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NOTES

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NOTES

FROM THE

LEYDEN MUSEUM

FOUNDED BY THE LATE

Prof. H. SCHLEGEL,

CONTINUED BY

Dr. F. A. JENTINK,

Director of the Museum.

VOL. XX.

BOEKHANDEL EN DRUKKERIJ

VOORHEEN

E. J. BRILL

A LEIDEN. — 1898/9.

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BOEKDRUKKERIJ voorheen E. J. BRILL, LEIDEN.

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NOTE I.

CONTRIBUTION À L'ÉTUDE
DE LA FAUNE ICHTHYOLOGIQUE DE LA GUYANE

PAR

M. LÉON VAILLANT.

La Guyane prise dans son ensemble, peut être regardée comme un pays très anciennement colonisé par les nations européennes, aussi ne doit-on pas s'étonner que sa faune et sa flore aient donné lieu à des travaux, qui ont fait époque dans la science. Toutefois en ce qui concerne l'Ichthyologie, bien que ces régions soient arrosées par des cours d'eau importants, c'est à une époque récente que l'esprit s'est porté sur l'étude de cette partie de sa population zoologique.

Sans doute depuis longues années des espèces particulières de Poissons avaient été signalées de ces contrées et les traités généraux en ont fait connaître bon nombre. Mais pour trouver un travail spécial et réellement scientifique sur ce point, il faut arriver aux recherches de Richard Schomburgk, lequel en 1841 fit paraître en deux petits volumes bien connus, l'ichthyologie de la Guyane anglaise. Ce travail fut repris par Müller et Troschel d'après ces mêmes collections accrues et complétées, lorsque, quelques années plus tard (1848), on publia in-extenso le voyage de ce célèbre explorateur.

On doit également citer les ouvrages de M. Kappler qui, ayant pendant de longues années résidé à la Guyane,

Notes from the Leyden Museum, Vol. XX.

dans la partie hollandaise, a publié en 1854 et 1881 ¹⁾ sur ce pays des travaux plutôt relatifs sans doute aux questions politiques et économiques qu'aux études scientifiques et particulièrement zoologiques, mais où se trouve cependant une liste nominative d'animaux vertébrés envoyés par lui au Cabinet d'Histoire naturelle de Stuttgart. Il y énumère 98 espèces de Poissons, l'absence de détails ne permet pas de savoir exactement dans quelles conditions ils ont été recueillis, il semble que M. Kappler les donne comme pris dans le Surinam, c'est à dire comme d'eaux douce, quoique une vingtaine d'espèces au moins puissent être bien plutôt regardées comme marines et doivent avoir été capturées au voisinage de l'embouchure du fleuve. Cependant les poissons nettement dulçaquicoles sont encore nombreux dans cette liste, notamment les Siluridæ et les Characinidæ, familles dans chacune desquelles il n'est pas compté moins de 27 espèces.

Dans l'intervalle, sans parler de travaux sur les Poissons de l'Amérique intertropicale où quelques espèces ont pu être signalées, on ne trouve guère à citer que deux notes de Bleeker, l'une sur les Silures de Surinam conservés aux Musées de Leyde et d'Amsterdam (1864), l'autre sur un *Stolephorus (Engraulis)* de la même localité (1866).

La collection que le Musée de Leyde a bien voulu confier à mon examen offre cet intérêt que la rivière Berbice, où elle a été recueillie par le Dr. C. G. Young, ne paraît pas avoir donné lieu jusqu'ici à des recherches de ce genre. Situé entre le Corentyne à l'Est, l'Essequibo à l'Ouest, ce cours d'eau semble moins considérable que ceux-ci, son parcours est estimé à 186 kilomètres, tandis

1) Kappler, 1854. Sechs Jahre in Surinam oder Bilder aus dem militairischen Leben dieser Colonie und Skizzen zur Kenntniss seiner socialen und naturwissenschaftlichen Verhältnisse. (Il a dû paraître de cet ouvrage, que je n'ai pu consulter, une édition en hollandais, 1853).

Kappler, 1881. Holländisch-Guiana. Erlebnisse und Erfahrungen während eines 43 jährigen Aufenthalts in der Kolonie Surinam. (La liste des Poissons, dont il est question plus bas, se trouve aux pages 167 et 168).

que le premier aurait environ 400 kilomètres, le second, de beaucoup le plus considérable, 965 kilomètres. On ne peut toutefois considérer cette collection comme donnant une idée complète de la faune, le nombre des sujets est évidemment trop restreint; d'autre part le point où elle a été faite, New Amsterdam, se trouve situé vers l'embouchure de la rivière Berbice et il y a par suite mélange d'espèces dulçaquicoles et marines, cependant elle renferme, comme on pourra en juger, quelques spécimens très curieux.

Voici l'énumération des espèces recueillies :

Fam. Gymnotidæ.

1. *Sternopygus carapo* (Linné).
2. *Carapus fasciatus* (Pallas).

Fam. Siluridæ.

3. *Pimelodus holomelas* Günther.
4. *Callichthys callichthys* (Linné).
5. » *littoralis* Hancock.
6. *Plecostomus plecostomus* (Linné).
7. *Loricaria maculata* Bloch.
8. » *filamentosa* Steindachner.
9. *Aspredo batrachus* Linné.
10. » *cotylephorus* (Bloch).
11. » *tibicen* Cuvier et Valenciennes.

Fam. Characinidæ.

12. *Erythrinus uniteniatus* Agassiz.

Fam. Clupeidæ.

13. *Engraulis spinifer* Cuvier et Valenciennes.

Fam. Pleuronectidæ.

14. *Achirus fasciatus* Lacépède.

Fam. Mugilidæ.

15. *Mugil incilis* Hancock.

Fam. Batrachidæ.

- 16.
- Batrachus surinamensis*
- Bloch-Schneider.

Fam. Sciænidæ.

- 17.
- Ancylodon ancylodon*
- (Bloch-Schneider).
-
- 18.
- Nebris microps*
- Cuvier et Valenciennes.

Les Poissons appartenant aux trois familles des Gymnotidæ, des Siluridæ, des Characinidæ, sont tous des eaux douces, nous ne voyons même pas ici pour la seconde de représentants du groupe des *Arius*, dans lequel se trouvent souvent des espèces marines ou tout au moins d'eaux saumâtres, comme il en est cité dans la liste de M. Kappler.

L'*Achirus fasciatus*, le *Batrachus surinamensis*, l'*Ancylodon ancylodon*, le *Nebris microps*, sans doute l'*Engraulis spinifer*, sont plutôt marins. Cependant les deux Sciénoïdes, comme nombre de poissons de cette famille, pourraient bien accidentellement remonter dans le fleuve, on peut en dire autant du *Mugil incilis*. MM. C. et R. Eigenmann dans leur Catalogue des Poissons des eaux douces de l'Amérique du Sud, ne citent cependant pas ce dernier, non plus que l'*Ancylodon ancylodon*, ni le *Nebris microps*.

Si nous comparons cette liste à celles données par Müller et Troschel, et par M. Kappler, ce qu'on trouvera rappelé à propos de chacune des espèces, on voit qu'environ huit espèces n'ont pas été signalées par ces auteurs, mais sur ce nombre trois seulement seraient nouvelles pour la faune à savoir: *Loricaria filamentosa* Steindachner, espèce récemment décrite du Rio Magdalena; *Achirus fasciatus* Lacépède, qui n'avait pas encore été signalé d'un point aussi méridional; *Mugil incilis* Hancock, celui-ci pourrait bien avoir été confondu jusqu'ici avec le *Mugil brasiliensis* Agassiz.

1. *Sternopygus carapo* (Linué).

Günther, 1870, T. VIII, p. 7.

Un exemplaire long de 330 millimètres.

Müller et Troschel ne signalent pas cette espèce, elle se trouve indiquée par M. Kappler.

2. *Carapus fasciatus* (Pallas).

Günther, 1870, T. VIII, p. 9.

Un exemplaire long de 300 mm.

Müller et Troschel ne signalent pas cette espèce, elle se trouve indiquée par M. Kappler.

3. *Pimelodus holomelas* Günther.

Günther, 1864, T. V, p. 120.

D. I, 6; A. 9.

Ce Pimelode a le prolongement occipital sensiblement plus long que large, sans qu'il atteigne toutefois le bouclier interépineux, la seconde épine de l'épiptère est faible et sensiblement plus courte que les rayons articulés qui la suivent. L'adipeuse très longue (79 mm.) est comprise environ $2\frac{1}{2}$ fois dans la longueur du corps.

Tous ces caractères le rapprochent des espèces du groupe du *Pimelodus Sebæ* Cuvier et Valenciennes et particulièrement du *Pimelodus holomelas* Günther, son adipeuse commençant à une certaine distance de l'épiptère rayonnée, et la formule de l'anale étant la même. Toutefois il diffère de toutes par l'absence de serratures au bord antérieur de l'épine pectorale, qui ne peut, par conséquent, passer pour dentelée sur les deux bords. Ceci justifierait-il une distinction spécifique? j'avoue que ne trouvant pas d'autre caractère différentiel, je crois devoir rester dans le doute.

Les deux exemplaires de la collection, à peu près de même taille, mesurent $200 + 42 = 242$ millimètres et sont donc plus petits que l'individu type, lequel atteignait 305

millimètres (12 pouces), l'absence des serratures ne peut alors, en tous cas, être attribuée à l'âge, comme le fait a été constaté chez d'autres Siluroïdes ¹⁾. Ce poisson venait de l'Essequibo (Günther, 1864, T. V, p. 120), c'est à dire des mêmes régions.

Non cité par Müller et Troschel, ni par M. Kappler. MM. C. et R. Eigenmann ne croient pas cette espèce distincte du *Pimelodus Sebæ* Cuvier et Valenciennes, dans ce cas elle aurait été trouvée par les premiers de ces auteurs dans toute la Guyane anglaise.

4. *Callichthys callichthys* (Linné).

Günther, 1864, T. V, p. 226 (sous le nom de: *C. asper* Quoy et Gaimard).

Un individu mesurant $125 + 30 = 155$ mm.

Je ne trouve à la dorsale rayonnée que la formule I. 7 et pour les boucliers latéraux 27 à la rangée supérieure, 26 à la rangée inférieure, il y a de plus un petit espace nu entre les derniers boucliers et la base de l'adipeuse. L'individu présente des caractères mixtes entre le *Callichthys callichthys* (Linné), auquel je crois devoir le rapporter, et le *C. affinis* Günther; ces deux espèces sont évidemment des plus voisines.

Non compris dans les trois espèces citées par Müller et Troschel (*C. caelatus* C. V., *C. exaratus* M. & T., *C. pictus* M. & T. = *C. longipilis* C. V.) mais cité par M. Kappler.

5. *Callichthys littoralis* Hancock.

Günther, 1864, T. V, p. 227.

Deux individus mesurant l'un $135 + 41 = 176$ mm., l'autre $110 + 34 = 144$ mm.

N'est cité ni par Müller et Troschel, ni par M. Kappler.

1) L. Vaillant, 1895. Essai monographique sur les Silures du genre *Synodontis* (Nouvelles Archives du Muséum d'Histoire naturelle, 3e Série, T. VII, p. 257).

6. *Plecostomus plecostomus* (Linné).

Günther, 1864, T. V, p. 231 (sous le nom de: *P. bicirrhosus* Gray).

Un individu mesurant $137 + 67 = 204$ mm.

Müller et Troschel ne mentionnent pas cette espèce citée par M. Kappler.

7. *Loricaria maculata* Bloch.

Günther, 1864, T. V, p. 257.

Un individu long de $230 + 58 = 288$ mm.

Kner a déjà fait remarquer (1854, p. 80), que le point où se réunissent les crêtes de la ligne latérale peut, suivant les individus, varier. Ici nous le trouvons vers la 16^e ou 17^e écaille et non à la 20^e comme l'ont dit, d'une manière trop absolue, les anciens auteurs.

Non cité par Müller et Troschel, ni par M. Kappler.

8. *Loricaria filamentosa* Steindachner.

F. Steindachner, 1878. Zur Fisch-Fauna des Magdalenen Stromes, p. 29, Pl. IX, figs. 1, 1a, 1b, 2.

C'est à ce Loricaire que je crois devoir rapporter trois exemplaires, mesurant pour le corps 142 mm. à 164 mm. (aucun d'eux n'a l'uroptère intacte).

Ils en présentent les principaux caractères tels qu'on les trouve dans l'excellente description et le très beau dessin donnés par M. Steindachner. Toutefois la disposition striée du bord postérieur du bouclier céphalique est loin d'être aussi nette que le montrent les figures ou pour mieux dire n'existe pas. Le plastron abdominal est bien formé de scutelles sur quatre rangées, mais ces rangées ne comprennent aux séries externes qu'une suite de 5 à 7 écailles, au lieu de 12. Enfin le corps est sensiblement plus court, la distance du rostre à la base de l'aiguillon dorsal

faisant le $\frac{1}{3}$ de la longueur, abstraction faite de l'uroptère, au lieu des $\frac{3}{11}$ et même presque $\frac{1}{4}$ chez les jeunes.

Malgré ces petites différences, la forme du museau, la disposition des dents, la présence et la dimension de l'échancre post-orbitaire, surtout les prolongements tentaculiformes qui ornent le bord des voiles labiaux, établissent des rapports, qui me paraissent justifier l'assimilation proposée.

Aucun des exemplaires ne présente en arrière sur les côtés de la tête de soies sensibles, ce seraient donc des individus femelles. On remarque sur tous, dans l'espace en triangle très allongé formé par les carènes latérales avant leur réunion, une série de taches sombres au nombre de cinq, régulièrement espacées.

9. *Aspredo batrachus* Linné.

Günther, 1864, T. V, p. 268.

Günther, 1864, T. V, p. 269 (*A. sicyephorus* C. V).

Sept exemplaires dont la taille varie de $300 + 18 = 318$ mm. jusqu'à $180 + 15 = 195$ mm.

Par la longueur de la tête, mesurée jusqu'à l'extrémité du prolongement interpariétal, supérieure au quart de la longueur totale (y compris la caudale par conséquent), ces Asprèdes se rapportent plutôt à l'*Aspredo sicuephorus* de Cuvier et Valenciennes. Ce caractère ne me paraît pas avoir une valeur spécifique. Un autre particularité indiquée par les auteurs de l'Histoire des Poissons pourrait être regardée comme plus importante à savoir: le pourtour des lèvres et le dessous des barbillons maxillaires garnis de points verruqueux; mais précisément dans cette série d'individus on trouve toutes les transitions entre des lèvres très papilleuses et des lèvres lisses ou presque lisses. L'Asprède à ventouses ne peut donc être regardé au plus que comme une variété de l'Asprède batrachoïde.

MM. C. et R. Eigenmann nomment cette espèce *Aspredo aspredo* Linné; l'auteur du Systema Naturæ ayant anté-

rieurement employé l'épithète de *batrachus*, cette désignation spécifique mérite d'être conservée bien que ce ne soit pas celle des dernières éditions.

L'espèce est signalée par Müller et Troschel (sous le nom d'*Aspredo laevis* Cuvier et Valenciennes) et par M. Kappler.

10. *Aspredo cotylephorus* (Bloch).

Günther, 1864, T. V, p. 269.

Un individu long de $230 + 18 = 248$ mm.

L'espèce ne se trouve pas citée par Müller et Troschel ni dans la liste de M. Kappler.

11. *Aspredo tibicen* Cuvier et Valenciennes.

Günther, 1864, T. V, p. 270.

Deux individus à peu près de même taille mesurant environ $192 + 16 = 208$ mm.

L'un d'eux (femelle d'après M. Günther) présente à la région abdominale ces prolongements spéciaux que Bloch a le premier fait connaître.

Cette observation porterait à quatre le nombre des espèces chez lesquelles aurait été authentiquement reconnue la présence de ces singuliers appendices, les précédentes étant les *Aspredo cotylephorus* (Bloch), *A. sicuephorus* Cuvier et Valenciennes, *A. batrachus* Linné¹⁾.

Grâce à M. Günther c'est sur ce dernier que nous possédons le plus de renseignements, par l'examen qu'il a pu faire d'un très remarquable individu appartenant à la collection du British Museum. Ce savant ichthyologiste en a donné une étude détaillée dans le V^e volume de son Catalogue²⁾, ses conclusions ont été résumées dans l'Introduction

1) On a vu plus haut qu'on peut élever des doutes légitimes sur la distinction établie entre ces deux dernières espèces.

2) A. Günther, 1864. Catalogue of the Fishes in the British Museum, T. V, p. 268.

à l'étude des Poissons, où se voit de plus une très belle figure de ce curieux spécimen ¹⁾).

Suivant cet auteur on doit supposer, qu'à l'époque de la reproduction, la partie ventrale aplatie de la femelle prend une structure spongieuse, c'est dans ce tissu mou et en quelque sorte aréolaire, que celle-ci par pression fait pénétrer les œufs au moment de la ponte. «Les espaces intermédiaires sont remplis par les appendices mentionnés, dont les dilatations terminales jouent un rôle essentiel pour maintenir les œufs en position.» Une fois ceux-ci éclos le tégument reprend son aspect habituel, les prolongements, qui ne seraient en somme qu'un dérivé du tissu spongieux, persistent encore quelque temps, puis finissent eux-mêmes par disparaître, tout revenant à l'état normal.

L'étude d'un certain nombre de spécimens du genre *Aspredo* conservés dans la collection du Muséum: *A. cotylephorus* (= *A. sex-cirrhis* Cuvier et Valenciennes), *A. sicuephorus*, mais en particulier de l'*A. tibicen* provenant du Berbice et dont l'état de conservation est de beaucoup meilleur que celui de tous les autres exemplaires, me conduit à des conclusions différentes. Comme toutefois en l'absence d'observations directes sur le vivant, on ne peut encore qu'émettre des hypothèses plus ou moins plausibles, j'exposerai en premier lieu les résultats de l'étude anatomique tant descriptive que générale, pour indiquer ensuite les conséquences qui paraissent pouvoir en être tirées au point de vue physiologique.

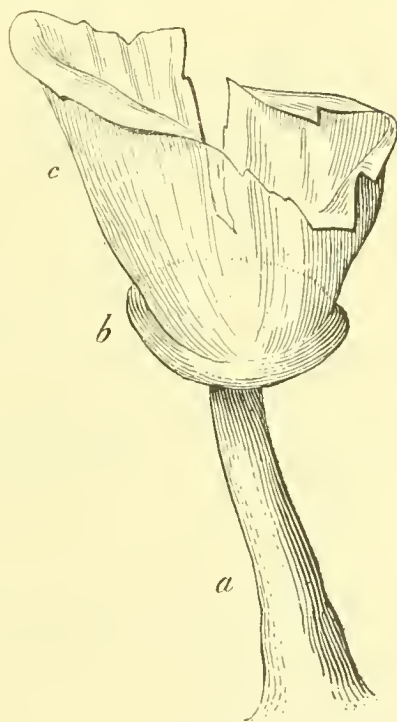
Les différents individus qui ont été jusqu'ici figurés ou observés, sauf celui du British Museum, dont il vient d'être question, ne présentent ni les uns ni les autres d'œufs bien reconnaissables et l'on n'observe que les appendices singuliers que Bloch a fait connaître. Ceux-ci ne se rencontrent jamais qu'à la face inférieure du corps, principalement sur le tégument abdominal, s'étendant quelquefois au delà de l'insertion des pectorales en avant, au delà de celle des

1) A. Günther, 1880. An introduction to the study of Fishes, p. 160a et fig. 72.

ventrales en arrière, j'en vois même sur la base du pédoncule caudal chez l'*Aspredo cotylephorus* du Muséum. On remarque aussi que cet accident peut atteindre la face inférieure des nageoires paires elles-mêmes, mais, pour les pectorales, aux rayons mous et à la membrane interradielle, non à l'épine osseuse, sur laquelle du moins je n'en vois pas, en ayant égard soit aux figures données par les auteurs, soit aux exemplaires que j'ai eu l'occasion d'examiner.

Pour préciser davantage, sur le bel exemplaire du Musée de Leyde, le ventre porte environ une soixantaine de ces appendices, je n'en vois aucun sur les pectorales, mais sur les ventrales on en observe 8 du côté droit, 5 à 6 du côté gauche.

A l'état de complet développement, et il convient pour les étudier de choisir parmi ceux de la peau de l'abdomen, l'appendice se compose de deux parties dont l'ensemble est comparable à un champignon, aussi les désignations de pied et de chapeau peuvent-elles leur être appliquées. Le premier (*a*) est plus ou moins cylindrique, se dilatant quelque peu vers la base, qui est continue avec le tégument, dont il paraît être et est en effet une dépendance, sa longueur irait jusqu'à 3.9 mm. (mesure approximative) le plus grand diamètre ne dépasserait guère 1 mm.; il est bon de remarquer, et ceci s'applique à l'ensemble des observations ici consignées, qu'il s'agit de sujets conservés depuis plus ou moins longtemps dans l'alcool. Le chapeau (*b*) en continuité directe avec le pied par le centre de sa face adhérente, est discoïde, aplati, à bords arrondis, légèrement



Oophore de l'*Aspredo tibicen*
(gross. $\frac{2}{1}$ environ. — Figure
demischématique)

a. pied; *b.* chapeau; *c.* débris
de la coquille de l'œuf

concave du côté de la face libre, le diamètre atteint environ 1.4 mm.

Mais tous les appendices ne sont pas aussi parfaits, même sur un individu donné. Un certain nombre sont réduits au chapeau immédiatement appliqué sur le tégument auquel il adhère par sa partie centrale, c'est à dire qu'ils sont sessiles. Chez d'autres au contraire, le pied plus aminci vers son extrémité, conique, au lieu d'un chapeau discoïde très développé ne porte qu'un petit bouton en sphère.

Une autre particularité importante, qui s'observe très clairement sur l'exemplaire du Musée de Leyde, mais qu'on retrouve sur d'autres individus une fois l'attention fixée sur ce fait, c'est la présence, sur les cupules sessiles et sur les chapeaux bien complets, de lambeaux lamelleux (*c*) très minces et d'une grande transparence, qui s'y rencontrent d'une manière, on peut dire, constante, sur le sujet bien conservé. Examinés à un fort grossissement ces lambeaux apparaissent comme une membrane hyaline à déchirure nette, s'ils sont repliés sur eux-mêmes, ce qui est fréquent, le point de la duplication montre une ligne à double contour, permettant d'apprécier l'épaisseur de la membrane, laquelle épaisseur serait de $10\ \mu$ à $13\ \mu$. Sur cette membrane se trouve à l'intérieur un revêtement d'à peine $2\ \mu$ d'épaisseur, irrégulièrement déposé, manquant parfois, de sorte qu'il en résulte des inégalités d'épaisseur, ce qui produit sur la membrane vue à plat des accidents d'aspect cratéiforme, les diamètres mesurés de quelques une de ces dépressions, toujours plus ou moins régulièrement circulaires, m'ont donné les dimensions extrêmes $93\ \mu$ et $24\ \mu$. Il est impossible de ne pas croire que ces lambeaux proviennent d'une membrane coquillère, enveloppe de l'œuf, la couche interne étant formée sans doute de débris de la substance vitelline restés adhérents après l'évacuation du contenu.

Il faudrait, d'après cette observation, admettre que les œufs, dans les individus dont il est ici question, n'étaient

pas placés entre les appendices fungiformes mais sur leur extrémité dilatée.

Au point de vue histologique la structure de ces oophores est très simple, c'est d'ailleurs aussi bien pour le pied que pour le chapeau celle du tégument. La partie centrale est formée de fibres conjonctives assez lâchement unies, comme dans la partie profonde du derme, on y distingue des vaisseaux. Les fibres deviennent ensuite plus serrées, formant un tissu d'autant plus dense qu'on se rapproche davantage de la partie superficielle. Il doit y avoir un revêtement épidermique, mais je dois avouer que je n'ai pu en constater l'existence, ce qui n'a pas lieu de surprendre étant données les conditions dans lesquelles les études ont été faites.

En se rappelant les formes diverses, signalées plus haut, de ces appendices, l'hypothèse qui me paraît se présenter naturellement à l'esprit, c'est qu'au moment de la ponte les œufs doivent se fixer au tégument abdominal et cela sans doute, comme pour les œufs de beaucoup d'autres poissons, par suite de la présence à leur surface d'une matière plus ou moins gluante, leur permettant de se coller sur les surfaces avec lesquelles ils se trouvent en contact. Ce qui induit à penser que la faculté adhésive réside dans l'œuf plutôt que dans les parties qui le supportent, c'est la manière jusqu'à un certain point indifférente suivant laquelle ils se fixent en dehors de la région abdominale, particulièrement sur certaines nageoires.

Le tégument en se gonflant au point d'attache formerait une cupule de réception, le chapeau; un peu plus tard se produirait une élongation des tissus sous jacents, d'où résulte la tige centrale formant le pied de l'appendice oophore fungiforme. Après l'éclosion l'enveloppe de l'œuf resterait adhérente au chapeau, puis se détacherait soit spontanément, soit par la rétraction de celui-ci passant à l'état de simple bouton, enfin le pied reviendrait également sur lui-même rentrant en quelque sorte dans le tégument, qui reprend ainsi son aspect normal.

La marche du phénomène est-elle bien celle que je propose ici hypothétiquement? des observations sur le vivant pourront, sans doute, seules décider la question, car il serait aussi possible que l'œuf effectuât son développement sur une cupule sessile et que le pied se produisit ensuite dans la marche de réintégration des tissus, ce qui pourrait expliquer la disposition observée sur l'exemplaire du British Museum présentant à la fois des œufs encore adhérents, entremêlés à des appendices fungiformes. En tout cas, d'après les faits ici consignés, ceux-ci ne seraient pas des organes protecteurs des œufs mais de véritables oophores.

Müller et Troschel ainsi que M. Kappler citent l'*Aspredo tibicen* parmi les espèces trouvées à la Guyane.

12. *Erythrinus unitaniatus* Agassiz.

Günther, 1864, T. V, p. 283.

Un exemplaire long de $170 + 32 = 202$ mm.

Espèce citée par Müller et Troschel, ainsi que par M. Kappler.

13. *Engraulis spinifer* Cuvier et Valenciennes.

Günther, 1868, T. VII, p. 394.

Deux individus à peu près de même taille mesurant environ $141 + 26 = 167$ mm.

Cuvier et Valenciennes ont attiré l'attention sur le dessin particulier que présentent les écailles, couvertes d'un réseau à mailles polygonales irrégulières, dépendance du système des canaux rayonnants.

L'espèce n'est citée ni par Müller et Troschel ni par M. Kappler.

14. *Achirus fasciatus* Lacépède.

Jordan and Goss, 1889, p. 315, Pl. IX, figs. 22 and 23.

Deux exemplaires à peu près de même taille $118 + 28 = 146$ mm.

Notes from the Leyden Museum, Vol. XX.

La détermination de ce Pleuronectoïde ne me paraît pas douteuse, l'espèce cependant n'avait pas été signalée plus au Sud que le Texas, sa présence dans la Guyane anglaise est, sous ce rapport, intéressante.

L'espèce serait donc nouvelle pour la faune mais, comme il a été dit plus haut, suivant toute probabilité elle est marine.

15. *Mugil incilis* Hancock.

Günther, 1869, Trans. Zool. Soc. London, T. VI, p. 443.

D. IV—I, 7; A. III, 9.

Ecailles: lig. lat. 42; lig. tr. 14.

Dans l'ouvrage auquel il est ici renvoyé, M. Günther a décrit très complètement cette espèce, qu'il avait d'abord été porté à confondre avec le *Mugil brasiliensis* Agassiz.

Cet auteur indique en passant le caractère fourni par l'écartement des narines. Elles partagent en effet assez exactement le museau par tiers, au lieu d'être placées l'une contre l'autre, comme elles le sont d'ordinaire chez les Muges et genres voisins, particularité très importante à noter.

Voici les dimensions de l'un des deux individus faisant partie de cette collection:

	mm.	¹ / ₁₀₀
Longueur	157	»
Hauteur	37	23
Épaisseur	25	16
Longueur de la tête	38	24
» de l'uroptère	35	22
» du museau	10	26
Diamètre de l'œil	8	21
Espace interorbitaire	15	39

Cette espèce, d'après ces exemplaires, est de nature à montrer également combien les divisions de la famille des Mugilidæ, telles qu'en général on les admet, c'est à dire

basée en grande partie sur la dentition sont d'une appréciation difficile. En effet si les dents à la mandibule sont nombreuses (au moins 50) ciliiformes, unisériées, difficilement visibles, les dents inter-maxillaires sont au contraire peu nombreuses, une douzaine environ de chaque côté, presque perceptibles à l'œil nu, recourbées, ces animaux seraient donc à la rigueur tout aussi bien placés dans le genre *Myxus*, auquel je les avais rapportés d'abord.

L'espèce ne paraît pas être très commune, M. Günther la cite de la Guyane anglaise et du Chagres, MM. Jordan et Swain¹⁾ disent qu'on la trouve aux Antilles, sur les côtes septentrionales de l'Amérique du Sud, et sur celles de l'Amérique centrale tant atlantiques que pacifiques, elle serait plus abondante dans cette dernière région bien que ces auteurs conviennent n'en avoir vu qu'un exemplaire unique.

La confusion ordinairement faite avec le *Mugil brasiliensis*, ne permet pas de savoir si cette espèce n'avait pas déjà été trouvée à la Guyane.

16. *Batrachus surinamensis* Bloch-Schneider.

Günther, 1861, T. III, p. 174.

Un bel exemplaire long de $186 + 36 = 222$ millimètres.

Il répond parfaitement à l'excellente description de Cuvier et Valenciennes (1837, T. XII, p. 488), complétée sur quelques points par M. Günther.

La figure donnée par R. Schomburgk du *Lophius? pacamah* est bien imparfaite, ce qui en est dit dans le texte n'y ajoute guère (1843, T. II, p. 202, Pl. XXVIII), c'est cependant du *Batrachus surinamensis* que ce poisson se rapproche davantage et, jusqu'à plus ample informé, on peut l'y réunir.

Cité aussi bien par Müller et Troschel que par M. Kappler.

1) O. S. Jordan and J. Swain, 1885. A review of the American Species of marine Mugilidae (Proceed. U. S. nat. Mus. 1884, T. VII, p. 261).

17. *Ancylodon ancylodon* (Bloch-Schneider).

Günther, 1860, T. II, p. 311 (sous le nom: *A. jaculidens* C. V.).

Un individu dont le corps mesure 196 mm., sans la caudale, qui est en mauvais état.

Cité par Müller et Troschel, mais non par M. Kappler.

18. *Nebris microps* Cuvier et Valenciennes.

Günther, 1860, T. II, p. 316.

D. VII—I, 3; A. II, 10.

Ecailles 14/(72), 50/23.

Hauteur très peu moins de $\frac{1}{4}$, épaisseur $\frac{2}{11}$ de la longueur du corps, dans laquelle la tête entre pour $\frac{1}{3}$; uroptère environ $\frac{1}{5}$ de cette même dimension (cette nageoire est incomplète).

Museau remarquablement bombé, obtus, il occupe $\frac{2}{7}$ de la longueur de la tête. Orifice buccal médiocrement grand, maxillaire prolongé au delà de l'œil, il dépasse sensiblement, ainsi que l'intermaxillaire, l'angle formé par la rencontre de ces deux os avec la mandibule, disposition singulière, la commissure buccale se trouvant par suite moins reculée que ne le ferait supposer la longueur de la mâchoire supérieure. Œil remarquablement petit, $\frac{1}{12}$ environ de la longueur de la tête, l'espace interorbitaire étant quatre fois plus grand, $\frac{1}{3}$ de cette même dimension.

Les dents n'existent que sur les mâchoires où elles sont, à l'une comme à l'autre, en velours très fin. Bien que le menton soit légèrement avancé, il n'y a point de barbillons, on peut signaler également l'absence de fossettes.

Les pièces operculaires sont complètement cachées sous le tégument, sur la joue se voient des sortes de plis cutanés en crêtes, irrégulièrement disposés, c'est ce que Cuvier et Valenciennes entendent peut-être par «les arêtes osseuses des sous-orbitaires et du préopercule», qu'on voit au travers de la peau, cela se rapporte sans doute au système

de la ligne latérale; la figure donnée dans l'Histoire naturelle des Poissons, indique très clairement cette disposition. A la région génienne les mandibules, en contact en arrière, laissent entre elles un écusson allongé, lancéolé, à pointe postérieure.

Ligne latérale très nette, bien que, comme on le verra plus loin, l'écaillure en soit assez imparfaite. On y compte une cinquantaine de ce que j'appellerais volontiers des nœuds, mais le nombre des rangées d'écailles est plus grand et peut être évalué à 70 (comme l'indique la formule donnée plus haut). Les nageoires impaires sont fortement écailleuses et la ligne latérale se prolonge jusqu'à l'extrémité de la caudale. On remarquera que les formules ici données diffèrent un peu de celles qu'avaient trouvées Cuvier et Valenciennes, mais il ne faut pas, je crois, dans le groupe des *Sciænidæ*, attacher à ce fait une trop grande importance.

La nature des écailles varie suivant les points que l'on considère. Sur les flancs, au dessous de la ligne latérale, elles sont en quadrilatères à côtés plus ou moins convexes, allongées d'avant en arrière; foyer central ou sub-central postérieur; les champs antérieur et latéraux couverts de crêtes concentriques, interrompues sur le premier par des sillons centripètes; des festons au bord radiculaire; le champ postérieur, triangulaire, peu étendu, porte des spinules bien développées, sur plusieurs rangs; ces écailles sont donc d'un type nettement cténoïde-polystique. Sur la joue ces organes sont plus ou moins exactement circulaires, à foyer central régulièrement entouré de crêtes concentriques; ils sont donc d'un type cycloïde. Les tubes de l'appareil latéral paraissent membraneux et sont protégés par une multitude de petites écailles cycloïdes, disposition déjà signalée chez d'autres *Sciænidæ* ¹⁾.

Au dessus de la ligne latérale la forme des écailles est

1) Vaillant et Bocourt, Mission scientifique au Mexique et dans l'Amérique centrale. — Poissons, p. 172, Pl. VIII, fig. 1c.

plutôt ovalaire, on observe des sillons centrifuges sur le champ antérieur, les trois autres champs sont simplement couverts des stries concentriques, les spinules faisant complètement défaut; c'est le type cténoïde-spanostique.

Les dimensions de l'individu sont les suivantes :

	mm.	$\frac{1}{100}$
Longueur	180	»
Hauteur	44	24
Épaisseur	32	18
Longueur de la tête	60	33
» de l'uroptère	? 35	19
» du museau	17	28
Diamètre de l'œil	5	8
Espace interorbitaire	20	33

La découverte d'un individu du *Nebris microps* dans la rivière Berbice, est d'un très grand intérêt.

On sait que les auteurs de l'Histoire naturelle des Poissons décrivent et figurent cette espèce, d'après un exemplaire envoyé de Surinam au Musée de Berlin, c'est à dire de la Guyane hollandaise.

Pendant de longues années l'animal n'avait pas été revu lorsqu'en 1875 M. Steindachner annonça l'avoir trouvé dans une collection faite à Panama, c'est à dire sur l'autre versant américain, dans l'Océan pacifique. Le fait fut confirmé par MM. Jordan et Gilbert en 1882. Toutefois ces différents ichthyologistes s'étaient bornés à une simple mention sans entrer dans aucun détail, en 1889 seulement, MM. Jordan et C. H. Eigenmann, revenant sur ce point, ont donné une description des individus de l'Amérique occidentale dans un travail très complet auquel je renvoie pour les indications bibliographiques ¹⁾.

Ces derniers ichthyologistes ont pu voir l'exemplaire type et disent qu'ils n'ont remarqué aucun caractère le distin-

1) Jordan and Eigenmann, 1889. A review of the Sciaenidae of America and Europe (Ann. Rep. Fish and Fisheries for 1886, p. 374).

quant de la forme de Panama, ils font observer toutefois que cet exemplaire type n'est pas en très bon état. D'après l'individu appartenant au Musée de Leyde, que j'ai entre les mains et dans un état d'admirable conservation, cette manière de voir ne me paraît pas exacte. On trouve dans l'excellente description fournie par MM. Jordan et C. H. Eigenmann, que le *Nebris* du Pacifique a les dents mandibulaires unisériées, les écailles cycloïdes, tandis que le *Nebris microps* a les dents plurisériées à l'une et l'autre mâchoire, les écailles, en grande partie au moins, nettement cténoïdes; le premier également, autant qu'on en peut juger, aurait le maxillaire moins prolongé en arrière puisqu'il s'arrêterait au dessous du bord postérieur de l'orbite.

Les deux poissons doivent par suite être considérés comme spécifiquement distincts ¹⁾ et l'on pourra désigner le *Nebris* de l'Océan pacifique sous le nom de *N. occidentalis*.

Ce dernier, d'après M. Steindachner et d'après MM. Jordan et C. Eigenmann paraît exclusivement marin, le *Nebris microps*, à en juger par l'exemplaire de la rivière Berbice, serait plutôt dulçaquicole, mais le fait n'a rien d'étonnant dans la famille des Sciénoïdes, où des espèces voisines, parfois une même espèce, peuvent indifféremment se rencontrer dans l'un ou l'autre milieu.

Paris, Octobre 1897.

1) L. Vaillant, 1897. Sur les espèces à distinguer dans le genre *Nebris* Cuvier et Valenciennes (Bull. Mus. Hist. Nat. T. III, p. 124).

NOTE II.

SUR QUELQUES CÉPHALOPODES DU MUSÉE
ROYAL DE LEYDE ET DESCRIPTION DE TROIS
ESPÈCES NOUVELLES

PAR

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M. le Dr. R. Horst, Conservateur au Musée Royal d'histoire naturelle de Leyde, a bien voulu me confier la détermination des Céphalopodes de ce Musée. Je le prie de vouloir bien agréer tous mes remerciements.

Parmi les nombreux échantillons que j'ai examinés, j'ai rencontré trois espèces qui me paraissent nouvelles; on en trouvera dans cette Note une courte description. Ce sont: *Octopus Horsti*, *Octopus Hoeki* et *Sepioteuthis Sieboldi*. En outre j'ai réuni ici diverses remarques sur quelques unes des espèces qui composent le Catalogue que l'on trouvera prochainement, au complet, dans une autre publication.

Puisque l'occasion s'en présente je crois devoir vivement recommander aux voyageurs l'emploi du Formol à 3% pour la conservation des Céphalopodes; ils y gardent leur forme, leur couleur, leur transparence, pendant plusieurs années, et ensuite l'immersion dans l'alcool à 75° ne les leur enlève plus. Il suffit pour employer ce liquide d'en mettre dans de l'eau, douce ou marine, environ 30 centimètres cubes par litre, et d'y plonger les Céphalopodes en

ayant soin de boucher ensuite hermétiquement le récipient qui les renferme. Ce procédé est beaucoup moins couteux que l'alcool et moins encombrant puisqu'avec un litre de formol on peut faire 30 à 35 litres de liquide.

Il serait vivement à désirer que les voyageurs hollandais continuent à apporter au Muséum de Leyde un grand nombre de Céphalopodes, mêmes communs; il serait alors possible, à côté d'un type de chaque espèce, de disposer d'une série d'échantillons de la même espèce de provenance différente. On pourrait dans ces conditions, étendre le travail de comparaison des variétés locales, que je n'ai pu qu'ébaucher, ce qui amènerait vraisemblablement à la suppression d'un certain nombre d'espèces et serait d'un grand intérêt zoogéographique.

Octopus macropus Risso (= *O. Cuvieri* d'Orbigny).

Un échantillon, de Djeddah (J. A. Kruyt), est remarquable, malgré son piteux état, parce qu'il représente très exactement l'*Octopus Lechenaulti* d'Orbigny. Cet auteur a d'ailleurs, supprimé lui-même cette espèce et l'a rattachée à *Octopus macropus*. Les ventouses charnues sont très irrégulièrement placées sur les bras; on en voit 5 ou 6 de suite sur un seul rang, comme chez *Eledone*; plus loin au contraire elles sont très serrées, et disposées sur deux rangées alternantes.

Octopus granulatus Lamarck var. *rugosa* Bosc.

Un exemplaire intéressant, de Bahama (A. de Haas), parce que 7 de ses 8 bras sont en voie de reconstitution plus ou moins avancée par bourgeonnement.

Octopus areolatus de Haan, 1885.

Dans un exemplaire de moyenne taille, bien conservé (von Siebold, Japon), la tache oculiforme garde encore son éclat métallique.

Octopus ocellatus Appellöf.

Une jeune femelle, pleine de gros oeufs, et dont le corps

Notes from the Leyden Museum, Vol. XX.

est granuleux, ne porte pas de cirrhes orbitaires; ses yeux sont plus saillants que dans le type décrit par Appellöf (Amboine, Hoedt).

Octopus fontanianus d'Orbigny.

Un échantillon de l'Océan Indien (Reinwardt) est identique, par la disposition de ses ventouses, à la description et à la figure données par d'Orbigny. Mais celui-ci l'indique comme habitant seulement la côte de l'Amérique du Sud, tandis que l'échantillon du Musée de Leyde provient de l'Océan Indien.

Octopus Horsti, n. sp.

Octopus de grande taille provenant de Djeddah (J. A. Kruyt), en assez mauvais état. Cette espèce est intéressante et je la dédie à Mr. Horst, du Muséum de Leyde.

Le corps est gros, ovale, de couleur foncée. Les bras sont très développés, et l'animal par sa forme générale rappelle *O. vulgaris*. La peau est entièrement lisse, et présente seulement sur chaque oeil un gros cirrhe postérieur et un petit antérieur. Une membrane natatoire unit les bras et se prolonge sur toute leur longueur. Sur la base de la couronne tentaculaire, de chaque côté, en avant de l'oeil et un peu plus bas, vers la racine du 2^e bras ventral (3^e) on voit une grosse tache noire ovale. — Tout le long des bras, surtout dorsaux, sur leur moitié ventrale seulement, entre chaque ventouse, on distingue une grosse zébrure noire, irrégulière. Quand on ne voit qu'un côté du bras, cela ressemble à une série de bagues noires qui y seraient enfilées. — Cela ne commence qu'au point où finit la membrane palmaire.

Les bras, charnus à la base, deviennent bientôt filiformes. Les ventouses y sont très enfoncées dans la peau, deviennent rapidement très petites et très nombreuses, car j'en ai compté 350 sur un seul bras dorsal de 52 centimètres de longueur. Les 4 premières sont sur un seul rang. — Bras 1.4.3.2.

Le siphon est long et cylindrique.

Cette espèce présente une certaine analogie avec *Octopus ocellatus* Appellöf mais en diffère par la forme générale du corps, la longueur des bras, le nombre des ventouses, et l'aspect de la membrane palmaire.

Octopus Hoeki, n. sp.

Cette nouvelle espèce d'*Octopus* a été rapportée d'Amboine par Schorel. Je me permets de la dédier à notre savant collègue P. P. C. Hoek. Voici les caractères distinctifs de ce Céphalopode.

Corps ovale, rétréci en haut, surmonté d'une tête très étroite. Yeux saillants. Bras relativement courts, à ventouses enfoncées dans le tissu mou et d'aspect infiltré. L'ouverture palléale intéresse à peu près toute la largeur du haut du corps. Siphon petit, ne dépassant pas le niveau des yeux. — Couleur du corps blanchâtre, sur le milieu du dos et sur la tête violet foncé.

Bras 1.2.4.3. — Membrane palmaire bien développée entre les bras ventraux, diminuant à mesure qu'on se rapproche du dos; cette palmure, blanche partout ailleurs, est rendue violette par de très curieux petits organes pigmentés, entre les bras dorsaux, et la moitié dorsale de la 2^e palmure (entre le 1^{er} et le 2^e bras). Ces membranes s'étendent par des prolongements minces le long des bras.

La peau est entièrement lisse, le corps mou et flasque. On trouve un seul cirrhe long et grêle susorbitaire. — Sur chaque bras les 3 premières ventouses sont disposées sur un seul rang, les autres alternent, et sur les 2 bras latéraux les plus grandes sont de la 8^e à la 11^e. La 1^{re} de chaque bras contribue à former un cercle saillant péribuccal. La longueur totale du corps est de 230 millimètres.

Sepia Filliouxii Lafontaine.

Un gros exemplaire mâle du Cap (Horstock). C'est la première fois que cette espèce est signalée au Cap. Mais à

cause de la grande ressemblance (pour ne pas dire identité) entre cette espèce et *S. officinalis*, il est probable que l'on trouverait des *Filliouri* parmi les *officinalis* déjà connus.

Sepia aculeata van Hasselt.

Un lot d'une quinzaine d'individus étiqueté St. Vincent, Nassau harbor, Bahama (A. de Haas). Cette espèce est jusqu'à présent considérée comme exclusivement Indo-Malaise, et c'est pour la première fois qu'elle est signalée dans l'Atlantique. Le repli postérieur nacré n'apparaît nettement que chez les individus ayant plus de 10 centimètres, il est à peine indiqué chez les jeunes.

Il me paraît très probable que *S. indica* d'Orbigny est identique à cette espèce.

Sepiella inermis (van Hasselt).

Trois petits échantillons assez mauvais de Timor. Sur l'un d'eux on constate nettement un caractère qui n'est presque jamais conservé: une série de gros points colorés situés sur la face dorsale de la nageoire, le long de son insertion, et diminuant de la queue vers la tête, absolument comme dans la figure 2, planche 22, de d'Orbigny.

Genre *Sepioteuthis* Blainville, 1825.

L'examen des nombreux exemplaires appartenant au genre *Sepioteuthis* qui composent la collection du Muséum de Leyde, m'a amené à critiquer les subdivisions admises généralement dans ce genre.

On peut conserver, provisoirement du moins, les deux sections basées sur la présence ou l'absence de ventouses sur la membrane buccale. Mais la subdivision suivante, établie sur la présence ou non de bords épaissis à la plume, doit être abandonnée. Je puis dire que tous les *Sépioteuthis* que j'ai examinés, à quelque espèce qu'ils appartiennent, présentent ces épaississements très nets chez cer-

tains individus, moins nets chez d'autres, étendus sur tout le bord ou seulement limités au bas. Ces différences se trouvent dans la même espèce, et dépendent, à ce qu'il m'a semblé, surtout de la taille des individus, conséquemment de leur âge, peut-être même de leur sexe. Les épaisissements marginaux ne peuvent servir en rien à déterminer les espèces, et même il ne faut pas tenir compte de ce caractère qui peut, par ses variations individuelles, conduire à des erreurs de diagnose.

Il en est de même de la forme générale de la plume qui peut être plus ou moins mince, étroite, large, droite, courbée, selon les variations sexuelles, de taille et d'âge des individus. D'autres influences locales doivent certainement contribuer à modifier cet organe, mais il faudrait pour les préciser, étudier un plus grand nombre d'échantillons.

Sepioteuthis lessoniana Férussac et d'Orbigny.
(= *S. mauritiana* Quoy et Gaimard).

J'ai examiné un grand nombre d'échantillons de différents localités (Java, Timor, Morotai, îles Obi, Océan Indien, Cap) se rattachant soit à *Sepioteuthis lessoniana* Férussac et d'Orbigny, soit à *Sepioteuthis mauritiana* Quoy et Gaimard. J'ai acquis la conviction que ces deux espèces n'en font qu'une.

Si l'on compare les diagnoses, assez vagues et défectueuses d'ailleurs, proposées par les auteurs pour ces deux espèces, on voit immédiatement qu'aucun caractère différentiel sérieux ne s'y remarque. Le bord de la plume est épaissi chez les deux types (j'ai dit d'autre part combien ce caractère doit être considéré comme fugace); la longueur proportionnelle des bras est identique de formule; les dents cornées des ventouses sont tout-à-fait semblables, car les légères différences qui ont été signalées par les auteurs peuvent se rencontrer jusque sur le même individu, et sont corrélatives de sa taille. Les différences peu sensibles, si tant est qu'elles soient appréciables, dans la forme des nageoires in-

diquées par d'Orbigny, ne correspondent même pas au texte explicatif de l'auteur. Il n'y a pas de différence entre les échantillons recueillis au Cap, dans l'Océan Indien, ou dans l'Archipel Indo-Malais. Je suis en outre porté à croire que certaines déterminations n'ont été basées que sur la différence de provenance des individus. Dans ces conditions il me paraît absolument justifié de considérer comme synonymes les deux espèces de d'Orbigny et de Quoy et Gaimard. Le nom *lessoniana* étant le plus ancien prend donc la place de *mauritiana*. — Je ne serais pas autrement surpris que *S. australis* ne soit également destiné à se fondre avec *S. lessoniana*; mais je ne veux pas l'affirmer actuellement.

Sepioteuthis loliginiformis d'Orbigny.

Je rapporte à *Sepioteuthis loliginiformis* d'Orbigny un échantillon en assez mauvais état, recueilli à Djeddah, mer Rouge (J. A. Kruyt). Cette espèce, peu connue et très mal caractérisée, présente les particularités principales suivantes: Les ventouses de la membrane buccale sont par petits groupes de 2 ou 3 situées tout-à-fait à la pointe des dents de cette membrane. La nageoire, étroite en avant, est arrondie en arrière. La plume est mince. Les bras longs et grêles présentent l'ordre d'importance suivant: 3.4.2.1. Le siphon est retenu à la tête par les 2 ligaments ordinaires, mais en outre par un troisième médian. Les chromatophores sont très gros sur les côtés, plus petits sur le milieu du ventre. Sur la face ventrale de la tête, entre les yeux, il n'y en a que quelques uns ovales, très espacés, fort gros. Sur les tentacules ils sont aussi de grande taille, ovales et allongés.

Sepioteuthis Sieboldi, n. sp.

Il me semble nécessaire de créer une nouvelle espèce de *Sepioteuthis* que je me permets de nommer *S. Sieboldi*. Voici les raisons qui m'y conduisent. Les auteurs comme

Férussac et d'Orbigny, Gray, Tryon qui ont écrit sur la spécification des *Sepioteuthis* ont posé comme caractère immédiatement décisif de *S. lunulata*, la présence sur la face dorsale de la nageoire d'une série de taches rondes régulièrement espacées; puis ils posent en principe que les bras, longs et fort grêles, sont dans l'ordre d'importance suivant 3.2.4.1. C'est bien en effet ce que l'on observe dans les individus qui répondent au type *lunulata*. Mais on en trouve d'autres qui leur ressemblent au premier abord par les taches de la nageoire; cependant ils ont, comme les *S. lessoniana* les bras dans l'ordre 3.4.2.1; et de plus ces bras sont gros et courts, ce qui entraîne une tête plus grosse et une différence sensible dans la forme générale du sac viscéral. Ces caractères sont plus que suffisants, pour établir une section dans les *Sepioteuthis* portant des taches sériées sur leurs nageoires: 1°. *S. lunulata* à bras grêles 3.2.4.1, 2°. *S. Sieboldi* à bras gros et courts 3.4.2.1. Quand on examine un échantillon de même taille des deux espèces l'un près de l'autre on constate qu'ils sont fort différents, autant du moins que deux *Sepioteuthis* (genre où les espèces sont si voisines) peuvent s'écarter l'un de l'autre.

Hab. Waigeou (Bernstein) 2 exemplaires. — Japon (von Siebold) 2 exemplaires, dans l'un desquels un des tentacules est plus développé que l'autre.

Rennes, Décembre 1897.

NOTE III.

THREE NEW SPECIES OF THE MELOLONTHID
GENUS APOGONIA

DESCRIBED BY

C. RITSEMA Cz.

Apogonia sulcaticeps, n. sp.

Resembling *A. laevicollis* Lansb. from Java and Sumatra, but at once distinguished from that species by the clypeus which is shorter, deeply emarginate in the middle and, between the eyes, separated from the face by a deep sulcus. Moreover the punctuation on the elytra is stronger.

Length 7,5—8,5 mm. — Broadly ovate; glabrous, black, the head, pronotum and scutellum with green and purple or coppery tinges, the antennae and palpi pale ferruginous, the tarsi pitchy brown.

The head is large, the clypeus broadly emarginate in the middle, the emargination with rounded lateral angles, the anterior margin reflexed; a deep sulcus between the eyes separates the clypeus from the face; the clypeus is rather remotely covered with large punctures; the punctures on the face are fine and distant.

The prothorax is strongly transverse and very convex; the pronotum is distantly covered with punctures which are a trifle larger than those on the face; a small impression is present at the basal margin in front of the basal angles of the scutellum; the sides are rounded just behind the middle when viewed laterally, the basal angles are obtuse, the anterior ones acute but not protruding. The

scutellum is smooth, impunctate, and of a broadly triangular shape.

The elytra are strongly punctured, with two very distinct narrow costae; the third costa is not discernible as the punctures on the sides of the elytra are in regular rows.

The propygidium is rugosely punctured; the punctures on the pygidium are large but wider apart. The punctuation on the sides of the metasternum agrees with that of the abdomen; the latter (with the exception of the propygidium) is surrounded by a raised line.

The anterior tibiae are minutely tridentate.

Hab. East Sumatra: Serdang (Dr. B. Hagen); Deli (Ed. Veen). — Leyden Museum.

Apogonia Blanchardi, n. sp.

A deep black species without metallic lustre, which is, according to the authentic specimens in the Paris Museum, erroneously identified by E. Blanchard (Cat. Coll. Ent. 1850, p. 228) as *A. rauca* Fabr.

