*98. *Ciconia episcopus* (Bodd.).

Boc. Orn. d'Ang. p. 452; — Sharpe, Birds S. Afr. p. 731.

An adult female. Iris yellow, bill red and black, feet black.

99. *Ciconia abdimii*, Licht. — An adult male.

*100. *Ardea rufiventris*, Sund.

Boc. Orn. d'Ang. p. 441; — Sharpe, Birds S. Afr. p. 713.
Ardea semirufa, Schleg. Mus. P.-B., Ardeae, p. 35.

An adult male. Iris yellow, bill pale horny, tip black, feet yellow.

*101. *Butorides atricapilla* (Afzel.).

Boc. Orn. d'Ang. p. 446; — Sharpe, Birds S. Afr. p. 719.

An adult male. Iris yellow, bill black, yellow underneath the lower mandible, feet yellow.

*102. *Sarcidiornis africana*, Eyton.

Boc. Orn. d'Ang. p. 496; — Sharpe, Birds S. Afr. p. 752.

Adult male and female. Iris dark brown, bill and feet black.

*103. *Graculus africanus* (Gm.).

Boc. Orn. d'Ang. p. 522.
Phalacrocorax africanus, Sharpe, Birds S. Afr. p. 781.

An adult male. Iris red, bill horny, feet black.

NOTE XVII.

ADDITIONAL REMARK ON FRANCOLINUS SUBTORQUATUS.

BY

J. BÜTTIKOFER.

In my first paper on Birds from S. W. Africa (N. L. M. 1888, p. 242) I mentioned a specimen of *Francolinus subtorquatus* from Humpata. Looking through the Francolins in our Museum, I found an adult female of this same species, which has been collected by Mr. Sala near Mossamedes, on Oct. 27th 1867. Prof. Barboza du Bocage has not mentioned this species in his excellent Ornithologie d'Angola. A comparison of his description of *Francolinus schlegeli* (p. 407) with *F. schlegelii* and *subtorquatus* in our Collection, convinced me, however, that the bird in question undoubtedly belongs to *F. subtorquatus*. The misleading note in Smith's Zoology of South Africa, about the resemblance of male and female of this species is remedied by Mr. Sharpe in his »Birds of South Africa", p. 601.

NOTE XVIII.

ON MACRONOTA APICALIS, G. & P.

BY

J. R. H. NEERVOORT van de POLL.

Among the Macronota's described and figured in Gory and Percheron's »Monographie des Cétoines (1833)" there is a small species from West-Africa, viz.: *Macronota apicalis* G. & P., which, though with some doubt, was placed by the authors in the genus *Macronota*, composed of Asiatic species only.

Our advanced knowledge of the distribution of Cetoniid genera induces us to consider the occurrence in West-Africa of a species, belonging to an exclusive Asiatic genus, a fact of much doubt. Moreover the figure of *M. apicalis* is not at all representing the peculiar facies of a *Macronota*, but looks much more like a *Glycyphana* with a slightly lobed prothorax.

Burmeister, in his »Handbuch der Entomologie III (1842)" mentions this species, which was not known to him, no less than three times. Firstly he supposes (p. 330), that *M. apicalis* G. & P. does not belong to the genus *Macronota*, but probably ought to be ranged in the genus *Glycyphana*. On p. 351, in an annotation at the end of the discription of *Glycyphana impar* G. & P., he says: »I suppose, *Macronota apicalis* G. & P. belongs hereto." Finally having established the genus *Discopeltis* for *D. tricolor* Burm. [1]), he writes (p. 600): »the only species I

1) Burmeister described *Discopeltis tricolor* from a specimen in Mr. Sommer's collection, which was obtained afterwards by Dr. Baden, and has passed now in my possession.

have examined, is a native of Guinea, and therefore I suppose that *Macronota apicalis* G. & P., which I have placed formerly in the genus *Glycyphana* as I did not yet know *Discopeltis tricolor*, must take its true place in this genus."

In the Munich Catalogue these quotations of Burmeister are omitted.

Schaum discusses the views of Burmeister in his »Observations critiques sur la famille des Lamellicornis Mélitophiles (Ann. Soc. Ent. de France. 1844. 2e Sér. t. II)" and considers the characters, which distinguish *M. apicalis* from the genus *Macronota*, too trifling as to justify a separation.

The type specimen of *M. apicalis*, which belonged to the collection of Count Dejean, is now in possession of Mr. J. Thomson, who has published in his »Typi Cetonidarum (1878) p. 36" a list of the types of Gory & Percheron preserved in his collection, and among them he enumerates a *Gametis apicalis*. The position assigned to this insect by Thomson, without any further explanation, neither pleads in favor of his accurate observation, nor for the homogeneity of his genus *Gametis*.

I have failed to find any further annotations about this interesting species, which seems to be a great rarity, for although I have visited the greater part of the more important Musea and private collections in Europe, I never saw a specimen of it. Great was therefore my delight, as I observed, on opening a drawer with Cetoniidae of Dr. Baden's collection, which I recently purchased, an insect which directly called to mind the figure of *M. apicalis* G. & P. After a careful examination with the description and figure, little doubt remained as for its identity, the only appreciable difference being the red border of the thorax, which does not extend along the front- and basal-margin in my specimen. (Here I must observe that the description and figure of G. & P. are somewhat in contradiction, the legs being yellow on the plate, at least in

my copy, whilst they ought to be black according to the description). At the same time it became evident, that Burmeister, at last, very correctly had referred this species to his genus *Discopeltis*.

D. apicalis G. & P. is allied to *D. lateralis* Gerst. from Zanzibar, and to the more recently described *D. aberrans* Jans. from Angola, and *D. capucina* Gerst. from the Cameroons, the two latter species I know however from description only.

The description of Gory & Percheron being very superficial and incomplete, I think it might be useful to give a detailed description of my specimen.

Discopeltis apicalis G. & P.

Macronota apicalis G. & P. Monographie des Cétoines. p. 327. t. 64. f. 7.

? *Glycyphana apicalis* Burm. Handbuch der Entomologie. III. p. 330 & 351.

? *Discopeltis apicalis* Burm. Handbuch der Entomologie. III. p. 600.

Macronota apicalis Schaum. Ann. Soc. Ent. de France. 2e Sér. t. II (1844). p. 369.

Gametis apicalis Thoms. Typi Cetonidarum. p. 36.

♀. Head black, slightly shining, with a coarse and confluent punctuation at the sides, the clypeus finely punctured, a faint longitudinal ridge along the centre; clypeus depressed at the sides, the apex rounded and emarginate in the middle. Antennae entirely black.

Prothorax dull black, broadly margined along the sides with dull red; convex, frontmargin slightly prominent, the base produced into an obtuse point over the scutellum, sides broadly rounded, somewhat prominent in the middle, obsoletely punctured near the anterior angles.

Scutellum dull black, the top strongly produced and acute.

Elytra dull rusty red, with a lunated dull black patch, common to both, just before the tip and extending along

the suture downwards to the apex; depressed, parallel-sided, each with a faint trace of two costae, united at the apical callosity, and a few longitudinal striae; sutural margins smooth at the end. Epimera red, shining, deeply and confluently punctured.

Pygidium dull black, with a few scattered punctures.

Undersurface shining black, sides of the prosternum margined with red; breast coarsely strigose at the sides, each abdominal segment with a transverse row of large distant punctures at the basal margin and an other row about the middle, the last segment finely punctured; mesosternal-process short and broad, apex straight; sides of the breast with sparse golden pubescence. Legs shining black, deeply punctured, all the femora and the tibiae of the middle- and hindlegs sparingly fringed with golden hairs; the anterior tibiae coarsely strigose above, with two distinct lateral teeth before the terminal edge, the other tibiae with a strong tooth about the middle.

This specimen has been captured by the Missionary Werner at Abetefi (Ashantee).

NOTE XIX.

ON THE OCCURRENCE OF LAMPRIS LUNA, GMEL. ON THE DUTCH COAST.

BY

Dr. Th. W. van LIDTH de JEUDE.

On Dec. 8th 1888 a large fish was washed ashore near Scheveningen, and was captured by two fishermen, who brought it to the Leyden Museum. They told us nobody in Scheveningen ever saw such a fish, and were very much surprised as we showed them a stuffed specimen of *Lampris luna*, captured at Noordwijk in 1840, which specimen resembled the fish they captured in all points, being only somewhat smaller.

Now it is a matter of truth that *Lampris luna* very seldom makes its appearance on our coast. As far as I can make out this is the 5th specimen captured on the dutch coast during this century.

The first is the specimen, the skeleton of which is described by G. Bakker in his work entitled »Osteographia Piscium" edited in 1822 at Groningen. In his »Praefatio" Bakker states that his specimen was captured at Katwijk during the summer fifteen years ago [1]).

In 1836 a second specimen of *Lampris luna* was washed ashore at Noordwijk. A coloured figure of that specimen in possession of Mr. F. A. Verster van Wulverhorst, the administrator of the Leyden Museum, who got it from his father, is now in our library. Moreover Mr. Verster van Wulverhorst Sr. made an annotation in his copy of »J. A. Bennet en G. van Olivier, Naamlijst der Nederlandsche Visschen" stating the

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1) In „Bouwstoffen voor eene Fauna van Nederland" this fish is erroneously stated to have been caught in 1822 at the coast of Groningen.

capture of a specimen of *Lampris luna* at Noordwijk in the end of the 18th century.

The third specimen is that above referred to, captured at Noordwijk in 1840, stuffed and making part of the Leyden Museum.

The fourth is a fish captured on our coast on Dec. 1844, the skeleton of which is preserved in our osteological collection.

Our new specimen from Scheveningen is a female, long 103 c.m., high 65 c.m. and weighing 54$^1/_2$ K.G.

On examining the contents of the intestines a shrimp was found in the oesophagus, and the stomach was filled up with cuttlefish-jaws.

As the fish was in a very good condition we tried the flesh and found it excellent, much resembling that of salmon.

The skeleton of this specimen will be placed in the osteological collection of the Leyden Museum.

NOTE XX.

DESCRIPTIONS OF NEW MALAYAN CICADIDAE BELONGING TO THE LEYDEN MUSEUM.

BY

W. L. DISTANT [1]).

Gœana Hageni, n. sp.

Body olivaceous brown. Head with the lateral margins of front, pronotum with two oblique, irregular, linear spots on each lateral area, and a small central spot at base blackish. Mesonotum with two central, obconical, castaneous spots at anterior margin.

Tegmina pale greenish, the costal membrane, a somewhat broad apical margin irregularly waved internally, a rounded spot at base of third apical area, and the apical half of inner margin (narrowly) dark brownish. Wings pale bluish green, the apical and outer margins not reaching base, narrowly dark brownish.

Rostrum not quite reaching the posterior coxae. Face large and tumid, the transverse striations coarse and prominent, central sulcation only prominent at about centre.

Var. *a*. Tegmina with two dark brownish spots, one at base of third apical area and another, smaller, at base of fifth apical area.

Long. excl. tegm., ♂ 32 millim., exp. tegm. 82 millim.

Hab. East-Sumatra: Tandjong Morawa, Serdang (Dr. B. Hagen).

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1) See also: Ann. & Mag. of Nat. Hist. Jan. 1889.

Leptopsaltria nigrescens, n. sp.

Brownish ochraceous, with the following black markings: — Head with the area of the ocelli, the inner margins of the eyes, a spot near bases of antennae, a spot on each side of front, and a central transverse linear line at base; pronotum with two central lines united at base and the incisures; mesonotum with two central obconical spots at anterior margin, a sublateral fascia on each side, and a spot in front of each anterior angle of the basal cruciform elevation; the posterior margins of the abdominal segments, the margins of the eyes beneath, the apex of the face, the disk of the sternum, the inner halves of the opercula, the abdominal tubercles, and the disk of abdomen.

Tegmina pale hyaline, the basal venation brownish, the apical venation fuscous. Wings pale hyaline.

The rostrum passes the posterior coxae, the opercula are concave externally, oblique internally, the apices narrowed and angularly rounded.

Long. excl. tegm., ♂ 20 millim., exp. tegm. 56 millim.

Hab. Java (J. W. van Lansberge).

Cicada coronata, n. sp.

Body above ochraceous; anterior margin of front, a broad transverse fascia at base of head, extending between and behind the eyes, a narrow fascia near lateral margins of pronotum, and a small central transverse linear spot at base of same, four obconical spots at anterior margin of pronotum (the central pair smallest), an irregular spot in front of cruciform elevation, and anterior margins of abdominal segments, black. Body beneath and legs ochraceous; opercula ochraceous, with the lateral margins greyish and with a black spot at inner apical angles; abdomen beneath with the anterior segmental margins, the apical segment, and apex of abdominal appendage black.

The opercula are long and overlapping at inner margins, their outer margins slightly concavely sinuate, their apices convexly rounded; the rostrum reaches the posterior coxae.

Long. excl. tegm., ♂ 28 millim., exp. tegm. 74 millim.

Hab. Sumatra (J. W. van Lansberge).

Kamalata, gen. nov.

This genus is allied to *Bœturia* and *Karenia* by having the anterior margins of the first dorsal segment of the abdomen neither produced nor sending forward a lobe, thus rendering the tympana visible. Its principal characteristic is found in the vertex of the head, which is laminately produced on each side in front of the inner margin of the eyes in somewhat rectangular processes.

The body is very robust, the abdomen broad and moderately inflated, its lateral margins distinctly keeled beneath; the opercula are short, as in the genus *Pomponia*; the rostrum in the typical species here described about reaching the posterior coxae, its second joint somewhat compressed laterally and dilated and deeply grooved above; anterior femora robust and spined beneath at apex. Tegmina short, broad, about as long as the body, apical areas eight in number, first longer than the second, basal ulnar area very slightly ampliated anteriorly.

Kamalata pantherina, n. sp.

Body above and beneath dark chocolate-brown; head with a longitudinal fascia to front, the margins and a transverse fascia to the ampliations in front of eyes, and a transverse spot at anterior margin of vertex, behind which are two outwardly curved lineate spots ochraceous, eyes luteous; pronotum with a central black hour-glassed shaped fascia somewhat margined and streaked with ochraceous, the posterior margin also ochraceous; mesonotum

with two longitudinal waved linear fasciae, between which near anterior margin are two oblique spots, and the cruciform elevation ochraceous; abdominal segmental margins ochraceous; apices of the femora luteous, anterior and posterior tibiae annulated at base, intermediate tibiae both at base and apex with fuscous.

Tegmina pale greenish ochraceous-hyaline, the venation brownish ochraceous; a large pale fuscous spot at bases of second, third, fourth, fifth, and seventh apical areas, some small spots at bases of sixth and eighth apical areas, two very small spots on the margins of third ulnar area, and a series of large marginal spots at the apices of the longitudinal veins to apical areas. Wings pale hyaline, the venation brownish ochraceous.

Long. excl. tegm., ♂ 34 millim., exp. tegm. 75 millim.

Hab. Sumatra: Peak of Indrapura, at a height of about 2200 M. (December 1877: Sumatra-Expedition).

NOTE XXI.

SUR QUELQUES ISOPODES DU MUSÉE DE LEYDE.

PAR

ADRIEN DOLLFUS.

(Planche 5).

Armadillo Javanensis, n. sp.

Corps très-finement poilu, avec une double série de tubercules allongés, lisses et peu saillants, sur les segments thoraciques, de part et d'autre de la ligne médiane.

Epistome (*sec.* Budde-Lund) dépassant notablement le front et formant en avant un rebord presque droit.

Antennes à fouet court et ténu; premier article trois fois plus court que le second.

Bord latéral des segments thoraciques antérieurs ne formant pas de duplicature comme dans la plupart des autres espèces du genre.

Telson presqu'aussi long que large, avec une forte rentrée sur le côté.

Telsopodes à appendice interne n'atteignant pas la moitié du telson; appendice externe très-petit et situé presqu' à l'extrémité du côté interne incurvé de la base du telsopode.

Couleur (dans l'alcool): rougeâtre clair avec de petites taches plus claires.

Dimensions: $8^{mm} \times 3^{1}/_{2}{}^{mm}$.

Provenance: Java, près de Batavia (Groen, 1861).

Porcellio cristatus, n. sp.

Corps couvert de granulations beaucoup plus fortes sur la tête que sur le thorax et sur l'abdomen.

Lobes latéraux du front grands, presque quadrangulaires, arrondis du côté interne. Lobe médian triangulaire, infléchi entre deux saillies de la marge frontale s'élevant de chaque côté en forme de crête.

Antennes à fouet n'atteignant pas tout à fait la longueur de l'article précédent; le 1^{r} article du fouet est 3 ou 4 fois plus court que le second.

Deux premiers segments thoraciques à bord postérieur à peine sinueux.

Lames operculaires toutes munies de trachées, celles des deux dernières lames plus considérables que celles des premières.

Telson triangulaire, incurvé sur les côtés et terminé en pointe aigue.

Telsopodes à base très-développée; appendice externe conique, l'interne presque cylindrique et cilié à l'extrémité.

Couleur: Tête et abdomen bruns; thorax fauve avec quatre lignes longitudinales brunes, les deux médianes très-rapprochées.

Dimensions: $7^{mm} \times 2^{1}/_{2}{}^{mm}$.

Provenance: Surinam (ten Kate).

Ligia Hawaiensis, Dana (?).

Corps allongé, ponctué et présentant quelques saillies mousses irrégulières, mais ni tubercules ni granulations.

Yeux grands. Espace frontal interoculaire moindre que la longueur d'un oeil. Antennes $= {}^{3}/_{4}$ de longueur du corps. Fouet robuste, composé de 28 articles chez le ♂, de 25 chez la ♀.

Segments thoraciques postérieurs fortement incurvés, à angle postéro-latéral aigu.

Telson à bord postérieur sinueux et presque 5-denté. Les deux dents latérales de même forme que les angles postéro-latéraux des segments précédents; les deux dents intermédiaires très-petites. Partie médiane du rebord postérieur largement triangulaire.

Telsopodes à article basilaire large et fortement trica-

réné. Appendices inégaux, l'externe égalant au moins deux fois la longueur de l'article basilaire et terminé par un cil raide. L'interne d'un quart plus court.

Couleur: Gris-foncé, plus clair sur les bords.

Dimensions: ♂, env. 30mm × 13mm. La ♀ est près de moitié moins grande; en outre, les trois premières paires de pattes n'ont pas l'avant dernier article élargi et le dernier recourbé comme chez le ♂.

Provenance: Mexique, baie de Guyamas (ten Kate).

Cette espèce parait bien se rapporter au *L. Hawaiensis* Dana; le manque de granulations sur la surface du corps, le nombre des articles du fouet des antennes sont des caractères qui le séparent nettement du *L. occidentalis* signalé sur les côtes de la même région. Etant donnée la grande aire de dispersion de la plupart des espèces de ce genre, il n'est pas impossible que la même espèce puisse se rencontrer aux îles Hawaï et sur la côte occidentale du Mexique, à latitude presque égale et baignée par le même Océan.

Sphaeroma Sieboldii, n. sp.

Corps couvert de granulations serrées, plus fortes sur la région postérieure qu'antérieurement.

Tête petite et courte; bord frontal sinueux et formant un rebord peu accentué. Antennes supérieures égalant les $^2/_3$ des antennes inférieures; les deux premiers articles des antennes supérieures élargis. Fouet 8-articulé (ant. supér.) et 10-articulé (ant. infér.). Yeux grands.

Premier segment thoracique relevé en gouttière sur les côtés. Suture des épimères peu nette à cause des granulations. Pattes longuement ciliées.

Telson fortement granulé; les granulations, disposées régulièrement sur le reste du telson, forment sur le milieu deux lignes divergentes plus saillantes. Prolongement du telson largement arrondi et concave supérieurement.

Telsopodes dépassant un peu l'extrémité du telson; les

deux lames sont presqu'égales; la lame interne est lancéolée, poilue sur le bord externe; la lame externe a le bord interne droit et poilu, le bord externe est garni de sept dents ciliées.

Dimensions: Env. 7mm × 3mm.

Provenance: Japon (von Siebold).

EXPLICATION

DE LA

Planche 5.

Fig. 1. *Armadillo Javanensis.* — *a.* Tête. — *b.* Telson et telsopodes vus en dessus. — *c.* Id. vus en dessous (contours).

Fig. 2. *Porcellio cristatus.* — *a.* Tête. — *b.* Face. — *c.* Antenne supérieure (contours). — *d.* Telson et telsopodes (contours).

Fig. 3. *Sphaeroma Sieboldii.* — *a.* Tête. — *b.* Telson et telsopodes.

NOTE XXII.

DESCRIPTION DE TROIS ELATERIDES NOUVEAUX DU MUSÉE DE LEYDE.

PAR

E. CANDÈZE.

Alaus Ritsemae, n. sp.

Fusco-niger, confertissime brunneo albidoque maculatim squamulosus; prothorace latitudine paulo longiore, convexo, postice medio carina transversa brevi, angulis posticis divaricatis, carinatis; elytris basi tuberculatis, striato-punctatis, apice emarginatis; subtus albicans. — Long. 25 mill., lat. $7^1/_2$ mill.

Serdang: Sumatra or. (Dr. B. Hagen).

De la Section du *Boreli* et se rapprochant beaucoup des *Elaps*, *Colffsi*, *Hurria*, etc.

Ce qui la caractérise au premier aspect, c'est sa couleur blanchâtre, plaquée de grandes taches d'un brun jaunâtre clair; la tache latérale du milieu des élytres notamment est d'une forme triangulaire équilatérale et uniformément brun clair, ce qui la sépare, sans confusion possible, des espèces que je viens de citer où cette tache est autrement faite. Dans leur ensemble les élytres sont blanchâtres, présentant chacune trois grands espaces où le brun domine: un à la base, un autre au sommet, tous deux mal délimités, et enfin la tache triangulaire latérale dont je viens de parler.

La petite saillie transversale, située vers la base du prothorax, non loin de l'écusson, est ici bien accusée. On l'observe chez plusieurs *Alaus* (*anguis*, *nubilus*, *Eryx*, etc.). Le tubercule de la base des élytres est petit, transversale-

ment oblique et situé entre l'épaule et la pointe de l'écusson.

Les *Alaus* particuliers à Sumatra sont, jusqu'ici, indépendamment des *Lacteus* et *Wallandi* dont l'écusson est tout autrement fait: *A. Hurria*, *Debyi* et *Ritsemae*, tous les trois bien distincts l'un de l'autre; il semble que l'île soit riche en espèces de ce genre.

Psephus invenustus, n. sp.

Brunneus, *opacus*, *breviter sparsim pilosulus; antennis crassiusculis*, *pilosulis; prothorace transverso*, *crebre fortiter punctato*, *dorso inæquali*, *angulis posticis divaricatis*, *apice truncatis*, *fortiter carinatis; elytris granulatis*, *profunde striatis*. — Long. 16 mill., lat. $4^1/_2$ mill.

Humpata: Afrique trop. occid. (P. J. van der Kellen).

La forme du prothorax et surtout celle des angles postérieurs de ce dernier est caractéristique. On ne pourra confondre cette espèce avec aucune autre du genre. La tournure et la couleur rappellent le *Melancholicus*, dont il diffère du reste par la taille et d'autres caractères importants.

Ludius rubiginosus, n. sp.

Piceus, *nitidus*, *pube brevi*, *rubiginosa*, *confertim vestitus*; *antennis brevibus* (♀); *prothorace latitudine haud longiore*, *a basi attenuato*, *convexo*, *crebre fortiterque punctato*, *angulis posticis validissime carinatis*; *elytris a basi gradatim attenuatis*, *apice acuminatis crebre punctatis*; *subtus pedibusque concoloribus*. — Long. 30 mill., lat. 9 mill.

Serdang: Sumatra or. (Dr. B. Hagen).

Belle et grande espèce se rapprochant, pour la forme, des grandes espèces noires de Malaisie et notamment du *L. acutus*; mais il est plus grand et se distingue au premier abord par sa pubescence fine, serrée, couchée, rouge, qui donne à tout l'insecte un aspect rouillé.

Obs. Le *Dicronychus lamellicornis* Fairm. (Notes Leyd. Mus. 1888. p. 255) dont j'ai vu les types, doit rentrer en synonymie du *D. Hacquardi* Cand. (Mém. Liége. 1881. p. 36).

NOTE XXIII.

ON TWO PROBABLY NEW BIRDS FROM LIBERIA.

BY

J. BÜTTIKOFER.

Drymocataphus johnsoni, n. sp.

Drymocataphus cleaveri, Bütt. N. L. M. 1888, p. 77.

Forehead, crown and nape black, a broad eyebrow of ashy white, beginning at the base of the nasal groove and extending over the eye to the sides of the neck; before and below the eye a narrow edging of black feathers, ear-coverts blackish, upper surface of body dark olive-brown, somewhat rufescent on the rump and still more so on the upper tail-coverts, quills sooty brown, primaries narrowly, secondaries very broadly edged with the color of the rump, greater wing-coverts broadly edged with the color of the back, the lesser entirely of that color, under wing-coverts dark fulvous brown. Tail dark rufous brown, strongly waved under certain lights. Chin, throat, breast and abdomen white, sides of neck and chest ashy gray, sides of body and under tail-coverts faintly tinged with rusty. Iris reddish brown, upper mandible black, lower whitish, feet pale flesh-color. Wing 7 cM.; tail 5,5; bill 1,6; tarsus 2,6.

My excellent friend Mr. Sharpe, who kindly compared this specimen for me with *D. cleaveri* in the British Museum, writes me as follows: »Close to *D. cleaveri*, but a darker bird, not so rufous on the wings; sides of body pale, not tawny buff. The chest and fore-neck are decidedly ashy gray, the other being whitish ashy."

Loc. Hill Town, Du Queah River.

I am much pleased in dedicating this new Bird, which I collected during my second stay in Liberia, to His Excellency Dr. H. R. W. Johnson, the President of the Liberian Republic, who rendered us many valuable services

during our sojourn in that country, especially by exempting us from paying import and export duties.

Laniarius zosterops, n. sp.

Laniarius sulfureipectus, Bütt. N. L. M. 1888, p. 87.

About similar in size and general coloration to *L. sulfureipectus* (Less.), but the bill as large as in *L. multicolor*, the olive parts darker green than in the first, and no yellow on front and superciliary region.

Forehead, crown, nape, hind neck, sides of neck and mantle bluish gray; lower back, rump, upper tail-coverts and entire tail, with the exception of the broad sulphur-yellow tips and inner edgings to the four outermost pairs, green, and also the lesser, median and larger wing-coverts, innermost secondaries and outer web of outermost secondaries and primaries. Inner web of quills blackish brown, which color occupies the whole terminal part of the inner primaries and nearly the whole surface of the two outermost quills. Innermost primaries minutely, secondaries broadly tipped, and all the quills, except the two outermost, broadly edged inside with sulphur-yellow, the larger series of wing-coverts very narrowly tipped with the same color. No blackish subterminal bar before the yellow tips on wing and tail. A tolerably broad band, extending from the front and running along the lower edge of the eye to the ear-coverts, and also the latter darker gray than upper surface of head. Upper and lower eyelid grayish white, contrasting with the surrounding parts. Whole lower surface, thighs and under wing-coverts bright yellow, the sides of body tinged with green; the chest, which is paler yellow than the rest of lower surface, has probably been orange-yellow, a color which is not able to stand the influence of spirits, in which the bird was preserved. Iris blue, bill black, feet sooty brown. Wing 8,8 cM.; tail 8; culmen 0,8; tarsus 2,3.

A probably fully adult female from the Du Queah River.

NOTE XXIV.

PRELIMINARY DESCRIPTIONS OF NEW SPECIES OF THE COLEOPTEROUS GENUS HELOTA, MACLEAY.

BY

C. RITSEMA Cz.

Having the intention to publish at some future date full descriptions (perhaps also figures) of all the known species of the genus *Helota* Macleay [the only species which are still unknown to me, are *Helota thibetana* Westw. [1]) (= *Mellii* Westw. [2])) and *Helota africana* Olliff [3])], I will confine myself for the present time to give the distinctive characteristics of the new species with which I am as yet acquainted.

Before going over, however, to the descriptions of these new species, I feel obliged to state, judging from the specimens in the collections of Mr. E. W. Janson [4]), Mr. R. Oberthür and in the Leyden Museum which are now before me and which are determined by Mr. A. Sidney Olliff, that this author has overlooked the specific distinctness of my present *Helota Oberthüri* and *Fairmairei* from *Helota Servillei* Hope, that of my present *Helota Kolbei* from his *Helota Gorhami*, that of *Helota fulviventris* Kolbe (at that time undescribed) from *Helota gemmata* Gorh., and that of my present *Helota fulvitarsis* from *Helota semifulva* Rits.

1) Ann. and Mag. of Nat. Hist. VIII. p. 123.

2) Cabin. of Orient. Entom. p. 86, pl. 41, fig. 8.

3) Ann. and Mag. of Nat. Hist. (5). XIII. p. 479, and Waterhouse's Aid. Pl. 153, fig. 3.

4) These specimens are now in the possession of Mr. J. R. H. Neervoort van de Poll.

Moreover he considered the three clearly distinct species *Helota Guerinii* Hope, *curvipes* R. Oberth. and *ocellata* Rits. to belong to one and the same species.

Helota Oberthüri, nov. spec. ♂ and ♀.

Belongs to the group of *Helota Servillei* Hope [1]) and strongly resembles that species. In the female sex, however, the apices of the elytra are more abruptly narrowed, more acutely pointed and more dehiscent than in *Servillei* [2]), and the apical margin of the last ventral segment is bisinuate, whereas it is regularly rounded in *Servillei*. In the male sex the second interstice is sharply raised at the end of the elytra and slightly prolonged beyond them, and, as the sutural margin is likewise slightly prolonged, each elytron seems to be faintly bidentate, whereas in the male of *Servillei* the apices of the elytra are conjointly and very regularly rounded and the sutural margins end in a very distinct spine. Moreover the anterior tibiae of the male do not show the small strongly compressed dilatation on the inner margin of the under surface a little before the apex, which is present in the male of *Servillei*. Finally the red coloured lateral streak of the pronotum is more densely and very regularly punctured in the new species. — Length of the male 18 mm., that of the female 15 mm.

Hab. India orient.: Darjeeling. — A male and a female in the collection of Mr. René Oberthür to whom this species is dedicated.

Obs. *Helota Servillei* Hope, the type of which is from Poonah, is represented in the Leyden Museum by a ♂ from India bor., in the Brussels Museum by a ♂ from Poonah, in the Museum of Budapest by a ♂ from the

1) Coleopt Manual. III. p. 187; pl. 3, fig. 4.

2) In the above cited figure of this species, representing a female, the shape of these apices is correctly drawn.

Himalaya, and in the collection of Mr. Neervoort van de Poll by a ♂ from Bengal and a ♀ from India orient.

Helota longipes, nov. spec. ♂.

Very much like the male of *Servillei* Hope and agreeing with it in almost every respect, but at once distinguished by its very elongate hindlegs. Moreover the anterior tibiae do not show the small strongly compressed dilatation on the inner margin of the under surface a little before the apex, which is present in the male of *Servillei*. As to the coloration the black colour at the knees is almost entirely absent and on the thorax it is restricted to the smooth elevation in front of the scutellum. — Length 18—19 mm.

Hab. India bor. and Sikkim. — A male specimen in the collection of Mr. M. Sédillot, and another (that from Sikkim) in the collection of Mr. Neervoort van de Poll. — The female is as yet unknown to me.

Helota Fairmairei, nov. spec. ♂ and ♀.

Also resembling *Helota Servillei* Hope, but the female has the apices of the elytra conjointly rounded, narrowly truncate at the suture; the sutural margins have not the slightest trace of a spine at the end, and the last ventral segment is broadly truncate in a rather straight line and faintly depressed at the apex. In the male the elytra are also conjointly but more broadly rounded, and the sutural margins end in a small spine. In the male of *Servillei* the apex of the elytra is very regularly rounded and the sutural spine rather strong, but in *Fairmairei* the apical margin of the elytra is faintly waved and the sutural spines are smaller. Moreover the male of *Fairmairei* has the compressed dilatation *at* the end of the anterior tibiae, whereas in *Servillei* this dilatation is much smaller and situated a little *before* the apex. — Length 16,5—20,5 mm.

Hab. India orient.: Sikkim (Leyden Museum, Berlin Mu-

seum, coll. Fairmaire, coll. Neervoort van de Poll), Himalaya (Leyden Museum), Darjeeling (coll. Oberthür and Copenhagen Museum), Cherra Ponjee (coll. Sédillot), Bengal (coll. Neervoort van de Poll), India bor. (coll. Sédillot).

I have much pleasure in dedicating this beautiful species to Mr. Léon Fairmaire.

Helota caudata, nov. spec. ♀.

Very closely allied to *Helota Gorhami* Olliff [1]) and strongly resembling that species in the sculpture of the elytra. It is, however, smaller and proportionately narrower, the apices of the elytra are much more prolonged and more acutely pointed, the elytral epipleurae are strongly punctured on the inner half of the basal portion (entirely impunctate or nearly so in *Gorhami*), the abdomen is bright rufous (dark pitchy brown in *Gorhami*), and the last ventral segment is decidedly shorter and more broadly rounded than in the female of *Gorhami*. — Length 12,5 mm.

Hab. China. — A single female specimen (brought home by Père David) in the collection of Mr. René Oberthür.

Obs. In the Archiv für Naturgeschichte, Vol. LII (1886) p. 181, Mr. H. J. Kolbe has published a very satisfactory description of both sexes of *Helota Gorhami* Olliff. The male is clearly distinct from that of the other species of the *Gemmata*-group by the very conspicuous sutural spine and by the tomentose depression on the middle of the metasternum, which latter character it has in common with the males of the *Vigorsi*- and *Servillei*-group.

Of this species I have seen a type-specimen (♀) from Shantung from the collection of Mr. E. W. Janson which is now in the possession of Mr. Neervoort van de Poll, further a male and a female specimen from Corea received from Mr. Kolbe, a female specimen from North China

1) Cistula Entomologica. Vol. III, p. 53.

from the Copenhagen Museum, and a male specimen from North China (brought home by Père David) making part of Mr. Oberthür's collection.

Helota Kolbei, nov. spec. ♂ and ♀.

This is another Chinese species of the *Gemmata*-group, of which several specimens of both sexes have been brought home by Père David together with *Gorhami* Olliff and *caudata* Rits. As to the sculpture of the elytra it resembles the Japanese *Helota gemmata* Gorh. [1]) much more than it does *Helota Gorhami* Olliff with which it is confounded by Mr. Olliff. Usually, however, it is larger, considerably narrower, and more elongate, the bronze colour of the upper surface is brighter, and the colour of the abdomen (in mature specimens) dark chestnut, brighter along the lateral margins, whereas in *gemmata* the colour of the abdomen is rufous.

The ♂ is easily distinguished from that of all other known species by the want of the tomentose impression on the last ventral segment, the apical margin of which is faintly trisinuate. Its elytra are conjointly rounded at the apex and do not show the slightest trace of a sutural spine, whereas the small strongly compressed apical dilatation on the inner margin of the under surface of the anterior tibiae, which is present in the male of *gemmata*, is absent in *Kolbei*.

In the ♀ the apices of the elytra are more produced than in *gemmata*, and, though likewise regularly narrowed in a convex line, more acutely pointed; moreover the last ventral segment, which is very short in *gemmata* (about equal in length to the 3rd segment), is considerably longer (about as long as the 3rd and 4th segment taken together) and of a more triangular shape in the new species. Finally the apical depression which is present on the last

1) Trans. Ent. Soc. London. 1874. p. 448.

ventral segment of the female *gemmata* is absent in *Kolbei*. — Length 14.5—17 mm.

Hab. China: Kiang si and Shanghai (coll. E. W. Janson, R. Oberthür, M. Sédillot, J. R. H. Neervoort van de Poll, Leyden Museum, Genoa Museum and Berlin Museum).

I have dedicated this interesting species to Mr. H. J. Kolbe of the Berlin Museum.

Obs. Japan has, as far as I know, three species of *Helota*, two of which belong to the *Gemmata*-group. These two bear, up to this day, each the name of *Helota gemmata* Gorh. although they are clearly distinct.

The true *Helota gemmata*, described by Gorham in the Transactions of the Entomological Society of London for the year 1874 (p. 448), has, besides striking differences in the sculpture of the elytra, the anterior tibiae in the male provided with a compressed apical dilatation on the inner margin of the under surface, and in the female acute apices to the elytra and an apical depression on the last ventral segment.

In the second species, which is the one described by Kolbe (after a female specimen from Corea) under the name of *Helota fulriventris* [1]), the male does not possess the compressed dilatation on the apex of the anterior tibiae, and the female has not only the apices of the elytra separately rounded (not produced), but it wants moreover the apical depression on the last ventral segment. — Of this latter species a very badly drawn figure is published on plate 133 of Waterhouse's Aid to the Identification of Insects.

If the larva described and figured by Sidney Olliff (Cist.

1) Archiv für Naturgesch. Bd. LII (1886) p. 182; taf. XI, fig. 25. — I have examined a female specimen of this species from the Amur, kindly sent to me for comparison by Mr. Kolbe. — The specimens from Shanghai, alluded to by Mr. Lewis (Trans. Ent. Soc. London. 1874, p. 449), will probably prove to belong either to *fulriventris* Kolbe or to *Kolbei* Rits., the latter species being already known from that locality.

Ent. III. p. 52; pl. 3, fig. 8) belongs to *Helota fulviventris* Kolbe, or to the true *Helota gemmata* Gorh. I can not make out, Mr. Lewis having captured both species.

Helota Guerinii Hope [1]), *curvipes* R. Oberth. [2]) and *ocellata* Rits. [3]).

These three species are united by Mr. Sidney Olliff though they are certainly distinct. Of the two latter species I have the type-specimens before me, and Mr. Ch. J. Gahan of the British Museum has been kind enough as to examine at my request the position of the yellow elytral spots in the type-specimen of *Helota Guerinii* which is in the British Museum. About this he wrote me: »I have examined Hope's type-specimen of *Guerini* [4]) which is a ♂, in which, unfortunately, the head and prothorax are wanting. The anterior as well as the posterior spot of the elytra is between the 3rd and 7th striae. There are a second male specimen and two females associated with it, which agree with the type in the position of the spots; and, in the ♂, the anterior tibiae are much curved. These are ticketed E. Indies. — There is also a ♀ specimen, ticketed N. India, in which the spots are, respectively, placed between the 4th and 6th, and 3rd and 6th striae. The spots in this specimen are at once seen to be smaller than in the others."

Of the true *Helota Guerinii* Hope (the species which has the anterior as well as the posterior elytral yellow spot between the 3rd and 7th striae) I have before me a male and two females from Bombay from the collection of Mr. E. W. Janson, and a third female from the collection of Mr. M.

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1) Coleopt. Manual. III (1840) p. 188. ♂. — Travancore.
2) Coleopt. Novitates. I (1883) p. 60. ♂. — Himalaya.
3) Notes Leyd. Mus. III (1881) p. 79. ♀. — Java.
4) From Travancore.

Sédillot ticketed: »coll. Thomson. *Thibetana* Westw. = *Mellyi* Westw. Thibet", but this determination certainly is incorrect. The specimens from Mr. Janson's collection have been examined by Mr. Olliff, and one of the females has been figured in the Cistula Entomologica (III. pl. 3, fig 1).

The other species, which has the anterior elytral spot between the 4th and 6th, and the posterior spot between the 3rd and 6th striae, is the species the male of which has been described by Mr. R. Oberthür under the name of *Helota curvipes*. Besides the two type-specimens, which have likewise been examined by Mr. Olliff and one of which comes from the Himalaya, I have before me a third male from North India from the collection of Mr. Sédillot, and a female specimen from Tenasserim (brought home by Mr. Fea) and belonging to the Genoa Museum.

Guerinii Hope and *curvipes* Oberth., though closely allied, are not only distinct by the different position of the elytral spots: in *curvipes* the fulvous colour of the anterior angles of the pronotum is indistinctly continued along the lateral margins of the thorax, the punctuation on the pronotum is less dense, and the row of strong punctures which is present on the interstices of the external half of the elytra in *Guerinii* is absent in *curvipes*. Moreover the apices of the elytra in the females are much more produced and more acutely pointed in *Guerinii* than in *curvipes*.

As to the Javanese *Helota ocellata* Rits., of which only a female (the type-specimen) is known to me, it has a shorter and broader form, a much brighter colour on the upper surface (bright golden green, with coppery tinges at the sides of the pronotum and around the elytral spots), the elytral spots proportionately large, the anterior one apparently between the 3rd and 7th, but in reality between the 4th and 7th striae, the posterior one between the 3rd and 7th striae, and the fulvous colour of the anterior angles of the pronotum indistinctly continued along the lateral margins of the thorax. The apices of the elytra are less produced than in the female of *Guerinii*, but more acutely pointed than

in that of *curvipes*, and the interstices on the external half of the elytra are not provided with a row of strong punctures.

Helota fulvitarsis, nov. spec. ♂ and ♀.

Very closely allied to and strongly resembling the Javanese *Helota semifulva* Rits. with which it is united by Mr. Sidney Olliff. I feel sure, however, of its specific distinctness, which might be already presumed by the difference of the countries from which they come: Bengal (Darjeeling) and Java.

The new species is proportionately broader, the punctures on the pronotum are distinctly larger, the flattened lateral margins of the elytra are broader, the tarsi are of a pale fulvous colour (dark pitchy brown in *semifulva*), and the fulvous colour of the basal half of the elytra is continued over the flattened lateral margins much farther than in *semifulva*. The elytra are conjointly rounded, both in male and female, but the male has the anterior tibiae strongly curved, and its apical ventral segment is inconspicuously depressed in the middle before the apical margin, which depressed portion is very densely and finely punctured and hairy. — Length of the male 8 mm., that of the female 9,5 mm.

Hab. India orient.: Darjeeling. — A male and a female in the collection of Mr. René Oberthür, who possesses also a female specimen of *Helota semifulva* Rits., the second specimen of this species with which I am as yet acquainted, and which comes, like the type-specimen, from Mt. Ardjoeno (Java orient.).

The specimen from »India" in the collection of the British Museum, alluded to by Mr. Sidney Olliff under the name of *Helota semifulva* Rits. (Cist. Ent. III. p. 55), will, no doubt, prove to belong to *Helota fulvitarsis*.

Helota guineensis, nov. spec. ♀.

Closely allied to *Helota africana* Olliff [1]) from Angola, and strongly resembling it. The two specimens before me, which come from Accra and Assinie (Guinea coast), show, however, some differences which induce me to believe it a distinct species, but as the type-specimen of *africana* is unknown to me, I can compare my specimens with the description and figure only. In the new species the thorax is shorter and broader and the sides are decidedly rounded; the punctures are widely and irregularly spread, and those on the sides are as large as those on the middle; the black median streak is laterally emarginate on its anterior half; the base of the thorax as well as that of the elytra is very narrowly edged with black. Of the elytra the smaller apical half is black with a deep triangular notch at the suture, the two elongate black spots on the fulvous basal half are absent, and the apices are more acutely pointed. The legs are black, with the exception of a broad fulvous ring at the basal half of the femora, and a more or less distinct spot on the middle of the under surface of the tibiae, which is of the same colour. The last ventral segment shows an ill-defined impression along the middle, and its apex is indistinctly truncate. — Length 13—14 mm.

Hab. West Africa: Accra and Assinie. — A single female specimen in the collection of Mr. Neervoort van de Poll, and another (that from Assinie) in the collection of the Leyden Museum and presented by Mr. Ch. Alluaud.

Helota costata, nov. spec. ♂.

Also allied to *Helota africana* Olliff from Angola and strongly resembling that species as to coloration, but quite

1) Ann. & Mag. of Nat. Hist. (5) XIII. p. 479, and Waterhouse's Aid to the Identification of Insects. Pl. 153, fig. 3. — There is every probability that this specimen is the one mentioned by Chapuis in the „Genera des Coléoptères", vol. XII (1876) p. 18: „Nous avons vu, dans la Collection du célèbre voyageur Welwitch, un type de l'Afrique occidentale."

distinct by its costate elytra and by the oblique callosity between the 3rd and 6th striae, just before the black apical half, which characters I think cannot be of sexual value.

As to the coloration it differs from *africana* (according to the description and figure) in having the black elytral spot between the 3rd and 4th striae more elongate and the line of demarkation between the fulvous and black colour very irregular, while it is nearly straight in the figure of *africana*. Moreover the legs are black or dark pitchy with a very irregular fulvous ring at the base of the femora.

The head, thorax and scutellum correspond pretty well with the description of *africana*; the fulvous sides of the thorax, however, are not finely but very coarsely punctured, leaving free an elongate raised spot. The elytra are, as in *africana*, half as long again as the head and prothorax together but proportionately narrower and slightly tapering towards and conjointly rounded at the apex; they are somewhat dehiscent at the suture, and the apical margin is minutely bisinuate in each elytron. The interstices are alternately costate; the first (sutural) and second costae, however, become flat towards the base, and the second and fifth only join the apical margin; the third costa is somewhat shorter than the fourth, and the fifth does not reach the basal margin; the punctures of the striae become larger the more they approach the lateral margins. Between the 3rd and 6th striae, just before the black apical half, an oblique callosity of a somewhat paler colour is present. The anterior tibiae are curved, without compressed dilatation at the apex; the posterior femora rather slender and slightly curved. The first ventral segment is shallowly impressed along the middle; the fifth broadly truncate and provided with a large but shallow semicircular impression which is neither punctate nor tomentose. — Length 15 mm.

Hab. East Africa: Zanzibar. — Of this very interesting species three specimens have been sent to the Berlin Museum by Mr. C. W. Schmidt, and of these Mr. Kolbe has been good enough to let the Leyden Museum have one.

Finally it will be, I believe, not without interest to give here a copy of the descriptions of *Helota Thibetana* Westw. and *Mellii* Westw., names which, undoubtedly, are given to one and the same species, which, besides *africana*, is the only one I have not yet seen.

Helota Thibetana Westw. Ann. & Mag. of Nat. Hist. VIII (1841) p. 123:

Aenea, lateribus cupreo-tinctis, valde rugosa et punctata tuberculisque oblongis distincta, elytris guttis 4 elevatis fulvis, antennis piceo-luteis, femoribus fulvis, apicibus aeneis, tibiis fulvo piceoque annulatis. Long. corp. lin. 4. — Habitat Thibet. Mus. Melly.

Helota Mellii Westw. Cabin. of Orient. Entom. (1848) p. 86; pl. 41, fig. 8:

Helota, supra aenea, lateribus cupreis, punctata et rugosa, tuberculisque elevatis elongatis nitidis, strias longitudinales in elytris formantibus, his etiam maculis 4 elevatis fulvis distinctis; antennis piceo-flavis; femoribus fulvis, apice viridibus; tibiis alternatim fulvis et piceis; tarsis piceis, dimidio basali articuli ultimi fulvo; corpore subtus pallide fulvo; capite (nisi in medio collaris) et lateribus thoracis viridibus et punctatis.

Helota, with the upper surface of the body brassy, the sides copper-coloured; punctured and rugose; and with elevated elongated shining tubercles which form longitudinal striae on the elytra; the latter also marked with four raised fulvous round spots; thighs fulvous, with the tips green; tibiae alternately fulvous and pitchy; tarsi pitchy, basal half of the terminal joint of the tarsi fulvous; body beneath pale fulvous; the head, except in the middle of the neck, and the sides of the thorax green and punctured.

Length of the insect, $4^1/_2$ lines. Inhabits Simlah, in Thibet [1]). In the Collection of A. Melly, Esq.

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1) It is certainly by mistake that Prof. Westwood says „Simlah in Thibet". Simlah is situated in the Province Punjab (N.W. Hindostan).

List of the twenty-five hitherto described species of the genus *Helota*.

Helota Vigorsii, Macleay.
» scintillans, Olliff.
» Servillei, Hope.
» longipes, nov. spec.
» Oberthüri, nov. spec.
» Fairmairei, nov. spec.
» Gorhami, Olliff.
» caudata, nov. spec.
» fulviventris, Kolbe.
» gemmata, Gorh.
» Kolbei, nov. spec.
» sinensis, Olliff.
» thibetana, Westw.
Mellii, Westw.

Helota Guerinii, Hope.
» curvipes, Oberth.
» ocellata, Rits.
» cereopunctata, Lewis.
» laevigata, Oberth.
» pusilla, Oberth.
» culta, Olliff.
» semifulva, Rits.
» fulvitarsis, nov. spec.
» africana, Olliff.
» costata, nov. spec.
» guineensis, nov. spec.

NOTE XXV.

DESCRIPTION D'UN DYTISCIDE NOUVEAU.

PAR

M. RÉGIMBART.

Laccophilus coccinelloides, n. sp.

Long. 5 mill. — *Ovalis, sat elongatus, postice attenuatus, parum convexus. Capite et pronoto pallide testaceis, hoc postice sat late, illo postice in medio nigro et in elytris fortiter producto. Elytris nigris, ad latera vitta submarginali medium attingente, maculisque duodecim aliis albido-testaceis singulatim ornatis; corpore subtus, pedibus et antennis fulvo-testaceis. Supra tenuissime reticulato et vix visibiliter punctulato.*

Cette grande et charmante espèce se place au voisinage des *L. pictus* Cast. et *insignis* Sharp, mais s'en distingue par le nombre et la disposition de ses taches qui sont ainsi disposées: une bande submarginale s'étendant de la base au milieu où elle se dilate en dedans, quatre taches sublatérales dont les trois premières sont plus ou moins réunies à la bande submarginale, trois taches médianes en série longitudinale, quatre taches juxta-suturales et une subapicale étendue transversalement. Le dessus du corps est pourvu d'une double réticulation très-fine et de points très-petits et peu apparents situés à l'intersection des aréoles.

Etats Unis: Arizona central (Dr. H. ten Kate).

NOTE XXVI.

ZOOLOGICAL RESEARCHES IN LIBERIA.

FOURTH LIST OF BIRDS.

BY

J. BÜTTIKOFER.

(Plate 6).

Mr. F. X. Stampfli, whom I left in Liberia at the end of May 1887, repatriated last summer and brought home an important number of Birds skins, most of which are collected at three stations: Owen's Grove, Mount Olive and Gallilee Mountain on the Farmington River. Only relatively few have been obtained at our old station at Schieffelinsville (March 1888) and at Paynesville on the Messurado River (April 1888).

The Farmington River is a very important confluent of the Junk River, having its general direction about parallel with the Du Queah River and joining its water with that of the main river half a mile above the mouth of the latter, and seven or eight miles lower than the Du Queah. Going up the Farmington River by canoe, both banks are flat and covered with impenetrable Mangrove-swamps, but after a few miles the banks become higher, the swamps have disappeared and forests, intermixed with grassy plains and some well-cultivated plantations of Liberian Missionaries, have entirely changed the aspect of the country. Farther up the river the banks are becoming still higher and very

rocky, the whole country is hilly, even mountainous and the river forms a whole series of rapids and roaring waterfalls, caused by the same range of mountains as those of the Du Queah. The highest elevation of this part of the country is the Gallilee Mountain, about 1200 feet above the sea, and entirely covered with primeval forest. From his residences Mount Olive and Owen's Grove (two of the mentioned Missionnary Stations) Mr. Stampfli made several excursions to this district, where the river, at some places, is not more than 4 miles distant from the Du Queah.

Mr. Stampfli's collection contains about 250 specimens, representing 92 species, one of which, *Bubo lettii* (conf. N. L. M. 1889, p. 34), is new to science. It is, as the accompanying plate will show, a very peculiar and interesting form, which has no near ally, known as yet from the old world.

As Mr. Stampfli does not return to Liberia again, there is little chance for the present to obtain any more objects from that country, though no doubt a considerable number of species will have escaped our observation.

The species, hitherto obtained by us in Liberia, and of which a full list will be given at the end of this paper, have now reached the number of 229, and in this paper eleven of them are for the first time recorded from Liberia.

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1. *Asturinula monogrammica* (Temm.).

Astur monogrammicus, Bütt. N. L. M. 1885, p. 152.

An adult female, Mount Olive, Farmington R.

2. *Astur macroscelides* (Hartl.).

Nisus macroscelides, Bütt. N. L. M. 1885, p. 153; id. 1888, p. 63.

Three specimens, Mount Olive and Schieffelinsville.

3. *Accipiter büttikoferi.*

Nisus hartlaubii, Bütt. N. L. M. 1885, p. 153; id. 1886, p. 246; id. 1888, p. 63.
Accipiter büttikoferi, Sharpe, N. L. M. 1888, p. 199.

Two adult males, both fully agreeing in coloration with the former specimens; Mount Olive.

4. *Polyboroides typicus*, Smith.

An adult female, Mount Olive.

5. *Pernis apivorus* (Linn.).

An adult female, Mount Olive.

* 6. *Bubo lettii*[1]).

(Plate 6).

Büt. N. L. M. 1889, p. 34.

An adult specimen (type of the species). Collected by Mr. Lett in the Pessy Country.

* 7. *Scotopelia peli.*

Scotopelia peli, Bp. Consp. I, p. 44 (ex Temm. MS.); — Sharpe, Cat. Birds Br. Mus. Vol. II, p. 10.
Ulula Pelii, Schl. Mus. P.-B. Rev. Noctuae, p. 21.
Scotopelia oustaleti, Rochebr. Faune de la Sénégambie, p. 69, pl. 8.

The head of a nestling in down, without any accompanying notes. The down is uniform white, with a faint isabelline tinge, especially along the neck. The powerful black bill alone will exclude any doubt about the species.

I have carefully compared Mr. Rochebrune's description of *S. oustaleti* with our type of *peli* and feel convinced

1) The species, new to the knowledge of the Liberian Avifauna, will be marked with an asterisk.

that the first is identical with the latter. The figure also agrees well with the type of *S. peli*, with the exception of the eye, which is blue on the figure, and thus in full contradiction with the description, where it is said to be pale reddish brown. A specimen from the Casamanse River, we purchased from Mr. Bouvier, shows but slight differences from the type, too slight indeed to base a new species upon.

* 8. *Scotopelia ussheri.*

Scotopelia ussheri, Sharpe, Ibis 1871, pp. 101, 417, pl. 12; id. Cat. Birds Br. Mus. Vol. II, p. 11.

An adult female. Iris yellow, bill yellow, blackish at tip and the cutting edge of the mandibles, base and cere yellow, feet yellow, claws yellowish horny. Wing 32 cm. Gallilee Mountain.

A comparison of this specimen with our Liberian *S. bouvieri* shows clearly the difference between both species, though it cannot be denied that their resemblance is very strong.

9. *Caprimulgus cinnamomeus*, Sharpe.

An unsexed specimen from Mount Olive, probably a young male, with indications of white ends to the two outermost pairs of tail-feathers and of white cross-bars on the first, second, third and fourth primaries. Similar to the specimens mentioned in Notes 1885, p. 156, but much darker brown and on the upper surface somewhat tinged with gray.

10. *Scotornis longicauda* (Drap.).

Two specimens from the Gallilee Falls.

11. *Hirundo rustica*, Linn.

Hirundo rustica, Bütt. N. L. M. 1885, p. 158; id. 1888, p. 69.
Hirundo lucida, Bütt. N. L. M. 1886, p. 248.

Adult male and female from Paynesville, having nearly assumed their breeding plumage, both collected April 4th. They have the front, chin and throat deep rufous, while the rest of the lower surface is pale fulvous, under wing- and tail-coverts much darker so.

A re-examination of the specimen, mentioned as *H. lucida*, l. c., shows that it is *H. rustica* in winter plumage, with fulvous forehead and throat, a dull blackish pectoral band, and the rest of lower surface, incl. the under wing- and tail-coverts, pure white.

12. *Eurystomus afer* (Lath.).

One specimen, Gallilee Mountain.

13. *Halcyon senegalensis* (Linn.).

One specimen, Schieffelinsville.

14. *Halcyon semicoerulea* (Forsk.).

Adult male, Paynesville.

15. *Ceryle maxima* (Pall.).

Adult female, Farmington River.

16. *Ispidina picta* (Bodd.).

One specimen, Mount Olive.

17. *Ispidina leucogastra* (Fras.).

One specimen, Farmington River.

18. *Alcedo quadribrachys*, Bp. (ex Temm. MS.).

One specimen, Mount Olive (Farmington River).

* 19. *Merops superciliosus*, Linn.

Merops savignyi, Hartl. Orn. W. Afr. p. 38.
Merops aegyptius, Schl. Mus. P.-B. Merops, p. 2.

Two specimens, Mount Olive and Schieffelinsville.

20. *Cinnyris fuliginosus* (Shaw).

An adult male, Schieffelinsville.

21. *Cinnyris cyanolaemus* (Jard.).

An adult female, Schieffelinsville.

22. *Cinnyris obscurus* (Jard.).

Several specimens, Farmington River and Schieffelinsville.

23. *Cinnyris johannae*, J. Verr.

An adult female, Schieffelinsville.

24. *Cinnyris chloropygius* (Jard.).

An adult female and a nestling, the latter with the bill yellow and the throat slaty gray, with paler tip to the feathers; Schieffelinsville.

25. *Cinnyris adelberti*, Gerv.

Adult male and female, Mount Olive and Schieffelinsville.

26. *Anthreptes rectirostris* (Shaw).

Anthreptes rectirostris, Shelley, Mon. Nect. p. 331, pl. 107, and the rectification in the same work, p. XLV.

An immature (green) unsexed specimen from Paynesville and a (also green) female from Schieffelinsville. Both are easily distinguished from their ally *A. hypodilus* by their superior size and quite unmistakably so by their smaller, more lanceolate first primary.

* 27. *Anthreptes gabonicus.*

Nectarinia gabonica, Hartl. J. f. O. 1861, pp. 13, 109.
Cinnyris venustus (nec Shaw), Bütt. N. L. M. 1885, p. 170, part. (female, nest and eggs).

Stiphrornis alboterminata, Rchw. J. f. O. 1874, p. 103; id. 1875, p. 43; — Sharpe, J. f. O. 1882, p. 345; — Boc. Orn. d'Ang. pp. 285, 555; — Sharpe, Cat. Birds Br. Mus. VII. p. 174; — Bütt. N. L. M. 1886, p. 250.

Anthreptes rectirostris (nec Shaw) Shelley, Mon. Nect. p. XLV (gray females); — Bütt. N. L. M. 1888, p. 211.

Anthreptes tephrolaema (nec Jard. & Fras.) Shelley, Mon. Nect. p. XLVI (gray female); — Bütt. N. L. M. 1888, p. 212.

Although Mr. Stampfli's collection did not contain any materials, able to throw more light upon the question of our Liberian gray females of *Anthreptes*, I feel, after a re-examination of our gray specimens, obliged to remove the two unfortunate specimens again and to place them, together with the gray specimen from the Congo, as *Anthreptes gabonicus*. In my above cited note (1888) I, in conferring Capt. Shelley's remarks (p. XLV), believed the gray specimens from Liberia to belong to *A. rectirostris*, and that from the Congo to *A. tephrolaema*, but at present I have strong reasons to doubt their identity with the latter species, notwithstanding their agreeing fully with the description of the adult female as given in Capt. Shelley's remarks. Those reasons are, that by a more careful comparison of the gray females from Liberia and that from the Congo, which I consider to be fully identical, with the adult male of *A. rectirostris*, I found in the mentioned gray birds the first (short) primary considerably l o n g e r and b r o a d e r than in the latter, and the f o u r t h quill to be the longest, while in the latter the t h i r d is the longest. In both these respects the gray birds agree very well with *A. hypodilus*, but they are too large to be considered the females of that species. Belonging thus neither to *A. hypodilus* nor to *A. rectirostris*, the only two hitherto known representatives of this genus in Liberia, nor, as I think, to *A. tephrolaema*, I place them here under the name of *A. gabonicus*, with which species Dr. Reichenow's *Stiphrornis alboterminata* is identical.

The birds (also that from the Congo) were found along river-banks — the same is said by Dr. Reichenow of his

St. alboterminata — and their pouch-like nests were hanging from twigs or dead limbs about three feet above the water.

28. *Prinia mystacea*, Rüpp.

One specimen, collected in the grassy plains near Paynesville.

29. *Cisticola rufa* (Fras.).

Three specimens, all from Paynesville.

* 30. *Camaroptera concolor.*

Camaroptera concolor, Hartl. Orn. W. Afr. p. 62; — Sharpe, Cat. Birds Br. Mus. VII, p. 179.

Male and female, Mount Olive and Paynesville.

31. *Camaroptera brevicaudata* (Cretzschm.).

One specimen, from Schieffelinsville.

32. *Hylia prasina* (Cass.).

Two specimens, Mount Olive and Paynesville.

33. *Cossypha cyanocampter* (Bp.).

An adult female, Gallilee Mountain.

34. *Alethe poliocephala* (Bp. ex Temm. MS.).

An adult female, Gallilee Mountain.

35. *Turdinus fulvescens* (Cass.).

A male specimen from Mount Olive, similar in color to that, mentioned in N. L. M. 1888, p. 77, but considerably larger. None of both these specimens has the dull ashy color on the head, ascribed to this species by Mr. Sharpe in his Catalogue of Birds, Vol. VII, p. 545.

36. *Crateropus atripennis*, Sw.

Two specimens, Mount Olive and Gallilee Mountain.

37. *Xenocichla canicapilla* (Hartl.).

Four specimens, Mount Olive and Schieffelinsville.

38. *Criniger verreauxi*, Sharpe.

One specimen from Schieffelinsville.

39. *Criniger leucopleurus* (Cass.).

An adult male, Mount Olive.

* 40. *Criniger serinus*, J. & E. Verr.

Trichophorus xanthogaster, Hartl. Orn. W. Afr. p. 83.
Xenocichla serina, Sharpe, Cat. Birds Br. Mus. VI, p. 100 (1881).

One specimen, unsexed, from Schieffelinsville. Iris brown, bill yellow, feet black (Stampfli).

* 41. *Andropadus curvirostris.*

Andropadus curvirostris, Cass. Proc. Acad. Philad. 1859, p. 46; — Sharpe, Cat. Birds Br. Mus. VI, p. 111.

Only one specimen, collected at Schieffelinsville, was sent by Mr. Stampfli. It decidedly belongs to this slender-billed species, as well as the two specimens (N°. 90 and 179), which, in N. L. M. 1888, p. 82, I mentioned with some hesitation under the name of *A. virens.*

Except by the peculiar shape and slenderness of the bill, this species is distinguished from *A. virens* (its nearest ally) by the dark greenish or brownish gray feet, while in *A. virens* the feet are ochraceous flesh-color, and yellow in *A. latirostris.*

42. *Ixonotus guttatus*, Verr.

Two specimens, Gallilee Mountain.

43. *Pycnonotus barbatus* (Desf.).

One specimen, Mount Olive.

44. *Pitta angolensis*, Vieill.

An adult female, Gallilee Mountain.

45. *Motacilla vidua*, Sund.

Two specimens, at the falls of the Farmington River.

* 46. *Motacilla longicauda.*

Motacilla longicauda, (non Gm.). Rüpp. Neue Wirb. Vög. p. 84, Taf. 29, fig. 2; — Sharpe, Cat. Birds Br. Mus. X, p. 495.

A single specimen was collected by me at the falls of the Du Queah River, where it was found together with *M. vidua*. Iris brown, bill black, feet gray, soles yellow. As far as I know, this is the first statement of the occurrance of this species in Western Africa.

47. *Anthus pyrrhonotus*, Vieill.

One specimen, Paynesville on the Messurado River.

48. *Cassinia finschii*, Sharpe.

An adult male from Schieffelinsville.

49. *Terpsiphone nigriceps*, Hartl. (ex Temm. MS.).

Adult male and female, Mount Olive and Gallilee Mountain. In high forest.

50. *Trochocercus nitens*, Cass.

An adult male, Owen's Grove.

51. *Muscicapa lugens*, Hartl.

One specimen from Schieffelinsville.

52. *Platystira cyanea* (P. L. S. Müll.).

An adult male from Paynesville.

53. *Diaphorophyia castanea* (Fras.).

Six specimens (♂ & ♀) from the Farmington River, Schieffelinsville and Paynesville. Wattle above the eye in males and females purplish blue, not red, as I have erroneously mentioned in my former paper (N. L. M. 1888, p. 86).

54. *Smithornis rufilateralis*, Gray.

An adult male, Gallilee Mountain, in high forest.

55. *Fraseria cinerascens*, Hartl. (ex Temm. MS.).

An adult male, Gallilee Mountain.

56. *Nicator chloris* (Less.).

Three specimens, Mount Olive and Gallilee Mountain.

57. *Laniarius multicolor*, G. R. Gray.

An adult male, Mount Olive. This specimen, having been preserved in spirits, has lost its red color on throat and breast, which parts have become pale rosy.

* 58. *Chaunonotus sabinei*, J. E. Gray.

Chaunonotus sabinei, Hartl. Orn. W. Afr. p. 113.

An adult female, Mount Olive. Iris reddish brown, bill and feet blue.

59. *Dryoscopus gambensis* (Licht.).

An adult male, Paynesville.

* 60. *Onychognathus hartlaubii.*

Onychognathus hartlaubi, G. R. Gray, P. Z. S. 1858, p. 191; — Hartl. Glanzstaare Afrika's, p. 87.

Adult male and female, both from the Gallilee Mountain. Iris red, bill and feet black.

61. *Lamprocolius cupreicauda* Hartl. (ex Temm. MS.).

Five specimens from Gallilee Mountain, Mount Olive, Schieffelinsville and Paynesville.

Obs. The specimen of *Lamprocolius*, collected by Mr. Schweitzer in Liberia and making part of the Stettin Museum under the name of *L. purpureiceps*, belongs very probably to the closely allied *L. cupreicauda.*

62. *Oriolus brachyrhynchus*, Sw.

Several specimens from different localities.

63. *Malimbus cristatus*, Vieill.

A female, collected at Paynesville.

64. *Malimbus nitens* (J. E. Gray).

An adult female, Gallilee Mountain.

65. *Malimbus scutatus* (Cass.).

An adult male, Mount Olive.

66. *Quelea erythrops* (Hartl.).

Many immature specimens from the Farmington River.

67. *Pyromelana flammiceps* (Sw.).

An adult male from the Gallilee Mountain.

68. *Vidua principalis* (L.).

Several specimens, Farmington-, Junk- and Messurado River.

69. *Spermospiza haematina* (Vieill.).

Two matched pairs from the Farmington River.

70. *Pyrenestes personatus*, Dubus.

An adult male, Mount Olive.

71. *Spermestes bicolor* (Fras.).

Two specimens, Mount Olive.

72. *Nigrita bicolor* (Hartl.).

One specimen, Mount Olive.

73. *Buceros elatus*, Temm.

Two adult males, Mount Olive.

74. *Buceros atratus*, Temm.

An adult male, Mount Olive.

75. *Megalaema subsulphurea* (Fras.).

Three specimens, Farmington River and Schieffelinsville.

76. *Megalaema atroflava* (Blumenb.).

Two specimens from Schieffelinsville.

77. *Megalaema scolopacea* (Bp.).

Three specimens, Schieffelinsville and Paynesville.

78. *Trachyphonus goffini* (Schl.).

An adult male, Gallilee Mountain.

79. *Campothera caroli* (Malh.).

Two adult females, Mount Olive and Gallilee Mountain.

80. *Chrysococcyx klaasii* (Steph.).

One specimen, Farmington River.

81. *Numida cristata*, Pall.

Adult female, Mount Olive.

82. *Agelastes meleagrides*, Bp. (apud Temm.).

A series of specimens of both sexes in different stages of plumage, from the Gallilee Mountain.

All the specimens got trapped by natives, and Mr. Stampfli, who bought them and kept them alive for some weeks, confirms what I told in my former paper about the color of the naked parts. The birds must have belonged to one large travelling flock, as they all were caught within one week, towards the end of July, while neither before nor after that time specimens of this species have been seen in that part of the country. Mr. Stampfli sent me the following notes about his splendid acquisition: »My eight specimens of red-heads are all well and become quite tame. In the beginning they ate nothing but bug-a-bugs (larvae of *Termes mordax*), but now I got them so far that they eat rice also. It is really a pleasure to look at the flock while feeding, and the naked pink-red heads with the milky white necks suit wonderfully to the broad collar of dirty white feathers. Directly after death the pink on head and upper neck changes into pale rosy, and the milky white lower neck becomes purplish and afterwards almost black." Unfortunately all these birds got poisoned shortly after above note was written. The whole lot of these birds compared with those of our former collections and with the two typical specimens in our Museum are not able to enrich our knowledge of the species very much, as all of them are about fully adult. Only one specimen shows plainly, that the feathers of the collar are originally pure white and get afterwards the isabel tinge, which is thus the result of external influences.

The female is entirely similar to the male, only the spur is wanting.

83. *Francolinus ahantensis*, Temm. [1])

Adult male and female, Mount Olive. The adult male

1) This specific name has got altered into *ashantensis* by several Authors; it is to be observed, however, that the bird is not named after Ashantee, but after the province of Ahanta, in the Coast region of the Gold Coast.

has two spurs, like *F. bicalcaratus*, in the female the spurs are wanting and only represented by a faint knob.

84. *Francolinus lathami*, Hartl.

A large series of specimens from the Farmington River. In fully adult males the feathers on chest and breast are black, with a subterminal cordiform spot of pure white. Moreover the feathers on the chest have a distinct white cross-bar at about half their length, and two such are on the feathers of the breast. The female and young male, have chest and breast olivaceous brown, and the white cordiform spots as well as the white cross-bars are broadly edged with pure black. The spur in the adult male is very strongly developed, but only represented by a small knob in the female and young male.

85. *Glareola megapoda*, G. R. Gray.

A large series was collected near the falls of the Farmington River. The whitish inner edge at the base of the first, second and third primary is a character of the fully adult male only; in younger, even breeding males and the females in all stages the primaries are all gray entirely up to the base. The gizzard of two specimens was entirely filled up with a species of Termes, probably from a swarm of flying specimens, as it happens that these latter come down to the water in great number. I feel quite certain now, that this bird will be found in the region of the falls on all the Liberian rivers.

86. *Ibis hagedash* (Lath.).

An adult male, Du Queah River.

87. *Ibis olivacea*, Du Bus.

An adult male, Farmington River.

88. *Totanus hypoleucos* (Linn.).

Two specimens, Farmington River.

89. *Rallina oculea* (Hartl.).

Three adult specimens, Gallilee Mountain and Mount Olive.

90. *Corethrura pulchra* (J. E. Gray).

Two adult specimens, Mount Olive.

91. *Himantornis haematopus*, Temm.

Several specimens, all in adult stage, Farmington River.

92. *Podica senegalensis* (Vieill.).

Heliornis senegalensis, Bütt. N. L. M. 1886, p. 267; id. 1888, p. 103.

A male specimen with spotted under surface, was obtained on the Farmington River, but, unfortunately, no date mentioned. It is similar in every respect to the male described by me in the »Notes", 1888, p. 104, with the exception that its wing-coverts are more broadly spotted with white, and that the slaty gray throat is flanked by a broad stripe of black- and white feathers, running from the angle of the mouth and uniting afterwards with the narrower band of white, which begins at the hind angle of the eye and separates the hind neck from the fore neck. The white tips to the tail-feathers are very broad. In the mentioned description I, by mistake, called the color of the back chocolate brown, while in reality it is olive brown. The measurements in both birds are about the same, the present one is even slightly larger than that from the Junk River. The claw of the thumb is well-developed, very sharp and but slightly curved.

ENUMERATION OF THE SPECIES OF BIRDS, HITHERTO RECORDED TO EXIST IN LIBERIA.