Length 9,5—11 mm. — Ovate, glabrous, shining black, the apex of the elytra and the two basal ventral segments, however, opaque; the antennae and palpi pale ferruginous; the under surface and legs sprinkled with pale coloured setae.

The clypeus is rather long, almost regularly rounded, faintly truncate in the middle, and separated from the face by a distinct suture; the anterior margin is reflexed and the punctuation very dense. The punctuation on the face is much finer and wider apart.

The prothorax is transverse and very convex; the pronotum very shining, its punctuation rather fine (the punctures agreeing with those on the face) and remote; the sides are broadly rounded just behind the middle when viewed laterally; the anterior angles are acute but not protruding, the basal ones obtuse; the middle of the base, just before the scutellum, is faintly raised and projects

slightly backwards. The scutellum is smooth, impunctate or provided with a few very fine punctures; it has a triangular shape with convex sides.

The elytra are strongly punctured, the punctures large but not deep; provided with three costae, the first slightly broader than the second and third, the narrow interspace outside from the third provided with a row of punctures.

The propygidium and pygidium rugosely punctured, the latter in several of the specimens before me with a raised smooth line along the middle. The sides of the metasternum and of the abdomen are rather remotely punctured.

The anterior tibiae are tridentate, the upper tooth is small, often very obscure.

Hab. East India: Bengal, Chota Nagpore and Mysore. — (Leyden Museum and Mr. René Oberthür's collection).

Apogonia impressa, n. sp.

A pubescent species which is easily recognizable by the conformation of the scutellum this being broadly and deeply impressed at some distance from the base.

Length $10\frac{1}{3}$ mm. — Broadly ovate, the thorax conspicuously narrower than the elytra; dark brown with a faint greenish and purplish hue, the head and thorax blackish, the antennae and palpi pale ferruginous. Covered with a fine glittering pale ochreous pubescence which is denser set on the elytra than on the head, thorax and underside.

The head proportionately small, the face confluent punctured, the punctures forming longitudinal striae separated from the clypeus by a narrow streak which bears large isolated punctures; the clypeus long, coarsely punctured, subtruncate (not emarginate) in front, the margin reflexed.

The prothorax conspicuously narrower than the elytra, the sides (when viewed laterally) strongly rounded just behind the middle; the anterior angles acute, almost im-

perceptibly protruding, their lateral margin narrowly explanate; the sides before the obtuse basal angles faintly emarginate; the pronotum is confluent striated in a longitudinal direction, the raised interspaces are smooth and shining, the sulci provided with hair-bearing punctures. The scutellum triangular with rounded tip, broadly and deeply impressed or excavated at some distance from the base, impunctate, the impression however with a few indistinct longitudinal wrinkles.

The elytra at the shoulders conspicuously broader than the base of the thorax, very densely punctured, the punctures fine and of equal size all over, the costae only indicated by their faint convexity.

The punctures on the under surface larger and wider apart, more approximate however on the sides, propygidium and pygidium; on the latter the punctures are slightly larger than those on the propygidium.

The anterior tibiae are tridentate, the upper tooth however is small.

Hab. The island of Sumbawa. — The described specimen is in the collection of the Leyden Museum.

Leyden Museum, November 1897.

NOTE IV.

A NEW SPECIES
OF THE LONGICORN GENUS PELARGODERUS

DESCRIBED BY

C. RITSEMA Cz.*Pelargoderus nigroplagiatus*, n. sp. ♀.

Length 30,5 mm., breadth at the shoulders 10 mm. — Black, covered with a reddish brown pubescence which is very dense round the eyes and forms two slightly diverging vittae on the vertex; on the pronotum the pubescence forms a broad band along the middle and a narrow stripe on each side; on the scutellum it is divided along the middle by a smooth stripe; the elytra are speckled with small spots of a dense reddish brown pubescence and marked, just behind the middle, with a large oblique velvet-black patch which is broader anteriorly than posteriorly and here more approximate to the suture than to the lateral margin; in front of and behind this black patch the pubescence is of a paler colour and on both sides of the scutellum there is a similarly coloured short, slightly oblique basal stripe; the basal joint of the antennae is covered with a thin greyish brown pubescence, the 3rd and following joints have a dense grey pubescence and are ringed with sooty black on their apical portion.

The head shows some punctures on the face, behind the upper lobes of the eyes and on the middle of the vertex; the scape of the antennae is slightly rugose and strongly narrowed towards the base.

Notes from the Leyden Museum, Vol. XX.

The prothorax has a small but very distinct tooth on each side; on the bare streaks, especially on their basal portion, very distinct transverse wrinkles are present, and the surface of the thorax is sprinkled with a few black points; a bare longitudinal line divides partially the median pubescent streak.

The elytra have a large depressed space on the middle of their basal fourth; they are granulate at the base, especially towards and on the shoulder region, and each granule is generally followed by an impressed puncture; further on the elytra are covered with punctures which become smaller towards the end; the apices are obliquely truncated, the sutural angle is rounded, the outer one distinctly spined.

Body beneath and legs sparingly punctured. The intercoxal part of the mesosternum is slightly raised along the middle and minutely protruding.

Hab. The eastern part of the Malay Archipelago. — The Leyden Museum has received the here described female specimen, without indication of a more precise locality, from Dr. H. J. Veth.

The distinctly spined outer angles of the apex of the elytra and the ringed antennae together with the large velvet-black patch about the middle of the elytra make this species easily recognizable from the allied *P. arouensis* Thoms.

Leyden Museum, December 1897.

P.S. The above description was already printed when Dr. Veth communicated to me a male specimen of this species received by him together with the described female. The male agrees with the female except in the sexual characters, viz. less robust shape, longer antennae, elongate anterior legs etc., but the tooth on the sides of the prothorax, which is very distinct in the female, is almost entirely wanting in the male specimen.

NOTE V.

CLAVICORNES DE GRENADA ET DE ST. VINCENT
(ANTILLES) RÉCOLTÉS PAR M. H. H. SMITH, ET
APPARTENANT AU MUSÉE DE CAMBRIDGE

PAR

A. GROUVELLE.*Brachypterus insularis*, n. sp.

Oblongus, convexus, nitidus, glaber, testaceus; clava antennarum leviter infuscata; capite sat grosse punctato; prothorace transverso, punctato, angulis posticis rotundatis, basi lateribusque stricte marginatis; elytris sat dense punctatis. — Long. $1\frac{1}{2}$ mill.

Oblong, convexe, brillant, glabre, testacé; massue des antennes légèrement enfumée. Tête convexe, assez fortement ponctuée. Prothorax transversal, arrondi aux angles postérieurs, étroitement rebordé à la base et sur les côtés, plus densément ponctué sur les côtés que sur le disque. Écusson largement arrondi au sommet, ponctué. Elytres un peu moins longs que larges ensemble, assez densément ponctués, un peu obliquement tronqués au sommet. Segments visibles de l'abdomen assez densément ponctués.

Hab. Grenada — Mount Gay Estate (leeward side).

Pallodes Smithi, n. sp.

Ovatus, convexus, nitidus, glaber, niger; antennis clava excepta pedibusque testaceis; capite parce punctulato; pro-

Notes from the Leyden Museum, Vol. XX.

thorace transverso, utrinque vix perspicue punctulato, basi medio leviter retrorsum prominente; scutello triangulari; elytris vix perspicue lineato-punctatis, stria suturali impressa, antice evanescente. — Long. $2\frac{1}{2}$ à 4 mill.

Ovale, court, convexe, brillant, glabre, noir; antennes sauf la massue, bouche et pattes testacées. Articles 3 à 5 des antennes un peu plus longs que larges, sensiblement égaux; massue en ovale un peu allongé, dernier article aussi long que les deux premiers réunis, comprimé au sommet en lame et présentant latéralement deux zones, la première, à la base, demi-circulaire lisse, et la deuxième occupant le reste de la surface finement pubescente. Tête éparsément pointillée. Prothorax très transversal, lisse sur le disque, éparsément pointillé sur les côtés. Ecusson triangulaire. Elytres un peu plus longs que larges ensemble, très finement ponctués en lignes; strie suturale bien marquée, atténuée à la base, rapprochée de la suture. Tibias intermédiaires assez larges; hanches postérieures non contigues, assez rapprochées.

Hab. Grenada — Black Forest Estate, Mt. Maitland, Chantilly Estate.

Pallodes cyanescens, n. sp.

Ovatus, convexus, glaber, cyaneo-micans; antennis clava excepta, margine antico capitis, prothorace, subtus pedibusque rufo-testaceis; capite parce punctulato; prothorace transverso, utrinque vix perspicue punctulato, basi medio subemarginato, haud retrorsum prominente, basi cyaneo stricte marginata; scutello triangulari; elytris leviter punctato-lineatis, stria suturali impressa, antice evanescente. — Long. 3 à 4 mill.

Ovale, court, convexe, glabre, roux testacé, avec la base de la tête, une étroite bordure à la base du prothorax et les élytres d'un bleu soyeux, peu brillant. Articles 2 à 4 des antennes notablement plus longs que larges, 5^{me} un peu plus long; massue noire, comprimée, dernier article aussi long que les deux premiers réunis, présentant sensi-

blement le profil d'un rectangle surmonté d'un trapèze; zone lisse de la base subdemicirculaire. Prothorax très transversal, lisse sur le disque, éparsément pointillé sur les côtés; base légèrement sinuée au milieu devant l'écusson. Ecusson triangulaire. Elytres sensiblement aussi longs que larges ensemble, finement pointillés en lignes, arrondis séparément au sommet; strie suturale bien marquée, atténuée à la base. Partie visible de l'abdomen noirâtre. Tibias intermédiaires assez larges; hanches postérieures non contigues, mais peu éloignées.

Hab. St. Vincent (leeward side).

Microsicus minimus, n. sp.

Oblongo-elongatus, modice convexus, opacus, setosus; capite prothoraceque infuscatis, elytris sordido-testaceis, nigro-variegatis; prothorace transverso, lateribus parallelis, antice arcuatis, ciliatis, disco subimpresso; elytris substriatis. — Long. $1\frac{3}{4}$ mill.

Oblong, allongé, médiocrement convexe, opaque, couvert de courtes soies dressées, squamiformes, entremêlées de soies plus courtes, plus fines, plus ou moins couchées, n'ayant pas d'orientation régulière. Tête noirâtre, plus claire au sommet, labre bien développé. Prothorax environ une fois et demie aussi long que large, côtés parallèles, arqués en dedans au sommet, ciliés; disque présentant les traces de plusieurs impressions dessinées surtout par la condensation de la squamulation. Elytres ovales, environ une fois et demie plus longs que larges dans la plus grande largeur, un peu plus larges que le prothorax, environ trois fois plus longs, profondément ponctués-striés; chacun avec une dizaine de petites taches noires, dont une contre la base, vers le milieu, trois sur le troisième intervalle, trois sur l'avant dernier intervalle latéral et les trois dernières placées, la 1^{re} en dedans et plus près de la base que la 1^{re} latérale, la 2^{me} sur le 5^{me} intervalle, un peu plus loin que la 2^{me} dorsale et la 3^{me} près du bord latéral vers

le niveau de la 3^{me} dorsale. Antennes et pattes claires.

Hab. Grenada — Mount Gay Estate (leeward side).

Catolæmus exilis, n. sp.

Oblongus, sat convexus, opacus, niger, testaceo-ferrugineo variégatus, squamoso-hispidus; antennis pedibusque rufo-testaceis; prothorace transverso, antice posticeque angustato, lateribus arcuatis, ciliatis; elytris lineato-punctatis. — Long. 1¹/₂ mill.

Oblong, assez convexe, opaque, noir, varié de roux testacé, couvert de soies dressées, courtes, squamiformes, tantôt claires, tantôt foncées. Bord antérieur de la tête plus clair; squamules entremêlées de petites soies très courtes. Prothorax un peu plus de deux fois plus large que long, rétréci à la base et au sommet, arqué sur les côtés, noir avec les marges antérieures et latérales plus claires; disque vaguement impressionné; bord antérieur largement et peu profondément échancré; bords latéraux ciliés. Elytres un peu plus larges que le prothorax, environ une fois et demie aussi longs que larges ensemble, ponctués en lignes; points serrés, intervalles sensiblement plus larges que les points; bords latéraux ciliés.

Hab. Grenada — Mount Gay Estate (leeward side).

La coloration de cette espèce peut varier considérablement. Chez l'insecte bien coloré que nous décrivons, le fond des élytres est roux testacé, avec une tache suturale triangulaire près de la base orientée vers le sommet, une bande latérale ondulée enfermant le long du bord un espace mal défini, et deux bandes suturales transversales, la première à peu près au niveau de l'extrémité de la bande latérale, la 2^{me} entre la précédente et le sommet. Lorsque la couleur claire se développe, les taches noires s'atténuent et deviennent brunes.

Neotrichus insularis, n. sp.

Elongatus, parallelus, convexus, niger, opacus, flavo-

setosus; fronte arcuatim impressa, tuberculata; prothorace vix elongato, basin versus subangustato, tuberculato, lateribus obtuse denticulatis; elytris lineato-punctatis, intervallis undulatis. — Long. $3\frac{1}{2}$ à 6 mill.

Allongé, parallèle, convexe, noir, opaque, garni de soies dressées, flaves, disposées en lignes sur les élytres. Tête transversale, couverte d'assez forts tubercules; front avec une assez forte impression arquée en avant, passant de chaque côté auprès des yeux, ceux-ci non saillants. Prothorax un peu plus long que large, légèrement rétréci à la base, chargé de tubercules ocellés laissant un vague sillon longitudinal sur le disque; bord antérieur arqué, très faiblement relevé en bourrelet, bords latéraux obtusément denticulés. Ecusson petit, suborbiculaire. Elytres environ trois fois aussi longs que larges ensemble, avec des lignes d'impressions ponctiformes qui donnent aux intervalles un aspect ondulé dans le sens de la longueur.

Hab. Grenada — Balthazar (windward side); St. Vincent.

Espèce très variable de taille; parfois le vague sillon longitudinal du prothorax s'accroît et devient presque une impression et les côtés du prothorax s'arrondissent légèrement.

Neotrichus tuberculatus (Chevrolat).

Il faut rapporter au genre *Neotrichus* Sharp le *Plagiopse tuberculata* Chevrolat (Ann. Soc. entom. de France, 4^e sér. tome III, 1863, p. 607).

Hab. Cuba.

Lemnis denticulatus, n. sp.

Oblongus, subdepressus, dense squamoso-flavo-griseus, griseo-setosus; antennis rufis, clava infuscata; prothorace transverso, subcordato, lateribus denticulatis, disco septem subfoveolato; elytris striato-punctatis, intervallis latis, planis, singulo elythro septem fasciculato. — Long. $4\frac{1}{2}$ mill.

Notes from the Leyden Museum, Vol. XX.

Oblong, faiblement convexe, densément couvert de squamules oblongues, d'un gris flave et garni de soies grises dressées, recourbées en arrière sur les élytres. Antennes rougeâtres, massue noirâtre. Tête transversalement concave, éparsément ponctuée, longitudinalement impressionnée de chaque côté vers la naissance des antennes. Prothorax moins de moitié aussi long que large au sommet, rétréci à la base, subcordiforme; marge antérieure légèrement relevée en bourrelet; côtés denticulés; disque avec six impressions peu profondes, disposées en séries transversales de trois. Ecusson subdemicirculaire. Elytres environ une fois et deux tiers aussi longs que larges ensemble, subacuminés ensemble au sommet, finement ponctués-striés sur le disque, plus fortement sur les côtés; chacun avec six saillies fasciculées, plus ou moins gibbeuses, placées l'une à la base près de l'écusson, trois sur le disque en triangle, en avant du milieu, deux vers le dernier quart de la longueur et une 7^{me} plus forte placée vers le dernier tiers de la longueur, un peu plus près de la suture que du bord latéral. Pattes rougeâtres; dessous noirâtre.

Hab. Grenada — Balthazar (windward side).

Lytopeplus insularis, n. sp.

Oblongus, convexus, nitidus, castaneus; prothorace transverso, antice angustato, lateribus arcuatis, marginatis, sulco marginali profundo, antice posticeque leviter abbreviato; elytris lineato-subsulcatis, sulcis punctisque ad apicem evanescentibus. — Long. 2¹/₂ mill.

Oblong, convexe, brillant, marron. Tête convexe. Antennes courtes, massue oblongue partagée transversalement en trois zones. Prothorax transversal, presque demi-circulaire, tronqué en avant, lisse; bords latéraux formant un assez fort bourrelet limité en dedans par un profond sillon n'atteignant pas la base et le sommet. Ecusson subpentagonal. Elytres ovales, environ une fois et un tiers aussi longs que larges; chacun avec cinq lignes de gros points

espacés, placés dans des vestiges de sillons et effacées vers le milieu; sur les côtés deux lignes de points également effacées vers le sommet. Tibias antérieurs larges, subanguleux à la tranche externe.

Hab. St. Vincent (leeward side).

Inopeplus insularis, n. sp.

Oblongus, depressus, nitidus, glaber, piceus; antennis tibisque dilutioribus; elytris arcuatim testaceo-maculatis, apice stricte testaceo-marginatis. — Long. 3 à 5 mill.

Oblong, déprimé, brillant, glabre, noir de poix; antennes, bouche et tibias rougeâtres; élytres marqués d'une tache demi-circulaire, partant des épaules qu'elle occupe largement et se continuant jusqu'à la suture par une étroite et courte bande qui s'avance en arrière sur la suture; sommet étroitement bordé de testacé. Tête peu densément ponctuée, profondément et largement sillonnée entre la naissance des antennes, impressionnée sur le front, avec une strie réunissant cette impression au sillon intermédiaire. Prothorax plus éparsément ponctué que la tête. Elytres très éparsément ponctués, arrondis séparément au sommet. Segments visibles de l'abdomen très finement bordés de testacé au sommet et sur les côtés.

Hab. Grenada — Mount Gay Estate (leeward side), Grand Etang, Chantilly Estate (windward side).

Chez les exemplaires imparfaitement colorés la coloration claire envahit plus ou moins l'ensemble des téguments.

Læmophlæus Smithi, n. sp.

Elongato-oblongus, depressus, vix nitidus, rufo-testaceus; antennis moniliformibus, 2^o articulo 3^o longiore; capite ante basin antennarum leviter producto, margine antico late emarginato, labro sat magno; prothorace transverso, utrinque carinato, et basin versus foveolato, lateribus undulatis; scutello transverso; singulo elythro tri-carinato. — Long. 1½ mill.

Notes from the Leyden Museum, Vol. XX.

Oblong, assez allongé, déprimé, à peine brillant, très finement pubescent, roux testacé, légèrement enfumé sur la partie apicale des élytres. Antennes moniliformes, terminées par une massue de trois articles; 3^{me} article de l'antenne plus court que le 2^{me}. Tête et prothorax très finement chagrinés. Marge antérieure de la tête un peu saillante, largement échancrée; labre transversal, bien visible; sur le front une fine impression sulciforme. Prothorax une fois et demie aussi large que long, légèrement rétréci à la base et au sommet; angles antérieurs un peu saillants, bords latéraux ondulés, disque avec une carène longitudinale et une impression près de la base de chaque côté; marge latérale concave. Ecusson transversal. Elytres environ une fois et demie aussi longs que larges, arrondis ensemble au sommet, chacun avec trois carènes longitudinales; marges latérales explanées.

Hab. Grenada — Mount Gay Estate (leeward side).

Voisin de *L. repandus* Grouv. et *carinatus* Reitt. Se distingue de ces deux espèces par la sculpture de la tête et du prothorax qui sont finement granulés ou couverts d'une très dense ponctuation qui leur donne un aspect mat, finement chagriné.

Læmophlœus Caseyi, n. sp.

Elongatus, subparallelus, convexus, subnitidus, glaber, testaceus; antennis moniliformibus, 2^o articulo 3^o longiore; margine antico capitis sinuato; fronte utrinque in longitudinem impresso; prothorace quadrato, parce punctulato, utrinque unistriato, angulis anticis rectis, posticis obtusis; scutello transverso, subpentagonali; elytris ad apicem conjunctim rotundatis, in disco tristriatis, intervallis vix perspicue striatis. — Long. 1³/₄ mill.

Allongé, convexe, un peu brillant, glabre, testacé. Antennes moniliformes, 2^{me} article plus long que la 3^{me}, massue de 3 articles. Tête éparsement pointillée. Labre peu visible, front longitudinalement et assez fortement impres-

sionné de chaque côté. Prothorax un peu moins long que large, à peine rétréci à la base, très éparsément pointillé, longitudinalement strié de chaque côté; angles antérieurs droits, postérieurs obtus; disque avec une courte impression longitudinale sulciforme au milieu de sa marge antérieure. Écusson plus large que long, subpentagonal. Elytres environ deux fois et demie aussi longs que larges, un peu atténués vers le sommet, arrondis ensemble à l'extrémité; chacun avec trois stries dorsales et dans les intervalles une très fine strie à peine visible, sauf au sommet, et déterminant dans cette partie des intervalles alternés un peu élevés.

Hab. Grenada — Grand Etang (leeward side).

Se placerait dans le tableau des *Laemophloeus* de l'Amérique du Sud (Ann. Soc. entom. de France, tome LXV (ann. 1896), p. 205) dans le groupe 34 et se distinguerait par sa forme étroite, allongée.

Cryptophilus frater, n. sp.

Oblongus, convexus, nitidus, testaceus, flavo-pubescens; prothorace transversissimo, dense punctato; elytris punctatis, vix perspicue striatis. — Long. 1½ mill.

Oblong, convexe, brillant, testacé, couvert d'une pubescence courte, pas très serrée, flave. Septième article des antennes un peu plus épais que les 6^{me} et 8^{me}. Prothorax un peu plus de deux fois plus large que long, sensiblement aussi large à la base qu'au sommet, régulièrement mais peu fortement arqué sur les côtés, tronqué à la base et au sommet, sans trace de fossettes contre la base, densément et assez fortement ponctué. Écusson transversal. Elytres presque quatre fois plus longs que le prothorax, finement ponctué en lignes, à peine visiblement striés.

Hab. Grenada — Soubise (windward side).

Espèce voisine du *Cryptophilus integer* Heer, mais distincte par sa taille notablement plus petite, son prothorax plus transversal et sa pubescence encore plus courte.

Diplocœlus (Marginus) similis, n. sp.

Oblongus, modice convexus, subnitidus, brunneo-castaneus, dense flavo-pubescentibus; prothorace parce punctato; elytris lineato-punctatis, punctis circa scutellum et juxta basin suturæ evanescentibus. — Long. 2 mill.

Oblong, modérément convexe, peu brillant, brun marron, couvert d'une pubescence gris flave, assez dense, composée de poils assez longs, presque couchés, disposés par petits faisceaux de quelques poils convergents et de poils plus courts et plus fins uniformément répartis, assez densément serrés, mais ne masquant pas le fond du tégument. Prothorax plus de deux fois plus large à la base que long, rétréci au sommet, éparsément et finement ponctué sur le disque. Elytres ponctuéés en lignes, ponctuation presque effacée sur le disque autour de l'écusson et le long de la suture dans la partie basilaire. Strie suturale bien marquée dans la moitié apicale.

Hab. Grenada — Mount Gay Estate (leeward side).

Espèce voisine du *Marginus rudis* Lec., distincte par sa ponctuation presque effacée sur le prothorax et sur le disque des élytres dans la partie basilaire.

Psephenops, nov. gen.

Primus et secundus articulus antennarum incrassati.

Palpi maxillares elongati; ultimus articulus elongatus, ovatus.

Trochantinus conspicuus.

Abdomen segmentis ventralibus sex.

Pedes tenues; tarsi elongatis, articulo primo brevi, lobato, 2^o elongato, lobato, 3^o et 4^o brevibus.

Processus prosternalis strictus, canaliculatus, apice acuminatus.

Genre remarquable par la conformation des tarsi dont le 1^{er} article court et le 2^{me} très allongé sont terminés par des lobes en forme de cornet.

Psephenops Smithi, n. sp.

Oblongus, vix convexus, fuscus, pube brevi flavo-cinerea vestitus; prothorace transverso, antice angustato, lateribus subrectis, angulis posticis acutis, disco in longitudinem, ante scutellum carinato; scutello subtriangulâri, concavo, glabro; elytris vage punctato-striatis, ad apicem separatim rotundatis. — Long. 3 mill.

Oblong, à peine convexe, peu brillant, brun olivâtre, plus foncé sur la tête et le prothorax, couvert d'une pubescence grisâtre sur les élytres, plus foncée sur la tête et le prothorax. Antennes noires, les deux premiers articles un peu moins foncés; pattes d'un testacé enfumé. Prothorax un peu plus de deux fois plus large à la base que long, rétréci au sommet; côtés droits; bord antérieur arqué, base faiblement échancrée devant l'écusson, sinué de chaque côté; angles antérieurs effacés, postérieurs aigus; sur le disque devant l'écusson une courte carène longitudinale. Ecusson subtriangulaire, légèrement enfoncé. Elytres environ quatre fois plus longs que le prothorax, un peu élargis vers le sommet, arrondis séparément, portant des vestiges de stries ponctuées le long de la suture.

4^{me} segment abdominal du mâle impressionné de chaque côté, 5^{me} échancré laissant voir les deux segments de l'armature génitale.

Hab. Grenada — Mt. Maitland (leeward side), Chantilly Estate (windward side); St. Vincent.

Xexanchorinus, nov. gen.

Prosternum parallelum, ad apicem acumiatum.

Metasternum in longitudinem sulcatum.

Segmenta abdominis æqualia.

Palpi maxillares filiformes.

Genre voisin des *Xexanchorus* mais présentant une physiologie qui le rapproche des *Psephenus*.

Xexanchorinus latus, n. sp.

Oblongo-ovatus, sat latus, vix convexus, nigro-fuscus; pube brevi, flavo-cinerea sat dense vestitus; capite prothoraceque opacis, elytris subnitidis; prothorace transversissimo, antice angustato, lateribus rectis, angulis anticis obtusis, posticis rotundatis; elytris sat elongatis, obsolete sulcatis, intervallis alternis subelevatis. — Long. 4 mill.

Oblong, assez large, très légèrement convexe, noirâtre sur la tête et le prothorax, un peu plus brun sur les élytres, couvert d'une pubescence grise, courte, assez serrée. Antennes des Potamophiliens vrais. Front présentant une faible élévation transversale. Prothorax environ d'un tiers aussi long que large à la base, notablement rétréci au sommet; côtés droits; angles antérieurs obtus, postérieurs assez largement arrondis; sommet arqué en avant dans le milieu, sinué de chaque côté; marges latérales pas très largement explanées; disque présentant de chaque côté en arrière du milieu une faible dépression. Ecusson en triangle curviligne. Elytres plus de cinq fois plus longs que le prothorax, obsolètement striés; intervalles alternes vaguement élevés; extrémités arrondies séparément.

Hab. Grenada — Chantilly Estate (windward side).

Phanocerus congener, n. sp.

Oblongus, convexus, fuscus, pube brevi flava sat dense vestitus; prothorace transverso, antice angustato, lateribus bi-sinuatis, disco in longitudinem subcarinato, utrinque striato, stria sinuata; elytris striato-punctatis; antennis clava excepta, pedibusque fusco-testaceis. — Long. $2\frac{1}{3}$ mill.

Oblong, convexe, brun olivâtre, couvert d'une pubescence flave, serrée, courte, entremêlée sur la tête, le prothorax et le rebord latéral des élytres de poils plus longs, dressés, bruns. Antennes, sauf la massue, d'un testacé un peu enfumé, articles 1 et 2 frangés de poils noirs, assez allongés, surtout à l'extrémité du 2^{me} article. Prothorax

transversal, obsolètement caréné sur le disque, avec deux impressions obliques à la base de la carène, enclosant un espace triangulaire un peu saillant; de chaque côté du disque une strie longitudinale sinuée en dedans, déterminant avec le rebord latéral un espace légèrement concave en avant, longitudinalement convexe un peu avant le milieu, et assez étroitement explané vers la base; bords latéraux par suite bisinués; angles antérieurs presque marqués. Ecusson transversal, suborbiculaire. Elytres ponctués-striés jusqu'au sommet.

Hab. Grenada — Balthazar (windward side).

Helmis Smithi, n. sp.

Oblonga, convexa, subopaca, fusco-castanea, tenue pubescens; prothorace transverso, granoso, in longitudinem sulcato, utrinque carinato, carinis antice abbreviatis, lateribus arcuatis, marginatis; elytris subcoriaceis, punctato-striatis, intervallis 3 et 5 elevatis; antennis pedibusque fusco-testaceis. — Long. 2 mill.

Oblong, convexe, peu brillant, brun marron, finement pubescent. Antennes et pattes testacées, légèrement enfumées. Front déprimé, finement granuleux, impressionné de chaque côté vers la naissance des antennes. Prothorax un peu moins de deux fois plus large que long, granuleux; sur le disque un sillon longitudinal, de chaque côté une carène ondulée au milieu, atténuée vers le sommet; bords latéraux arqués, rebordés d'un fin bourrelet granuleux. Ecusson ovale. Elytres environ une fois et demie aussi longs que larges, finement chagrinés, ponctués-striés; 3^{me} et 5^{me} intervalles en partant de la suture relevés, le premier surtout vers la base, le second sur presque toute la longueur; strie suturale profondément enfoncée au sommet.

Hab. Grenada — Mount Gay Estate (leeward side).

Espèce voisine des *H. ferruginea* Horn, *sulcata* Grouv., *subsulcata* Grouv., *flavipes* Grouv., *granosa* Grouv. et *granulosa* Sharp. Sa couleur brun marron clair la rapproche

surtout de *ferruginea*. Elle se distingue de cette dernière espèce par l'impression longitudinale du disque du prothorax qui forme un véritable sillon, tandis que chez l'autre espèce elle se trouve limitée aux extrémités, et par les carènes latérales qui n'atteignent pas le sommet.

TABLEAU DE CES ESPÈCES.

- | | |
|---|--------------------------|
| 1. Sillon longitudinal du disque du prothorax accompagné à la base, de chaque côté, d'une impression ponctiforme. | 2. |
| Sillon longitudinal du disque du prothorax sans impression ponctiforme de chaque côté à la base. | 4. |
| 2. Sillon longitudinal effacé à la base; impressions ponctiformes petites; brun foncé. | <i>granosa</i> Grouv. |
| Sillon longitudinal entier; impressions ponctiformes plus fortes. | 3. |
| 3. Noir. | <i>sulcata</i> Grouv. |
| Brun; épaules rougeâtres. | <i>subsulcata</i> Grouv. |
| 4. Prothorax moins large que les élytres; noir; élytres brillants | <i>flavipes</i> Grouv. |
| Brun ou brun ferrugineux | 5. |
| 5. Stries des élytres à peine visibles. | <i>granulosa</i> Sharp. |
| » » » bien marquées | 6. |
| 6. Impression du disque du prothorax large, non nettement sulciforme; carènes latérales entières | <i>ferruginea</i> Horn. |
| Impression du disque du prothorax sulciforme; carènes latérales écourtées au sommet. | <i>Smithi</i> Grouv. |

Paris, 3 Février 1898.

NOTE VI.

DESCRIPTION D'UNE NOUVELLE ESPÈCE DU
GENRE PLATYPRIA

PAR

le Dr. R. GESTRO.

Je suis redevable à l'amabilité de M. Ritsema de l'occasion de décrire une nouvelle espèce de *Platypria*, genre qui a été jadis l'objet de quelques uns de mes travaux et je remercie le savant Conservateur au Musée de Leyde d'avoir été et d'être toujours si obligeant et si large dans ses communications avec moi.

Platypria squalida, n. sp.

Subquadrata, subopaca, supra brunnea, subtus flavo-ferruginea; prothorace utrinque lobato, lobis subnitidis sex-spinosis, spinis 1^a et 6^a brevioribus, disco opaco, medio longitudinaliter parum profunde sulcato, basi transversim impresso et ruguloso; elytris opacis, pube tenui cinerea indutis, margine laterali subnitido, punctato-striatis, spinis discoidalibus brevibus conicis, inæqualibus, apice nigris, lobo antico sex-spinoso, lobo postico tri-spinoso. — Long. 6 $\frac{1}{2}$ millim.

Même taille que *subopaca* Chap., corps brun en dessus, jaune ferrugineux en dessous. Tête à front sillonné au milieu; antennes de la couleur du corps. Corselet mat, à disque presque plan, avec un léger sillon longitudinal

Notes from the Leyden Museum, Vol. XX.

au milieu, se joignant à la base avec une impression transversale, densément rugueux le long de cette impression, éparsément sur le milieu en avant. Expansions latérales du corselet légèrement brillantes, rétrécies au sommet et armées de six épines, dont les quatre intermédiaires assez longues, l'antérieure et la sixième plus courtes. Ecusson triangulaire, arrondi en arrière, chagriné. Elytres mats, recouverts d'une pubescence grisâtre très fine; le pourtour latéral plus clair et légèrement brillant; régulièrement ponctués-striés; le lobe antérieur armé de six épines égales, le postérieur de trois; épines discoïdales inégales entre elles, courtes, coniques, avec la pointe noire.

Cette espèce est très rapprochée de *subopaca* Chap. des îles Philippines, dont elle diffère principalement par la présence de six épines au lobe antérieur des élytres, au lieu de cinq ¹⁾ et par le corselet unicolore.

J'en ai examiné trois exemplaires recueillis par Mr. Forsten à Gorontalo et à Tondano (Célèbes sept.). Tous les trois appartiennent au Musée de Leyde.

Gênes, Museo Civico di Storia Naturale,
6 Janvier 1898.

1) Voir ma note sur les *Platypria* (Annali del Museo Civico di Storia Naturale di Genova, XXXVIII, 1897, pag. 116).

NOTE VII.

ON SOME BRENTHIDAE COLLECTED BY
MR. J. D. PASTEUR IN JAVA

BY

Dr. ANGELO SENNA,

Assistant in the R. Museum at Florence.

Lately I have had the pleasure to receive an interesting collection of Brenthidæ from West Java, very kindly offered to me by Mr. J. D. Pasteur to whom I here wish to express my sincere thanks.

In the letter accompanying this valuable lot of specimens, Mr. Pasteur gives some remarks on the coloured lines and spots of the elytra in living Brenthidæ and says: »Les taches jaunes sont toujours d'un jaune très clair (jaune de paille ou bien de gomme gutte) faisant un vif contraste avec la couleur laque noire des élytres; aussitôt que l'insecte est desséché ces taches jaunes deviennent d'une couleur fade, brune claire ou même foncée." In my note: Enumeration of the species known as yet from Java¹), treating of *Eutrachelus Temmincki* Latr., I wrote: »this species varies in having the elytral spots more or less evident", but Mr. Pasteur notices: »Les *E. Temmincki* Latr. que j'ai collectionnés par vingtaines de toutes dimensions et des deux sexes à Sumatra aussi bien qu'à Java, avaient toujours les taches d'une couleur jaune très claire de gomme gutte." And indeed, in a few specimens belonging not only to the

1) Notes Leyden Museum, XIV, p. 161, 1892.

genus *Eutrachelus* but also to *Miolispa*, *Baryrrhynchus*, *Orychodes*, *Pseudorychodes* etc. that Mr. Pasteur sent to me preserved in arsenical glycerine, the colour of the elytral lines and spots is very bright and strongly contrasting with the dark general tint. In dry specimens preserved in the collections, the differences of colour of the elytral markings are probably due to the different manners of conservation, but I believe also that some species are less subject to this darkening.

As I have already worked out in this periodical the Javanese Brenthidæ presented by Mr. J. D. Pasteur and other collectors to the Leyden Museum, the greater number of the species contained in the present collection has been previously recorded¹⁾, nevertheless I have the satisfaction to find the genera *Jonthocerus* Lac. and *Higonius* Lew. not yet collected in Java and some undescribed species. I add also two other genera new to Java, *Cyphagogus* Parry and *Epicoenoneus* Senna, obtained by Mr. Pasteur and presented by him to the collections of the Leyden Museum.

Cyphagogus longulus, n. sp.

Elongatus, *gracilis*, *niger*, *sparsim pilosus*; *capite elongato*, *basin versus modice angustato*; *metarostro antice vix attenuato*; *prothoracis lateribus posticis vix recurvis*, *cono regulari*, *vertice oblique declivi*; *elytris dorso anguste striatis*, *striis fere impunctatis*, *lateribus striato-punctatis*, *interstitiis angustis*, *dorso depressis*; *tibiis anticis intus apicem versus curvato-ampliatis*, *tarsis posticis elongatis*, *modice robustis*. — Long. $8\frac{1}{2}$ mm., latit. max. prothor. 1 mm.

1) These species are the following: *Zemioses latus* Senna, *Cerobates tristriatus* (Lund), *C. adustus* Senna, *C. angustipennis* Senna, *Trachelizus bisulcatus* (Lund), *Miolispa javanica* Senna, *M. metallica* Senna, *M. exarata* Desbr., *M. nupta* Senna, *Prophthalmus longirostris* Gylh., *P. pugnator* Pow., *Baryrrhynchus latirostris* Gylh., *Orychodes cinnamomi* (Herbst), *Eutrachelus Temmincki* Latr., *Schizotrachelus brevicaudatus* Lac., *Sch. intermedius* Senna, *Cediocera tristis* Senna and *Dinrus furcillatus* Gylh.

Hab. Toegoe (Western Java). — Leyden Museum.

Head elongate, moderately narrower at the base than behind the eyes, convex above, with some hair-bearing punctures scattered at the sides and near the base. Rostrum very slightly longer than the head: metarostrum hardly attenuate anteriorly, prorostrum enlarged towards the tip, scarcely emarginate in the middle, above deplanate, smooth. Antennae compressed, with the joints 3—5 almost moniliform, the 6th—8th broader than long with the sides unequal in length, the 9th and 10th larger, like the preceding ones obliquely cut anteriorly, the apical joint is shorter than the two preceding taken together and acuminate.

Prothorax equalling in length the head and rostrum taken together, the sides of the posterior half are slightly curved, those of the cone are regularly oblique, the vertex is subacuminate and obliquely sloping on the apical margin; the prothorax above is scattered with fine punctures bearing long hairs.

Elytra elongate, slightly shorter than the head and prothorax together, with the shoulders moderately callous and the sides parallel till the apical third; striate above with the dorsal striae almost impunctate, the sides are striato-punctate, the interstices broader than the striae, depressed, very obsolete punctured and hairy.

Anterior tibiae with the inner edge enlarged and curved near the apex, penicillate; hind tarsi elongate, moderately robust and punctured, the metatarsus is slightly shorter than twice the following joint. Metasternum and base of the abdomen convex, almost smooth.

C. longulus is the first species of this genus taken in Java; it belongs to the group of *C. Eichhorni* Kirsch and *C. signipes* Lewis from which it is easy to recognize by the characters of the head, prothorax and elytra above indicated.

Jonthocerus angulaticeps, n. sp.

Niger, opacus, capite, rostro, antennis, elytrorum humeris

Notes from the Leyden Museum, Vol. XX.

pedibusque ferrugineo-rufis nitidis; capite pone oculos distincte angulato, oculis mediocribus, prothorace canaliculato, elytris striatis, apici in medio emarginatis, angulis externis marginato-subrotundatis. — Long. 5—6½ mm.

Hab. Western Java.

♂. Head angulate at the sides behind the eyes, truncate at the base, convex above, channelled; the portion between the eyes narrow in front; eyes moderate for the genus; metarostrum furrowed, prorostrum distinctly enlarged at the tip. Antennae almost as long as the entire body, slender, delicately hairy, with the joints cylindrical.

Prothorax sub-ovate, constricted at the apical margin, convex above, channelled.

Elytra elongate, emarginate at the base with the shoulders rounded and slightly callous, the sides almost parallel, the tip emarginate in the middle with the external angles margined and almost rounded; depressed above along the sutural region, striate with the dorsal interstices curved, the 1st (sutural) deplanate, the 2nd interrupted behind the middle, the 3rd enlarged near the apex; sides of the elytra distinctly striate.

Legs regular. Body beneath chestnut, shining; the head and rostrum punctured except on the median line, metasternum and base of the abdomen convex, shallowly impressed.

In the female the head is hardly shorter and broader, the portion between the eyes broader, the eyes smaller, the antennae short and robust, shaped as in some species of *Cerobates* but with the apical joints slightly longer, the apex of the elytra is margined and rounded, the tarsi are shorter; beneath the rostrum only is punctured.

By the head, angled behind the eyes, *J. angulaticeps* is allied to *J. carinensis* Senna but distinguished by the eyes which in the new species are smaller, by the head being channelled and not furrowed, by the prothorax differently coloured and finally by the elytral apex which is otherwise shaped.

Jonthocerus Pasteuri, n. sp.

Brunneo-ruber, capite et rostro magis infuscatis, pedibus dilutioribus; capite pone oculos haud angulato, supra laevi, oculis magnis; antennis longitudinis totius corporis, albidopilosis; prothorace canaliculato, canaliculo antice angustiore, postice basin haud attingente; elytris dorso striatis, lateribus indistincte striatis, apici in medio emarginatis, angulis externis explanato subrotundatis. — Long. $6\frac{1}{2}$ mm.

Hab. Western Java.

♂. Head not angulate behind the eyes, smooth above, eyes very large, nearly touching the base of the head and almost contiguous on the front; metarostrum furrowed, prorostrum enlarged at the tip. Antennae as long as the entire body, slender, with the joints cylindrical, clothed with fine whitish hairs.

Prothorax sub-ovate, constricted at the apical margin, convex above, channelled, the channel narrower anteriorly.

Elytra elongate with the shoulders rounded but not callous, the sides almost parallel, the apex emarginate, the external angles margined and nearly rounded; depressed above, striate, the 1st interstice (sutural) broad, deplanate, the 2nd curved, narrow, indistinct behind the middle, the 3rd broader at the base and at the apex than in the middle; the sides of the elytra are indistinctly striate.

Legs regular. Body beneath more shining, head and rostrum shaped as in the preceding species, metasternum and base of the abdomen channelled.

Female unknown.

This species resembles *J. ophthalmicus* Pascoe from Australia but the colour is darker, the portion of the head between the eyes is narrower and smooth, the elytra at the apex are less emarginate and the external angles less produced and more rounded.

Higonius Poweri Lewis.

Journ. Linn. Soc. XVII, p. 299, note, 1883.

A single male. The genus is for the first time recorded from Java.

Miolispa Pasteuri, n. sp.

Nigro-fusca vel brunneo-fusca, parum nitida, interdum capite, rostro et prothorace saturate rubro-castaneis. — ♂. Capite parvo, quadrato; rostro fere usque ad apicem sulcato, prorostri apice minime ampliato; antennarum articulis 9^o et 10^o paullo longioribus quam latioribus, sub-cylindricis, apicali elongato-acuminato; prothorace antice fortiter constricto, lateribus regulariter arcuatis, supra rugoso-punctato, in medio canaliculato; elytris profunde sulcato-punctatis, subclathratis, sulco 1^o angustiore quam cæteris, impunctato, interstitiis angustis, carinatis. — ♀. Capite, metarostro et antennarum articulis brevioribus, prorostro longiore et graciliore, cylindrico, prothorace ovato-conico. — Long. 8—11½ mm.

Hab. Western Java, Bantam.

Head punctured, furrowed above with the furrow obsolete near the base, deep between the eyes. Rostrum as long as 2½ the head, furrowed; metarostum shorter than the head, prorostrum longer, very slightly enlarged at the tip, furrowed also at the sides. Antennae clubshaped with the median joints hardly broader than long, slightly obconical and almost equal in length, the 9th and 10th joint longer than broad, subcylindrical; the apical is elongate, acuminate at the tip and as long as the two preceding joints together.

Prothorax sub-ovate, strongly constricted at the apical margin, the sides regularly curved, above rugoso-punctate, channelled in the middle.

Elytra elongate, with the sides moderately attenuate behind the basal third till the tip, at the apex they are slightly emarginate in the middle, rounded externally, sulcato-

punctate above, subclathrate; the 1st furrow narrower than the following ones and impunctate, these latter are broader than the interstices and deeply punctured; the interstices are raised and narrow.

Legs regular. Body beneath black-brown, shining, head punctured, metasternum and base of the abdomen slightly impressed along the median line.

In the female the head and rostrum are slightly shorter, the prorostrum longer, cylindrical; the median joints of the antennae more transverse, the apical ones shorter; prothorax ovato-conical, less constricted at the apical margin; head beneath indistinctly punctured, metasternum and base of the abdomen not impressed.

Allied to *M. exarata* Desbroch. but distinguished by the following characters: head more truncate at the base, with the hind angles almost straight, the prothorax narrower anteriorly, the elytra more punctured and finally the colour is different.

Miolispa lineata, n. sp.

♂. *Elongata, subgracilis, fulvo-ferruginea parum nitida, capite, rostro, antennis, elytrorum regione suturali et declivitate apicali, pedibus, corpore infra et lateribus nigris vel brunneo-nigris; capite angusto, leviter longiore quam latiore, supra obsolete canaliculato, canaliculo interdum super verticem indistincto; antennarum articulis funiculi gracilibus, breviter obconicis, 9^o et 10^o fere aequae latis quam longis, lateribus curvatis; prothorace sparsim modiceque punctato; elytris regulariter punctato-sulcatis.* — Long. 6—7 $\frac{1}{2}$ mm.

Hab. Western Java.

Head narrow, slightly longer than broad, strongly notched in the middle and laterally, convex and indistinctly channelled above with the sides straight; rostrum slender, metarostrum shorter than the head, furrowed in the middle and at the sides, prorostrum longer than the metarostrum, furrowed in the basal half, slightly enlarged at the tip.

Notes from the Leyden Museum, Vol. XX.

Antennae slender, clubshaped, with the median joints broader than long, slightly obconical, the 9th and 10th almost as long as broad, curved at the sides, the apical one elongate, ovato-conical.

Prothorax oblongo-ovate, narrower anteriorly than at the base, punctured above.

Elytra almost as long as the prothorax, head and rostrum together, broader than the prothorax, emarginate at the base, with the shoulders slightly raised, the sides gradually narrower behind the middle till the apex, this is truncate with the outer angles rounded: above the elytra are furrowed and punctured, the 1st furrow is impunctate and slightly broader than the following one; the sutural interstice is narrow, convex, black, the 2nd likewise black, narrower and less raised than the 3rd which is almost as broad as the following ones.

Legs regular. Body beneath more shining than above, metasternum and base of the abdomen moderately impressed in the middle, the apical segment is obsoletely punctured.

This new species is allied to *M. pygmaea* Senna but differs by the following characters: body more elongate, head obsoletely channelled above, prothorax more punctured, elytra broader at the apex, the teguments are less shining and the colour different: the fulvous of the prothorax and elytra strongly contrasts with the dark colour of the head, rostrum etc.

Trachelizus laevigatus, n. sp.

Castaneo-fuscus plus minusve saturatus, nitidus, haud squamosus; capite transverso, oculis majusculis, basin capitis attingentibus, fronte foveolata; prorostro in ♂ gracili, cylindrico, apice haud ampliato; antennis clavatis; prothorace ovato, antice sat fortiter angustato, in medio profunde sulcato, elytris juxta suturam utrinque bisulcatis, sulcis impunctatis, coeterum laevibus. — Long. 8—11 mm.

Notes from the Leyden Museum, Vol. XX.

Hab. Western Java.

♂. Head short, transverse, slightly emarginate at the base, not angulate at the sides, the eyes are prominent and touching the base of the head; convex above, smooth, the front foveolate. Metarostrum as long as the head, slightly conical with the sides oblique, but sometimes slightly curved, above furrowed in the middle; mesorostrum moderately enlarged and rounded, almost smooth; pro-rostrum longer than the metarostrum, slender, cylindrical, not enlarged at the tip. Antennae clubshaped, with the median joints almost moniliform, the 9th and 10th larger, rounded; the apical joint ovato-conical, shorter than the two preceding together.

Prothorax ovate, distinctly angustate anteriorly, deeply furrowed, smooth at the sides, shining.

Elytra longer and slightly broader before the middle than the prothorax, the shoulders distinctly angulate, the sides moderately curved, the apex rounded; above with two furrows on each side of the sutural interstice, the remaining portion is smooth, shining.

Legs as in *T. bisulcatus* (Lund). Body beneath very shining, the apophysis of the prosternum is broad, the metasternum and the base of the abdomen are slightly furrowed.

The female differs by the metarostrum and the apical joint of the antennae which are shorter and by the pro-rostrum which is longer and more slender.

This interesting species may be placed near *T. bisulcatus* by the general shape of the prothorax and elytra, but the rostrum is not enlarged at the tip in the male and the shape of the head recalls the genus *Ceocephalus*; the character of the eyes (touching the base of the head) is peculiar to this species.

Pseudorychodes piliferus (Senna).

Notes from the Leyden Museum, XIV, p. 177, 1892.

Of this peculiar and rare species I have hitherto examined a single male, the type, captured by Prof. A. A. W. Hubrecht at Telaga bodas, a crater near Garoet (Western Java) and belonging to the collection of the Leyden Museum. Mr. Pasteur has been successful in obtaining of it a female by which I am able to indicate the sexual differences.

Head slightly shorter and smooth above, metarostrum hardly as long as the head, deeply furrowed, prorostrum longer than that of the male, filiform, almost straight; antennal joints slightly shorter; apex of the elytra truncate with the external angles rounded, the base of the abdomen convex, not impressed. The long hairs at the sides of the elytra are also visible in the female; the colour and disposition of the elytral lines are as in the male. My specimen has a length of 15 mm.

Pseudorychodes dentipennis, n. sp.

♀. *Crassiusculus*, *castaneus* parum nitidus, antennis capite et rostro elytrorumque apice rufescentibus, elytris lineis pluribus flavo-ferrugineis notatis; capite paullo brevior quam latiore, angulis posticis rectis, supra tenue canaliculato, metarostro conico, sulcato, prorostro longiore, filiformi; prothorace ovato, sparsim minutissime punctulato-piloso, elytris fortiter punctato-sulcatis, apice subtruncatis, angulis externis breviter dentatis. — Long. 13 mm.

Hab. Western Java.

Head short, slightly broader at the base than long, the hinder angles straight, the vertex and front channelled; metarostrum as long as the head, conical, furrowed in the middle, with the sides roughly punctured and scattered with a few hairs; prorostrum longer, moderately curved, filiform, shining. Antennae as long as the prothorax, head and metarostrum together, filiform, moderately stout, with

Notes from the Leyden Museum, Vol. XX.

the median joints cylindrical, and gradually increasing in length, the apical ones almost as long as the two preceding joints together, pointed at the tip.

Prothorax ovate, narrower anteriorly than behind, with a broad margin at the base, transversely furrowed, convex above, scattered with very fine punctures which bear short hairs.

Elytra twice as long as the prothorax and broader than it, the shoulders are rounded, the sides almost parallel in the middle, gradually curved and narrower behind the middle, the tip is almost truncate with the external angles obtusely toothed; above the elytra are strongly punctured and furrowed; some punctures at the sides are hair-bearing but the hairs are shorter than in *Ps. piliferus* (Senna); the 1st furrow is impunctate, the 1st interstice (sutural) is depressed and regular, the 2nd depressed but of irregular width, the following interstices are more raised and convex, broader where they have the yellow-ferruginous lines. The disposition of these lines is the following: the 3rd interstice bears two lines in the apical third, the 4th has a line near the base, another near the middle and a spot behind it, the 5th has a short line at the base and another behind the middle, the 7th a line behind the middle, the 8th a short line at the same position and another longer one on the basal third, where a short line is visible on the 9th interstice which has also a longer one near the tip.

Thighs clubshaped and spined in the apical third. Body beneath shining, head and metarostrum with a line of punctures bearing hairs and the median interspace raised; metasternum foveolate at the apex, the base of the abdomen is convex.

Of this handsome species, Mr. Pasteur sent me a single female. The male has certainly a slender rostrum, the eyes more prominent, the prothorax more attenuate near the apex and broader behind the middle. *Ps. dentipennis* is easily distinguishable from all the species which have likewise a slender rostrum, by the obtusely toothed external apical angles of the elytra and by the 2nd interstice being depressed in the median portion.

Epicoenoneus ¹⁾ *femoralis* Senna.

Annali Mus. Civ. Stor. nat. Genova, ser. 2a, vol. XII (XXXII)
p. 478 (n°. 28). 1892.

One female from Toegoe, Western Java, in the collection of the Leyden Museum.

Mr. Pasteur may be congratulated by the capture of this very interesting species of which I have described a single male from the Carin Mounts (Burma). I take the occasion to mention the differential characters of the female.

Head slightly shorter than broad, beneath obsoletely punctured; metarostrum shorter than the head, hardly attenuate anteriorly, foveolate; prorostrum slender, cylindrical. Antennae shorter, with the scape as long as the 2nd and 3rd joints together, the 4th is shorter than the two preceding joints, the 5th—7th are gradually longer than the 4th, cylindrical, the apical joint is pointed and shorter than the 9th and 10th together.

Prothorax slightly narrower anteriorly than at the base, in this specimen the hairs are few in number and the two black bands are obsolete.

Elytra shaped as those of the male, the 3rd interstice bears moreover a line at the apical declivity; the sutural angle at the apex obsoletely prominent, the external angle strongly spinous. Anterior femora and coxae shaped as in the male.

Florence, February 1898.