A. Species, collected by the Author, and Messrs Sala and Stampfli.

	Notes Leyd. Mus.			
Falconidae.	**1885**	**1886**	**1888**	**1889**
1. Circus macrourus, Gm. p.	151	—	—	—
2. Spizaetus coronatus (Daud.).	152	—	63	—
3. Asturinula monogrammica (Temm.)	152	—	—	114
4. Astur macroscelides (Hartl.).	153	—	63	114
5. Accipiter büttikoferi, Sharpe (Nisus hartlaubi, Bütt.).	153	246	64 200	115
6. Polyboroides typicus, Smith.	—	—	65	115
7. Dryotriorchis spectabilis (Schl.).	—	246	65	—
8. Milvus aegyptius (Gm.).	155	247	65	—
9. Baza cuculoides (Sw.).	155	247	66	—
10. Pernis apivorus (L.).	—	247	—	115
11. Haliaetus angolensis (Gm.).	154	246	66	—
12. „ vocifer (Daud.).	—	246	—	—
Strigidae.				
13. Bubo lettii, Bütt.	—	—	—	34 115
14. » cinerascens, Guér.	—	—	66	—
15. » leucostictus, Hartl.	—	—	67	—
16. Syrnium nuchale, Sharpe.	151	247	67	—
17. Scotopelia peli, Bp.	—	—	—	115
18. » ussheri, Sharpe.	—	—	—	116
19. » bouvieri, Sharpe.	—	247	—	—
Caprimulgidae.				
20. Caprimulgus cinnamomeus, Sharpe.	156	—	—	116
21. Scotornis longicauda (Drap.).	156	248	68	116

	1885	1886	1888	1889
Hirundinidae.				
22. Hirundo rustica, L.	158	248	69	116
23. » nigrita, Gray.	157	—	68	—
Coraciadae.				
24. Eurystomus afer (Lath.).	158	248	69	117
25. » gularis, Vieill.	159	—	—	—
Alcedinidae.				
26. Halcyon senegalensis (L.).	161	249	70	117
27. » cyanoleuca (Vieill.).	162	—	—	—
28. » malimbica (Shaw).	162	249	70	—
29. » badia, Verr.	165	—	69	—
30. » semicoerulea (Forsk.).	166	249	70	117
31. Ceryle maxima (Pall.).	160	248	70	117
32. » rudis (L.).	161	249	70	—
33. Corythornis cyanostigma (Rüpp.).	159	248	70	—
34. Ispidina picta (Bodd.).	160	—	71	117
35. » leucogastra (Fras.).	—	—	71	117
36. Alcedo quadribrachys, Bp. (ex Temm. MS.).	—	248	71	117
Meropidae.				
37. Merops superciliosus, L.	—	—	—	117
38. » albicollis, Vieill.	166	249	71	—
39. » erythropterus, Gm.	167	249	71	—
40. » gularis, Shaw.	167	249	71	—
Nectariniidae.				
41. Cinnyris fuliginosus (Shaw).	168	251	72	118
42. » cyanolaemus (Jard.).	—	251	72	118
43. » sp.	—	—	72	—
44. » verticalis (Lath.).	168	251	—	—
45. » obscurus (Jard.).	—	251	72	118
46. » johannae, Verr.	—	249	—	118
47. » chloropygius (Jard.).	169	250	72	118
48. » venustus (Shaw).	169	250	72	—

	1885	1886	1888	1889
49. Cinnyris adelberti, Gerv.	—	251	—	118
50. Anthreptes hypodilus (Jard.).	170	251	—	—
51. » rectirostris (Shaw).	—	251	73	118
52. » gabonicus (Hartl.).	—	—	—	118
Timeliidae.				
53. Prinia mystacea, Rüpp.	171	251	73	120
54. Cisticola lateralis (Fras.).	171	—	—	—
55. » rufa (Fras.).	172	—	—	120
56. Sylviella stampflii, Bütt.	—	252	—	—
57. Camaroptera concolor, Hartl.	—	—	—	120
58. » brevicaudata (Cretzschmar).	173	252	—	120
59. Hylia prasina (Cass.).	—	—	73	120
60. Stiphrornis erythrothorax, Hartl.	—	—	74	—
61. Cossypha poensis, Strickl.	176	253	75	—
62. » verticalis, Hartl.	177	—	—	—
63. » cyanocampter (Bp.).	—	—	75	120
64. » leucosticta, Sharpe.	—	—	75	—
65. Alethe poliocephala (Bp.).	177	—	76	120
66. » diademata (Bp.).	—	254	76	—
67. Drymocataphus johnsoni, Bütt. (D. cleaveri, Bütt. err.).	—	—	77	97
68. Turdinus gularis, Sharpe.	178	254	77	—
69. » fulvescens (Cass.).	—	—	77	120
70. Crateropus atripennis, Sw.	178	254	76	121
71. Xenocichla syndactyla (Sw.).	179	255	78	—
72. » eximia (Hartl.).	179	255	79	—
73. » canicapilla (Hartl.).	178	255	79	121
74. Criniger barbatus (Temm.).	178	255	79	—
75. » verreauxi, Sharpe.	—	—	79	121
76. » simplex (Hartl.).	—	—	80	—
77. » leucopleurus (Cass.).	179	255	80	121
78. » indicator, Verr.	—	255	80	—
79. » serinus (Verr.).	—	—	—	121
80. » tricolor (Cass.).	—	—	80	—
Pycnonotidae.				
81. Chlorocichla gracilirostris (Strickl.).	180	256	—	—
82. Andropadus latirostris, Strickl.	180	256	80	—

	1885	1886	1888	1889
83. Andropadus curvirostris, Cass.	—	—	—	121
84. » virens, Cass.	—	—	82	—
85. Ixonotus guttatus, Verr.	—	—	83	121
86. Pycnonotus barbatus (Desf.).	180	256	83	122
Pittidae.				
87. Pitta angolensis, Vieill.	175	—	75	122
Turdidae.				
88. Geocichla princei, Sharpe.	—	—	77	—
89. Turdus pelios, Bp.	176	—	—	—
Sylviidae.				
90. Phylloscopus trochilus (L.).	—	252	—	—
91. Acrocephalus turdoides (Meyer).	172	—	—	—
Motacillidae.				
92. Motacilla vidua, Sund.	173	—	74	122
93. » longicauda, Rüpp.	—	—	—	122
94. » flava, L.	174	253	74	—
95. Anthus pyrrhonotus, Vieill.	174	253	75	122
96. Macronyx croceus (Vieill.).	174	253	—	—
Muscicapidae.				
97. Cassinia finschii, Sharpe.	—	—	86	122
98. Terpsiphone nigriceps (Hartl.).	181	256	83	122
99. Trochocercus nitens, Cass.	—	—	83	122
100. Parisoma plumbeum (Hartl.).	—	256	—	—
101. Muscicapa grisola, L.	182	256	—	—
102. » lugens, Hartl.	—	—	84	122
103. Platystira cyanea (P. L. S. Müll.).	182	256	—	123
104. Diaphorophyia castanea (Fras.).	—	—	85	123
105. Artomyias ussheri, Sharpe.	182	—	—	—
106. Smithornis rufolateralis, Gray.	—	—	85	123
107. Bias musicus (Vieill.).	181	—	—	—
Campephagidae.				
108. Campephaga quiscalina, Finsch.	—	257	—	—

	1885	1886	1888	1889
Dicruridae.				
109. Dicrurus atripennis, Sw.	183	257	86	—
110. » modestus, Hartl.	183	257	86	—
Laniidae.				
111. Fraseria ocreata (Strickl.).	—	257	—	123
112. » cinerascens (Hartl.).	184	—	86	—
113. Sigmodus caniceps, Bp.	—	257	86	—
114. Telephonus senegalus (L.).	185	—	—	—
115. Nicator chloris (Less.).	185	258	87	123
116. Laniarius multicolor, G. R. Gray.	—	—	86	123
117. » zosterops, Bütt. (L. sulphureipectus, Bütt. err.).	—	—	87	98
118. Chaunonotus sabinei, J. E. Gray.	—	—	—	123
119. Dryoscopus gambensis (Licht.).	185	258	—	123
120. » leucorhynchus(Hartl.).	183	258	—	—
Oriolidae.				
121. Oriolus brachyrhynchus, Sw.	186	258	88	124
Corvidae.				
122. Corvus scapulatus, Daud.	186	—	87	—
Sturnidae.				
123. Onychognathus hartlaubi, G. R. Gray.	—	—	—	123
124. Lamprocolius cupreicauda, Hartl. (ex Temm. MS.).	—	258	—	124
125. Pholidauges leucogaster (Gm.).	187	—	—	—
Ploceidae.				
126. Malimbus malimbicus (Daud.), [M. rubricollis (Sw.)].	195	259	90	--
127. Malimbus cristatus, Vieill.	195	—	—	124
128. » nitens (J. E. Gray).	196	—	90	124
129. » scutatus (Cass.).	196	259	90	124

	1885	1886	1888	1889
130. Ploceus nigerrimus, Vieill.	—	—	88	—
131. » tricolor (Hartl.).	193	—	88	—
132. » castaneofuscus, Less.	192	258	88	—
133. » cucullatus (P. L. S. Müll.) [P. textor (Gm.)].	190	259	88	—
134. » aurantius (Vieill.).	188	—	—	—
135. » brachypterus, Sw.	189	259	—	—
136. Quelea erythrops (Hartl.).	194	—	89	124
137. Pyromelana flammiceps (Sw.).	194	—	89	124
138. Coliopasser macrurus (Gm.).	197	259	91	—
139. Vidua principalis (L.).	197	259	91	124
140. Ortygospiza polyzona (Temm.).	—	259	—	—
141. Estrelda melpoda (Vieill.).	—	260	—	—
142. Pytilia schlegelii, Sharpe.	201	—	91	—
143. Spermospiza haematina (Vieill.).	198	260	91	124
144. Pyrenestes personatus, Dubus	199	260	91	125
145. Spermestes fringilloides (Lafr.).	201	261	91	—
146. » cucullatus, Swains.	—	261	—	—
147. » bicolor (Fras.).	202	261	92	125
148. Nigrita emiliae, Sharpe [N. canicapilla (Strickl.)].	—	261	90	—
149. » bicolor (Hartl.).	194	261	—	125
Musophagidae.				
150. Corythaix macrorhynchus, Fras.	202	262	92	—
151. Turacus cristatus (Vieill.) [T. giganteus (Vieill.)].	203	262	92	—
Bucerotidae.				
152. Buceros elatus, Temm.	204	262	92	125
153. » atratus, Temm.	205	—	93	125
154. » cylindricus, Temm.	206	—	93	—
155. » fistulator, Cass.	206	262	93	—
156. Berenicornis leucolopha. Sharpe.	207	262	93	—
157. Tockus semifasciatus, Temm.	208	262	93	—
158. » hartlaubi (Gould).	209	—	—	—
159. » camurus (Cass.).	210	262	93	—
Trogonidae.				
160. Trogon narina (Levaill.).	—	262	—	—

	1885	1886	1888	1889
Psittacidae.				
161. Psittacus timneh, Fras.	212	—	94	—
162. Psittacula swinderniana, Kuhl.	214	263	94	—
Bucconidae.				
163. Pogonorhynchus hirsutus (Sw.).	215	263	94	—
164. Megalaema duchaillui (Cass.).	216	263	—	—
165. » subsulphurea (Fras.).	216	263	94	125
166. » atroflava (Blumenb.).	—	—	95	125
167. » scolopacea (Bp.).	217	263	95	125
168. Trachyphonus goffini (Schl.).	218	—	95	125
169. Gymnobucco calvus (Lafr.).	217	263	95	—
Indicatoridae.				
170. Indicator variegatus, Less.	219	—	96	—
Picidae.				
171. Mesopicus pyrrhogaster (Malh.).	219	263	96	—
172. Dendropicus lugubris, Hartl.	220	263	—	—
173. Campothera maculosa (Val.).	220	264	—	—
174. » caroli (Malh.).	221	—	96	125
175. » nivosa (Sw.).	221	264	—	—
Cuculidae.				
176. Centropus francisci, Bp.	222	264	96	—
177. » senegalensis (L.).	223	264	96	—
178. Ceuthmochares aeneus (Vieill.).	224	264	—	—
179. Coccystes cafer (Licht.).	225	—	—	—
180. Chrysococcyx cupreus (Bodd.).	225	264	—	—
181. » klaasii (Steph.).	—	—	96	125
Columbidae.				
182. Treron calva (Temm.).	226	264	97	—
183. Columba unicincta, Cass.	226	—	97	—
184. » iriditorques, Cass.	227	264	97	—
185. Turtur semitorquatus (Rüpp.).	227	—	—	—

	1885	1886	1888	1889
186. Peristera puella, Schl.	228	265	97	—
187. » afra (L.).	229	265	98	—
188. » tympanistria (Temm.).	229	265	98	—
Numididae.				
189. Numida cristata, Pall.	230	—	98	125
190. Agelastes meleagrides, Temm.	230	—	98	126
Tetraonidae.				
191. Francolinus ahantensis, Temm.	231	—	—	126
192. » lathami, Hartl.	231	265	99	127
Charadriidae.				
193. Oedicnemus vermiculatus, Cab.	232	—	—	—
194. Glareola megapoda, Gray.	233) 256)	—	99	127
195. Vanellus inornatus, Sw.	235	265	100	—
196. Lobivanellus albiceps (Gould).	236	—	—	—
197. Charadrius hiaticula, L.	237	—	—	—
198. » cantiana, Lath.	237	—	—	—
Ardeidae.				
199. Ardea alba, Linn.	238	265	100	—
200. » ardesiaca, Wagl.	238	—	—	—
201. » gularis, Bosc.	238	266	100	—
202. » atricapilla, Afz.	239	266	101	—
203. Botaurus sturmii (Wagl.).	240	—	—	—
204. » leucolophus (Jard.).	240	266	101	—
205. Nycticorax leuconotus (Wagl.).	241	266	—	—
Ciconiidae.				
206. Ciconia episcopus, Bodd.	242	—	101	—
Ibidae.				
207. Ibis olivacea, Du Bus.	243	—	101	127
208. » hagedash (Lath.).	242	—	—	127

	1885	1886	1888	1889
Scolopacidae.				
209. Numenius phaeopus (L.).	243	—	102	—
210. Totanus glottis (L.) [T. canescens (Gm.)].	244	266	102	—
211. » hypoleucos (L.).	244	266	102	127
212. Tringa subarquata (Gould).	244	—	102	—
Rallidae.				
213. Himantornis haematopus, Temm.	245	266	103	128
214. Ortygometra nigra (Gm.).	245	—	—	—
215. Rallina oculea (Hartl.).	—	—	102	128
216. Corethrura pulchra (J. E. Gray).	—	—	102	128
Heliornithidae.				
217. Podica senegalensis, Hartl.	—	267	103	128
Anatidae.				
218. Phoenicopterus sp.	246	—	—	—
219. Plectropterus gambensis (L.).	247	—	—	—
220. Sarcidiornis melanotos (Penn.).	248	—	—	—
221. Dendrocygna viduata (L.).	248	—	—	—
222. Querquedula hartlaubi, Cass.	—	267	105	—
Laridae.				
223. Stercorarius cephus (Brünn.).	—	267	106	—
224. Sterna cantiaca, Gm.	249	267	106	—
225. » fluviatilis, Naum.	250	—	—	—
226. Hydrochelidon nigra (Briss.).	250	267	106	—
227. Rhynchops flavirostris, Vieill.	251	—	—	—
Pelecanidae.				
228. Plotus levaillantii, Licht.	251	268	106	—
229. Graculus africanus (Gm.).	252	—	106	—

B. Species, not met with by ourselves, but mentioned as Liberian by Authors.

Machaeramphus anderssoni (Gurney) .	Coll. Schweitzer.
Astur macrourus, Schl.	Coll. Schweitzer.
Scops senegalensis, Sw.	teste Hartlaub.
Caprimulgus fossii, J. Verr.	Coll. Schweitzer.
Eremomela badiceps (Fras.)	teste Hartlaub.
Turdinus rufescens, Rchw. (n. sp.) . .	Coll. Schweitzer.
Laniarius melamprosopus, Rchw. (n. sp.)	Coll. Schweitzer.
» cruentus (Less.)	Coll. Schweitzer.
Graucalus azureus, Cass.	Coll. Mc. Dowell, texte [Cassin [1]).
Lamprocolius purpureiceps (Verr.) [an cupreicauda, Hartl.?]	Coll. Schweitzer.
Ploceus nigricollis (Vieill.) [P. grayi Verr.]	teste Hartlaub.
? Estrelda rhodopyga, Sund. [E. rubriventris, Vieill.]	teste Hartlaub.
Pytilia melba (L.)	teste Finsch & Hartlaub.
? Pyrenestes coccineus, Cass.	teste Cassin.
Corythaix persa (L.).	teste Herz. v. Württ. vide Hartlaub.
Francolinus bicalcaratus (L.). . . .	teste Herz. v. Württ. vide Hartlaub.
Nycticorax europaeus, Steph. . . .	Coll. Schweitzer.

1) Dr. Mc. Dowell collected numerous Birds on the St. Paul's River about 1840, which have been treated of by Cassin (Proc. Acad. Nat. Sc. Philad. 1851).

NOTE XXVII.

DESCRIPTION DE DEUX TROGOSITIDES NOUVEAUX.

PAR

A. LÉVEILLÉ.

Temnochila curta, sp. n.

Lata, *curta*, *convexa*, *fusco-œnea*, *nitida*. *Capite alutaceo*, *utrinque subfoveolato*, *sat fortiter*, *sparsim punctato*, *sulco anteriore integro*. *Prothorace subquadrato*, *lateribus basi apiceque rotundatis*, *angulis anticis vix productis*, *posticis distinctis*, *obtusis*; *dorso alutaceo*, *sat fortiter punctato*, *punctis laterum confertis*, *variolosis*, *singulis seta prœditis*. *Elytris breviusculis*, *convexis*, *basi fortiter elevato-marginatis*, *striato-punctatis*, *interstitiis uniseriatim punctulatis*. *Prosterno fortiter punctato*, *plus minusve impresso*. — Long. 12 mm.; lat. 4 mm.

Hab. Guyane.

Cette espèce est assez voisine de *T. tristis* Muls. (*cribricollis* Reitt.) dont elle se distingue par sa forme ramassée, convexe et par la brièveté des élytres par rapport au prothorax. Son seul aspect globuleux suffit pour la séparer facilement de toutes les autres *Temnochila*.

J'ai vu trois exemplaires de cette espèce: l'une dans la collection du Musée de Leyde, la seconde dans celle du Musée de Paris et la dernière dans la mienne.

Tenebroides Ritsemae, sp. n.

Elongatus, *supra opacus*, *ater*, *subtus dilutior*, *subnitidus*, *tarsis*, *antennis palpisque rufescentibus*. *Fronte plana*, *ca-*

pite prothoraceque fortiter alutaceis et punctatis. Prothorace subtransverso, postice sat fortiter sinuato-angustato, lateribus a medio ad apicem subparallelis, marginatis, margine punctis subcrenulato, angulis anticis productis, posticis rectis, basi retro arcuata, linea basali vix interrupta. Scutello nitido. Elytris basi ad humeros arcuatis, extus dentatis, medio latioribus, postice leniter attenuatis, alutaceis, valde seriato-punctatis, juxta series angustissime costulatis, costulis nitidis, plus minusve, præsertim a septima interruptis vel catenatis, intervallis vix perspicue punctulatis, margine suturali biseriatim punctulato. — Long. 10 mm.; lat. 3,5 mm.

Hab. Colombie (coll. Sédillot), Bogota (v. Lansberge, Mus. de Leyde), deux exemplaires: l'abdomen manque à celui du Musée de Leyde.

Voisin de *T. Bonvouloiri* Lév. mais plus mat, moins transverse et plus atténué en arrière; le prothorax est plus cordiforme, les élytres sont beaucoup moins régulières, surtout à la partie déclive très rugueuse. C'est encore une espèce chez laquelle la marge basilaire du prothorax est presque entière, ce qui enlève à ce caractère de groupe sa valeur absolue.

Je dédie cette espèce à M. C. Ritsema, entomologiste distingué, qui a mis si gracieusement à ma disposition les richesses du Musée de Leyde.

NOTE XXVIII.

SUR UNE ESPÈCE MÉCONNUE DU GENRE MACROMA.

PAR

J. R. H. NEERVOORT van de POLL.

Il y a seulement quelques mois, que j'ai eu la bonne chance d'obtenir d'un de mes correspondants en Sumatra central, un exemplaire de la rarissime *Macroma gloriosa* Mohn., exemplaire qui se rapportait parfaitement à la description soignée du Dr. Mohnike. Tout récemment, je viens de recevoir par l'obligeance du Dr. Gestro, un premier lot des doubles des chasses de M. Fea en Birmanie, et j'y trouve une *Macroma*, déterminée aussi *gloriosa* Mohn. Malgré la localité continentale, cette détermination ne m'offrait à première vue rien d'extraordinaire. La présence de la coloration si caractéristique semblait exclure tout doute.

Ce ne fut qu'un peu plus tard, en voulant l'intercaler dans ma collection auprès de son confrère insulaire que je fus frappé par quelques particularités qui m'engageaient à les comparer plus sérieusement. Le résultat de cet examen fut, que je me trouvais sans aucune doute en présence de deux espèces très distinctes, quoique voisines.

Tout d'abord je consultais de nouveau l'ouvrage de Mohnike. Il n'y avait rien à redire. Sa description s'accordait de point en point avec mon individu insulaire. Donc l'espèce Birmanienne devait être quelque chose de nouveau.

Me rappelant que M. Gestro avait publié, dans sa première notice sur les captures de M. Fea, quelques annotations à propos de la *M. gloriosa* Mohn., j'espérais y trouver

l'information désirée. Malheureusement cette notice, à part la communication de la localité précise, se bornait à la phrase suivante: »è facilissima a determinare coll'aiuto dell'ottima figura di Westwood, mentre quella di Mohnike sembra fatta espressamente per mettere nell' imbarazzo."

Il ne me restait donc plus que de consulter le „Thesaurus Entomologicus" de M. Westwood. Mon exemplaire Birmanien se rapportait si parfaitement à la figure de Westwood, comme si celle-ci avait été peinte d'après lui, et ainsi la description était tout à fait exacte pour toutes les particularités caractéristiques. Mais cela n'a rien de bien surprenant quand on sait que Westwood n'a pas connu la forme insulaire décrite par Mohnike, et que l'individu qui lui a servi pour son étude, était l'exemplaire de la collection W. W. Saunders, capturé par Mouhot en Siam.

Voici donc la solution, la *Macroma gloriosa* Westw., n'est pas du tout identique avec la *Macroma gloriosa* Mohn.!

Le Prof. Westwood a commis la faute grave de ne pas avoir consulté la description de Mohnike. S'il eût pris la peine de lire cette description détaillée, il n'aurait pas manqué d'observer que la *M. gloriosa* Mohn. n'a point une tête »very delicately granulose," ni la carène de la callosité apicale des élytres »scalloped into four teeth," et non plus le dessous uniformément noir! M. Gestro, par cette complication, a été induit en erreur, il a trouvé, et pour cause, son espèce mieux en rapport avec la figure de Westwood et en a conclus que la figure de Mohnike était peu exacte. Les planches de Mohnike ne sont pas hors ligne, pourtant cette fois-ci, l'opinion défavorable du Dr. Gestro est non méritée et trop sévère.

Comme je l'ai déjà dit, la description de Mohnike est très complète, et celle de Westwood est aussi suffisante, il serait donc inutile de décrire ici de nouveau ces espèces. Je me bornerai pour faciliter des recherches ultérieures, à relever les différences entre ces deux espèces voisines, en imposant à l'espèce Birmanienne le nom de *Macroma superba* v. d. Poll.

M. gloriosa Mohn.	*M. superba* v. d. Poll. *M. Gloriosa* Westw. et Gestro non Mohn.
Tête imponctuée.	Tête finement granuleuse sur le clypeus, ponctuée sur le vertex.
La carène de la callosité apicale des élytres en ligne courbe, imitant la forme d'une S.	La carène de la callosité apicale des élytres échancrée en quatre dents.
La partie apicale des élytres offrant à peine quelques traces de fines rides transversales.	La partie apicale des élytres visiblement ridée transversalement.
Le pygidium légèrement tronqué au sommet; avec trois carènes, dont la médiane prend son origine à la base et s'étend presque jusqu'au bout des carènes latérales; avec une très légère indication de sculpture.	Le pygidium assez fortement échancré au sommet; avec trois carènes, dont la médiane prend son origine à la base et s'arrête à une certaine distance du bout des carènes latérales; entièrement couvert de fines rides transversales.
Le dessous entièrement noir, avec les parapleura et les parties laterales du metasternum blanches ou jaunâtres.	Le dessous uniformément noir.

En outre la *M. superba* est plus grande, plus robuste, mon individu mesurant 23 mm. de longueur et 8 mm. de largeur, tandis que mon exemplaire de la *gloriosa* n'a que 21 mm. de longueur et $6^1/_2$ mm. de largeur. Par suite de sa plus grande ampleur les taches noires sur son prothorax sont plus espacées, outre cela elles sont plus petites. La couleur de la tête et du corselet est d'un rouge sanguin, tandis que ces parties sont jaunes dans la *gloriosa:*

NOTE XXIX.

ON THE LONGICORN GENUS ORION, GUÉR.

BY

C. RITSEMA Cz.

In the „Genera des Coléoptères" (VIII, p. 300) Lacordaire, in accordance with Guérin's views, ascribes to the female of *Orion patagonus* Guér. a prothorax which is more strongly rugose than in the male and the callosities of which are less numerous and but little conspicuous.

Now the Leyden Museum possesses two specimens of *O. patagonus* (one from Magellan: Patagonia, the other from Cordoba: Argentinia) which, no doubt, are *male* and *female*, but these two have the thorax quite similarly sculptured. The male, however, is smaller and of a somewhat brighter colour; it has the antennae somewhat longer, and the apical half of the elytra subshining in consequence of its being rather vaguely sculptured; in the female, however, the apical half of the elytra is opaque coriaceous.

Moreover the Leyden Museum has a third specimen of this genus (from Santa Lucia: Uruguay) which almost exactly corresponds with the figure given in the „Atlas" belonging to Lacordaire's „Genera" (pl. 86, fig. 1) under the name of *Orion patagonus*. In this specimen the thorax is very strongly rugose, its callosities are but little conspicuous, and its lateral spines very slender, whilst the elytra are more coarsely rugose and have the costae slightly more distinct. I suppose this to be the form considered by Guérin and Lacordaire as the female of *patagonus*, but as, in my opinion, it is specifically distinct from that species I propose to call our Uruguay insect *Orion Lacordairei*.

Orion brunneus Guér. most probably will prove to be founded on a male specimen of *patagonus* Guér.

NOTE XXX.

ON EGGS OF SOME BRITISH GUYANA BIRDS.

BY

Dr. C. G. YOUNG.

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1. *Nyctidromus albicollis* (Gm.) [1]).
Goat Sucker, Jumbi Bird.

They make no nest but lay their eggs in a depression in the ground where it is dry, on the beds of cultivated land, on the high dams between plantations, on the bare rocks up the rivers, and on the savannahs in the „Interior".

They lay two or three eggs.

The egg is smooth, regularly oval — 30 mm. by 22 mm. —, light pink with darker pink blotches.

They hatch from March to July. — One egg (N°. 1).

Although I kept all the eggs in the dark, the above mentioned one has much faded during its being in my possession.

2. *Progne chalybea* (Gm.).
Swallow.

They build a flat nest of coarse grass and fine sticks, lined with a few leaves, on the beams about houses.

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1) Excepting three Herons and the two species of *Tinamus*, all the eggs, presented to our Museum by Dr. Young, have been accompanied by birds skins of the species the eggs belong to, and therefore identification is rendered quite easy and unmistakable. J. BÜTTIKOFER.

Although a number of nests are found at the same time on the same beam they are not sociable.

They lay three eggs.

The egg — 25 mm. by 16 mm. — is white.

They hatch from May to August. — One egg (N°. 8).

3. *Fluvicola pica* (Bodd.).
Cotton Bird.

The nest is covered in, almost round like a ball, made of grass, and suspended from the extremity of the branch of low trees and shrubs, four or five feet from the ground. The place of entrance is near the attachment to the branch. Sometimes the nest is built in a thick bush when the lower part of the nest rests on the branch beneath.

They lay two eggs.

The egg — 18 mm. by 12 mm. — is cream white with a few reddish brown spots at the large end.

They hatch from January to May. — One egg (N° 5).

4. *Pitangus sulphuratus* (Sw.).
Kickadu.

They make a domed nest, which is very rough on the outside and more like a wisp than a birds nest, of grass, pieces of cotton, and old rags when they can get them, on the extremity of the branch of low trees and shrubs a few feet from the ground, or on the outer branches of forest trees fifty or sixty feet from the ground; they never build in the heart of the tree near the stem, except when they build on palms.

They lay four eggs.

The egg — 29 mm. by 21 mm. — is cream, spotted on the large end with light and dark brown large and small spots; there may be a few small spots here and there over the rest of the egg.

They hatch from January to August. — Three eggs (N°. 6).

5. *Cassicus persicus* (L.).
Sawacco, Mocking Bird, Oriole.

They build in colonies and make a hanging nest of grass, tendrils of crisping plants, and strips torn from the leaves of the cocoanut palm, from the end of the branches of trees or low bushes, if the latter hang over water. They keep on the lea side of the tree. The distance of the nest from the ground depends a great deal on the locality, and is from eight feet on low bushes, to fifty or sixty feet on tall forest trees.

The nests are about eighteen inches long and four inches in diameter and are very uniform in shape and size. The shape is like a bag closed in at the top, with the entrance in the side near the attachment to the branch. The sides round the entrance project a little, forming a funnel. The bird builds from the inside and finishes the nest in from eight to ten days.

They lay two, rarely three eggs.

The egg — 30 mm. by 20 mm. — is white with a slight shade of blue, and may have a few light brown and violet spots at the large end, or a great many similar spots distributed over the entire surface.

They hatch from January to June, and if the year has been dry build again in October and November. If the first months of the year are very wet, their building operations are delayed. — Two eggs (N°. 17).

6. *Cassicus affinis*, Sw.

They build in colonies and make a nest like the nest of *Cassicus persicus*, on the same tree sometimes, but never on the same branch.

They lay two eggs.

The egg — 30 mm. by 21 mm. — is bluish white, thickly covered with light purple spots, more numerous at the large end, with a few light brown spots here and there.

The egg is distinguished from that of N°. 5 by having more spots and the spots being more uniform in tint.

They hatch from January to June. I have not seen them build in October. — One egg (N°. 18).

7. *Icterus xanthornus* (Gm.).
Yellow Plantain Bird.

They make a hanging nest of grass, like a bag, with an open mouth, from the end of branches of trees or low bushes. The nest is generally about eight or ten inches long, but may be eighteen inches long, and three or four inches in diameter. The bird builds from the inside and outside alternately, and as a consequence the nest is smooth on both sides.

They do not build in colonies, although two or more nests are found on one tree.

They lay three eggs.

The egg — 25 mm. by 17 mm. — is white, having light violet and black irregular lines about the large end, the black lines commence with a spot.

They hatch from January to July: if the spring is wet they hatch later. — Two eggs (N°. 19).

8. *Rhamphocoelus jacapa* (L.).
Black Sackie.

The nest is open like a cup and built of twigs and dry leaves, especially the leaves of the bamboo, and lined with coarse fibres. They build in the centre of low thick bushes or in the fork of a branch of moderately high trees. Some nests are made of brown materials — brown twigs, brown leaves, and brown fibres — resembling the colour of the bird.

They lay three eggs.

The egg — 21 mm. by 18 mm. — is greenish blue, spotted with black and purple spots, the former being more

numerous at the larger end, or in a belt round the largest diameter.

They hatch from February to June. — Two eggs (N°. 16).

9. *Crotophaga ani*, L.
Old Witch, Keel-bill.

Some eight or ten birds build an oval, shallow, open nest, about eight inches long and four inches wide, of sticks, lined with leaves, in the centre of low bushes, especially in orange trees, a few feet from the ground. This nest is used in common, and when they are hatching, five or six birds sit on the nest at the same time. Twenty eggs have been taken out of one nest.

The egg is regularly oval — 38 mm. by 27 mm. —, smooth, and white in colour: if the egg is scratched it leaves a light green mark, the colour of the inside of the shell.

The size of the egg varies considerably in the same nest, probably due to the difference in age of the members of the colony.

They hatch in March, April and May. — Three eggs (N°. 7).

10. *Parra jacana*, L.
Spur-wing.

They build a deep open nest of grass and roots among the water plants on the unused canals, swamps, and edges of the creeks.

They lay four eggs.

The egg — 30 mm. by 23 mm. — is yellowish brown, thickly covered over with black irregular lines.

They hatch in April, May and June. — Two eggs (N°. 4).

11. *Ardea candidissima*, Gm.
White Gaulding.

One egg (N° 11).

12. *Ardea coerulea*, L.
Blue Gaulding.

One egg (N°. 12).

13. *Ardea tricolor*, Müll.
Ardea leucogaster, Gm. (Schleg. Mus. P.-B. Ardeae, p. 9).
Grey Gaulding.

One egg (N°. 13).

These three herons build a nest like the nest of *Nyctico-rax violaceus* (L.) mentioned sub N°. 15, in the same locality, at the same time, and often on the same tree. Once in a way isolated nests are found in the low bushes that fringe the creeks.

They lay two or three eggs.

The egg is light green, but varies much in shade as well as in shape and size, the length being about 42 mm. and the breadth about 30 mm.: some eggs are almost round. It is not possible to identify the egg by inspection alone: their eggs and the egg of N°. 14 can be distinguished by size only.

14. *Butorides griseus* (Bodd.).
Ardea scapularis, Ill. (Schleg. Mus. P.-B. Ardeae, p. 42).
Ardea cyanura, Vieill. Encycl. Méthod. p. 1120.
Shypook.

The nest is flat and made of sticks and grass in low bushes and tall water plants about unused canals and on the margin of quiet creeks.

They lay three or four eggs.

The egg — 37 mm. by 29 mm. — is light green.

They build in colonies, and hatch from May to July. — One egg (N°. 9).

15. *Nycticorax violaceus* (L.).
Quaak.

The nest of this bird is similar to the nest of *Butorides griseus*, only larger, and they build in colonies on the

young Courida trees (*Avicennia nitida*) along the margin of the sea. The nest is built about six feet or so above the surface of the mud, in which one, standing under the tree, sinks to his waist.

They lay three eggs.

The egg — 43 mm. by 31 mm. — is light green. They hatch in March and April. — One egg (N°. 10).

16. *Ibis* (*Harpiprion*) *cayennensis* (Gm.).
Black Curri-curri.

Their nest is made of sticks, and resembles the nest of the herons, being flat and built on moderately high trees, but, unlike the latter, they build up the creeks as a rule.

They lay four eggs.

The egg is bluish green, and varies in shape and size. They average 43 mm. by 35 mm. They build in colonies and hatch in April, May and June. — Two eggs (N°. 14).

17. *Ibis rubra*, Vieill.
Curri-curri.

They have also a flat nest, in colonies, of sticks, and build on moderately high trees on the sea shore, generally by themselves, but sometimes among the small herons.

They lay two or three eggs.

The egg is more uniform in shape and of a lighter green than the egg of N°. 16, and averages 45 mm. by 33 mm.

They hatch in April and May. — One egg (N°. 15).

18. *Tinamus major*, J. E. Gray.
Tinamus subcristatus, Cab. (Schomburgk, Reise, III, p. 749).
Maam, Bush-fowl.

The nest is a depression on the ground in which they place a few dry leaves and bits of dry grass.

They lay from six to eight eggs.

The egg is smooth, regularly oval — 56 mm. by 46 mm. —, and of a greenish blue.

They hatch in April and May, and are not found on the coast. — Two eggs (N°. 2).

19. *Crypturus variegatus*, Wagl.
Small Maam, Bush-fowl.

Their nest is similar to that of N°. 18, but they are found on the coast lands.

They lay four or five eggs.

The egg is smooth, regularly oval — 40 mm. by 30 mm. —, and dark chocolate in colour.

They hatch from February to June. — Two eggs (N°. 3).

Much faded afterwards, though having been kept in the dark.

New Amsterdam, Berbice, British Guyana. March 20th, 1889.

NOTE XXXI.

PAPILIO (ORNITHOPTERA) RITSEMAE, N. SP.

DÉCRIT PAR

P. C. T. SNELLEN.

La découverte de cette nouvelle espèce fut faite à l'occasion d'une révision des Ornithoptera à ailes supérieures noirâtres et à ailes inférieures jaunes, se trouvant dans la collection du Musée d'Histoire Naturelle de Leyde, dans celle de la Société Natura Artis Magistra à Amsterdam et dans les collections réunies de Mr. Piepers et de moi. A cette révision, entreprise dans le but d'arriver à une détermination uniforme de notre matérial assez considérable qui comprend peut-être 200 à 250 individus appartenant à ce beau groupe, prirent part Mr. Ritsema, le conservateur du cabinet entomologique du Musée de Leyde, Mr. Swierstra, celui de la collection d'Artis, Mr. Piepers et moi-même. En premier lieu je dois observer que c'est Mr. Ritsema qui découvrit les deux principaux caractères de la nouvelle espèce; pour cette raison et aussi afin de lui marquer notre reconnaissance pour la constante bienveillance avec laquelle il vient toujours en aide à ses collègues dans leurs recherches, nous avons voulu lui dédier notre nouveauté.

Le *Papilio Ritsemae* appartient à la section du *Pap. Amphrysus* et a même assez de ressemblance avec cette espèce dont le ♂ est figuré par Cramer, Pap. Exot. III pl. 219 A, c'est-à-dire que les ailes supérieures sont d'un noir de suie velouté à rayons clairs qui sont disposés tellement qu'ils limitent un espace foncé presque rectangulaire au lieu de circonscrire un espace foncé arrondi ou d'être éta-

gés le long du côté extérieur de la cellule discoïdale comme chez les autres espèces en tant qu'elles les possèdent. Ensuite, la couleur jaune des ailes inférieures s'étend jusqu'à la base de l'aile, en occupant chez le ♂ toute la cellule discoïdale et entièrement la cellule 7^{e}, tandis que chez la ♀ le noir qui se trouve dans cette cellule est limité horizontalement. Le bord interne des secondes ailes n'est noir dans les deux sexes que jusqu'à la nervure anale ou première, le liseré noir en feston du bord postérieur est étroit et les échancrures de ces ailes ne sont pas marquées de blanc. De plus, l'angle anal des ailes postérieures est arrondi, non allongé dans le sens du corps comme chez le *Papilio Rhadamanthus* et ses alliés.

Les antennes, la tête avec les palpes peu développés, la moitié dorsale du thorax et les pattes sont d'un noir uniforme dans les deux espèces; ce n'est que rarement que l'on aperçoit un collier rouge peu prononcé et quelques traces de taches rouges sur la poitrine. Les longs poils qui chez le mâle ornent le bord interne ou abdominal des ailes postérieures en dessous, sont d'un brun roux bien décidé, non pas noirs, et la frange des ailes supérieures est marquée de blanc dans les cellules.

Ceci sont les caractères communs aux deux espèces et qui les distinguent suffisamment de toutes les autres espèces ou variétés d'Ornithoptera de la division qui nous occupe. Il me reste maintenant à indiquer les différences entre le *Pap. Amphrysus* et la nouvelle espèce. D'abord le *Pap. Ritsemae* est en général plus petit. En mesurant six ♂♂ d'*Amphrysus* je trouve pour la longueur de leur aile antérieure droite: 76, 78, 80, 83 et 84 millim. Un individu exceptionnellement petit n'atteint que 63 mm.; quatre ♀♀ ont 83, 87 et 95 mm. Cinq ♂♂ de *Ritsemae* atteignent 65, 67, 68 et 70 mm., trois ♀♀ prises par Mr. Piepers, 77, 79 et 84 mm. Le plus grand ♂ d'*Amphrysus* est de Bornéo, il mesure 84 mm., la plus grande ♀ de Sumatra (Deli), 95 mm.

Les ailes antérieures sont chez *Ritsemae* ♂ d'une nuance

moins franchement noire, plus brunâtre, mais chez les femelles des deux espèces je n'aperçois pas de différence sensible à ce sujet. La couleur du fond est chez le sexe faible des deux espèces d'un brun terreux bien plus clair que chez le ♂. Les rayons clairs — d'un jaune d'or chez *Amphrysus* ♂ ou blanc sale *uniforme* chez sa ♀, tandis que chez *Ritsemae* ♂ ils sont d'un jaune pâle et verdâtre, chez la ♀ d'un blanc jaunâtre sale qui passe au jaune verdâtre clair à mesure qu'on approche du bord interne — sont, dans les deux espèces, disposés d'une manière un peu différente. L'espace noir qu'ils limitent chez les deux sexes d'*Amphrysus* est coupé presque horizontalement en haut, c'est-à-dire du côté qui regarde le bord antérieur ou plutôt le sommet de l'aile, tandis que chez *Ritsemae* il est en cet endroit visiblement incliné vers le bord postérieur. Le fond des secondes ailes est chez *Amphrysus* d'un jaune d'or brillant, à peine plus pâle chez la ♀, avec les nervures finement dessinées en noir chez le ♂ et avec quelques poils noirs, longs et soyeux vers la base de l'aile. Chez *Ritsemae* le fond jaune a une teinte verdâtre bien sensible, la base est plus velue et plus pâle chez la ♀, les nervures noires sont bien plus épaisses et cela non pas seulement chez la ♀, le noir du bord intérieur déborde chez les deux sexes un peu dans la cellule 1^b, ce qui ne se voit pas du tout chez *Amphrysus*, ensuite on aperçoit chez *Ritsemae* ♂ dans les cellules 3 — 6 des taches noires, pointues vers la base de l'aile, plus ou moins distinctes, toujours un peu nébuleuses. La tache noire de la cellule 5^e est persistante chez tous les mâles que j'ai vus (environ une dizaine) aussi en dessous. En outre, parmi les dents du bord postérieur, celle qui se trouve au bout de la cellule 5^e est chez *Ritsemae* ♂ bien plus saillante que les autres; elles sont d'ailleurs toutes bien accusées, non arrondies et égales comme chez *Amphrysus* ♂. Chez *Ritsemae* ♀ les dents sont égales. En dessous, j'observe que la nervure 8^e des ailes postérieures est fortement courbée sur tout son parcours chez *Amphrysus*, surtout chez le ♂, et la cellule 7^e fort large,

tandis que cette nervure s'écarte à peine de la ligne droite chez *Ritsemae* passé son premier tiers et que la cellule 7e n'est pas plus large que la 6e.

Un caractère, à mon avis capital, se voit sur le dos de l'abdomen du ♂ de *Ritsemae*, c'est-à-dire deux verrues plates, allongées, rappelant par leur forme les cocons du genre *Nepticula* ou les Coccides. On les trouve sur le 3e et 4e anneau; rien d'analogue ne se voit chez *Amphrysus* ♂. Le dessus de l'abdomen est du reste chez *Ritsemae* d'un brun terreux foncé, uniforme chez la ♀, plus clair et plus rougeâtre au milieu chez le ♂. Chez *Amphrysus* ♀ la partie dorsale de l'abdomen est également d'un brun uniforme mais très-pâle, tandis que chez le ♂ les quatre premiers anneaux sont d'un brun d'ocre terne et pâle, et le reste, comme les flancs et le ventre entier, chez les deux sexes d'un jaune d'or avec une rangée de points noirs de chaque côté. Chez *Ritsemae* ♂ et ♀ les flancs de l'abdomen sont d'un vert jaunâtre, aussi marqués de points noirs et le dessous seulement est jaune. Les valves anales des mâles sont d'un blanc brunâtre chez les deux espèces.

Jusqu'ici, le *Papilio Ritsemae* ne nous est parvenu que des régions montagneuses de l'ouest et du centre de Java (Preanger, Ardjoeno) où il vole à une hauteur de 1600 — à 1800 mètres. Quant au *Pap. Amphrysus* que Cramer dit venir des environs de Batavia, il ne se trouve pas là, puisque Mr. Piepers, pendant son long séjour dans cette ville, n'y a jamais observé ce grand papillon. Cependant, comme le Musée de Leyde possède quelques individus étiquettés »Java", il se pourrait qu'*Amphrysus* vole à Java à une hauteur de 800 à 1500 mètres où Mr. Piepers a fait peu de chasses. Ce Musée, et aussi celui d'Amsterdam, possède plusieurs exemplaires d'*Amphrysus* venant de Sumatra où il ne paraît pas être rare, mais tous sont sans indication de la hauteur où ils furent pris. En outre, à Leyde on a un ♂, venant de Bornéo (Banjermassing, voyage S. Müller), qui diffère des mâles de Sumatra par l'absence de la tache claire au bout de la cellule des ailes antérieures. Ceci lui donne

un aspect différent. Mr. de Haan a du reste déjà signalé cette variété de Bornéo dans son traité sur les espèces du genre *Papilio* des Indes Orientales.

Le Dr. Boisduval, dans sa description du *Papilio Amphrysius* (Spécies Général, I, p. 178), confond les deux espèces *Amphrysus* et *Ritsemae*, mais la figure réduite qu'il en donne (Pl. 5 (1 B) f. 1) se rapporte à la première espèce.

Le Dr. Boisduval dit que les ailes postérieures d'*Amphrysius* ♀ deviennent presque blanches vers la base. Ceci est surtout vrai pour le *Pap. Ritsemae* ♀ mais seulement pour les individus tant soit peu défraichis.

Le *Papilio ruficollis* Distant, Rhopalocera Malayana, p. 328, pl. 27 f. 1 ♂, fig. 107 (dans le texte) ♀, pl. 27a fig. 1 ♀ variété, est complètement identique avec le *Pap. Amphrysus* de Sumatra, et c'est bien étonnant que cet entomologiste distingué ne s'en est pas aperçu.

Les originaux de ma description du *Papilio Ritsemae* se trouvent à Leyde, à Amsterdam et à Rotterdam, dans les collections mentionnées plus haut.

NOTE XXXII.

ON A VARIETY OF EUZOSTRIA ARUENSIS, GORH.

BY

J. R. H. NEERVOORT van de POLL.

Among a few insects from Goldie-River, New-Guinea (30 miles inland from Port Moresby), I obtained an Erotylid, which proved to belong to the newly erected genus *Euzostria* Gorh. (Notes from the Leyd. Mus. X, p. 140, pl. 7, fig. 6) founded upon a single specimen of a new insect from the Aru-Islands. The comparison of my specimen with the description of this species (*E. aruensis* Gorh.), offering several differences, I was inclined to regard my New-Guinean insect as a closely allied but distinct species. However, after a careful examination of the type-specimen, I think it will be better to consider the New-Guinean form as a variety, at least provisionally, until the arrival of a more extensive material shall allow us to obtain certainty. As the spotted thorax of my specimen gives the insect a quite different and peculiar aspect, I propose the name *binotata* v. d. Poll for this variety, which may be characterized as follows. The face between the eyes is nearly impunctate. The thorax is less convex, the anterior angles are broader, the disc is ornated with two round black spots, and the base narrowly edged with black, more broadly so in the middle, which makes the thorax apparently shorter. The large punctures are less numerous but larger, the small punctures on the contrary still finer. The yellow band of the elytra is narrower at the suture, i. e. the band of each elytron is more triangular. Moreover, the rows of piceous dots on the yellow band, which are very distinct in the type, are hardly visible in the variety.

Finally the colour of the thorax, of the apical elytral spot and of the two last ventral segments is dirty yellow instead of deep red.

NOTE XXXIII.

THE SPECIES OF THE MALACODERM GENUS ICHTHYURUS, WESTW.

ENUMERATED BY

C. RITSEMA Cz.

Ichthyurus.

Westwood. The Cabinet of Orient. Entom. 1848. p. 83.

lateralis	Westw. Cab. Or. Ent. 1848. p. 83; pl. 41, fig. 2, 2*a*.	Java.
costalis	Westw. l. c. p. 83; pl. 41, fig. 3.	Moulmein.
basalis	Westw. l. c. p. 84, note.	»
discoidalis	Westw. l. c. p. 84, note. — id., Thesaurus Entom. Oxon. 1873. p. 102; pl. 2, fig. 2.	Sierra Leone.
Semperi	Fairm. Stett. ent. Zeit. XXVIII (1867). p. 113.	Luzon.
forficuloides	Fairm. l. c. p. 114.	Sarawak.
Dohrnii	Fairm. l. c. p. 114. — Gestro, Ann. Mus. civ. Genova. IV (1873). p. 360, fig. 3.	Luzon.
scripticollis	Fairm. l. c. p. 115. — Gestro, l. c. p. 360, fig. 1.	»
bicaudatus	Fairm. l. c. p. 116.	Ceylon.
inermis	Fairm. l. c. p. 116. — Gestro, l. c. p. 360, fig. 4.	»
depressicollis	Macleay. Trans. Ent. Soc. of N. S. Wales. II (1872). p. 264.	Gayndah.

Doriae Gestro. Ann. Mus. civ. Genova. IV (1873). p. 359; 360, fig. 2.	Penang.
octopunctatus Rits. Notes Leyd. Mus. I (1879). p. 76.	Java.
bifasciatus Rits. l. c. p. 77.	»
suturalis Rits. l. c. p. 78.	Sumatra.
planifrons Rits. l. c. p. 81.	»
Gestroi Rits. l. c. p. 82.	Abyssinia.
discoidalis Gestro (nec Westw.). Ann. Mus. civ. Genova. IV (1873). p. 359; 360, fig. 5.	
niponicus Lewis. Ann. & Mag. Nat. Hist. 5th ser. IV (1879). p. 463.	Japan.
Hageni Rits. Notes Leyd. Mus. V (1883). p. 248.	Sumatra.
maculicollis Gestro. Ann. Mus. civ. Genova. 2nd ser. VI (1888). p. 119, fig.	Birmania.
denticornis Gestro. l. c. p. 121, fig.	Tenasserim.
oxyurus Gestro. l. c. p. 123, fig.	»
carinifrons Gestro. l. c. p. 125, fig.	»
quadrimaculatus Gestro. l. c. p. 126, fig.	Birmania.
Gianellii Gestro. l. c. p. 127, fig.	Darjeeling.

Obs. In 1882 (Stett. ent. Zeit. XLIII. p. 460) Dr. C. A. Dohrn has described a South American Telephorid under the name of *Malthinus* (*Ichthyurus?*) *paradoxus*. It comes from Olivenza (Amazons near the Peruvian frontiers).

Leyden Museum, May 1889.

NOTE XXXIV.

CONTRIBUTIONS TOWARDS THE KNOWLEDGE OF THE ANNELIDA POLYCHAETA.

BY

Dr. R. HORST.

III [1]).

On species of *Nereis*, belonging to the sub-genus *Perinereis*. (Plate 7 and 8).

The sub-genus *Perinereis*, according to Grube's views, contains all *Nereis*-species, characterized by having the lateral dorsal paragnathi of the basal ring of the proboscis (group VI) all or some of them transverse, ridge-shaped, the remaining paragnathi being conical, or pin-shaped (»pectiniformes" Kinberg), or compressed; the feet all of the same structure, or those of the posterior region of the body more enlarged. This division mainly corresponds to Kinberg's family Aretidea, and not to his genus *Perinereis*, containing the species, which have no pectiniform teeth and but little modified posterior feet. However it seems preferable to me to maintain Kinberg's name, as I do not like to increase the systematical literature with a new one, and because the greatest number of species of the family Aretidea are united in the genus *Perinereis*, the four other genera (*Arete*, *Pseudonereis*, *Paranereis* and *Naumachius*) containing only a small part of them. To use the name *Lipephile*, afterwards proposed by Malmgren for *N. cultrifera*, instead of *Perinereis*, as done by Claparède a. o., seems not justified to me, because the name *Perinereis* has the priority, and moreover the name *Lipephile* is applied

1) For Part I see Vol. VIII, p. 157, and for Part II Vol. XI, p. 37.

by Claparède in a sense different from what it was intended for by its author.

I prefer to base the subdivisions of the genus *Nereis* rather on characters taken from the arrangement of the paragnathi, than on the state of development of the dorsal lobe of the feet. The main groups of paragnathi of the proboscis are rather constant and appear not to be liable to much variation in the same species; moreover the knowledge of their arrangement enables us to recognize also the systematical position of the *Heteronereis*-forms. On the contrary the lobes of the feet are liable to much variation in different regions of the body, and show such marked changes in individuals coming to sexual maturity, that I do not think it advisable to rely much upon their characters for classification.

Besides the specimens of our Museum, I could also examine the Annelida collected by Prof. E. van Beneden, during his stay on the coast of Brasil, in the Gulf of Rio de Janeiro, and already described by Dr. Armauer Hansen [1]); I am much obliged to the Director of the Museum of Liège for allowing me to examine them, as Hansen's descriptions are as well very incomplete as inaccurate and our knowledge of local faunas being rather scanty. This interesting collection contains two species belonging to the group *Perinereis*, *N. ferox* Hans. and *N. minor* Hans.; in the present note I will publish a detailed description of them. Three other species: *N. obscura* Hans., *N. coerulea* Hans. and *N. microphthalma* Hans., will be shown to be mere synonyms.

Nereis cultrifera Gr. [2]) — Ehlers, Borstenwürmer, p. 461, pl. XXI, figs. 31—36. — Claparède, Annélides

1) Mém. couronnés et Mém. des Savants étrangers de l'Académie Royale de Bruxelles, T. XLIV, 1882, pl. I—VII.

2) For the synonymy it may be referred to those authors, who already published a list of them; I think it superfluous to repeat them and I wish to avoid a common fault of our days, rightly characterized by Bütschli as „eine Art Kultus mit möglichst nummerreichen Literaturverzeichnissen".

chétopodes du Golfe de Naples, Supplément, p. 439, pl. VII, fig. 1.

I examined three specimens from Napels and one individual from the coast of Portugal (Villa Nova de Milfontes), collected by Prof. M. P. d'Oliveira.

The last worm measures 10 cm. in length, while the number of its segments amounts to 102. In group I. its proboscis has two paragnathi, a large tooth preceded by a smaller one, whereas in the Napels specimens there occurs only a single tooth. Our individuals do not agree in all regards with Ehlers' description; f. i. the anal cirri are much longer than indicated by Ehlers, reaching as far as the posterior 11 segments; the tentacular cirri are also longer. According to Ehlers' description they should reach the 5th ring, whereas in our specimens they reach the 7th and 9th segment. In the structure of its feet the Portuguese worm differs somewhat from the Napels specimens, and agrees better with the figures of Audouin and M. Edwards [1]), than with those of Ehlers; the inferior ligule is longer, and extends somewhat beyond the tip of the ventral setigerous lobe. As first was demonstrated by Claparède, and afterwards confirmed by Langerhans [2]), there occur in the inferior fascicle of the ventral lobe some heterogomph setose bristles.

Nereis macropus Clap. (Pl. 7, fig. 12). — Claparède, loc. cit. Supplément, p. 444, pl. VIII, fig. 1.

As far as I know, only the atocous form of this species was observed by Claparède. In our collection I met with two female specimens in epitocous condition, labelled »Méditerranée, Cuvier". Only one specimen is complete; it measures 62 mm. in length and has 104 segments. The

1) Ann. Sc. nat. 1e Sér. T. 27, pl. XIII, figs. 4—6; Règne animal, pl. XII, figs. 1d and 1e.

2) Die Wurmfauna Madera's: Zeitschr. f. Wissensch. Zoologie. Bd. XXXIII, p. 289.

arrangement of the paragnathi quite agrees with Claparède's description and figure. As in other epitocous forms the eyes are very large; the tentacular cirri appear to be somewhat longer than indicated by Claparède, at least the longest of the superior pair of them extends rather far beyond the tip of the palpi, and reversed they reach the 5th segment. The ligules of the anterior feet are not so acute as figured by Claparède, but have a more obtuse tip. Only homogomph setose bristles are present.

At the 20th segment commences the remarkable change in regard to the structure of the feet. The superior ligule has its base greatly enlarged and bears near the origin of the dorsal cirrus an oblong oval lamella; moreover a small narrow lamella occurs at its ventral side. The anterior lip of the dorsal setigerous lobe is largely produced and bears near its base at the ventral side a small oval lamella. The inferior lobe is furnished with a large lamella, at the dorsal side extending along its total length, at the ventral side embracing only its distal end. The inferior ligule is faintly curved in a hook-like manner, with an obtuse papilla near its base. The ventral cirrus is provided at its superior margin with two small tongue-shaped lamellae, at its inferior border with an oblong oval one. At one third of the length of the body the superior ligule of the feet commences to elongate gradually, attaining posteriorly that considerable size, which is described and figured by Claparède; at the same time the lamelliform processes of the feet decrease, first those of the dorsal ligule, then those of the setigerous lobes and finally those of the ventral cirrus. Carus [1]) seems to have been mistaken in placing this species in Ehlers' group I: »Lingula superior simplex, non foliacea, cirrum dorsalem non gerens."

Nereis Oliveirae, n. sp. (Pl. 7, figs. 1—5).

Length of the body 8—10 cm., its breadth at the widest

1) Prodromus Faunae mediterraneae, p. 218.

region 5 mm.; the number of its segments amounts to 124. The epitocous form measures 9 mm. in breadth. A dark brown patch on the dorsum of each foot, usually also a transverse stripe on each side of the segment; ventral side of the foot marbled with blackish. Cephalic lobe longer than broad, antennae subulate, hardly as long as half the length of the head; palpi large, projecting far beyond the antennae. The antero-posterior diameter of the buccal segment about one and a half the length of that of the succeeding one; tentacular cirri short, the inferior pair of them shorter than the palpi, the longest of the superior pair projecting a little beyond the tip of the palpi, reversed they reach the 3rd or 5th ring. The anal cirri, situated at the ventral side, as long as the posterior six segments. The feet in front and posteriorly not quite similar. In the anterior feet the lip of the dorsal setigerous lobe bluntly conical, the lips of the ventral lobe very short, not projecting; the superior ligule of the same structure and length as the dorsal lobe, the inferior ligule a little shorter; dorsal cirrus not extending beyond the tip of the superior ligule, ventral cirrus reaching to the middle of the inferior ligule. In the posterior body-region the superior ligule of the feet is considerably enlarged, consisting of a large lamella, which bears near its tip the small dorsal cirrus; the conical lip of the dorsal lobe reaches only to about the middle of its ventral border; the lips of the ventral lobe are more projecting than in the anterior segments, nearly as far as the inferior ligule.

In the dorsal lobe there occur only homogomph setose bristles; in the ventral lobe the superior fascicle contains homogomph setose bristles and heterogomph falcate ones, but in the inferior fascicle the setose bristles are wanting.

In the epitocous form the anterior 19 segments do not show any change.

Paragnathi of proboscis: Maxillary region, I. two teeth behind each other; II. small triangular group; IV. large semilunar group; III. large group, consisting of a large transverse patch in the middle and a smaller patch of 3 or

4 teeth on each side; basal region, V. a single conical point; VI. one long, ridge-shaped tooth, situated more in front; VII. and VIII. a belt of two irregular rows. — Coast of Portugal.

Of this species I examined five examples, three atocous and two epitocous females; they were collected by Prof. M. P. d'Oliveira near Buarcos, la Granja and Sines. The epitocous forms differ from the other ones by their large dimensions; unfortunately these specimens are incomplete, one of them wanting the posterior body-region, whereas in the other worm this region is partly regenerated. At the 20th segment the change of the feet occurs. The superior ligule is greatly elongated, conical and bears near the base of the dorsal cirrus an oblong oval lamella, at its ventral side a small rounded one; the dorsal cirrus projects somewhat beyond the tip of the ligule. The lip of the dorsal setigerous lobe, enlarged and elongated in the same manner as the ligule, is provided at the base of its ventral side with a small oval lamella. The ventral lobe is cylindrically produced and furnished with a large lamella, which is a little emarginated on the ventral side. The inferior ligule is about of the same length as the ventral lobe, faintly curved and provided with a conical process behind the middle of the superior border. The ventral cirrus reaches nearly to the tip of the inferior ligule, bearing near its base on the dorsal side two small tongue-shaped lamellae and on the ventral side a large oblong oval one. Bristles with knife-shaped terminal pieces occur in both lobes of the feet.

In some specimens the transverse paragnathi of group VI. show curious variations. For, whereas each paragnathe consists in its normal state of a long, narrow ridge, slightly notched in its middle, I found in one atocous specimen the left ridge broken up in four, the right one in three short transverse teeth; in the middle between both rows a small conical tooth was situated, and behind the right row a large Λ-shaped tooth. The unpaired paragnathe of group V. has its normal situation. In examining the proboscis of the

large epitocous examples it becomes obvious, that by the lack of the chitinous investment the long ridges are broken up in some irregular pieces. It may be concluded from this case, how difficult it is to recognize the real arrangement of the paragnathi, when having only a single specimen at his disposal. Though these individuals show great resemblance to *N. floridana* Ehl. [1]) and *N. atlantica* M'Int. [2]), I hesitated to identify them with one of those species. In *N. floridana* the lateral patches of paragnathi in group III. seem to be absent, and the tentacular cirri are also much longer, reaching to the 11th segment; according to Langerhans' description [3]), who examined this species at the coast of Madera, it should have »Gestalt und Vertheilung der Borsten" like in *N. cultrifera*, whereas in our specimens there occur no heterogomph setose bristles in the ventral lobe. *N. atlantica* also wants the lateral paragnathi of group III; moreover in this species the posterior feet seem to have the dorsal setigerous lobe (»second lobe" Mac Intosh) larger than the superior ligule (»superior lobe" Mac Intosh), quite opposite to our specimens.

Nereis malayana, n. sp. (Plate 8, figs. 4—7).

Epitocous form. The largest specimen 9 cm. in length, and 6.5 mm. in breadth at its widest part; the number of segments amounts to 150 or 160. Cephalic lobe about as long as broad; antennae half as long as the head. Palpi with a small terminal boss, their basal part with an annular notch; they are about twice as long as the antennae. The antero-posterior diameter of the buccal ring only a little longer than that of the succeeding segment; all tentacular cirri longer than the palpi, the longest of them reaching to the 6th segment or farther backward. The change of the feet commences in the ♂ at the 21st seg-

1) Borstenwürmer, p. 503.

2) Challenger Reports, Zoology, Vol. XII, Annelida Polychaeta, p. 219, pl. XXXV, figs. 1—3; pl. XVI A, figs. 10 and 11.

3) loc. cit. p. 289.

ment, in the ♀ at the 23rd segment. In the anterior body-region the lip of the dorsal setigerous lobe obtusely conical, longer than the lips of the ventral lobe, which measure about a third of its length. The ligules have the same shape as the dorsal lobe, the superior of them is a little longer, the inferior about of the same length. Dorsal cirrus extending somewhat beyond the tip of the superior ligule, ventral cirrus reaching to the middle of the inferior ligule. In the anterior feet both cirri show a lamellar enlargement of their basal portion. In the inferior fascicle of the ventral lobe there occur, besides the heterogomph falcate bristles, a couple of heterogomph setose ones. In the feet of the middle body-region the lip of the dorsal lobe is considerably produced, with an oblong oval lamella at its base; the ventral lobe has a cordiform anterior lip and a large, round, lamellar posterior one. The superior ligule, extending a little beyond the tip of the dorsal lobe, bears near the base of the cirrus a rather large, oblong, oval lamella; the inferior ligule, not reaching to the distal end of the ventral lobe, is furnished with a conical process near its base. The dorsal cirrus is longer than the superior ligule, smooth in the females, in the males provided with papillae on its distal half. The ventral cirrus longer than the inferior ligule, with an oblong, rhomboidal lamella near the base of its ventral border and two long, narrow, tongue-shaped lamellae at the dorsal edge.

Bristles with knife-shaped terminal pieces of ordinary appearance occur in both lobes. The anal segment shows longitudinal grooves; the anal cirri as long as the posterior 10 segments.

Paragnathi of proboscis: Maxillary region, I. two conical teeth behind each other; II. small triangular patch; IV. larger semilunar group; III. group consisting of a large transverse patch in the middle and a lateral one of 2 or 3 teeth on each side; basal region, V. triangular group of 3 paragnathi; VI. short transverse ridge, slightly notched in its middle; VII. and VIII. a belt of three rows. — Malayan Archipelago, Hoedt.

In a bottle containing Annelida, probably dredged with the tow-net in the Malayan Archipelago by Mr. Hoedt, I found several examples of this *Nereis*-species. Except one specimen they are all incomplete, the anal region being wanting or only partly regenerated. The males appear not to be smaller than the females. Almost all individuals are marked by two parallel, transverse, black stripes on the dorsum of the feet, most distinct in the posterior body-region. The length of the tentacular cirri seems rather variable, for, in one specimen the longest of them reaches to the 5th segment, and in another one to the 8th ring. Though in the males the epitocous transformation of the feet commences at the 21st segment, we find already marks of it at the 20th segment, which shows small lamellae at the base of the dorsal and ventral cirri. In the females the change of the feet commences at the 23rd segment, but faint marks of it are already visible at the two preceding segments. There are also some differences between the feet of the anterior segments in the males and females. In this body-region the dorsal and ventral cirri are gibbous at the base, their distal end being very slender; in the males the anterior 7 feet show this character, in the females it is only observed at six of them. As in other *Heteronereis*-forms the dorsal cirrus of the males in the posterior body-region is provided with papillae along its ventral border; but in the vicinity of the anal end this character disappears, as is already observed by Ehlers in epitocous examples of *N. Dumerilii*. In our specimens this change occurs at the 60th segment; here the dorsal cirri have lost their papillae and show the appearance of those of the females. The dorsal cirri of this body-region show a curious abnormity in both sexes: they are in several segments considerably elongated and extend far beyond the tip of the superior ligule. This abnormal elongation of the dorsal cirrus occurs very irregularly, for often it is present at the left foot of a segment and wants at its right side. Such dorsal cirri of different length are also observed by Grube in some *Syllis*-species.

A considerable change in the shape of the feet may be observed in the posterior body-region, as not only the lamellar processes gradually diminish in size, but also the setigerous lobes presenting different appearance. The dorsal lobe becomes broad and blunt, the ventral lobe on the contrary is conically produced. The anal segment is without feet, cylindrical and its surface is longitudinally grooved; between these grooves there arise ridges of the skin, provided along their border with papillae, which are greatly developed at the lateral sides of the segment. The ventral side of the anal segment is almost fully occupied by the base of the anal cirri. The regenerated anal segment has its surface beset with densely crowded papillae.

In the maxillary region the dorsal side of the proboscis bears two paragnathi on the median line (I), one large tooth in front succeeded by a smaller one, and on each side a small triangular patch (II) of 9 to 10 teeth is to be found; on the ventral side the median group (III) consists of a transverse patch of about 14 teeth and 2 or 3 teeth on each side, the lateral groups (IV) constitute a rather large semilunar patch of about 22 teeth. The basal region bears on the dorsal side a median triangular patch of 3 paragnathi (V), laterally a transverse ridge (VI) occurs, not very high, faintly notched in the middle; in one specimen the middle portion of the left ridge is wanting, this tooth was thus broken up in two. On the ventral side a belt of three rows of teeth occurs, those of the median series alternating with the others; in the median area two teeth are situated next each other.

This species is closely related to *N. taorica* Langh. [1]), *N. Helleri* Gr. [2]) and *N. camiguina* Gr. [3]). *N. Helleri* however is distinguished by the length of its dorsal cirri, which are twice as long as the superior ligule. Our know-

1) Canarische Anneliden: Nova Acta der K. Leop.-Carol.-Deutschen Akad. Bd. XLII, p. 110, T. I, fig. 15.

2) Annulata Semperiana: Mém. de l'Acad. Imp. des Sciences de St. Pétersbourg. VIIe Sér. T. XXV, p. 81.

3) loc. cit. p. 87, pl. IV, fig. 8.

ledge of the characters of *N. taorica* is rather scanty, but this species seems to be characterized by having at the ventral side of the basal region of the proboscis only a single series of few paragnathi. Our species more nearly approaches *N. camiguina*, though the arrangement of its paragnathi is somewhat different, the structure of the feet is also somewhat doubtful, as we have no figure of them. Grube seems to have known only the atocous form, perhaps our specimens might be the epitocous form of this species.

Nereis nigro-punctata, n. sp. (Pl. 8, figs. 1—3).

Epitocous form. The body of the largest specimen measures 27 mm. in length; the number of its segments amounts to 70. Cephalic lobe trapezoidal, with the posterior margin truncated, not quite so long as broad; eyes large, situated next each other. Antennae having a third of the length of the head; palpi about twice as long as the antennae, their basal portion in the middle with an annular groove. The antero-posterior diameter of the buccal segment only slightly more than that of the succeeding ring; the inferior pair of the tentacular cirri about as long as the palpi, the longest of the superior pair reaching to the posterior border of the 4th segment or beyond. Segments in the anterior body-region on each side of the dorsum marked by a transverse blackish spot, posteriorly only with a dot of the same colour; head generally also marbled with blackish.

The change of the feet commences in the males at the 16th segment, in the females at the 19th ring. At the feet of the anterior body-region the lip of the dorsal setigerous lobe has a rounded border, divided by a deep notch in a small superior and a larger inferior half; the ventral lobe is shorter, reaching about to the middle of the inferior edge of the dorsal lobe. The superior ligule is bluntly triangular, nearly of the same length as the dorsal lobe; the inferior ligule projects till the tip of the ventral lobe. Dorsal cirrus almost twice as long as the superior ligule,

ventral cirrus of the same length as the inferior ligule. In the anterior feet the ventral and dorsal cirri greatly enlarged at their base. In the inferior fascicle of the ventral lobe sometimes a heterogomph setose bristle occurs. At the feet of the posterior body-region the lip of the dorsal lobe is conically produced, with a narrow oblong oval lamella at the base of the ventral border, the ventral lobe shows an obtuse, truncated anterior lip and a large lamellar posterior one. The superior ligule, about of the same length as the dorsal lobe, is provided at its dorsal side with a small rounded lamella in front of the base of the dorsal cirrus, and with a rather elongated lamella behind it; the inferior ligule, projecting as far as the ventral lobe, has a large conical process near its base. Dorsal cirrus much longer than the superior ligule, smooth in the females, with eight papillae at the ventral side of their distal end in the males; ventral cirrus a little longer than the inferior ligule, on the dorsal side with two narrow tongue-shaped lamellae, on the ventral side with an oblong lamella near its base. Both lobes have setose bristles with knife-shaped terminal pieces of ordinary appearance. Anal segment with longitudinal grooves; anal cirri reaching as far as the posterior 6 segments.

Paragnathi of proboscis: Maxillary region, I. group of 4 or more; II. semilunar group; IV. large group; III. a group consisting of a large, transverse median patch and 2 or 3 teeth on each side; basal region, V. triangular group of 3 teeth; VI. short, curved ridge; VII. and VIII. belt of two series of teeth, alternating with each other. — Malayan Archipelago.

In the same bottle, which contained *N. malayana*, I found more than hundred examples of this small, characteristically marked species. Its body-length is very different and varies from 27 to 12 mm.; nevertheless the small specimens are also in a state of sexual maturity and have about the same number of segments as the larger ones. The number of male and female specimens seems to be nearly equal.

Like in the preceding species the length of the tentacular cirri seems to be very variable; for usually the longest cirrus of the dorsal pair reaches to the 6th segment, however, in some individuals it extends only to the posterior border of the 4th ring, and in other ones it reaches the 9th segment. In the males the epitocous change of the feet commences at the 16th, in the females at the 19th ring; some segments, however, situated more in front, show already marks of this transformation, f. i. a small lamella at the base of the ventral cirrus at the 12th foot in a male. The dorsal and ventral cirri of the anterior feet have their basal portion greatly enlarged, in the males this is visible at the dorsal cirrus of the anterior 7 feet, but at the ventral cirrus of only 5 feet. The females show this character only at the dorsal and ventral cirri of the anterior 5 feet. The papillae occurring at the dorsal cirrus of the posterior segments in the males, disappear nearly at the 50th segment; posteriorly the dorsal cirri are smooth as in the females.