1) *Epicoenoneus* olim.

NOTE VIII.

TROIS ÉLATÉRIDES NOUVEAUX DU MUSÉE DE LEYDE

DÉCRITS PAR

le Doct. E. CANDÈZE.

Alaus Keili, n. sp.

Inter majores; niger, eleganter brunneo cinereoque marmoratus; prothorace oblongo-rectangulari, lateribus depresso, margine antico bidentato, angulis posticis divaricatis et carinatis; scutello flavo, declivi; elytris seriatim punctatis, apice late truncatis. — Long. 40 mill., lat. 13 mill.

Hab. Les îles de Sumatra et de Nias.

Sauf la tache oblongue latérale des élytres, assez bien limitée, les teintes brunes foncées, claires et cendrées qui marbrent élégamment le dessus du corps, sont fondues; le prothorax est brun dans sa partie centrale et gris blanchâtre latéralement; les élytres, généralement brunes, sont ornées de taches latérales oblongues d'un brun noir et, en outre, de quelques taches claires, petites, disséminées. J'en ai vu deux exemplaires, l'un communiqué par M. Ritsema et qui provient des récoltes de M. Keil sur le plateau de Liwa (Benkoelen), l'autre, de Nias, que je tiens de M. Staudinger.

Melanoxanthus ramusculus, n. sp.

Subopacus, angustus, nigro-fuscus, griseo-pubescentis; fronte nigra, fortiter punctata; antennis obscuris; prothorace lati-

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tudine longiore, conico, crebre punctato, angulis posticis flavis; elytris profunde punctato-striatis, apice integris, singulatim basi apicemque versus vage flavo-maculatis; pedibus pallidis. — Long. 4 mill., lat. $\frac{3}{4}$ mill.

Hab. L'île de Lombok: Mons Sapit (Fruhstorfer).

Le nombre des petites espèces de ce genre augmente tellement tous les jours qu'il devient nécessaire d'en dresser un tableau dichotomique qui permette, en l'absence de la comparaison avec les types, de parvenir à les nommer sûrement. Les îles Malaises surtout en sont abondamment pourvues et il est peu de collection, faite dans l'une ou l'autre d'entre elles, qui n'en présente de nouvelle.

Melanoxanthus puerulus, n. sp.

Rhomboidali-elongatus, opacus, nigro-brunneus, tenuiter flavo pubescens; fronte fortiter punctata; antennis obscuris, basi flavis; prothorace latitudine parum longiore, conico, crebre punctato, angulis posticis flavis; elytris fortiter punctato-striatis, apice integris, singulatim basi apiceque maculis magnis flavis ornatis; pedibus flavis, femoribus obscuris. — Long. 3 mill., lat. fere 1 mill.

Hab. Les îles de Lutungan et de Lombok: Mons Sapit (Fruhstorfer).

Plus court que le précédent avec lequel il a quelques rapports de coloration, de forme plus rhomboïdale, les taches jaunes des élytres plus grandes et mieux teintées; les cuisses noirâtres. Ces deux espèces sont sujettes à varier, suivant l'oblitération plus ou moins marquée des taches sur les élytres.

Glain-lez-Liége, Février 1898.

NOTE IX.

ON A NEW GENUS AND SEVERAL NEW SPECIES
OF BRENTHIDAE

BY

Dr. ANGELO SENNA,

Assistant in the R. Museum at Florence.

Mesoderes

nov. genus Taphroderinarum.

*Corpus breve, robustum, convexum, pilosum.**Caput brevissimum, lineato-transversum, convexum, basi emarginatum, oculis lateralibus, semiglobosis, prominulis; infra bisbulbosum, medio subimpressum.**Rostrum brevissimum, capite longius sed angustius, recurvum, antice dilatatum, infra utrinque ante antennis unidentatum.**Antennae ad latera rostri insertae, longulae, subclavatae, articulis medianis breviter obconicis, apicalibus majoribus, compressis.**Prothorax paullo longior quam latior, subellipticus, antice vix angustior quam basi, supra valde convexus, haud canaliculatus, lateribus anticis neque excavatus nec compressus.**Elytra brevia, ovato-oblonga, convexa, lateribus a medio usque ad apicem gradatim curvatis, apici anguste rotundata, supra sulcato-costata, sulcis antice vix curvatis, interstitiis depressis, punctulato-pilosis, 2^o lato, a basi usque ad apicem extenso.**Pedes parum graciles, longiusculi, femoribus pedunculato-clavatis, posticis longioribus, haud difformibus, apicem*

Notes from the Leyden Museum, Vol. XX.

elytrorum paullo superantibus; metatarso postico articulis duobus sequentibus unitis longitudine subaequali, articulo unguifero gracili.

Prosternum antecoxale medio subimpressum, antice utrinque subcallosum; prosternum postcoxale foveolatum. Metasternum late impressum in mare, sulcatum in femina; abdominis segmenta basalia valde abbreviata, coalescentia, suturae vestigio in medio nullo vel obsoleto; segmento apicali foveolato in mare, laevi in femina.

The body is unusually short in comparison with its broadness and much convex; the head is strongly transverse and almost dilated sideways; the greater transverse diameter of the prothorax passes through the middle of the longitudinal one, the excavation or compression at the sides anteriorly is wanting, the legs are comparatively more elongate.

I consider this interesting Brenthid as a Zemiosine-like genus with the body conspicuously shortened and convex and with some peculiar characters that may ultimately require a new group for its reception.

Mesoderes sexnotatus, n. sp.

Niger, nitidus, breviter pilosus, capite, rostro, antennis brunneo-rubris, elytris minus nitidis, singulo elytro linea basali in interstitio 4°, altera apicali in interstitio 2°, maculaque postmediana e 2—3 lineolis formata ferrugineis, in interstitiis 2°, 3°, 4° ornato.

♂. *Capite transverso, basi in medio emarginato, supra convexo, punctulato, infra medio subimpresso, utrinque paullo elevato. Rostro fortiter recurvo, lato, basi subfoveolato, punctato, pone antennis deplanato, gradatim modice dilatato, punctulato-piloso, antice haud emarginato; infra ante antennis utrinque dentato. Antennarum articulis medianis obconicis, 9° et 10° longioribus, compressis, desuper visis elongato-subobconicis, apicali longiore, acuminato.*

Prothorace antice angustiore quam basi, subelliptico, lateribus regulariter modiceque curvato-ampliatis, antice haud excavato, supra convexo, basi in medio leviter impresso, dorso sparsim punctulato-piloso.

Elytris brevibus, latioribus prothorace, basi leviter emarginatis, humeris paullo callosis, apice acuminato, supra convexis, subfornicatis, sulcato-costatis, sulcis impunctatis, interstitiis costiformibus, punctulato-pilosis, suturali basi latiore quam postice, 2° latiore quam sequentibus, 4° in tertio basali lato, postice attenuato.

Corpore infra rubro-castaneo, hic et illic plus minusve saturato. Prosterno in medio subimpresso, antice utrinque elevato, subcalloso; metasterno late — abdomine basi obsolete impresso, segmento apicali foveolato.

♀. *Differt corpore paullo brevior sed robustiore, pro-rostro brevior, postice constricto, deinde] rapide fortiterque ampliato; metasterno canaliculato, haud excavato, segmentis abdominis basali et apicali convexis, hoc haud foveolato. — Long. ♂ 7, ♀ 6 $\frac{1}{3}$ mm.*

Hab. Humboldt Bay (Nov. Guinea).

Two specimens collected by W. Doherty are in the Rothschild Museum at Tring.

Whenever the indication of the specimens »male'' and »female'', based upon an examination of the metasternum and abdomen, is not erroneous, this species is worthy of note also for its rostral dimorphism. In the male the pro-rostrum is longer, much curved, slightly enlarged from its rise till the tip; in the female on the contrary the pro-rostrum is shorter, more curved, and more rapidly and conspicuously enlarged at the tip.

Mesoderes maculatus, n. sp.

Hellodius maculatus Power in litt.

Rubro-brunneus, nitidus, pilosus, femorum pedunculis et apice obscurioribus, elytris ferrugineo notatis, fascia transversa mediana obsolete brunnescente.

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Capite brevissimo, transverso, utrinque subdilatato, basi emarginato et subtuberculato, supra punctato, oculis prominentibus, semiglobosis, basin capitis fere attingentibus. Rostro quam capite longiore illoque angustiore, recurvo, basi subsulcato; prorostrum rapide fortiterque dilatato. Antennis ad latera rostri insertis, crassiusculis, articulis 3°—8° breviter subobconicis, 9° et 10° majoribus, compressis, longioribus quam latioribus, apicali acuminato, vix longiore quam 10°.

Prothorace brevi, subelliptico antice haud compresso neque excavato, lateribus regulariter modiceque curvato-ampliatis, supra convexo, sparsim punctulato-piloso, obsolete versus medium versus canaliculato.

Elytris duplo prothoracis distincte brevioribus, basi emarginatis, humeris callosis, lateribus curvatis, gradatim ampliatis usque ad medium ibique evidenter latioribus quam prothorace, deinde angustatis, apice obtuso; supra convexis, subformicatis, sulcato-costatis, sulcis vix punctulatis, interstitiis regularibus, dorso convexis, punctulatis et pilosis; interstitio 2° ferrugineo, latiore quam sequente et a basi usque ad apicem prolongato, sequentibus basin et medium versus plus minusve ferrugineo notatis.

Corpore infra brunneo-rubro, nitido; capite infra bisbulboso, rostro basi utrinque spinoso, prosterno antecoxali depresso, processu lato; metasterno convexo, medio canaliculato, abdomine basi sublaevi, segmento apicali punctulato. — Long. 6 mm.

Hab. Malacca.

One specimen, probably a female, belonging to the collections of the R. Museum at Brussels (ex coll. Castelnau).

Allied to *M. sexnotatus* Senna but differs by the following characters: head more distinctly separated from the neck, with the occiput more raised; prorostrum narrower at its origin, prothorax shallowly channelled near the base, narrower anteriorly; elytra more attenuate behind, colour, disposition and number of the elytral markings different.

Miolispa cruciata, n. sp.

Capite, rostro, prothorace pedibusque rubro-castaneis, nitidis, plus minusve saturatis, prothoracis parte antica semper obscuriore, elytris brunneo-ferrugineis, regione suturali et macula postmediana infuscatis vel nigricantibus, interstitio 3° flavo-ferrugineo.

♂. Capite distincte longiore quam latiore, lateribus subparallelis, in speciminibus majoribus sat inflatis, basi in medio fortiter — lateribus levius inciso, supra convexo, laevi vel sparsim obsoletissime punctulato, nitido, fronte subfoveolata. Metarostro trisulcato, prorostro parce longiore, apicem versus gradatim latiore quam basi, supra usque ad medium sulcato. Antennis clavatis, articulis medianis submoniliformibus vel breviter obconicis, 9° aequae longo ac lato, lateribus curvatis, 10° vix breviorae praecedente, apicali longiore, ovato-conico.

Prothorace antice conspicue angustato, postice rotundato-dilatato, supra convexo, nitidissimo, sparsim punctulato.

Elytris basi modice emarginatis, angulis externis leviter callosis, lateribus a medio usque ad apicem sensim attenuatis, dorso parum convexis, juxta suturam punctato-striatis, lateribus punctato-sulcatis, interstitiis angustis, convexis, 3° latiore quam 2°, hoc flavo-ferrugineo; stria 1^a impunctata vel indistincte punctulata, caeteris regulariter punctatis; metasterno abdomineque basi medio obsolete impressis.

♀. Capite breviorae, quadrato; metarostro itidem breviorae, prorostro gracili, longiore, filiformi, apici paullo ampliato; antennarum articulis praecipue apicalibus brevioribus, prothorace antice minus angustato, metasterno obsolete impresso, abdomine basi laevi. — Long. ♂ 6½—8½ mm., ♀ 7½ mm.

Hab. North Borneo, Labuan Isl.

Type in my private collection.

This new species belongs to the group of *M. pygmaea* Senna and *M. sycophanta* Senna from which it differs by having the head much longer and shaped as in *M. javanica* Senna; the latter is nevertheless a species easily distin-

guishable from the new one by its body being more elongate and by its prothorax which is less enlarged at the sides and perfectly smooth above.

Miolispa borneensis, n. sp.

Ferrugineo-rufa, parum nitida, capite, rostro, antennis brunnescentibus, prothoracis margine antico, elytrorum interstitio suturali brunneo-nigris.

Capite angusto, subquadrato, basi in medio fortiter — lateribus levius impresso, supra convexo, vertice laevi. Rostro gracili, metarostro trisulcato, brevior quam capite; prorostro longiore, sulcato usque ad medium, apice ampliato. Antennis gracilibus, clavatis, articulis medianis transversis, breviter subobconicis, apicalibus majoribus, 9° et 10° tam latis quam longis, lateribus curvatis, apicali elongato conico.

Prothorace subbrevis, antice angustato, lateribus posticis rotundato-ampliato, dorso convexo, sparsim punctulato.

Elytris basi leviter emarginatis, humeris paullo elevatis, lateribus a medio usque ad apicem gradatim angustatis, apice breviter marginato-rotundatis; supra punctato-sulcatis, sulco 1° aegre angustiore quam 2°, impunctato, cæteris punctatis, interstitio suturali angusto, parum convexo, sequentibus convexis, fere aequalibus.

Corpore infra rubro-brunneo, nitido, metasterno abdomineque basi medio impressis. — Long. 6—7½ mm.

Hab. Borneo.

Type in my private collection.

Belongs to the group of *M. pygmaea* Senna and *M. sycophanta* Senna (though the head is nearly square) and is allied to *M. lineata* Senna from Java, of which the present is certainly the representative at Borneo. I have distinguished it in consideration of the following characters taken after a careful examination of two specimens (males) equal in size. In *M. borneensis* the head is slightly shorter with the vertex not channelled; the median joints of the antennae, especially the 7th and 8th, have the sides

less oblique; the prothorax is slightly shorter and more enlarged at the sides; the elytra are slightly shorter, the apex is emarginate, the sutural interstice more depressed, the 2nd as broad as the 3rd and not black coloured, the 1st furrow is hardly narrower than the 2nd and finally the general colour is a somewhat different.

Pseudorychodes cruentatus, n. sp.

Orychodes (subg. *Carausius*) *cruentatus* Power in litt.

Capite, rostro, antennis et prothorace brunneo-rubris nitidis, pedibus dilutioribus, elytris castaneis, lineis pluribus flavo-ferrugineis ornatis.

Capite brevi, transverso, basi truncato, angulis posticis subrotundatis, supra modice convexo, laevi, oculis prominulis. Metarostro brevi, sulcato, sulco super frontem evanescente, lateribus rude impresso; prorostro modice longiore, gracili, lateribus prope basin indistincte denticulato, apice vix dilatato. Antennarum articulis 3°—8° subobconicis, gradatim antrorsum longioribus, 9° et 10° subcylindricis, apicali elongato-acuminato, paullo brevioribus duobus praecedentibus unitis.

Prothorace oblongo-ovato, nitido, laevi.

Elytris lateribus vix latioribus quam basi, apici in medio emarginatis singulatim externe rotundatis, supra punctato-sulcatis, interstitiis convexis, lineis pluribus flavo-ferrugineis notatis nempe: singulo elythro lineis tribus quarum una basali in interstitio 3°, altera in ipso interstitio prope apicem, tertia denique ad declivitatem apicalem in interstitio 9°; praeterea maculis tribus quarum prima e lineis duabus formata in interstitiis 3° et 4° ante medium, secunda simili sed longiore et proprius basin in interstitiis 8° et 9°, tertia majore e lineis quatuor composita in interstitiis 3°, 4°, 5° et 6° pone medium sita.

Femoribus in tertio apicali breviter spinosis; corpore infra brunneo-rubro, abdomine basi sulcato. — Long. 11 mm.

Hab. Malacca.

One male in the Museum at Brussels (ex Roelofs).

Belongs to the group of *Pseudorychodes* which has a slender rostrum; the species of this group may be divisible according to the shape of the elytra at the tip. The new species has the elytra rounded and emarginate in the middle at the apex and consequently must be placed near *Ps. insignis* Lewis from which it differs by the smaller head, by the shorter rostrum, by the elytral furrows being narrower and shallowly punctured and finally by the different disposition of the elytral lines which are also more numerous. Any confusion of this new species with the others of the same group is not possible, and indeed from *Ps. Fruhstorferi* Senna it is recognizable by the head which is smooth above, from *Ps. piliferus* (Senna) by the elytra which are bare, without hairs, and from *Ps. Ritsemæ* (Senna) by the rostrum, prothorax and antennal joints which are shorter and otherwise shaped.

Schizotrachelus interruptus, n. sp.

♂. *Castaneus, nitidus, capite leviter longiore quam latiore, lateribus rectis, basi in medio late emarginato, haud tuberculato, lateribus integris, angulis posticis rotundatis, supra sat convexo, laevi, fronte minutissime foveolata. Metarostro breviusculo, sat robusto, conico, sulcato; mesorostro rotundato-ampliato, itidem sulcato; prorostro longitudine circiter metarostri, gradatim antrorsum dilatato, sulcato. Antennarum articulo 3° brevi, obconico, 4°—5° submoniliformibus, 6°—8° latioribus quam longioribus, subrectangularibus; 9° et 10° itidem latioribus quam longioribus, subrotundatis; apicali ovato-conico.*

Prothorace modice elongato, ovato-conico, dorso sulcato, sulco antice abbreviato, lateribus laevibus.

Elytris lateribus subparallelis, pone medium angustatis, apice regulariter marginato-rotundatis, suturae emarginatis, juxta suturam bisulcatis, sulco externo a medio interrupto et punctis nonnullis continuato, apice redivivo; disco et lateribus leviter substriato-punctulatis.

Femoribus clavatis, compressis; tibiis modice latis, tarsis brevibus. Corpore infra nitidior, capite et metarostro in medio sulcatis, sulco squamoso; processu prosterni impresso, metasterno sulcato, abdomine basi parum profunde impresso, segmento apicali utrinque squamoso. — Long. 11 mm.

Hab. Penang.

A single male specimen in my private collection.

This species does not belong neither to the 1st nor to the 2nd group of Lacordaire, and indeed the head is slightly longer than broad and entire at the sides; the rostrum is comparatively short for the genus and the metarostum distinctly conical; the character of the 2nd elytral furrow is peculiar to this species.

Schizotrachelus intrusus, n. sp.

♂. *Niger, nitidus, capite robusto, paullo longiore quam latiore, lateribus fere rectis, basi truncato et in medio anguste inciso, angulis posticis integris, supra parum convexo, laevi, fronte minute foveolata. Rostro modice elongato, robusto, metarostro vix brevior quam capite, subconico, lateribus leviter arcuatis, medio anguste sulcato; mesorostro rotundato-ampliato, sulco angustiore; proroostro longiore quam metarostro, apicem versus gradatim sed conspicue dilatato, dorso et lateribus sulcato. Antennarum articulis 4^o—8^o submoniliformibus, 9^o et 10^o majoribus, lateribus rotundatis, apicali ovato-conico.*

Prothorace elongato, ovato-conico, dorso profunde sulcato, lateribus posticis sparsim punctulato.

Elytris longiusculis, lateribus parallelis, apice breviter marginato-productis, margine utrinque obtuse rotundato, suturae profunde inciso; dorso bistriatis, disco et lateribus seriatim punctatis, punctis regularibus, parum profundis.

Pedibus ut in specie praecedenti. Corpore infra brunneo-nigro, nitido, capite et metarostro canaliculatis, canaliculo subsquamoso; metasterno abdomineque basi sulcatis, segmento apicali punctulato. — Long. 14 mm.

Hab. Borneo.

Allied to *Sch. metallicus* Senna, but shorter, with the head entire at the sides, the metarostrum much shorter, broader, with the sides slightly curved, prorostrum shorter, furrowed, more enlarged at the tip.

Schizotrachelus timoriensis, n. sp.

♂. *Elongatus, sat gracilis, castaneus nitidus. Capite longiore quam latiore, lateribus parallelis, basi subtruncato et in medio subintegro, lateribus leviter inciso, angulis posticis rectis, supra convexo, laevi, fronte foveolata. Metarostro longiore quam capite, antice minime attenuato, supra convexo, laevi, nitido, lateribus punctis nonnullis sat profundis signato; mesorostro, parum dilatato, prorostro laevi, apici ampliato. Antennarum articulis medianis breviter obconicis, 9° et 10° majoribus, basi minus angustatis quam praecedentibus, apicali ovato-conico.*

Prothorace elongato, ovato-conico, dorso profunde sulcato, basi transversim sulcato et margine elevato instructo.

Elytris lateribus parallelis, apicem versus modice angustatis, apici marginato subrotundatis, in medio leviter emarginatis, supra juxta interstitium suturale sulco unico exaratis, cui externe stria punctata adjecta, disco et lateribus leviter substriato-punctulatis.

Femoribus breviter pedunculato-clavatis, compressis; tibiis posticis dilatatis, latioribus quam praecedentibus, tarsis brevibus. Capite et metarostro infra in medio sulcatis, sulco squamoso; metasterno apicem versus abdomine basi sulcatis, segmentis apicalibus utrinque squamosis, ultimo foveolato. — Long. 17 mm.

Hab. Timor.

One male in my private collection.

This new species belongs to the 2nd group established by Lacordaire and it is more allied to *Sch. unicolor* (Montr.) than to *Sch. cameratus* Lac. and *Sch. dichrous* Lac. because the elytra have as in Montrouzier's species one furrow on

each side of the sutural interstice and not two as in Lacordaire's species. *Sch. timoriensis* differs from *Sch. unicolor* (Montr.) by the following characters: head more elongate with the basal angles more prominent, the base almost truncate and without distinct notch in the middle; elytra with the punctures on the disc and at the sides more visible, the apex more emarginate; the colour slightly darker.

Schizotrachelus marginatus, n. sp.

♂. *Modice elongatus, castaneus, levissime aenescens, nitidissimus. Capite longiore quam latiore, basin versus paullo inflato, basi in medio et lateribus fortiter inciso et tuberculato, incisuris squamosis, angulis posticis paullo retrum vertis, dorso modice convexo, fronte obsolete foveolata. Metarostro capitis longitudine, conico, supra anguste sulcato, lateribus sculpturato-squamoso; prorostro praecedente sensim longiore, leviter sulcato, apicem versus gradatim dilatato. Antennis crassiusculis, articulis 4°—8° rectangulari-transversis, 9° et 10° majoribus; apicali elongato-conico, duobus praecedentibus unitis brevior.*

Prothorace ovato-elongato, dorso profunde sulcato, lateribus laevi, nitidissimo.

Elytris basi denticulatis, a medio usque ad apicem gradatim attenuatis, declivitate apicali et apice margine crasso, elevato instructis, apice subtruncatis, suturae leviter incisae, angulis externis subrotundatis; supra juxta suturam utrinque sulco unico exaratis, cui externe stria punctulata adjecta, disco et lateribus lineatim punctulatis.

Pedibus brevibus, femoribus clavatis, tibiis omnibus compressis, posticis magis dilatatis, tarsis brevibus, robustis. Corpore infra et pedibus brunneo-rubro plus minusve saturato, nitidissimo; capite basi squamoso; in medio sulcato-squamoso; metarostro punctato-squamoso, mesorostro et prorostro medio carinatis; metasterno abdomineque basi indistincte longitudinaliter impressis, segmento apicali et lateribus duobus praecedentibus squamosis.

♀. *Praecipue differt capite brevior, subquadrato, metarostro brevissimo, prorostris longiore, filiformi, antennarum articulis apicalibus brevioribus, elytrorum declivitate apicali margine minus elevato et incrassato instructa.* — Long. $10\frac{1}{2}$ —18 mm.

Hab. North Borneo, Labuan Isl.

Two specimens in my private collection.

Like the preceding species this new one belongs to the 2nd group and may be placed near *Sch. unicolor* (Montr.) and *Sch. timoriensis* Senna by the elytra being unisulcate along the sutural interstice. Nevertheless, by the head which is strongly notched at the base in the middle and at the sides, this species recalls some other forms of the same group but having the elytra bisulcate along the sutural interstice.

Florence, February 1898.

NOTE X.

ON THE SO-CALLED „SANDWICH RAIL”
IN THE LEYDEN MUSEUM

BY

Dr. O. FINSCH.

Synonymy: *Crex sandwichensis* Schleg. (nec *Rallus sandwichensis* Gml.), Mus. P.-B. Ralli, 1865, p. 25.

Rallus sandwichensis Hartl. (nec Gml.), Abhandl. naturw. Vereins in Bremen, XII (1892), p. 397 (syn. part.). — Sharpe, Ibis, 1893, p. 443.

Pennula sandwichensis Sharpe, Cat. B. Brit. Mus. XXIII (1894), p. 336 (syn. part.).

Pennula Wilsoni Finsch.

Schlegel's type in the Leyden Museum:

Upper parts dark ruddy brown with blackish centres to the feathers of the back and wings, producing on these parts well marked blackish longitudinal stripes; head and neck somewhat lighter and uniform ruddy brown, like the sides of head and neck; underparts uniform rusty brown, shading into vinous red, a little darker on the flanks; middle of chin somewhat lighter; anal region and lower tail-coverts dark vinous-red, forming a well marked darker patch; primaries blackish, very narrowly margined with brown on the outer web; broad and lax upper tail-coverts with very narrow light rusty-brown apical margins, showing as lighter undulations. — Bill and feet light horny-brown (as far as can be judged greenish in life.) — *Sex and Habitat* unknown.

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Measurements taken from the above type:

	Total length.	wing.	culmen.	tarsus.	tibia.	middletoe with claw.	
	150 mm.	73 mm.	19 mm.	30 mm.	7 mm.	35 mm.	Finsch.
(French)		3,2 inch.	10 lin.	12 lin.	4 lin.	13 lin.	} Schlegel. 1)
=	in mill.	85 mm.	23 mm.	27 mm.	11 mm.	30 mm.	
	150 mm.	73 mm.	20 mm.	29 mm.		34 mm.	Hartlaub.
(Engl.)	5,3 inch.	2,8 inch.	08 lin.	1,3 inch.		1,35 inch.	} Sharpe.
=	135 mm.	68 mm.	19 mm.	34 mm.		37 mm.	

The wing is round; the primaries nearly hidden under the long and soft coverts; the first primary is 40 mm. long and 15 mm. shorter than the 3rd and 4th, which are the longest, though only a little longer than the 2nd and 5th; the exact number of primaries is difficult to ascertain without injuring the specimen. For the same reason I am able to find only two tailfeathers (dark coloured, soft, narrow and 20 mm. long), as they are hidden under the extremely thick, long and soft upper tail-coverts and are difficult to distinguish from the latter. So this species may be called „*ecaudatus*” as truly as *Pennula ecaudata* (King), and, as seen by the structure of the wings, is no doubt a flightless form. The feet are feeble; the nails short and small.

The type specimen in the Leyden Museum is stuffed and not too well; the stuffing, however, is apparently not of very old date, as may be judged from the artificial eyes (with red irides), which seem to be of enamelled glass, or — at any rate — of a kind, which was unknown in the beginning of this century. The wire used for stuffing is of brass, as commonly used by the taxidermists of the Leyden Museum.

On the underside of the stand of the specimen is written, undoubtedly by the hand of Temminck, »*Rallus* — Latham”, and perhaps also by Temminck »*Rall. obscura*”; to this is added »*Crex sandwichensis*, Cat. N^o. 1”, no doubt written by Schlegel, as possibly also are the words »Sandwich. Cook”. In the Catalogue of the Ralli Schlegel says unhesitatingly

1) The measurements of the wings and culmen given here are not exact.

»observé dans les îles Sandwich; voyage de Cook”, but this statement does not seem to rest on any reliable foundation, for there does not exist any notice *when and from whom Temminck acquired the specimen!* This fact must be mentioned, as Dr. Hartlaub assures us that Temminck bought this Rail at the auction of Bullock’s collection (3 June 1819) for £ 1.10, which may have been the case; but it cannot be proved that it was the specimen in question.

That it was not brought home by Cook from the Sandwich Islands is without the slightest doubt, for, according to the researches of Prof. Newton, Cook’s specimens were not skins but dried examples and have long since perished. Besides this, Latham described his »Sandwich Rail” from the collection of Sir Joseph Banks; so his type cannot be the same as the specimen in the Leyden Museum.

Latham’s »Dusky Rail” (*Rallus obscurus* Gml.), said to come also from the Sandwich Islands, is, according to his description, a quite different and much larger bird (»legs two inches” = 50 mm.; »legs red brown”; »bill scarcely one inch” — our specimen has the bill only $7\frac{1}{2}$ lines long!), and is most likely not a „*Pennula*” at all. Evidently Latham would have mentioned the rudimentary tail¹⁾, as he did not overlook this prominent character in the description of his »Sandwich Rail”. The type of Latham’s »Dusky Rail” was in the Leverian Museum, but unfortunately appears to have been also lost.

Schlegel’s »*Crex sandwichensis*” is only known from the specimen in the Leyden Museum and is no doubt one of the rarest of birds, being most certainly not the same as »*Rallus sandwichensis*” or »*Rallus obscurus*” of Gmelin; it must therefore be renamed. I have the pleasure to name it after Mr. Scott B. Wilson²⁾, to whom science is so highly

1) The identity with *Pennula ecaudata* (King) seems therefore rather doubtful, as already mentioned by Dr. Hartlaub.

2) This gentleman, in company of the artist, came over from England only for describing and figuring the bird in question.

indebted, and whom we have to thank for figuring this rare type through the skill of Mr. Frowhawk.

Although not referable at present to the Avifauna of the Hawaiian Islands, and probably one of the species »nearly or quite extinct”, perhaps we still may hope for the rediscovery of *Pennula Wilsoni* in one of the neighbouring small islands as yet unsatisfactorily explored.

Leyden Museum, February 1898.

NOTE XI.

ON PSOPHIA VIRIDIS AND PS. OBSCURA

BY

Dr. O. FINSCH.

When Dr. Sharpe wrote the Catalogue of the Fulicariae and Alectorides (Birds, vol. XXIII, 1894) he referred with regard to the above two species to the material in the Leyden Museum, as they were not then represented in the collection of the British Museum. Misled by the wrong determination of the specimen labelled »*Psophia viridis* Spix'' Dr. Sharpe declared both species named above identical, saying, and no doubt quite correctly, in reference to the two specimens in our Museum »I have seen one of the typical specimens of *Psophia obscura* in the Leyden Museum and could not find any character distinguishing it from *Ps. viridis*'' . But the specimen out of the old collection of Temminck and labelled in his handwriting »*Psophia viridis* Spix, Bolivia'' does not belong to this species, but is a true *Ps. obscura* Natt., of which species our Museum fortunately possesses one of the 3 examples collected by Johan Natterer at Para. This specimen, an old female, is the type of Sharpe's description of his »*Ps. viridis*'' and differs from the other one (»*Ps. viridis* Temm. nec Spix) in having purple tips to the greater series of the wing coverts. Otherwise both specimens are exactly alike; the feathers of the neck are almost black like the under parts, and show only a faint purplish gloss, but by

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no means »bright purplish reflections'' as described by Dr. Sharpe.

Psophia viridis Spix (Av. Bras. II, 1825, p. 66, tab. 83), of which we possess no specimen, is, judging from descriptions, an allied but decidedly distinct species. W. Blasius¹⁾ in his review of the species of this genus says: »die Federn des Unterhalses stark metallisch kupferfarbig und hauptsächlich violettglänzend'' which is not the case in *Ps. obscura*. And besides »der Rücken, die verlängerten weichen Schulterfedern grün, mit Rostfarbe vermischt'', it does also not answer to our specimen of *Ps. obscura*, which has the feathers of these parts (the back and shoulders) only margined with green, and therefore only shining with green in certain lights.

I append a list of the species of the genus *Psophia* in the collection of the Leyden Museum:

1) *Psophia crepitans* L.

N^o. 1. Ad. »Surinam p. Mirandolle'' (old label of Temminck).

N^o. 2. Ad. — No indication. — According to a monogram on the underside of the stand probably out of the collection of Prinz Maximilian zu Wied.

2) *Psophia leucoptera* Spix.

N^o. 1. Ad. female. — From Mr. F. E. Blaauw's Zoolog. Garden at 's Graveland and presented by the owner in 1896.

3) *Psophia ochroptera* Natt.

N^o. 1. Ad. — No indications.

N^o. 2. Ad. male. Brasil (Barra do Rio negro. 20 April 1838, coll. by Joh. Natterer). — In exchange from the Imp. Mus. in Vienna 1862.

4) *Psophia obscura* Natt.

N^o. 1. Ad. s. n. »*Ps. viridis* Spix, Bolivia'' (old collection of Temminck).

1) »Ueber einen vermuthlich neuen Trompeter-Vogel von Bolivia (*Psophia cantatrix* Boeck in litt.)'' Cabanis' Journ. f. Ornith. XXII, 1884, pp. 203—210.

N^o. 2. Ad. female. Brasil (Para, coll. by Joh. Natterer).

The species not represented in the Leyden Museum are the following:

Psophia napensis Scl. & Salv. — Ecuador.

» *viridis* Spix. — Amazonia.

» *cantatrix* Boeck. — Bolivia.

This last species seems to be nearly allied to *Ps. leucoptera*, but must be included for the present among the »doubtful species''. The short description of von Boeck (from a living specimen) is all we have to depend on, and therefore a more careful investigation is most desirable.

Leyden Museum, February 1898.

NOTE XII.

CONCHOLOGICAL CORRECTIONS AND ADDITIONS

BY

M. M. SCHEPMAN.

Melania Junghuhni Schepman.

In Vol. XVIII, pag. 135, of this periodical I have described a new *Melania* with the specific name *Junghuhni*. Now some time ago Prof. K. Martin directed my attention to the fact, that this name was preoccupied for a fossil species, described in 1879/80 in his work: *Die Tertiärschichten auf Java; Palaeontologischer Theil*, pag. 89, pl. XIV, fig. 20. So his name has the priority, and my species must receive another name, for which I propose *Melania Martini*, after the person who has detected the error. I may make the apology, that, as it is already not an easy matter to avoid such errors with the names of recent species, it becomes very difficult, to know also the names of the numerous fossils.

Pupina sucinacia Boettger.

In studying some specimens of *Pupina* from Java, I got for comparison the types of *Pupina Junghuhni* (Herklots ms.) from the Leyden Museum, described by Prof. von Martens, in: *Die Preussische Expedition nach Ost-Asien; Zool. Theil*, 1867, pag. 156, and was struck with the extreme resemblance of this species to *P. sucinacia* Boettger, described

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in: Bericht über die Senckenbergische naturf. Gesellschaft in Frankfurt a/M., 1890, pag. 157, especially with the variety bearing the manuscript name *porcellanea*; indeed I could not detect a single character that might have specific value. The Museum specimens are partly deprived of the enamel, but this is only individual, probably they were not collected alive, as the operculum is wanting. Prof. Boettger, having seen a typical specimen, fully agrees with my opinion and so *P. sucinacia* falls in synonymy, since the name *Junghuhni* has the priority for twenty three years. I think this error may be accounted for, by the different method of measuring; von Martens says:

«Long. 11, diam. maj. 9, min. $5\frac{2}{3}$; apert. alt. 6, lat. 5 Mill.» and Boettger: «Alt. $9-9\frac{1}{2}$, diam. max. $6\frac{1}{2}-7$, apert. intus $3\frac{3}{4}$ mm. alta, 3 lata.»

Now the largest specimen in the Leyden Museum has from the apex to the base of the peristome only $10\frac{1}{3}$ mill. long.; so «Long. 11» by von Martens is probably a typographical error for 10, the other specimen measures scarcely 10 mill.; these measurements are taken diagonally; if taken perpendicularly they are still smaller. The diam. maj. of 9 mill., is even scarcely reached if one takes the utmost breadth in an oblique direction; if measured horizontally without the peristome it is a trifle more than 7 mill. Von Martens has measured the aperture with the peristome in its largest extension, Boettger without the peristome. It is a new proof how desirable it is to have a uniform method for measuring shells.

Cyclotus dimidiatus Kobelt.

A few months ago I had to study some shells from Celebes, belonging to the Leyden Museum, amongst which I found a *Cyclotus* which I suggested to be *C. dimidiatus* Kobelt, described in: Abhandlungen und Berichte des Königl. Zool. und Anthropol. Ethnogr. Museums zu Dresden, 1896/97, N° 5, under the title »Schnecken von N. O.

Celebes u. Banggai." The shell agreed in every respect, but as I found that it had the rapidly increasing upper whorls radiately and concentrically striated, the last whorl being comparatively smooth, and that the peristome was orange yellow, which important characters wanted in the description, I asked Dr. Kobelt to inform me if his shell possesses the same characters. Dr. Kobelt wrote that the specimen was returned to Dr. A. B. Meyer, Director of the Dresden Museum, who on his turn told me, it was sent for comparison to the brethren P. and F. Sarasin in Basle, who wrote in reply on my request, that the specimens have: »einen hell orange rothen Mundsaum und dass sie die erwähnte Gittersculptur auf den oberen Windungen aufs deutlichste zeigen." Thus I found my determination to be right.

I thought it might be useful to publish these facts, as especially the sculpture of the upper whorls may greatly tend to recognize the species, for I cannot find a similar structure in any of the other species of *Cyclotus* from Celebes.

Rhoon near Rotterdam, December 1897.

NOTE XIII.

TWO NEW SPECIES OF THE LONGICORN
GENUS APRIONA

DESCRIBED BY

C. RITSEMA Cz.

Apriona fasciata, n. sp. ♀.

Length 51 mm., breadth at the shoulders 17 mm., length of the antennae 54 mm. — Black, covered with a delicate fulvous pubescence, the elytra however with five naked narrow transverse bands of which the first is situated at one third from the base; along the suture and the lateral margins, on the legs and along the middle of the abdomen the pubescence is of a more greyish colour; the antennae are black, the joints ringed with grey at their base.

Impunctate. The scape of the antennae slightly scabrous towards the top on the outside. The disc of the pronotum with some transverse waved wrinkles and two patches of small granules; an abbreviated bare stripe runs along the middle; the lateral spines are long and acute and curved backwards. The scutellum is broadly rounded at the tip.

The sides of the elytra are nearly parallel, the shoulders armed with a pointed granule, the apices obliquely truncate and armed at the sutural as well as at the outer angle with a sharp spine. The basal fifth of the elytra is covered with large shining black granules which are somewhat smaller and more densely set on the sides where they extend moreover further backward, almost down to the first naked band.

A single female specimen from Toegoe (West Java) lately has been presented to the Leyden Museum by Mr. J. D. Pasteur.

Apriona buruensis, n. sp. ♂.

Length 52 mm., breadth at the shoulders 18 mm. — Black, the elytra dark brown; covered with a delicate greyish brown pubescence which is denser on the sides of the metasternum and of the abdomen where it forms an indistinct dirty white vitta. The antennae are rather slender, distinctly longer than the body and entirely sooty black, not ringed with grey.

Impunctate. The scape of the antennae slightly scabrous towards the top on the outside. The disc of the pronotum with very few transverse wrinkles, the lateral spines acute and straight. The scutellum broadly truncate posteriorly.

The base of the elytra is provided, solely on the shoulder region, with some shining black granules; the shoulders are armed with a distinct tooth; the apices are obliquely truncate, their outer angle is rounded, the sutural one provided with a short spine.

The above described male specimen, originating from the island of Buru (Dr. Bernstein), was regarded by the late Dr. Snellen van Vollenhoven as belonging to *Apriona humeralis* Kaup, but, according to Mr. Neervoort van de Poll who has seen Prof. Kaup's types in the Museum at Darmstadt, the last quoted species does not belong to the genus *Apriona* but is synonymous with *Jothocera tomentosa* (Buq.).

Leyden Museum, March 1898.

NOTE XIV.

DESCRIPTION DE TROIS ESPÈCES NOUVELLES
DE COLÉOPTÈRES

PAR

A. GROUVELLE.

Pseudotarphius Pasteuri, n. sp.

Oblongus, convexus, opacus, nigricans, nigro-setosus et flavo-fasciatus; prothorace transverso, cordiformi, disco fasciculato; elytris oblongis, lineato-setosis, antice et postice flavo-fasciatis; antennis pedibusque rufo-fuscis. — Long. 2 à 2 $\frac{1}{2}$ mill.

Oblong, convexe, opaque, noir, garni de soies dressées noires, entremêlées de quelques soies claires, présentant sur les élytres, dans la région scutellaire et vers le sommet, quelques fascicules d'un jaune blanchâtre, formées de squamules serrées et couchées. Antennes roux brunâtres, 3^{me} article allongé, 4^{me} et 9^{me} un peu plus longs que larges; massue ovale. Tête transversale, subdemi-circulaire, profondément et grossièrement ponctuée, soies dressées en général claires, yeux garnis de soies. Prothorax plus de deux fois plus large que long, fortement cordiforme, marge antérieure un peu épaissie dans le milieu, fortement sinuée de chaque côté, marges latérales concaves, bordées de soies serrées; ponctuation semblable à celle de la tête; sur le disque quatre groupes de soies dressées et serrées, disposées sur une ligne transversale; base rebordée. Ecusson ponctiforme. Elytres plus larges que le prothorax, une fois et un

Notes from the Leyden Museum, Vol. XX.

quart aussi longs que larges ensemble, présentant leur plus grande largeur au delà du milieu, acuminés ensemble, finement ponctués en lignes, points peu serrés, portant chacun une soie dressée; intervalles plans, lisses, à peine ondulés; calus huméral fasciculé. Sillons antennaires convergents en dedans. Pattes roux brunâtres.

Hab. Poentjak: Java occidental (Pasteur). — Collection du Musée de Leyde.

Pseudotarphius Fruhstorferi, n. sp.

Oblongus, convexus, opacus, nigro-castaneus, nigro vel rufo hispidus, flavo-squamoso fasciatus; prothorace transverse cordiformi, disco in longitudinem sulcato; elytris lineato-setosis, intervallis linearum 4 à 5 et 8 à 9 latioribus; antennis pedibusque rufo-fuscis. — Long. 3 à 3½ mill.

Oblong, convexe, opaque, brun marron, couvert de courtes soies dressées, en général noires mais par places fauves et formant de chaque côté du disque du prothorax, sur les calus huméraux et de chaque côté de l'écusson des groupes de soies plus serrées. Antennes brun-rougeâtres, moniliformes, 3^{me} article plus long que large, massue oblongue. Tête granuleuse, subrectangulaire, bord antérieur largement arrondi. Prothorax plus de deux fois plus large que long, fortement cordiforme, largement sillonné et impressionné dans la longueur; marge antérieure fortement sinuée de chaque côté, chargée en avant de soies serrées; marges latérales frangées de soies concaves, disque gibbeux, garni en dehors de soies noires, dressées, soies squamiformes fauves, assez serrées; base rebordée. Elytres un peu plus larges que le prothorax, environ aussi longs que larges ensemble, acuminés ensemble au sommet, ponctués-striés, garnis à la base de courtes soies squamiformes, dressées, fauves, et sur le reste de la surface de soies noires, dressées, disposées par groupes de 4 lignes, déterminant des intervalles plus larges, donnant l'apparence de côtes longitudinales peu saillantes; sur le disque quelques

petites macules formées de squamules blanchâtres, couchées. Sillons antennaires presque nuls.

Hab. Lompa-Battau: Célèbes mérid. (Fruhstorfer). — Collection du Musée de Leyde.

Sostea pilula, n. sp.

Breviter oblonga, convexa, picea, setulosa; prothorace transverso, antice angustato, dense profunde valdeque punctato, flavo-griseo squamulato; clytris brevibus, valde lineato-punctatis, intervallis linearum angustioribus punctis. — Long. $2\frac{1}{4}$ mill.

Oblong, court, très convexe, brun de poix, garni de longs poils dressés, peu serrés, un peu plus épais au sommet. Tête et prothorax couverts de squamules filiformes d'un jaune cendré. Prothorax environ deux fois aussi large que long, un peu rétréci au sommet, couvert d'une grosse ponctuation serrée qui laisse une étroite bordure lisse le long de la base. Ecusson à peine visible. Elytres de la largeur du prothorax à la base, ovales, acuminés ensemble au sommet, environ une fois et un quart aussi longs que larges ensemble dans la plus grande largeur, couverts d'une grosse ponctuation disposée en lignes, laissant des intervalles plus étroits que les points, marge basilaire relevée en un étroit bourrelet. Pattes longues, garnies de soies, rougeâtres, tarsi plus clairs.

Hab. Pengalengan: Java occidental (Fruhstorfer). — Musée de Leyde et collection Grouvelle.

Paris, 13 Mars 1898.

NOTE XV.

DESCRIPTION OF A NEW UNIO FROM BORNEO

BY

M. M. SCHEPMAN.

Plate 1.

Unio Nieuwenhuisi, n. sp.

Shell somewhat squarely oblong, moderately inflated, very inaequilateral, covered with a dark-brown fibrous epidermis, giving to the shell the appearance of being concentrically striated; striae coarser towards the margins, if seen by transparent light the colour is yellowish-brown. The umbones being decorticated, no sculpture is perceptible on these parts, but the posterior slope is provided with radiating folds, usually becoming bifurcate towards the margin. Upper margin moderately curved, anterior margin rounded, passing insensibly into the rather straight ventral margin; posterior margin sinuous above, then abruptly truncate, forming two angles, one at the upper part of the truncation and one at the beginning of the ventral margin; from this point an obtuse ridge runs towards the umbones. Nacre iridescent, bluish white near the margins, olive yellow near the umbones. Hinge strong, one thick tooth in the right valve, with crenated edge, two in the left valve, the posterior one being the largest; both are obsoletely crenated. One lamella in the right valve, two in the left one, they are slightly curved, somewhat crenated posteriorly. Anterior scars irregular, deep, posterior ones shallow, pallial line distinct. A flat callosity runs from the umbones, obliquely towards the ventral margin.

Long. 69, alt. near the umbones 37, at the angle of superior and posterior margin 40, diam. 19 mill.

Locality: Bloe-oe, east Borneo (Dr. Nieuwenhuis).

This interesting novelty may be easily distinguished from the known Bornean species, by its strongly sculptured posterior slope; this character is only present in *Unio radulosus* Drouet and Chaper, which is however in nearly every other respect quite different. I have named the species in honour of its discoverer.

Rhoon near Rotterdam, March 1898.

Notes from the Leyden Museum, Vol. XX.

NOTE XVI.

ON THE IDENTITY OF MUSCICAPULA WESTERMANNI, SHARPE AND M. MELANOLEUCA, HODGS.

BY

Dr. O. FINSCH.

Under the first name Dr. Sharpe describes (Proc. Z. S. L. 1888, p. 270) a small flycatcher, a single specimen collected by Mr. L. Wray in the principal mountain range of Perak (Mt. Ulu Batang Padang, 4200 f. h.). This specimen was marked »adult male”, but Mr. Sharpe adds: »it may not be the fully adult of its species, but I believe it to be so” and remarks further: »the reddish upper tail-coverts and tail remind one of the female of *M. maculata*, but the blue-grey upper surface distinguishes it at a glance.” The relationship is here correctly pointed out, for the type-specimen of *M. Westermanni* is undoubtedly not an »adult male” but an »adult female”, as proved by Dr. Sharpe himself on a pair of flycatchers collected by Mr. Whitehead on the Kina Balu. About these two birds Dr. Sharpe says (Ibis 1888, p. 385): »I cannot see any difference between this male bird and specimens from the Himalayas (*M. maculata* Tick.). The bird Mr. Whitehead sends as the female is undoubtedly the same as my *M. Westermanni*, so that if those two birds are sexes of one species, the latter may have to be separated on the females alone, while *M. Westermanni* (»female”!) is certainly different from any Himalayan specimen of *M. maculata*.”

Notes from the Leyden Museum, Vol. XX.

Species in which the males are precisely alike and which can be only distinguished by differences in the colours of the female, may always be considered as rather doubtful, and this as more if these differences are so slight as between the females of *M. melanoleuca* and of the so-called *M. Westermanni*. The more grey tone on the back of the latter, scarcely to be termed »blue-grey”, is seen in freshly moulted females, as in the specimen (N^o 14) in our Museum from the highlands of Luzon. Other females from Java (N^o 8), already specifically separated by Temminck s. n. *Muscicapa Hasselti*, and from Timor, show the upper surface more brownish grey and agree perfectly with Dr. Sharpe’s description of the female of *M. maculata* from Sikkim (Cat. B. Brit. M. IV, p. 207). As in many other similarly coloured species the colouring of the back varies therefore somewhat. So Mr. Oates notices: »females from Manipur are commonly much darker than such from the Indian peninsula”, and Mr. Grant likewise says (Ibis 1896, p. 540): »upper parts of females from Negros are of a rather darker grey than in Luzon specimens.”

The male birds show also certain variations after age and season, chiefly in the extension of the white parts; the white longitudinal stripe above the eyes is more or less developed, as this is the case with the white basal portion of the tailfeathers, and the white longitudinal mark on the wings. The freshly moulted male (N^o 10 from Timor) has the whole outerweb of the last secondaries white, whereas other males show only a more or less broad white external margin on these feathers. I may add that the male assumes his full dress immediately from the first plumage, as clearly proved by specimen N^{os}. 9 and 7 (from Java) in our Museum. The example N^o 9 is a nestling in the first plumage, spotted like in our *Muscicapa grisola*; no white superciliar stripe; the white on the wings is nearly developed and the freshly grown tailfeathers are already precisely agreeing with these in the old male. The specimen N^o 7 is of more advanced age

and shows nearly the same black and white garb as the old male, only mixed on the upper surface with a few mottled feathers of the nestling dress.

In the synonymy I follow Oates adopting the specific name »*melanoleuca* Hodgs." (1849), an unpublished name also bestowed by Temminck to the same species, as Tickel's older appellation »*maculata*" (1833) was published without a description. According to Oates »*Erythrosterna pusilla* Bl." is only the female of this species, and Dr. Sharpe gives also *Muscicapa pooensis* Bl., *Muscicapula acornaus* Bl. and *M. leucoschistos* Bl. as synonyms. According to a note by Blyth (*Ibis* 1866, p. 372) this last species seems however a quite different bird and nearly allied to *Muscicapula superciliaris*.

Muscicapula melanoleuca Hodgs.

Bl. Journ. As. Soc. Beng. XII, 1849, p. 490. —

Muscicapa maculata Tick. J. A. S. II, 1833, p. 574 (descr. null.).

Erythrosterna maculata Jerdon, B. of Ind. I (1862), p. 483 (S. E. Himalaya, Darjeeling (3000—7000'), Centr. India, Arakan, Tenasserim).

Muscicapula maculata Sharpe, Cat. B. Br. M. IV (1879), p. 307 (Sikkim, Darjeeling, Nepal, Sumatra).

Cyornis melanoleuca Oates, Faun. of Br. Ind. Birds, II (1890), p. 18 (Himalaya, from Nepal to Assam, Bengal, Tenasserim and Karenee).

Muscicapula maculata Sharpe, *Ibis* 1888, p. 385 (Borneo, Kina Balu (3000—8000'): Whitehead).

Muscicapula Westermanni Sharpe, Proc. Z. S. Lond. 1888, p. 270 (Perak: Wray).

Grant, *Ibis* 1894, p. 506 (Highland of N. Luzon: Whitehead); — *ib.* 1895, p. 422 (Provinz of Lepanto, highest part of Luzon: Whitehead); — *ib.* 1896, p. 540 (Canloon vulcano, Central Negros: Whitehead). — Hartert, *Novit. Zool.* III (1896), p. 156 (South Celebes, Bonthain Peak to

10,000 feet: Everett); — ib. p. 595 (Lombok, 4000—6000 f.: Everett); — ib. p. 561 (Lombok, 3000 f.: Doherty); — ib. p. 541 (Java, 900—10,000 f.: Doherty); — ib. p. 548 (Bali, 2000—3000 f.: Doherty); — ib. p. 569 (Sumbawa, 3000 f.: Doherty).

The Leyden Museum possesses a nice and very instructive series of this species in the following specimens:

- N^o 1. Male, adult. Nepal. Coll. Hodgson.
 » 2. » » Tibet.
 » 3. » » Sikkim.
 » 4. » » Central India.
 » 5 & 6. » » Java. — Coll. Kuhl & van Hasselt (1826).
 » 7. » in change of plumage. — Same origin.
 » 8. Female, adult. » »
 » 9. Nestling. » »
 » 10. Male, adult. Timor. — Coll. Dr. S. Müller (1829).
 » 11. Female, » — Same origin.
 » 12. Male, adult. Celebes (Bonthain Peak). — Coll. Everett.
 » 13. » » Highl. of Luzon. — Coll. Whitehead.
 » 14. Female, » — Same origin.

In size there is no difference between the above specimens; the length of wing varies from 55 to 59 mm.; that of the tail from 38 to 42 mm.

The specimens N^o 5, 6, 7, 9, 10 and 11 were labelled by Temminck himself »*Muscicapa melanoleuca*, n. sp.”, N^o 8 »*Muscicapa Hasselti*, n. sp.” but not published; the specimens N^o 12, 13 and 14 were received s. n. »*M. Westermanni*”. Specimen N^o 12, collected by Mr. Everett and marked »female”, is no doubt an »old male” in freshly moulted dress, some of the wing- and tail-feathers are not yet full grown (shot in October).

Muscicapula melanoleuca is a mountain bird, breeding in high altitudes, as shown by the references given before in the synonymy, and visits low land only during the cold season.

Leyden Museum, March 1898.

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 ——— Supplementband I. 1881—1882. m. 1 Karte und 23 Taf. f 20.—
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NOTES

DEC 10 1898 FROM THE

LEYDEN MUSEUM

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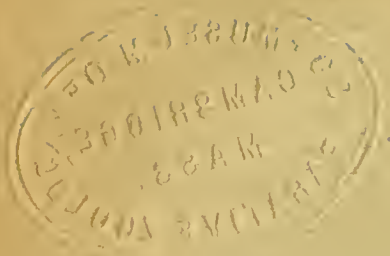
Dr. F. A. JENTINK,
Director of the Museum.

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NOTE XVII.

ON THE SPECIFIC DISTINCTION OF THE GROUND-
CUCKOOS OF BORNEO AND SUMATRA

(CARPOCOCCYX RADIATUS AND C. VIRIDIS)

BY

Dr. O. FINSCH.

Among the birds collected by the French naturalist Mr. P. Diard, who in the service of the government of Dutch India in 1826 first explored the district of Pontianak, west-coast of Borneo, the most interesting is no doubt a Ground-Cuckoo, peculiar by its large size and vivid colours. Diard got only one specimen, which reached Leyden not before 1828 and which was described and figured by Temminck in his »Planches coloriées» (91^e Livr., 1832, Pl. 538) under the name »*Calobates radiceus*», afterwards changed in »*Calobates radiatus*» (Tabl. méth. or Index to the above work, p. 53, 1838). I mention these dates only to show that publication in those days did not go on so quickly as at present. This type-specimen of the Pl. col. is »La femelle adulte», and Temminck anxiously waited, but in vain, for the »male», said to be, according to Diard, more vivid in colours and with a tail »double plus longue» (!)

No other explorer of that period mentioned this singular bird with the exception of Dr. Salomon Müller, who, however, gives only the name (*Calobates radiatus*, in »Verhandl. over de Natuurl. Gesch., Land- en Volkenk., etc. (1839—44) p. 234, Note) with »Borneo and Sumatra.» Strange enough he does not mention having got the bird

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himself during his explorations in Western Sumatra (1833—36), although there is one specimen in the Leyden Museum labelled »Sumatra, voyage Salomon Müller.” Professor Schlegel in his Catalogue of the Cuculi (Mus. Pays-Bas, 1864, p. 60), apparently misled by the duller colours, enumerates this specimen as the »fem. adulte” of the bright coloured Bornean-specimen, which latter he labels »mâle adulte.” The specific identity of the large Ground-Cuckoos of Borneo and Sumatra was thus confirmed, although the measurements given by Schlegel show such unusual differences in size that one might feel inclined to base upon specific value. But Schlegel does not say that there are also conspicuous differences in coloration, and it was not before many years afterwards that Count Salvadori, who got three specimens collected by Odoardo Beccari on Mount Singalang, west-coast of Sumatra, pointed out the specific differences and, although hesitatingly, proposed a new name (*C. viridis*) for the Sumatran bird. And this is indeed an excellent species, as will be seen by the following characters taken from specimens in the Leyden Museum, which possesses an interesting material on these birds, still very rare in collections. In the British Museum, for example, *C. viridis* is wanting.

Carpococcyx radiatus (Temm.).

- Calobates radiceus* Temm. Pl. col. 538 (91^e Livraison, 1832).
C. radiatus Temm. Tabl. méth. (Index to Pl. col.), p. 53 (1838).
Carpococcyx radiceus Gray, List of Gen. of B. p. 56, 1840. —
 id. Gen. of B. II, p. 460, Pl. 117, fig. 5 (head), 1845.
C. radiatus Gray, Handl. II, p. 206.
Neomorphus radiatus Schleg. Mus. P. B. Cuculi (1864), p. 60
 (N^o. 1 »mâle adulte”, but in fact an old female!).
Carpococcyx radiatus Shelley, Cat. B. Brit. M. XIX (1891), p. 414.

Larger; shoulders, secondaries and tail purplish-violet, with coppery-red reflections; head, nape, sides of head, chin and throat black, shining with violet on the vertex and nape.

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Moreover in this species the back and wing-coverts are of a vivid green, the sides of the neck and the crop grey.

Besides the old female (Cat. N^o. 1) figured in the Pl. col., from Pontianak (Coll. Diard 1826), the Leyden Museum possesses another old female (Cat. N^o. 3) collected by Dr. Nieuwenhuis on the Long-Bloe, a branch of the upper Mahakkam, Central-Borneo (October 1896), and an old male (Cat. N^o. 2), collected by Mr. Hose in the interior of Sarawak and presented by him to the Museum. The female N^o. 3 shows faint dark green apical margins on the feathers of the rump, and therefore this part is not so distinctly barred with dark; but both sexes are precisely alike, in size as well as in colours.

»Irides grey, with a narrow brown outer circle; bill, feet and the naked space round the eye oilgreen”: Dr. Nieuwenhuis. Diard describes the naked part round the eye as »red” and accordingly this colour is used also in the Pl. col. and our type to it. Mr. Hose got this fine Cuckoo in the interior of Sarawak (Mt. Dulit, Baram district and Kalulong) and gives only the following short notice: »a very rare bird, only found on the ground. Native name »Kruai Manang” (Ibis, 1893, p. 415).” Dr. Nieuwenhuis remarks only: »contents of stomach remains of beetles and other insects; native name »Manok bawai” (M. S.).

Carpococcyx viridis Salvad.

et *C. radiatus* (Temm.)? in: Annali del Mus. Civ. di St. nat. di Genova, vol. XIV (1879), p. 187.

Neomorphus radiatus Schleg. (nec Temm.), Mus. P. B. Cuculi (1864), p. 60 (N^o. 2 »femelle”).

C. viridis Shelley, Cat. B. Brit. Mus. XIX, p. 415.

Smaller; shoulders, secondaries and tail dark green, without any purplish or coppery reflections; top of the head black (without violet shine); nape dark green; the chin black as also a longitudinal stripe margining the naked space round the eye from below.

Notes from the Leyden Museum, Vol. XX.

Besides that in this species the throat and sides of the neck are greenish-grey, the back and wing-coverts are darker green than in *C. radiatus*; the dark crosslines on the abdomen are narrower and stand more closely, the sides of the breast and vent are washed pale rufescent, which colour is very distinct on the black barred lower tail-coverts.

The Leyden Museum possesses two specimens: one (Cat. N^o. 1) collected by Dr. Salomon Müller in western Sumatra (Padang), the other (Cat. N^o. 2) by Mr. van Hasselt (1880) in the same district; this last specimen is afterwards signed by Schlegel's handwriting »*Neomorphus radiatus sumatranus*». None of the specimens are sexed, but we may trust that in this species too both sexes are alike. The specimen N^o. 2 shows remains of the first plumage: on the head there are a few rufous-brown feathers and among the not yet full grown primaries is an old one: brownish-black, narrowly margined with rufous-brown on the outer web.

Salvadori describes the young bird as blackish, with chestnut-brown crossbands; occiput blackish, quills greenish-black, margined with rufous. The naked space round the eye is: »di vari colori; verde, blue, e rosso-vinato chiaro.» Judging from our skins the naked space round the eye, and the bill and feet are green.

Of the habits of this species nothing is known.

	Al.	caud.	culm.	tars.		
	256 mm.	306 mm.	49 mm.	97 mm.	<i>radiatus</i>	N ^o . 1 ♀.
(French)	9,04 inch.	11,2 inch.	—	3,6 inch.	"	: Schlegel.
	267 mm.	280 mm.	50 mm.	85 mm.	"	N ^o . 3 ♀.
	250 "	292 "	46 "	92 "	"	" 2 ♂.
	205 "	247 "	32 "	73 "	<i>viridis</i>	" 1.
(French)	7,10 inch.	9,3 inch.	—	2,9 inch.	"	" 1 Schl.
	200 mm.	250 mm.	30 mm.	75 mm.	"	" 2.

Leyden Museum, 1 May 1898.

NOTE XVIII.

TEN NEW SPECIES OF CICINDELIDAE

DESCRIBED BY

Dr. WALTHER HORN.

Odontochila Sternbergi, sp. n.

Differt ab *Od. simulatore* m. statura majore; labro longiore, in medio (ab basi ad apicem) viridi-tincto, dente mediana distincta; fronte latiore, oculis magis prominentibus, vittis discoidalibus deficientibus; thorace brevior latiore, postice minus angustato; elytris longioribus, magis parallelis, planioribus, ad marginem post medium minus cyaneis; antennarum articulo primo viridi, palpis labialibus et trochanteribus posticis piceis, pedibus obscure-cyaneis, tarsis anticis viridibus; corpore subtus fere toto viridi. — Long. $11\frac{1}{2}$ mm.

1 ♂, Venezuela. — I owe my unique specimen to the kindness of Mr. Chr. Sternberg who has presented it to me with many other rare Cicindelidae of his collection.

Ab *Od. Jordani* m. (specie sequente!) haec bestia est distinguenda magnitudine paullo majore; colore (praesertim elytrorum) laete cupreo-viridi; labro brevior, in medio viridi; vertice brevior; thorace latiore brevior, in medio magis rotundato, marginibus lateralibus cum angulis posticis viridi-lucentibus (basi sulcisque obscure cuprascentibus); elytrorum sculptura antica evidenter subtilior; pedibus obscure cyaneis (vide supra!); colore antennarum (articulis

2—4 cyaneis), trochanterum posticorum, palporum labialium etc.

Head and thorax dull coppery-brassy on the disk; elytra of a coppery-greenish colour (not very glossy).

Odontochila Jordani, sp. n.

Species intermedia inter *Odont. rufiscapem* Bat. et *Odont. exilem* Bat. Differt ab illa magnitudine minore; antennis gracilioribus (praesertim apicem versus); labro (imprimis ♂) brevioribus, ♂ dente mediana distincta, ♀ ♂ tota basi discoque nigrescentibus; fronte inter oculos magis excavata; thorace minus plano, sulcis magis distinctis, margine antico in medio producto, angulis posticis clarius cupreo-micantibus. — Distinguenda ab *Odont. exili* Bat. antennarum articulo 3^o et 4^o rufo-annulato; pronoti marginibus (praesertim basi!) valde opacioribus, ad angulos posticos planioribus; elytrorum basi margineque minus splendidibus, sculptura grossiore, superficie tota (imprimis ad apicem et ad marginem medium posterioremque: parte humerali declivi excepta) planiore. — Long. 10—11 mm. (sine labro).

♀ ♂, Cachabé low c., XI, 96 (Ecuador: Rosenberg). — Typus ♂ in Museo Tring (Rothschild), specimina altera in eadem collectione et mea.

Od. cinctula Bat. et *Od. secedens* Steinh. differunt a nova specie colore clariore magis splendente; labro multo brevioribus; capite angustiore; thorace convexiore, basi valde lucente; elytris minus applanatis (praesertim ad margines convexioribus), subtilius sculptis etc.

Palpis flavis (labialium articulo ultimo, maxillarum articulis 2 ultimis nigris), antennarum articulis 4 primis viridi-cyanescentibus (primo basi, 3^o et 4^o ante apicem rufescentibus); pedibus cyaneis, femoribus maxima ex parte tibiarumque basi flavis, trochanteribus posticis infuscatis; tarsis sulcatis; maculis 3 flavis marginalibus (humerali sat magna, media, anteapicali); penis apice paullulum incrassato.

All specimens were sent to me by Dr. K. Jordan.

Oxygonia Erichsoni, sp. n.

♂ supra purpureo-cupreo; elytrorum disco viridi; plagis 2 glabris impunctatis (altera in medio, altera ante apicem) *deficientibus*; penis apice sat crasso, breviter hamato.

Oxyg. Schaumi m. ♂ affinis, differt statura longiore graciliore; thorace vix levius sculpto; elytris totis paullo densius punctatis, in medio et ante apicem nusquam glabris, lateraliter non multo rarius quam in disco sculptis, postice longius producto angustatis, spina suturali brevissima vel nulla, maculis 4 albis marginalibus minoribus (praesertim illa pone humeros et media); penis hamulo apicali valde brevior. — *Oxyg. prodigae* Erichs. ♂ iterum similis, sed forma magis angustata; maculis albis multo minoribus, spina suturali valde brevior; colore rubro supra minus claro minusque nitente; peni ante hamulum crassior. — Long. 14 mm. (sine labro).

♂♂, Songo et Yungan (Bolivia).

The following ♀ was caught together with the examples from Songo and I think it is the female of my *Ox. Erichsoni*: differt ab *Ox. floridula* Bat. ♀ statura paullo graciliore; labro maculis 2 indistinctis centralibus brunnescentibus ornato; capite valde thorace paullo angustiore, huius lateribus magis rotundatis superficieque subtilius densiusque striolata; elytris sine plagis glabris, sculptura marginali minus evanescente, spina suturali vix brevior sed multo magis retracta. Colore supra subtusque saturatius viridi, multo minus cupreo- vel orichalco tincto, infra hinc inde paullulum coerulescente, palpis brunnescentibus. — Long. 13½ mm. (sine labro).

Myrmecoptera tarsalis, sp. n.

Costis elytrorum nullis, prothoracis linea media et marginibus lateralibus villosis.

Statura fere ut in *Myrm. nobilitata* Gerst.; labro vix brevior, albo solummodo nigro-marginato; capite angus-

tiore, grossius sculpto, fronte antica pilosa; thorace vix brevior, paullo irregularius plicato, parte media convexiore, marginibus lateralibus sparsim, linea media (usque ad basim apicemque) densius pilosis; humeris minus distinctis, elytris ad basim valde angustioribus, spina suturali multo longiore (longissima!), sculptura valde subtiliore, regulariter cribriformi, signatura flavo-alba: macula basali discoidali, lunula apicali cum fascia transversa (fere usque ad suturam ducta et valde pone medium sita) connata. Malis, toto sterno, abdominis lateribus pilosis; tibiis brunnescentibus (distaliter aeneis), tarsis brunneo-testaceis, apice nigro-annulato. — Long. 15 mm. (sine spina suturali nec labro).

3 ♂♂, German East Africa. — Specimen typicum in Museo Tring (Mpwapwa!), alterum in collectione von Bennigsen, tertium in mea.

The sculpture of the elytra and the yellowish white spots are quite the same as in *Myrm. Schaumi* m. — Coloration of the surface obscure brassy.

Cicindela Jordaniana, sp. n.

C. flavidenti Guér. affinis, statura valde majore; labro brevior, ♀ dente mediana valde longior; fronte multo latiore, oculis magis prominulis; pronoto subtilius sculpto; elytris longioribus, signatura valde differente: macula humerali parva, altera sat magna rotundata in disco antico collocata, tertia magna transversa (ad marginem paululum dilatata) fere in medio disco abbreviata et perparum apicem versus recurvata, quarta sat magna in disco postico sita (interdum cum praecedente connexa), stria marginali apicali, puncto parvo inter angulum lateralem posticum et maculam discoidalem posteriorem collocato. — Long. 13—14 mm.

Mpwapwa; specimen typicum (♀) in Museo Tring, alterum (♀) in collectione von Bennigsen, tertium (♂) in mea.

Labro flavo tridentato (♂ obsoletius dentato quam ♀); capite pronotoque obscure aeneis, illo medio, huius margi-

nibus lateralibus hirsutis; elytris nigrescentibus, margine apicali subtilissime denticulato; pectore toto, coxis posticis lateraliter, abdomine pilosis, hoc cyaneo.

This interesting species is distinguished from all the others in the *C. melancholica*-tribus by the short and broad transverse patch in the middle of the elytra.

Cicindela Hauseri, sp. n.

Cic. vicina Dej. affinis; differt fronte juxta oculos paullo, thorace multo subtilius sculptis; hoc angustiore, lateribus fere rectis; elytris vix magis elongatis, lunula humerali latius interrupta, lunula apicali (a stria marginali media separata) dilacerata, ut macula parva discoidalis (inter maculam centralem inferiorem et partem posticam lunulae apicalis) formetur. Colore supra aut aureo-rufo paullulum viridescente aut brunneo-rufo. — Long. 9—10 mm.

Variat. macula media transversa dilacerata, ut punctum discoidale exstet.

2 ♂♂, Ikutha: British East Africa. — The two specimens were kindly given to me by Prof. G. Hauser, to whom I dedicate this species.

Approaches nearest *C. vicina* Dej., but the colour of the surface is very singular. The palpi are yellowish with the last joint green; the first four joints of the antennae greenish with a violet tinge; trochanters, tibiae and knees yellow; femora green; tarsi bluish-brassy.

Cicindela eoa, sp. n.

Cic. stenoderae Schm. paullulum affinis; magnitudine valde minore; mandibulis brevioribus; labro flavo solummodo in medio perparum infuscato, antice recte truncato, dente una parva armato; fronte inter oculos vix evidentius striolata; thorace brevioris latiore planiore, lateribus paullo magis rotundatis, ad margines laterales hirsuto (disco etc. nudo), sulcis laevioribus; spina suturali brevioris, elytris

immaculatis; sterni totius disco nudo. Corpore supra cyaneo-violaceo, hinc inde viridescente, opaco (sutura margineque elytrorum paullulum nitentibus: lunula sat lata clariore nitidula humerali indistincta in discum prominente); antenarum articulis 1, 3, 4 viridi-cyanescentibus, 2 cyaneo, 5—11 griseo-obscuris; corpore subtus obscure viridescente hinc inde aeneo-tincto; femoribus viridi-cupreis, tibiis tarsisque cyaneis, trochanteribus palpisque (his eadem fere longitudine atque in *C. stenodera* Schm.) flavis, articulo ultimo (basi excepta) viridi. — Long. 7—7½ mm.

2 ♂♂, Luçon (5—6000': Whitehead). — I have received these specimens from Mr. E. Heyne (ex. coll. Janson!).

This peculiar species is rather unlike any other known.

Therates Fleutiauxi, sp. n.

Ther. Chennelli Bat. simillimus; statura vix minore; fronte inter oculos non convexo-planata sed in medio impressione transversa curvata sat profunda ornata, punctis 2 alteris parvis inter frontem et verticem collocatis cum illa connatis, capite pone oculos valde minus amplo; thorace angustiore, lateribus minus rotundatis; elytris ad suturam minus sinuato-truncatis, superficie paullo subtilius densiusque punctata, macula lata antica obscure rufo-testacea valde differente: pone humeros minus late marginem attingente [vitta parva metallica discoidali antica deficiente, altera suturali indistincta in tertia parte antica exstante (in illa specie nulla)], ante elytrorum medium (non in medio!) leviter (non profunde!) lateraliter sat longum (non brevem!) spatium excisa, postice mox (non longe!) pone medium abbreviata (parte suturali sat angusta excepta, quae longius apicem versus ducta in tertia parte postica evanescit). Macula apicali ut in illa specie flavescens. — Long. 8 mm. (sine labro).

1 ♂, Malacca meridionalis.

Head and thorax obscure greenish-cyaneous, posterior hips brown, abdomen (towards the base darker) and legs yellow (tarsi partly brownish).

Oxychila Fleutiauxi, sp. n.

Ox. tristi F. affinis; statura minore; superficie nitidissima; prothorace brevior, parte media convexiore, basim versus multo angustiore, lateribus magis rotundatis; elytris ad humeros paullo latioribus, postice latius breviusque rotundatis, angulo suturali recto, macula flava centrali rotundata; palpis, antennarum articulis 3—11 (3ⁱ et 4ⁱ apice anguste nigro-annulato), tibiis tarsisque (summo apice utrinque infuscato), trochanteribus testaceis. — Long. 18 mm. (sine labro).

1 ♂, Caraça (Brazil), from the collection of Mr. Ed. Fleutiaux; taken by the celebrated traveller Mr. Germain (II Sem. 1884).

Ox. Pineli Guér. differt ab nova specie superficie opaca, labro antice latiore; capite (praesertim vertice) minore, oculis magis prominulis; thorace angustiore, postice minus constricto; humeris paullo magis distinctis, elytris in medio vix minus amplis, apicem versus longius rotundato-productis, summo apice non transverse-truncato; colore nigro omnium extremitatum etc.

Megacephala Hauseri, sp. n.

Species inter *Meg. Baxteri* Bat. et *Meg. excelsam* Bat., differt ab illa fronte paullo minus rugosa, punctis piliferis juxta oculos rarioribus; thorace impressione centrali brevi profunda transversa ornato, lateribus vix magis rotundatis, superficie impunctata; elytris valde brevioribus latioribusque, ad basim lateralem aequaliter tuberculatis, suturam anticam versus sculptura valde magis evanescente, post quartam partem anticam tuberculis totis disparentibus (foveolis punctisque minoribus solummodo restantibus), a medio ad apicem omnino laevigatis nitidis (foveolis quibusdam rarissimis punctisque perparvis vix percipiendis). — Ab *Meg. excelsa* Bat. nostra species est distingenda: forma gigantea, impressionibus frontalibus profundioribus: thorace latiore, fossa

brevi transversa centrali (in ipso medio pronoti!) profunda, lateribus rotundatis (ante basim interdum angulo parvo acuto ornatis); elytris latioribus, ad basim lateralem tuberculis piliferis sat acutis ornatis, postice nitidis, sculptura abruptius evanescente. — Long, 32—33 mm.

2 ♀♀, Ikutha: British East Africa. — Kindly sent to me by Prof. G. Hauser.

Palpi, trochanters, antennae (with the 2nd, 3rd and 4th joint infuscate at the tip) and legs yellow. Knees and the apical half of the posterior femora pitchy. Head and thorax obscure greenish with blackish disk.

Berlin, 18 June 1898.

NOTE XIX.

WHAT ABOUT THE JAVAN BEAR?

BY

Dr. F. A. JENTINK.

June 1898.

The other day I read in a dutch popular periodical a paper dealing with the different species of Bears and their geographical distribution. To my great surprise the Malayan Bear was mentioned from Java: the locality Java being quite new to me I wrote to the author of that paper and asked him some informations about the matter: he referred me to Brehm's »Tierleben" and Flower and Lydekker's »Mammals."

Indeed on p. 245 of Brehm's Tierleben, Säugethiere, zweiter Band, 1890, Dr. Pechuel Loesche stated: »der Biruang (*Ursus malayanus*) bewohnt Borneo, Java, Sumatra, die Malayische Halbinsel und verbreitet sich nordwärts durch Tenasserim bis nach Burma und durch Arakan bis nach Tschittagong"; and in Flower and Lydekker's Mammals, 1891, p. 559, the geographical distribution of the Malay Bear or Sun Bear (*Ursus malayanus*) runs as follows: »this small species inhabits the Malay Peninsula, Sumatra, Java, Borneo, Tenasserim, Arakan, Chittagong and the Garo hills of India."

Scrutinizing what has been published concerning the geographical distribution of the Malay Bear I see that there are more authors who believe that in the island of Java is living a Bear. I only have to remember the opinion of the following authors.

Notes from the Leyden Museum, Vol. XX.

1829. J. B. FISCHER. Synopsis Mammalium, p. 145: »In insulis archipelagi Indici (Sumatra, Borneo, *Java*) et in peninsula Malacca.»
1863. E. BLYTH. Catalogue of the Mammalia in the Museum Asiatic Society, p. 77: »Hab. Arakan; Indo-Chinese countries generally; Malayan peninsula, Sumatra, *Java* and Borneo.»
1866. A. MURRAY. The geographical distribution of Mammals, p.p. 382, 383: »Borneo, Sumatra and *Java*.”¹⁾
1869. J. E. GRAY. Catalogue of Carnivorous, Pachydermatous and Edentate Mammalia in the British Museum, p. 235: »Hab. Malayan islands — Sumatra, Borneo, *Java*; Malay peninsula.»
- 1888—91. W. T. BLANFORD. The Fauna of British India, Mammalia, p. 199: »This bear inhabits the Malay Peninsula, Sumatra, *Java* and Borneo, and extends northwards into Tenasserim, Arakan, Chittagong, and the Garo hills.»
1891. W. L. SCLATER. Catalogue of Mammalia in the Indian Museum, Calcutta, p. 304: »Garo Hills, Assam, Chittagong, Arakan, Tenasserim, Malay Peninsula (Cantor), Sumatra, *Java* and Borneo (Temminck).»
1894. CARL GREVÉ. Die geographische Verbreitung der jetzt lebenden Raubthiere. Nova acta der Ksl. Leop.-Carol. Deutschen Akademie der Naturforscher, Bd. LXIII, N^o. 1, p. 243: »der Verbreitungsbezirk des malayischen Bären ist ein verhältnissmässig beschränkter. Die Halbinsel Malacca, Hinterindien, vor allen Dingen die Landschaften Tschittagong, Arakan, Tenasserim, Birma, die Garohügel und das Terai bilden auf dem Festlande — unter den Inseln Borneo, Celebes²⁾, Sumatra, *Java* und Banka, Palawan,

1) Murray mentions as *chief authority* »Müller's Verhandlungen, 1835” (lege Verhandelingen, 1839—44)! This is incorrect; Müller said l. c. p. 32: that the Malay Bear is distributed over Sumatra, Borneo and Malacca.

2) I do not know from where Dr. Grevé has his informations or in what collection he saw specimens from all those small islands; he is responsible;

Tambelan, Gross-Natuna, Labuan, Balabak, Calamyanes, Cuyo, Cogayan, Sulu, Sibutu, Solombo und Paternoster-Inseln seine Heimath."

1897. E. L. TROUËSSART. *Catalogus Mammalium tam viventium quam fossilium, fasciculus II*, p. 244: »Indo-China, ? Birma, Pegu, Arakan, Chittagon, Garo Hills, Tenasserim, Malacca, Sumatra, *Java*, Borneo."

The principal question now arises: »on what typical Java-specimens has been based the above cited locality *Java*; where are specimens from that locality stored up in *Musea* as »documents"? And the answer is, that according to Blyth's Catalogue, 1863, and Sclater's Catalogue, 1891, there is in the Indian Museum, Calcutta, a skin of a specimen from Java, presented by Captain Scholefield. We find the history relating this specimen in *J. A. S. B.* Vol. XVII, 1848, part I, p. 250: »the curator Zoological Department reported that Capt. Scholefield, of the Schooner »Sydney", presented a dead female *Ursus malayanus*, from Java. Perfectly identical, as a species, with specimens from Assam, Tenasserim, a. s. o.; but the individual remarkable for two great black patches occupying much of the right side of its V-like mark on the chest, and for numerous small spots ¹⁾ over the remainder of the same mark. It has been set up as a stuffed specimen." That is all! Now a Captain of a Schooner generally spoken is not a naturalist, so that he could not know that Java was an erroneous locality for a Bear, but it is very strikingly that all naturalists have accepted that locality without comment and without a trace of hesitation.

Still more inexplicable is the following: according to Gray's Catalogue, 1869, p. 235, he has compared the skull of a

but nobody has seen or heard about the existence of a Bear in *Celebes*! I find this fictive locality too in Giebel's *Säugethiere*, 1855, p. 744.

1) In the Leyden Museum there is a very adult stuffed female (Catalogue 1892, p. 151, N^o. e) from Borneo in which the white V-shaped patch or mark on the chest also is adorned with numerous small black spots.

Notes from the Leyden Museum, Vol. XX.

Bear from Borneo with the skulls of *Javan specimens*! For he wrote verbatim: »but perhaps the Bornean specimen »may be found to have a rather larger tubercular grinder »which is more contracted behind than in the *Javan specimens*.” One of the officers of the British Museum however kindly told me by letter d. d. May 26th 1898 in reply on my request: »I beg to inform you that we have »in our collection the skin of a bear labelled *Helarctos malayanus* from Sumatra. The specimen is mentioned in »Gray’s List of specimens of Mammalia in B. M. 1843, »p. 73. This appears to be the only bear from that region »which we have in the collection.” Gray’s Javan specimens not having been seen by other naturalists and nobody knowing the way by which they arrived in the Museum and by which they have disappeared, the proof that bears have been brought over from Java is entirely failing!

It is a since long well-known fact that neither naturalists nor dutch inhabitants of Java have seen there a Bear; contrariwise they all unanimously related that in the island of Java the Bear is *not* to be found.

In the Leyden Museum are specimens from Sumatra and Borneo, moreover a specimen said to come from Banka; I cannot ascertain that the Bear truly is living in Banka, however the geographical position of that island, rather close to Sumatra, indicates the possibility, and — the Bear is a very good swimmer.

To conclude we may accept as well established facts that *Ursus malayanus* is living in Sumatra and Borneo, probably in Banka, but most certainly not in Java, Celebes or smaller Malayan islands.

NOTE XX.

ZOOLOGICAL RESULTS OF THE DUTCH SCIENTIFIC
EXPEDITION TO CENTRAL BORNEO.

THE MAMMALS

BY

Dr. F. A. JENTINK.

May 1898.

(Plate 2).

In a paper dated April 1897 (Notes from the Leyden Museum, 1897, p. 25) Dr. Büttikofer stated that the work of the expedition was still being continued in Borneo, Dr. Nieuwenhuis having once more started for the Upper-Mahakkam with a staff of collectors, and that, according to the latest news he will have left the Upper-Mahakkam medio March with fine zoological collections. I may report now that Dr. Nieuwenhuis safely reached the east-coast of Borneo and started from Samarinda June 7th 1897.

His hunting-stations were the following:

Poetoes Sibau, on the Kapoeas, 16 May—2 June 1896.

Long-Bloe, right branch of the Upper-Mahakkam, 10—26 September, 12—23 November, 16—20 December 1896.

Dingai, on the Upper-Long-Bloe, 29 September—26 October 1896.

Station on the Bruny-river, right branch of the Long-Bloe, 27 November—16 December 1896, 16—25 January, 10—25 May 1897.

Notes from the Leyden Museum, Vol. XX.

All the zoological collections made by Dr. Nieuwenhuis like those formerly made by Dr. Büttikofer have very generously been presented to the Leyden Museum by the *Society for the advancement of Natural History exploration in the Dutch Colonies* — Maatschappij ter bevordering van het natuurkundig onderzoek der Nederlandsche koloniën — and our sincere thanks are due to the Directors of the named *Society*.

The mentioned collections will successively be described in the »Notes from the Leyden Museum”.

I described the Mammals collected by Dr. Büttikofer in the Notes from the Leyden Museum, 1897, pp. 26—66.

PRIMATES.

Hylebates.

It is a well-known fact that the Genus-name *Hylobates* has been invented by Illiger; we find in his »*Prodromus systematicus Mammalium et Avium*, 1811, p. 67: Genus 3. *Hylobates* (ὕλοβατης, per sylvas gradiens) (Armaffe), with the species *Simia lar* Lin. Gmel.; the introduction s. n. »*Lectori*” he wrote in April 1811, see p. XVIII: »*scribebam Bero- lini in Museo zoologico m. Aprili 1811*”. Now all naturalists have overlooked that *somewhat more than one month earlier* Illiger held a lecture before the members of the »*königliche Akademie der Wissenschaften*” in Berlin, entitled: »*Ueberblick der Säugethiere nach ihrer Vertheilung über die Welttheile*” (Vorgelesen den 28. Februar 1811). On p. 91 he verbatim said: »*Von dieser Gattung der menschähnlichen Affen trenne ich unter den Namen *Hylebates* die langarmigen Affen, den *Lar*, Buffon’s *Grand Gibbon*, den damit bisher verbundenen *Petit Gibbon*, *varius*, und den Audebertischen *Moloch*, den Schreber *Leucisca* nennt*”. Here he therefore *for the first time* separated the Gibbons under a new generic title, viz.: *Hylebates*, and a few weeks later he changed that title in the later-on everywhere used name *Hylobates*. And that Illiger did not wrote *Hyle-*

bates by a mere chance or by a slip of the pen appears from the fact that in his paper read before the royal Akademie on 28. 2. 1811, he used the name *Hylebates* on p. 88 twice and on p. 91 twice too. (Abhandlungen der physikalischen Klasse der Königlich-Preussischen Akademie der Wissenschaften aus den Jahren 1804—11, Berlin, 1815).

According to the rules of priority in nomenclature we have to write in future *Hylebates* instead of *Hylobates*.

Hylebates Mülleri Martin.

Nos. 93 and 94a.

N ^o . 93. Kopflänge	14.5 cm.
Halslänge	8.— »
Rumpflänge.	37.— »

*) Farbe der Iris gebrannter Oker; Farbe der Pupille schwarz. Mageninhalt: Ueberreste von Früchten. Mit Pfeil erlegt am 20. X. 1896. Dingai. Nomen indigenorum: *Krawet*.

Sennopithecus.

Sennopithecus femoralis Horsfield.

N^o. 92.

♀ ad. Kopflänge	13.— cm.
Halslänge	8.— »
Rumpflänge.	38.— »
Schwanzlänge	68.— »

Farbe der Iris braun; Farbe der Pupille schwarz. Hatte ein vollkommen ausgebildetes Embryo. Mit Pfeil erlegt am Spätachmittage den 19. X. 1896. Dingai. Nomen indigenorum: *Boehi*.

*) The appendices in German are extracted from the field-notes of Dr. Nieuwenhuis and Moret.

CARNIVORA.

Viverra.*Viverra tangalunga* Gray.N^o. 118.

Kopflänge	13.— cm.
Halslänge	16.— »
Rumpflänge	40.— »
Schwanzlänge	33.— »

Farbe der Iris sepiabraun gebrannt; Farbe der Pupille grünlich hell; Form des Auges stark gewölbt; Form der Pupille rund. Die Stellung des Auges ist zur Gesichtslinie vorgeneigt.

Mageninhalt: Ueberreste von Früchten.

Im Schlinge gefangen im tiefen Busch, am 12. XII. 1896. Station am Brunai Flusse, rechter Nebenfluss des Long-Bloee. Nomen indigenorum: *Uhnun*.

Paradoxurus.*Paradoxurus hermaphroditus* Gray.N^o. 89.

Kopflänge	13.— cm.
Halslänge	14.— »
Rumpflänge	30.— »
Schwanzlänge	41.— »

Farbe der Iris sepiabraun; Form der Pupille rund, stark gewölbt; Farbe der Pupille wasserhell mit grünem Schimmer.

Mit Pfeil erlegt gegen Abend den 15. X. 1896. Dingai. Nomen indigenorum: *Paré*.

Arctogale.*Arctogale leucotis* (Blyth).N^o. 86.

Kopflänge	13.5 cm.
Halslänge	9.5 »
Rumpflänge	33.— »
Schwanzlänge	58.— »

Farbe der Iris sepiabraun; Farbe der Pupille schwarz; Farbe des inneren Irisringes licht sepia; Form der Pupille rund; Form der Augen stark gewölbt.

Mageninhalt: Ueberreste von Früchten.

Geschossen am Fruchtbaume Vorabend am 9. X. 1896.
Dingai.

Nomen indigenorum: *Boessan*.

Hemigalus.*Hemigalus derbyanus* (Gray).

Nos. 82 and 83.

In his »Spicilegia Zoologica'', Part II, 1830, p. 9, Dr. J. E. Gray described the drawing of an animal under the name *Viverra Hardwickii*. The author stated: »the animal is only known by the drawing of Major Farquhar, which is now (1830) in the collection of the Asiatic Society''. All subsequent writers dealing with the subject, Gray himself too, mention, that Lesson described another animal under the very name; this alone — if it were true — would suffice to reject the name (I cannot make out it, as I nowhere can find where Lesson used that name). The principal reason however why I reject the name is that it has been given to a *drawing* and not to an *animal*. It seems that all authors — and Gray himself too — believe that in the »Spicilegia'' there has been figured the animal on tab. I; the fact is that such a figure is not to be detected in Gray's book at all, and that on tabula I have

been figured two Monkeys. Nobody has consulted Gray's »Spicilegia'', they merely transcribed what foregoing writers wrote down.

Since 1814 Dr. Gray had among the drawings under his charge the portrait of an animal belonging to the Lyons Museum and presented to him by Mr. Jourdan in that year: this animal has been described by Jourdan (Comptes rendus des séances de l'Académie des Sciences, 1837, p. 442) as *Hemigale zébré* and Dr. Gray described in the same year (the Magazine of Natural History, Vol. I, New Series, 1837, p. 579) the for about 23 years previously to him presented drawing as *Paradoxurus? Zèbra*. Jourdan having baptized his animal merely with a french name and Gray having given a latin name to the same animal, the latter should generally have been adopted, if Dr. Gray a few lines earlier and at the same page where he described the drawing (being that of the animal in the Lyons Museum) had not given a diagnosis of specimens belonging to the Zoological Society and to Lord Derby's collections and representing exactly the same species as *P. zèbra*, under the title of *Paradoxurus Derbyanus*. He therefore described the same animal under three different names.

Although Jourdan in his original description gave the animal a french name only, he created a new genus for its reception, the genus *Hémigale*, which he translated in Latin (see l. c. p. 442) as *Hemigalus*, so that we ought to accept this generic name and not *Hemigale* or *Hemigalea*.

The animal's latin title therefore is *Hemigalus derbyanus* (Gray).

Major Franquhar's paper-specimen seems to originate from Malacca; Dr. S. Müller described the animal from South-Eastern Borneo (v. d. Hoeven's Tijdschr. voor Natuurlijke Geschiedenis en Physiologie, Vol. V, 1838—1839, p. 144, s. n. *Viverra Boiei*), meanwhile I pointed out (N. L. M. 1889, p. 23) that a skeleton of it in the Leyden Museum had been collected by Dr. Hagen in Deli, N. E.

Sumatra. I repeat this pro memoria as it seems that the latter locality has been overlooked or not been accepted as trustworthy by some modern writers — (exceptions are Dr. W. L. Sclater, Catalogue of Mammalia in the Indian Museum, Calcutta, 1891, Part II, p. 241 and Dr. E. L. Trouessart, Catalogus Mammalium tam viventium quam fossilium, 1897, fasc. II, p. 327) — and because I am convinced that the knowledge of *exact* localities, especially in the study of the animals from the different islands of the Malayan Archipelago, is of the highest scientific interest, for without this the geographical distribution of the Malayan mammals will remain in a chaotic condition.

An adult female with its young was captured in a snare at Dingai-station d. d. 29 September 1896. The natives call it *Doengan*.

♀ *ad.* Farbe der Iris dunkelsepiabraun. Der innere Irisring lichte Sepia (gebrennt). Die Pupille ist rund, wasserhell mit grünem Schimmer. Farbe der Schnautze schwarz. Die Ohrensippen analog der lichtbraunen Farbe des Halses. Farbe des Rachens und der Zunge bläulich. Form der Augen stark gewölbt. Stellung der Augen: gegen die Gesichtslinie geneigt. Mageninhalt: Ueberreste von Früchten.

Kopflänge	12 cm.
Halslänge	13 »
Rumpflänge	34 »
Schwanzlänge	38 »

Young. Farbe der Iris: lichtsepiabraun; Farbe der Pupille: wasserhell mit sehr lichtem, grünlichem Schimmer; Form der Pupille: rund; Form der Augen: stark gewölbt.

The tail of the adult female specimen is much longer than that part in the two stuffed specimens in the Leyden Museum, among which the type-specimen of *Viverra Boiei*, and the broad transverse bands on the back are much

darker colored than in these specimens, explained by the fact that our specimens perhaps have faded and that the female-specimen has been measured in the flesh. Mr. Hose stated that the number of the transverse bands is variable, but I find it very constant in our specimens.

The young one measures about 42 cm. from the nose to the extremity of the tail, the latter part measuring 16 cm. The distribution of the colours is exactly the same like in the adult ones, the dark bands however are more brownish coloured.

They have been captured September 29, 1896, at Dingai. Indigenous name: *Doengan*.

Arctictis.

Arctictis binturong (Raffles).

N^o. 85.

Kopflänge	10.—	cm.
Halslänge	9.5	»
Rumpflänge	27.5	»
Schwanzlänge	47.—	»

Young. Farbe der Iris dunkelbraun, Farbe der Pupille schwarz, Form der Pupille rund, Form des Auges stark gewölbt. Mageninhalt: Ueberreste von Früchten. Im Baume mittels Pfeil erlegt. Dingai, am 4 October 1896. Nomen indigenorum: *Kitan*.

Herpestes.

Herpestes brachyurus Gray.

N^{os}. 87 and 88.

	N ^o . 87.	N ^o . 88.
Kopflänge	12 . . .	12 cm.
Halslänge	9 . . .	10 »
Rumpflänge	26 . . .	27 »
Schwanzlänge	22 . . .	24 »

Farbe der Iris okergelb; Farbe der Pupille kobaltblau mit weiss; die Stellung der Augen zur Gesichtslinie geneigt.

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Mageninhalt: Ueberreste einer Klapperratte. Von Hunden aus dem Baue unterhalb eines morschen Baumes geholt am Morgen den 11. X. 1896. Dingai. Nomen indigenorum: *Toeban*.

Putorius.

Putorius nudipes Cuvier.

N^o. 119.

Kopflänge	7.5 cm.
Halslänge	9.5 »
Rumpflänge	21.— »
Schwanzlänge	26.— »

Farbe der Iris braun mit etwas feuerrothem Schimmer; Farbe der Pupille schwarz.

Mageninhalt: Ueberreste von einer Grasseidechse.

Anmerkung: die Dayaken erzählen mir, dass ihnen dieses Ichneumonid Schaden an den Hühnern anzurichten pflegt. Ob species die Farbe des Felles wechselt, konnte ich nicht in Erfahrung bringen; doch soll es eine zweite Art geben, welche gerade so gross ist, nur mit dunklerer Farbe!

Beim Passiren des Brunaiflusses mit dem Ruder erschlagen, während das Thier den Fluss durchschwamm. Gegen Abend, 14. XII. 1896. Dingai. Nomen indigenorum: *Snangan*.

Besides specimens from Borneo, Banjermassing and Pontianak, there are in the Leyden collection individuals from Sumatra, Deli, presented by Dr. B. Hagen.

Aonyx.

Aonyx cinereus (Illiger).

Lutra cinerea Illiger.

Mr. Oldfield Thomas pointed out in P. Z. S. L. 1889, p. 193 that the name *Lutra cinerea* had been applied by Illiger in 1811 to v. Wurmub's *Gryze Otter* and most unfortu-

nately therefore has the priority to the long-known name *leptonyx* given in 1824 by Horsfield to the same animal, the so-called clawless otter from Java. As the description of v. Wurmb's otter as well as Illiger's name for that animal are to be found in rather unknown or difficultly accessible books, it may perhaps bear some interest to give the full and exact titles of the mentioned books, the more as Thomas himself is not quite correct in his quotation and as Blanford in his »Fauna of British India, Mammalia, 1888—91" though accepting Thomas' interpretation commits another error (Illiger 1815 instead of Illiger 1811).

Baron F. v. Wurmb described the »Grijze otter, die omstreeks Batavia gevonden wordt" in the »Verhandelingen van het Bataviaasch Genootschap der Konsten en Wetenschappen", 1784, Vol. 2, p. 456 (not 1780, see Thomas). It is very likely that Thomas never saw the named volume as he quotes 3rd edition, published 1826.

Illiger's paper, *vorgelesen den 28 Februar 1811* has been published in »Abhandlungen der königlichen Akademie der Wissenschaften in Berlin, Abhandlungen der physikalischen Klasse der Königlich-Preussischen Akademie der Wissenschaften aus den Jahren 1804—11, Berlin, 1815"; the full title is: »Ueberblick der Säugethiere nach ihrer Vertheilung über die Welttheile", p.p. 39—159.

Nos. 90 and 91.

Kopflänge	9.5 cm.
Halslänge	9.5 »
Rumpflänge	28.— »
Schwanzlänge	28.— »

Farbe der Iris intensiv dunkelbraun; Farbe der Pupille schwarz. Mageninhalt: Ueberreste von Fischen.

Von Hunden aus dem Baue geholt am 15. X. 1896. Dingai.

Nomen indigenorum: *Ding(e)n*.

This clawless otter is represented in the Leyden Museum

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by specimens from the Indian continent, Sumatra (Padang), Borneo (Pleyharie) and Java.

INSECTIVORA.

Tupaja.

Tupaja tana Raffles.

One adult specimen, in alcohol, without label or history.

CHIROPTERA.

Rhinolophus.

Rhinolophus trifolius Temminck.

Two adult specimens (♂, ♀) without any further indication and a male-specimen from Tepoe, Central Mahakkam-river, May 1897. They have been preserved in alcohol and formalin. Forearm: 53, 55 and 49 mm.

Harpiocephalus.

Harpiocephalus swillus (Temminck).

Adult ♀, preserved in alcohol. Lower Mahakkam-river, May 1897. Forearm 37 mm.

Vespertilio.

Vespertilio adversus Horsfield.

♂ ad. (alc.) Central-Mahakkam-river, Tepoe, May 1897. Forearm 35 mm.

♂ ad. (alc.) Locality not registered. Forearm 34 mm.

Vespertilio muricola Hodgson.

♂ ad. (alc.) Central-Mahakkam-river, Tepoe, May 1897. Forearm 34 mm.

RODENTIA.

Sciurus.*Sciurus albiceps* Desmarest.

N°. 84.

Kopflänge	8.— cm.
Halslänge	6.— »
Rumpflänge	25.— »
Schwanzlänge	46.— »

Farbe der Iris dunkelbraun; Farbe der Pupille schwarz; Form der Pupille rund; Form des Auges stark gewölbt.

Mageninhalt: Ueberreste von Früchten.

Geschossen am Früchtbaume Vorabend, den 3. X. 1896. Dingai.

Nomen indigenorum: *Maka*.

Adult specimen, with dark colored upperparts, representing the variety distinguished by some naturalists by the specific title *ephippium*.

Sciurus soricinus Waterhouse.

♀ ad. and three adult males (alc.). The female with four (2 × 2) teats.

From the Upper-Mahakkam-river, May 1897.

Sciurus exilis Müller.

One adult specimen (alc.). Without history.

Rheithrosciurus.*Rheithrosciurus macrotis* Gray.

N°. 120.

Kopflänge	10.— cm.
Halslänge	7.— »
Rumpflänge	23.— »
Schwanzlänge	35.— »

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Farbe der Iris braun; Farbe der Pupille schwarz; Form der Augen und Pupille stark gewölbt rund.

Im tiefen Busch geschossen des Morgens nach starken Regenfall, als das Thier am Kanarienbaume nach Früchten suchte, am 15 December 1896.

Die Dajaks erzählen dass das Thier sehr selten vorkommt. Nomen indigenorum: *Papoen*.

RUMINANTIA.

Bibos.

Bibos banteng (Raffles).

Skull of an adult female.

Horns of an adult specimen.

Horns of a young individual.

Dr. Nieuwenhuis relates that the animal is living along the upper and middle Mahakkam, Batang, Badjang and Upper Silat. It frequents in small troops principally young bush and shrubs; the Baham-men hunt it very seldom as they do not like its flesh as a meat; the Malay however are more fond of it.

The indigenous men (so Dr. Nieuwenhuis reported) distinguish two varieties: a large black one and a smaller red form. The photo (plate 2) and the skull belong to specimens of the black variety. It is well known that the adult female is more reddish, not so dark colored as the adult male. According to Dr. S. Müller the Dajaks along the Doeson-river call the (black-colored) adult animal *Roempoe* and the (red-colored) calf *Banteng* — and by that way I explain Dr. Nieuwenhuis' black and red varieties.

NOTE XXI.

ON ABNORMAL PECTORAL SHIELDS IN
TESTUDO EPHIPIUM GTHR.

BY

Dr. TH. W. VAN LIDTH DE JEUDE.

(Plates 3, 4 and 5).

In the beginning of this year our herpetological collection was enriched with a specimen of the gigantic land-tortoises from the Galapagos-islands. The specimen, a male one, directly struck me by the peculiar arrangement of the pectoral shields, which have a triangular form, and do not meet in the middle of the plastron.

On further information as to the exact locality where our tortoise was captured, I learned from Prof. Giglioli, to whom the specimen had formerly belonged, that it was captured by the captain of an Italian merchant-vessel in 1884 on the island of Duncan, together with a similar but smaller male specimen, which was still in the Florence Museum.

Now the peculiar arrangement of the pectoral shields of our specimen quite agrees with the form and position of these shields in *Testudo emys* and in *Testudo Phayrii*; the former species showing the said arrangement with both sexes, the latter only with the males¹). For this reason I thought it probable that our specimen, together with the Florence

1) See my note on *Testudo emys* and its affinities. Notes Leyden Museum, Vol. XVII, p. 197.

specimen, might belong to a still undescribed species of *Testudo*. I therefore had the lower part of our specimen photographed, and sent a photograph to Prof. Giglioli, asking him to be so kind as to compare my photograph with his specimen and to give me information as to the pectoral shields. Prof. Giglioli very graciously answered my letter expressing his regret that he was unable to give me the information I had asked for, as the smaller specimen was sent in communication to the Hon. Walter Rothschild. Accordingly, I addressed myself to the well-known proprietor of Tring Museum, explaining my case to him, and asking for information about the smaller Duncan-specimen. The Hon. Walter Rothschild, whose interesting contributions to zoölogy are valued by all zoölogists, not only gave me the particulars I had asked for, but with extreme kindness and great liberality gave me all information he could furnish to help me to decide this difficult question. He expressed as his opinion that the tortoises of Duncan-island all belong to one and the same species viz. *Testudo ephippium* Gthr., the specimens varying much at different ages. His opinion is based on the comparison of 31 living and dead specimens of different sizes, obtained from that island and now in his collection, and of 5 other specimens including the type, which is in the Edinburg Museum. To enable me to judge myself, he very graciously sent me for comparison 2 specimens of *P. ephippium*: one skeleton measuring 62 cm. over the curve, and a very large unmounted specimen measuring 83 cm. Moreover he sent me:

1°. an outline sketch of the front part of the plastron of Prof. Giglioli's specimen, which shows the pectorals meeting one another in the middle of the plastron.

2°. an outline sketch of the front part of the plastron of a large male, weighing 180 kilogram, and showing the right pectoral shield normally developed, while the left has its middle part reaching its fellow, but atrophied to half its proper size.

In view of all these evidences, and as our specimen in all essential points, the pectorals excepted, resembles the specimens of *Testudo ehippium*, I feel inclined to regard the peculiar arrangement of the pectorals in our tortoise as an individual abnormality.

However, with regard to the normal occurrence of this special arrangement of the pectoral shields in *Testudo emys* and *Testudo Phayrii*, I think the individual abnormality of our specimen of *Testudo ehippium* so remarkable, that I think it worth while to publish the figures together with the measurements of the different shields of the plastron.

Length of carapace measured over the curve .	70 cm.
Length of plastron from gular to caudal notch .	49 cm.
Length of the gulars	5.2 cm.
Length of the brachials	11.5 cm.
Distance between the pectorals	17 cm.
Length of the abdominals	19.5 cm.
Length of the femorals	8 cm.
Length of the anals	5 cm.

Leyden Museum, July 1898.

NOTE XXII.

ON SEVEN NEW SPECIES OF BIRDS IN THE
LEYDEN MUSEUM FROM THE ISLANDS OF WETTER,
KISSER, LETTI AND NEW-GUINEA

BY

Dr. O. FINSCH.1. *Sphecotheres hypoleucus*, n. sp.

Adult male (Cat. ¹⁾ n°. 1). Head, nape and earcoverts black; remaining upper parts olive-green, brighter and more yellowish green on the rump and upper tailcoverts; wings black; the primaries and their coverts on the outer web narrowly margined with pale greenish olive, the secondaries broadly with brighter yellowish green; the two central tailfeathers washed with dull olive-green, the remainder black, margined on the outer web with olive-green, wider towards the base, almost imperceptibly on the two outermost ones; the four outermost ones on each side with white tips, confined almost to the inner web; whole under surface, as also the cheeks, sides of neck and under wingcoverts white with a faint yellowish hue; wings and tail from below ashy grey. Bill and feet black; a narrow ring round the eye and the space between eye and gape naked and flesh-coloured (in the living bird »reddish-yellow»: Schädler). »Irides dark brown» (Schädler).

Adult female (Cat. n°. 2). General colour above olive-brown, the head mottled with darker brown shaftstripes,

1) MS. Catalogue in preparation.

lower back and rump olive-green, more vivid on the upper tailcoverts; wings blackish brown; primaries on the outer web very narrowly margined with pale yellowish olive, secondaries and all the coverts more distinctly margined externally with greenish yellow-olive; tail blackish brown, the two central tailfeathers washed with olive-green, the remainder only with a faint greenish margin on the outer web; ear-coverts, chin and throat dull brown, with faint whitish margins, most distinct on the chin, remaining under parts whitish, with dark shaftstripes, broadest on breast and flanks, very narrow on the middle of vent and under tail-coverts; under wingcoverts whitish, washed with pale isabelline. — Bill and feet black, the same as a narrow ring round the eye and the space between the eye and gape (in the living bird »dark green”: Schädler).

Another old female (Cat. n°. 3) agrees with the foregoing specimen, but the margins of the wings and their coverts are lighter, more yellowish white.

Al.	caud.	culm.	tars.	
mm.	mm.	mm.	mm.	
130	96	19	24	♂ (Cat. n°. 1).
130—132	98	17—20	24	♀ (Cat. n°. 2 a. 3).

A very distinct species, easily recognizable by the uniform white undersurface in the male; the female resembles that of *Sph. viridis* Vieill. (*timoriensis* Schl.) from Timor, but has its rump and upper tailcoverts, as well as the two central tailfeathers, distinct olive-green; the ground-colour of the under parts is whitish (not yellowish as in *viridis*).