The maxillary region of the proboscis in most of the specimens has on the dorsal side a median (I) triangular group of 7 teeth; this number however decreases in some of them to 4, whereas in other individuals it increases to 9 or 11. Next to it on each side (II) there occurs a curved group of 15 to 20 teeth. On the ventral side the median group (III) consists of three patches, a large transverse one of about 20 teeth, arranged in 4 series, and a small group ones however are not always quite isolated from the median of 2 to 4 teeth at a short distance on each side; the latter group. Laterally a large group (IV) occurs, consisting of 25 to 30 teeth. The basal region bears on the dorsal side (V) a median triangular patch of 3 paragnathi; only in one of perhaps hundred specimens I observed 4 teeth in this group. Laterally (VI) a short, semilunar, ridge-shaped tooth occurs; only in one specimen I observed behind the ridge of the right side another small transverse tooth. However sometimes one of both ridges is broken up in two

teeth. On the ventral side (VII and VIII) a belt of two rows of teeth is to be found.

From the foregoing description, based on the examination of a great number of specimens, it may be concluded, that the arrangement of the paragnathi is very constant; the number of small teeth in the lateral groups varies within certain limits, but on the dorsal side the median maxillary group only appears to be liable to some variation, as is already stated by other authors.

Among the species of the *Perinereis*-division, characterized by having in group V. a triangular patch of three teeth, only a small number are described, which have in group I. more than 2 paragnathi; they are: *N. perspicillata* Gr. [1]), *N. Anderssoni* Kgb. [2]) and *N. exsul* Kgb. [2]). *N. perspicillata*, only known in atocous state, is distinguished from our species by the longitudinal series of paragnathi in group I, by the shortness of its palpi and by having the dorsal cirrus not longer than the superior ligule. Our knowledge of the characters of the two other species is too scanty.

Nereis ferox Hans. (Pl. 7, figs. 6—8). — Recherches sur les Annélides, recueillies par M. le Prof. E. van Beneden pendant son voyage au Brésil et à la Plata, loc. cit. p. 14, pl. IV, figs. 34—39.

Length of a specimen, with regenerated posterior region, 37 mm.; anterior region of the body considerably enlarged. Cephalic lobe longer than broad; its anterior part in front of the eyes narrower. The head measures a little more in length than the antero-posterior diameter of the two succeeding segments (the proboscis being extruded). Antennae two thirds of the length of the cephalic lobe; palpi large, about of the same length as the antennae. The antero-posterior diameter of the buccal segment once and a

1) Annulata Semperiana, p. 90, T. IV, fig. 10.
2) Annulata nova, p. 175.

half that of the following segment. Tentacular cirri short; the longest of the inferior pair about of the same length as the palpi, the longest of the superior pair projecting beyond the antennae, reversed they reach to the 5th segment. The feet of the anterior and posterior body-region show a different appearance. In the anterior feet, the lip of the dorsal setigerous lobe blunt, rounded; the lips of the ventral lobe only a little shorter, trapezoidal, with a slight notch. Superior ligule of the same shape and length as the dorsal lobe; inferior ligule a little shorter, obtusely conical. The dorsal cirrus arises from a shallow notch of the superior ligule and is very long, projecting far beyond the tip of the dorsal lobe; the ventral cirrus only a little longer than the inferior ligule. In the posterior segments the superior ligule is considerably enlarged and consists of a broad lamella with a straight external margin and a convex internal one; it bears on its tip the dorsal cirrus, which has only half its length. The dorsal lobe does not reach further than one fourth of the length of the ligule; the inferior ligule has undergone no change and has about the same length as the ventral cirrus. In the dorsal lobe only homogomph setose bristles; the ventral lobe contains: in the superior fascicle heterogomph falcate bristles and homogomph setose ones, in the inferior fascicle, besides the heterogomph falcate bristles, a couple of heterogomph setose bristles, at least in the posterior segments.

Paragnathi of the proboscis: Maxillary region, I. one or two teeth; II. small group of 3 or 4 curved rows; IV. large group of 4 to 5 transverse series, and a semilunar patch in front of them; III. group of 3 or 4 transverse rows; basal region, V. one conical tooth; VI. transverse ridge; VII. and VIII. a belt of two series of teeth.

The bottle contained only one complete specimen, besides some fragmentary examples, among which two anterior body-regions with proboscis. The worms are decolored, only the dorsum is partly brownish and marked with white transverse bands on the anterior margin of each ring. The

head is blackish, with a longitudinal white band in the median line, broad between the eyes and narrowing anteriorly. The superior ligules, especially in the posterior body-region, show a greyish hue. The tentacular cirri of the different examples vary somewhat in length; however in all of them the posterior of the right dorsal pair is the longest. The feet do not present the same appearance over the total length of the body, as stated by Hansen; on the contrary the superior ligule, in the anterior segments only a little larger than the dorsal lobe, increases gradually in the posterior body-region, and near the anal extremity surpasses in size the total foot. However the dorsal cirrus decreases gradually in length in the posterior region.

The setose bristles are short and slender, of a vitreous appearance: those of the dorsal lobe do not project beyond the tip of the falcate bristles of the ventral lobe. However the falcate bristles are very stout, brownish; their terminal pieces are not »sans denticules" as stated by Hansen, but beset with fine setae along the base of the concave margin. Only in the posterior body-region the ventral lobe seems to contain, besides the falcate bristles, one or two heterogomph setose ones. Hansen's drawing of the proboscis of this species is rather correct. The paragnathi show the characteristic appearance, by which, according to Kinberg's description, his genus *Paranereis* should be distinguished; they consist for the greater part of pin-shaped teeth with darkbrown tip (papillae pectiniformes). Group I. consists of a single conical tooth, though in one specimen I observed another smaller one situated more posteriorly; in group II. there occurs a small patch of 3 to 4 succeeding transverse rows of pin-shaped paragnathi, of which the external row is the longest, group IV. consists of a large patch of 4 or 5 transverse rows of pin-shaped teeth, of which the external row is the longest and extends somewhat beyond the penultimate of them; between these and the maxillae another semilunar group of large conical

teeth is situated; group III. consists of 4 transverse series which are faintly curved in a knee-like manner, and of which the inferior one is the longest. The basal region has in group V. one bluntly conical tooth and in group VI. a transverse triangular ridge, whereas group VII. and VIII. show two series of teeth, alternating with each other; the posterior series consists of longitudinal, narrow teeth (»dentes compressae" Kinberg), the anterior series of stout conical ones.

Two specimens, described by Hansen under the name of *N. obscura* [1]), also belong to this species; the largest of them has the anal region complete, with two long anal cirri, extending about over the posterior 9 segments. The superior ligule of the feet preserves his great elongation till at the fifth segment in front of the anal end, posteriorly it decreases gradually in size.

Another specimen, labelled *N. coerulea* Hans. [2]), ought to be ranged also under this species; though it wants the anterior body-region, the structure of its posterior feet is characteristic enough to recognize the species at once. The drawing of one of the anterior feet (Pl. IV, fig. 1) rather well resembles our fig. 6. Hansen's statement, that the terminal pieces of the falcate bristles are devoid of setae, is not correct.

Another specimen, labelled *N. microphthalma* [3]), must also be identified with this species; on comparing Hansen's drawing of a foot on Pl. IV, fig. 26, with his figure 1, I cannot find out much difference. The specimen has the dorsum of the anterior body-region reddish coloured; the head shows the ordinary white longitudinal band, and each segment is marked on the lateral sides of the dorsum with some white oblique lines, extending from the posterior margin of the segments to the middle. In examining the proboscis, I found in group I. three paragnathi,

1) loc. cit. p. 13, pl. IV, figs. 18—24.
2) loc. cit. p. 11, pl. III, fig. 31, and pl. IV, figs. 1—3.
3) loc. cit. p. 13, pl. IV, figs. 25—28.

besides the two ordinary teeth another small one; this confirms the observations about the variability of the number of paragnathi of this group.

This species is closely allied to *N. variegata* Gr. [1]), perhaps identical with this species from the West-coast of South America (Callao and Valparaiso); as the description of this worm is not accompanied by figures, the question remains somewhat doubtful. However in his paper »die Familie der Lycoriden" published afterwards, Grube gives more detailed communications about the arrangement of the paragnathi and states that the species shows all the striking characters of Kinberg's genus *Paranereis*. *N. ferox* resembles *N. variegata* [2]) as well in the colour and the dimensions of the cephalic lobe, as in the length of the tentacular cirri and the structure of the feet. Kinberg's *N. elegans* seems to be distinguished by the shape of its head »lobus cephalicus elongatus, segmenta 5 proxima aequans."

? ***Nereis Stimpsonis*** Gr. [nec *N. variegata* Gr.] (Pl. 7, figs. 9—11). — Reise der Oesterr. Fregatte Novara, Zoolog. Theil, Bd. II, Anneliden, p. 18, T. I, fig. 8.

In our collections there are two large *Nereis*-specimens, collected by Mr. Horstock at the Cape of Good Hope, which I believe must be identified with Grube's *N. Stimpsonis*. However some confusion seems to reign in the description of the characters of this species. For Grube's description is established on two specimens: a large one collected near the Cape during the Cruise of the Novara, and another example of the Hamburg Museum probably from the same locality; because this latest specimen much agreed with *N. variegata* (really belonged to that species, as I believe), therefore Grube concluded that his *N. Stimpsonis* should be considered to be a variety of *N. variegata*.

1) Annulata Oerstediana, Naturh. Foren. Videnskab. Meddedelser, 1857, p. 7.

2) About Grube's identification of *N. variegata* and *N. Stimpsonis* see further on.

Though it is very difficult to settle this question without examining the type-specimens, it appears to me that Grube's description probably is based on two different species; otherwise I cannot clear up the controversies in his descriptions. In *N. Stimpsonis* the cephalic lobe should have the same length as the buccal segment, in *N. variegata* on the contrary it should be a little longer than the two following segments. In his paper »die Familie der Lycoriden", on p. 16, Grube mentions *N. Stimpsonis* and *N. variegata* as two different species, and in speaking of the structure of the paragnathi (»papillae compressae" and »papillae pectiniformes"), he only refers to *N. variegata*, not to *N. Stimpsonis*.

Therefore I believe it will be not without interest to give a detailed description of our specimens.

The largest individual is a female, in state of sexual maturity; it measures 125 mm. in length and 11 mm. in breadth at its widest part (with the feet). The number of its segments amounts to 91.

The cephalic lobe is a little longer than the antero-posterior diameter of the buccal segment. The antennae are short, scarcely half as long as the head, extending till the first articulation of the palpi. The tentacular cirri are not long, not projecting beyond the tip of the antennae, and reversed they reach till on the middle of the 2nd segment. The antero-posterior diameter of the buccal segment one third longer than that of the following ring. The feet of the anterior and the posterior body-region considerably different in structure. In the anterior segments the dorsal setigerous lobe short, rounded, papilliform, the ventral lobe shorter, trapezoidal. The superior ligule of the same shape and size as the dorsal lobe, the inferior ligule a little shorter than the ventral lobe, obtusely conical. The dorsal cirrus blunt and stout, projecting far beyond the tip of the dorsal lobe, about twice the length of the superior ligule; the ventral cirrus on the contrary much shorter than the ventral lobe. In the posterior segments the superior

ligule is greatly enlarged, and consists of an elongated lamella; the inferior ligule is obtusely conical, longer than the ventral lobe, about of the same dimension as the dorsal one. The dorsal cirrus, arising from a shallow notch of the ligule, measures a little more than one third of its length. The ventral cirrus is much shorter than the inferior ligule.

The paragnathi consist only of blunt, conical teeth. The maxillary region of the proboscis has in group I. one tooth; II. is a narrow semilunar patch; IV. is a larger group of about 5 transverse rows; III. a transverse patch of 3 rows; basal region, group V. one conical tooth; VI. a large, oval, transverse ridge; VII. and VIII. an irregular belt of four series, uniting into a single one at the dorsal side, the anterior teeth of the belt are the largest. In regard to this character our specimens differ from Grube's *N. Stimpsonis*, which has a belt of only two series. In Grube's drawing of the proboscis (fig. 8, a) the groups V. and VI. seem to consist of minute teeth; however this must be a mistake of the artist, for Grube states exactly: »annulus posterior supra granis 3 maximis valde distentis, triangulum valde obtusangulum vel lineam componentibus". Moreover in his paper »die Familie der Lycoriden", p. 16, he observes, that his *N. Stimpsonis* belongs to the sub-genus *Perinereis*. Ehlers seems to have overlooked this, for in his systematical table *N. Stimpsonis* is erroneously ranged in the group characterized »Kieferspitzen vollständig, nur kegelförmige".

Nereis minor Hans. (Pl. 8, figs. 8—10). — loc. cit. p. 12, pl. IV, figs. 8—12.

Epitocous form. Length of the body 40 mm. (according to Hansen), its breadth 4 mm. Cephalic lobe longer than the antero-posterior diameter of the three following segments. Antennae short, of about half the length of the head, extending till the first articulation of the palpi; antero-posterior diameter of the buccal segment scarcely longer than that of the following ring. Tentacular

cirri short, the longest of the ventral pair not so long as the palpi; the longest of the dorsal pair longer than the palpi, reversed they reach to the 4th segment. In the anterior feet the lip of the dorsal setigerous lobe short, rounded; lips of the ventral lobe somewhat shorter, trapezoidal. Superior ligule conical, larger and a little longer than the dorsal lobe, inferior ligule less developed and not projecting beyond the tip of the ventral lobe. Dorsal cirrus long and slender, extending far beyond the tip of the superior ligule, ventral cirrus short, somewhat longer than the half of the inferior ligule. In the posterior segments the superior ligule is enlarged and presents a more acute shape; the lip of the dorsal lobe is more conical, about of the same appearance as the inferior ligule. The ventral lobe presents a narrow lamella. The ventral cirrus, about of the same length as the inferior ligule, bears near its base on the dorsal side two obtuse, tongue-shaped lamellae, on the ventral side a narrow rounded lamella. The inferior fascicle of the ventral lobe contains, besides the heterogomph falcate bristles, a single heterogomph setose one.

Paragnathi of the proboscis: Maxillary region, I. two teeth situated behind each other; II. small, semilunar group; IV. large curved patch; III. transverse group; basal region, V. triangular group of 3 teeth; VI. a transverse, round ridge; VII. and VIII. a belt of two rows of conical teeth, alternating with each other; on the ventral side the rows are separated from each other, on the dorsal side they unite in a single series.

The bottle contained only a single incomplete specimen, wanting the posterior body-region. It is a female with completely developed eggs, presenting however only faint marks of epitocous transformation. The eyes are not enlarged; the feet of the posterior segments present but some faint lamellar processes, and bristles with knife-shaped terminal pieces could not be observed.

Already several species of the *Perinereis*-group are known, which have in group V. of the proboscis a triangular

patch of three paragnathi; among them *N. Anderssoni* belongs, found in the same locality as our specimens (Rio de Janeiro). That species seems to be distinguished from *N. minor*, by having in group I. of the proboscis not 2, but 4 paragnathi, however because the number of paragnathi in group I. is liable to some variation in the same species, perhaps both species may prove to be identical.

In the following table I have tried to enumerate all the known species of *Nereis*, which belong to the *Perinereis*-group; the literature on Annelida being however so extensive and dispersed in so many periodicals, which are often very difficult to be get, one or another species may have been overlooked. Nevertheless I hope, that my colleagues, dealing with this matter, will not find it quite useless.

Perinereis.

A. Transverse and conical paragnathi in group VI.
Marionii Aud. et Edw. Annales des Sciences naturelles, T. XXIX, 1833, p. 207, pl. XIII, fig. 1—6; Grube, Anneliden des Pariser Museums, Archiv für Naturgeschichte, Jahrg. XXXVI, Bd. 2, p. 304. . . . . [Coast of French (St. Malo, Vendée).
mictodonta Marenzeller [1]), Südjapanische Anneliden, Denkschriften der Math.-Naturw. Classe der Kaiserl. Akademie, Bd. XLI, p. 10, T. II, fig. 2. . . . Japan.

B. Two transverse paragnathi in group VI.
a. A triangular patch of 3 paragnathi in group V.
vancaurica Ehl. (*languida* Gr.) Grube, Annulata Semperiana, Mémoires de l'Acad. Imp. des Sciences de St. Pétersbourg, VIIe Sér. T. XXV, p. 83; Ehlers, die Borstenwürmer, p. XX. . Nancauri (Nicobar I.).

1) I do not understand Marenzeller's assertion, that this species could not be ranged in Kinberg's family of the Aretidea; *N. mictodonta* appears to me to belong to this family as well as *N. Marionii*, which both correspond with each other in having a series of paragnathi in group VI, partially consisting of transverse ridges.

aibuhitensis Gr. Annulata Semperiana, p. 89, T. V. fig. 3. . . . . Philippines.

b. A single paragnathe in group V.

singaporiensis Gr. Annulata Semperiana, p. 84 . . [Singapore.

C. A single transverse paragnathe in group VI.

a. A patch of 5 or more paragnathi in group V.

macropus Clap. Annélides Chétopodes du Golfe de Naples. Supplément, p. 444, pl. VIII, fig. 1. . Napels.

novae hollandiae Kinb. Annulata nova, Oefversigt af K. Vet. Akad. Förhandlingar, 1865, p. 175. . . [Port Jackson.

b. A triangular patch of 3 paragnathi in group V.

cultrifera Gr. Ehlers, Borstenwürmer, p. 461, pl. XXI, figs. 31—36. — Claparède, Annélides Chétopodes du Golfe de Naples. Supplément, p. 439, pl. VII, fig. 1. [Coast of Europe.

taorica Lgh. Canarische Anneliden, Nova Acta der K. Leop.-Carol. Deutschen Akad. der Naturforscher, Bd. XLII, 1881, p. 110. . . . . Tenerif.

perspicillata Gr. Annulata Semperiana, p. 90, T. IV, fig. 10. . . . . Philippines.

camiguina Gr. (? *aberrans* Kinb.) Annulata Semperiana, p. 87, T. IV, fig. 8 . . . . . Philippines.

Helleri Gr. [1]) Annulata Semperiana, p. 81. Philippines.

malayana, n. sp. . . . . Malayan Archipelago.

nigro-punctata, n. sp. . . . Malayan Archipelago.

Anderssoni Kinb. Annulata nova, p. 175. Rio de Janeiro.

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1) In his analytical table of the *Perinereis*-species (Annulata Semperiana p. 60) Grube places *N. Helleri* in the group B. b, characterized by „nur 1 Paragnath in der 5ten Gruppe"; this must be a mistake, for we read in the detailed description of *N. Helleri*, on p. 82, „paragnathi ordinis 5ti triangulum componentes" and farther on „von *Perinereis*-Arten, die in der 6ten Gruppe nur 1 queren, in der 5ten Gruppe 3 und in der 1sten nur 2 Paragnathen haben, ist bisher nur eine, nämlich *P. aberrans* Kbg., bekannt, vielleicht sogar mit unserer Art zu identificiren" etc.

Hedenborgi Kinb. Annulata nova, p. 175. Alexandria.
exsul Kinb. Annulata nova, p. 175. ?
minor Hans. Mém. couronnés et Mém. des Savants étrangers de l'Acad. Royale de Bruxelles, T. XLIV, 1882, p. 12, pl. IV, figs. 8—12. Rio de Janeiro.

c. A single paragnathe in group V.

α. One or two paragnathi in group I.

floridana Ehl. Borstenwürmer, p. 503; Zeitschrift für Wissensch. Zoologie, Bd. XXXIII, 1880, p. 289, T. XV, fig. 24.. . . . . Florida, Madeira.
atlantica M'Int. [1]) Challenger-Reports, Zoology, XII, p. 219, pl. XXXV, figs. 1—3; pl. XVI A, figs. 10 and 11 . . . . . Cape Verde Islands.
Oliveirae, n. sp. . . . . Coast of Portugal.
Stimpsonis Gr. Reise Oesterr. Freg. Novara, Zool. Theil, Bd. II, 1867, p. 18, T. 1, fig. 8. . . . Cape.
variegata Gr. Annulata Oerstediana, Naturh. Foren. Vidensk. Meddedelser, 1857, p. 7. Callao, Valparaiso.
ferox Hans. (*obscura* Hans., *coerulea* Hans., *microphthalma* Hans.) Mém. couronnés et Mém. des Savants étrangers de l'Acad. Royale de Bruxelles, T. XLIV, 1882, p. 14, Pl. IV, figs. 34—39 . . . Rio de Janeiro.

β. A patch of 3 or more paragnathi in group I.

1. Dorsal lobe of the feet posteriorly greatly enlarged.

melanocephala M'Int. Challenger-Reports, Zoology, XII, p. 216, pl. XXXIV, figs. 14—17; pl. XVI A, figs. 8 and 9. . . . . Bermuda.

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1) According to M'Intosh' description the proboscis of *N. atlantica* should have in group V. two narrow horny ridges, and behind one a small posterior tooth (in extrusion), and in VI. the tooth should be absent; however as we know no species of *Nereis*, having transverse teeth in group V, I suppose an error must have crept into this description, due to the difficulty of recognizing the exact arrangement of the paragnathi, when the proboscis is not in state of extrusion. Therefore I believe that in *N. atlantica* the two horny ridges are situated in group VI. and the small tooth in V, as in other species of *Perinereis*; should this not be the case, the species could not at all belong to Kinberg's *Perinereis*, as supposed by M'Intosh.

2. Dorsal lobe of the feet posteriorly not greatly enlarged.
striolata Gr. Annulata Semperiana, p. 85, T. IV, fig. 9 . . . . . Philippines.
obfuscata Gr. Annulata Semperiana, p. 86. Philippines.
Ponteni Kinb. Annulata nova, p. 176. Rio de Janeiro.

d. No paragnathi in group V.
capensis Kinb. Annulata nova, p. 174.. . . Cape.

In this list are not enumerated, though belonging in the *Perinereis*-group, the following unsufficiently described species: *Pseudonereis gallapagensis* Kinb. (Annulata nova, p. 174), Gallapagos; *Pseudonereis formosa* Kinb. (loc. cit. p. 174), Honolulu; *Paranereis elegans* Kinb. (loc. cit. p. 175), Valparaiso.

EXPLANATION OF THE PLATES.

Plate 7.

Fig. 1. Sixteenth foot of *Nereis Oliveirae* Horst, atocous form. × 15 diam.
» 2. Ninetieth foot of the same. × 15 diam.
» 3. Fifty-fourth foot of the same species, epitocous form (♀). × 15 diam.
» 4. Dorsal side of the anterior region of the same, with proboscis extruded. × 4 diam.
» 5. Ventral side of the proboscis of the same. × 4 diam.
» 6. Eighth foot of *Nereis ferox* Hans. × 28 diam.
» 7. Sixtieth foot of the same. × 28 diam.
» 8. *a.* Falcate bristle; *b.* heterogomph setose bristle of the same. × 175 diam.
» 9. Eighth foot of ?*Nereis Stimpsonis* Gr. × 15 diam.
» 10. Sixtieth foot of the same. × 15 diam.
» 11. Falcate bristle of the same. × 175 diam.
» 12. Forty-second foot of *Nereis macropus* Clap., epitocous form. × 15 diam.

Plate 8.

Fig. 1. *Nereis nigro-punctata* Horst, epitocous form, with proboscis extruded, from the dorsal side. × 2 diam.
» 2. Twelfth foot of the same (♂). × 15 diam.
» 3. Thirty-eighth foot of the same (♂). × 15 diam.
» 4. Twelfth foot of *Nereis malayana* Horst, epitocous form (♀). × 15 diam.
» 5. Fifty-second foot of the same (♂). × 28 diam.
» 6. Hundred-thirty-fifth foot of the same (♀). × 28 diam.
» 7. Anal region of the same (♀). × 15 diam.
» 8. Ninth foot of *Nereis minor* Hans. × 28 diam.
» 9. Forty-fifth foot of the same. × 28 diam.
» 10. Falcate bristle of the same. × 175 diam.

NOTE XXXV.

DEUX ESPÈCES AFRICAINES DE LA FAMILLE DES STAPHYLINIDES.

DÉCRITES PAR

A. FAUVEL.

Hesperus cafioides, nov. spec.

Magnitudine et facie *H. rufipennem* simulans, paulo minus nitidus, magis parallelus magisque depressus, omnino aliter coloratus, pubescentia subtiliore, breviore et densiore, griseola, super elytrorum basin scutellumque subaurata, niger, pedibus piceis, tibiis supra fere omnino, tarsis anticis, intermediis posticisque apice, segmentorum marginibus subtus, anoque summo rufis, antennis multo validioribus, articulis 7—10 fortiter transversis, capite paulo breviore et latiore, punctura subtiliore, undique triplo densiore, fronte media longitudinaliter, disco latius, laevi, punctis tantum duobus inter antennas impressis, lateribus magis parallelis, angulis posticis subtiliter unidentatis, inde ad collum minus arcuatim angustatis; thorace minore, subtrapezoïdali, angulis anticis magis indicatis, aeque ac caput dense fortiterque punctato, spatio sat lato, longitudinali, laevi; scutello crebrius fortiusque quam in *rufipenni* punctato; elytris dorso subplanatis dense sat fortiter subrugosule punctatis, abdomine subtiliter dense punctato, apice licet parcius, supra toto parum irideo, facile distinguendus; ♂ latet. — Long. 8 mill.

Hab. Liberia Africae.

Collection du Muséum de Leyde et la mienne.

Species alia, etiam Africae incola (Stanley Pool, Congo), vicina est: *Hesperus laniger* Fauv. Differt a *cafioide* magnitudine vix majore, corpore paulo minus nitido, pubescentia fulva praelonga etiam super caput et thoracem subhispida, punctura elytrorum abdominisque fortiore et parciore, colore piceo-nigro, antennis circa apicem, ore pedibusque rufis, antennis longioribus, articulis minus transversis, capite, praesertim in ♂, thorace latiore; ♂ capite majore, segmento 7°. ventrali late parum emarginato. — Long. $8^1/_2$ mill.

Je possède deux exemplaires (♂, ♀) du *laniger*; le ♂ est entièrement roux, mais évidemment immature; il est possible même que la ♀ le soit un peu également et que les exemplaires bien développés rappellent la coloration foncée du *cafioides*; mais la pubescence longue et laineuse est caractéristique à première vue.

Ces deux espèces sont les seuls *Hesperus* que je connaisse dans la région éthiopienne, et même en Afrique. Le *rufipennis* Grav. n'a encore été trouvé ni en Barbarie, ni en Egypte.

Caen, Juin 1889.

NOTE XXXVI.

ON AN UNDESCRIBED SPECIES OF THE COLEOPTEROUS GENUS HELOTA, MACLEAY.

BY

C. RITSEMA Cz.

To the liberality of Prof. Westwood I owe the opportunity of adding a new species of *Helota* to the number already described, and as the specimen communicated to me (a ♂) is labelled »*Helota Boysii* Westw.", I believe it desirable to maintain this name.

Helota Boysii

is a very narrow and elongate species, and closely allied to *H. pusilla* R. Oberth. [1]) and *culta* Olliff [2]) of which I have the types before me. It is, however, considerably larger, measuring 9 mm. in length, which gives it some resemblance to *H. laevigata* R. Oberth. [3]). The latter, however, is broader, has a shorter thorax and otherwise coloured antennae, sides of prosternum, elytral epipleurae [4]) and legs, and its tibiae are considerably more elongated. Moreover the tibiae of the anterior pair of legs in the males are quite differently shaped: in *laevigata* ♂ they are more elongated (as is already said), and distinctly curved about the middle; in *Boysii* ♂ on the contrary they are shorter and stouter, slightly curved at the apex on the outside, and provided at the apex on the inside with a flattened and truncate black appendage which is directed for-

1) Coleopt. Novitates. I (1883) p. 60.

2) Cist. Ent. III (1883) p. 55; pl. 3, fig. 2.

3) Coleopt. Novitates. I (1883) p. 59.

4) In *laevigata* the sides of the prosternum and the elytral epipleurae are pale fulvous (the latter with a brassy hue), in *Boysii*, *pusilla* and *culta* they are brassy.

ward and inward. Finally the pubescence of the basal joints of the anterior tarsi is much longer and denser in *Boysii* ♂ than in the same sex of *laevigata*.

From *pusilla* (the male sex of which is unknown to me) the new species differs, besides by the sexual characters and by its larger size (9 mm.), by the pale colour of the club of the antennae, by the punctuation of the head which is considerably coarser and denser, by the shape and punctuation of the prothorax (in *Boysii* the prothorax is proportionately longer, more strongly narrowed in straight lines to the front and consequently of a regular trapezoidal shape, with broadly rounded anterior angles which are not at all produced; the punctures on the pronotum are larger, more widely and irregularly spread, leaving free a longitudinal streak in front of the scutellum; as for the punctuation of the pronotum it agrees therefore better with *laevigata* than with *pusilla*). Moreover, *H. Boysii* differs from *pusilla* in the position of the yellow elytral spots: in the former the anterior as well as the posterior spot is placed between the 3rd and 7th striae, whereas in the latter the anterior spot is placed between the 4th and 7th, the posterior one between the 3rd and 7th striae. Finally in *Boysii* the metallic green colour on the tibiae is restricted to the basal fourth, whereas in *pusilla* it occupies slightly more than the basal half.

From *culta* ♂ it may be distinguished by its superior size, straight (not constricted) sides of the prothorax, flattened appendage at the apex of the anterior tibiae, more narrowly rounded apices to the elytra which show a minute sutural tooth, proportionately smaller elytral spots, etc. In both species the 5th ventral segment has no impression, and the hinder-margin is truncate, more narrowly, however, in *culta* than in *Boysii*.

The examined male specimen comes from India (Boys) and belongs to the University Museum at Oxford.

NOTE XXXVII.

ON A NEW SPECIES OF GALLINULE.

BY

J. BÜTTIKOFER.

Some days ago our Museum received a probably fully adult female of *Porphyrio*, kindly sent by Mr. A. A. van Bemmelen, the able Director of the Zoological Garden at Rotterdam, with the assurance, that the bird had been caught at and sent from the Lake Toba in the Interior of Sumatra.

Peculiarly enough there is hitherto no evidence published as to the occurrence of a Porphyrio in Sumatra, except by Cassin in U. S. Exploring Expedition, Ornith. p. 308, where, treating of *P. indicus*, the author says that the Museum of the Philadelphia Academy contains specimens from Java, Sumatra and other islands of the Malay Archipelago. As *Porphyrio indicus* Horsf. (*P. calvus* Vieill.) has also been found in Borneo, I was much astonished to see that our Sumatran bird differs not only from this, but also from both the known species from the Continent, though those latter may be considered to be its nearest allies.

According to Elliot's Monograph of the genus *Porphyrio* (Stray Feathers, 1878, p. 6), the Gallinules from the Continent belong to two gray-headed species; *P. poliocephalus* (Lath.) = *P. neglectus* Schl., inhabiting Ceylon and India from the Bay of Bengal to Tenasserim, and *P. edwardsi* Ell. from Cochin-China.

Although very closely allied to both above mentioned species, especially to the second, our Sumatran bird dif-

fers from both by the blue (instead of purplish) color of sides of chest, breast and flanks, and from the latter species, with which it is related by its dark green color of back and wings, by the sea-green instead of turquoise blue color of the lower throat and chest.

The new species, which I propose to call after Mr. van Bemmelen, who rendered already so many important services to Ornithology, may be described as follows:

Porphyrio bemmeleni.

Head, chin and upper throat gray, sides of head tinged with blue, ear-coverts and occiput with a purplish hue, sides of neck and hind neck purplish; entire back, rump, upper tail-coverts, secondaries and greater wing-coverts dark green, the latter strongly tinged with olivaceous and narrow undulations under certain lights; mantle, scapulars and lesser wing-coverts paler green, also undulated and more or less broadly margined and tipped with blue. Quills blackish on the inner, green on the outer web; edge of wing, under wing-coverts, lower throat and chest, pale green; sides of chest, entire breast and flanks pale (not purplish) blue; abdomen and vent somewhat darker blue, under tail-coverts pure white, thighs dark green like the back. The tail-feathers are mutilated is our specimen. Bill, head-shield, legs and feet red, with the exception of the knees and joints of toes, which are black; iris red.

Wing 23, tarsus 9, middle toe without claw 9, bill from tip to the posterior end of the head-shield 5.6, from tip to gape 3 cM.

Leyden Museum, June 1889.

NOTE XXXVIII.

THIRD LIST OF BIRDS FROM SOUTH WESTERN AFRICA.

BY

J. BÜTTIKOFER.

A new consignment of Birds, recently sent by Mr. van der Kellen from Gambos in the Upper Cunene Region, contains but 15 species which have not made part of the former collections and consequently are not mentioned in my two previous lists [1]). As we hardly will receive any new supply from Gambos within short, an enumeration of the species received will be allowed to be published here. The species, not contained as yet in van der Kellen's previous collections, will be marked with an asterisk. The species, hitherto sent by Mr. van der Kellen from the Upper Cunene, have now reached the number of 195.

*1. *Polyboroides typicus*, Smith.

Sharpe, Birds S. Afr. p. 9; — Boc. Orn. d'Ang. p. 7.
Nisus radiatus, Schl. Mus. P.-B., Rev. Accip. p. 100.

An adult male. — Iris dark brown, bill black, basal part and cere yellow, feet yellow.

2. *Melierax gabar* (Daud.).

Two adult males.

3. *Asturinula monogrammica* (Temm.).

Adult male and female.

1) See N. L. M. 1888, p. 209, and 1889, p. 65.

*4. *Circaëtus cinereus* (Vieill.).

Sharpe, Birds S. Afr. p. 43; — Boc. Orn. d'Ang. p. 34.

An adult female. — Iris yellow, bill black, feet horn-color.

*5. *Falco minor*, Bp.

Sharpe, Birds S. Afr. p. 57.
Falco communis minor, Schl. Mus. P.-B., Rev. Accip. p. 33.

A nearly adult male in transitional stage, upper surface earthy brown with new ashy gray feathers on scapulars and upper tail-coverts. — Iris brown, bill bluish, feet yellow.

6. *Cerchneis rupicola* (Daud.).

An adult male.

7. *Falco ardesiacus* (Vieill.).

An adult female.

8. *Bubo lacteus* (Temm.).

An adult male.

9. *Bubo leucotis* (Temm.).

Two males and a female.

10. *Scops capensis*, Smith.

An adult male.

11. *Noctua perlata* (Vieill.).

Four specimens.

12. *Ceryle rudis* (L.).

Two adult males.

13. *Halcyon cyanoleuca* (Vieill.).

An adult female.

14. *Lophoceros erythrorhynchus* (Gm.).

Two males and a female.

15. *Lophoceros epirhinus* (Sund.).

An adult and an immature male.

16. *Upupa africana*, Bechst.

Adult male and female.

*17. *Schizorhis concolor* (Smith).

An adult male.

18. *Centropus superciliosus* (Hempr. & Ehr.).

Boc. Orn. d'Ang. p. 150.
Centropus monachus, Schl. Mus. P.-B., Cuculi, p. 72.

A probably adult female. The long white superciliary streak and the numerous broad, white shaft-stripes on the feathers of the hind neck and mantle make it evident, that this bird really belongs to *C. superciliosus* and not to the closely allied southern *C. natalensis*, described by Shelley in Ibis 1882, p. 246. — Iris red, bill and feet black.

19. *Campothera smithii* (Malh.).

Two adult males.

20. *Mesopicus namaquus* (Licht.).

An adult male.

21. *Psittacus rueppellii*, Gray.

Four specimens.

22. *Agapornis roseicollis* (Vieill.).

Adult male and female.

23. *Turdus litsitsirupa*, Smith.

An adult female.

*24. *Monticola brevipes*, Strickl. & Sclat.

Sharpe, Birds S. Afr. pp. 221, 816; — Boc. Orn. d'Ang. p. 267.

A nearly adult male, showing on chin and throat the barred plumage of the immature bird. — Iris brown, bill and feet black.

25. *Erythropygia munda*, Cab.

An adult male.

26. *Pycnonotus layardi*, Gurney.

Adult male and female.

27. *Phyllostrophus fulviventris*, Cab.

An adult female.

28. *Crateropus melanops*, Hartl.

Adult male and female.

29. *Crateropus hartlaubi*, Boc.