The three above described specimens are collected by Mr. K. Schädler on the Island of Wetter (north of Timor) in February and March 1898.

2. *Stigmatops notabilis*, n. sp.

Adult male (Cat. n°. 1). Head above dull black; the feathers on the occiput margined with brownish at the

base, giving the appearance of indistinct longitudinal stripes, which are more distinct on the feathers of the nape and hind neck; back and shoulders dark olive-yellow, with broad blackish shaftstripes, therefore on an olive-yellow ground streaked with blackish; rump and upper tailcoverts uniform olive-yellow; the lores are covered with short smoky grey feathers; round the eye a distinct naked ring, extending somewhat behind the eye; above this naked space the feathers are very short and tipped whitish, forming a distinct whitish postocular stripe; feathers on the ear-region, below the naked space, black, with faint silvery grey tips, but without forming a marked earpatch; sides of head, from the gape, including fore part of sides of neck and throat, silky white, the chin washed with pale greyish; the white of the throat is surrounded by a broad black collar, beginning on each side of the neck; the black feathers of this collar are margined with yellowish white at the base, giving an indistinct striped appearance; all the remainder underparts, including the axillaries, dark yellow with blackish shaftstripes, very distinct on the breast and sides of breast and vent, very faint on the vent and under tailcoverts; quills black, margined on the outer web with dark olive-yellow, on the basal half of the innerweb pale isabelline-whitish, the same colour as the lower wingcoverts; upper wingcoverts dull blackish, very faintly margined with olive-yellow; bent of wing yellow; tail ? (being *helas* missing!). Bill and feet black, as the naked space round the eye. »Irides light brown'' (Schädler).

Al.	caud.	culm.	tars.
168 mm.	? mm.	16 mm.	20 mm.

Hab. Island of Wetter (4 February 1898: Schädler).

The single specimen was preserved out of alcohol, but has kept the colours remarkably well (only the white of the throat has a certain dirty hue).

3. *Gerygone wetterensis*, n. sp.

Male (Cat. n°. 1). All the upper parts dull olive-brown; lower back, rump and upper tailcoverts changing into brownish rufescent; wings dark brown, with a narrow greenish brown margin on the outer web; wingcoverts brown like the back; a narrow feathered ring round the eye pale yellowish; a pale yellowish white loreal stripe; earcoverts brownish; fore-cheeks washed with yellowish, sides of neck, chin and throat white, the same as the under wing- and tailcoverts, the remaining under parts faintly washed with yellowish, sides of breast and flanks distinct yellowish isabelline; tailfeathers brownish black (except the two central ones), white at the tip of the inner web, the outer web tipped with smoky brown, extending a little on the inner web; the white end-spot of the outermost tailfeather runs also, but indistinctly, on the outer web; on the remaining tailfeathers the white apical spots diminish in extension and get smaller towards the innermost feathers. Bill and feet brownish black. »Irides whitish grey'' (Schädler).

Another male (Cat. n°. 2) agrees in every respect, but the sides of the breast and flanks are only very faintly washed yellowish.

Al.	caud.	culm.	tars.	
48 mm.	39 mm.	10 mm.	20 mm.	N°. 1.
50 »	40 »	9 »	—	» 2.

Hab. Island of Wetter (collected by Mr. K. Schädler: February and March 1898).

Judging from the narrow yellowish eye-ring both specimens may be perhaps not fully adult ones.

The pattern of the tailfeathers in this species is almost the same as in *G. pallida* Temm., but lacks the rufescent colour on the basal half, moreover *G. wetterensis* is above dull olive-brown, the under parts are white with a distinct yellowish isabelline wash on the sides; the bill is also considerably longer and the wings are shorter than in *G. pallida*.

4. *Gerygone kisserensis*, n. sp.

Adult male (Cat. n°. 1). General colour above olive-brown, upper tailcoverts more into rusty brown, head above more dull brown; lores and sides of head more brownish grey, under surface white, sides of breast and flanks rusty brown; tailfeathers brownish black, lighter towards the base; all the feathers (excepting the two central ones) broadly tipped with a lighter shade of smoky brown; the four outermost on the inner web with a pale whitish marginal spot not reaching to the shaft. Bill and feet black. „Irides light red” (Schädler).

Al.	caud.	culm.	rikt.	tars.	
mm.	mm.	mm.	mm.	mm.	
53	39	11	15	21	<i>kisserensis</i> (type).
50	34	11	15	20	<i>Everetti</i> (1 spec.).
50—53	38—39	9	12	17—18	<i>inornata</i> (4 spec.).

Mr. K. Schädler has sent only the above described specimen from the small island of Kisser (opposite to the extreme north-east point of Timor) and gives the following short, but interesting notice: »the best singing bird I met with in this island”.

After a careful comparison the specimen proves to belong to a new species, nearly allied to *G. inornata* Wall. and *G. Everetti* Hartert, but easily to be distinguished by the markings of the tailfeathers, which show only a pale whitish marginal spot before the end of the inner web (faintest on the outermost feather) and no broad distinct white end (tipped with smoky) and running over both webs on the two outermost as in the above mentioned species. The bill is as large as in *G. Everetti*, and the legs are even somewhat longer than in this species.

The Leyden Museum possesses 4 specimens of *G. inornata* Wall. (Proc. Z. S. London, 1863, p. 490), collected in 1829 by Dr. Salomon Müller in Timor and distinguished already as a new species s. n. „*Sylvia* (s. *Acanthiza*) *tyrannuloides* Müll.” A *Gerygone* collected by Dr. Salomon

Müller in Timor in 1829 and marked by Temminck's handwriting „*Acanthiza brachyoptera* n. spec.“, has been described lately by Mr. Hartert on specimens collected by Mr. Everett in Savu and Timor (*G. everetti* Hart. Nov. Zool. 1897, p. 268).

5. *Gerygone pallida* (Temm.).

»*Acanthiza pallida*“ Temm. n. sp. in Mus. Lugd. Bat.

Male (Cat. n°. 1). All the upper parts and the wings pale sandy brown; wings on the inner web dark brown; a narrow feathered ring round the eyes pale yellowish; lores and sides of head brownish, lighter than the head above; all the underparts whitish; under wingcoverts white; tailfeathers sandy brown (the same colour as above) with a broad blackish subterminal crossband over both webs before the broad smoky brown apical end and here with a large white spot on the inner web, except on the the two central tailfeathers, which are uniform sandy brown with an indication of a dark crossband before the end. Bill and feet dark hornish brown.

Al.	caud.	culm.	tars.
54 mm.	38 mm.	8 mm.	18 mm.

Hab. New Guinea: Lobo-Bay (on the Westcoast).

The single specimen has been collected by the late Dr. Salomon Müller already in 1828 and belongs most probably still at present to one of the many new but neglected discoveries of this indefatigable naturalist.

The specimen may be perhaps not quite an old bird (as shown by the narrow yellowish eye-ring) but the peculiar coloration of the tailfeathers is alone sufficient to distinguish it as a new species; moreover the uniform whitish under surface, with no marked darker sides and flanks, is rather peculiar.

The nearly allied *G. inornata* Wall. is easily distinguished by the dark brown plumage of the upper parts and has

a differently coloured tail: *G. ruficollis* Salvad. has the sides of head and neck, the foreneck and throat rufescent, and in *G. bimaculata* (most nearly allied to the former species) the white apical spot on the outermost tailfeathers runs over both webs.

6. *Pseudogerygone virescens* (S. Müll.).

Tyrannulus virescens S. Müll. n. sp. in Mus. Lugd. Bat.

Sylvia virescens S. Müll. Blyth, Ibis, 1870, p. 169 (descr.).

Sylvia virescens S. Müll. = *Pseudogerygone conspicillata* (Gray), Sharpe, Cat. B. Br. M. IV, 1879, p. 221. — Salvad. Orn. Pap. II (1881), p. 100.

Adult female (Cat. n^o. 1: Type of S. Müller).

All the upper parts brownish olive-green, longest upper tailcoverts rusty brown, the outer margins of the uniform dark brown tailfeathers of the same colour, the tail therefore appears rusty brown; wings dark brown, with brownish olive-green outer margins (no lighter bar or crossband on the wing); a very indistinct pale line on the lores and temporal region; chin and throat white, all the remaining under surface pale yellowish, more distinct on the lower sides, vent and under tailcoverts, bent of wing and axillaries yellowish. Bill pale hornish brown; feet hornish white.

Al.	caud.	culm.	tars.
53 mm.	37 mm.	10 mm.	16 mm.

Hab. New Guinea: Lobo-Bay (on the Westcoast), collected by Dr. Salomon Müller in 1828 (later determined „*Gerygone conspicillata* (G. R. Gray)”).

Blyth's short diagnosis is thoroughly insufficient to recognize this species, which has been placed (apparently first by Dr. Sharpe) simply as synonymous with the totally different *Gerygone conspicillata* Gray ¹⁾. In fact *Ps. virescens*

1) One specimen of this species was collected on the Westcoast of New Guinea (Lobo-Bay) already in 1828 by Dr. S. Müller and distinguished by Temminck as new s. n. „*Muscicapa decolorata*”. — Synonymous is „*Zosterops*

belongs to a quite different groupe (distinguished by the unicolorous tailfeathers) and is nearest allied to *Ps. notata* Salvad., from which it differs by the want of one (or two) light crossband on the wings; moreover *Ps. notata* has no indication of a light temporal stripe and is underneath distinct pale yellowish.

7. *Zosterops lettiensis*, n. sp.

Very similar to *Z. Grayi* Wall. (from Key and Aru) but above not so bright olive-yellow, but more greenish yellow, rump and upper tailcoverts like the back (not bright yellow as in *Z. Grayi*); yellow frontal margin not so distinct as in *Z. Grayi*, confined to a yellow loreal stripe; the yellow on chin, throat and lower tailcoverts not so dark and bright as in *Z. Grayi*; remaining under parts nearly the same as in *Z. Grayi*, but the flanks darker washed with isabelline; a faint yellowish longitudinal stripe along the centre of the abdomen. Smaller than *Z. Grayi*.

Al.	caud.	culm.	
mm.	mm.	mm.	
60	42	9	
62—64	43—45	11—12	<i>Z. Grayi</i> (3 specim.).

Based upon a single specimen (s. n. *Z. citrinella*) collected by Baron von Rosenberg (May 1866) on the Island of Letti.

Leyden Museum, 1 June 1898.

fusca Bernst. J. f. Orn. 1864, p. 406" of which we possess type-specimens from Waigiu, Salawati and New Guinea (Sorong). — Sharpe and Salvadori enumerate *Z. fusca* Bernst. as a doubtful species (Cat. Br. M. IX, p. 146. — Orn. Pap. II, p. 363).

NOTE XXIII.

ZOOLOGICAL RESULTS OF THE DUTCH SCIENTIFIC
EXPEDITION TO CENTRAL BORNEO.

THE CRUSTACEANS

BY

Dr. J. G. de MAN.

Part I. MACROURA. ¹⁾

(Plates 6, 7 and 8).

Palaemon (Eupalaemon) carcinus Fabr.

Confer: de Man, in: Max Weber, Decapoden des indischen Archipels, 1892, p. 421.

One nearly adult male collected by Dr. Nieuwenhuis at Oedjoe-tepoe.

Two young specimens from Pontianak.

The adult male is 225 mm. long, measured from the tip of the rostrum to the end of the telson. The rostrum is armed above with 14 teeth, of which the first three stand on the cephalothorax, the fourth immediately before the anterior margin; below it is armed with 13 teeth. The

1) Part II, Brachyura, will be published in Vol. XXI.

first pair of legs project with two fifth of the wrist beyond the end of the antennal scales. The second pair of legs are almost as long as the body, measuring 215 mm. and they project with the whole wrist beyond the antennal scales. The wrist (45 mm.) has exactly the same length as the palm, the fingers are slightly shorter and the mobile finger is covered with hairs.

In the specimens from Pontianak, measuring 150 resp. 130 mm. from the apex of the rostrum to the tip of the telson, the carpus of the second pair of legs is also still shorter than the whole hand, as could be expected, because the hand is shorter than the carpus only in those individuals the length of which is smaller than about 105 mm., as I have indicated in the paper quoted above.

The carapace is smooth. In both specimens the rostrum extends a little beyond the antennal scales and is armed with 14 teeth on the upper and with 13 on the lower margin; in both the first three teeth are placed on the cephalothorax. The second pair of legs have the following measurements:

Length of the body:	150 mm.	130 mm.
» » » merus:	18 »	16 »
» » » carpus:	24 ¹ / ₂ »	23 »
» » » palm:	18 »	13 ¹ / ₂ »
» » » fingers:	9 »	10 ¹ / ₂ »

The telson of the larger specimen agrees with Ortmann's description (in: Decapodenkrebse des Strassburger Museums, II, p. 697), presenting on each side two minute spinules that by far do not reach to the apex. In the other the apex of the telson is broken.

Palaemon (Eupalaemon) sintangensis, n. sp.

Fig. 1.

14 specimens, amongst which several males and two ova-bearing females, from Sintang.

Notes from the Leyden Museum, Vol. XX.

As we know, the geographical distribution of some species of this genus, namely of those that inhabit also the sea, is rather large. It appears to me, however, probable that other species which occur exclusively in fresh water, are distributed over a small area, inhabiting e. g. one single large river with its tributaries. To the latter seems to belong *Pal. sintangensis*, the specimens of which have been collected by the Expedition in the interior of Borneo at Sintang.

Pal. sintangensis is apparently a species of small size, the largest specimen, a male, being only 57 mm. long from the apex of the rostrum to the tip of the telson. It bears a considerable resemblance to *Pal. (Eupal.) Ritsemae* de M. from Atjeh, exhibiting indeed almost the same characters, but it differs at first sight by the size of the eggs. An ova-bearing female and a younger one of *Pal. Ritsemae*, original type-specimens from the collection made by capt. Storm, are lying before me: the eggs are very numerous and small, being only 0,6 mm. long and 0,5 mm. broad.

The two females of *Pal. sintangensis*, however, carry a much smaller number of eggs and these eggs are more than twice as long and more than twice as broad as those of the Atjeh species: they are 1,6 mm. long and 1,2 mm. broad.

The ensiform rostrum has nearly the same form as that of *Pal. Ritsemae* and reaches to the end of the antennal scales, in young individuals it extends sometimes even slightly beyond them. The upper margin is usually slightly convex above the eyes and the apex mostly a little turned upwards; in a very young male specimen even almost the whole rostrum is slightly upturned and tapers more than usually towards the apex (Fig. 1*d*). On the upper margin 12 or 13 teeth are observed, rarely 9 or 10; the first tooth is commonly separated from the second by an interval twice as large as between the following, which above the eyes are equidistant and mostly placed close

together (Fig. 1a); towards the apex the intervals become again larger. Usually the first three teeth are placed on the cephalothorax, the fourth immediately before its anterior margin; sometimes only two are placed on the carapace and then the third tooth stands above or just before the anterior margin. The lower margin is armed with 4 or 5 teeth.

The cephalothorax of the adult male appears slightly scabriculate anteriorly, especially towards the inferior lateral margins, when seen under a strong magnifying glass, but that of the female and younger specimens is smooth.

The telson fully agrees with that of *Pal. Ritsemae* and of most other species of the genus: it terminates into an acute point, that reaches slightly farther than the external subterminal spinules.

The external maxillipedes exceed the antennal peduncles by the larger part of their terminal joint.

The first pair of legs exceed the antennal scales by their chelae and their merus reaches the distal end of the antennal peduncle; the carpus is slightly more than twice as long as the hand, the former measuring $7\frac{1}{2}$ mm. in the adult male, the latter $3\frac{1}{4}$ mm.

The second pair of legs of the adult male are of equal size and length, and just as long as the body; their joints are cylindrical, so that this species belongs to the subgenus *Eupalaemon*. The merus measures one fifth of the length of the whole leg and extends to the tip of the antennal scales. The carpus and the hand appear at first sight equally long, but, when accurately measured, the hand of both legs proves to be very slightly longer than the carpus (confer the measurements). The slender carpus, once and a half as long as the merus, presents nearly the same breadth until the middle of its length, but then gradually grows thicker until its distal end and here its diameter measures $\frac{1}{9}$ — $\frac{1}{10}$ of its whole length. The palm, nearly as long as the merus, is cylindrical, being about as broad as thick, and justly as broad as

the distal extremity of the carpus. The fingers are four fifth or three fourth of the length of the palm and meet along their inner edges when closed. The dactylus, examined with a lens, presents two small teeth near the articulation, the first of which appears double, the second conical; the immobile finger is also armed with a small conical tooth, placed between the two opposite teeth of the dactylus. Like in the other allied species on each finger a sharp cutting-edge runs between the second tooth and the tip. These legs are covered with minute points, those on the inner margin of the joints are a little larger, appearing here as sharp thorny spinules, directed forwards; the fingers are nearly smooth. The latter are covered with rather close hairs on each side of the basal teeth and of their cutting-edge, until slightly beyond the middle of their length; for the rest the second pair of legs are glabrous.

The second pair of legs of a younger male, which is 47 mm. long, are comparatively a little shorter, measuring two thirds the length of the body: they are also less stout and thinner than the described legs of the adult male. The merus does not reach the tip of the antennal scales, so that only three fifth of the carpus project beyond it; it measures also $\frac{1}{5}$ the length of the whole leg. The carpus, again nearly once and a half as long as the merus, is almost as long as the hand, not shorter as is the case in the adult male. Its diameter at the distal end measures scarcely $\frac{1}{11}$ of its length. The fingers have exactly the same length as the palm and are not yet covered with hairs, but the teeth are already developed (Fig. 1g).

Finally, the second pair of legs of a quite young male which measures only 33 mm., are but half as long as the body. The merus projects scarcely beyond the antennal peduncle and measures again one fifth of the whole leg. The carpus is only a third longer than the preceding joint and, accurately measured, proves to be slightly longer than the hand, as in *Pal. Ritsemæ*; its diameter at the distal

extremity measures $\frac{1}{12}$ of its length. The fingers are a little longer than the palm, still glabrous and the basal teeth are scarcely visible.

The larger ova-bearing female has about the same length as the adult male and is still provided with the right leg of the second pair. This leg measures about two thirds the whole length and is thus shorter and less stout than the legs of the adult male. The merus reaches the distal end of the antennular peduncle, as far as in the male of 47 mm. The carpus, once and a half as long as the merus, is still slightly more slender than in the male, its diameter at the distal extremity measuring only $\frac{1}{13}$ of its length, though the form is quite the same. The hand is distinctly shorter than the carpus, measuring four fifth of the latter, and the fingers are somewhat shorter than the palm, in the same proportion as in the adult male. Examined with a lens, the fingers present the same minute basal teeth (Fig. 1*i*) and the same cutting-edge as in the male, but they are not covered with hairs. The minute points and spinules on the surface of the joints are scarcely visible and the leg appears smooth for the naked eye.

The other ova-bearing female, that has also lost one of the legs of the second pair, agrees fully with the other. In a still younger female, 38 mm. long, the carpus appears also distinctly longer than the hand.

We may conclude from the preceding description 1° that the carpus of very young male individuals is a little longer than the hand, that both joints have the same length in middle-sized male specimens, but that the chela of the adult male is slightly longer than the carpus, 2° that the carpus of the female is constantly slightly longer than the hand, and finally that in adult specimens the carpus is once and a half as long as the merus, in younger individuals once and a third.

The ambulatory legs are as thin and slender as those of *Pal. Ritsemae*, but the terminal joints are a little longer, measuring nearly one third of the propodi, those of *Pal. Ritsemae* only one fourth. In the adult male the third pair of legs exceed the antennal scales by the length of their terminal joints, those of the female reach only to their tip. The fourth and fifth pairs of legs of the male extend as far as the third, but those of the fifth pair in the female project with their dactyli beyond the antennal scales. As has already been observed, the ambulatory legs are about as slender as those of *Pal. Ritsemae*. So e. g. the breadth of the propodi of the 5th pair measures in the adult male only $\frac{1}{22}$ — $\frac{1}{24}$ of their length, in the ova-bearing females $\frac{1}{26}$ — $\frac{1}{27}$, in the male of 47 mm. also $\frac{1}{27}$ and in the young female, which is 38 mm. long, even only $\frac{1}{23}$. In the adult male and in the adult female the dactyli of the third pair of legs are a little longer, those of the fifth pair but little shorter than one third of the length of the propodi. In *Pal. Ritsemae* these joints are shorter in proportion to the length of the propodi.

Closely allied to *Pal. sintangensis* is *Pal. (Eupal.) Idae* Heller, a species that has also been collected »auf Borneo» (Heller, Sitzungsber. Akad. Wiss. Wien, Vol. 45, 1862, p. 417). *Pal. Idae*, however, is an inhabitant of the Java Sea (vide de Man, in: Zool. Jahrb. 1897, p. 767) and may perhaps have been collected by Ida Pfeiffer in one of the sea-ports of Borneo; as far as I know this species is not yet known to live also in the rivers of that great island. The eggs of *Pal. Idae* are therefore probably numerous and small. This species attains a much larger size, the carpus of the second pair of legs has a different form and the difference in length between carpus and hand is much greater than in our new species.

The eggs of *Pal. (Eupal.) sundaicus* Heller are also numerous and small, the ambulatory legs are less slender and the second pair of legs present different characters.

I give the measurements (in millimetres) of six specimens (3 ♂♂, 3 ♀♀) and also those of the two type-specimens of *Pal. (Eupal.) Ritsemae* from Atjeh:

	N° 1	N° 2	N° 3	N° 4	N° 5	N° 6	N° 7	N° 8
	(♂)	(♂)	(♂)	(♀)	(♀)	(♀)	(♀)	(♀)
Length of the body	57	47	33	54	45	38	49	52
Formula of the rostrum	$\frac{3}{5}$	$\frac{3}{4}$	$\frac{3}{5}$	$\frac{3}{4}$	rostrum abnor- mal.	$\frac{2}{4}$	$\frac{3}{4}$	$\frac{3}{4}$
Length of the second leg	58	30	16,2	34,5	31,5	23	29	35
" " merus	10,75	6	3,4	6,75	6	4,75	5	6,75
" " carpus	16,5	8,5	4,5	10,7	9	6,6	8,5	10,2
Diameter of the carpus at its distal end.	1,78	0,74	0,38	0,84	0,72	0,54	0,84	1
Length of the palm	10	4,2	2	4,8	4,5	3	4,6	5,6
" " fingers	8	4,2	2,3	3,8	3,6	2,7	3,6	4,1
" " hand	18	8,4	4,3	8,6	8,1	5,7	8,2	9,7
Length of the propodi	7	4,8		5,3	5	3,7	5,6	6,7
Breadth " " "	0,4	0,26		0,28	0,26	0,19	0,28	0,35
Length " " dactyli	2,6	1,92		2,1	2	1,6	1,7	2
" " propodi	8,4	6,48		7	6,9	5,3	wanting	9
Breadth " " "	0,34	0,24		0,27	0,253	0,19	wanting	0,32
Length " " dactyli	2,5	wanting		2,08	2,06	1,66	wanting	2,2

N^{os}. 1—6 *Pal. sintangensis*: N^{os}. 4 and 5 ova-bearing; N^{os}. 7 and 8 *Pal. Ritsemae* de M. from Atjeh: N^o. 7 without eggs, N^o. 8 ova-bearing.

Palaemon (Parapalaemon) Trompii, n. sp.

Fig. 2.

An adult male and an egg-bearing female collected by Max Moret in the Ketoengau river, August 1894; 4 specimens from the Mandai river at Nanga Raoen, viz. one male and three egg-bearing females; 2 very young specimens from Sintang.

Like the preceding, this new species that I like to dedicate to Mr. Tromp, the late Resident of Dutch West-Borneo, is also characterized by the female carrying only

a comparatively small number of large eggs, which are 2—2,5 mm. long and 1,4—1,7 mm. broad. *Palaemon Trompii* appears to be also a rather small species, the largest specimen (♂) being 7 cm. long, the ova-bearing females scarcely 5 cm. The tolerably slender rostrum extends usually to the end of the antennal scales, occasionally it exceeds them very slightly; the rostrum runs horizontally forward, only in one specimen it is very slightly upturned distally and the upper margin appears almost straight above the eyes, very rarely a little convex. The upper margin bears 11, rarely 10 or 12 teeth, which stand until the apex; the first tooth is placed immediately before the middle of the cephalothorax and usually the four proximal teeth are placed on the carapace, the fifth before the orbital margin, occasionally already the fourth stands above the latter. The teeth on the carapace are nearly equidistant, the interspace between the penultimate tooth and the antepenultimate is mostly a little wider than the interval between the penultimate and the last. In the male specimen from the Mandai river the rostrum very slightly exceeds the end of the antennal scales and the penultimate tooth stands as far distant from the last as from the antepenultimate. The lower margin is armed with 4—6 teeth.

I observed under the microscope on the cephalothorax of the adult male, anteriorly near the inferior margin, many minute thorny points, but the greatest part of the cephalothorax appeared smooth. The hepatic spine is scarcely half as long as the antennal one and placed just behind and somewhat below the latter. The apex of the telson fully agrees with that of the preceding species.

The external maxillipedes exceed the antennal peduncle almost by the whole length of their terminal joint, in the male as well as in the female.

The first pair of legs of the adult male exceed the end of the antennal scales by a third of their carpus, in the younger

male and in the female specimens only by the hand; in the adult male the carpus is very slightly more than twice as long as the hand, in the other specimens the chela is justly half as long as the carpus. The fingers are a little longer than the palm.

The second pair of legs are of moderate size and subequal, the larger leg being the right or the left. In the adult male from the Ketoengau river the larger left leg, that is little more than half as long as the body, exceeds the end of the antennal scales by the whole length of the hand. The almost cylindrical merus measures $\frac{1}{5}$ of the whole leg and extends to the end of the antennal peduncle. At first sight the carpus appears as long as the merus, but accurately measured it proves to be very slightly longer than the latter.

The carpus widens a little towards its distal end, so that here its diameter measures $\frac{1}{5}$ of its whole length; this joint appears therefore moderately slender. The chela is almost twice as long as the merus and the fingers nearly as long as the palm; the latter is about 4 times as long as broad and very slightly wider than the distal end of the carpus, the palm is also a little broader than thick, as is proved by the measurements. The fingers meet together along their whole length and each of them is armed with three minute basal teeth (Fig. 2*g*); the distance of the foremost tooth of the immobile finger from the articulation measures about $\frac{1}{3}$ of the whole length of the finger and the third or foremost tooth of the dactylus is a little farther distant from the articulation. The second tooth is slightly larger, but the first or proximal one is the smallest of all. Each finger is furnished with a sharp cutting-edge between the foremost tooth and the apex. The other leg is very slightly shorter, but agrees for the rest with the left; the dactylus presents four minute obtuse teeth, the two first of which are a little smaller than the two distal ones and the immobile finger has two teeth. The

second legs are smooth, the small thorny points, by which these legs in other species are roughened, wanting throughout; fine, moderately long hairs, however, are scattered on all their joints and these hairs are characteristic of this species.

In the ova-bearing female from the Ketoengau river the right leg is the larger; it measures $\frac{2}{3}$ the length of the body and exceeds the end of the antennal scales by a third of the carpus. As is proved by the measurements, this leg agrees with that of the male as regards the relative length of the joints, but the fingers are very slightly shorter than the palm. Each finger (Fig. 2i) presents five obtuse teeth, but the fifth or foremost is placed on each a little farther distant from the articulation; on the dactylus this tooth is but slightly more distant from the apex than from the articulation and on the immobile finger it is placed likewise a little farther forwards; on each finger a sharp cutting-edge unites again the foremost tooth and the apex. The carpus widens slightly less towards its distal end and the palm is somewhat broader in proportion to its length than in the adult male: the palm appears therefore distinctly wider than the carpus, the difference being greater. The left leg is a little shorter than the right, the carpus slightly more slender, the width at the distal extremity measuring only $\frac{1}{6}$ of its length and the palm is a little narrower, the fingers are armed each with 4 minute teeth.

In the young male from Nanga Raoen the left leg is also a little shorter than the right and its joints appear slightly more slender. Both legs exceed the end of the antennal scales by a fourth of the carpus. As in the adult male, the right leg is but little more than half as long as the body. The merus measures $\frac{1}{3}$ of the whole leg, the carpus is again slightly longer and the diameter at its distal end measures $\frac{1}{6}$ of its length. The hand is once and a half as long as the merus and appears therefore comparatively shorter than in the

adult male. The palm, very slightly shorter than the fingers, is distinctly wider than the distal extremity of the carpus and appears a little less thick than broad, about in the same proportion as in the adult male. The immobile finger presents 5 obtuse teeth, the dactylus 4. The chela of the other leg is narrower, but the fingers have the same toothing.

Amongst the three ova-bearing females from Nanga Raoen the two legs of the second pair are only present in one. The right leg is the larger, measures $\frac{2}{3}$ the length of the body and exceeds the end of the antennal scales by a third of the carpus. The latter, again very slightly longer than the merus, has the same form as in the adult male from the Ketoengau river, the diameter at the distal end being $\frac{1}{5}$ the length. The chela is likewise almost twice as long as the merus, and the fingers are but very slightly shorter than the palm, that is distinctly wider than the distal end of the carpus and a little wider than thick; the immobile finger is armed again with 5, the dactylus with 4 obtuse teeth, the foremost of which is but little farther distant from the apex than from the articulation, as in the other specimens. The left leg is a little shorter, the carpus somewhat more slender and the palm scarcely wider than the end of the carpus; the toothing is the same.

The second female bears only the smaller leg and in the third both are wanting.

One leg is only present in the young male from Sintang and this leg agrees with the described, as regards its characters and the length and dimensions of its joints. The chela is comparatively shorter than in the adult specimens, being once and a half as long as the merus; the fingers, each of which is still only armed with three teeth, are scarcely longer than the palm, that is distinctly wider than the end of the carpus and somewhat less thick than wide. On the dactylus the distance of the third or foremost tooth from the articulation measures one third the length

of the finger, that of the first one fifth and the second tooth, that is a little larger than the two others, is placed just in the middle; the foremost tooth of the index is situated between the second and the third tooth of the other finger.

We may conclude from the preceding descriptions that the legs of the second pair are a little unequal, that the merus is constantly very slightly shorter than the carpus, the diameter of which at its distal extremity measures $\frac{1}{5}$ its length in the larger leg of adult specimens; that in the latter the chela is almost twice as long as the merus, in younger individuals only once and a half times and that the palm of the larger leg is always distinctly wider than the end of the carpus and a little wider than thick. The foregoing description proves furthermore that the fingers of the larger leg of the adult male are nearly as long as the palm, those of younger males very slightly longer, that the fingers of the females, however, are a little shorter than the palm and finally that they are armed at the base with 3, 4 or 5 minute obtuse teeth and with a sharp cutting-edge between the foremost tooth and the apex. The smaller leg is a little shorter, the carpus somewhat more slender and the palm scarcely wider than the end of the carpus, but for the rest this leg agrees with the other. The second legs are smooth, not roughened by minute thorny points, and moderately long hairs are scattered on their joints.

The ambulatory legs are slender and thin; they are smooth, though somewhat hairy. In the adult male the 3rd pair of legs exceed the antennal scales by their dactyli, and the fourth and the fifth reach nearly as far; in the younger males and in the females the third pair of legs

extend only to the end of the scales. The breadth of the propodi of the 3rd pair of legs of the adult male measures $\frac{1}{11}$, of their length, of the females $\frac{1}{13}$ — $\frac{1}{16}$; the dactyli are very slightly longer than $\frac{1}{4}$ the length of the propodi, in the very young male from Sintang they measure almost $\frac{1}{3}$. The breadth of the propodi of the 5th pair (Fig. 2m) is $\frac{1}{23}$ — $\frac{1}{24}$ their length, and the dactyli measure about $\frac{1}{5}$ the length of the propodi.

This species, that may belong to Ortmann's subgenus *Parapalaemon*, the palm of the 2nd pair of legs being distinctly wider than the end of the carpus and the fingers being armed with several minute teeth, seems to differ from all other species. It differs indeed from the allied species 1°. by the smaller number of large eggs, carried by the female, 2°. by the characters of the rostrum, four teeth standing on the cephalothorax, 3°. by the second pair of legs being smooth, and provided with scattered hairs and 4°. by the three, four or five minute obtuse teeth with which the fingers are armed.

The rostrum of *Pal. (Parap.) Horstii* de M. from Celebes bears some resemblance to that of this new species, but the second pair of legs are roughened by thorny points, the fingers are shorter and the ambulatory legs are more robust.

The eggs of *Pal. (Macrobr.) bariensis* de M. from Flores are very numerous and small, the carpus of the second pair of legs is slightly shorter than the merus and appears less slender, the hand finally is considerably wider. *Pal. (Macrobr.) lampropus* de M. from Celebes is another allied species, but the rostrum is armed above with 16 or 17 teeth, which are placed closer together. The chela of the larger leg has a different form, the palm being broader and its inner margin making almost a straight line with the inner margin of the immobile finger. The fingers of the larger leg are shorter and armed with more

teeth, this leg is also not quite smooth but covered with minute points. The ambulatory legs finally are less slender. Young specimens may be distinguished at first sight by the characters of the rostrum.

Pal. dayanus Henderson from India bears also some resemblance, but the upper margin of the rostrum presents only 7—9 teeth, the second or third of which stands above the orbital margin and the fingers of the second legs are finely ridged longitudinally on all sides. The ova of this species have also a large size.

In *Pal. asperulus* v. Mart. from Shanghai the carpus of the second pair of legs is shorter than the palm and these legs are scabrous.

Pal. (Eupal.) elegans de M. from Buitenzorg, the ova of which are likewise of large size, 1,4—1,5 mm. long and 1—1,1 mm. broad, is certainly different. An adult male and an ova-bearing female are before me. The rostrum has another form and presents different characters. The second pair of legs of the adult male are larger, stouter and distinctly scabrous; the dactylus bears characteristic tubercles, that are not observed in *Pal. Trompii*. The ambulatory legs finally are more robust.

Pal. (Eupal.) dispar v. Mart. has a different physiognomy. The carpus of the second pair of legs is more elongate and more slender. The palm is cylindrical and not broader than the carpus, the fingers are armed with more numerous teeth and these legs are scabrous. The eggs finally are small.

Pal. (Eupal.) sundaicus Heller is, like the preceding, an *Eupalaemon*, the carpus of the second pair of legs is longer, the palm scarcely broader than the carpus and almost cylindrical, the tothing of the fingers is different, the eggs are very numerous and small, having a diameter of 0,50—0,65 mm.

The measurements of *Pal. (Parap.) Trompii* in mm. are the following:

	N° 1 (♂)		N° 2 (♀)		N° 3 (♂)		N° 4 (♀)		N° 5 (♀)	N° 6 (♀)	N° 7 (♂)
Length of the body	68		48		50		47		47	49	30
Formula of the rostrum	$\frac{11}{6}$		$\frac{11}{5}$		$\frac{10}{7}$		$\frac{11}{7}$		$\frac{3}{4}$	$\frac{4}{5}$	$\frac{4}{5}$
Length of the second leg	right 38	left 40	right 33	left 29,5	right 28	left 26,5	right 30	left 26	27,5		17
" " " merus	7,5	7,5	6,25	6	5,6	5,6	5,75	5,3	5,5		3,5
" " " carpus	8	8	7	7	6,4	6,4	6,5	6	6,3		4
Diameter of the carpus at its distal end	1,65	1,66	1,34	1,1	1,04	0,96	1,35	1,04	1,12		0,66
Length of the palm	6,6	7	6,5	5,2	4,4	4,2	5,6	4	4,7		2,5
" " " fingers	6,2	6,75	5,7	4,6	4,5	3,88	4,8	4	4,1		2,7
" " " chela	12,8	13,75	12,2	9,8	8,9	8,1	10,4	8	8,8		5,2
Breadth of the palm	1,8	1,9	1,85	1,35	1,26	1,04	1,7	1,1	1,27		0,8
Thickness " " "	1,5	1,6	1,5	1,2	1	0,88	1,4	0,92	1,1		0,6
Length of the propodi	7,8		5,3		5,4		4,8		5,2	4,5	3
Breadth " " "	0,5		0,32		0,27		0,34		0,34	0,34	0,22
Length " " dactyli	2,1		1,44		1,34		1,3		1,4	1,34	0,9
" " " propodi	9,5		6,8		6,7		6,3		6,7	6	
Breadth " " "	0,4		0,28		0,29		0,3		0,3	0,3	
Length " " dactyli	2		1,4		1,34		1,34		1,34	1,34	

N^{os.} 1 and 2 Ketoengau river; N^{os.} 3—6 Mandai river at Nanga Raoen; N^{o.} 7 Sintang.

Palaemon (Macrobrachium) callirrhoë, n. sp.

Fig. 3.

Three males from the Mandai river at Nanga Raoen and one young male from the Ketoengau river.

Though no ova-bearing females of this apparently new species have been collected, I suppose nevertheless that the male specimens are adult or nearly fully developed and that *Pal. (Macrobr.) callirrhoë* belongs, like the two preceding, to the species of small size. The largest specimen measures only 43 mm. from the apex of the rostrum to the extremity of the telson.

The rostrum of all four specimens extends to the extremity of the antennal scales and is slightly

directed downward, so that the apex is situated a little below the surface of the carapace; an imaginary line that unites the points of the teeth of the upper margin, appears very slightly convex. The upper margin is armed with 9 or 10 teeth; in the specimens from Nanga Raoen the three first teeth are placed on the cephalothorax, the fourth above the orbital margin; in the young individual from the Ketoengau river the four proximal teeth stand on the carapace, the fifth immediately before the orbital margin. The first tooth stands justly before the middle of the cephalothorax and is a little smaller than the following; the teeth are equidistant and they occupy the whole upper margin until the apex. The rostrum is vertically rather low, though not in such a degree as in *Pal. placidulus* de M. In the two adult specimens from Nanga Raoen the lower margin of the rostrum presents two well-developed teeth justly in the middle, in the individual from the Ketoengau river three; the rostrum of the youngest specimen from Nanga Raoen is broken off.

Examined with a lens, the carapace appears very slightly pubescent, minute microscopical hairs being scattered on it; for the rest it seems to be smooth, not scabrous. The hepatic spine is situated behind and distinctly below the antennal one. The shape of the telson is different from that of the two preceding species, as may be seen by a comparison of the figures. The telson is less elongate, as it is comparatively shorter and broader; it appears broader towards the triangular apex, which terminates into a small apical spine. This spine reaches a little farther backwards than the external subterminal spinules.

The short flagellum of the internal antennae is distinctly serrate.

The external maxillipedes exceed the antennal peduncle with two thirds of their terminal joint, reaching to the

distal extremity of the penultimate joint of the antennular peduncle.

The first pair of legs exceed the extremity of the antennal scales with a third of the carpus, in the young specimens with a fourth; the carpus of the two adult specimens is exactly twice as long as the hand, the fingers of which are about as long as the palm, the chela of the younger individuals is slightly more than half as long as the carpus.

The second pair of legs are a little unequal; with the exception of the young male from Nanga Raoen, the right leg is the larger. The right leg of the male from Nanga Raoen, which measures 43 mm., is but little shorter than the body. The cylindrical merus reaches almost to the end of the antennal scales, the carpus and the hand projecting beyond it. The obconical carpus is very slightly shorter than the merus, its diameter at the distal end measures $\frac{2}{5}$ of its length, so that the carpus is of a compact shape. The hand is about three times as long as the carpus and the fingers are very slightly shorter than the palm; the latter is about three times as long as broad and appears distinctly broader than the carpus, because the palm is in the middle once and a half as broad as the distal extremity of the preceding joint. The palm is a little wider than thick, the proportion being as 7:5; it is, however, not compressed, because both the upper and the under surface are transversely slightly convex and because the inner and outer margins are likewise rounded. The fingers are slender, the index makes a concave line with the inner surface of the palm; on each finger one observes above and below a longitudinal elevated ridge that runs from the articulation to the tip. The dactylus (Fig. 3*f*) is armed with a strong and sharp conical tooth exactly in the middle of its length, a second similar though slightly smaller tooth

is observed between the former and the articulation, somewhat closer to the latter than to the tooth on the middle of the finger. The immobile finger presents two similar teeth; the distal one has the same size and form as the middle tooth of the dactylus and is situated immediately behind it, the proximal just behind the proximal tooth of the other finger. A sharp cutting-edge unites on each finger the distal tooth with the pointed curved tip. The upper surface of the palm is closely covered with small thorny spinules that occur also on the outer surface; on the lower surface these spinules are somewhat larger and stand not so close together and on the inner margin they form two longitudinal, parallel rows of larger spines, between which the surface is smooth. The fingers are somewhat hairy. The carpus is covered with similar spinules, rather closely set, except on the inner surface, where larger spines form two longitudinal rows and these spines have the same size as those on the inner surface of the palm. Similar spinules are everywhere placed on the merus, and they are larger on the lower surface than on the upper.

The left leg is 6 mm. shorter than the right and exceeds the end of the antennal scales by the hand and two thirds of the carpus. The latter is likewise a little shorter than the merus and both joints have the same shape as in the other leg. The chela is $2\frac{1}{2}$ times as long as the carpus and the fingers have the same length as the palm; the form of the palm is the same as in the other leg but it appears scarcely broader than the distal end of the carpus. The proportion of the width and thickness of the palm is the same as in the other leg. The fingers present also the same tothing, but the index is armed with a third tooth just behind and contiguous to the proximal one; they are likewise slightly hairy. As regards the spinulation of the surface of the joints, both legs agree with one another.

The second pair of legs of the other male, long 41,5 mm.,

are somewhat shorter in proportion to the length of the body; the carpus is a little more slender and the spines on the inner surface of this joint and of the hand are less developed, but for the rest these legs agree with those described above.

The young male from the Ketoengau river likewise agrees with the preceding, in both legs the merus appears quite as long as the carpus; the carpus of the shorter left leg is a little more slender, being slightly more than three times as long as broad at the distal extremity and the fingers are a little longer than the palm.

In the youngest male from Nanga Raoen the left leg (Fig. 3*g*) is longer than the right and reaches with the hand and a third of the carpus beyond the end of the antennal scales; the right leg, 1,5 mm. shorter, exceeds the scales with the hand. In both legs the carpus is slightly shorter than the merus and appears a little more slender than in the adult specimens, its diameter at the distal extremity measuring scarcely one third of its length. In both legs the dactylus is armed with two, the immobile finger with three minute teeth. The distance of the distal tooth of the dactylus from the articulation is, in both legs, slightly larger than one third of the length of the finger, that of the proximal tooth exactly one fourth of it. The distance of the foremost or third tooth of the index from the articulation measures, in both legs, one third of the length of the finger, that of the second tooth from it one fourth; in the left hand the first or proximal tooth, somewhat smaller than the two others, is contiguous to the second, in the right hand its distance from the articulation measures one sixth of the length of the finger. Minute thorny points are already developed on the inner surface of carpus and palm; they present themselves as small spinules on the inner margin, but the outer surface of these joints is still nearly smooth. The third pair of legs extend to the end of the antennal scales, the following reach slightly less forward.

The ambulatory legs are moderately slender. The breadth of the propodi of the third pair measures $\frac{1}{10}$ — $\frac{1}{11}$ of their length, the dactyli of the adult individuals measure $\frac{1}{3}$ of the propodi or slightly less, in the young specimens they are slightly longer. The propodi of the fifth pair are as usually a little more slender, their breadth measuring $\frac{1}{14}$ — $\frac{1}{15}$ of their length; the dactyli measure in the adult $\frac{1}{4}$ of the propodi, in the younger specimens they are a little longer. I may add that the meri of the third pair of the largest male are 4,6 mm. long and seven times as long as broad.

The ambulatory legs are a little hairy, short fine hairs being distributed over their joints.

Palaemon (*Parapalaemon*) *Horstii* de M. from Celebes is an allied species, but has a larger size. The chela of the second pair of legs, however, is not broader than the carpus, the fingers are considerably shorter than the palm and less slender, the ambulatory legs finally are still more robust, the meri of the 3rd pair e. g. are only five times as long as broad.

Pal. (*Macrobr.*) *bariensis* de M. from Flores is likewise a species of small size. The rostrum is shorter and armed on the upper margin with 12—16 teeth. The hand of the second legs is broader in proportion to the distal extremity of the carpus and the palm is more compressed, namely in the proportion of 7:4 $\frac{1}{2}$ and its inner margin is rather sharp; the palm is covered with minute rounded tubercles that stand not close together and the fingers of the larger chela are considerably shorter than the palm.

Pal. (*Macrobr.*) *pilimanus* de M. from Sumatra is also a quite different species.

Pal. *callirrhoë* is represented in the State of Santa Catharina, Brazil, by *Pal. potiuna* F. Müll., to which it is most closely allied. (Confer: Ortmann, Os camarões da agua doce da America do sul, in: Revista do Museu Paulista N^o. II, 1897, p. 209, Pl. I, fig. 9).

Measurements in mm.:

	N° 1 (♂)		N° 2 (♂)		N° 3 (♂)		N° 4 (♂)	
Length of the body	43		41,5		30 1)		35	
Formula of the rostrum	$\frac{3}{2}$		$\frac{3}{\frac{1}{2}}$		Rostrum broken.		$\frac{4}{\frac{1}{3}}$	
Length of the 2nd pair of legs	right 38	left 32	right 29	left 24	right 19,5	left 21	right 24,5	left 19,5
" " " merus	6,5	5,5	5	4,5	3,6	3,9	4,25	3,5
" " " carpus	6	5,25	5	4,5	3,4	3,7	4,25	3,5
Diameter of the carpus at its distal extremity	2,4	2	1,8	1,5	1,06	1,14	1,5	1
Length of the palm	9	6,5	6,25	4,5	3,6	4,2	5,25	3
Breadth of the palm in the middle	3,5	2,25	2,5	1,65	1,1	1,36	2	1,25
Thickness of the palm	2,6	1,6	2	1,35			1,65	0,9
Length of the fingers	8,5	6,5	6,25	4,75	3,8	4,2	5	3,75
" " " hand	17,5	13	12,5	9,25	7,4	8,4	10,25	6,75
" " " propodi	4,1		4		3,3		3,26	
Breadth " " "	0,4		0,37		0,31		0,3	
Length " " dactyli	1,24		1,32		1,24		1,16	
" " " propodi	4,9				4,1		3,9	
Breadth " " "	0,34				0,28		0,27	
Length " " dactyli	1,24				1,2		1,1	

N^{os}. 1—3 Nanga Raoen, N^o. 4 Ketoengau river.

Palaemon (Macrobrachium) pilimanus de M.

Confer: de Man, in: Max Weber, Decapoden des indischen Archipels, 1892, p. 471.

One adult male from the Upper-Sibau river.

One male and one ova-bearing female, both of middle size, from the Mandai river at Nanga Raoen.

3 young individuals, one of which with eggs, from the Ketoengau river.

3 young males, one adult and one younger female, both with eggs, from Sintang.

7 young specimens from the Kapoeas river at Sanggau.

1) The rostrum being broken, the distance between the anterior margin of the carapace and the end of the telson is given here.

As has been indicated in my paper quoted above, this species, that hitherto was only known to inhabit the lakes and rivers of Sumatra and Western Java, exhibits considerable variation in the characters of the rostrum and of the second pair of legs. The measurements given below prove that also the form of the ambulatory legs is variable, that their joints appear rather robust in some individuals, as e. g. in the adult male from the Upper-Sibau, in others tolerably slender, as in the adult female from Sintang. The same variation is exhibited by specimens from Sumatra, which are before me, as may be seen by comparing the specimens from the lake of Singkarak with those of the lake of Manindjau.

Palaemon pilimanus belongs to those species the fertilized eggs of which are large. The eggs of the two females from Sintang, one of which is adult, the other of middle size, are equally large, viz. 1,8 mm. long and 1,1—1,2 mm. broad; those carried by the small female from the Ketoengau river that is only 30 mm. long, have the same size. The eggs of Sumatra-specimens are also 2 mm. long (de Man, l. c. p. 472).

The largest specimen, the male collected in the Upper-Sibau river, is 60 mm. long from the tip of the rostrum to the end of the telson. The formula of the rostrum, that reaches to the end of the antennular peduncle, is $1\frac{4}{2}$, the fifth tooth is placed above the orbital margin and the rostrum is directed slightly downwards. The rostrum of the adult female from Sintang extends straightly forwards, as far as in the preceding specimen, and its formula is $1\frac{6}{3}$; the teeth above the eyes stand closer together than the proximal and distal ones. For the other female the formula is $1\frac{4}{2}$ and for the three males $1\frac{4}{2}$, $1\frac{4}{2}$ and $1\frac{5}{1}$; for the male from Nanga Raoen it is $1\frac{5}{4}$ and for the female $1\frac{4}{3}$. Like the specimens from the Ketoengau river, those that were collected at Sanggau are all young, of small size and 25—30 mm. long, though some already carry eggs.

Measurements in mm.:

	N° 1 (♂)		N° 2 (♀)		N° 3 (♀)	N° 4 (♂)	N° 5 (♂)	N° 6 (♂)		N° 7 (♂)	N° 8 (♂)	N° 9 (♂)	N° 10 (♀)	N° 11 (♀)
	right	left	right	left				right	left					
Length of the second leg	58	45	45	31				21	28					
" " merus	12	9,5	11,5	7,5				4,75	7					
" " carpus	6,5	5,25	5	4,25				3	3,5					
Breadth " " "	4,25	2,8	3	1,8				1,3	2					
Length " " palm	13	9,5	10	5,75				3,5	6,5					
Breadth " " " in the middle	6,5	3,5	4,6	2,4				1,66	2,8					
Thickness of the palm in the middle	4,5	2,5	4	1,8				1,25	2,25					
Length of the fingers	15	10,5	9	5,5				4,5	6					
" " hand	28	20	19	11,25				8	12,5					
" " merus	7,4		7		5,6	4,4	4	5		4,9	4,8	4,6	4,3	4,5
Breadth " " "	1,16		0,82		0,67	0,76	0,63	0,71		0,86	0,82	0,68	0,53	0,62
Proportion between the length and the breadth of the merus	6½		8½		8½	6	6½	7		5½	6	6½	8	7¼
Length of the propodus	5,8		6		4,36	3,7	3,3	4		4	3,8	4	3,6	3,8
Breadth " " "	0,64		0,47		0,38	0,46	0,38	0,38		0,56	0,52	0,42	0,33	0,37
Proportion between the length and the breadth of the propodus	9		13		11½	8	8½	10½		7	7½	9½	11	10
Length of the dactylus	2,1		2,1		1,7	1,54	1,4	1,54		1,54	1,4	1,5	1,4	1,4

of the legs of the third pair

N^o. 1 Upper-Sibau river; N^{os}. 2—5 Sintang; N^o. 6 Nanga Raoen; N^{os}. 7—11 Sumatra: N^{os}. 7 and 8 Lake of Manindjau, N^{os}. 9—11 Lake of Singkarah.

Ierseke, June 1898.

EXPLANATION OF PLATES 6—8.

Fig. 1*a—d*. *Palaemon (Eupalaemon) sintangensis*, n. sp.: anterior portion of carapace of four examples, $\times 3$, viz. *a* of the adult male, 57 mm. long; *b* of the ova-bearing female, long 54 mm.; *c* of the other ova-bearing female with monstrous rostrum; *d* of the young male, long 40 mm. Fig. 1*e* second leg of the adult male, long 57 mm., $\times 3$. Fig. 1*f* second leg of the male specimen, long 47 mm., $\times 3$. Fig. 1*g* enlarged view of the tothing of both fingers of this male, $\times 25$. Fig. 1*h* second leg of the ova-bearing female, long 54 mm., $\times 3$. Fig. 1*i* the tothing of both fingers of this leg, $\times 25$. Fig. 1*j* fifth leg of the adult male, long 57 mm., $\times 3$. Fig. 1*k* terminal joint of this leg, $\times 10$.

Fig. 2*a—c*. *Palaemon (Parapalaemon) Trompii*, n. sp.: anterior portion of carapace of three examples, $\times 3$, viz. *a* of the adult male from the Ketoengau river; *b* of the male and *c* of the female from the Mandai river. Fig. 2*d* telson of the adult male from the Ketoengau river, $\times 3$. Fig. 2*e* apex of this telson, $\times 25$, the hairs between the inner subterminal spinules have not been figured. Fig. 2*f* the larger or left leg of the second pair of the adult male from the Ketoengau river, $\times 3$. Fig. 2*g* tothing of both fingers of this leg, $\times 25$. Fig. 2*h* right leg of the female from the Ketoengau river, $\times 3$. Fig. 2*i* tothing of both fingers of this leg, $\times 25$. Fig. 2*j* right and Fig. 2*k* left leg of the second pair of the female from the Mandai river, $\times 3$. Fig. 2*l* hand of the right leg of this female, $\times 6$. Fig. 2*m* fifth leg on the left side of the adult male from the Ketoengau river, $\times 3$.

Fig. 3*a—b*. *Palaemon (Macrobrachium) callirrhoë*, n. sp.: *a* anterior portion of the adult male from the Mandai river, *b* that of the young male from the Ketoengau river, $\times 3$. Fig. 3*c* telson of the adult male from the Mandai river, $\times 6$. Fig. 3*d* right and Fig. 3*e* left leg of the adult male from the Mandai river, $\times 3$. Fig. 3*f* tothing of both fingers of the larger right leg, $\times 6$. Fig. 3*g* left leg of the second pair of the young male, long 30 mm., from the Mandai river, $\times 6$. Fig. 3*h* tothing of the hand of this leg, $\times 12$. Fig. 3*i* left leg of the 5th pair of the adult male from the Mandai river, $\times 6$.

NOTE XXIV.

ON THE PUPA OF ALLOTOPUS ROSENBERGII (VOLL.)

(COLEOPTERA : LUCANIDAE)

BY

C. RITSEMA Cz.

(Plate 1, figs. 3 and 4).

Some weeks ago I received from Mr. J. D. Pasteur at Batavia the pupa of the male (forma maxima) of the above quoted interesting stag-beetle, which I thought worthy to be figured in the »Notes».

I received the specimen with the following annotation :

»The pupa of *Allotopus Rosenbergii* (Voll.) I send herewith to you was found by me at Toegoe (West Java) in the mouldered trunk of a long since unrooted forest-tree, which in Western Java is called »Kajoe Pasang.» According to Mr. Wigman, Horticulturist of the Botanical Gardens at Buitenzorg, Kajoe Pasang is the collective name for the different species of Javanese oaks (*Quercus*).»

Leyden Museum, June 1898.

NOTE XXV.

ÜBER SCOPS MAGICUS (S. MÜLL.) UND DIE
VERWANDTEN ARTEN

VON

Dr. O. FINSCH.

Tafel 9 und 10.

Die nachfolgenden Bemerkungen sind das Ergebniss einer Durchsicht und Vergleichung des reichen Materials unseres Museum, das seit der letzten Catalogisirung durch Professor Schlegel (»Revue de la collection des oiseaux de proie etc. Aves Noctuae. Juillet 1873, pp. 11—13) noch manchen erwünschten Zuwachs erhielt und (mit den Doubletten) 94 Exemplare ¹⁾, z. Th. in sehr instructiven Serien enthält. Jedes einzelne Stück dieser beträchtlichen Reihe ist genau auf Färbung und Zeichnung, sowie Befiederung der Laufe untersucht und nach den Localitäten untereinander verglichen worden, ausserdem habe ich mir noch die Mühe gegeben jedes Exemplar genau zu messen.

Was zunächst die Färbung und Zeichnung anbetrifft so herrscht, wie bei so vielen Eulen, auch bei diesen Arten der Gattung *Scops*, eine grosse Variabilität. Ausser dem vorherrschend graulichbraunen bis rostbräunlichen Grundtone der Hauptfärbung kommen, bei den hierher gehörigen

1) Das British Museum besass 1875 nur 25 Exemplare der hierher gehörigen Arten; siehe »Catalogue of the Birds in the British Museum, vol. II, 1875», in welchen Sharpe (pp. 69—82) eine Art (*Scops magicus*) in 8 Subspecies zu unterscheiden versucht.

Arten, einzeln auch sehr dunkel(braun) gefärbte Individuen vor, sowie solche die unterseits mehr oder minder lebhaft rostgelb oder rostroth gefärbt sind, und verhältnissmässig nicht selten eine ober- und unterseits lebhaft rostrothe Phase, wie sie auch von anderen Eulenarten bekannt ist (z.B. unserer *Ulula aluco*). In wie weit diese Färbungsstufen von Alter und Geschlecht abhängig sind lässt sich nicht annähernd feststellen; als ziemlich sicher darf man aber annehmen, dass auch die ganz rothe Phase alte Vögel betrifft.

Neben diesen Verschiedenheiten der Grundfärbung sind diejenigen nicht minder erheblich, welche sich auf die Färbung und Zeichnung einzelner Theile des Federkleides beziehen. So sind die bräunlichgrauen bis rostbräunlichen Federchen des Schleiers bei rostrothen Exemplaren ebenfalls lebhaft rostroth, während die Schleierfedern vor dem Auge (also an der Basis des Schnabels) an der Basis häufig mehr oder minder deutlich weiss erscheinen, welche Färbung zuweilen als mehr oder minder deutliches Supercilium das Auge oberseits begrenzt. (Vergl. Sharpe, Cat. Pl. VII, Fig. 2). Die Schleierfederchen der Ohrgegend sind hinterseits meist von einem schmalen schwarzen halbmondförmigen Bogen begrenzt, der indess sehr häufig nur theilweis sichtbar ist, zuweilen ganz fehlt.

Die grossen Schulterdecken zeigen am Ende der Aussenfahne in der Regel einen grossen, weissen, bis blassrostgelblichen, bei rothen Exemplaren meist blassrothrothen Fleck, der aber häufig mehr oder minder verdeckt ist oder selbst ganz fehlt, weil die betreffenden Federn mehr oder minder stark dunkel vermiculirt resp. quergebändert sind. Aehnlich verhält es sich mit den weissen oder blassfahlen Endflecken der vorderen Deckfedern der Armschwingen, sowie einiger der vorderen grössten oberen Flügeldeckfedern, welche indess nur ausnahmsweis sehr deutlich sichtbar hervortreten. Endlich mag noch erwähnt sein, dass bei manchen Exemplaren der weisse Grundton auf Bauch und auf den Bauchseiten etwas deutlicher bemerkbar ist, dass

solche Individuen aber auch bei *Scops rutilus* (von Madagascar) vorkommen.

Die Befiederung der Tarsen, mit kurzen dichtstehenden, zuweilen mehr spärlich gestellten Federchen, erstreckt sich meist auf die oberen zwei Drittel bis vier Fünftel der Vorderseite, häufig mehr oder minder auch auf die Hinterseite des Laufes, zuweilen reicht sie auch bis zur Basis der Zehen herab. Bei der Werthschätzung dieses Characters ist die Präparation des betreffenden Exemplares sehr zu berücksichtigen; denn nicht selten ist beim Trocknen oder Aufweichen des Balges die Befiederung der Tarsen mehr oder minder beschädigt worden, ja zuweilen ganz verloren gegangen. Dagegen zeichnet sich *Sc. sulaënsis* durch fast nackte Läufe aus.

Einige der soeben erwähnten Verschiedenheiten sind als charakteristisch zur Aufstellung besonderer Species oder Subspecies benutzt worden, deren Werth sich bei Vergleichung grosser Reihen indess meist nicht halten lässt. Ueberdies sind auch die ausführlichsten Beschreibungen (wie sie z.B. Sharpe giebt) völlig ungenügend um Exemplare (zumal ohne sichere Lokalitätsangabe) darnach zu bestimmen, und selbst die brauchbaren Abbildungen (Pl. V—VIII) welche wir Sharpe zuerst verdanken, sind dafür nicht ausreichend.

Soweit ich nach dem von mir untersuchten Material zu urtheilen vermag, scheinen mehr als alles Andere zwei Charactere zur Unterscheidung der Arten von Werth, nämlich: die Zeichnung der Schwingen und die Grössenverhältnisse. Beide Eigenthümlichkeiten habe ich in den beifolgenden genauen Abbildungen der ersten Schwinge (rechts, von der Unterseite gesehen) darzustellen versucht, sowohl um die vorherrschende Zeichnung, als die hauptsächlichsten Abweichungen zu zeigen. Die letzteren sind freilich bei allen hierher gehörigen Arten sehr erheblich und ich will nicht verhehlen, dass Individuen vorkommen können und werden, die auch nach diesem illustrierten »Key'', zu Bedenken Anlass geben.

Die häufig fehlenden oder unzuverlässigen Geschlechtsangaben erschweren die Bestimmung und stehen nicht selten mit der auch für diese Arten gültigen Grössenverschiedenheit der Geschlechter (Männchen kleiner als Weibchen) im Widerspruch. Immerhin werden die beigegebenen vergleichenden Messungen von Nutzen sein, die trotz beträchtlichen Schwankungen doch immerhin gewisse Anhaltspunkte geben, wobei besonders auf die Länge der ersten Schwinge hingewiesen sein mag. Sie ist unter den angegebenen Artcharacteren von der Basis an gemessen, die Figuren der Tafeln zeigen dagegen die erste Schwinge (und zwar die des rechten Flügels von der Unterseite) nur soweit sie nicht von den unteren Deckfedern bedeckt ist. Dabei ist bei Figur 3—10, der Einfachkeit halber, dieselbe Grösse beibehalten worden ohne Rücksicht auf das Geschlecht, deren Unterschiede ja aus den Artcharacteren ersichtlich sind.

1. *Scops magicus* (S. Müll.)¹⁾.

Taf. 9, Fig. 1 und 2.

Schleg. M. P. B. Oti, 1862, p. 22. — id. Rev. Noctuae, 1873, p. 11.

Erste Schwinge (von Basis an) 80—88 mm. lang (Männchen) oder 90—103 (Weibchen) an Aussenfahne (von unten gesehen) mit 8—9 hellen breiten Querbinden, an Innenfahne mit 8—9 hellen, mehr oder minder dunkel vermiculirten Querbinden (also meist wie Fig. 1); seltener die Querbinden innen in Form von mehr oder minder deutlichen Randflecken (wie Fig. 2).

1) „*Strix magica*“ S. Müll. Verhandl. Nat. Gesch. Land- und Volkenkunde, (1839—44), p. 110. Amboina. (Wird nicht beschrieben, sondern nur in der Grösse mit „*Str. noctula (tempeji)*“ und „*Str. passerina*“ verglichen).

Otus magicus Temm. u. Schl. Faun. jap. 1842, p. 25. Amboina, Celebes. (Ganz kurze, ungenügende Beschreibung und Vergleichung mit *Sc. semitorques* Schleg.).

Scops magicus Bp. Consp. av. I (1850), p. 46. (Kurze unzutreffende Diagnose).

Die übrigen Schwingen zeigen aussen 7—9 helle Querbinden (meist 8 deutlich), innen 8 bis 9, von denen 6 des Basistheiles sich meist deutlich markiren, da die 2 bis 3 letzten des Spitzentheiles häufig stark vermiculirt sind und mehr oder minder ineinander verfließen. Auf den Armschwingen sind die hellen Querbinden deutlicher und laufen meist über beide Fahnen.

Bei zusammengelegten Flügel zeigen die Handschwingen aussen meist 7 helle Querbinden, die Unterseite der Schwingen meist 7—9 helle Querbinden.

Läufe, Zehen und Krallen sehr kräftig, der Lauf ¹⁾ vorn meist nur auf $\frac{2}{3}$ der Basis, zuweilen nur im obersten Drittel befiedert; Hinterseite des Laufs meist mehr oder minder nackt. (Einzelne Exemplare zeigen, in Folge der Präparation, fast die ganzen Läufe nackt).

Verbreitung: Amboina, Ceram, Buru, Nord-Celebes, Batjan, Ternate, Halmahera, Morotai, Aru, Sumbawa. (Im Leidener Museum von allen diesen Lokalitäten (mit Ausnahme von Morotai) in 54 Exemplaren vertreten, darunter 13 der rothen Färbungsphase und 9 die nur unterseits rostgelb oder rostroth gefärbt sind). Nach Gray (Proc. Z. S. L. 1860, p. 345) auch auf »Banda'', aber ohne Angabe des Sammlers. — Der Catalog des British Museum verzeichnet nur 13 Exemplare (von Ceram, Buru, Batjan, Halmahera und Morotai).

Von Amboina und Ceram (Kat. N^o. 1—16a; Schleg. Cat. 1862, p. 22, N^o. 2 und 3. — id. Rev. 1873, p. 11, N^o. 26—31).

Scops magicus. Subsp. α *Scops magicus* Sharpe (Cat. II, p. 70, Pl. V).

Scops manadensis magicus Meyer a. Wigl. B. of Celebes, I, 1898, p. 105. (Diagnose nach Sharpe).

1) Die Abbildung, welche Sharpe (Cat. II, p. 71) vom »Leg of *Sc. magicus*'' giebt, zeigt den Lauf bis zur Basis der Zehen befiedert, stimmt also, wenigstens mit unseren Exemplaren, nicht überein.

Soll sich nach Sharpe durch folgende Kennzeichen auszeichnen: »The characteristic feature of this Scops-Owl is its yellow plumage, which pervades the entire aspect of the bird both above and below. The ruff and ear-coverts are ochraceous buff, and there is no sign of white on the scapulars, which are externally yellowish; the entire upper surface is very strongly banded with fulvous''. Die ausführliche Beschreibung, welche Sharpe giebt bezieht sich auf die seltenere mehr rostbräunliche Färbungsstufe (»sandy buff''), während die Abbildung (Pl. V) die ober- und unterseits rostrothe Phase darstellt. Letztere ist unter den 23 Exemplaren, welche das Reichs Museum von Amboina und Ceram (durch Dr. S. Müller, Hoedt, Teijsmann, van Musschenbroek und Schädler) besitzt (gegen 4 im British Museum) in acht Exemplaren vertreten. Zwei derselben (N^o. 5 und 8) zeigen die längsten oberen Schwanzdecken einfarbig tief rostroth. Die vorherrschende Grundfärbung der Oberseite ist ein mehr oder minder rostfarben verwaschenes Braun, die des Schleiers fahlbräunlich, bei manchen Exemplaren heller, fast bräunlichweiss oder grau; der weisse Superciliarstreif ist bei manchen Exemplaren so deutlich als auf der Abbildung bei Sharpe (Pl. VII, Fig. 2); der zuweilen sehr versteckte Schulterfleck ist meist weiss und nur selten blassrostgelblich verwaschen, zuweilen auch auf der Aussenfahne rostfarben und schwarz quergebändert. Mit dieser Färbungsstufe stimmen auch die beiden noch von Dr. Sal. Müller in 1828 auf Amboina gesammelten Exemplare (Kat. N^o. 1 u. 2; Schleg. Cat. 1862, N^o. 2 u. 3) überein, welche als Typen der Art betrachtet werden dürfen. Das eine derselben (N^o. 1) war mit Temminck's Handschrift als „*Strix hemipodia-magica*'' bezeichnet.

Dunenjunge, mit noch nicht völlig ausgewachsenen Schwingen, sind blassrostfahl, mit schmalen, weitstehenden dunklen Querbinden.

Salvadori will *Scops magicus* (Orn. Pap. I, 1880, p. 73) hauptsächlich durch die hinterseits nackten Läufe unterscheiden, eine Eigenthümlichkeit die in der That für fast

alle unsere Exemplare von Amboina und Ceram zutrifft, allein ein Exemplar (Kat. N^o. 11 von Amboina) zeigt die Hinterseite des Laufes im oberen Drittel ebenfalls befiedert und andererseits haben auch Exemplare von Halmahera und Batjan die Hinterseite des Laufs mehr oder minder nackt.

Von Buru (Kat. N^o. 17 u. 18; Schleg. Cat. Rev. 1873, p. 12, N^o. 24 u. 25).

Scops magicus. Subsp. γ *Scops bouruensis* Sharpe (Cat. II, p. 73, Pl. VII, Fig. 2).

Nach einem Exemplare aufgestellt, das sich von *Sc. leucospilus* (Gray) leicht unterscheiden soll »by its distinctly mottled forehead, which is largely spotted with white, and by its having the sides of the neck also whitish, mottled with black. The legs ¹⁾ are more thickly feathered than in either *S. leucospilus* or *S. magicus*; the nape and hindneck are also mottled with white, forming two indistinct bands.»

Unsere beiden Exemplare von Buru (durch Hoedt, 1865, gesammelt) stimmen mit gewissen von Amboina und Ceram durchaus überein. Auch bei letzteren (z. B. N^o. 11 u. 15) ist der Vorderkopf so stark »spotted with white» als bei den Buru-Exemplaren, von denen überdies nur das eine eine Art undeutliches helleres Nackenband zeigt, das bei manchen Amboina-Exemplaren stärker hervortritt.

Salvadori zieht *Scops bouruensis* ²⁾ Sharpe zu *Sc. leucospilus* Gray (Orn. Pap. I, p. 74).

1) Die beigegebene Abbildung (p. 74) zeigt Befiederung bis fast zur Zehenbasis herab, was mit unseren Exemplaren nicht übereinstimmt, die nur vier Fünftel befiedert zeigen, das eine die Hinterseite nackt, wie Exemplare von Amboina.

2) Als nächst verwandt beschreibt Sharpe:

Scops brookii Sharpe, Bull. B. O. C. II, 1892, p. IV. — Ibis, 1893, p. 117. — Hose, ib. p. 417, Pl. XI.

Sc. manadensis brookii Meyer a. Wigl. B. of Celebes, I, 1898, p. 107.

„S. similis *S. bouruensis*, sed fascia alba lata cervicali distinguendus; alae 6, 65. Mt. Dulit, Sarawak, Borneo. Coll. Hose» (Sharpe).

Schon die bedeutende Grösse (Flügelänge 174 mm.) lässt keine Vergleichung

Von Celebes (Kat. N^o. 19, 20, 21; Schleg. Cat. 1862, p. 22, N^o. 4 u. 5).

Scops manadensis magicus Meyer a. Wigl. B. of Celebes, I, 1898, p. 105. (Diagnose nach Sharpe).

Zwei von Dr. Forsten, 1841, im Norden (Gorontalo) gesammelte Exemplare gehören zu der rostrothen Phase und waren von Temminck mit »*Strix (Scops) nov. spec.*» bezeichnet. Sie stimmen durchaus mit rothen Exemplaren von Amboina und Ceram überein, wie zwei Exemplare der gewöhnlichen Färbung, von Hoedt 1878 und van Musschenbroek 1878 in der Minabassa gesammelt. Die Läufe sind bei einem Exemplar fast bis zur Zehenbasis befiedert, bei den anderen nur im oberen Drittel.

Von Batjan und Halmahera (Kat. N^o. 22—24 u. 33—39; Schleg. Cat. 1873, N^o. 8—16).

Scops magicus. Subsp. β . *Scops leucospilus* ¹⁾ Sharpe, Cat. II, p. 72, Pl. VI.

Scops manadensis leucospilus Meyer a. Wigl. B. of Celebes, I, 1898, p. 106. (Diagnose nach Salvadori).

»Distinguished by its dark brown plumage and large white shoulder-spots, but especially by its greyish-white cheeks and ear-coverts; the under surface is whiter than in any of the allied races» lauten die Unterscheidungskennzeichen, welche Sharpe (l. c.) für diese Art angiebt, welche nach ihm nur auf Batjan und Halmahera (Gilolo) vorkommt. Salvadori fügt »Buru» hinzu (= *Sc. bouruensis* Sh.).

mit *Sc. manadensis* zu, sondern nähert diese neue Art (wie auch Hose hervorhebt) *Sc. magicus*, doch gehört sie, nach der Abbildung zu urtheilen (mit 3 hellen Bändern auf Ober- und Hinterkopf und Nacken) in die ganz andere Gruppe von *Sc. lempeji* (Horsf.).

1) *Ephialtes leucospilus* Gray, P. Z. S. Lond. 1860, p. 344, Batjan and Eastern Gilolo. »In general appearance this bird is very like *E. manadensis* (Q. et G.) but it is larger in all its proportions and is more prominently marked with white on the wing-coverts». Die kurze Beschreibung ist durchaus ungenügend. Der Mangel an Exemplaren von *Sc. magicus* entschuldigt die Aufstellung dieser neuen Art.

Von unseren Exemplaren von Batjan (Coll. Dr. Bernstein 1860) gehört das eine (N^o. 23) zu der rostrothen Phase, das andere (N^o. 22) stimmt ganz mit einem Exemplare von Amboina (N^o. 7) überein, zeigt wie dieses die Schleierfedern bräunlich und nur an der Schnabelbasis weiss, und sehr kleine, fast verdeckte weisse Schulterflecke. Der Bauch erscheint etwas heller (weisser), doch nicht mehr als bei gewissen Exemplaren von Amboina (N^o. 10) und Ceram (N^o. 15).

Unter den Exemplaren von Halmahera (Dr. Bernstein 1861; v. Rosenberg 1870) zeichnet sich namentlich ein jüngeres Männchen (N^o. 36) durch helleren (weissen) Bauch aus, dasselbe zeigt aber die versteckten weissen Schulterflecke noch quergebändert, während alte Vögel (z. B. N^o. 35 u. 36), ebenfalls mit hellem Bauch, deutliche grosse weisse Schulterflecke besitzen. Die Federn des Schleiers sind meist bräunlich (ganz so gefärbt wie bei Amboina-Exemplaren), die an der Schnabelbasis zuweilen weiss, welche Färbung sich auch als mehr oder minder deutliches Supercilium über den oberen Augenrand fortsetzt (vergl. Sharpe Pl. VI und VII, Fig. 2), wie dies auch bei Exemplaren von Amboina, Ceram, Buru und Celebes der Fall ist. Manche Exemplare von Halmahera (z. B. N^o. 37) sind auch auf der Unterseite ebenso dunkel gefärbt als solche von Amboina.

Die Querbindenzeichnung des Schwanzes ist übrigens bei keinem unserer Exemplare so deutlich markirt als dies die Abbildung bei Sharpe (Pl. VI) zeigt, wobei noch bemerkt sein mag, dass die Zeichnung der Schwanzfedern in mehr oder minder deutlichen, oft nur vermiculirt angedeuteten Querbinden so ausserordentlich variirt, dass sich kaum eine allgemein gültige Beschreibung geben lässt.

Dunenjunge, mit mehr oder minder in der Entwicklung begriffenen Schwingen und Schwanzfedern, zeigen feine dunkle Querbänderung (wie der Nestvogel von Amboina). Die Schwingen sind meist so deutlich quergebändert als bei alten Vögeln.

Die Läufe sind meist bis fast zur Zehenbasis herab befiedert (wie dies die Figur auf S. 73 bei Sharpe zeigt), meist auch auf der Hinterseite; wir besitzen aber auch Exemplare (und noch im Nestkleide) die nur die oberen $\frac{2}{3}$ des Laufes befiedert und die Hinterseite desselben unbefiedert haben.

Von Ternate (Kat. N^o. 25—32; Schleg. Cat. 1862, N^o. 6; 1873, N^o. 17—23).

Scops magicus. Subsp. δ *Scops morotensis* Sharpe, Cat. II, p. 75, Pl. VII, Fig. 1.

Sc. morotensis Salvad. Orn. Pap. I, p. 76.

? *Sc. manadensis morotensis* Meyer a. Wigl. B. of Celebes, I, 1898, p. 106. (Diagnose nach Salvadori).

»Strictly of the same form and general coloration as *S. leucospilus*, but it is a darker looking bird and is at once recognizable from that race by its buff-coloured ruff and ear-coverts, in these characters resembling true *Sc. magicus*» (Sharpe).

Wir besitzen merkwürdiger Weise zwar kein Exemplar von Morotai (Morty), aber eine genügende Reihe von Ternate, und diese Exemplare würden nach Salvadori gerade zu *Sc. morotensis* gehören, die nach diesem Forscher auf der dazwischen liegenden grossen Insel Halmahera fehlt; jedenfalls sehr auffallende Verbreitungsverhältnisse (!) Um Wiederholungen zu vermeiden will ich nur bemerken, dass unsere Exemplare von Ternate (Dr. Bernstein 1861, von Rosenberg 1872, van Musschenbroek 1878) durchaus mit solchen von Amboina, Halmahera u. s. w. übereinstimmen und die von Sharpe angegebenen Charactere in keiner Weise als constante bestätigen. Die Abbildung (Pl. VII, Fig. 1) zeigt ein dunkel gefärbtes Exemplar von *Sc. magicus*, wie solche auch auf Amboina vorkommen. Die Befiederung der Läufe variirt bei den Ternate-Exemplaren in derselben Weise, wie ich dieselbe bereits von Exemplaren von Halmahera und Batjan angab.

Von Sumbawa (Kat. N^o. 40; Schleg. Cat. 1862, N^o. 1).

Notes from the Leyden Museum, Vol. XX.

Das 1842 von Dr. Forsten bei Bima gesammelte Exemplar (von Temminck als »*Strix manadensis* Voy. Coqu.» bezeichnet) stimmt vollkommen mit Exemplaren vom Amboina, Ceram u. s. w. überein, und giebt zu keinen weiteren Bemerkungen Anlass. Der Lauf ist kaum auf den oberen zweidrittel befiedert und hinterseits nackt.

Von den Aru-Inseln (Kat. N^o. 41, 42; Schleg. Cat. 1873, N^o. 32, 33).

Ein alter Vogel (von Kobroor: Februar 1865, von Rosenberg) in der lebhaft rostrothen Phase, stimmt durchaus mit solchen von anderen Lokalitäten (z.B. N^o. 5 von Amboina) überein. Die Läufe sind, in Folge der Präparation, ganz nackt. Ein Nestjunges (im Februar 1865 durch von Rosenberg auf Wammer gesammelt) ist ganz so gefärbt als ähnliche Alterstufen von Amboina etc. — Die von Salvadori angezweifelte Herkunft der beiden Exemplare unserer Museums ist unbedenklich richtig.

2. *Scops manadensis* Quoy et Gaim. (1830).

Taf. 9, Fig. 3—7.

Erste Schwinge (von Basis an) 63—77 mm. lang (Männchen) oder 80—87 (Weibchen) an Aussenfahne (von unten gesehen) mit 6 hellen Querbinden (wie Fig. 3, 5 u. 6), ausnahmsweis nur mit 5 (wie Fig. 4) oder mit 7—9 (wie Fig. 7); an Innenfahne meist mit 6 hellen Randflecken oder undeutlichen Querbinden (wie Fig. 3), die sich nur bei jüngeren Vögeln zu mehr oder minder deutlichen Querbinden gestalten (wie Fig. 5 u. 6), ausnahmsweis mit 7 undeutlichen Randflecken oder Querbinden (wie Fig. 7), oder nur mit 2 Randflecken (Fig. 4: rothe Phase).

Die übrigen Schwingen zeigen aussen 6—7 (ausnahmsweis 8) helle Querbinden (meist 6 deutlich); die Innenfahne der Handschwingen erscheint mehr einfarbig als bei den verwandten Arten, nur der Spitzentheil zeigt 3—4 hellere, aber dunkel vermiculirte Querbinden, der Basistheil

3—5 helle einfarbige Randflecke (ähnlich Fig. 3), die nur bei jungen Vögeln (wie N^o. 1 u. 4) deutliche Querbinden bilden (wie Fig. 5 u. 6); die Armschwingen zeigen 6—7 Randflecke, die bei jungen Vögeln über beide Fahnen laufen. Bei zusammengelegten Flügeln zeigen die Handschwingen aussen meist 5 helle Querbinden; die Unterseite der Schwingen 5—6 helle Querbinden (zuweilen nur 3).

Läufe, Zehen und Krallen erheblich schwächer und zierlicher als bei *Sc. magicus*; der Lauf vorn meist bis zur Zehenbasis befiedert auch auf der Hinterseite (wie dies die Figur bei Sharpe S. 77 richtig zeigt).

Verbreitung: Celebes (Makassar, Minalassa); Sangi, Wetter, Flores, Sumbawa ¹⁾, Lombok.

Mit Ausnahme der zwei letzteren Lokalitäten im Reichsmuseum durch 24 Exemplare vertreten (gegen 5 im British Museum von Celebes und Flores). Die Vergleichung dieser ansehnlichen Reihe lässt keinen Zweifel, dass *Sc. manadensis* keineswegs nur als eine Subspecies, sondern als eine von *Sc. magicus* verschiedene, sogenannte »gute“ Species betrachtet werden muss. Sie unterscheidet sich schon leicht durch die merkbar geringere Grösse, da auch die grösseren Weibchen von *Sc. manadensis* immer kleiner sind als die grössten Männchen von *Sc. magicus*, Verhältnisse die bei Exemplaren mit richtigen Geschlechtsangaben kaum Zweifel lassen werden. Lauf, Zehen und Krallen sind viel zierlicher als bei *Sc. magicus* und der Lauf ist ringsum bis nahezu oder ganz bis zur Zehenbasis dicht befiedert. Die Schwingen sind im Allgemeinen nicht so deutlich quergebändert als bei *Sc. magicus*; wo dies aber, wie bei jüngeren Vögeln, vorkommt, sind die Querbinden minder zahlreich, wie dies die Figuren auf Taf. 9 zeigen. Wenn hier z.B. Fig. 7 an der Aussenfahne ebensoviel helle Querbinden (9) auf der Aussenfahne aufweist als *Sc. magicus* (Fig. 1), so unter-

1) *Pisorhina albiventris* Hartert, Nov. Zool. III, 1896, p. 572: Sumbawa, Doherty; ib. p. 596: Lombok, Everett; ib. vol. IV, 1897, p. 527: Flores, Everett.

scheidet sich dies Exemplar doch noch durch den Mangel deutlicher Querbinden an der Innenfahne.

Im übrigen ist *Sc. manadensis* in Gesamtfärbung wie Zeichnung ein getreues kleinerer Abbild von *Sc. magicus*, und die bei letzterer Art erwähnten individuellen Abweichungen, (grössere oder geringere Ausdehnung eines weissen Schulterfleckes, helle (weisse) Endflecke auf den vordersten oberen Deckfedern, Weiss an der Basis der Schleierfedern an der Schnabelbasis, zuweilen als mehr oder minder deutliches weisses Supercilium den oberen Augenrand begrenzend), kommen auch bei *Sc. manadensis* vor. Manche Exemplare sind nur auf der Unterseite rostroth, andere ganz rostroth gefärbt, doch scheint diese rothe Phase (unter 24 Exemplaren nur 4) seltener als bei *Sc. magicus*. Ausser dieser rothen Phase kommt auch noch eine ober- und unterseits sehr dunkelbraun gefärbte Färbungsstufe vor, die merkwürdiger Weise bis jetzt noch nicht zur Begründung einer eigenen Art benutzt worden zu sein scheint.

Von Celebes (Kat. N^o. 1—14; Schleg. Cat. 1862, N^o. 1—3 und 1873, N^o. 4—10 u. 12—15).

Scops magicus. Subsp. ϵ *Scops menadensis* Sharpe, Cat. II, p. 76, Pl. VIII, Fig. 2.

Sc. manadensis 1. The typical *Sc. manadensis* Meyer a. Wigl. B. of Celebes, I, 1898, p. 103.

»*Scops menadensis* is in reality a small form of *Sc. magicus*, to which it bears considerable resemblance; but the more slender legs and lesser size distinguish it from that and the allied subspecies" lautet die Bemerkung von Dr. Sharpe, in welcher derselbe die hauptsächlichsten Artunterschiede sehr richtig hervorhebt. Hierzu kommen noch die Verschiedenheiten in der Zeichnung der Schwingen, wie ich dieselben vorher darzustellen versuchte.

Mit Ausnahme eines Exemplares aus dem Süden (Macassar: Teijsmann 1878) stammen alle übrigen Exemplare unseres Museum aus der Minahassa im Norden her (Goron-

talo: Dr. Forsten 1841, v. Rosenberg 1864; Manado' Renesse van Duivenbode 1866; van Musschenbroek 1878 und von Faber 1883).

Das Exemplar von Macassar (N^o. 1) gehört zur rothen Phase, zeigt einen grossen weissen Schulterfleck und die vorderen Deckfedern der Schwingen, wie die vorderen grössten Deckfedern am Ende breit weiss, während ein anderes rothes Exemplar (N^o. 3) nur einen kleinen versteckten rostgelblichen Schulterfleck aufweist. Einzelne Exemplare (z.B. N^o. 1, 6 und 13) haben die Bauchpartie so hell (weiss) gefärbt als solche von Flores und Wetter. Die Exemplare N^o. 5 und 9 gehören zu der auffallend dunklen Färbungsstufe, die ich vorher erwähnte. Auch die Befiederung des Laufes ist hier (anstatt weisslich bis rostbräunlich) tiefbraun (mit rostbraunen Querbändern). Die Innenfahne der Handschwingen ist bis auf 2—3 undeutliche rostfahl vermiculirte Querbinden des Spitzentheiles einfarbig schwarz; dagegen zeigen die Armschwingen die gewöhnliche Zeichnung.

Dunenjunge sind ganz so gefärbt und gezeichnet als bei *Sc. magicus*, unterscheiden sich aber schon durch die fast bis zur Zehenbasis befiederten Läufe.

Von den Sangi Inseln (Kat. N^o. 15; Schleg. Cat. 1873, N^o. 12).

Das einzige Exemplar (10 Januar 1866: Hoedt) stimmt durchaus mit solchen der gewöhnlichen Färbung von Celebes überein und giebt zu keinen Bemerkungen Anlass. Die Zeichnung der Schwingen stimmt ganz mit Fig. 3 überein. (Auch von Dr. Meyer und Platen auf Gross-Sangir gesammelt. Vergl. *Scops menadensis* Meyer, Isis, 1884, p. 13).

Von Flores und Wetter (Kat. N^o. 16—20; Schleg. Cat. 1873, N^o. 14 u. 15).

Scops magicus. Subsp. *Scops albiventris* Sharpe, Cat. p. 78, Pl. VIII, Fig. 1.

Scops manadensis albiventris Meyer a. Wigl. B. of Celebes, I, 1898, p. 105. (Diagnose nach Sharpe).

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Nach einem Exemplare von Flores (Coll. Wallace) aufgestellt, das Sharpe wie folgt als eigene Subspecies charakterisirt: »It has a distinct wash of grey on the upper surface and has the cheeks greyish white; but the principal difference lies in the white belly, where it is the prevailing colour, the cross-markings and lines being very scanty.»

Bei einer grösseren Reihe von Exemplaren erweisen sich die angegebenen Kennzeichen als nicht stichhaltig. Unser Exemplar von Flores (N^o. 16 Larantuka: Semmelink 1863), oberseits rostroth gefärbt, ist ganz so als ein anderes oberseits rostrothes von Celebes (N^o. 11); dasselbe gilt bezüglich eines Exemplares von Wetter (N^o. 18: Hoedt 1866) im Vergleiche mit Exemplar N^o. 1 von Macassar.

Das Exemplar von Flores zeigt auf der Aussenfahne der ersten Schwinge 7 helle Querbinden, zwei andere von Wetter die gleiche Zahl (eins, N^o. 19, sogar 9, wie Fig. 7), allein andere Exemplare von dieser Insel (in Spiritus durch Schädler 1898 eingesandt) zeigen dieselbe Zeichnung als Exemplare von Celebes (wie Fig. 3).

Unter den kürzlich durch Schädler von Wetter eingesandten Exemplaren gehören zwei zu der ober- und unterseits lebhaft rostroth gefärbten Phase. Sehr nahe verwandt damit scheint *Sc. (Pisorhina) alfredi* Hartert (Novit. Zool. IV, 1897, p. 527; id. V, Pl. 1, Fig. 1) von Flores (Coll. Everett); auch bei *Sc. manadensis* ist zuweilen nur »one-fifth of tarsus bare»; im übrigen ergeben Beschreibung, Maasse und Abbildung bei Hartert keinerlei durchgreifende Unterschiede mit unseren rothen Exemplaren von Wetter.

Meyer und Wiglesworth betrachten auch die folgende Art als Subspecies von *Scops manadensis*:

Scops sibuensis Sharpe.

Bull. B. O. C. N^o. XII, p. IX (Novembr. 1893). — Ibis 1894, pp. 121 u. 244.]

Sc. manadensis sibuensis Meyer a. Wigl. B. of Celebes, I, 1898, p. 107.

»S. similis *S. mantananensi* sed alius extus vix albo

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notatis et remigibus intus vix fasciatis distinguenda; alae 6,0 (= 152 mm.). — Hab. Sibutu Island, Sulu-Archipel" (Sharpe, Ibis 1894, p. 121). — »This race is intermediate between *S. menadensis* and *S. mantananensis*. From *S. menadensis* the Sibutu bird differs in having all the markings of the upper surface very fine and not all over as in that species. The quills have also more bars in the Celebian bird than in the species from Sibutu" (Sharpe, ib. p. 245). — Ohne Vergleichung, namentlich auch mit *Sc. mantananensis* ¹⁾, nicht näher festzustellen.

3. *Scops rutilus* Pucheran (1849).

Taf. 10, Fig. 8—10.

Scops menadensis Schleg. Rev. Noctuae, 1873, p. 12, N^o. 16—28.
Scops magicus. Subsp. θ *Scops rutilus* Sharpe, Cat. II, 1875, p. 80.
 ? *Scops capnodes* Gurney, Ibis 1889, p. 104 (Comoren).
Sc. manadensis rutilus (Diagnose nach Sharpe) et *Sc. m. capnodes*
 Meyer a. Wigl. B. of Celebes, I, 1898, p. 105.

Erste Schwinge an Aussenfahne (von unten gesehen) mit 5 hellen schmalen Querbinden (wie Fig. 8 u. 10), nur ausnahmsweis (jung) mit 6 (wie Fig. 9); an Innenfahne mit undeutlichen hellen dunkler vermiculirten Querbinden (meist 5 mehr oder minder erkennbar, wie Fig. 8 u. 9), seltener an der Basis mit (3) deutlichen hellen Randflecken, die noch seltener deutlichere Querbinden bilden (wie Fig. 10).

Nach sorgfältigster Vergleichung unserer Reihe (von 14 Exemplaren, durch Pollen, van Dam und Audebert in

1) *Scops mantananensis* Sharpe, Bull. B. O. C. N^o. II (Novemb. 1892). — Ibis, 1893, p. 117 et 559.

„S. similis *S. eleganti* Cass., sed subtus latius striatus et tectricibus alarum conspicue albo notatis distinguendus, alae 6,2 (= 160 mm.)" Sharpe. — Insel Mantanani, Nord Borneo (Coll. Everett). — Diese Art dürfte nach Meyer u. Wiglesworth mit der Subspecies *Sc. sibutuensis* zusammenfallen.

Nordwest-, West- und Ost-Madagascar gesammelt), scheinen mir die soeben angegebenen allerdings geringfügigen, Unterschiede die einzigen constanten, nach welchen es möglich sein dürfte Madagascar Exemplare von solchen von Celebes (auch ohne Lokalitätsangaben) zu bestimmen, wofür auch die Zeichnung der übrigen Schwingen weitere Anhaltspunkte bietet.

Sharpe hat bereits auf diese Verhältnisse hingewiesen (Cat. II, p. 78) und sagt in Betreff der Fleckenzeichnung der ersten Schwinge »in *S. menadensis* the spots are 8 or 9 in number, in *S. rutilus* they are no more than six" giebt also für beide Arten mehr helle Flecke an, wahrscheinlich weil die unter den Deckfedern versteckten mitgezählt wurden. Soweit diese Flecken oder Querbinden sichtbar sind ohne die Deckfedern aufzuheben, machen sich bei *Sc. manadensis* in der Regel 6, bei *Sc. rutilus* nur 5 bemerkbar. Freilich kommen ausnahmsweis auch bei *Sc. manadensis* nur 5 helle Querbinden auf der Aussenfahne vor, wie Fig. 4 zeigt, aber dies ist ein Exemplar des rothen Phase (N^o. 3) und hat die Innenfahne fast einfarbig, während rothe Exemplare von Madagascar hier mehr oder minder deutliche Querbinden (6) aufzuweisen haben.

Dies gilt auch bezüglich der Zeichnung der übrigen Schwingen, deren Innenfahne zwar nur verwischte, vermiculirte Querbinden zeigt, die aber immerhin deutlicher bemerkbar sind als bei *Sc. manadensis* 1). Die Handschwingen zeigen innen 6—7 solche verwischte Querbinden (ähnlich Fig. 8 u. 9), von denen die 3 letzten des Spitzentheiles deutlicher hervortreten, am Basistheile 3—5 helle Randflecke; die Armschwingen mit 6—7 vermiculirten über beide Fahnen laufenden Querbinden (deutlicher ausgeprägt

1) Ganz im Gegensatz sagt Sharpe „the aspect of the inner lining of the quills: in the Madagascar bird this is nearly uniform, with only a few bars of yellowish white near the base of the feathers; but in *S. menadensis* the whole wing is narrowly barred with fulvous for its entire extent". Vermuthlich bezieht sich dies auf Exemplare seines Subspecies *Sc. magicus*.

als auf den Handschwingen), die am Rande der Innenfahne in einfarbige Querflecke übergehen.

Bei zusammengelegten Flügeln sind auf den Handschwingen meist 4 helle Querbänder sichtbar; auf der Unterseite der Schwingen 3—4 (selten 5) helle Querbänder.

Die Läufe sind bis fast zur Zehenbasis herab befiedert, auf der Rückseite anscheinend nicht so dicht als bei *Sc. manadensis*. Die haarähnlichen verlängerten Schäfte der Schleierfedern an der Schnabelbasis erscheinen bei manchen Madagascar-Exemplaren auffallend lang (bis 33 mm.), sind in der Regel aber nicht länger als bei *Sc. manadensis* (21—23 mm.).

Im übrigen stimmt *Sc. rutilus*, sowohl in Grösse, allgemeiner Färbung wie Zeichnung des Gefieders durchaus mit *Sc. manadensis* überein, auch hinsichtlich der mehr oder minder grossen (häufig versteckten) weissen Schulterflecke. Der helle (weisse, aber dunkel vermiculirte) Superciliarstreif scheint dagegen minder häufig vorhanden als bei *Sc. manadensis* und ist nur bei einem unserer *Sc. rutilus* sehr deutlich vorhanden. Dasselbe gilt für die weissen Enden der obersten grössten Deckfedern, welche auch nur an einem Exemplare bemerkbar sind. Dagegen giebt es Exemplare mit hellerem Bauch, ähnlich wie die Form »*albi-ventris*» von *Sc. manadensis*, und wie bei der letzteren Art unterseits rostrothe Exemplare (N^o. 5), sowie eine lebhaft rostrothe (N^o. 4 u. 12) und sehr dunkelbraune Phase (N^o. 7). Diese letztere ist jedenfalls identisch mit *Sc. capnodes* Gurney von den Comoren (Anjouan), von woher mir kein Exemplar zur Hand ist. Aber die Beschreibung, welche Gurney giebt, stimmt ganz mit unserem dunklen Madagascarvogel überein.

Verbreitung: Madagascar und Comoren (Anjouan).

Ueber den Artenwerth von *Sc. rutilus* werden, gegenüber den geringen constanten Unterschieden, die Meinungen immer getheilt bleiben. Die merkwürdige Uebereinstimmung mit der Zwergohreule von Celebes (u. s. w.) gehört jedenfalls zu den auffallendsten zoogeographischen That-

sachen, welche durch die problematische Annahme des Verschlagenwerdens (von Celebes nach Madagascar), wie sie Meyer zuerst aufstellte, noch keineswegs eine befriedigende Erklärung findet.

4. *Scops sulaënsis* (Hartert).

Taf. 10, Fig. 11.

Scops menadensis Schleg. Rev. Noctuae, 1873, p. 12 (spec. N^o. 11).

Pisorhina sulaensis Hartert, Nov. Zool. V (1898), p. 126.

Erste Schwinge an Aussenfahne (von unten gesehen) mit 5 hellen sehr kleinen Querbinden innen einfarbig dunkel; Läufe vorn nur an der Basis (circa ein Drittel) befiedert, im übrigen wie die Zehen nackt.

Auch die übrigen Schwingen zeigen auf der Aussenfahne nur 5 helle Randflecke, die des Armes nur 3 hellere Querbinden; die vorderen Handschwingen zeigen am Basistheil der Innenfahne 3 kleine helle (gelblichweisse) Randflecke, die hinteren Handschwingen 5 grössere, die auf der Innenfahne der Armschwingen noch stärker entwickelt sind.

Im übrigen in Färbung und Grosse ganz mit *Sc. magicus* übereinstimmend.

Verbreitung: Sula-Inseln — Sula Bessie: Dr. Bernstein (Februar 1864); Sula Mangoli: Doherty (October 1897).

Bis jetzt nur nach je einem alten Exemplare im Leidener und Tring-Museum bekannt.

5. *Scops siaoënsis* Schleg.

Taf. 10, Fig. 12 (Schwinge), Fig. 13 (Schwanzf.).

Mus. P.-B. Rev. Noctuae, 1873, p. 13.

Scops magicus. Subsp. ζ *Scops siaoënsis* Sharpe, Cat. B. Br. M. II, 1875, p. 78.

Erste Schwinge an Aussenfahne (von unten gesehen) mit 7 kleinen rostfarbenen Querflec-

ken, innen einfarbig; äusserste Schwanzfeder mit heller (verwaschener weisser) Querbinde vor dem Ende; sehr klein (Flügel 125 mm.).

Auch die übrigen Schwingen sind an der Innenfahne einfarbig schwarz, und nur die hintersten Armschwingen zeigen an der Basis 3—4 rostfarbene Randflecke; die vierte Schwinge zeigt auf der Aussenfahne 10 rostfarbene Querbinden, die Armschwingen fünf. In der übrigen Färbung fast ganz mit Exemplaren der dunklen Phase von *Sc. manadensis* (wie N^o. 5) übereinstimmend, aber mit einem zwar nicht ganz geschlossenen, aber doch bemerkbaren rostgelblichen Nackenquerbande. Läufe bis fast zur Zehenbasis, auch auf der Hinterseite befiedert. Ausserdem durch die auffallende Kleinheit ausgezeichnet ¹⁾. Damit ist diese ausgezeichnete Art genügend characterisirt; denn eine detaillirte Beschreibung würde doch keine weiteren unterscheidenden Merkmale liefern und wie bei allen so schwierig zu beschreibenden Vögeln mehr zur Verwirrung als zur Klärung beitragen.

Bis jetzt nur nach dem einen Exemplare des Leidener Museum bekannt, das Renesse van Duivenbode 1866 von der kleinen Insel Siao-Oudang (zwischen Celebes und Sangi) einsandte.

Vergleichende Maasse.

Der Flügel ist vom Bug bis zur Flügelspitze (nicht wie es zuweilen geschieht, über den Flügel) gemessen; der Schwanz von der Basis der mittelsten Feder an, der Lauf von der Einlenkung von Tibia und Tarsus bis zur Basis der Mittelzehe (Punkte, die sich nicht immer leicht feststellen lassen), die Mittelzehe von der Basis an bis zur Kralle (also ohne die letztere).

1) „Semblable au *Sc. manadensis*, mais de très petite taille“ ist Alles womit Schlegel diese neue Art einführte, die deshalb nur als eine zufällige kleine Form von *Sc. manadensis* betrachtet wurde, eine irrthümliche Annahme in welcher Meyer (Birds of Celebes, p. 104) neuerdings Sharpe folgte.

1. *Scops magicus* (S. Müll.).

Flügel.	Schwanz.	Lauf.	Mittelzehe.		
176	87	37	27	♂	Amboina. S. Müller (Type).
185	86	37	25	♀	» » »
173—180	78—85	31—37	} 24—27	♂♂	» 11 Expl.
182—192	84—98	34—37		♀♀	» 7 »
178—183	83—84	31—32	24—25	♂ u. ♀	Ceram 4 »
174—176	82—86	33—35	25	♂♂	Buru 2 »
175—184	80—89	31—32	24—25	♂ u. ♀	Celebes 3 »
165—174	70—75	32	24—25	♂♂	Batjan 2 »
170—180	} 70—90	} 32—35	} 25—27	♂♂	Ternate } 40 »
180—191				♀♀	» }
162—168	70—82	31—34	25—26	♂♂	Halmahera 5 »
182	85	31	25	♀	Sumbawa 1 »
173	—	33	24		Aru Ins. 1 »
162—180	} 70—98	} 31—37	} 24—27	♂♂	46 Expl.
180—192				♀♀	

2. *Scops manadensis* Q. u. G.

143—151	63—74	22—27	18—22	♂♂	Celebes 12 Expl.
153—160	70—78	25—30	20—23	♀♀	» 4 »
158	73	25	20	♀	Sangi 1 »
155	76	25	20	♀	Flores 1 »
150	73	23	20	♂	Wetter 1 »
153—156	73—78	25—26	19—20	♀	» 4 »
150—159	} 81—82	} 23	—	♂	} Alfredi.
162				♀	

3. *Scops rutilus* Puch.

149—158	73—79	} 26—32	} 18—22	♂♂	} Madagascar. 6 Expl.
160—163	77—83			♀♀	
162—192	70—98	31—37	24—27	Sc. magicus	♂ u. ♀ 46 Expl.
144—160	63—78	22—30	18—23	» manadensis	♀ u. ♂ 23 »
149—163	73—83	27—32	18—22	» rutilus	♂ u. ♀ 13 »

4. *Scops sulaënsis* Hartert.

160	73	32	22	Ad. Sula Bessi.
170	77	—	—	♂. Nach Hartert.

5. *Scops siaoënsis* Schleg.

125	55	22	20	Siao.
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Leyden Museum, 17 Juli 1898.

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TAFEL-ERKLÄRUNG.

Erste Schwinge des rechten Flügels von der Unterseite gesehen und zwar soweit dieselbe unbedeckt von den Deckfedern sichtbar ist (also nicht in ganzer Länge bis zur Basis, wie bei den Maassen in den Diagnosen). Zu bemerken ist, dass Fig. 3—10, ohne Rücksicht auf das Geschlecht, der Einfachheit wegen, in ein und derselben Grösse gehalten sind.

Tafel 9.

- Fig. 1. *Scops magicus* (S. Müll.) Type. Amboina (Kat. N^o. 1).
 » 2. » » (rothe Phase). » (» » 9).
 » 3. » *manadensis* Q. u. G. — Gorontalo (» » 2).
 » 4. » » (rothe Phase). » (» » 3).
 » 5. » » jung. » (» » 4).
 » 6. » » jung. Macassar (» » 1).
 » 7. » » Wetter (» » 19).

Tafel 10.

- Fig. 8. *Scops rutilus* Pucher. Madagascar (Kat. N^o. 3).
 » 9. » » jung. » (» » 6).
 » 10. » » » (» » 11).
 » 11. » *sulaënsis* (Hartert). Sula-Ins. (» » 1).
 » 12. » *siaoënsis* Schleg. Siao (» » 1).
 » 13. » » äusserste Schwanzfeder.

List of Works published by E. J. BRILL, Leyden.

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NOTES

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NOTE XXVI.

ON THE SPECIES OF THE GENUS
JONTHOCERUS LAC. AND DESCRIPTION OF A NEW
SPECIES FROM ZANZIBAR

BY

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Assistent in the R. Museum at Florence.

Some time ago I have had occasion, in speaking of the genus *Cerobates* Schh.¹⁾, to note the logical position in the Brenthids arrangement of the genus *Jonthocerus* Lac. after the suppression of the subfamily Ephebocerinae lately proposed by Prof. Sharp. This position is among the Stereoderminae near *Cerobates* to which the genus *Jonthocerus* is allied. In this subfamily, *Jonthocerus* represents the South American genus *Ephebocerus* Schh. of the Trachelizinae.

The characteristic of all the species of this genus is, in the males, the remarkable development of the eyes occupying often the greater part of the head, and the long and slender antennae clothed with delicate hairs. The females have the eyes smaller and normal, the antennae shorter and more robust; it is not easy to distinguish them from *Cerobates*.

The genus has a wide geographical distribution, its species inhabiting Ceylon, Upper Burma, Penang, Singapore, Saigon, Japan, Borneo, Sumatra, the Andaman and Mentawai Islands, Java, New Guinea, Australia, finally Zanzibar and Cameroon.

1) Notes Leyden Museum, Voi. XVII, p. 209, 1896.

The species are moderately numerous and all probably live under the barks of the fallen trees, like *J. nigripes*, observed by Mr. Lewis in Japan. Two species, *J. sondaicus* and *J. foveolatus*, described by me are imported in Europe with dry tobacco from Sumatra.

In the following table I indicate all the species known to me at present and, subsequently treating of each species, I give only the taxonomical characters, being of opinion that anyone using these diagnoses has made himself familiar with the generic characters.

A. Prothorax levis vel obsoletissime
basi impressus.

a. Caput et rostrum prothoraci vix
longitudine aequalia; prothorax
omnino levis.

1. *J. papuensis* Macleay.

aa. Caput et rostrum simul sumpta
prothorace longiora; prothorax
obsoletissime basi impressus.

2. *J. mentaweicus* Senna.

AA. Prothorax distincte canaliculatus
vel basi foveolatus.

b. Caput ad latera pone oculos
manifeste angulatum.

c. Oculi magni, frons valde an-
gusta.

3. Niger, opacus, elytrorum de-
clivitate apicali fulva; meta-
tarso postico articulis duobus
sequentibus unitis longiore. . *J. carinensis* Senna.

4. Ferrugineo-rufus, metatarso
postico articulis duobus se-
quentibus subaequali . . . *J. Modiglianii* Senna.

cc. Oculi mediocres, frons latior.

5. Niger, capite, rostro, anten-
nis, prothorace humerisque

- rufis; prothorace antice valde angusto, abdomine basi simpliciter impresso *J. angulaticeps* Senna.
6. Ferrugineo-rufus, prothorace antice latiore, abdomine basi sulcato *J. mimus* Senna.
- bb.* Caput ad latera pone oculos rotundatum, rare obsolete subangulatum.
- d.* Prothorax simpliciter basi foveolatus.
7. *J. foveolatus* Senna.
- dd.* Prothorax plus minusve canaliculatus.
- e.* Capitis vertex et occiput omnino leves.
8. *J. Pasteuri* Senna.
- ee.* Caput canaliculatum vel sulcatum.
- f.* Elytrorum interstitium 2^{um} (1^{um} prope suturale) medium versus interruptum vel indistinctum.
- g.* Oculi magni vel maximi, frons valde angusta.
- h.* Elytrorum apex in medio fortiter excisus.
9. Omnino testaceo-rufus, antennis albido-pilosis . . . *J. ophthalmicus* Pasc.
- hh.* Elytrorum apex in medio modice emarginatus.
10. Rufo-ferrugineus, capite cum rostro, antennis elytrorumque dimidia parte postica nigris vel brunnescentibus, antennis albido-pilosis *J. crematus* Lac.