An adult female.

30. *Aethocichla gymnogenys* (Hartl.).

Three adult males.

31. *Cinnyris gutturalis* (L.).

An adult male.

32. *Cinnyris leucogaster* (Vieill.).

An adult male.

*33. *Muscicapa coerulescens* (Hartl.).

Sharpe, Birds S. Afr. p. 340.

Adult male and female. The latter is entirely similar to the male. — Iris dark brown, bill and feet black.

34. *Lanius collurio*, L.

An adult female.

35. *Urolestes melanoleucus* (Jard. & Selby).

Three adult males.

36. *Laniarius sulphureipectus* (Less.).

An adult male.

37. *Laniarius atrococcineus* (Burch.).

An adult male and an immature female. The latter is with the exception of head, wing and tail, banded across with black and pale brown. Chin and abdomen show the red color of the adult stage.

38. *Dryoscopus cubla* (Levaill.).

Two adult males.

*39. *Telephonus trivirgatus*, Smith.

Boc. Orn. d'Ang. p. 224.
Laniarius trivirgatus, Sharpe, Birds S. Afr. p. 396.

Two adult males. — Iris brown, bill bluish horn-color, feet bluish gray.

40. *Nilaus brubru* (Lath.).

Two adult males.

41. *Eurocephalus anguitimens*, Smith.

Three adult males.

42. *Prionops talacoma*, Smith.

An adult male.

43. *Dicrurus assimilis* (Bechst.).

A nearly adult female, with the metallic gloss on its

black plumage, the feathers on breast, abdomen, flanks and under tail-coverts very broadly tipped with pure white, giving these parts a white-spotted appearance.

44. *Oriolus larvatus*, Licht.

One specimen.

45. *Lamprotornis mewesi* (Wahlb.).

Two adult males and two females.

46. *Lamprocolius sycobius* (Licht.).

An adult male.

*47. *Vidua regia* (L.).

Sharpe, Birds S. Afr. p. 453; — Boc. Orn. d'Ang. p. 346.

Three adult females. — Iris brown, bill and feet red.

48. *Treron calva*, Temm.

Three adult specimens.

*49. *Ortygometra nigra* (Gm.).

Lymnocorax niger, Sharpe, Birds S. Afr. p. 618; — Boc. Orn. d'Ang. p. 481.

Adult male and female, and immature male. The latter is distinguished by its olive-brown plumage, especially on the upper surface, by the ashy white throat and a tinge of the same color on the chest. — Iris in adult and young dark brown, bill in adult green, feet coral-red, in young: bill horny brown, feet flesh-color.

*50. *Parra africana*, Gm.

Sharpe, Birds S. Afr. p. 648; — Boc. Orn. d'Ang. p. 477.

An adult female. — Iris brown, bill dark horny brown, feet black.

51. *Lobivanellus senegalus* (L.).

Three specimens.

52. *Chettusia coronata* (Gm.).

An adult female.

*53. *Gallinago aequatorialis*, Rüpp. [1])

Gallinago nigripennis, Sharpe, Birds S. Afr. p. 676; — Boc. Orn. d'Ang. p. 475.
Gallinago aequatorialis, Schl. Mus. P.-B., Scolopaces, p. 10.

One specimen (♂) with an exceedingly long bill, measuring 9,4 cM. — Iris brown, bill dark, more flesh-color towards the base, feet dark brown.

*54. *Totanus glottis* (L.).

Totanus canescens, Sharpe, Birds S. Afr. p. 687; — Boc. Orn. d'Ang. p. 464.

An adult female.

55. *Totanus glareola*, L.

Two adult males.

*56. *Nycticorax leuconotus* (Wagl.).

Sharpe, Birds S. Afr. p. 724; — Boc. Orn. d'Ang. p. 450.
Ardea cucullata, Schl. Mus. P.-B., Ardeae, p. 60.

An adult male. — Iris yellow, bill black, feet yellowish.

57. *Scopus umbretta*, Gm.

Two adult males.

58. *Ciconia abdimii*, Licht.

Four specimens.

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1) Confer: Seebohm, Charadriidae, p. 100 (footnote).

59. *Sarcidiornis africana*, Eyt.

An adult male.

*60. *Anas erythrorhyncha*, Gm.

Adult male and female. — Iris brown, bill dark red, feet brown.

61. *Graculus africanus* (Gm.).

An adult male.

*62. *Plotus levaillantii*, Licht.

An adult male in breeding plumage.

Leyden Museum, June 1889.

NOTE XXXIX.

NEW SPECIES OF AFRICAN COLEOPTERA (CARABIDÆ) IN THE LEYDEN MUSEUM.

BY

H. W. BATES,

F. R. S., F. L. S.

The following are descriptions of what appear to be new species (including one new genus) in a collection of African Carabidæ submitted to me by Mr. C. Ritsema for examination.

Casnonia cribriceps, nov. spec.

C. natalensi (Chaud.) subsimilis, sed differt, inter alia, capite post oculos semi-ovato, lateribus rotundatis. Piceo-nigra vix ænescens, antennis articulis 1—4 (cæteris rufo-piceis), femoribus basi, tibiis medio et tarsis elytrisque prope apicem utrinque macula bene delimitata, fulvo-testaceis: capite ovato, supra cum thorace toto et pectore crebre punctato, collo constricto, occipite lateribus lævibus: thorace sicut in *C. natalensi* brevi, graciliter ovato: elytris grosse punctato-striatis, sat convexis sed versus basin transversim depressis. Mandibulæ graciles, rufæ, palpi nigropicei rufomaculati. — Long. $6^1/_2$ millim.

Junk River, Liberia (Stampfli). — One example.

Lebia (Astata) humpatensis, nov. spec.

A *L. tetragramma* (Chaud.) differt thorace dense vermiculato-rugoso elytrorumque macula anteriori usque ad basin extensa, etc. Nigro-fusca, pectore, partibus oris, antennis

et epipleuris testaceo-rufis, thorace margine laterali elytrisque utrinque maculis duabus aurantiacis: capite sat grosse et dense punctato, media fronte lævi, juxta oculos strigoso: thoracis lobo basali quam in *L. tetragramma* paullo longiori (lateribus parallelis), lateribus sat late explanato-reflexis: elytris profundius exarato-punctato-striatis, interstitiis convexis sparsim punctulatis, apice flexuoso-truncatis angulo suturali subrotundato, utrinque macula magna oblonga interstitia 4—7 tegentia apud interstitia 5.7 solum basi attingenti, alteraque minori subapicali juxta suturam, aurantiaco-flavis. — Long. $8^1/_2$ millim.

Humpata (Veth & van der Kellen). — One example.

The species is very distinct from the widely distributed *L. (Astata) tetragramma* and is distinguished not only by the different shape and position of the anterior spot of the elytra, but by the narrower thorax, much more coarsely vermiculate-rugose on the surface and black with rather well defined reddish-yellow lateral borders, and by the more strongly striated elytra.

Judging from a single example from Lagos which I have compared, the *L. bisbinotata* (Murray) differs from the *L. tetragramma* of Natal only in the external angles of the elytra being more produced and acute.

Anthia ooptera, nov. spec.

A. omostigma (Chaud.) multo brevior; elytris sat breviter ovatis valde convexis. Nigra parum nitida, thorace immaculato, elytris valde convexis elongato-ovatis, interstitiisque valde convexis, margine lata humeros attingenti maculaque humerali contigua (apud interstitia 6—7) albo-pubescentibus. — Long. 35 millim. ♂.

Mossamedes (Sala).

A single male example, of minor development. The head has only a few minute punctures and the thorax has precisely the same form as in corresponding individuals of *A. omostigma*; but the elytra are much more convex and shorter with the

sides more rounded, so that their form is ovate and not in the least oblong-quadrate. The white tomentose border covers the two marginal interstices and behind reaches the suture; it also nearly reaches the base and at its termination is separated from the humeral spot only by the extremely narrow carina into which the 7th interstice is here contracted.

The description of *A. Actæon* (Erichs.) also from Benguella, agrees very nearly with *A. ooptera*, but no mention is made of the white humeral spot, and besides the »interstitiis leviter convexis" and »striis postice evanescentibus" do not at all fit but suit almost exactly examples of *A. cinctipennis* (Lequien) which I have examined from Lake Ngami and Damaraland.

Anthia niveicincta, nov. spec.

A. omostigmæ (Chaud.) proxime affinis. Nigra, thorace utrinque vitta vel macula elongata, elytris margine lato (antice angustato humeros haud attingenti) albo-pubescentibus: capite thoraceque sparsissime punctulatis: elytris elongato-ovatis, præcipue basi et apud humeros alte convexis, punctulato-striatis, interstitiis convexis, singulis utrinque setifero-punctatis.

♂ minor. Thorax anguste cordatus, lateribus pone medium sinuatis deinde gradatim convergentibus, disco utrinque longitudinaliter convexo loboque brevi obtuso apice medio emarginato et utrinque sinuato-truncato. — Long. 37 millim.

♀. Elytra latius elongato-ovata, thoraceque sicut in ♂ sed basi obtuse convexo. — Long. 42 millim.

A male from Humpata (Veth & v. d. Kellen), and a female from Mossamedes (Sala).

Extremely near *A. omostigma* from Benguella; differing only in the absence of the white pubescent humeral spot and in the stronger convexity of the elytra at the base and shoulders; the elytra although equally elongated are espe-

cially in the ♂ narrower and more ovate. Males of minor development of the two forms agree exactly in the form of the thorax; examples of *A. nivicincta* of higher development I have not seen; in *A. omostigma* they differ in the lobe of the thorax being much prolonged, dilated and flattened out behind with the exterior angles produced and acute. A similar difference in thoracic structure is presented in the males of all the allied species.

Netrodera Vethi, nov. spec.

N. formicaria (Erichs.) fere duplo major, elytris a basi usque longe ultra medium gradatim latioribus, nigra obscura (subtus nitida) partim sparse griseo-pubescens elytrisque vitta suturali (a basi usque ad medium) fasciolaque angulari prope apicem densius subochraceo-pubescentibus: capite post oculos parvos elongato semi-ovato, punctato: thorace angusto, medio perparum dilatato, sat dense punctato, dorso costis obtusis duabus lateribus utrinque acute carinatis: elytris utrinque tricarinatis, carinis altissimis acutis, interioribus 2 apice valde abbreviatis, interstitiis seriatim foveatis et punctulatis, apice flexuoso-truncatis, truncaturæ angulo exteriori dentiformi, suturali subrecto. — Long. 18 millim. ♀.

Benguella (Veth & v. d. Kellen). — A single example.

Belongs undoubtedly to the genus *Nestra* (Chaud.) which I agree with Perroud in considering quite distinct from *Atractonotus*, so that if the latter is to be separated from *Polyhirma*, so must the former. Its more obvious points of distinction are the shorter semi-ovate prolongation of the head behind the eyes and the tricarinate elytra. *Polyhirma Baucis* (Dohrn) from the description must belong to *Atractonotus* and is probably hardly distinct from *A. Mulsanti* (Perroud).

Aulacillus, nov. gen.
(Subfam. Scaritinæ).

Apterus. Caput relative magnum lævissimum, epistoma bidentatum. Mandibulæ elongatæ, subrectæ, supra bicarinatæ

et inter carinas læves. Maxillæ angustæ, leviter curvatæ, apice obtusæ, inermes. Frons acute bisulcata. Thorax valde transversus, lateribus fortiter dentatus, lobo basali sat producto, margine inter lobum et dentem lateralem subsinuato. Elytra relative brevia et angusta, humeri valde dentati, interstitio 7mo alte carinato prope basin intra dentem humeralem incurvato. Tarsi, præcipue articulo 5to cum unguiculis elongati: tibiæ intermediæ extus unispinosæ. Episterna metathoracica brevia subquadrata. Abdominis segmenta 3—5 basi transversim sulculata, 2—6 foveolata.

The obtuse and wholly unarmed apex of the maxillæ and dentate sides of the thorax bring this genus into the neighbourhood of *Haplogaster* and allies, but it has certainly a close affinity with *Tæniolobus*, with which genus it is connected by several Tropical African species having, like *Tæniolobus*, the maxillæ produced at their inner apex, but with the deeply bisulcate forehead and facies of *Aulacillus*. In the rather long and robust claw-joints and claws it indicates also an affinity with the very different-looking genus *Ochyropus*.

Aulacillus Liberianus, nov. spec.

Niger, nitidus: capite ante oculos quadrato, angulis rotundatis, absque strigis, sulcis frontalibus elongatis subparallelis usque ad finem apud verticem profundis, oculis valde prominentibus canthis posterioribus parvis haud prominentibus: elytris acute striatis, striis exterioribus et versus apicem gradatim latioribus profundioribusque, ibique transversim punctatis et opacis; interstitiis interioribus parum, exterioribus fortius convexis, 3io tripunctato, basi et epipleuris granulatis: tibiis anticis tridentatis, supra dentem 3um vix denticulatis. — Long. 22 millim.

Junk River, Liberia (Stampfli). — Three examples.

Stomonaxus longulus, nov. spec.

St. striaticolli (Dej.) affinis sed major et præcipue magis elongatus. Piceo-niger nitidus, labro, palpis, antennis et pe-

dibus rufis: capite thoraceque impunctatis, sutura et sulcis flexuosis frontalibus tenuibus acute impressis: thorace transverso, medio rotundato, post medium fere recte mediocriter angustato, angulis posticis breviter dentiformibus, sulculo marginali profundo sat lato, sulcis basalibus latis et rectis: elytris subelongato oblongo-ovatis, exarato-striatis striis punctulatis versus marginem latioribus, interstitiis convexis, interioribus versus basin planioribus: sternis lævibus, tarsis posticis articulo 5to cum unguibus elongatis; tibiis anticis extus lævibus sed intus spinulis nonnullis brevibus. — Long. $7^1/_2$ millim. ♂, ♀.

Junk River, Liberia (Stampfli). — Six examples.

The species is distinguished from its nearest ally, *S. striatocollis*, at first sight by its elongate-oblong and unicolorous elytra; but it differs in the narrower and much more convex lateral and apical interstices and in the wider and deeper marginal groove of the thorax. In the anterior tarsi of the ♀ the 1st and 2nd joints have their inner apices sharply produced but scarcely spiniform and the external edge of the anterior tibiae is unarmed in both sexes though having a few short spines on their lower surface.

Stomonaxus complanatus, nov. spec.

Elongato-oblongus, supra vix convexus, piceo-niger nitidus, labro, palpis, antennis et pedibus picescenti-rufis: thorax transversus, medio valde rotundato, post medium sinuatim angustato, angulis posticis acutis, sulculo marginali parum profundo: elytris adhuc magis quam in *S. longulo* elongatis, sat planis, punctulato-striatis, interstitiis paullo convexis, 1—5 usque prope apicem planis: tibiis anticis versus apicem dilatatis extus spinulosis: sternis parce grosse punctatis: cætera sicut in *S. longulus*. — Long. 9 millim.

Junk River, Liberia (Stampfli).

Chlænius (Homalolachnus) Vethi, nov. spec.

Elongatus, gracilis, niger vix nitidus, elytris breviter nigrosetosus, vitta supra interstitium 8vum a basi usque ad me-

dium, maculaque subapicali rotundata supra interstitia 5—8va flavo-testaceis: capite nitido, sparsissime punctulato: thorace elongato, angusto, lateribus postice longius angustato angulisque basalibus subrectis, toto crebre ac grosse punctato, fovea basali utrinque elongata et angusta: scutellum lævissimum; elytris angustissime subovatis versus basin gradatim angustatis, basi angustis, humeris distincte angulatis et marginatis, profunde punctato-striatis interstitiis convexis et grosse subbiseriatim punctatis, punctis interdum pupillatis. Prosternum apice parce setosum, passim cum meso- et metasterni lateribus sparsim grosse punctatum. Metasterni episterna latissima et brevia; venter medio lævissimus. Antennæ elongatæ, articulis 4—6 magis, cæteris minus, dilatatis, 3io quam 4to duplo longiori. Palpi ♀ paullo dilatati apice truncati: labrum recte truncatum. — Long. 14 millim. ♀.

Variat elytris immaculatis.

A female of the typical form from Humpata, and a ditto of the var. from Benguella (Veth & van der Kellen).

Chlænius Sykesii Hope, Trans. Zool. Soc. Lond. Vol. 1. p. 13. fig., from Poonah, India, belongs also to the section or subgenus *Homalolachnus*. It appears to have escaped the notice both of Chaudoir and the authors of the Munich Catalogue.

Anisodactylus abaculus, nov. spec.

Sat late oblongus, mediocriter convexus, niger nitidus, palpis antennisque obscure rufis (scapo paullo latius rufo): thorace transversim quadrato, lateribus fere æqualiter rotundatis, angulis anticis sat productis, posticis obtusissimis fere rotundatis, basi utrinque vage impresso fere lævi: elytris acute striatis, striis fundo minute punctulatis, interstitiis vix convexis 3io versus apicem 2—4-punctato: metasterno lateribus punctulato: pedibus cum tarsis nigris politis. — ♂ tarsi intermedii parum dilatati, articulis 2—4 dense breviter erecte pilosis. — Long. 15 millim. ♂, ♀.

Junk River, Liberia (Stampfli). — Several examples of both sexes.

Megalonychus explanatus, nov. spec.

M. platydero (Chaud.) affinis. Cyanescenti-niger politus, partibus oris, scapo pedibusque rufo-testaceis: capite relative parvo, impunctato, foveis frontalibus vix impressis: thorace magno, subcirculari, minute punctulato disco lævi, angulis posticis omnino rotundatis anticis obtusis, lateribus late explanato-reflexis rufo-translucentibus, marginibus anticis et posticis late sinuatis: elytris thorace paullo latioribus, humeris rotundatis, apice sinuatis angulo suturali recto, exarato-striatis striis fundo crenulato-punctulatis, interstitiis parum convexis 3io bipunctato; margine laterali æqualiter explanato. — Long. 11 millim. ♂, ♀.

Junk River, Liberia (Stampfli). — A few examples of both sexes.

London, June 1889.

NOTE XL.

ON A NEW GENUS AND A NEW SPECIES IN THE MACROGLOSSINE-GROUP OF BATS.

BY

Dr. F. A. JENTINK.

August 1889.

(Plate 9, figs. 1, 2, 3, 4).

A closer study of the Bat exhibited in my »Catalogue systématique des Mammifères, 1888, p. 158" as *variété insulaire* of *Eonycteris spelaea* forces me to separate it from the named species and to regard it as a new species belonging to a genus very different from all the hitherto described genera in the Macroglossine-group.

Its index-finger is *without a claw* like in *Eonycteris*, *Nesonycteris* and *Notopteris*. It differs from *Notopteris* by a much shorter tail, by its dentition and by having the wings *not* from the central line of the back; it differs from *Eonycteris* by having the wing-membrane attached to the second toe (*not* to the first) and by its dentition; it differs from *Nesonycteris* by having a well developed tail and another dentition. The following description will show the more differences between the named three genera and my new genus

Callinycteris, g. n.

Muzzle long, narrow, cylindrical; nostrils not projecting; upperlip with a vertical groove dividing the nostrils; lower lip grooved in front. Tongue very long and attenuated. Index-finger without a claw. Metacarpal bone of middle

finger as long as the index-finger. Wings separated by a rather considerable interval from the spine of the back; wing-membrane from the base of the second toe. Tail well developed, for one third contained in the membrane.

Dentition: I. $\frac{4}{4}$, C. $\frac{1-1}{1-1}$, P. $\frac{2-2}{2-2}$, M. $\frac{3-3}{3-3} = 32$.

Callinycteris rosenbergii, n. sp.

Ears much longer than the muzzle, oval, rounded off above, with several folds.

Body above and below clothed with densely set pale brown and very soft hairs. The fur of the head extends upon the face as far as the naked nostrils. Muzzle with longer hairs, among which some black ones, thinly spread between the other shorter fur. Wing-membranes brownish black.

As in *Eonycteris* there are placed on each side of the anal opening two small, cutaneous, kidney-shaped, gland-like bodies. In *Eonycteris* these bodies are placed a little behind the anal opening, meanwhile in *Callinycteris* the anal opening is exactly in the middle between the named bodies.

Tongue in the middle of its surface thickly covered with recurved papillae; for the rest the tongue is covered with smaller papillae overlapping its margins.

Palate-ridges seven in number, the three posterior ones divided in the centre.

Upper incisors very small, equidistant from each other and from the canines; first upper premolar very small, equidistant from and close to the canine and the second premolar. Second upper premolar triangular, about two fifth of the canine in height. Upper molars crowded, without interval between the second premolar and the first molar; first and second molars with a longitudinal furrow; hindmost molar about half the diameter of its predecessor and scarcely raised above the level of the gum.

Lower incisors in a triangular series; lower canines about

two thirds of the upper canines in height. First lower premolar half the height of the second, close to the canine and separated by an interval from the first molar, which is separated from the second premolar by an interval of the same dimension; second and third molars scarcely raised above the level of the gum; a very small interval between the three molars; third molar about half the diameter of the second one.

The dental-formulae in the genera hitherto known as belonging to the Macroglossine-group are the following:

Macroglossus: I. $\frac{2}{2}$, C. $\frac{1}{1}$, P. $\frac{2}{2}$, M. $\frac{3}{3} \times 2 = 34$.
Eonycteris: I. $\frac{2}{2}$, C. $\frac{1}{1}$, P. $\frac{2}{2}$, M. $\frac{3}{3} \times 2 = 34$.
Melonycteris: I. $\frac{2}{2}$, C. $\frac{1}{1}$, P. $\frac{3}{3}$, M. $\frac{2}{3} \times 2 = 34$.
Megaloglossus: I. $\frac{2}{2}$, C. $\frac{1}{1}$, P. $\frac{3}{3}$, M. $\frac{2}{3} \times 2 = 34$.
Callinycteris: I. $\frac{2}{2}$, C. $\frac{1}{1}$, P. $\frac{2}{2}$, M. $\frac{3}{3} \times 2 = 32$.
Nesonycteris: I. $\frac{2}{1}$, C. $\frac{1}{1}$, P. $\frac{3}{3}$, M. $\frac{2}{3} \times 2 = 32$.
Notopteris: I. $\frac{2}{1}$, C. $\frac{1}{1}$, P. $\frac{2}{3}$, M. $\frac{2}{2} \times 2 = 28$.

With the exception of the genus *Nesonycteris* all the named genera are represented by alcoholic specimens in the Leyden Museum.

Measurements of the type-specimen (an adult male preserved in alcohol):

	mm.
Head and body	127
tail	18,5
tail free from membrane	12
ear	16,5 × 11,5
forearm	67
thumb with claw	23
index-finger	32,5 + 9 + 5,5 = 47
third finger	47 + 30 + 40 = 117
fourth finger	47 + 25 + 24 = 96
fifth finger	41 + 20 + 19 = 80
tibia	30
foot with claws	19

Hab.: Celebes, Gorontalo. Collected by Mr. von Rosenberg, May 1864.

EXPLANATION OF PLATE 9.

(Figs. 1, 2, 3 and 4).

Fig. 1. Upperlip with nostrils and lowerlip of *Callinycteris rosenbergii.*

» 2. Palate-ridges of *Callinycteris rosenbergii.*

» 3. Tongue with papillae of *Callinycteris rosenbergii.*

» 4. Penis, anal opening and kidney-shaped bodies of *Callinycteris rosenbergii.*

NOTE XLI.

ON A NEW SHREW FROM THE INDIAN ARCHIPELAGO.

BY

Dr. F. A. JENTINK.

August 1889.

I have to add a new species to the series of Shrews discussed and described by me in the Notes from the Leyden Museum, 1888, p. 161, and I previously named it *Pachyura semmelinki* in my Catalogue systématique des Mammifères, 1888, p. 257. I now proceed to describe it as follows.

Pachyura semmelinki, n. sp.

Fur rather long for a Shrew; the base of the hairs mouse-color, the hairs of head and upperparts of body tipped with maroon, those of the belly with light brown. Hairs of hands, feet and tail maroon.

Tail conical, very hairy so that the scales are hardly visible; elongated hairs are widely set along the whole tail. Muzzle swollen.

Upper jaw: posterior hook of first incisor as high as the fourth tooth; this latter is unicuspidate and is about four fifth of the size attained by the second also unicuspidate tooth; third unicuspidate and about two thirds of the fourth; fifth unicuspidate very small and hardly visible from without.

Lower jaw: first incisor with a small denticulation; second unicuspidate and about two thirds of the height of the third unicuspidate which attains the height of the posterior cusp of the first molar.

All the teeth are white.

Measurements of the type-specimen, an adult female, preserved in alcohol:

	mm.
Head and body	98
Ear	9
Hindfoot	18
Tail	59

Hab.: Banda-Neira. Collected by Dr. J. Semmelink in 1881.

NOTE XLII.

SOME OBSERVATIONS RELATING TWO SEMNOPITHECUS-SPECIES FROM THE MALAYAN ARCHIPELAGO.

BY

Dr. F. A. JENTINK.

September 1889.

(Plate 9, figs. 5, 6, 7).

The well known scientific investigator of North-East-Sumatra, Dr. B. Hagen, presented some weeks ago to our national Museum two skins belonging to two different *Semnopithecus*-species from Deli, in consequence of which I was obliged to enter into the labyrinth of synonymes of the very entangled *Semnopithecus*-group. The following lines contain some conclusions.

Semnopithecus femoralis Horsfield.

One of the specimens agrees exactly with the specimens collected by the late Horner on Mount Ophir, West-Central-Sumatra, and since in our Museum. The species has been described and figured in the »Verhandelingen, 1839—44, p. 73, Tab. 10 bis" under the name of *Semnopithecus Sumatranus*. »Although specifically separated from *S.* »*chrysomelas*", the author remarked, l. c. p. 73, »*S. Suma-*»*tranus* is by its general appearance and by its color so »closely allied to *S. chrysomelas* that it perhaps ought to »be considered as a local variety of that species."

In 1876 Schlegel (Catalogue, Simiae, p. 45) rejected the specific title *Sumatranus* in favour of the name given for-

merly by Horsfield, scilicet *S. femoralis*, but maintained the specific distinction of *S. chrysomelas*.

Anderson (Yunnan Expedition, 1878, p. 31) being ignorant of Schlegel's »Catalogue," as he nowhere quoted it in his book, asserted: »as has been pointed out by pre»vious authors, there do not appear to be any facts re»lating to the structure of the so-called *S. chrysomelas* »from Borneo that would sanction its recognition as a »species distinct from *S. femoralis* of Sumatra, and I have »arrived at this opinion after an examination of the type »specimens."

Oldfield Thomas (P. Z. S. L. 1886, p. 66) seems to differ from Anderson, for he states that »the few localities as »yet recorded for *S. femoralis* Horsfield are all either in »the South of the Malay Peninsula or in Sumatra." It is clear that Oldfield Thomas keeps *S. chrysomelas* distinct from *S. femoralis*, otherwise he would have added Borneo to the above given localities.

Blanford (The fauna of British India, 1888, Part I, p. 42) agrees, as it seems, more with Anderson, for he says that *S. femoralis* is distributed over Borneo, Sumatra and the Malay Peninsula, extending north into Tenasserim.

Having now given an exposition as short as possible of the stand of the question I will proceed to give my opinion in a few words. I confess that it is very difficult to observe striking differences between *S. femoralis* and *S. chrysomelas* as to their external appearance, but I think that only a careful study of their skulls will settle the question. In comparing adult skulls of *S. femoralis* with the drawings in the »Verhandelingen, plate 11, fig. 3," I am unable to find difference whatsoever, but in comparing the same bony parts of young specimens of the two species, I suppose that there are to be observed very striking differences. As I have no young skulls of *S. chrysomelas* to compare with the young ones of *S. femoralis* in our collection, I at present can only state that the peculiar form of the frontalia and parietalia in our young skulls of *S.*

femoralis hardly can be explained by difference in age alone; so that in my opinion we will do correct to accept, at all events previously, Schlegel's views and call the Borneo-form *S. chrysomelas*. I remark that the skull of *S. chrysomelas*, drawn by Schlegel in the »Verhandelingen" is not to be found in our Museum and that I wrongly said in my »Catalogue ostéologique" that skull *b* was there figured. The two skulls mentioned in my »Catalogue" are fullgrown but not so adult as Schlegel's figures indicate, the canines being much less developed in our specimens.

Semnopithecus maurus auctorum.

The second above mentioned *Semnopithecus* is a beautiful specimen belonging to the form described by Desmarest as *S. pruinosus*. Although Schlegel is quite right in his statement that the name given by Desmarest is more appropriate than the specific title bestowed upon it by Raffles, viz. *cristatus*, I think we should be forced to use Raffles' name, as having the priority of date and the more as being accompanied by a very excellent description. Schlegel wrote (Catalogue, Simiae, p. 58): »cette espèce ressemble »sous tous les rapports au *S. maurus*, à cette exception »près qu'elle a tous les poils du pelage plus ou moins lar»gement terminés de gris blanchâtre. Elle remplace le *S.* »*maurus* à Sumatra, Borneo et dans l'île de Bangka." Anderson (Yunnan Expedition, p. 30) wrote: »in the size »and proportions of its parts *S. cristatus* closely resembles »*S. maurus*, and many zoologists have considered it merely »as a local race of that form, an opinion justifiable from »the mere consideration of their external characters, but »it remains to be ascertained whether these views are sup»ported by the structure of their skeletons."

Now the skull of *S. pruinosus* (cf. plate 9, figs. 5, 6 and 7, drawn after the skull of Hagen's specimen) agrees in all details so exactly with the same bony parts of *S. maurus* that I cannot see any important difference and as the external characters of both forms are so very inconstant

and changeable I do not hesitate in considering the Sumatra-Bangka-Borneo-form as belonging to the same species as the Java-form, and as Schreber's specific title has the priority of about half a century over Raffles', we are obliged to call the species *Semnopithecus maurus* Schreber.

In accepting this name it must however be observed, that Schreber never has *described* a monkey under the mentioned specific title: he *figured* Tab. XXII, B, a young monkey under the name *Simia maura*, but called it in the text: »Der Mohraffe." As synonyme he cited *Simiolus ceilonicus* Seba, Thes. I, p. 77, tab. 48, fig. 3; Schreber adds »der Geburtsort dieser Gattung ist nach Seba Zeilan, nach »Herrn Edwards Guinea." If Schreber was right in uniting his *Simia maura* with Seba's *Simiolus ceilonicus*, then Seba's name ought to be given to the species in question, as Seba's book is from the year 1734, meanwhile Schreber's Säugethiere dates from 1775! But I think it need not to make more conjectures as my intention was merely to exhibit the specific similarity of *Semnopithecus pruinosus* Desmarest (*Semnopithecus cristatus* Raffles) with *Semnopithecus maurus* auctorum.

NOTE XLIII.

DESCRIPTION OF A NEW SPECIES OF THE LONGICORN GENUS PACHYTERIA, SERV.

BY

J. R. H. NEERVOORT van de POLL.

Pachyteria apicalis, v. d. Poll.
(Plate 10, fig. 1).

♂. *Subopaca, supra ochracea, antennarum articulis quinque ultimis nigris, thorace antice posticeque purpureo-nigro marginato, scutello nigro, elytrorum tertia parte apicali atro-coerulea, omnino pube brevi sericea obtecta; subtus atro-coerulea, media parte prosterni et pedibus cum coxis ochraceis, pubescentia sericea parce induta. Caput crebre punctatum. Thorax latus, brevis, antice posticeque fortiter strangulatus, in lateribus distincte spinosus, in medio et ad latera nonnihil impressus, in disco rugosus, lateraliter minutissime densissimeque punctatus. Scutellum elongato-triangulare, acutum. Elytra ad apicem conjunctim rotundata, costis quatuor obsoletis instructa, dense punctata. Prosternum crebre, pectus subtiliter punctatum, in quo puncta nonnulla grossa intermixta; abdomen aliquot punctis maioribus instructum, segmento quinto profunde semicirculariter inciso.* — Long. 31 mm., lat. ad hum. 9 mm.

Habitat N. E. Borneo. — In mus. nostro.

Head ochraceous, with the tip of the mandibles piceous and the throat black; coarsely punctate in front, strongly rugosely punctured on the vertex, the inter-antennary ridge divided by a deeply impressed median line. Antennae ochraceous with the five apical joints black, the base of the first black joint somewhat clearer, but on the other

hand the extreme tip of the last ochraceous joint slightly infuscate. The scape is rather deeply punctured above, almost smooth below; the 3rd joint is not quite as long as the two next following joints together, this joint as well as the 4th is provided with a sparse fringe of fulvous hairs along the underside.

Prothorax very broad and relatively short, strongly transversely sulcated and narrowed anteriorly in a neck-like manner and abruptly depressed and constricted posteriorly. The posterior margin slightly turned upwards; the sides distinctly but not sharply toothed and obliquely narrowing in nearly straight lines from the spines to the constricted front part. Both, the constricted anterior and posterior portion, metallic purplish black, thickly covered with short stiff black hairs, the rest ochraceous and clothed in the middle with a short somewhat silvery shining pile. The disc shows a broad but shallow impression in the centre and on each side there is an other broad shallow groove, originating near the lateral spine and obliquely turning upwards. Between these lateral grooves the disc is strongly rugosely punctured, whilst the parts outside of the grooves are very thickly and finely punctate, and, being moreover destitute of the silvery pile, they have consequently a much more opaque appearance. The black parts are also finely but not so closely punctured.

Scutellum purplish black, elongate-triangular, sharply pointed and delicately punctured.

Elytra ochraceous with the greater apical third bluish black, brighter towards the apex; entirely clothed with a dense short brilliant silvery pubescence. From the base towards the top the elytra are gradually narrowed, their apices conjointly rounded; strongly and thickly punctured all over, the sculpture but very slightly decreasing towards the apex, moreover each wing-case presents two faintly elevated longitudinal lines.

Underneath bluish black, with the sides and the middle of the prosternum ochraceous and a small ill-defined ful-

vous spot on the metasternal episterna. Legs ochraceous, the femora and coxae darker, somewhat brownish and with very faint purplish tinges under certain lights. The sides of the prosternum densely and finely punctate, the punctures becoming gradually larger and more distant near the middle. The breast is covered with extremely fine and closely set punctures, which are intermixed with a few large and deep ones; clothed with a delicate silvery pubescence. The abdomen with some large distant punctures, which are somewhat more numerous on the last ventral segments; the 5th segment is very deeply semicircularly emarginate, the 6th segment more broadly so; the hinder-margin of the 1st segment is clothed with a rather broad band of silvery pile, whilst on the two following segments a similar but narrower band is broadly interrupted in the middle. Legs slender, the hinder femora almost reaching the apex of the elytra, thighs and shins rather coarsely punctured, the sculpture of the former closest near the knees; tibiae fringed with fulvous hairs at the innerside.

This species is most nearly allied to *P. ochracea* C. O. Waterh., but clearly distinct by the different coloration of the elytra and antennae. The structure of the prothorax is also quite different.

N.B. There is made use of this opportunity for publishing on Plate 10 a figure of three already described species of Longicorn beetles, viz.:

Fig. 2. *Pachyteria Vandepolli* Rits. ♀, from Malacca (Notes Leyden Museum. XI (1889) p. 49).
» 3. *Aphrodisium Albardae* Rits. ♂, from Tjilatjap: Java (Notes Leyden Museum. X (1888) p. 193).
» 4. *Callichroma chrysogaster* Rits. ♂, from Ceylon (Notes Leyden Museum. X (1888) p. 195).

NOTE XLIV.

ADDITIONAL REMARKS ON DOLICHOPROSOPIS MACULATUS, RITS.