11. Rufus, antennis pedibusque nigro-piceis, illis nigro-pilosis *J. nigripes* Lewis.
gg. Oculi minores, frons latior.
12. Rufo-brunneus vel rufo-ferugineus, elytris dimidia parte postica (apice excepto) brunneo-nigris *J. sondaicus* Senna.
ff. Elytrorum interstitium 2^{um} (1^{um} prope suturale) medium versus angustum sed conspicuum.
i. Prothoracis sulcus usque ad apicem prolongatus.
13. Niger, antennis pedibusque, interdum elytris postice brunnescentibus *J. zanzibarius*, n. sp.
ii. Prothoracis sulcus levior, pone medium carens.
14. Capite et prothorace rubro-brunneis, pedibus elytrorumque lateribus dilutioribus, elytrorum tertio basali et regione suturali nigris *J. Conradti* Senna.

1. *J. papuensis* Macleay.

Proceed. Linn. Soc. New South Wales, 2 ser., I, p. 194, 1886.

Distinctive characters: »Pale piceous red, head and rostrum together scarcely equal in length to the prothorax, all of these perfectly smooth. Antennae short, reaching to the base of the elytra, prothorax without median line, elytra with a raised suture and a depressed space on each side broadest at the base and running out before the apex, with two fine carinae in them. Length 2 lines”.

Hab. Fly river (New Guinea).

The above characters are taken from Macleay's descrip-

Notes from the Leyden Museum, Vol. XX.

tion which is undoubtedly based on a female specimen. This species is unknown to me and I have also some doubts as to its belonging to this genus.

2. *J. mentaweicus* Senna.

Ann. Mus. Civ. Stor. Nat. Genova, ser. 2^a, Vol. XIX (XXXIX), p. 228, 1898.

Distinctive characters: Ferruginous red; head rounded behind the eyes, these moderate and scarcely approximate on the front; prothorax shorter than the head and rostrum together, smooth, very obsoletely impressed near the base; elytra slightly striate at the sides, the apex angularly cut in the middle, the external angles rounded. Length 5 mill. ♂.

Hab. Mentawai Islands (West of Sumatra).

3. *J. carinensis* Senna.

Ann. Soc. Ent. Belgique, Vol. XXXVIII, p. 362, 1894.

Distinctive characters: ♂. Opaque black, elytra at the tip fulvous; head angulate behind the eyes, furrowed above, eyes large, very approximate on the front; prothorax channeled; elytra striate also at the sides, the apex emarginate in the middle, the external angles obtusely acuminate; hind metatarsus longer than the two following joints together.

♀. More robust, brown black, shining, elytra at the tip fulvous; head and front broader, eyes smaller, antennae shorter and more robust, with the joints oblong-ovate; prothorax broader, with the furrow deeper; tip of the elytra margined and rounded; tarsi shorter. Length 6—9 mill.

Hab. Upper Burma.

4. *J. Modiglianii* Senna.

Ann. Mus. Civ. Stor. Nat. Genova, ser. 2^a, Vol. XIX (XXXIX), p. 228, 1898.

Distinctive characters: Ferruginous red; head angulate behind the eyes, these large, nearly touching in front,

Notes from the Leyden Museum, Vol. XX.

occiput furrowed, with the margin of the furrow raised; prothorax channeled; elytra indistinctly striate at the sides, the apex angularly cut with the external angles obtusely acuminate; hind metatarsus nearly as long as the two following joints taken together. Length $4\frac{1}{4}$ mill. ♂.

Hab. Mentawai and Andaman Islands.

5. *J. angulaticeps* Senna.

Notes Leyden Museum, Vol. XX, 1898, p. 53.

Distinctive characters: ♂. Black, head, rostrum, antennae, prothorax, shoulders of the elytra and legs ferruginous red; head angulate behind the eyes, channeled in the middle, eyes moderate, more separated on the front than in *J. Modiglianii* Senna; prothorax channeled; elytra distinctly striate also at the sides, the apex emarginate, the external angles margined and rounded; metasternum and base of the abdomen shallowly impressed.

♀. Eyes smaller, frontal region broader, antennae shorter and more robust, with the joints oblong-ovate; tip of the elytra margined and rounded. Length $5-6\frac{1}{2}$ mill.

Hab. Western Java.

The var. *borneensis* Senna, from Borneo, has the eyes a little larger and more approximate on the front and at the base of the head; the elytra are ferruginous red near the base.

6. *J. mimus* Senna.

Ann. Mus. Civ. Stor. Nat. Genova, ser. 2^a, Vol. XIX (XXXIX), p. 229, 1898.

Distinctive characters: Ferruginous red; head distinctly angulate behind the eyes, singly impressed above, eyes moderate, less approximate at the base of the head than in the preceding species, front moderately narrow; prothorax channeled, broader anteriorly than in *J. angulaticeps* Senna; elytra distinctly striate also at the sides, the apex emar-

Notes from the Leyden Museum, Vol. XX.

ginate, the external angles margined and rounded; apical half of the metasternum and base of the abdomen furrowed. Length 5 mill. ♂.

Hab. Mentawai Islands.

The var. *sumatrana* Senna differs by having the eyes more approximate at the base of the head, the elytra blackish in the posterior half and the apex more emarginate with the external angles more regularly rounded.

7. *J. foveolatus* Senna.

Bull. Soc. Ent. Ital. XXV, 3, p. 300, tav. II, fig. 4, 1893.

Distinctive characters: Ferruginous red, head, rostrum and prothorax darker; head rounded behind the eyes, furrowed above, front very narrow, eyes large; prothorax foveolate at the base; elytra indistinctly striate at the sides, the apex angularly cut in the middle, the external angles margined and regularly rounded. Length $4\frac{1}{2}$ mill. ♂.

Hab. Sumatra.

This species is imported in Europe with dry tobacco (Grouvelle).

8. *J. Pasteuri* Senna.

Notes Leyden Museum, Vol. XX, p. 55, 1898.

Distinctive characters: Brown-red; head rounded behind the eyes, smooth above, eyes very large, nearly touching the base of the head and very approximate on the front; prothorax channeled; elytra indistinctly striate at the sides, the apex emarginate, the external angles margined and rounded; metasternum and base of the abdomen channeled. Length $6\frac{1}{2}$ mill. ♂.

Hab. Western Java.

9. *J. ophthalmicus* Pascoe.

Ann. and Mag. of Nat. Hist. ser. 4, Vol. X, p. 320, pl. XV, figs. 4, 4^a ♂, 1872.

Distinctive characters: Ferruginous red; head rounded or indistinctly subangulate behind the eyes, furrowed above,

Notes from the Leyden Museum, Vol. XX.

eyes large and approximate on the front, antennae clothed with whitish hairs; prothorax channeled; elytra as in the preceding species but with the apex more emarginate and the external angles more produced. Length 5—7 mill. ♂.

Hab. Queensland and Sumatra.

10. *J. crematus* Lac.

Gen. Coléopt. VII, p. 416, 1866.

Distinctive characters: Ferruginous red, head, rostrum, antennae and apical half of the elytra black or blackish; head rounded behind the eyes, channeled above, eyes large and very approximate on the front, antennae clothed with whitish hairs; prothorax channeled; elytra as in the preceding species, the apex emarginate and the external angles margined and subangulate. Length 7 mill. ♂.

Hab. Ceylon.

11. *J. nigripes* Lewis.

Journ. Linn. Soc. Vol. XVII, p. 298, pl. XII, fig. 5 ♂, 6 ♀, 1883.

Distinctive characters: ♂. Red, antennae and legs nearly black; head rounded behind the eyes, furrowed above, eyes large, nearly touching in front, antennae nearly as long as the body and clothed with black hairs; prothorax furrowed; elytra indistinctly striate at the sides, the apex slightly emarginate in the middle, the external angles rounded.

♀. Antennae robust, a little longer than the head and prothorax, eyes moderate, front broader. Length 3—4 lines.

Hab. Japan.

12. *J. sondaicus* Senna.

Bull. Soc. Ent. Ital. XXV, 3, p. 302, tav. II, fig. 5, 1893.

Distinctive characters: Brown-red or ferruginous red, the posterior half of the elytra (the apex excepted) blackish

or black-brown. Allied to *J. crematus* Lac. but smaller, the antennae clothed with whitish hairs, the eyes smaller and less approximate at the base of the head, front broader, elytra more emarginate at the apex and more distinctly striate at the sides. Length $4\frac{3}{4}$ mill. ♂.

Hab. Sumatra.

This species is imported in Europe with dry tobacco (Grouvelle).

13. *J. zanzibaricus*, n. sp.

♂. Shining black, legs, tip of the elytra, in one of the specimens also the sides, brownish. Head not angulate behind the eyes, channeled above, front very narrow, eyes large, rounded, very approximate at the base of the head, metarostrum slightly channeled in the middle and at the sides, attenuate anteriorly, prorostrum shorter, scarcely broader at the tip. Antennae nearly as long as the entire body, with the joints 3—11 cylindrical, clothed with whitish hairs, shorter than those of the eastern species.

Prothorax strongly constricted anteriorly, channeled above, the sides regularly curved.

Elytra elongate, with the shoulders a little raised, the sides almost parallel, the apex emarginate, the external angles sub-acuminate; deeply tristriate along the sutural interstice, this latter broad, deplanate, the following narrow in the median portion but more distinct than that of some eastern species; elytra at the sides also distinctly striate, the striae not so deep as the sutural ones.

Legs regular, hind metatarsus longer than the following two joints taken together.

Body beneath brown, shining, head and metarostrum almost keeled in the middle, the remaining portion of the rostrum excavate; metasternum and base of the abdomen channeled. Length $5\frac{1}{2}$ mill.

Hab. Zanzibar.

Two males, captured by Mr. Raffray, in the Genoa Museum.

J. zanzibaricus m., the second species of this genus

recorded from Africa, is easily distinguishable from the eastern species by the joints of the antennae which are clothed with shorter hairs, and by the 2nd dorsal interstice which is broader in the middle portion of the elytra.

14. *J. Conradti* Senna.

Deutsche Ent. Zeitschrift, 1898, II, p. 374.

Distinctive characters: ♂. Red-brown, legs, tip and sides (except the base) of the elytra more reddish, basal third and sutural region black; head not angulate behind the eyes, above obsolete channeled, front narrow, eyes very large, antennae clothed with short whitish hairs; prothorax slightly and briefly channeled; elytra with the 2nd interstice as conspicuous as in the preceding species, the apex emarginate and the external angles obtuse. Length 7 mill.

Hab. Cameroon.

Florence, September 1898.

NOTE XXVII.

ASPIDOSIPHON CYLINDRICUS, N. SP.

BY

Dr. R. HORST.

Fig. 1.

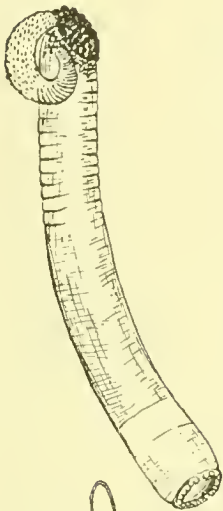


Fig. 2.

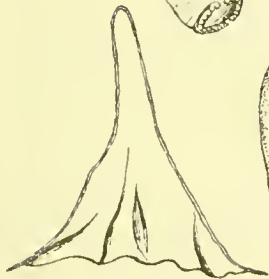
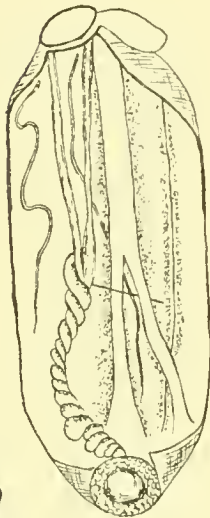


Fig. 3.

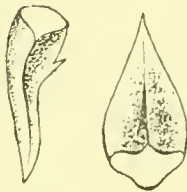


Fig. 4.

Fig. 1. *A. cylindricus* from the lateral side ($\times 2$). Fig. 2. The animal laid open by an incision along the right side ($\times 2$). Fig. 3. A hook from the basal part of the proboscis ($\times 215$). Fig. 4. Two hooks from the terminal part of the proboscis ($\times 375$).

Among a small collection of Invertebrates, recently collected by Mr. K. Schädler in the neighbourhood of Kisser, I met with a gephyrean worm, belonging to the genus *Aspido-siphon*. Though we know already several species of this genus from the Malay Archipelago, thanks the careful investigations of Dr. Sluiter, during his stay at Batavia ¹⁾, the present specimen could not be identified with one of them.

The body of our specimen (fig. 1) has a nearly cylindrical shape; it measures $3\frac{1}{2}$ mm. in breadth, its length being about eight times greater (26 mm.). The colour of the body is brownish-yellow, that of the anal and terminal shields dark brown, almost black. In the anterior half

1) Beiträge zu der Kenntniss der Gephyrëen a. d. Mal. Archipel; Natuurk. Tijdschrift voor Ned. Indië, Dl. XLI, XLIII, XLV.

of the trunk the body-wall is rather thick, marked by annular grooves; in its posterior half, however, the skin is plain and thin, and the retractor-muscles and nephridia are visible through it. On a distance of 3 mm. from the terminal shield, nearly on the place where the retractor-muscles are attached to the body-wall, the skin shows a girdle-shaped area of a glistening appearance. The cutaneous bodies (Hautkörper) are not very densely scattered over the surface of the body; they resemble those of *A. Steenstrupii* (Selenka, die Sipunculiden, taf. XIII, fig. 191), but only a single glandular opening could be detected, somewhat by the side of the centre. The anterior and posterior shields have about the same size, but not the same shape; the first of them is elliptical and lies at an oblique angle to the trunk. It is convex and divided in a great number of small polygonal areas, consisting of a dark brown chitinous substance; on the passage between this shield and the adjacent skin, similar areas are visible over a narrow space, but they are only surrounded by a dark brown margin. The posterior or terminal shield is of a paler colour, circular and concave; its margin is also divided by grooves in numerous polygonal areas.

The proboscis or introvert is very short, about 8 mm. long, though he may perhaps not be totally protruded. Its terminal part is, over a third of its length, densely beset with parallel rows of small brown hooks, the remaining posterior part showing larger hooks, irregularly scattered. The smaller hooks (fig. 4) are only 0.048 mm. high; they have the shape of a triangular pyramid, with a large convex face and two smaller concave ones. The edge between the two latter faces bears a small, hardly visible tooth in its basal half. The hooks of the basal part of the proboscis are two and a half times larger and look like conical spines, faintly bent and furnished near their base with several prominent ridges. Between both kinds of hooks the usual conical excretory ducts of glands can be observed.

The layer of longitudinal muscles is continuous, of glistening appearance, much thicker in the anterior third part of the body, where at the dorsal side some irregular slits are visible. Two strong retractor-muscles (fig. 2) are attached with broad base near the caudal end of the body, on about $\frac{1}{7}$ of its length, the left a trifle more anteriorly than the right one; they are fused nearly in the middle of the body. The spiral of the alimentary canal shows nine double coils and is furnished with a complete spindle-muscle, which is attached in the middle of the posterior shield. An other muscle (Befestiger) arises from the place of passage of the oesophagus into the intestinal spiral, passes through the angle between the two retractor muscles and is attached to the body-wall at the left of the nerve-cord. A diverticulum could not be observed. The nephridia are long and slender; they do not extend quite till the end of the retractor-muscles, and the right appears not to be so long as the left one. Over a great part of their length the nephridia are fixed to the body-wall by a mesenteric ligament.

Of the ten species of *Aspidosiphon*, observed in the Indian Ocean, our specimen most resembles in its external appearance *A. Steenstrupii* Dies. ¹⁾; however, this species belongs to the group having the longitudinal muscles split up into bundles. In structure it more agrees with *A. ravus*, found by Sluiter in the bay of Bantam and kindly placed by him at my disposal for comparison ²⁾. This species, however, differs from the Kisser-specimen in several external and internal characters. Its body is only $5\frac{1}{2}$ times as long as broad, the anal shield is finely

1) Selenka, de Man und Büllow, Die Sipunculiden, Taf. I, fig. 12 und 13.

2) For some of my colleagues I think it interesting to know, that the Museum of the „Koninklijke Natuurkundige Vereeniging in Ned.-Indië” at Batavia does no longer exist, and that the Invertebrates, collected and described by Dr. Sluiter, all are transported to the Zoological Museum of the University of Amsterdam.

granular and lies with a less oblique angle to the trunk, the proboscis is longer and its hooks have another shape; internally it is distinct by its much broader nephridia and by having the retractor-muscles attached on a greater distance from the caudal extremity.

Leyden Museum, October 1898.



NOTE XXVIII.

A NEW HELOTA-SPECIES FROM SUMATRA

BY

C. RITSEMA Cz.

The species described in this Note and dedicated to the late Dr. E. Candèze of Glain near Liege is very interesting necessitating the establishment of a new section in my Synopsis of the species of this genus ¹). It belongs to the division I (base of elytra coloured as the apex), A (elytra with four convex flavous spots), *b* (pronotum finely and evenly punctured, without raised patches), but it has the prosternum neither entirely fulvous (α), nor fulvous in the middle with the lateral portions metallic green (β): in the new species the prosternum is entirely of a dark metallic green colour.

Helota Candezei, n. sp. ♂.

Length $6\frac{1}{2}$ mm. — Subshining; above dark bronze green with purple tinges along the middle of the elytra, especially round the elytral spots; antennae dark pitchy approaching to black; the elytra provided with two pairs of small convex flavous spots which are placed between the 3rd and 6th striae; the anterior spots are larger than the posterior ones. Underneath the head, the prosternum and the elytral folds are dark bronze green; the meso- and metasternum, the abdomen, the coxae and the femora (the tip of the latter excepted) reddish testaceous; the tip of the femora and the entire tibiae and tarsi are dark pitchy, the claws reddish testaceous.

The upper surface of the head is rather strongly punc-

1) Notes Leyden Museum, Vol. XIII, 1891, p. 223.

tured, the punctures on the clypeus, however, are fine and wider apart; the punctures on the raised middle portion are elongate-ovate.

The prothorax is at the base distinctly broader than long, and narrows in slightly curved lines towards the front-margin; the sides are indistinctly crenulate, the front-margin is curved backwards, the anterior angles are slightly protruding; the base is deeply bisinuate, the basal angles are acute, the median lobe is truncate; the upper surface is covered with punctures which become larger and more closely set towards the lateral margins; in front of the scutellum a longitudinal impunctate streak is present on the basal half, and it is accompanied on each side by a large but indistinct impression. The scutellum is strongly transverse, glossy and impunctate.

The elytra are subparallel narrowing somewhat to the apices which are slightly dehiscent and almost conjointly rounded. Each elytron is provided with ten regular rows of punctures (the 10th row is marginal); the punctures of the 7th—10th rows are larger than the others; the interstices are provided with some extremely fine punctures and become more or less costate towards the apex, especially the 3rd and 9th which extend to the apical margin.

The under surface of the head shows in the middle very distinct but rather remotely placed punctures, on the lateral portions the punctures are very close together. The middle of the prosternum is sparsely punctured, on the sides however the punctures are larger and more densely set. The middle of the metasternum is impunctate, the abdomen finely but very distinctly punctured. The apical ventral segment is flattened, transversely impressed before the apex which is broadly truncate. The tibiae are provided with large punctures, the anterior ones are strongly curved.

A single male specimen, captured at Palembang (Sumatra) by Mr. Bouchard, in the Leyden Museum.

Leyden Museum, November 1898.

NOTE XXIX.

ON THE VARIABILITY OF CHARACTERS IN
PERICHAETIDAE

BY

Dr. R. HORST.

Every one occupied with the study of Perichaetidae, no doubt will be persuaded, that too much species of this genus are based on a single specimen, that showed some slight differences from well-known type-species, whether by its being not quite mature, or by the variability of some of its organs. In a recent paper Michaelsen ¹⁾ as well as Benham ²⁾ especially called attention to this fact and urged the necessity of examining as many individuals of a species as possible, to augment our knowledge of the variability of the characters of these worms and of their value for the discrimination of the species. Whether Michaelsen is right in uniting so many species of Perichaeta, as done by him in his paper, above referred to, I hope to discuss later on; for I think Benham rightly says: »until we know more of the variability of the animals we are justified in regarding a given position as fixed, if any considerable number of specimens reveal it." In the present paper I wish to point out for a couple of them the variability of some characters always used in differentiating *Perichaeta*-species, viz. the number of spermathecae, and the number and arrangement of copulatory papillae.

1) Oligochaeten in Kükenthal's *Ergebn. einer Zoolog. Forschungsreise in den Molakken und Borneo*; *Abhandl. Senckenb. naturf. Gesellsch.* Bd. XXIII, 1896, p. 208.

2) *Journ. Linnean Society, Zoology*, vol. XXVI, p. 221.

Perichaeta biserialis Perrier.

(— *monocystis* Bedd.).

Some years ago my friend Dr. Th. Lens, Surgeon of our West-India army, kindly forwarded me a bottle with earthworms, collected in Paramaribo. Among them there are several examples, which must be identified with *P. biserialis* Perr.¹⁾, though this species hitherto is not observed in South-America, and only mentioned from the distant isles of Madagascar and the Philippines. Like several other earthworms this species therefore appears to have a very wide distribution, probably due to man's interference. According to the investigations of Perrier²⁾, Beddard³⁾ and Michaelsen⁴⁾ *P. biserialis* is distinguished by the following characters: chaetal ring on a prominent ridge, presenting a ventral gap, on each side of which there is an enlarged bristle, forming thus behind the girdle an apparent longitudinal row of setae on the left and the right of the ventral median line; upon the segments in front of the girdle, except the anterior ones, two or three setae on each side are thus enlarged. The male generative pores situated on prominent, conical papillae upon segment XVIII and the 3 to 7 succeeding segments each with a pair of copulatory papillae in positions nearly corresponding with them. First dorsal pore in the intersegmental groove XII/XIII. The fifth, sixth and seventh septum are specially thickened; for Beddard's assertion that they should lie one segment more posteriorly I think to be erroneous. Two pairs of spermathecae, opening into the intersegmental grooves V/VI and VI/VII, consisting of a globular main pouch, with short excretory duct and a tubular diverticulum, extending over 2/3 of its length.

1) The collection contained also *P. posthuma* Vaill., *P. Houletti* Perr., *Pontosc. corethrurus* Fr. Müll. and a *Benhamia* sp.

2) Compt. Rendus de l'Acad. des Sc. LXXXI, 1875. p. 1043.

3) Proc. Zool. Soc. 1890, p. 63, pl. IV, fig. 7.

4) Abhandl. Senckenb. naturf. Gesellsch. Bd. XXI, 1897, p. 226.

Prostata large, occupying segments XVI—XIX, flat, reniform, with U-shaped duct. Intestinal coeca not present in segment XXVI.

The two specimens examined by Beddard and first identified by himself with *P. biserialis*, afterwards were described as belonging to a new species, on account of the absence of spermathecae; however, I cannot agree with his assertion, as will appear from the following.

Perrier, who in 1875 first described *P. biserialis* from the Philippines, already pointed out the variability of the number of copulatory papillae in this species; he says »on peut en effet constituer une série d'individus présentant, en arrière des orifices mâles, de chaque côté de la ligne médiane ventrale, une rangée de trois, quatre, cinq, six ou sept papilles. Quelques individus ont même trois, quatre ou cinq papilles d'un côté, quatre, cinq ou six papilles de l'autre." In 1890 Beddard examined two specimens from Manilla, both characterized by the presence of 5 pairs of copulatory papillae. In the foregoing year Michaelsen published a detailed description of the same species, based on the examination of five individuals, collected in Madagascar. He confirmed the variability of the number of copulatory papillae, for of these specimens four showed but 3 pairs of papillae, while the fifth one had 5 pairs of them.

My own observations about the worms from Surinam are quite in agreement herewith. Eight mature worms came under examination and of these two have 4 pairs of copulatory papillae on segments XIX—XXII; three of them show only 3 pairs on segments XIX—XXI; one specimen has 3 papillae on segments XIX—XXI at the right side, and on segments XX—XXII at the left, while on both remaining worms one has only 3 papillae at the right, the other one at the left side of the body on segments XIX—XXI. None of them thus showed the number of 5 pairs of papillae, as observed by the above-named naturalists.

In our specimens, however, the variability is not

limited to the number of papillae; they also show remarkable differences in the number of spermathecae. Only in a single specimen two pairs of spermathecae were observed in segments VI and VII; they agree rather well with Michaelsen's description, though I found the main pouch more pear-shaped than globular and the diverticulum only extending till the half of its length in stead of two thirds. Considering however that the shape and size of this pouch depends somewhat on the state of being more or less filled, I think no much value can be ascribed to those differences. Of the seven remaining worms one specimen (with 4 pairs of papillae) only shows a single spermathecal pore at the left side in the intersegmental groove V/VI, corresponding with a spermatheca without diverticulum in segment VI; another specimen (also with 4 pairs of papillae) has three spermathecal pores in a row in the same situation. Comparing the spermathecae of the last individual with those of the first one, the main pouch proves to be somewhat more slender and the diverticulum does not extend quite till the half of its length. In the fourth specimen also at one side (the right) spermathecal pores are visible, 4 in the intersegmental groove V/VI and 3 in that between segments VI and VII. On the contrary in four other specimens no trace whatever of spermathecal pores or spermathecae could be found; they agree in this character with both individuals examined by Beddard, and represent, I think, his species *P. acystis*.

As Benham already suggested, that in this species the spermathecae might perhaps be not yet functional and therefore extremely minute like in some specimens of *Lumbricus herculeus* with fully-developed sperm-sacs and clitellum, I made transverse sections of one of our worms, but no trace of spermathecae was visible.

Also the arrangement of the setae showed some irregularity in a couple of worms. Ordinarily the distance between both enlarged ventral bristles measures four times the usual distance; on some segments, however, it can amount

till five or six times that distance, and thereby the continuity of the series of large setae is also broken off. In the number of setae our worms agree very well with Michaelsen's statement; I found on segment X 83 bristles, while he mentions 81 on segment V and 90 on segment X. The length of the enlarged setae is two and a half to three times that of the ordinary ones; at their distal extremity they are ornamented with obvious transverse grooves.

Similar variations in the number of spermathecae were already observed by Beddard some years ago in a lot of worms from Manilla belonging to *P. posthuma*¹⁾; besides normal specimens with four pairs of spermathecae, he found one individual with three pairs of them, another one with no trace whatever of spermathecae, while in one specimen there were in segment VIII on the right hand three spermathecae in a row, instead of a single.

Perichaeta Stelleri Mich.

(*P. Everetti* Bedd., *P. papillata* Bedd., *P. sarawacensis* Bedd., *P. kinabaluensis* Bedd.).

In 1891 Michaelsen described a remarkable *Perichaeta*-species²⁾ from the Sangi-isles, distinguished by the fact that it possesses numerous (16—28) spermathecae in segments VI and VII, furnished with diverticula, which are swollen at their base. The male pores situated on very prominent papillae on segment XVIII; moreover a pair of copulatory papillae on the three succeeding segments XIX—XXI. First dorsal pore in the intersegmental groove XII/XIII. Setae in a nearly continuous ring, on a prominent ridge; fifty-six in the middle of the body. The 5th—8th and 11th—14th septa specially thickened. Intestinal coeca absent.

Four years afterwards Beddard described in his Monograph of *Oligochaeta*, four new species from Borneo quite allied to *P. Stelleri*: of those *P. Everetti* is also char-

1) Ann. a. Mag. of Nat. History, Ser. 5, vol. XVII, 1886, p. 93.

2) Jahrb. Hamb. Wissensch. Anstalten, VIII, p. 39.

acterized by the presence of three pairs of papillae on segments XIX—XXI, but has 12 and 17 spermathecae respectively in segments VI and VII; *P. papillata* with ten pairs of papillae on the segments XIX—XXVIII and 7 spermathecae in segments VI and VII; *P. sarawacensis* with four pairs of papillae on the segments XIX—XXII, and 14 spermathecae in segments VI and VII; *P. kinabaluensis*, having on segments XIX and XX a single median papilla, like those of *Everetti* fused, on segment XXI the left half only developed and in segments VI and VII, 11 and 17 spermathecae in each. In Kükenthal's *Ergebnisse einer zoologischen Forschungsreise* Michaelsen describes another badly preserved specimen of *P. Stelleri* from Borneo, with 5 and 9 spermathecae in segments VI and VII respectively, and he makes the suggestion that the above-named species of Beddard all could be identified with his *P. Stelleri*. I think Michaelsen's suggestion quite right, for the number of papillae and spermathecae, characterizing Beddard's different species appear not to be constant, but liable to much variation.

I had the opportunity to examine a great number of Perichaeta-specimens, collected by Dr. Büttikofer in Western-Borneo (Poetoes Sibau, Nanga raoen, the Liang Koeboeng); they agree with each other externally in the presence of a pair of papillae on several segments behind the male pores, internally in the presence of more than one pair of spermathecae in segments VI and VII, and the absence of intestinal coeca. They all I believe must be identified with *P. Stelleri* and are characterized in the following manner.

The length of their body varies from 115 to 300 mm.; the number of segments amounts to 150. The colour is olive-brown, violet on the upper side, often with a dark line in the dorsal mid-line; chaetal circles whitish. Cephalic lobe extending over two-thirds of the buccal segment, which is longitudinally folded. Setae on a prominent ring in front of the clitellum, with obvious dorsal

gap; 54 of them on segment VI, 68 on segment XIX. The ventral setae are straighter and longer than the dorsal ones. No setae on clitellum. First dorsal pore in the intersegmental groove XII/XIII. Several small spermathecal pores in a transverse row, in the grooves between segments V and VI, VI and VII. Oviducal pore single, on an oval area upon segment XIV. Male pores, on prominent conical papillae, formed by a longitudinal crescent fissure with crenulated lateral margin. In the interspace between the male pores 12 to 14 setae; their number is somewhat variable, and depends on the development of the papilla.

The number of pairs of copulatory papillae on the succeeding segments is different in several individuals. In most of them there are four pairs of papillae on segments XIX—XXII; but this number can increase to eleven pairs and decrease to a single one.

On comparing the number of papillae of different individuals they will prove to form an almost uninterrupted series, as demonstrated by the following table:

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i</i>
Length:	mm. 240	300	290	300	?	115	150	105	160
XIX.
XX	
XXI.		
XXII			
XXIII.				
XXIV.					
XXV						
XXVI.						
XXVII						
XXVIII.							
XXIX.								

The first specimen (*a*) is characterized by the presence of 11 pairs of papillae on segments XIX—XXIX; a second specimen (*b*) however possesses 9 pairs on segments XIX—

XXVII and a single papilla on segment XXVIII at the right ventral side, so we may conclude that of the tenth pair the left one is not developed. In a third specimen (*c*) we find 9 papillae at the left and 3 at the right ventral side, forming a complete pair only on segments XIX, XXVI and XXVII, while on the interposed segments (XX—XXV) the right papilla is not developed. Next follows an interruption in the series, for specimens with 7 and 8 pairs have not been observed by myself, but an individual (*d*) collected on the Liang Koeboeng showed 6 pairs on segments XIX—XXIV. Another specimen (*e*) presents 4 pairs of papillae on segments XIX—XXII and a single one, at the right side, on segment XXIII; it is likely that of the last pair the left papilla was not developed. In another individual there are no papillae on the anterior segments XIX and XX, but segments XXI and XXII show a pair of them and segment XXIII a single one; it may be presumed that in this specimen both anterior pairs of papillae and one of the last pair are checked in their development. Specimens with 4 pairs of papillae on segments XIX—XXII, like *f*, are very common; even in immature individuals, without clitellum, these papillae are recognizable. A specimen, that has only two pairs of papillae on segments XXI and XXII, but wants those on the two preceding ones, belongs to the same category. In the worms from Nanga raoen there are but 3 pairs of papillae visible on segments XIX—XXI (*g*). A few specimens (*h*) have only 2 pairs of papillae on segments XIX and XX; and in one individual (*i*) only a single pair of them on segment XIX is present. The papillae have a transverse oval shape and are situated just in front of the circle of setae, which sometimes are pushed from their place ¹).

The spermathecae lie in segments VI and VII; in most specimens there are more than one pair in each segment,

1) For an account of their structure, as also for more details of the internal anatomy, see my paper „on the earthworms of the Dutch Scientific Expedition to central Borneo.”

and usually the number of them at the right side is not the same as that at the left. The largest number, observed in segment VI, was 29: at the right side 17, at the left 12; it was in a worm from Sintang, with only a single pair of papillae. In a couple of specimens I found only two spermathecae in this segment, one on each side. In segment VII the number of spermathecae usually is larger than in the preceding; in one specimen I observed 30 of them, 15 at the right and 15 at the left side. The smallest number I met with was 3 on each side. It is not always in the largest specimens that the greatest number of spermathecae is to be found. A specimen, 300 mm. long, showed a single pair of them in segment VI, while in segment VII there were 12, at the right side 7, at the left 5; on the contrary one individual, 115 mm. in length, had in segment VI five spermathecae, 3 at the right and 2 at the left, while the following segment showed 5 pairs of them.

Leyden Museum, November 1898.

NOTE XXX.

ON ALPHEUS HIPPOTHOË, DE M. VAR.?

BY

Dr. J. G. de MAN.

Alpheus hippothoë de M. var.?, in: Zoologische Jahrbücher, herausgegeben von J. W. Spengel, Abth. f. System. Vol. IX, 1897, p. 754, tab. 36, fig. 66.

Two specimens, one of which carrying eggs, from the Sugut river, North Eastern Borneo, collected by Mr. Prakke.

Both specimens have the same size and measure about 18 millim. from the tip of the rostrum to the end of the telson; they are somewhat smaller than the Atjeh specimens described l. c., the largest of these being 28 millim. long. Though both individuals are only provided with the larger chelipede, they ought, however, to be referred to the variety quoted above. The rostrum which reaches about to the distal extremity of the first joint of the antennular peduncle, scarcely extends backwards to the middle of the cephalothorax; the upper margin of the interocular compressed portion of the rostrum appears slightly concave. In both specimens the basal joint of the outer antennae is armed with a very small spine on the anterior margin of the inferior surface, not visible when looked at from above.

In both individuals the larger hand fully agrees with that of the Atjeh specimens, and this is also the case with the carpal joints of the 2nd pair of legs. The five joints of the carpus of these legs are respectively 1,9—0,76—0,44—0,44 and 0,7 millim. long, the first joint is a little shorter than the four following together and $2\frac{1}{2}$ times as long as the second joint; the hand, measuring 1,6 millim., is as long as the third, fourth and fifth joint together. The following legs also agree with the Atjeh-specimens.

The globular eggs of the female have a diameter of 0,5 mm.

Ierseke, June 1898.

Notes from the Leyden Museum, Vol. XX.

NOTE XXXI.

QUELQUES COLÉOPTÈRES DE L'AFRIQUE
OCCIDENTALE FRANÇAISE

PAR

Mr. L. FAIRMAIRE.*Orphnus subfoveatus*, n. sp.

Long. $5\frac{1}{2}$ à 7 mill. — Ovatus, convexus, rufus, nitidus; capite brevi, antice utrinque fortiter foveolato; prothorace transverso, elytris haud angustiore, lateribus sat rotundato, punctulato, antice angustiore; scutello ogivali, fere ruguloso-punctato; elytris brevibus, ad humeros angulatis, sat grosse parum dense punctatis, suturam versus vage lineatis, stria sutura sat impressa; pygidio parce punctato; tibiis anticis tridentatis, dentibus 2 apicalibus validioribus, tibiis 4 posticis longe spinosulis, calcaribus posterioribus articulis 2 primis conjunctis haud brevioribus; ♂ minor, prothorace subtilius punctato, antice fovea parum profunda, fere semicirculari, lateribus haud carinata impresso; ♀ major, prothorace laevi, fortius punctato, elytris magis punctatis et evidentius lineatis.

Hab. Soudan. — Donné par Mr. M. Aubert.

Ressemble assez au *senegalensis*, mais plus court, moins fortement ponctué; l'impression du corselet est très différente, peu profonde, ne dépassant guère en arrière le milieu du corselet, au lieu d'être très profonde, carénée sur les côtés et atteignant presque le bord postérieur; en outre la tête du ♂ est inerme.

Notes from the Leyden Museum, Vol. XX.

Apogonia Conradtii, n. sp.

Long. 12 mill. — Ovata, modice convexa, fusco-metallescens, nitida, sat dense fulvo-villosa; capite brevi, dense punctato, fere rugosulo, clypeo late sinuato, utrinque rotundato-anguloso, transversim leviter impresso; prothorace lato, longitudine plus duplo latiore, elytris vix angustiore, antice angustato, lateribus leviter arcuatis, dorso dense rugoso-punctato, angulis posticis fere obtusis, anticis paulo productis; scutello triangulari, apice fere rotundato, dense punctato; elytris subquadrato-ovatis, dense irregulariter punctatis, rugosis, extus plicatulis, sutura et utrinque costulis 3 vix elevatis, apice magis convexis, lateribus costulatis, apice abrupte rotundato; subtus cum pedibus subopaca, fulvo-pubescent, abdomine lateribus rufomaculato; tibiis anticis apice dentibus 2 minutis approximatis; pygidio rugosulo, rufopiloso, medio breviter carinato; ♂, segmento ventrali 2^o medio tuberculo sat prominente signato; ♀ minor, abdomine haud tuberoso, pygidio basi utrinque foveato.

Hab. Congo français (Arrighi); Cameroun (Conradt). — Collection Oberthür et la mienne.

Quand cet insecte est frais les pilosités des élytres forment sur l'extrémité des côtes des touffes plus ou moins marquées, plus ou moins nombreuses.

Ressemble assez à la *sanghira* Oberth. par la taille, la coloration et le chaperon sinué; mais la sculpture et la vestiture sont fort différentes.

Cyphonistes impressicollis, n. sp.

Long. 22 mill. — Ovatus, postice leviter ampliatus, fuscus, nitidus; capite antice attenuato, apice truncatulo, antice ruguloso-punctato, fronte parum punctulata, transversim excavata, carina clypeali medio elevata et emarginata; prothorace elytris vix angustiore, longitudine fere duplo latiore, lateribus rotundato, antice paulo angustiore, dorso lævi, antice et lateribus parum dense et parum

fortiter punctato, medio sulcatulo, antice sat late parum fortiter impresso et supra utrinque obtusissime angulato, margine basali angustissime fortiter punctato; scutello lato, triangulari, apice parum acuto, lævi; elytris breviter ovatis, ad humeros parum rotundatis, stria suturali punctata, basi impressa, utrinque lineis punctatis substriatis seriatim geminatis, intervallis alutaceis, irregulariter parum dense punctatis, primo basi præsertim latiore; pygidio brevi, transversim convexo, alutaceo; subtus alutaceus, rufopilosus, segmentis ventralibus apice magis elevatis et laevibus, pedibus sat brevibus, validis, femoribus compressis, tibiis anticis fortiter et acute tridentatis, tarsis anticis articulo ultimo valde inflato, unguiculo externo valde crasso et abrupte arcuato, altero gracillimo et brevior.

Hab. Gabon. — Ma collection.

Basanus guineensis, n. sp.

Long. 9 mill. — Oblongo-ovatus, postice haud ampliatus, modice convexus, nigro-fuscus, nitidus, elytris utrinque macula basali testacea, transversa, suturam fere attingente, humeris et macula scutellari quadrata nigris, et ante apicem macula minore transversa paulo arcuata similiter colorata signatis; capite punctulato, clypeo utrinque leviter impresso, ore et palpis rufis, antennis articulis 6 ultimis gradatim latioribus, clavatis; prothorace transverso, elytris angustiore, antice a medio sat fortiter angustato, lateribus medio fere angulatis, marginatis, dorso punctulato; scutello paulo rufescente, vix punctulato; elytris ovato-oblongis, apice conjunctim subrotundatis, subtiliter sat dense punctatis, basi fortius; femoribus 4 posticis subtus dente acuto armatis.

Hab. Cameroun (Conradt). — Collection Oberthür et la mienne.

Ressemble aux *Basanus* déjà décrits, mais le corps est plus large, les antennes sont un peu plus longues, le corselet est très différent, étant un peu rétréci en arrière

avec les côtés obtusément angulés, les taches des élytres sont plus jaunes et la première entoure presque complètement la tache noire scutellaire presque carrée.

Lyprochelyda, n. g.

Corpus late ovatum, parum convexum. Caput parvum, breve, oculi globosi, antennæ validæ, apicem versus gradatim crassiores, articulo ultimo majore, articulis 3 primis brevibus, subæqualibus, palpi maxillares articulo ultimo late triangulari. Prothorax brevis, elytris angustior, lateribus explanatus. Elytra ovata, marginata, margine apice valide angusto, epipleuris basi latis, apice gradatim angustatis. Prosternum mediocre, convexum, mesosternum sat excavatum, lateribus elevatis, processus intercoxalis obtuse rotundatus. Pedes sat breves, tarsorum articulo penultimo integro.

Le faciès de ce nouveau genre est un peu celui de certaines Chrysomélides ou d'un large *Anædus*; mais sa place est près des *Lyprops* dont il diffère par ses antennes robustes, à dernier article gros, le corps marginé, le corselet presque foliacé sur les côtés, à bord postérieur presque droit et les 4 fémurs postérieurs armés en dessous d'une forte dent épineuse.

Lyprochelyda purpurina, n. sp.

Long. 10 mill. — Ovata, parum convexa, piceolo-testacea, purpurino-micans, nitida, rufopilosula, capite prothoraceque magis rufescentibus, hoc medio obscuriore; elytris ad marginem externum anguste rufescentibus; capite punctato, inter antennis fere rugosulo, his validis, apicem versus paulo crassioribus, fuscis, basi rufis; prothorace elytris angustiore, longitudine triplo latiore, lateribus antice fortiter rotundato, dorso sat fortiter parum dense punctato, lateribus fere foliaceis, angulis anticis sat rotundatis, posticis acutiusculis; scutello triangulari, lævi; elytris

amplis, ad humeros late rotundatis, ad latera leviter arcuatis et anguste marginatis, dorso sat laxè punctato et leviter irideo; subtus rufescens, nitida, abdomine basi late infuscato, pedibus nigro-fuscis, femoribus 4 posticis subtus ante apicem dente lato apice spinoso armatis.

Hab. Cameroun (Conradt). — Collection Oberthür et la mienne.

Morocaulus, n. g.

Corpus oblongum, convexum. Oculi magni, transversi, confusi, subgrosse granulati. Clypeus brevis, transversim profunde impressus, antennæ sat validæ, medium corporis superantes, articulo 3^o sequenti longiore, omnibus apicem versus leviter latioribus et apice angulatis. Palpi maxillares articulo ultimo sat magno, oblique truncato. Prothorax brevis, elytris parum angustior. Scutellum mediocre. Elytra basi truncata, ad humeros sat rotundata, striata, epipleuris angustis. Pedes mediocres, posteriores longiores, compressi, tibiis posticis longioribus, fere a basi gradatim dilatatis, foliaceis, tarsis sat brevibus, posticis articulo 1^o ceteris conjunctis longiore, unguibus subtiliter pectinatis.

Ce nouveau genre est extrêmement curieux; il doit se placer près les *Allecula*, mais les yeux très gros, confondus, les antennes épaisses, les tibiais postérieurs élargis comme chez certains *Callichromides* le rendent fort remarquable et sans affinités bien marquées.

Morocaulus remipes, n. sp.

Long. 7 mill. — Oblongus, sat convexus, fuscus, opacus, elytris testaceo-rufulis, nitidulis, apice et lateribus fusculo-virescentibus, ore pedibusque rufotestaceis, genibus et tibiis posticis fuscis, tarsis testaceis, antennis fusco-piceis, apice rufescentibus; prothorace brevi, valde transverso, antice leviter angustato, lateribus antice tantum arcuatis, tenuiter marginatis, dorso lævi, basi transversim impresso, impressione utrinque profundiore, margine postico leviter

bisinuato, angulis posticis sat acutis; scutello mediocri, triangulâri, apice obtuso; elytris oblongis, fere parallelis, post medium leviter gradatim angustatis, fortiter striatis, striis subtiliter punctulatis, intervallis convexis, lævibus; subtus rufus, tibiis posticis laminatis et supra longitudinaliter carinatis.

Hab. Benito, Gabon. — Ma collection.

Ce curieux insecte est le plus remarquable du groupe des Cistélides.

Argobrachium, n. g.

Faciès des *Hoplonyx*, en diffère beaucoup par la tête creusée au milieu, cette cavité bordée le long des yeux par un pli assez mince, élevé, ceux-ci très écartés, assez gros, légèrement échancrés; en outre les fémurs antérieurs sont inermes. La tête est courte, tronquée en avant ainsi que le labre; le dernier article des palpes maxillaires est largement triangulaire, les antennes dépassent à peine la base de l'abdomen, les 5 derniers articles sont plus larges, en massue très allongée, les 4 derniers mats, le 6^e un peu plus large que le 5^e, plus brillant que les 7^e et suivants; le corselet est transversal, un peu plus étroit que les élytres, fortement arrondi aux angles antérieurs, celles-ci ont des lignes de gros points, effacées à l'extrémité; les épipleures très larges à la base, se rétrécissant rapidement; les pattes de grandeur médiocre, assez robustes, un peu comprimées, les tibias antérieurs surtout, et légèrement arqués, crochets robustes, très divariqués, fortement arqués.

Genre difficile à classer, ayant une grande ressemblance avec les *Hoplonyx*, mais très différent par la tête, l'écartement des yeux et les fémurs antérieurs inermes.

Argobrachium impressifrons, n. sp.

Long. 11 mill. — Elongatum, sat convexum, piceo-fuscum, nitidum; capite sat brevi, antice fere truncato, fronte late

impressa, ad oculos plicatulo-elevata; prothorace valde transverso, elytris angustiores lateribus levissime arcuatis, sed ad angulos anticos valde rotundatis, posticis fere rectis, dorso laxè punctato, elytris minus nitido, basi utrinque leviter sinuata et breviter marginata; scutello brevi, sat lato, apice obtuso rotundato; elytris oblongis, subparallelis, ad humeros rotundatim angulatis, dorso sat grosse lineato-punctatis, levissime striatis, striis suturali et marginali magis impressis, sutura paulo elevata, intervallis planis, lævibus; pedibus fusculo-piceis.

Hab. Benito, Gabon. — Ma collection.

Présente la sculpture et la coloration de certains *Hoplonyx*, les élytres sont bien plus brillantes à la suture que sur les côtés qui présentent une teinte un peu rougeâtre, peut-être accidentelle.

Gonocnemis crassicornis, n. sp.

Long. 13 mill. — La description de l'*athiopicus* Fairm. lui convient très bien, seulement celui-ci est un peu plus grand et un peu plus large, les antennes sont épaisses, presque moniliformes, le corselet est semblable, mais un peu plus rugueux et plus large, moins rétréci en avant; les élytres ont une sculpture presque semblable, les intervalles des stries sont aussi finement carénés à partir du 5^e, et la pubescence rubigineuse plus serrée donne une autre teinte à la coloration; la dent des fémurs antérieurs est plus aiguë.

Hab. Porto-Novo. — Donné par Mr. Aubert.

Se rapprocherait aussi de l'*incostata* Fairm. par la sculpture des élytres, mais cette dernière n'a que 7 mill. et vient du Soudan.

Gonocnemis puberulus, n. sp.

Long. 7 à 8 mill. — Oblongus, modice convexus, fusculo-subænescens, paulo nitidulus, pilis minutis rubigi-

nosis sat dense vestitus; oculis contiguïs, clypeo concavo, antennis validis, nodulosis, corporis medium haud attingentibus, articulo 3^o quarto haud longiore; prothorace subquadrato, lateribus vix arcuatis, sed antice paulo rotundatis, dorso densissime ac subtiliter ruguloso, medio longitudinaliter leviter sulcatulo, basi utrinque late sat fortiter impresso, disco utrinque foveola rotunda vix impresso, margine postico bisinuato, angulis acute rectis; elytris oblongus, fere parallelis, ad humeros angulatis, sat acute costulatis, subtilissime dense granulatis, interstitiis punctis grossis subquadratis impressis; pedibus rugulosis, femoribus anticis dente magno triangulari armatis, tarsis piceis.

Hab. Benito, Gabon. — Ma collection.

Ressemble assez au *G. Raffrayi* Fairm., de Zanzibar, mais plus petit, plus court, avec une vestiture remarquable et les élytres à côtes plus saillantes avec les interstices occupés par des gros points presque carrés.

Gonocnemis tubericollis, n. sp.

Long. 7 mill. — Ressemble au précédent, en diffère par la coloration d'un bronzé plus métallique, brillant sur les élytres qui sont glabres, tandis que le corselet, plus foncé, est couvert d'une pubescence rubigineuse qui le rend mat; il est aussi long que large, avec les côtés très faiblement arqués, un peu sinués avant la base, le dos est couvert de granulations très fines et très serrées; de chaque côté 2 tubercules oblongs, saillants, lisses, ayant à la base un autre tubercule plus petit, au milieu une ligne un peu élevée lisse; la base est déprimée transversalement, plus fortement au milieu et le bord postérieur est fortement bisiné; les antennes sont également noduleuses, surtout à l'extrémité et le 3^e article n'est pas plus long que le 4^e; les fémurs antérieurs sont armés aussi d'une forte dent triangulaire.

Hab. Benito, Gabon. — Ma collection.

Gonocnemis sulcicollis, n. sp.

Long. 9 mill. — Oblongus, sat convexus, fusco-ænescens, sat nitidus, parce ac breviter pilosulus; oculis contiguis, antennis elongatis, sat gracilibus, corporis medium attingentibus, articulo 3^o quarto paulo longiore; prothorace transverso, elytris angustiore, lateribus parallelis, antice fortiter rotundatis, dorso sat dense punctato, medio fortiter canaliculato, utrinque convexo, basi fere recto; elytris ad humeros angulatis, a medio postice gradatim attenuatis, dorso fortiter substriato-punctatis, striis primis magis impressis, punctis grossis paulo crenatis, intervallis leviter convexis; subtus fere lævis, lateribus punctulatus, metapleuris longitudinaliter impressis, pedibus piceis, femoribus anticis dente acuto armatis.

Hab. Benito, Gabon. — Ma collection.

Bien distinct de ses congénères par son corselet largement sillonné au milieu, les parties latérales convexes, les élytres sensiblement atténuées dès le milieu et la coloration d'un brun foncé bronzé; les antennes ont les articles plus étroits, non noduleux.

Gonocnemis rubripes, n. sp.

Long. 8 mill. — Oblongus, convexus, fuscus, parum nitidus, antennis et pedibus rufulo-rubris, subtus nitidior; capite antice fortiter impresso ac dense punctato, spatio lineari inter oculos antice magis elevato, antennis sat elongatis, punctatis, articulis 6 ultimis latioribus, 1^o et 3^o æqualiter elongatis; prothorace brevi, valde transverso, elytris paulo angustiore, lateribus antice fortiter rotundato, dorso convexo, densissime sat subtiliter punctato, medio longitudinaliter sulcato, sulco basi dilatato, utrinque impressione sat brevi impresso; scutello obtuso, punctulato; elytris oblongis, fortiter punctato-striatis, intervallis con-

vexis, dense subtiliter punctulatis; subtus laxè punctatus, femoribus anticis latis et dente lato acuto armatis.

Hab. Benito, Congo français. — Ma collection.

Bien distinct par son corselet court, avec les côtés fortement arrondis en avant, le disque fortement sillonné au milieu et la coloration des pattes, antennes et palpes, ces derniers rougeâtres avec le dernier article brun.

Gonocnemis seminitens, n. sp.

Long. 6 mill. — Oblongus, convexus, fusculo-ænescens, opaculus, elytris æneis, nitidis; capite antice punctulato, antennis piceis, apicem versus haud sensim crassioribus, articulo 1° paulo crassiore, 3° ceteris haud longiore; prothorace valde transverso, elytris angustiore, lateribus parallelis, antice abrupte rotundato-angustatis, dorso densissime sat subtiliter strigosulo-punctato, antice declivi, margine antico utrinque impresso, angulis fere nullis, margine postico utrinque subtiliter marginato et leviter sinuato, parte media læviore, nitida; scutello obtuse rotundato, medio impressiusculo; elytris ovato-oblongis, postice angustatis, basi truncatis, ad humeros angulatim rotundatis, profunde punctato-striatis, intervallis convexis, lævibus, apice fere carinatis; pedibus piceis, femoribus anticis compresso-clavatis, subtus dente triangulari acuto armatis.

Hab. Benito, Congo français. — Ma collection.

Cet insecte a un faciès un peu spécial à raison de ses élytres métalliques et de son corselet transversal analogue à celui du *rubripes* mais sans sillon médian.

Coracostira, n. g.