BY

J. R. H. NEERVOORT van de POLL.

The description of the above named Longicorn has been drawn up from a unique, rather old ♀ specimen in the collection of the Leyden Museum, originating from Halmaheira. I possessed already for some time a fine ♀ example from the same locality, which agrees exactly with the type specimen, however, being quite fresh, the rufous colour of the elytra is much darker and the elytral spots are chalky-white not dirty-white. More recently I got a ♂ specimen from Batjan, which in general appearance recedes so largely from the typical form, that it might be easily mistaken for a distinct species. The elytra, instead of being rufous-brown, are entirely clothed with a pale bluish-grey pile, on this ground colour the chalky-white spots are still perfectly contrasting. I failed to find this colour-difference accompanied by any structural character, of course besides the sexual peculiarities of the longer antennae and the thicker scape. Such an important change in colour of the covering pile is not to be met with abundantly and it remains to be elucidated whether this variety must be regarded as a geographical form peculiar to Batjan, or simply as a sexual peculiarity [1]). Under these circumstances I abstain from proposing now a name for it, which it surely deserves, if it turns out to be a local form.

1) The possibility of its being a sexual difference is not excluded, I may call to mind the enormous differences existing between the sexes of many species of *Dorcadion*.

NOTE XLV.

REMARKS ON GYMNETIS KERREMANSI, V. D. POLL.

BY

J. R. H. NEERVOORT van de POLL.

(Plate 10, fig. 5).

In volume VIII (p. 231) of the »Notes", I have described a Cetonid from Panama, under the name of *Gymnetis Kerremansi*. This species belongs to the Central-American fauna and of course Mr. Bates has had to deal with it in the »Biologia Centrali-Americana". As I had recently the pleasure of visiting my distinguished friend, he told me that my *G. Kerremansi* had given him much trouble and that he was not at all sure, the species he had mentioned and figured in the above quoted work, was really referable to my *Kerremansi*. In as much as I could judge from memory, the specimens he showed me did not agree with my species, but not having looked at my Gymnetis for several months, I would not risk a decided opinion. However, I promised Mr. Bates to study the question as soon as I should be back at home, in order to make it possible to insert eventual corrections in the Supplement of the Scarabaeidae of Messrs Godman and Salvin's work.

Now, after having carefully studied and compared my insect and description with the figures and remarks published by Mr. Bates, I have not the least hesitation in considering my *G. Kerremansi* perfectly distinct. It is evident that Mr. Bates has endeavoured to make my description fit for the species that had come under his notice,

therefore my terms »cervina" and »fallow" had to mean bluish-grey, therefore no attention has been paid to the coloration of the elytra, which is very characteristic, each elytron having in the middle a pale yellow large oval spot surrounded by a mixture of ochraceous rufous-brown and black, the latter colour even predominates. The glabrous parts of the underside and the legs, I described as brilliant black with a strong purple-bronze hue, which is also in contradiction with the figure in the Biologia, where legs of a greenish colour are represented.

I have added to these few words of friendly protest a very satisfactory figure of *G. Kerremansi*, which certainly will assist to remove all doubts better than a long description would be able to do. As to the species figured by Mr. Bates, I think to make no mistake in supposing that it will prove to be referable to *G. Wollastonii* Schaum (Trans. Ent. Soc. London. V (1848), p. 66; pl. 8, fig. 3), a Mexican species not recorded in the „Biologia".

Rectification. According to a lapsus calami, I have compared *Moscheuma sebosum* v. d. Poll (described in the same paper as *Gymnetis Kerremansi)*, at the end of the description with *M. costatum* Oliv., a species which does not exist. Olivier's well-known species has been described under the name of *Cetonia lobata.*

Amsterdam, July 1889.

NOTE XLVI.

ON A NEW SPECIES OF THE LUCANOID GENUS ODONTOLABIS, HOPE.

BY

J. R. H. NEERVOORT van de POLL.

The new species of *Odontolabis* described below originates from Palawan, one of the Philippine Islands, situated between the northern part of Borneo and Luzon, and forms a most interesting connecting link between *O. alces* F. from Luzon, and *O. celebensis* Leuthn. from Celebes, bearing in general appearance even a greater affinity to the last named species, the dentition of the mandibles however corresponding with *O. alces* F. The great length of the mandibles, which in the mesodont form are longer than the head and prothorax together, is very remarkable and unique for the so-called *alces*-group. Now British North Borneo becomes the more and more explored, I have some hope, that, within a short time, an allied form from Borneo will also be brought to light, which I consider to be of high importance for the real appreciation of the allied species, scattered over these islands.

Odontolabis intermedius, v. d. Poll.

Male. Uniform deep black; mandibles, head, prothorax and legs dull, very finely punctured; elytra pitchy black with a bright obsidian lustre. Head large, quadrangular, much longer than the prothorax, front edge strongly emarginate, sides straight in front, canthus very narrow, postocular tubercles very much developed, obtuse and strongly directed forwards, the lower part of the cheeks coarsely

wrinkled and pitted, the uppersurface near the eyes also distantly pitted. Prothorax twice as broad as long, its front edge strongly emarginate on each side, the sides trispinose with two very deep concavities, the middle spine very long and acute, undersurface smooth, the lateral margin coarsely wrinkled. The prosternal process is well developed and projects strongly in front and beneath; the mesosternal process hardly prominent. Elytra elongate, oval. Front tibiae with three spines above the terminal fork, of which the uppermost are rudimentary in the large development.

As for general aspect and brilliancy of the wingcases it agrees well enough with *O. celebensis* Leuthn., but it is a larger and comparatively a more slender species, its prothorax is much flatter with the middle spine much longer and more acute, projecting sidewards in a straight manner and not downwards as in *celebensis*, its tubercle below the eyes is also much larger and directed obliquely forwards. *O. alces* F. is a more dull looking, broader species, with the middle spine of the thorax not very acute and the tubercle behind the eyes large and obtuse but not directed forwards.

Mandibles.

Forma mesodonta. Mandibles longer than the head and prothorax together, very slender, rounded, curved downwards, the tip slightly turned upwards, with three apical teeth of which the innermost is rather large and the two other ones very minute, and a strong tooth beyond the middle, projecting obliquely inwards not downwards. Head with raised crest.

In general shape the mandibles are very much like those of the teledont form of *O. celebensis* Leuthn. but they recede from them by the want of basal teeth. The dentition corresponds with that of the mesodont form of *O. alces* F., and it is this analogy, which made me suppose, that a still higher development, without the large tooth beyond the middle, might occur in my *intermedius* just as in *alces*,

but on the other hand, the great length of the mandibles renders this supposition somewhat doubtful. The examination of an extensive series only will enable us to settle the question satisfactorily.

Forma amphiodonta. Mandibles longer than the head, straight, rounded, with four apical teeth, strongly expanded inwards, at the base with three obtuse teeth. In the unique specimen I have, the basal teeth of the right mandible are entirely melted together, forming a single broad blunt appendix; on the left side the two undermost teeth are but faintly indicated, whilst the uppermost is rather strongly projecting.

Female. Very much like that of *O. celebensis* Leuthn. and *O. alces* F.; as far as I can judge from the single exponent I have at my disposal, it differs from both in a few peculiarities of the prothorax, viz.: the front angles are angular instead of broadly rounded, the lateral concavity before the middle spine is deeper and the spine is more prominent and acute. The uppersurface is neither so glossy as that of *celebensis*, nor so dull as that of *alces*. The front tibiae have four spines above the terminal fork.

Measurements.

	Total length	Head	Mandibles	Prothorax	Elytra
	mm.	mm.	mm.	mm.	mm.
mesodont	87	16 by 23	32	13 by 28	34 by 26
amphiodont	64	13 » 16	15	11 » 23	29 » 22
♀	43	7 » 13	5	10 » 20	26 » 19

NOTE XLVII.

ON THE GEOGRAPHICAL DISTRIBUTION OF SOME LITTLE-KNOWN AFRICAN SPECIES OF NIGIDIUS.

BY

J. R. H. NEERVOORT van de POLL.

1. *Nigidius amplicollis* Qued. (Berl. Ent. Zeitschr. XXVIII (1884) p. 266), first recorded from the Quango (v. Mechow) proves to be a widely distributed species. I have specimens from the Upper Zambesi and from the N'Guru mountains (Zanzibar).

2. *Nigidius laevigatus* Har. (Mittheil. d. Münch. Ent. Ver. II (1878) p. 100 & Coleopt. Hefte XVI (1879) p. 31)[1], originally described from a specimen captured by Dr. Pogge in the interior of tropical Africa (Lunda-land), then recorded by Quedenfeldt from the Quango, extends its range also towards the East-Coast, my specimen being from Lake Nyassa.

3. *Nigidius dentifer* Alb. (Deutsch. Ent. Zeitschr. XXVIII (1884) p. 16), has been described from Central-Africa, without indication of its more peculiar habitat. A specimen in my cabinet was taken at Old Calabar.

1) Von Harold provisionally published short latin diagnoses and afterwards in the „Coleopterologische Hefte" full descriptions. One of both citations, I found generally overlooked. Quedenfeldt only quotes the description of *N. laevigatus* Har. with a wrong page.

NOTE XLVIII.

ON AEGUS CAPITATUS, WESTW.

BY

C. RITSEMA Cz.

Among the Lucanidae brought together in Deli (East-Sumatra) by Dr. B. Hagen and presented by him to the Leyden Museum, I found a male specimen of minor development, belonging to the genus *Aegus*, which was at first sight unknown to me. A careful examination, however, convinced me of its close relationship with *Aegus capitatus* Westw., a species represented in Dr. Hagen's collection by a few males and females, but I could not decide whether it was the extreme varietas minor of this species or that of a new one. I wrote therefore to Mr. Neervoort van de Poll asking him to look at the matter, and most courteously he sent me from his extensive collections all connecting links between my specimen and the varietas major of *Aegus capitatus*.

Taking into consideration that among the described forms of the male of this species the smallest form (that what I regard as the true var. minor) is not to be found, I thought it not without interest to publish a detailed description of it. With the higher developed forms it has some important characteristics in common, viz.: the shape of the inner edge of the mandibles with the conical basal tooth on a level below that of the surface; the shape of the fore margin of the head between the mandibles (broadly and angularly emarginate, the emargination terminating in a produced point at each end); the shape of the hinder an-

gles of the thorax (subangular, not emarginate); the conformation of the lateral margin of the second and following abdominal segments (thickened and glossy, widened out on the last segment where this margin is notched at the apex).

Before to proceed to the description of the var. minor, I ought to say that the males which have a spine or tubercle on each side of the head between the eye and the produced point of the fore margin, are regarded by me as the var. major, those without these spines or tubercles but with the mentum and jugulum opaque as the var. med., and that the form which I believe to be the var. minor may be characterized by its small size, by the total or nearly total absence of the tooth which proceeds from the upper surface of the mandibles a little before the base, by the shining (not opaque) and deeply punctured mentum and jugulum, and by the subcostate elytra. The three different forms may at once be recognized by the following key:

I. Mentum and jugulum opaque, impunctate or provided with shallow, margined punctures.
   a. Head with a spine or tubercle between the eyes and the produced points of the fore margin. . . . . var. major.
   b. Head without spines or tubercles. . var. med.

II. Mentum and jugulum shining, provided with deeply impressed punctures. . . . . var. minor.

Aegus capitatus Westw. ♂, var. minor.

I have taken the following description from four specimens: one, the smallest, measuring with mandibles 21.5 mm. [1]), belonging to the Leyden Museum and originating from Serdang (East-Sumatra); the three others, measuring with mandibles 22.5, 23.5 and 24.5 mm., belonging to

1) The largest male with which I am acquainted (likewise from Serdang) measures with mandibles 47 mm.

the collection of Mr. Neervoort van de Poll and coming from Malacca.

Black above, dark reddish brown beneath; subshining. The mandibles glossy, covered with punctures which become finer and finer towards the tip and on the inner basal portion (basal tooth); they are as long as or slightly longer than the head, strongly and regularly curved, and provided internally, a little before the base and on a level below that of the surface of the mandible, with a conical tooth. Moreover in the two largest of my specimens a trace of the tooth is present which proceeds from the upper surface at some distance from the base.

The head is densely covered with large punctures which bear short erect fulvous hairs and are partially confluent especially towards the fore margin and the eyes. The fore margin between the mandibles broadly and angularly emarginate, the emargination terminating in a produced point at each end. The anterior lateral angles are rounded off, the ocular canthus is entire, and the sides are convex and slightly sinuate. From the anterior lateral angles a curved smoother carina runs to the inner orbit.

The prothorax somewhat broader than the head and with parallel sides, or (as in my smallest specimen) in front as wide as the head but somewhat broader at the base; it is densely and rather equally covered with large and deep punctures which are confluent along the margins and bear erect short fulvous hairs; the middle of the disc is shallowly impressed and provided with some larger and partially confluent punctures; the anterior angles are prominent and more or less narrowly rounded off, the posterior ones subangular, not emarginate. The scutellum has a few large punctures.

Each elytron shows four deeply impressed striae of confluent punctures, forming in connection with the suture five glossy interstices which are alternately more elevated and four of which disappear before the end; the interstices are sparsely provided with very fine punctures, the 2nd

and 4th moreover coarsely punctured at the basal portion; beyond the 5th interstice as well as at the end the elytra are rugose in consequence of a very dense and confluent sculpture, with the exception of two narrow costae originating from the shoulder (the inner one much more distinct) and the apex of the sutural interstice which are smoother; the shoulders are pointed, the outer margin of the elytra minutely crenulate, and the striae and rugose portion provided with short erect fulvous hairs.

The under surface and legs sparsely covered with short erect fulvous hairs; the jugulum and mentum shining and covered with large and deep punctures which are wider apart on the jugulum; on the basal portion of the latter a narrow but deep transverse furrow occurs in the smallest specimen (that from Serdang). The lateral portions of the head are very shining and show a few large punctures; the base is finely rugose as well as the middle of the prosternum, the sides of which are, however, very shining, nearly impunctate; the centre of the metasternum is finely and distantly punctate, the rest shows a somewhat reticulate sculpture; the epipleural fold of the elytra has an indistinct reticulate sculpture. The abdomen is rather strongly and equally punctured; the lateral margins of the 2nd and following segments are thickened and glossy, widened out on the last segment where this margin is notched at the apex. The anterior tibiae are serrated along the outer margin, the intermediate and posterior ones armed with two spines, one about the middle, the other (the smaller one) between the middle and the base.

Aegus capitatus Westw. is as yet recorded as inhabiting Malacca, Prince of Wales' Island, Sumatra, Banca and Borneo, whereas the allied *Aegus labilis* Westw. (? *parallelus* Hope), a species known to me by description and figure only, originates from Darjeeling.

NOTE XLIX.

THE SPECIES OF LUCANOID COLEOPTERA HITHERTO KNOWN AS INHABITING THE ISLAND OF SUMATRA.

ENUMERATED BY

C. RITSEMA Cz.

Hexarthrius Hope.

Rhinoceros Oliv. (= *Chaudoiri* H. Deyr.). — Without more definite locality, in Mus. Leyd.
Deyrollei Parry. — Sipirok, in Mus. Leyd.

Metopodontus Hope.

cinnamomeus Guér. — Solok, in Mus. Leyd.
Mohnikei Parry. — Deli, in Mus. Leyd.
occipitalis Hope. — Various localities, in Mus. Leyd.
sericeus Westw. — Deli, in Mus. Leyd.

Prosopocoelus Hope.

mysticus Parry. — Kepahiang and Deli, in Mus. Leyd.
Rosenbergii Voll. — Solok, in Mus. Leyd.
forceps Voll. — Without more definite locality, in Mus. Leyd.
forficatus Albers. — Sipirok, teste Albers: Deuts. Ent. Zeits. 1889. p. 232.

Cyclommatus Parry.

faunicolor Westw. — Palembang and Deli, in Mus. Leyd.
elaphus Gestro. — Mt. Singalan, teste Gestro: Ann. Mus. Civ. Gen. 1881. p. 309.

Odontolabis Hope.

Dalmani Hope. — Various localities, in Mus. Leyd.
Wollastoni Parry. — Lahat, in Mus. Leyd.

Ludekingii Voll. — Palembang, in Mus. Leyd.
Lacordairei Voll. — Various localities, in Mus. Leyd.
Castelnaudi Parry. — Solok, in Mus. Leyd.
latipennis Hope (= *Dejeani* Reiche). — Without more definite locality, in Mus. Leyd.
gazella Fabr. (= *bicolor* Oliv.). — Various localities, in Mus. Leyd.
Sommeri Parry (= *Lowei* Gestro). — Deli, in Mus. Leyd.

Chalcodes Westw.

aeratus Hope. — Various localities, in Mus. Leyd.

Neolucanus Thoms.

Lansbergii Leuthn. — Eastern Sumatra, teste Leuthner: Mon. Odont. p. 421.

Ditomoderus Parry.

mirabilis Parry. — Rawas, in Mus. Leyd.

Eurytrachelus Thoms.

Titan Boisd. — Various localities, in Mus. Leyd.
Alcides Voll. (= *eurycephalus* Gestro). — Various localities, in Mus. Leyd.
purpurascens Voll. — Various localities, in Mus. Leyd.
Hansteini Albers. — Various localities, in Mus. Leyd.

Dorcus Mc. Leay.

Parryi Thoms. (= *de Haani* Voll.). — Various localities, in Mus. Leyd.

Hemisodorcus Thoms.

passaloides Hope. — Palembang and Deli, in Mus. Leyd.

Gnaphaloryx Burm.

taurus Fabr. — Various localities, in Mus. Leyd.
squalidus Hope. — Deli, in Mus. Leyd.
tricuspis Rits. — Solok, in Mus. Leyd.
perforatus Rits. — Without more definite locality, in Mus. Leyd

Aegus Mc. Leay.

capitatus Westw. — Various localities, in Mus. Leyd.

malaccus Thoms. (= *rectangulus* Voll.). — Various localities, in Mus. Leyd.

myrmidon Thoms. — Conf. Parry's Catal. 2nd ed. 1870. p. 112.

ogivus H. Deyr. — Various localities, in Mus. Leyd.

chelifer Mc. Leay. — Without more definite locality, in Mus. Leyd.

Leeuweni Rits. [1]) — Solok, in Mus. Leyd.

fornicatus Albers. — Sipirok, teste Albers: Deuts. Ent. Zeits. 1889. p. 238.

Nigidius Mc. Leay.

Hageni Rits. — Deli, in Mus. Leyd.

Figulus Mc. Leay.

mediocris H. Deyr. — Deli, in Mus. Leyd.

marginalis Rits. — Various localities, in Mus. Leyd.

Beccarii Gestro. — Mt. Singalan, teste Gestro: Ann. Mus. Civ. Gen. 1881. p. 338.

Cardanus Westw.

sulcatus Westw. — Deli, in Mus. Leyd.

Whereas 20 species are recorded by Dr. Gestro in his tabular view of the geographical distribution of the Lucanidae in the Eastern Archipelago (Ann. Mus. Civ. Gen. 1881) as inhabiting the island of Sumatra, the present enumeration contains the names of 45 species.

Moreover the following species are said to occur also in Sumatra, but I think these statements are based either upon incorrect identification or upon inexact information about the habitat.

Prosopocoelus tragulus Voll. — Erroneously described from the Leyden Museum as a Sumatran species. The type-

1) In the description of *Aegus fornicatus* Albers (Deuts. Ent. Zeits. 1889. p. 238) the author says (p. 240) that in my description of *Aegus Leeuweni* no mention is made of the shape of the hinder angles of the prothorax. It now may be said here that they are faintly emarginate.

specimens were inexactly labelled »Ludeking, Sumatra" in stead of »Ludeking, Ternate."

Odontolabis Cuvera Hope. — Two males and a female of this species in the Leyden Museum are (doubtless inexactly) labelled »Muller, Sumatra."

Eurytrachelus bucephalus Perty. — The ♂ specimen from Sumatra (Ludeking) recorded by Snellen van Vollenhoven under the above name belongs to *Eurytrachelus Titan* Boisd.

Eurytrachelus saiga Auct. (= *Gypaëtus* Casteln.) is recorded by Parry (and after him by the Authors of the Munich Catalogue and Dr. Gestro) as inhabiting Sumatra. I believe, however, this statement to be based upon incorrect identification of specimens of the Sumatran *Eurytrachelus purpurascens* Voll. (? = *elaphus* Herbst).

Aegus acuminatus Fabr. is likewise recorded by Parry as a Sumatran species. Most probably, however, these specimens belonged to the Sumatran *Aegus ogivus* H. Deyr.

Aegus impressicollis Parry. — Four specimens (three males of the varietas minor and a female) brought home from Sumatra by the Dutch Scientific Sumatra-Expedition were sent back by Parry under the above name. A careful examination, however, convinced me that these specimens belong to *Aegus ogivus* H. Deyr.

Three other species, recorded by the authors as coming from Sumatra, are unknown to me, viz. *Lucanus* (*Aegus*) *lunatus* Weber, *Lucanus* (*Aegus*) *inermis* Fabr. and *Lucanus* (*Figulus?*) *punctatus* Fabr.

On the other hand I am acquainted with an unnamed Sumatran species of *Prosopocoelus* (a ♀ from Deli in the Leyd. Mus.), *Cyclommatus* (a ♀ from Deli in the Leyd. Mus.) and *Aegus* (a ♂ from Mt. Singalan in the Genoa Museum.

Finally three species of Lucanidae are described from Nias, an island west of Sumatra, which species perhaps may also belong to the Sumatran fauna, viz. *Cyclommatus Maitlandi* Parry (not identical with *C. faunicolor* Westw.), *Odontolabis gracilis* Kaup and *Odontolabis inaequalis* Kaup.

NOTE L.

A NEW JAVANESE SPECIES OF THE BUPRESTID GENUS APHANISTICUS, LATR.

DESCRIBED BY

C. RITSEMA Cz.

Aphanisticus Krügeri, nov. spec.

The nearest ally of this species will prove to be *A. paradoxus* H. Deyr. from the island of Makian (Ann. Soc. Ent. Belge. VIII. p. 223, and p. 227, pl. 4 fig. 20).

It has a length of about 3—3½ mm. and is of a blackish bronze colour, bright bronze on the head and pronotum. — The whole insect is covered with an extremely fine and dense sculpture which is only visible with the aid of a lens of strong power.

The head is short, narrowly and rather shallowly excavated between the eyes, the inner orbits slightly produced in front, which makes the head (seen from above) angularly notched at the anterior margin. It is smooth, provided with a few large but shallow punctures at the bottom of the frontal excavation and on the cheeks.

Prothorax transverse, widest about the middle, and wider at the base than at the tip; the sides flattened, regularly rounded, and very slightly (almost inconspicuously) constricted just before the base; the anterior angles acute and protruding, the basal ones subrectangular and with the margins turned upwards; the base bisinuate, provided in the middle with a broadly rounded lobe; the strongly convex disc is separated from the anterior margin by an impressed line of large but shallow punctures and from the basal lobe by a distinct transverse impression; the disc

itself is divided behind the middle by a transverse impression which is interrupted in the middle. The pronotum is smooth showing only a few shallow punctures in the transverse impressions and on the flattened sides. The scutellum is small and has a regular triangular shape with acute apex.

The elytra at the base as wide as the base of the thorax, the lateral angles angular, the sides parallel as far as half their length (slightly sinuated behind the shoulders), then obliquely narrowing in slightly convex lines till a little before the apex where they become parallel; the apices subtruncate with broadly rounded external angles; the shoulder-region prominent in consequence of an impression between it and the lateral margin, and the suture on the greater apical third raised in consequence of an impression which accompanies it. The sculpture of the elytra is subject to some variation: 1. the elytra are covered with large but ill-defined punctures which are arranged in longitudinal rows and which become less and less distinct towards the end and are nearly absent along the apical $^3/_4$ of the sutural region; 2. the punctuation is very indistinct and confluent and only present on the basal fourth; 3. no distinct punctuation but traces of raised longitudinal lines on the basal half; 4. the raised longitudinal lines very distinct and continued till a little before the apex.

Under surface and legs smooth and shining, the sternum and the two basal segments of the abdomen provided with some very shallow punctures.

Of this species I received a few specimens, together with larvae and pupae, from Dr. Krüger at Kagok (Tegal: Java) to whom the species is dedicated. The larvae were found mining in the under surface of the leaves of sugar-cane, where they undergo also their transformations. They are allied to those of *Aphanisticus emarginatus* Fabr. (E. Perris, Larves de Coléoptères. (Paris, 1878) p. 149—153; pl. VI, fig. 182—188) but remarkable by their being deeply constricted between the segments.

NOTE LI.

DESCRIPTION OF A NEW SPECIES OF DRILLIA.

BY

M. M. SCHEPMAN.

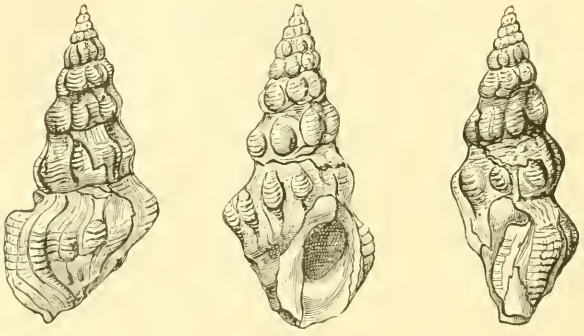
Drillia (*Clavus*) *albotuberculata*, Schepman.

Shell elongate, dark fleshy brown, with large white rib-like nodules and a white infra-sutural line; whorls 10, the apical ones a little eroded, smooth, the next 2 with rather indistinct ribs, the rest with conspicuous white nodules, which become larger up to the last whorl; on this whorl, which is somewhat oblique, they are smaller on the ventral side, it shows a very large nodule before the aperture and a second row of much smaller ones, which are not visible on the upper whorls. The surface of the shell is covered with faint spiral lirae, which are more distinct on the nodules. Suture linear, irregular in consequence of the nodules of which there are 9 on the last whorl, besides 12 of the second row, and 6 or 7 on the upper whorls, where they occupy nearly the whole breadth, except a narrow zone at the upper part of each whorl. Aperture rather small, the interior white with fleshy brown spots near the margin, sinus large, rounded, not deep, lip thin, arcuate and prominent, slightly crenulate. Canal very short and large, columella slightly curved, with a brown callosity, its lower extremity produced, near the suture with a strong tubercle.

Length 42, diam. 20 mill. Length of the apert. 17 mill.

Habitat unknown.

This species may be easily recognised by the strong white nodules, which cover nearly the whole surface. After careful research in the monographs of Kiener, Reeve and Weinkauff, I sent my specimen to Mr. E. A. Smith in London, who was kind enough to compare it with the specimens in the British Museum, and who agreed with me in considering it as a new species.



Drillia (*Clavus*) *albotuberculata*, Schepman.

NOTE LII.

ON SOME SUMATRAN COLEOPTERA WITH DESCRIPTION OF A NEW GENUS AND SPECIES OF LONGICORN.

BY

C. RITSEMA Cz.

Some days ago I received from Mr. J. D. Pasteur of Padang Sidempoean (res. Tapanoeli, Western Sumatra), a few Coleoptera presented to him by Mr. K. E. Keil, a military surveyor of the topographical service, who captured them in March of the present year in the neighbourhood of the above locality, on the eastern summit of Mt. Loeboe Raja at an elevation of about 2000 M. above the level of the sea.

These beetles, one of which proved to be new to science, belong to the following species:

1. *Odontolabis Lacordairei* Voll. — A female of the variety without the round orange-red spot on the front angles of the prothorax, and with the black suture as narrow as in the male. It has a total length of 38 mm. — Another, somewhat larger female specimen (41 mm.), presented to the Museum by Dr. Klaesi and likewise originating from Western Sumatra, shows faint traces of the red spots on the pronotum, and a suture narrowly edged with black. — A large series of males and both forms of the female (typical form and variety) has been sent over by Mr. J. A. N. Schagen van Leeuwen from Kotta Zuydewijn near Solok (Western Sumatra).
2. *Aceraius emarginatus* Fabr. — Two specimens.
3. *Xylotrupes Gideon* Linn. — Two females.
4. *Macronota Ludekingi* Voll. — Four males and three

females. — The type-specimen of this species is a male. The female has been described by Dr. Gestro (Ann. Mus. Civ. Gen. 1879. p. 10) under the name of *Macronota sumatrana*. — Both sexes were also found by Mr. Schagen van Leeuwen at Kotta Zuydewijn.

5. *Pseudochalcothea virens* Rits. (= *Bockii* Lansb.). — One male and two females. — The female alone was known up to this date: Sumatra-Expedition, Singkarah; van Lansberge, Ajer Mantjoer; Schagen van Leeuwen, Solok; Dr. Klaesi, Padang. The male differs from it (besides by the common sexual differences, viz. narrower shape, longer antennal club, longitudinally impressed abdomen) by having elongate tarsi, slender and elongate unarmed front tibiae, slightly curved middle tibiae, and hind tibiae which are feebly curved (the concavity on the outer side) and provided on the middle of the inner side with a compressed and acutely pointed curved appendage, which is obliquely directed inwards and backwards and reaches to the end of the tibia. Moreover the inner apical spur of this pair of tibiae is subacute, not broadly truncate at the apex as is the case in the female. Finally the sutural notch at the end of the elytra and the impression at the end of the pygidium is deeper, and the apical ventral segment is shorter and nearly impunctate. — The shape of the mesosternal process seems to be not quite constant in this species, at least in my Loeboe Raja specimens it is prolonged at the tip and consequently more acute with feebly sinuate sides; moreover the tibiae and tarsi in these specimens are not bright coppery but green with a faint golden hue on the upper side, and the palpi and antennae are dark piceous with metallic green tinges in stead of bright reddish brown.

6. *Campsosternus rosicolor* Hope var.? — One specimen.

7. *Ananca* spec. — A very mutilated specimen of a large cinnamon coloured species which has the legs slightly infuscate.

8. *Chloridolum Klaesii* Rits. — A single female specimen. — This species seems to be somewhat variable as to the sculpture of the head and pronotum. On the former the double

curved transverse line at the base of the clypeus is wanting in this female, whereas the transverse striae on the pronotum are more distinct and occupy nearly the whole surface. Moreover the bare stripes on the elytra are metallic green, not coppery as in the type-specimens.

9. *Pseudanhammus* (n. g.) *Keili*, nov. spec. — A single male specimen.

It is not without some hesitation that I propose a distinct generic name for this, I believe undescribed species of Monohammid. After a careful examination I could find no better place for my insect than in the genus *Anhammus* or *Monohammus* with which it has the majority of characters in common, viz. a declivous mesosternum which is neither produced nor tubercled, a strongly spined thorax, eyes of moderate size and not approximate in front, elongate antennae, a scape with a cicatrix, the head subquadrate (not transverse) in front, etc. From the former genus, to which it bears a strong resemblance in the habitus, it differs, however, by the want of a tooth at the shoulders, and by the different situation of the thoracical spines which are placed about the middle of the sides. From the latter genus it differs by the strongly granulate base and shoulders of the elytra, which granules are gradually replaced by deeply impressed punctures which are arranged in longitudinal rows and become less and less distinct towards the end; moreover by the shape of the thoracical spines which are slender and obliquely directed upwards. Finally the new genus differs from both by the different conformation of the prosternum between the anterior coxae, this being not rounded but wedge-shaped, perpendicularly raised to the level of the coxae, and furrowed along the middle of the whole front side which gives the top a bipartite appearance.

The generic name of the present insect is derived from its strong resemblance to a dwarf-specimen of *Anhammus Daleni* Guér. The specific name is given in honour of its captor.

Length, from the top of the antennary tubers to the end of the elytra, 20 mm.; breadth at the shoulders 7 mm. — Black, with the antennae (the scape excepted) dark brown. Head, thorax, under surface of body, and legs (with the exception of the tarsi which show a bluish grey pile) densely covered with a pale ochreous pubescence, variegated with bare dots which are irregularly confluent on the sides of the abdomen; the antennae are likewise covered with a pubescence which is pale ochreous on the scape and 3rd joint, but more greyish on the basal-, brown on the apical half of the succeeding joints. The elytra are variegated with irregular spots of a very dense pale ochreous pubescence, which spots are more or less confluent in a transverse direction, so as to form three very irregular bands, one across the base including the densely pubescent scutellum, the 2nd before, the 3rd behind the middle; moreover the elytra are sprinkled all over with small dots of a looser but similarly coloured pubescence.

The sculpture of the head is concealed by the pubescence, with the exception of an impressed mesial line extending from the front margin up to the front margin of the thorax. The head is triangularly concave between the antennary tubers which are prominent and, at their base, only separated by the smooth mesial line. The cheeks are as high as the inner orbit of the lower lobe of the eyes, the face subquadrate, broad but not transverse. The antennae twice as long as the body; the scape as long as the 6th joint and gradually thickened on the outside behind the middle, which conformation gives it a somewhat curved appearance; the cicatrix rather large, pubescent, not completely margined at the inside; the 3rd joint the longest, the 4th slightly longer than the 5th, this latter slightly longer than the 6th which is equal in length to each of the succeeding joints, the apical one excepted which is nearly as long as the 3rd.

The thorax has one frontal and two basal grooves parallel with the margins; the disk is somewhat uneven and

shows a few irregularly placed hair-bearing granules, and in the centre a few wrinkles. The lateral spines are placed about the middle and obliquely directed upwards; they are long, rather slender and acute and glossy black. The scutellum is very broadly rounded posteriorly.

The elytra are gradually narrowed towards the end; they are provided at the base, especially on the prominent and somewhat compressed shoulders, with numerous glossy granules which are gradually replaced by deeply impressed punctures arranged in longitudinal rows and becoming less and less distinct towards the end. At the base, between the shoulders and the scutellum, a feeble crest is present which is beset with glossy granules. The apices are narrowly truncate with very blunt angles.

The bare dots on the under surface and legs are impunctate. The apical ventral segment is longer than the preceding one, and broadly truncated posteriorly with rounded lateral angles.

10. *Thysia tricincta* Casteln. — A single specimen.

To this lot Mr. Pasteur joined some Butterflies [1]) from Padang Sidempoean (situated at an elevation of about 1000 feet above the level of the sea) and three insects captured (likewise by himself) at the Upper Bila, during a journey from Padang Sidempoean to Deli.

One of these specimens is identical with the larva described and figured in 1831 by Perty in his »Observationes nonnullae in Coleoptera Indiae orientalis" (p. 43, fig. 8 and 9), and which is said to be that of an *Episcapha*-species. It was found by Mr. Pasteur in dense forest, slowly walking on a fallen tree, and has, according to its captor, after death undergone no change whatever, neither in form nor coloration.

The second is a specimen of Lanternfly (*Hotinus pyrorhinus* Donov.). Mr. Pasteur writes me that he had kept

1) *Ornithoptera Amphrysus* Cram., *Papilio Memnon* Linn., *Papilio Antiphus* Fabr., *Papilio Polytes* Linn., and *Papilio leucothoe* Westw.

it alive (and in good condition) during two days and nights, but that he did not observe the slightest luminosity in it.

The third is a specimen of a very interesting Longicorn, viz. *Bradycnemis velutina* C. O. Waterh., a species of which the native country was not yet known with certainty.

P. S. In a recent paper on new Coleopterous insects from Mount Kinibalu, North Borneo (Proc. Zool. Soc. London. 1889. p. 383) Mr. H. W. Bates describes several new species of Cetoniids which partly belong to new, partly to already known genera. Among the latter are species of the genus *Plectrone* which is regarded by Mr. Bates as a mere section of the genus *Chalcothea*. Moreover Mr. Bates supposes my genus *Pseudochalcothea* to be synonymous with *Plectrone*. This latter supposition may be correct, the first is certainly erroneous.

Though the materials belonging to these genera are not very extensive in our Museum, I believe to have found a good characteristic that, besides the margined pronotum and, in the ♂, the armed hind tibiae, will serve to distinguish the genus *Plectrone* (and *Pseudochalcothea*) from *Chalcothea*. In the ♀ of *Plectrone* (and *Pseudochalcothea*) I find the end of the upper side of the hind tibiae bicuspidate, whereas in the ♀ *Chalcothea* it ends in a single spine.

The distinctive characteristics thus contrast as follows:

I. Sides of pronotum not margined. Hind tibiae in the ♂ simple, their upper margin in the ♀ ending in a single spine . . . . . *Chalcothea.*

II. Sides of pronotum margined. Hind tibiae in the ♂ provided on the inner side with a compressed spur or appendage, their upper margin in the ♀ bicuspidate at the end . . . . . *Plectrone*, *Pseudochalcothea.*

NOTE LIII.

NEW SPECIES OF HEXAGONIA (CARABIDAE) FROM THE MALAY-ISLANDS.

DESCRIBED BY

J. R. H. NEERVOORT van de POLL.

Besides *H. Bowringi* Schaum, from Poeloe Penang and of which I possess a specimen labelled »Sumatra", no species of *Hexagonia* have been recorded from the Indo-Malayan Region. I have now to add three more species and two of them have proved to be new to science, whilst one seems to be identic with *H. Kirbyi* Schm. Göb. from continental India (exact locality somewhat doubtful). All these species have been taken in Java, but one of the new species (*nigrita* m.) also occurs in Sumatra. Mr. Th. Lucassen sent over to the Leyden Museum two specimens of *H. Kirbyi* Schm. Göb., together with three examples of a new species (*Lucassenii* m.) captured in two different localities, but all under similar circumstances, hidden in the sheathes formed by dead leaves of the sugar-cane.

Hexagonia nigrita, v. d. Poll.

Nitida, nigra, antennis, mandibulis, palpis pedibusque piceis. Caput inter antennas late bi-impressum, pone oculos fossula profunda, in vertice linea curvata fossulas postoculares conjungente. Prothorax capite haud latior, subcordiformis, angulis anticis obtuse rotundatis, lateribus sat rotundatis ante basin nonnihil emarginatis, margine basali recta, angulis posticis quadrangularibus; in disco linea lata profunde impressus, juxta margines laterales carinula instructus et ante basin utrinque impressione lata subrugosa. Elytra prothorace duplo latiora, humeris valde rotundatis, lateribus fere rectis, parallelis, ad apicem conjunctim late rotundata; subtiliter punctato-striata, intervallis planis, levibus, intervallo quinto singulo, intervallo tertio tribus punctis magnis,

impresso. Subtus fere levis, segmento ultimo ventris subtiliter striolato-rugoso, ad marginem utrinque punctis piliferis tribus, instructo.

H. Bowringi Schaum, *proxima sed statura majore, prothorace multo angustiore, valde distincta.*

Long. $10^1/_2$—$11^1/_2$ mm.

Habitat: Batavia (Java), Highlands of Padang (Sumatra).

Nitid black with the antennae, the parts of the mouth and the legs with the coxae piceous or brown. Head large, smooth, between the antennae with two broad shallow impressions, united in front by an impressed transverse groove, behind the eyes with a deeply impressed pit, both pits united by a more or less visible shallow arcuate impression on the vertex. Antennae long, extending beyond the base of the thorax. Prothorax not broader than the head, subcordiform, the front angles rounded, the sides rounded and moderately emarginate before the posterior angles, which are almost quadrangular, the basal margin straight; the disc rather smooth, very faintly wrinkled in a transverse direction, with a deep and broad linear impression in the middle, not quite reaching the front and basal margins, just along the lateral margins provided with a fine costa and along the innerside of the costae with a broad impression, very conspicuous near the base but becoming the more and more obsolete towards the top. Elytra twice as broad as the thorax at the base, the shoulders obsolete and broadly rounded, the sides almost straight and parallel, at the apex gradually rounded with a slight emargination before the top; striated, the striae faintly punctate, the punctures increasing in size near the margins, the intervals plain and impunctate except three large punctures on the third interval, one close to the base, an other below the middle and the third near the apex, and a single pit on the fifth interstice near the top. Underneath rather smooth, a few large punctures on the prosternum and the last ventral segment rugosely striated and provided on each side of the upper margin with three piliferous punctures.

Closely allied to *H. Bowringi* Schaum, but that species is considerably smaller and has a much larger and more heart-shaped thorax and shorter antennae, which only extend slightly beyond the middle of the thorax. Besides its being a trifle smaller I cannot find any difference between my Javan and Sumatran specimens.

Hexagonia Lucassenii, v. d. Poll.

Minor, angusta, nitida, rufo-testacea; capite et quinta parte apicali elytrorum brunneis; antennis, mandibulis palpisque rufis; pedibus testaceis. Caput subrugosum, in vertice levior, inter antennas obsolete bi-impressum. Prothorax cordiformis, capite haud latior, angulis anticis late rotundatis, lateribus basin versus sat angustatis, rotundatis et paullo emarginatis ante angulos posticos, qui anguli acuti paullisper prominent; rugulosus, in medio linea lata valde impressus, juxta margines laterales impressione lata, obsoleta, magis rugosa instructus. Elytra prothorace dimidio latiora, humeris valde rotundatis, lateribus fere rectis, parallelis, ad apicem conjunctim late rotundata; punctato-striata, intervallis planis, levibus, intervallo quinto singulo, intervallo tertio tribus punctis obsoletis instructo. Pars inferior sublevis, capite transversim plicato, prosterno dense punctato.

Long. 7 mm.

Habitat: Kemanglen: Tegal, Java (Lucassen!).

A small and slender species. Nitid, pale rufous with the head brown, the antennae and parts of the mouth rufous, the apical part of the elytra with a common bisinuate brown or blackish spot, entirely occupying the reflexed margin or even extending somewhat beyond it; the legs testaceous. Head between the antennae with two shallow broad impressions, united by an impressed transverse line in front, behind the eyes with a very obsolete small pit; finely rugose, punctured on the vertex. Antennae long, considerably overreaching the base of the thorax. Prothorax as wide as the head, heart-shaped, the front angles obtuse, the sides gently rounded and emarginate before

the hinder angles, which are slightly projecting and acute, the base nearly straight; the disc with a broad deep linear impression along the middle, abbreviated anteriorly and posteriorly, the lateral margins narrowly grooved, on each side at the base an oblique strong impression, coarsely punctured all over. Elytra with the shoulders obsolete and broadly rounded, the sides straight and parallel, conjointly and gradually rounded at the apex with a slight emargination before the top; rather strongly punctate-striate, the intervals plain and impunctate, except the third which is provided with three shallow large punctures, one near the base, one below the middle and an other close to the top, and the fifth interstice which shows a single puncture at some distance from the apex. Underneath rather smooth, the head finely plicated in a transverse direction, the prosternum densely punctured.

This species has some resemblance with the African *H. praeusta* Chaud. At the request of Mr. Ritsema, I have dedicated this species to Mr. Lucassen.

Hexagonia Kirbyi, Schm. Göb.

The Leyden Museum possessed already a specimen captured by Dr. de Gavere near Batavia, when recently two specimens were sent over by Mr. Lucassen from Boemiajoe (Tegal: Java) at the feet of Mt. Slamat at a height of about 1000 feet. They correspond so well with Schmidt-Göbel's description and figure (Faun. Coleopt. Birman. p. 51, pl. 2 fig. 2 [1]) that, notwithstanding the different localities, I dare not treat our Javan insect as distinct. The only character of which no mention is made in the careful description, is the presence of rows of very large and closely set transverse piceous dots on the elytra.

1) According to the Munich Catalogue, *H. apicalis* Schm. Göb. should be figured on pl. 2 fig. 1, which is quite erroneous, that species not being figured at all.

NOTE LIV.

DESCRIPTIONS OF THREE NEW SPECIES OF THE GENUS PHYSODERA (CARABIDAE).

BY

J. R. H. NEERVOORT van de POLL.

The genus *Physodera* has been established already in 1829 by Eschscholtz for a species (*P. Dejeani* Esch.) with very singular inflated sides of the thorax. Twenty years afterwards Major Parry added a second species (*P. Eschscholtzi* Parry) to the genus, which entirely wants that peculiarity, however, in all other respects agreeing perfectly well with the type of the genus. Both species have been originally described from the Philippine-Islands, but Major Parry made already mention that he himself possessed a specimen of *P. Eschscholtzi* from Ceylon. Subsequent explorations have shown that they are both very widely distributed. Schmidt Göbel in his Faunula coleopterorum Birmaniae" records *P. Dejeani* Esch. from Tenasserim and Dr. Hagen sent over to the Leyden Museum, specimens from East-Sumatra (Deli), together with examples of *P. Eschscholtzi* Parry, which is also known as an inhabitant of Borneo and Java. Having such a wide range, it is not surprising that these species are subject to certain modifications. The elytral colour is very variable, even specimens from one and the same locality differ within the limits of golden-bronzy to violaceous-purple. The thorax of *Eschscholtzi* I found very inconstant in outline, being considerably larger in some examples than in others, and the elytral sculpture of that species is sometimes very

distinct, sometimes quite obsolete. Recently Fairmaire described a new *Physodera* from China, Fokien, under the name of *P. Davidis* Fairm. As the whole description does not contain a single expression, which should not apply perfectly well to *P. Eschscholtzi*, and moreover, as the diagnosis is not accompanied by a single word of comparison, which should let us suppose that the author has known the existance of *Eschscholtzi*, I shall allow myself to regard *P. Davidis* Fairm., until better evidence of its specific distinctness will be given, as a mere synonym of *P. Eschscholtzi* Parry.

I shall now proceed to describe in this paper three more species of *Physodera*; two of them, originating respectively from Hongkong and Celebes, are closely allied to *P. Eschscholtzi*; whether they must be regarded as distinct species or as local forms of *Eschscholtzi*, is a matter of opinion, but looking both very different and deserving certainly a name, I do not see much harm in treating them presently as distinct. The third species, which has been already for a long time in the collection of the Leyden Museum, is labelled »Java" and is as different from the two old species, as these are mutually.

Physodera parvicollis, v. d. Poll.

Oblongo-ovata, subconvexa, supra nitidissima, capite prothoraceque obscure viridi-aenescentibus, subviolaceo-interniten-tibus, elytris laete aureo-aeneis, ad suturam anguste violas-centibus et ad marginem externum viridescentibus. Subtus cum pedibus fusco-aenescens, nitida. Caput leve, inter antennas late bi-impressum; prothorax parvus (in hoc genere), lateraliter paullo angulato-ampliatus, angulis anticis rotundatis, pilosis, ante angulos posticos acute angulatus, lateribus nonnihil reflexis, in disco obsolete bi-impressus, ad latera subrugosus; elytra ampla, apicem versus vix ampliata, apice late truncato, distincte lineato-punctata, intervallis planis, levibus.

P. Eschscholtzi Parry, *proxima sed prothorace multo an-*

gustiore et elytris angustioribus longioribusque, valde discrepat.

Long. 12 mm.

Habitat: Hongkong.

Uppersurface brightly shining, head and thorax dark bronzy-green with faint purplish reflections, parts of the mouth piceous, elytra bright golden bronzy with a narrow violaceous border along the suture and a pale greenish lateral rim. Underneath and legs piceous with a bronzy hue, very shining.

Head smooth with two elongate shallow impressions between the antennae and a third small one in the middle. Prothorax rather small for the genus, the front angles broadly rounded, hairy, the sides not much angularly expanded, the edges formed by the emargination before the hinder angles very acute, the lateral margins but moderately reflexed; the disc transversely depressed beyond the middle, with two impressions in the centre united by a hardly perceptible dorsal line, the subconcave sides faintly wrinkled. Scutellum triangular, acute. Elytra subquadrate and moderately convex, with the shoulders broadly rounded, the sides slightly swelling out downwards, the apex largely truncated; distinctly punctate-striate, the punctures diminishing towards the margins and the apex, the intervals plain and smooth. Undersurface almost smooth.

This species is extremely close to *P. Eschscholtzi* Parry, but may be distinguished by its smaller prothorax, which is much narrower than in any specimen of *Eschscholtzi* I have seen, and by its elytra being narrower and altogether longer.

Physodera cyanipennis, v. d. Poll.

Oblongo-ovata, subconvexa, supra nitidissima, capite prothoraceque atris, hoc lateribus sat coerulescentibus, elytris cyaneis, subviolascentibus. Subtus cum pedibus fusco-coerulescens, nitida. Caput leve, inter antennas obsolete bi-impressum; prothorax latus, lateribus in medio obtuse angu-

lato-ampliatis, *paullo reflexis*, *angulis anticis valde rotundatis*, *pilosis*, *ante angulos posticos acute angulatus*, *in disco linea longitudinali leviter impressus*, *ad latera fere levis; elytra ampla*, *apicem versus nonnihil ampliata*, *apice late truncato*, *subtiliter lineato-punctata*, *intervallis planis*, *levibus.*

P. Eschscholtzi Parry, *proxima*, *sed elytrorum colore diversa et prothorace leviore et magis rotundato-ampliato ab angulis anticis usque ad medium*, *facilis ad distinguendum.*

Long. 12 mm.

Habitat: Bonthain, S. Celebes (C. Ribbe!).

Uppersurface brightly shining; head and prothorax black, the latter with bluish tinges chiefly at the sides; elytra dark cyaneous with strong violaceous reflections; underneath and legs piceous with a bluish hue, very shining.

Head smooth with two rather obsolete impressions between the antennae. Prothorax broad, the sides much expanded and strongly rounded in the middle, the front angles broadly rounded and pilose, the edges, formed by the lateral emargination, rather acute, the lateral margins but slightly reflexed, the disc transversely depressed posteriorly, very smooth, with the median line obsolete, the subconcave sides also almost plain. Scutellum triangular, acute. Elytra subquadrate, moderately convex, with the shoulders strongly rounded, the sides slightly enlarged towards the top, which is broadly truncated; rather finely punctate-striate, the punctures becoming smaller towards the margins and the apex which latter they do not reach, the intervals plain and smooth. Below almost smooth.

Also very close to *P. Eschscholtzi* Parry, but of a different colour, the head and thorax smoother, moreover the thorax is not so angular at the sides, more rounded towards the front angles.

Physodera amplicollis, v. d. Poll.

Ceteris minor, *angustior; sat convexa*, *nitida*, *capite nigro*, *prothorace fulvo*, *in medio nigro*, *utrinque gutta magna*

eodem colore notato, elytris atro-violaceis, apice anguste testaceo-limbato, segmento ultimo abdominis supra testaceo, guttis tribus nigris notato. Pars inferior picea, apice ventris testaceo. Caput inter antennas transversim sulcatum, juxta oculos rugosum, vertice levi. Prothorax latus, valde transversus, capite fere duplo latior, elytris paullisper angustior, lateribus valde rotundatis, ante basin nonnihil emarginatis (desunt ante angulos posticos anguli acuti), angulis anticis deficientibus (margo frontalis cum lateribus arcu confluit), in disco linea impressus, antice posticeque rugosus, lateraliter punctis sparsis instructus. Elytra apicem versus nonnihil ampliata, apice late truncato, lineato-punctata, intervallis planis, sat dense et regulariter punctatis.

Haec species structura prothoracis, colore et sculptura ab omnibus valde discrepat.

Long. 9 mm.

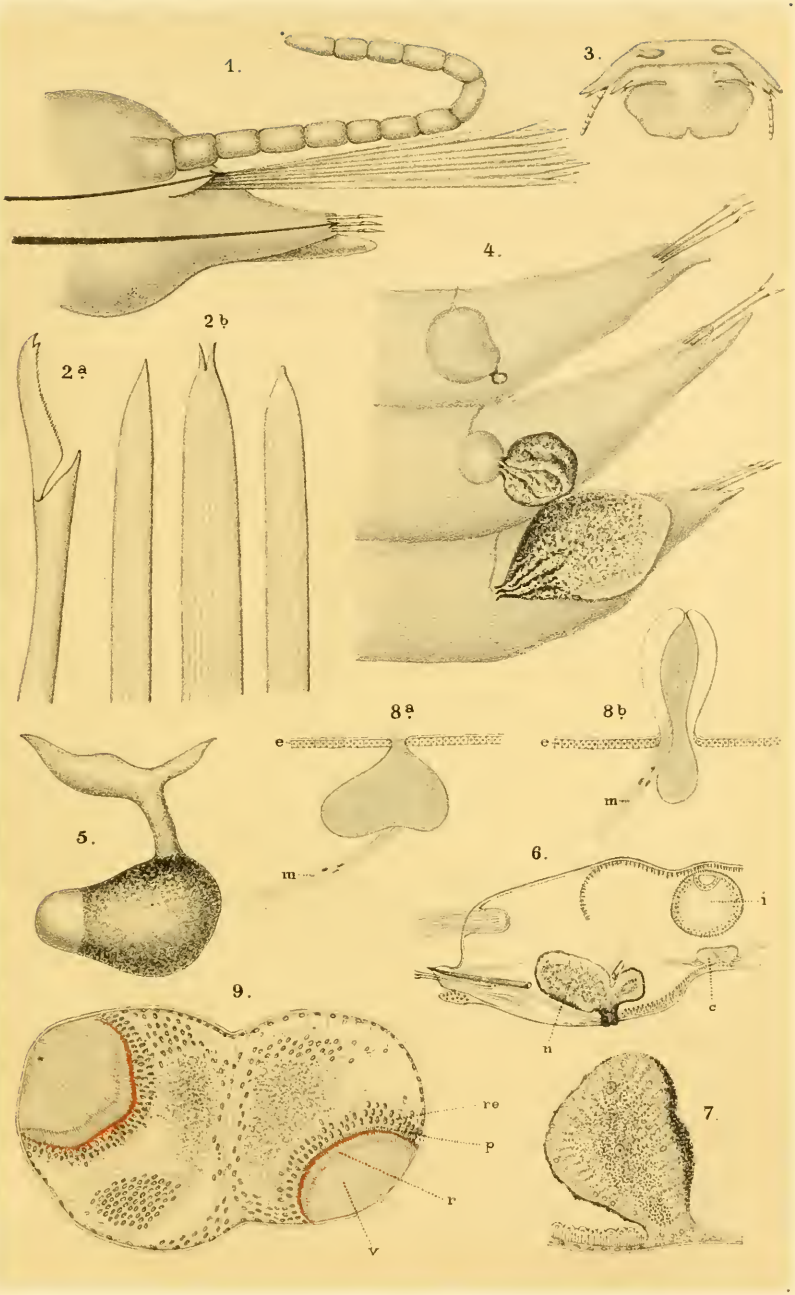
Habitat: Java (Blume!).

Smaller and narrower than any of the already known species. Uppersurface very shining, however, not quite so brilliant as usual. Head black; prothorax fulvous with a broad irregular black band along the middle and a large round black spot on each side (these markings probably very variable); elytra purplish-black with the apex edged with testaceous; the exposed upperpart of the last abdominal segment testaceous with a round black spot in the centre and another smaller one on each side; underneath and legs piceous, the last ventral segment bordered with testaceous.

Head with a transverse rather deeply impressed groove in front, finely rugose along the eyes, smooth on the vertex. Prothorax very wide, almost twice as broad as the head and but a little narrower than the elytra at the base; the sides not angular in the middle but strongly rounded in a curved line towards the front margin, by which there are no regular front angles, however, the very spot of the angles is indicated by the usual pilosity; the acute edges before the hinder angles are also absent

or perhaps it is more correct to say that they coincide with the hinder angles, and therefore the basal margin is much longer than usual; the disc with an impressed median line, abbreviated anteriorly and posteriorly, finely rugose along the frontal and basal margins, with scattered large punctures at the sides, and in the middle. Elytra moderately convex, somewhat swelling out towards the apex, which is broadly truncated, the shoulders strongly rounded; finely punctate-striate, the intervals plain, regularly and rather closely punctured, the punctures of the same size as those forming the striae, which are consequently very indistinct. Underside almost smooth.

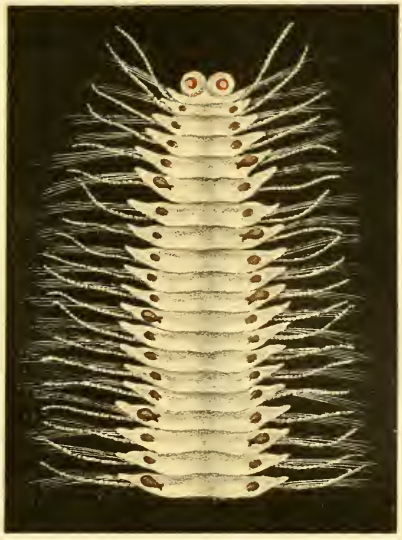
This species is very unlike any of the known species, as to colour, sculpture and structure of the thorax.



Dr. R. Horst ad nat. del. A. J. J. Wendel lith. P.W. M. Trap impr.

Malayan Syllis-bud.

1.



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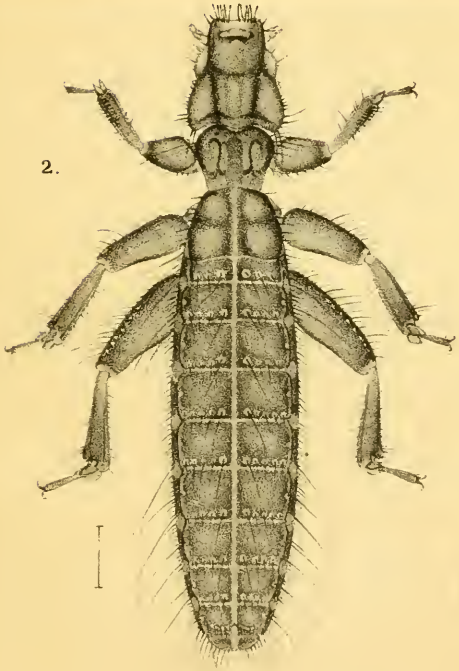


2a

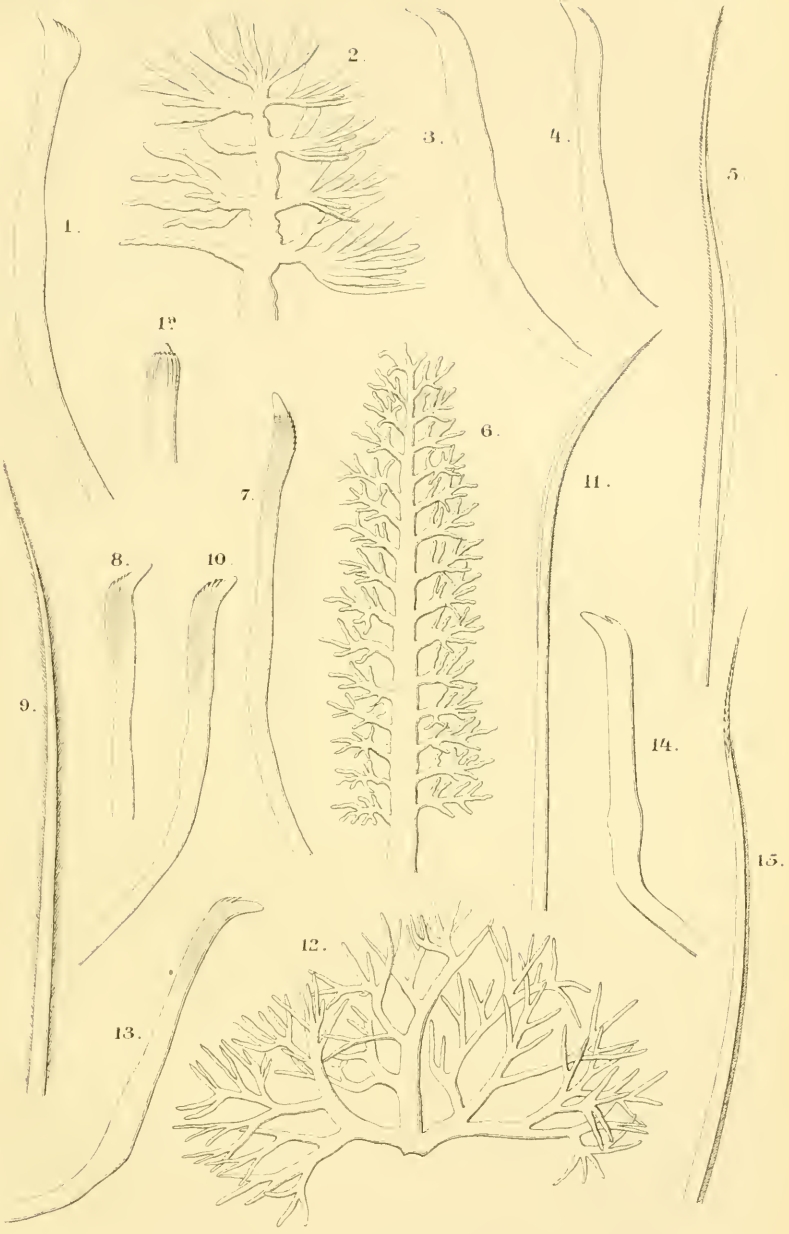
2b

2c

2d

Dr. R. Horst & Dr. E. Piaget ad nat. del. A. J. J. Wendel lith. P. W. M. Trap impr.

1. Malayan Syllis-bud.
2. Laemobothrium setigerum *Piaget*.

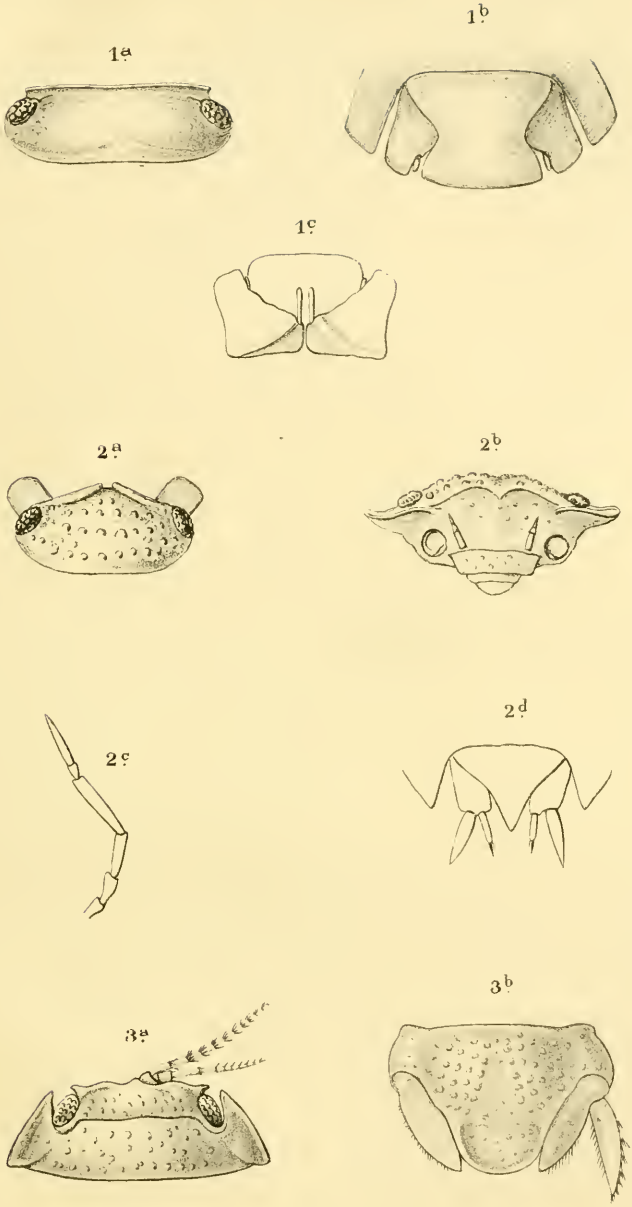


Dr. R. Horst ad nat. del. A. J. J. Wendel lith P.W. M. Trap impr.

1, 1a. Arenicola Claperedi *Levins.* 6—11. Arenicola cristata *Stimps.*
2—5. „ marina *Linn.* 12—15. „ Grubii *Clprd.*

Th. v. Hoytema ad nat. del. et lith. P.W.M.Trap impr.

Francolinus jugularis *Butt.*



A.Dollfus ad nat. del. A.J.J.Wendel lith. P.W.M.Trap impr.

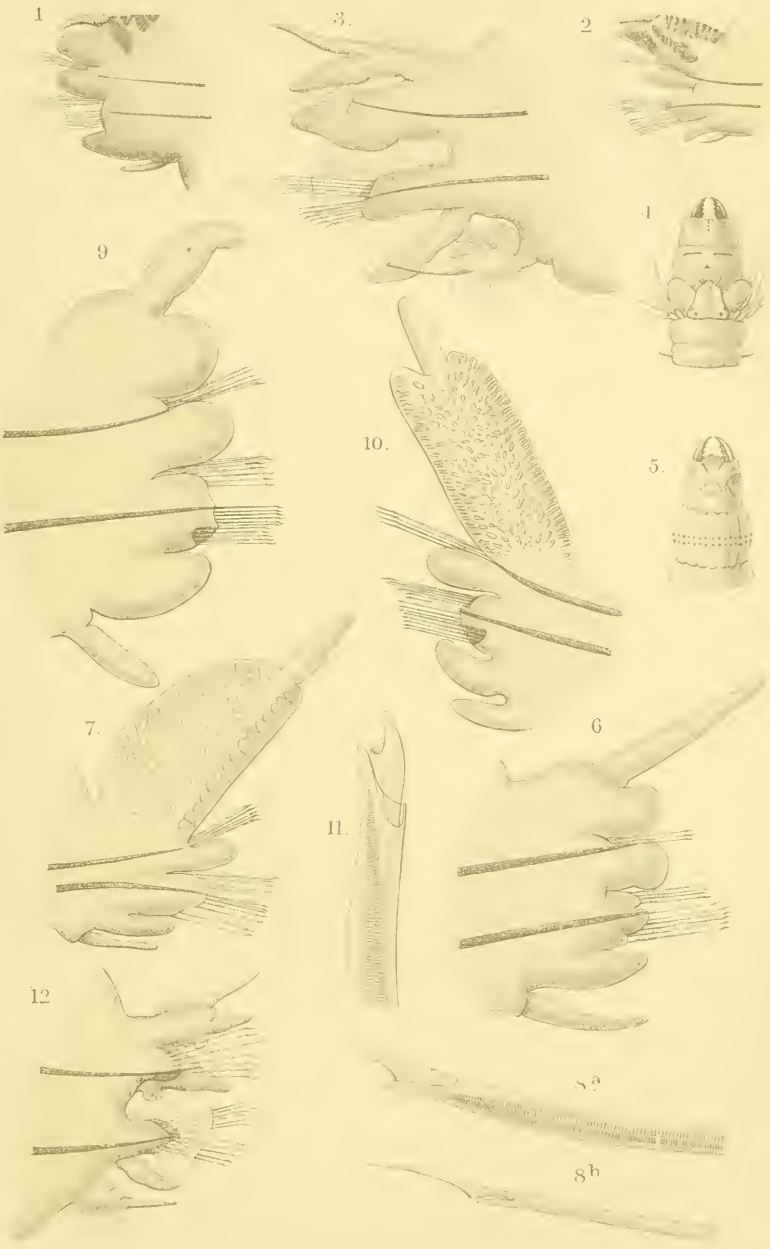
1. Armadillo javanensis *A. Dollf.*
2. Porcellio cristatus *A. Dollf.*
3 Sphaeroma Sieboldii *A. Dollf.*

$\frac{1}{2}$.

Th. v. Hoytema ad nat. del. et lith.

P.W.M.Trap impr.

Bubo lettii *Bütt.*

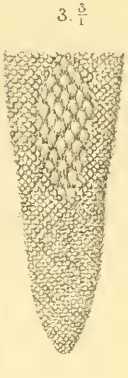


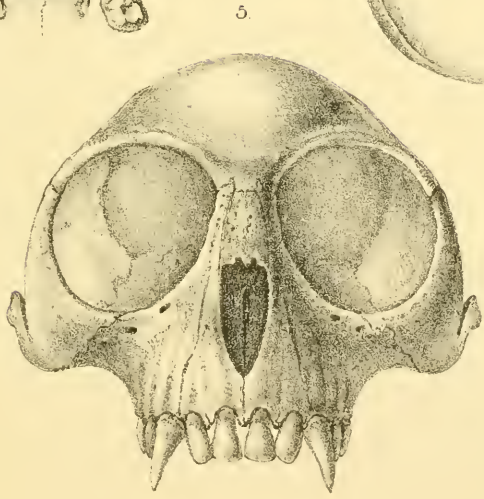
Dr.R.Horst ad nat. del. A.J.J.Wendel lith. P.W.M.Trap impr.

1—5. Nereis Oliveirae *Horst.*
6—8. „ ferox *Hans.*
9—11. Nereis Stimpsonis *Gr.*
12. „ macropus *Clprd.*

Dr.R.Horst ad nat. del. A.J.J.Wendel lith. P.W.M.Trap impr.

1—3. Nereis nigro-punctata *Horst.* 4—7. Nereis malayana *Horst.*
8—10. Nereis minor *Hans.*

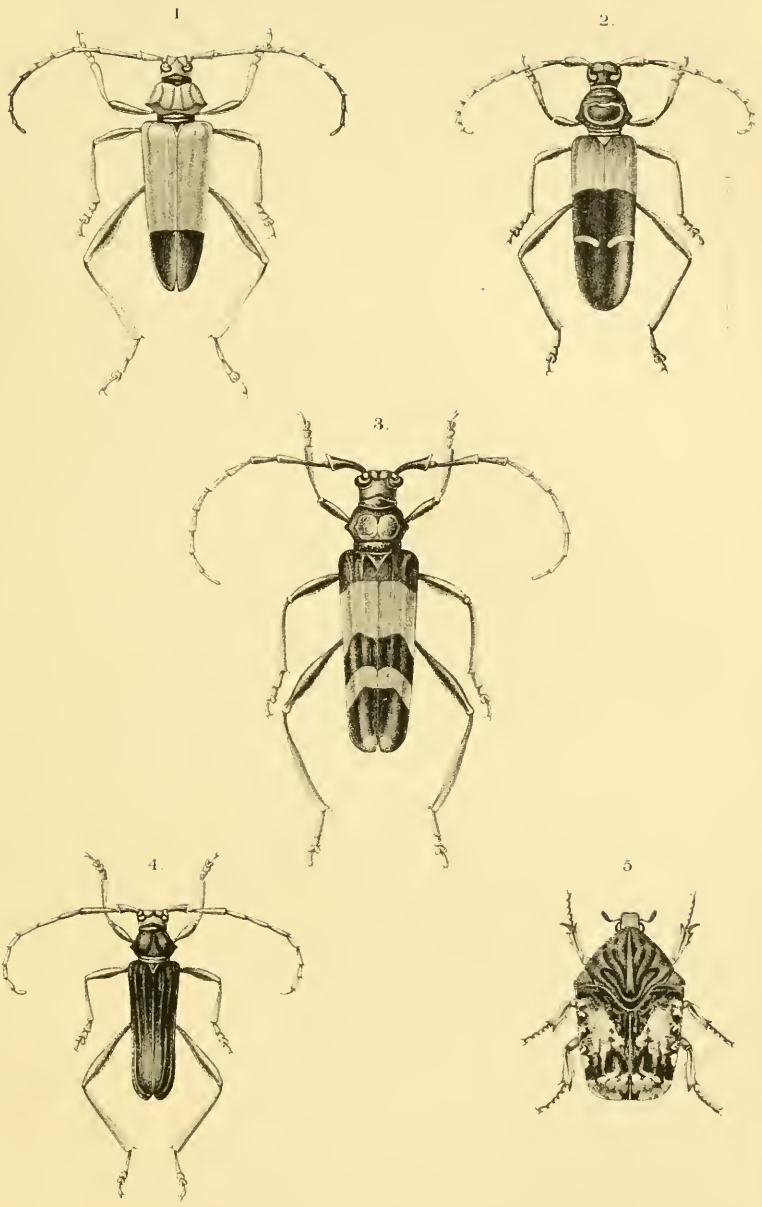




A. J. J. Wendel ad nat. del. et lith. P. W. M. Trap impr.

1, 2, 3, 4. Callinycteris rosenbergii *Jentink.*

5, 6, 7. Semnopithecus pruinosus *Desmarest.*



W. F. Jacobs ad nat. del. A. J. J. Wendel lith. P. W. M. Trap impr.

1. Pachyteria apicalis *v. d. Poll.*
2. „ Vandepolli *Rits.*
3. Aphrodisium Albardae *Rits.*
4. Callichroma chrysogaster *Rits.*
5. Gymnetis Kerremansi *v. d. Poll.*

NOTES

FROM THE

LEYDEN MUSEUM

EDITED

BY

Dr. F. A. JENTINK,
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VOL. XI.

N°. 1. January 1889.

LEYDEN
E. J. BRILL.

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PART I—1889.

N.B. Plate 4 will be published in the April-number.

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