L'insecte qui forme le type de ce nouveau genre ressemble beaucoup aux *Nemostira*; mais son corps est plus allongé, parallèle, presque cylindrique. Ses fémurs antérieurs et posté-

rieurs sont très épais, renflés, les 1^{ers} armés chez les ♂ de fortes dents avec les tibias armés vers l'extrémité, angulés en dedans. En outre la saillie intercoxale qui est plus ou moins obtuse et assez large chez les *Nemostira*, sauf de rares exceptions, est ici allongée et très acuminée.

Ces caractères sont bien nets chez les deux premières espèces; mais il y a, dans le genre *Nemostira*, plusieurs insectes qui se rapprochent de ce nouveau groupe par les fémurs postérieurs très épais, sans cependant présenter les mêmes armatures, et avec un corps un peu moins cylindrique et qu'il convient de rattacher, provisoirement au moins, aux *Coracostira*, se sont les *N. rufitarsis* Fairm. et *cribricollis* Fairm., chez qui les fémurs antérieurs sont médiocrement épais avec les tibias simples.

Coracostira armipes, n. sp.

Long. 16 mill. — Valde elongata, parallela, convexa, fusca, leviter ænescens, nitida, elytris viridi-metallicis, basi et lateribus leviter cupreolo tinctis, antennis (articulis 3 primis exceptis), tibiis interdum tarsisque dilute testaceo-fulvis, tibiis anticis apice infuscatis; oculis magnis, convexis, valde approximatis; prothorace ovato, antice angustato, basi constricto, dorso grosse parum dense punctato, basi transversim fortiter impresso, margine postico valde reflexo et ad angulos paulo producto; scutello minuto, obtuso; elytris elongatis, ad humeros sat rotundatis, apice obtusis, punctulato-striatis, punctis basin versus majoribus, intervallis convexis, lævibus; subtus lævis, nitida, metapleuris fortiter punctatis, pedibus magnis, femoribus anticis et posterioribus inflatis, anticis leviter arcuatis, apice subtus dente magno armatis, tibiis anticis ante apicem contortis, dilatatis, compressis, femoribus posticis subtus rugosis, tibiis basi leviter arcuatis et intus dense pilosulis, medio obtusissime angulatis, tibiis intermediis fere rectis, sed medio paulo angulatis, tarsis omnibus magnis, pilosulis.

Notes from the Leyden Museum, Vol. XX.

Hab. Benito, Gabon. — Ma collection.

Cet insecte est remarquable par l'armature des pattes et par sa forme parallèle, allongée, qui lui donne de la ressemblance avec quelques *Strongylium*.

Coracostira penicillata, n. sp.

Long. 16 mill. — Forme et coloration de la précédente, mais avec les élytres un peu moins étroites, les antennes et les pattes entièrement brunes, les tarses à peine moins fucés; les fémurs antérieurs et postérieurs sont plus renflés, la dent des premiers est moins grande, les tibias postérieurs sont plus robustes, sinués seulement au milieu, comprimés ensuite en formant un angle très obtus interne et angulé, en dedans près de la base avant la sinuosité avec un pinceau de poils roux; l'extrémité des élytres est un peu différente, presque tronquée avec une légère sinuosité en dehors, le dernier interstice formant en dessus un pli assez marqué; le corselet présente, au milieu de la base, un sillon longitudinal très court, peu marqué.

Hab. Gabon. — Ma collection.

Dasychlorus variicolor, n. sp.

Long. 11 mill. — Ressemble beaucoup au *Passeti* Fairm. (Ann. Soc. Ent. France, 1898, Bull. p. 19), mais bien plus petit et passant d'un beau vert métallique à un cuivreux pourpre brillant, sur les élytres, le corselet et la tête moins cuivreux, un peu doré, le dessous et les pattes sont concolores chez l'individu à coloration verte, avec les tarses d'un bleu foncé; ils sont chez l'autre, d'un vert un peu doré, surtout aux pattes et au métasternum. La forme du corps est semblable, mais la ponctuation beaucoup plus fine, plus égale sur la tête et le corselet, les élytres ont les épaules bien moins saillantes et angulées, leur ponctuation est plus fine, surtout plus serrée, sans

lignes ni stries, sauf un peu sur les côtés, la tête n'a pas de sillon médian, le corselet n'est nullement rugueux sur les côtés; le dessous du corps est presque lisse, les tibias sont sillonnés, l'extrémité des fémurs très ponctuée, les tibias antérieurs sont un peu épaissis et arqués à l'extrémité.

Hab. Benito, Gabon. — Communiqué par Mr. Donckier.

Paris, Novembre 1898.

NOTE XXXII.

ON THREE APPARENTLY NEW SPECIES OF BIRDS
FROM THE ISLANDS BATU, SUMBAWA AND ALOR

BY

Dr. O. FINSCH.

1. *Pachycephala Vandepolli*, n. sp.

Adult male. General colour above dark brown; head above darker; lores and ear-region lighter and more greyish brown; chin whitish grey, throat and breast ashy grey, remainder underparts, axillaries and greater under wing-coverts white, the smaller ones along the carpal margin grey; sides washed with grey; quills blackish, margined on the outer web with dark brown (a little lighter and more olive than the back) broadest on the secondaries; tail blackish brown. Bill and feet black. (» Iris brown; bill black; feet grey". Kannegieter).

Hab. Batoe Islands: Pulu tello.

There are three males (precisely alike) collected in July and August 1896 by Mr. J. Z. Kannegieter, the able collector of Mr. Neervoort van de Poll at Zeist, well known in science, especially as an Entomologist, after whom I have the honour to name this species.

Nearly allied to *P. grisola* Blyth (1843 = »*Pachycephala philomela*, Temm." Mus. Lugd.) from Java, Borneo and Lombok, but distinguished in being darker above, especially on the head, and having the throat and breast dark

grey, without any rufescente, moreover larger. *P. Plateni* Blas. (= *Whiteheadi* Sh.) from Palawan is of a darker grey on the chin, throat and breast, has the head above uniform dark brown the same as the back, and is a smaller bird. The nearest allied species, *P. brunneicauda* (Salvad.) from Sumatra, not represented in the Leyden Museum, has, according to Salvadori's description, the tail "more reddish" and is also considerably smaller, as shown by the subjoined measurements.

al. mm.	caud. mm.	culm. mm.	tars. mm.	
86—89	60	14	18	<i>Vandepolli</i> (3 specim.).
77—84	57—62	12—13	—	<i>grisola</i> (18 specim.).
80	60	14	19	<i>Plateni</i> (1 specim.).
"72	60	12	21"	<i>brunneicauda</i> (Salvad.).

2. *Geoffroyus Lansbergei*, n. sp.

General appearance like a young individual of *G. personatus* (Shaw): upper parts, wings and tail dark green, underneath yellowish green; lores and fore part of cheeks dirty brownish; under wing-coverts dark marine blue, but distinguished in having the feathers of the upper parts marked with a narrow light brown crossbar in the centre and therefore mostly hidden; the primaries show one, the secondaries two obsolete dark crossbars at the end portion, more distinct on the inner web and forming on the hind secondaries (tertiaries) several dark crossbars over both webs. — Bill light horn coloured.

Al. 140 mm.; caud. 50 mm.; culm. 18 mm.

Hab. Sumbawa.

The single specimen was collected in October 1879 on the Island Sumbawa and presented to the Museum by the Governor-General van Lansberge, to whom the Museum owes so many rare species.

The bird is no doubt a young one, and most likely a curious variety, which nevertheless deserves naming.

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3. *Trichoglossus aloreensis*, n. sp.

Like *T. euteles* (Temm.) but differs in the following particulars: — 1. The head above is decidedly yellowish green, without the yellowish olive tinge shading into brownish olive-yellow on the occiput in *T. euteles*; 2. The sides of the head and ear-coverts are greenish yellow, shading more into yellow near the base of the bill. 3. The bill is dark brown. — The size seems to be a little smaller than in *T. euteles*.

Hab. Alor (Mus. Lugd.).

al. mm.	cand. mm.	culm. mm.
123—124	88	14—15
126—130	98—110	15—17 <i>euteles</i> (Babber and Alor).

Two males; one has the sides of head more green.

From this Island we possess also typical *T. euteles* agreeing in every respect with specimens from Timor (type), Wetter, Babber and Letti. None of them, even apparently young birds, show a dark bill, which in all our dried skins is orange-yellow to orange-red.

Leyden Museum, 29 November 1898.

NOTE XXXIII.

MERULA JAVANICA (HORSEF.) AND M. FUMIDA
(S. MÜLL.) TWO DISTINCT SPECIES

BY

Dr. O. FINSCH.*Merula javanica* (Horsf.).

Seeb. Cat. Br. M. V, 1881, p. 279 (part. only spec. a, b, c Types).
id. Ibis 1893, p. 219 (Note).

Owing to the incorrect diagnosis given by Horsfield¹⁾ of his »*Turdus javanicus*», it would be impossible to refer on this species at all, if not, fortunately, the types were preserved in the Collection of the British Museum. On these types the late Mr. Seebohm has given (cit. above) the following most valuable note: »There are three types of Horsfield's *Merula javanica* in the British Museum, which are apparently male, female, and young. The adults differ from all other Javan examples known, in having the chestnut restricted to the belly, and not extending to the flanks. The white on the under tail-coverts is also reduced to a shaft-line in the male. It is possible that they may have been procured on some other mountain, and that *M. fumida* may be specifically distinct from *M. javanica*.

1) Trans. Linn. Soc. vol. XIII, 1822, p. 148: »*Turdus Javanicus* mihi. T. corpore fusco, striga gulari maculisque abdominalibus obscuris ferrugineis. — Boehrit: Javanis. Longitudo $8\frac{1}{2}$ poll. — This species is nearly allied to *Turdus australis*: it differs by the dark ferrugineous colour of the under parts».

And in this view the experienced Monographer on the Turdidae was no doubt right, as well as in supposing that there are three species of Ouzels in Java, all peculiar and confined to the high mountains of this island. Of the present species the Leyden Museum possesses only one specimen, an old bird collected on the Mountain Tjerimai («above 5000 feet»), Cheribon in Western Java, and presented by Dr. A. G. Vorderman in 1896.

This bird has the chestnut restricted to a considerable large patch on the centre of the belly, but the sides are brown, of the same colour as the remainder undersurface, including the lower tail-coverts, which show only the shaft white, it agrees therefore exactly with the diagnostic characters pointed out by Mr. Seebohm. Moreover he remarks (Cat. Br. M. p. 279): »The type of *T. javanicus* and that of *T. Schlegeli* agree in the colour of the under tail-coverts, but the latter has the rich chestnut flanks of the adult male”, which however is not *M. javanica* but *M. fumida* (Müll.), as in the Catalogue Mr. Seebohm mixes three species under the head-name *M. javanica*. Dr. Sclater, who also examined two of Horsfield’s types in the British Museum, considers them to belong to the same species as *M. fumida*, but his short notice mentions also the ferruginous colour on the belly to be very restricted (Ibis 1875, p. 344).

As Mr. Seebohm correctly remarks the nearest ally of *M. javanica* (Horsf.) is *M. Schlegeli* Scl. from Timor ¹⁾. This latter species is however lighter on the chin, throat and upper breast, has the sides of lower breast and vent

1) *Turdus (Merula) fumidus* S. Müll. Verh. Land- en Volkenk. 1839—44, p. 201, Note. (Descr. spec. ex Timor) — *Turdus schlegeli*, Scl. Ibis 1861, p. 280.

The type in our Museum seems to be still unique. Dr. Salomon Müller, who did see more of Timor than any one since, procured this specimen in the beginning of September (between 1st—6th) 1829, in a valley called Penpaan, near to the Mountain Micomaffo in the interior. This valley must be in considerable altitude, as Dr. Müller expressly mentions, that it was so cold as never experienced by him before on Timor or Java.

also chestnut and shows only faint lighter shafts on the brown lower tail-coverts.

Merula fumida (S. Müll.).

Turdus (*Merula*) *fumida* S. Müll. Verhandl. Land- en volkenkunde (1839—44) p. 201. Gedé (descr. in Note).

T. hypopyrrhus Hartl. Verh. Brem. Samml. 1844, p. 43.

T. fumidus (pt.) Finsch, J. f. Orn. 1863, p. 39 (descr. type spec. from Gedé).

T. javanicus Scl. (nec Horsf.), Ibis 1861, p. 280. — id. 1875, p. 346, Pl. VIII.

»*T. vulcanus* Temm." Pelz. Novara Reise, Vögel, 1865, p. 70.

Merula javanica (pt.) Seeb. (nec Horsf.) Cat. B. Br. M. V, 1881, p. 279 (only descr. old male, spec. d; syn. part.). — ib.

Ibis 1893, p. 219 (not descr. in note). — Büttik. (nec Horsf.) N. L. M. XV, 1893, p. 107 (descr. ad. et jun.).

Dr. Sclater's description is taken from the type of *T. hypopyrrhus* Hartl. in the Bremen Museum, as also the excellent figure on Pl. VIII, which will serve to distinguish this species at once from *M. javanica* (Horsf.), in having the head of the same dark olive-brown as the remainder upper surface, in having the belly, inclusively the flanks, chestnut, a white anal patch and well marked white shaftstripes on the lower tail-coverts. This latter character differs a good deal, being the white shaftstripes in some specimens very narrow, but is shown already in the young bird, which is uniform dark olive brown (also on the head), showing already on the middle of lower breast and vent some chestnut feathers, but more dull than in the old bird.

The Type in the Leyden Museum was collected by Dr. Salomon Müller in 1826 or 1827 on the Gedé (Western Java) on an altitude of 8000 feet. Moreover we possess one old and one young bird with no other indication than »Java". In 1841 the Imperial Museum in Vienna received from the Leyden Museum one specimen of this Mountain Ouzel from the Gedé, s. n. »*Turdus (fumatus) vulcanus*

Temm.", another useless synonym, as, at least in our Museum, there is no specimen labelled »*T. vulcanus* Temm." or »*T. concolor* Temm.", another synonym incorrectly bestowed on Temminck as author. Another specimen mentioned by von Pelzeln s. n. »*Turdus vulcanus*" was shot by Zelebor on the top of Mt. Pangerango (10,000 feet high) in Western Java, the same locality where Wallace obtained one specimen (Scl. Ibis, 1875, p. 346, Note). This species (as well as its allies) being confined to the highest mountains, is therefore difficult to get and consequently very rare in collections.

The third Javan mountain ouzel is:

Merula whiteheadi, Seeb. Bull. B. O. C. N^o. V (June 26th) 1893. — id. Ibis, 1893, pp. 221 and 257.

Discovered by Mr. John Whitehead (in August 1886) on Mt. Tosari (7000 feet high) in Eastern Java. This species is distinguished at once in having a greyish head, (»capite canescente" Seeb.). According to Seebohm *M. Whiteheadi* is confined to East-Java, but Mr. Hartert enumerates from this region also »*M. javanica* (Horsf.)", as obtained by Doherty in 1896 on the neighbouring Peak Arjuno (8000—8300 f. h.) — See: »Novitates zool. III, 1896, p. 538.

Leyden Museum, 29 November 1898.

NOTE XXXIV.

ON HABROPOGON JUCUNDUS V. D. W.

BY

F. M. van der WULP.

At the time, now a good while ago, I described the mentioned Javanese Asilid (Tijdschr. voor Entomol. XV, p. 148), I had at my disposal only some defective specimens from the Leyden Museum, the antennae being incomplete: the third joint of them being wanting. At that time I overlooked an essential character of the genus *Habropogon*, viz. the unusual shortness of the first tarsal joint. Latterly having become acquainted with some true species of that genus, I am aware of my error in referring the above species to it.

The examination of well preserved specimens in the collection of Mr. Neervoort van de Poll has taught me, that my *Habropogon jucundus* belongs to the genus *Scylaticus* Löw, and that it is identical with *Sc. vertebratus* Bigot (Ann. de la Soc. Entom. de France, 1878, p. 435), likewise from Java. The third antennal joint is indeed very slender, and longer than the two basal joints together; moreover the basal joint of the tarsi is of the usual shape.

Although the specific name *jucundus*, according to strict rules of priority, should have the preference, I think it cannot be maintained in this case, the species having been described in a genus, where it was absolutely misplaced and in which it never will be searched.

I observe, that the black pattern of the abdomen varies in its extension. Frequently there is only a black dorsal spot

on each segment, but sometimes the whole dorsal surface of the abdomen is black, and the rufous colour confined to merely lateral spots; usually the black is more predominating on the last segments. The brown stripe on the upperside of the femora is often less conspicuous, especially on the fore- and middle femora. The hind tibiae and hind tarsi are always blackish. The specimens differ much in size: the largest measures 17 mm., the smallest 10 mm. in length.

The Hague, November 1898.

NOTE XXXV.

ON THE „DIANA” AND THE „ROLOWAY”

BY

Dr. F. A. JENTINK.

November 1898.

Since more than a century the »Diana” has become such a well known Monkey that every child can show it you in every Zoological Garden. Therefore it may be called somewhat hazardously to move the supposition that — although it seems to be so familiar an animal to children — it has always been misunderstood by naturalists and scientific authors.

In our collection there are 9 specimens (among them 2 from the Gold-coast and 4 from Liberia) all labeled *Cercopithecus diana*. Some weeks ago Mr. Oscar Neumann, the excellent German Africa-traveller, told me that he had observed some differences between our Liberia- and Gold-coast-specimens, differences sufficiently striking to regard upon them as two distinct species. I now have studied the thing and believe to be able to explain the question exactly.

The Gold-coast-specimens have a long white beard and the inner side of thighs white or whitish; the Liberia-specimens, however, present a short white beard and the inner side of thighs is bright red-bay. There are still more differences as I will show furtheron. Now the question rises, which of the two species is the true »*Diana*”?

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In Gray's Catalogue of Monkeys, Lemurs and Fruit-eating Bats, 1870, p. 22, we see that he separated a specimen with back edge and inner side of thighs bright red-bay from the »Diana“ under the variety-name *ignita*; his example has been followed in 1893 (P. Z. S. L. p. 255) by Dr. Sclater: he proposed to designate this subspecies *Cercopithecus diana ignitus*, and the other *C. d. typicus*. The locality of *ignitus* is the Congo, from where the specimen, brought before the Zoological Society's meeting, had been received from Col. Wethered of Great Marlow. So plain as this is looking however the thing is not.

The *Diana* has been described by Linnaeus, in a paper entitled »Markattan Diana“ and published in the Kongliga Svenska Vetenskaps Academiens Handlingar of the year 1754, p.p. 210—217, after a living specimen, of which a woodcut is represented on plate 6, showing a short bearded Monkey. The name »Diana“ was given by Linnaeus from the fancied resemblance of the white on the forehead to the crescent worn by the Roman Goddess. In 1756 a German Professor, named Abraham Gotthelf Kässner, published a translation of the »Handlingar“ entitled »Der Königl. Schwedischen Akademie der Wissenschaften Abhandlungen aus der Naturlehre, Haushaltungskunst und Mechanik“. On p.p. 215 and 216 the animal has been described in the following terms: »die Haare am innern der Schenkel, vom Schwanze an bis an den Bug der Knie, sind von rother Rostfarbe, welches aussieht, als wäre das Thier blutig. Die Fronte oder die Augenbraunen, gehen mit langen weissen, aufgerichteten, und zurücke gebogenen Haaren zusammen, völlig, wie die neumodischen Toupees, wodurch auf der Stirne ein weisser Mond vorgestellt wird, weil die Haare an der Spitze weiss sind. Wenn er aber auf der Stirne ein Toupee nach der neuen Mode hat, so hat er auch am Kinne einen Bart nach der alten Mode. Dieser Bart befindet sich an einer fetteren Spitze des Kinnes, ist schmahl, kurz, und am Ende abgestutzt, oder gleichsam queer abgeschnitten; er liegt

auch mit seinen Haaren so gleich, als wäre es gekämmt. Aber darinnen hat der Bart etwas besonders, dass er an der Vorderseite schwarz, wie das Gesicht ist, aber an der untern Seite ist er länger und ganz weiss wie das Kinn”¹⁾. This description of the color of the thighs, of the white crescent on the forehead and of the beard and of the animal furtheron indeed, is so exactly a description of our Liberia-monkeys, that one could hardly produce a better one. In the 10th edition of his *Systema naturae* Linnaeus described the animal under the title *Simia diana*, so that we have to name it *Cercopithecus diana* (Linné). It appears therefore that the animals which have been called by Dr. Gray var. *ignitus* or *ignitus*-species by Sclater were true *Cercopithecus diana*-specimens, having bright red-bay inner side of thighs, a short white beard and a white crescent on the forehead, contrary to what always has been accepted, so that what has been called in all books *C. diana*²⁾, viz. the Monkey with white inner side of thighs, a long white beard and a white band or diadem on the forehead, requires an other specific title. And there *has* been described and figured a species presenting all the named characteristics: this is the »*Roloway*” of Allamand.

In the »*Histoire naturelle, générale et particulière avec*

1) The text in the *Handlingar*, p. 212, runs as follows: „Håren på inra sidorna af låren alt infrån svansen bårt til knävecken äro af en röd rost-färg, som set ut liksom han här vore blodig. . . . Fronten eller ögenbrynerna gå tillsammans med längre, hvita, uprätta och tillbaka bögda hår, aldeles som de nymodige Tupeer, hvarigenom en hvit måne föreställes i pannan, emedan desse håren äro hvita på spitsen; men om hon har efter nya modet Toupée i pannan, så har hon ock på hakan skägg efser gamla modet. Detta skägget, sitter på en mera fet haktipp, är smalt, kårt och studsat eller liksom tvärt afklipt, på ändan, samt ligger jämnt med sina hår, som vore det kammat. Men skägget är synnerligt deruti, at det på främre sidan är svart, såsom ansigtet, men på undra sidan längre och helt hvitt, såsom hakan.”

2) The „*Diane, femelle*” figured and described in 1824 by Geoffroy St. Hilaire and Cuvier was a Monkey quite different from „*Diana*” and „*Roloway*.” *La Diane* of Audebert (*Histoire naturelle des Singes et des Makis*) was a true *C. roloway*.

la description du Cabinet du Roi. Par Mrs. de Buffon et Daubenton, Tome quinzième. Nouvelle édition. Amsterdam, 1771” Professor Allamand figured and described (p. 77) »la Palatine, ou le Roloway” *after a living specimen*. He relates as follows: »La Guenon, qui est représentée dans la »Planche XIII, n’a point encore été décrite. Elle est »actuellement vivante à Amsterdam, chez le Sr. Berg- »meyer ¹⁾ Cette Guenon lui a été envoyée des Côtes »de Guinée, sous le nom de Roloway, que j’ai cru devoir »lui conserver. . . . Les poils qui couvrent la poitrine, »le ventre, *le contour des fesses et la partie intérieure des »bras et des cuisses sont blancs*. . . . Un cercle de poils »blanchâtres leur ²⁾ environne le sommet de la tête »Elles ont au menton une *barbe blanche*, longue de *trois »ou quatre pouces*”.

The reason why he called the animal »la Palatine” is the following: »ces animaux vus à une certaine distance »paroissent avoir autour du cou une *Palatine*, semblable »à celles que les dames portent en hiver; et même je »leur en ai d’abord donné le nom, qui se trouve encore »seul sur la Planche. . . . avant que je sçusse celui qu’elles »portent en Guinée”.

1) Mr. Bergmeyer at that time was the owner of the celebrated Zoological Garden at Amsterdam, know under the name of „*Blaauwe Jan*”. This clever director had brought together all rare animals which he could procure. So we find that Vosmaer saw in that garden a specimen of *Ateles paniscus*, the *Coita* of Buffon, described by Vosmaer under the name *Singe américain à longue queue* or *Quatto*. Bergmeyer had a living *Hyrae capensis*, which he presented to Mr. Vosmaer and the stuffed skin of which has been preserved in the Cabinet of the Prince d’Orange, like the above named specimen of *Ateles paniscus*, both at that time great rarities. As to the „*Roloway*” it is very likely that the original specimen after its death has passed in the collection of Mr. Joan Raye de Breukelerwaert: on the auction of that Museum in 1827 the Leyden Museum of Natural History procured the specimen at the price of 45 dutch guilders: it is n^o *b* of my Catalogue systématique etc. 1892. So that it is probably that the latter specimen is the type-specimen described by Allamand.

2) Allamand tells that Mr. Bergmeyer some months later received a second specimen, „dont la partie interne des cuisses est entièrement jaune.”

I think that there will be not in the least any doubt whether the Monkey here described in fact was a specimen exactly agreeing with our individuals from the Gold-coast as well as with all specimens called *Cercopithecus diana* in the other Musea. Allamand's »*Roloway*'' has in 1772 been taken by Schreber as specific title, s. n. *Simia Roloway* (vide Schreber, Säugethiere, Tafel XXV), so that its correct name is *Cercopithecus roloway* (Schreber).

Besides the mentioned characteristics there are other ones which distinguish the *Roloway* from the *Diana*, as will be clearly shown in the following short description of both species.

Cercopithecus roloway (Schreber).

Beard long (in adult specimens about 8 c.m.), white, a few short black hairs on the chin; a white diadem or band on the forehead above the eyes; ears untufted; a small white or yellowish white streak across the haunches; inside and back of thighs white to light orange; grizzled upperparts of body and of fore legs lighter than in the *Diana*.

Cercopithecus Diana (Linnaeus).

Beard short (in adult specimens about 2 c.m.), the foremost hairs black and shorter than the other white ones; a white or whitish crescent on the forehead above the eyes; ears with a white tuft from the inside of the upperpart of the conch; a broad white to reddish brown streak across the haunches; inside and back of thighs bright red-bay; the grizzled upperparts of body and of fore legs darker than in the *Roloway*.

Geographical distribution. Linnaeus said that the habitat of the *Diana* was Guinea; this statement he based upon

a phrase in Maregrave's *Historia naturalis*¹⁾, where the latter described a Monkey from Guinea, which Monkey was according to the view of Linnaeus a specimen agreeing with his *Diana*: the figure of that Monkey in Maregrave's book, however, represents certainly not a *Diana*, as it is black throughout, with exception of the white beard, and moreover has a prehensile tail. This may be so or not, the fact remains that the locality of Linnaeus-type-specimen of *Diana* was unknown. Buffon's *Roloway* was from the coast of Guinea. Gray's *diana* var. *ignita* was from West-Africa, therefore of no value for our purpose²⁾. Dr. Sclater (P. Z. S. L. 1893, p. 254) names among the habitat of *C. diana*, Niger (Fraser) and Delta of the Niger (Fraser): »I see (P. Z. S. L. 1841, p. 97) that Fraser »wrote to the Zoological Society, that at Bassa he saw »some skins of *Cercopithecus diana*, said to be common in »that district and that skins of that species were extremely »plentiful at Accra.” Bassa however is in Liberia and Accra is on the Gold-Coast, both localities having nothing to do with the Niger. Dr. Sclater wrote to me d.d. Nov. 8, »I cannot at present find my authority for giving Niger »(Fraser) as locality for *C. diana*.” In every case Fraser *procured* no specimens, he only *saw* them, so his statement has no scientific signification at all. I know no other

1) Georgi Maregravi de Liebstad, Misnici germani, *Historiae rerum naturalium brasiliae*, libri octo. 1648, p. 227. Linnaeus wrote Margrave instead of Maregrave and said, p. 213 of *Handlingar*: „Hans ord pag. 227 äro desse: hon kallas *Icongo Exquima*,” a very nonsensical translation of Maregrave's writing, for on p. 227 Maregrave wrote: „in Congo vocatur *Erquima*.” Both capital mistakes of Linnaeus have been verbatim transcribed by Professor Kästner without any remark, nay he added another incorrectness by citing p. 277 instead of p. 227.

2) In P. Z. S. L. 1832, p. 123, there have been described some animals exhibited on the meeting of the Zoological Society and obtained by Mr. Gould from Algoa Bay and at that very meeting also several specimens were exhibited of imperfect skins of *Cercopithecus Diana*, obtained from the same locality. For the *Diana* this locality is *very suspect* and it may be asked where all those specimens have been preserved after the exhibition in the mentioned meeting?

authorities! Indeed the harvest is extremely small! The only true localities to trust upon are those of the specimens in the Leyden Museum. Three of our 5 *C. diana*-specimens are from Liberia collected by Mrs. Büttikofer and Sala at Banana, Bavia and Soforé-place, St. Paul's river, the other two have been living in the Rotterdam Zoological Garden, one is from Liberia, the other without exact locality; two of our 4 *C. roloway* are from the Gold-Coast, collected by Mr. Pel, meanwhile the locality of the other two is uncertain (Côte d'Or written on the stand). So that it at present is a matter of course that *Cercopithecus diana* (Linné) is living in Liberia and *Cercopithecus roloway* (Schreber) is to be found on the Gold-Coast, the latter probably too more southward.

NOTE XXXVI.

ON PERICHAETA SIEBOLDI HORST

BY

Dr. R. HORST.

In a recent paper on earthworms of Japan by Seitaro Goto and Shinkichi Hatai ¹⁾ there is a short note about *Perichaeta Sieboldi*, a species described by myself several years ago and based on a specimen collected by von Siebold in the same country ²⁾. Rosa afterwards examined a couple of individuals belonging to the Museum of Vienna and published a detailed description of this species, in which my own observations were confirmed and amplified ³⁾. Beddard identified with *P. Sieboldi* a small specimen ⁴⁾, collected by Masatoka Rokugo, but added not much to our knowledge of the worm, while Michaelsen gave an annotation ⁵⁾ about a not quite mature specimen of the Berlin Museum, which differed by having spermathecae with a short and straight diverticulum.

The principal characters of *P. Sieboldi* are the presence of three pairs of spermathecae, opening into the intersegmental groove of segments VI/VII, VII/VIII, VIII/IX and the number of bristles in this region, being about 80 (76 Rosa). However, among the numerous earthworms, examined by our Japanese colleagues, they did not meet with a

1) Annot. zoolog. japon. vol. II, pt. 3, 1898.

2) Notes from the Leyden Museum, vol. V, 1883, p. 191.

3) Ann. K.K. Naturh. Hofmuseums, vol. VI, 1891, p. 401.

4) Zoolog. Jahrbüch. (Abh. für Syst. etc.), Bd. VI, p. 759.

5) Archiv. f. Naturgesch., 1892, p. 27.

single specimen, exactly presenting the above named characters. On the contrary they observed several individuals in which the spermathecae lie one segment more anteriorly, therefore opening in the groove between segments V/VI, VI/VII, VII/VIII, and in which the number of setae in the spermathecal region only amounts to 60. Because these worms not only have a very wide distribution in Japan, but are also found in the same locality where the specimens of the European authors have been collected, they regard them as belonging to *P. Sieboldi*, though they hesitate to suppose that all the specimens in Europe should present the same variation, or that there should have been made a mistake in stating the situation of the spermathecae. It is much to regret, that Goto and Hatai say nothing about the other characters of their worms, and only mention the number of setae lying between the male pores, being 14—19; for *P. Sieboldi* shows the remarkable feature, that instead of the single intestinal coecum of most other *Perichaeta*-species, there are six or seven of these diverticula, separated in two groups, of which the superior one is the longest. Moreover, both Rosa and I myself found the spermathecae provided with a zigzag diverticulum and the large prostata divided in three lobes, two larger crescentic ones and a smaller, pear-shaped one in the middle. After a re-examination of the type-specimen, by which were confirmed all my observations, made fifteen years ago, and considering that the observed differences can hardly be ascribed to variation, I cannot believe, that the worms examined by the Japanese authors belong to our *P. Sieboldi*, but I venture to suggest that they must be identified with a nearly allied species *P. Ijimai*¹⁾, also from Japan and circumstantially described by Rosa. In this species, that appears to be half as long as *P. Sieboldi*, the spermathecae lie one segment more anteriorly and the

1) Loc. cit. p. 402.

number of setae in the spermathecal region amounts to 60¹⁾).

There is also a smaller number of bristles between the spermathecal pores, for Rosa states that they are situated »in der neunten Borstenlinie”, while in *P. Sieboldi* they lie in the eighteenth, counting from the ventral median line, thus showing 36 bristles in the space between the spermathecal pores. In *P. Ijimae* the dorsal pores commence behind the clitellum, while in *P. Sieboldi* the first of them lies in front of it, in the intersegmental groove XII/XIII. Rosa found the spermathecae of *P. Ijimae* without a diverticulum, and instead of the lobed intestinal coecum of *P. Sieboldi* that species only shows a single coecum extending anteriorly over five segments. As it is rather difficult to discriminate the continually increasing number of *Perichaeta*-species, I hope the Japanese authors will give us a more detailed account of the characters of the specimens they examined²⁾. For it is a strange fact that hitherto they have not come across any of the nine species, described by European authors.

Leyden Museum, December 1898.

1) Perhaps specimen δ of *P. Hilgendorfi* Mich. also belongs to this species.

2) Unfortunately there crept some errors in the table annexed to the paper, upon which the attention may be fixed: *P. fuscata* is said to possess four pairs of spermathecae in segments VI—IX, while on the table only three of them are indicated in segments V—VII; *P. campestris* has two pairs of spermathecae in segment VIII and IX, while on the table three of them are enumerated in segments VI—VIII; the first dorsal pore lies in the intersegmental groove XIII/XIV according to the text, on the table between segment XII and XIII. *P. heteropoda* has no prostata, while on the table it is indicated in segment XVIII.

NOTE XXXVII.

LA FOSSANE DE BUFFON, FOSSA FOSSA (SCHREBER)

BY

Dr. F. A. JENTINK.

December 1898.

(Plate 11).

The type-specimen of Buffon's *Fossane*, *Fossa Fossa* (Schreber) had been presented in 1761 by Monsieur Poivre to the *Cabinet du Roi*: it was a stuffed skin, *with the jaws and the bones of the legs*. The animal measured 17 *pouces* from the tip of the nose to the origin of the tail, the tail measuring $8\frac{1}{2}$ *pouces*. In Etienne Geoffroy St. Hilaire's Catalogue (des Mammifères du Muséum national d'Histoire naturelle de Paris, 1803) on p. 112 there we find under n° CCXLI «l'individu original de la description de Buffon» of the *Civetta fossa*, la Civette fossane: however Geoffroy adds that this specimen has been given by *Sonnerat*, meanwhile Buffon's type (see above) had been presented by *Poivre*! On my inquiry Monsieur de Pousargues from the Paris Museum had the kindness to instruct me as follows: «il y a en effet une contradiction évidente entre le texte de Buffon et celui d'E. Geoffroy St. Hilaire. D'après les recherches que je viens de faire pour éclaircir ce point, je crois l'indication de Geoffroy St. Hilaire *complètement erronnée*; celui donnée par Buffon est seul bonne. Nous possédons un Catalogue des Mammifères de la collection de Sonnerat; la Fossane n'y figure pas. A supposer même qu'elle y eut figuré, ce specimen n'eut pas été le type de Buffon. En effet Sonnerat n'a quitté Paris pour

Notes from the Leyden Museum, Vol. XX.

commencer ses voyages qu'en 1768 or la lettre de Poivre à Buffon est bien antérieur et date du 19 Juillet 1761. C'est en revenant de son second voyage aux îles Philippines et à Timor, et après avoir hiverné à Madagascar en 1755, que Poivre a dû rapporter en France et donner au Jardin du Roi la peau bourrée de la Fossane qui a servi de type à Buffon. Vers 1766 ou 1767 Poivre fut nommé Intendant général des îles de France et de Bourbon, et quitta ce poste en 1773. Ce n'est qu'entre ces deux dates seulement que Poivre a été en rapport avec Sonnerat et Commerson. Je suis donc persuadé qu'il y a eu méprise de la part d'E. Geoffroy St. Hilaire.»

Therefore we may feel sure that E. G. St. Hilaire exhibited in his Catalogue really the type-specimen described by Buffon and that that specimen at that date (1803) really was existing in the collection of the »Muséum national". Afterwards however it has disappeared without a trace: so that Gray said in 1872 (P. Z. S. L. p. 869) that he had searched for that type-specimen two or three times when he had been in Paris without being able to discover it; he fears the original specimen has been lost. He considers the rediscovery of the animal quite as important as the finding of a new species.

In the Leyden Museum collection there is a specimen of *Fossa fossa* collected by Audebert, another from Crossley's voyages and a third very old looking specimen of a bleached coloring and labeled, 1835 du Musée de Paris. I thought this specimen to be perhaps the lost type-specimen of *la Fossane* Buffon; it at first seemed an impossibility to make this beyond doubt. In the skin however is an extremely fine cast of the anterior part of a skull, showing the teeth and molars all very clearly. I recollected that de Buffon (see above) said in his original description that the jaws were with the skin. So I thought the cast might have been taken from the original jaws and perhaps these jaws might be as yet preserved

in the Paris Museum. Monsieur de Pousargues was kind enough to inform me that an anterior half of a skull, containing the jaws, of what he thought to be that of the type, really was in the Laboratoire d'Anatomie comparée. Through the great kindness of my friend and colleague Prof. Milne Edwards of the Paris Museum, I have now before me that highly valuable anterior half of the supposed type-skull of *Fossane* Buffon. As I remarked above the cast is a very fine one, so perfectly made that each tooth and molar can be studied. And now it was a very great surprise, that in comparing teeth of the skull with those of the cast, I found that in the left ramus of the lower jaw of the skull there are *two* instead of *three* incisors: *the same abnormality is to be found in the cast*; this striking conformity is too obvious as to give rise to the supposition that it might be merely an accidental resemblance. *It proves that the old specimen in the Leyden Museum really is the type-specimen of Buffon's Fossane.*

Scrutinizing in our archives I could not find any list of exchange with the Muséum du Jardin des Plantes, containing the name *Fossane*, however Temminck and Schlegel paid in 1835 a visit to the Paris Museum and by that occasion made a lot of exchanges: so that we can now understand how we did procure the valuable specimen in question.

It is evident, that a specimen having been preserved about 140 years, hardly can be in what may be called a fine condition; it agrees however very well with de Buffon's description, although it is lighter colored generally, more brownish red.

The posterior part of the skull has been cut off as was the practise in foregoing days and the hindmost lower molars are wanting (fallen out); in the left ramus of the lower jaws is the anomaly that I described above. For the rest the jaws are, compared with a skull of another specimen in our collection, much smaller, and this corresponds exactly with what the skin shows, as the whole animal

is conspicuous shorter and smaller in all its measurements than our other specimens. The skull however is that of an adult specimen, so that, as its sex is not known and not to determine, I incline to the hypothesis that it must be a female specimen and that of course the latter are smaller than the males. The teeth correspond exactly with those of our male skull in all details, they are all somewhat smaller in size.

<i>Measurements taken in mm.:</i>	<i>Paris</i>	<i>Leyden</i>	<i>Leyden</i>
Length of all the the teeth in the upper jaw, measured from the anterior of the in- cisors to the last molar . . .	<i>skull.</i> <i>type.</i> 45.5	<i>skull.</i> <i>Audebert's</i> 46.5	<i>skull.</i> <i>Crossley's</i> 48
Length of lower jaw, from the angle to the base of the incisors	65	69	75
Length of bony palate . .	47	48	50

Although measurements taken from stuffed specimens have a very relative scientific value, it seems to me that in this case it has some interest. I call the specimens after the collectors:

	♀ (?)	♀	♂
<i>Measurements taken in cm.:</i>	<i>Poivre.</i>	<i>Audebert.</i>	<i>Crossley.</i>
From tip of nose to base of tail	45.5	48.5	53.5
Tail	22	26	26.5

Buffon gave somewhat other figures, viz. 17 pouces and 8.5 pouces, however at his time it was use to measure in a strait line: the tip of the tail apparently at that time was still wanting, moreover that part is black in other specimens, not in the type-specimen, so that the tail is too short. Audebert's specimen is a female and like the type-specimen (♀?) a good deal smaller than the male collected by Crossley. The coloring of the Audebert's and Crossley's specimen is much fresher and darker than that of the old bleached type-specimen, the distribution of the

colors however is exactly like de Buffon described them: in our female specimen are the dark back-lines more or less broken into very close spots, especially those along the sides of the body. In the adult male there are on each side the uppermost line entire, the following one entire for more than its anterior half, for the rest they are broken into spots like in the type-specimen. I don't see the use of reproducing de Buffon's good description. I solely have to add that the four feet are five-fingered, that the innermost finger is very short and rather high placed, that the claws are well-developed and slightly curved.

A single word concerning the name »*Fossa*'''. Dr. Pollen the well known dutch traveller in Madagascar assured in his book «*Recherches sur la Faune de Madagascar et de ses dépendances, 2^{me} partie, 1868, p. 14*»: *l'animal qui porte chez les malgaches le nom de Fossa est le Cryptoprocta ferox de Bennett et non pas la Viverra fossa de Gmelin. Le mot de «Fossa» indiqué pour la première fois par Flacourt pour désigner un animal de la forme du blaireau a été appliquée par Buffon et les naturalistes postérieurs, à une espèce de genette originaire de Madagascar. Les malgaches donnent cependant le nom de Sabady aux espèces de genettes, tandis qu'il appliquent constamment le nom de Fossa au Cryptoprocta ferox.* In other words Pollen was instructed by the Madagascar-people, that *Fossa* was the indigenous name for what we now call *Cryptoprocta ferox*, meanwhile they named our *Fossa fossa*, at once with other *Viverridae*, always *Sabady*. Now we cannot make out if Pollen was right, but it remains a fact that de Buffon was quite right also and that he had a good authority for his opinion in Flacourt himself. It is a curious fact that Pollen seems to have misunderstood what Flacourt tells in his book. The latter verbally stated as follows (*Histoire de la grande Isle Madagascar, composée par le Sieur de Flacourt, Paris, 1661, p. 152*): «*Fossa, est un animal semblable au blereau de France, il*

mange les poules, il est d'aussi bon goust que le levraut quand il est jeune, ou que c'est une femelle» and *Farassa*, «c'est un animal bien carnassier de la grandeur d'un Renard, il a la queue fort grande et longue, et le poil de la couleur de celui d'un loup.» I think that every naturalist will recognize in the *Farassa*, the *Cryptoprocta ferox*, the more as Flacourt gave a figure of that long tailed, fox-colored animal on the plate among other Mammals and Birds, Fishes and Reptiles. This now being an irrefragable fact I cannot find a reason to oppose de Buffon's naming *Fossa* the animal sent over by Mr. Poivre. The name *Sabady* has not been used in de Flacourt's book. Finally Pollen said (p. 16): «les malgaches prétendent qu'il existe dans leur pays une autre espèce de Fossa dont le pelage est d'un noir uniforme», an animal up to this day never seen by an European.

I remark that Monsieur Grandidier (Revue et Magasin de Zoologie, 1867, 2^e Série, T. XIX, p. 317) mentions that the indigenes of Madagascar call *Cryptoprocta ferox*, *Fonsa* (*Fossa* apud Pollen) and *Viverra Schlegeli*, *Zabada*: *Sabady* of Dr. Pollen sounds somewhat like the latter name; so that it is highly probable that Pollen made confusion by misunderstanding the Madagascar-men.

The figures of the skull on plate 11 we owe to the extreme kindness of Professor Milne Edwards, who allowed me to take these photo's of the type-skull of «La Fossane de Buffon» in the Paris Museum. Figures 1 and 2 are somewhat more than natural size, figure 3 is more than twice natural size.

In the collection of the Leyden Museum (cf. my Catalogue ostéologique et systématique des Mammifères) there are three stuffed specimens, a skull belonging to Crossley's ♂-specimen and a skeleton taken out of Audebert's ♀-specimen. This skeleton presents 13 ribs, 20 thoracic, 3 lumbar and 23 caudal vertebra.

NOTE XXXVIII.

THREE NEW SPECIES OF THE GENUS HELOTA

DESCRIBED BY

C. RITSEMA Cz.

The first of these species is very interesting as it belongs to the same section as the recently described *Helota Candezei* Rits., from Sumatra (see ante p. 199). It has been communicated to me by my friend René Oberthür who received it from Maria Basti, a christianity in British Bootang not far distant from Pedong in Sikkim and founded by the Missionaries of Monseigneur Biet.

1. *Helota Mariae*, n. sp. ♂.

Resembling *Helota serratipennis* Rits. ¹⁾, from Burma, but of a more parallel shape, more broadly rounded and not serrate at the apex of the elytra, and having the entire prothorax (the prosternum as well as the pronotum, the anterior lateral angles included) of a dark metallic green colour; moreover the flavous elytral spots are smaller and of a different position.

Length 7 mm. — Subshining; above dark bronze, the anterior lateral angles of the pronotum included; the antennae pitchy brown, the club darker; the elytra provided with four very small flavous spots which are situated between the same striae, viz. between the 3rd and 6th, and

1) Ann. Mus. Civ. Genova, ser. 2a, vol. X, 1891, p. 890.

surrounded with bluish black. — Underneath the head, the prosternum, and the elytral folds are dark bronze; the meso- and metasternum, the abdomen, the coxae and the basal two-thirds of the femora reddish testaceous; the apical third of the femora and the entire tibiae dark bronze, the tarsi pitchy, the claws reddish testaceous.

The head rather remotely covered with large deep punctures on the raised middle portion; towards the eyes the punctures are smaller and closer together, and towards the front margin they are still smaller and closer set.

The prothorax somewhat broader at the base than long and slightly narrowing in curved lines towards the front margin; the sides are distinctly crenulate; the front margin curved backwards, the anterior angles rounded and slightly prominent; the base deeply bisinuate, the lateral angles acute, the median lobe broadly rounded; the upper surface covered with strong punctures which become larger and very closely set towards the lateral margins; in front of the scutellum a longitudinal, nearly impunctate streak is present which is accompanied on each side of its base by a strongly punctured impression; outside from these impressions a sparsely punctate slightly raised patch may be observed. The scutellum is strongly transverse, glossy and impunctate.

The elytra parallel, broadly, almost conjointly rounded at the apex, each of them provided with ten regular striae of punctures which become larger and deeper towards the lateral margins which latter are narrowly flattened; the interstices are extremely finely punctured and become costate towards the apex especially the 3rd and 9th which extend to the apical margin.

The undersurface of the head shows in the middle very distinct punctures; those on the sides of the prosternum are larger and deeper, on the middle portion, however, smaller, the sides of the metasternum are also distinctly punctured; the middle of the metasternum shows a narrow longitudinal impression; the ventral segments are very

finely but distinctly punctured; the apical one flattened in the middle, broadly rounded posteriorly, subtruncate at the tip.

The tibiae are strongly punctured, the anterior ones strongly curved, their apical half angularly dilated on the inner margin, the middle- and hind tibiae armed on their inner edge, near the apex, with a very small tooth.

Hab. Maria Basti (British Bootang). — Collection Oberthür and Leyden Museum.

2. *Helota Olijii*, n. sp. ♂.

Allied to *Helota Boysi* Rits. ¹⁾, from Kurseong (Darjeeling), and agreeing with this species in the shape of the apices of the elytra but quite distinct by the otherwise shaped anterior tibiae.

Length 8—9 mm. — Narrow and elongate, shining; above metallic green with coppery and purple tinges; the antennae pale testaceous, the club infuscate; each elytron provided with two flavous spots, situated between the 3rd and 7th striae ²⁾ and surrounded with purple. — Underneath reddish testaceous with the exception of the head, the lateral portions of the prosternum and the elytral epipleurae which are golden green; the legs reddish testaceous with the apex of the femora and the base of the tibiae metallic green; the tarsi brownish, the basal half of the claw-joint pale testaceous.

The head is deeply and densely punctured; on the middle portion the punctures are larger and wider apart.

The prothorax is subquadrate, narrowing but slightly in straight lines towards the front margin which is straight; the anterior angles are broadly rounded, not at all prominent; the base is deeply bisinuate, the lateral angles

1) Notes from the Leyden Museum, vol. XVI, 1894, p. 114.

2) The posterior spot is, in some individuals, situated between the 3rd and 8th striae.

acute. The upper surface is rather regularly densely covered with large deep punctures and shows a smooth space in front of the scutellum.

The elytra are very slightly narrowing in straight lines towards the end where they are conjointly notched at the suture; at the bottom of the notch the suture forms an acute angle or very minute tooth quite as in *Boysi*. Each elytron has ten regular rows of punctures which become larger towards the sides; the interstices become costate towards the end, especially the 3rd and 9th.

The metallic portions of the undersurface of the head as well as the lateral portions of the prosternum are covered with strong punctures; the rest of the undersurface is apparently impunctate.

♂. Anterior tibiae slightly curved and faintly notched about the middle of the inner edge; between this notch and the apex the tibia is slightly widened out; the margin of this enlargement forms a curved line, is black and ends in a sharp angle; the basal joints of the anterior tarsi are enlarged and densely fringed with colourless hairs; the tarsi of the middle- and hind legs are very slender and elongate; the posterior tibiae have a black line along the inner edge of their apical half.

Hab. Khasia Hills (Assam). — Zoological Museum at Tring and Leyden Museum. — Dedicated to the late A. Sidney Olliff.

3. *Helota Jordani*, n. sp. ♂ and ♀.

Very closely allied to and strongly resembling *Helota Bretaudeaui* Rits. ¹⁾, from Kurseong (Darjeeling), but differentiated in the male sex by the shorter and broader toothlike appendage on the inside of the apical half of the anterior tibiae.

Length 8—9 mm. — Narrow and elongate, shining,

1) Notes from the Leyden Museum, vol. XVI, 1894, p. 116.

above metallic green with coppery tinges, the antennae pale testaceous with the club more or less infusate; each elytron with two flavous spots which are surrounded with dark purple and which are placed between the 3rd and 7th striae ¹). — Underneath the head (the middle of the throat excepted), the lateral portions of the pronotum and the elytral folds are golden green, the rest of the body testaceous; the legs are testaceous with the apex of the femora and the basal half of the tibiae metallic green; the tarsi are brown, the basal half of the claw-joint, however, is pale testaceous.

The head is deeply and densely punctured, the punctures on the middle are larger and wider apart.

The prothorax narrows slightly in straight lines towards the front margin which is straight; the anterior angles are broadly rounded, not at all prominent; the base is deeply bisinuate, the lateral angles acute. The upper surface is regularly densely covered with large deep punctures, an elongate smooth space, however, is present in front of the scutellum.

The elytra are slightly narrowing in straight lines towards the apices; each elytron is provided with ten regular striae of punctures which become larger towards the sides; the interspaces are more or less costate at the end, especially the 3rd and 9th.

The undersurface is apparently impunctate with the exception of the head and the metallic lateral portions of the posternum.

♂. Anterior tibiae slightly curved and with a notch on the inside about the middle; this notch is accompanied by a broad flat tooth which has the shape of a curved triangle; the margins of the tooth as well as the enlarged space between the tooth and the apex of the tibia are fringed with long soft colourless hairs; the basal joints of the

1) In one of the 28 examples before me (a female), the posterior elytral spot is situated between the 3rd and 8th striae.

anterior tarsi are slightly enlarged and covered on their undersurface with long colourless hairs. The intermediate tibiae are slightly curved, the posterior ones somewhat waved and provided on the inside of the apical half with a raised black line which terminates at some distance from the apex in a very minute tooth; the space between this tooth and the apex is finely pubescent. The apical ventral segment is truncate posteriorly. The apices of the elytra are subtruncate in a somewhat oblique direction.

♀. Legs simple. Apical ventral segment more narrowly truncate than in the male and more or less distinctly flattened along the middle. The apices of the elytra slightly prolonged, narrower than in the male, subacuminate, and obliquely truncate between the 3rd interstice and the suture.

Hab. Khasia Hills (Assam). — Zoological Museum at Tring and Leyden Museum. — Dedicated to Dr. K. Jordan.

Leyden Museum, January 1899.

NOTE XXXIX.

NOTE SUR UNE ESPÈCE NOUVELLE DE BOSTRYCHUS
(COLEOPTERA : BOSTRYCHIDÆ)

PAR

P. LESNE.*Bostrychus malayanus*, nov. spec.

Long. 12—18 mill. — *Bostrycho cænophradoidi* Lesn. ¹⁾
maxime affinis. Differt:

♂ ♀ *pube flavescente scutelli manifesta.*

♂ *fronte minus tenuiter granulata, antice prominentiore;*
costa marginali inferiori declivitatis apicalis lateraliter sinuata.

♀ *spinulis frontulibus minus tenuibus ac minus densis;*
costa frontali prominentiore; pube anterioris marginis pro-
thoracis rutila.

Nous avons d'abord confondu cette forme avec notre *Bostrychus cænophradoides*, dont elle est extrêmement voisine, à tel point qu'on peut la considérer comme une race géographique de ce dernier. Mais les caractères indiqués ci-dessus paraissent très constants. Ils nous ont toujours permis de distinguer les exemplaires malais (*B. malayanus*) de ceux provenant de l'Indo-Chine orientale (*B. cænophradoides*).

Les spécimens assez nombreux de *Bostrychus malayanus* que nous avons examinés, ont été recueillis dans la presqu'île de Malacca (Muséum de Paris), à Sumatra (Musée de Leyde, Musée de Vienne, Coll. Bedel, Coll. Oberthür) et à Bornéo (Coll. Oberthür).

Paris, Décembre 1898.

1) *Ann. Soc. ent. Fr.*, 1895, p. 174.

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J. C. WÄKERLIN AD NAT: PHOT.

LICHTDRUK VAN EMRIK & BINGER, HAARLEM

1, 2. UNIO NIEUWENHUI SI SCHEPMAN.
3, 4. PUPA OF ALLOTOPUS ROSENBERGII (VOLL.).

N. L. M. 1898.

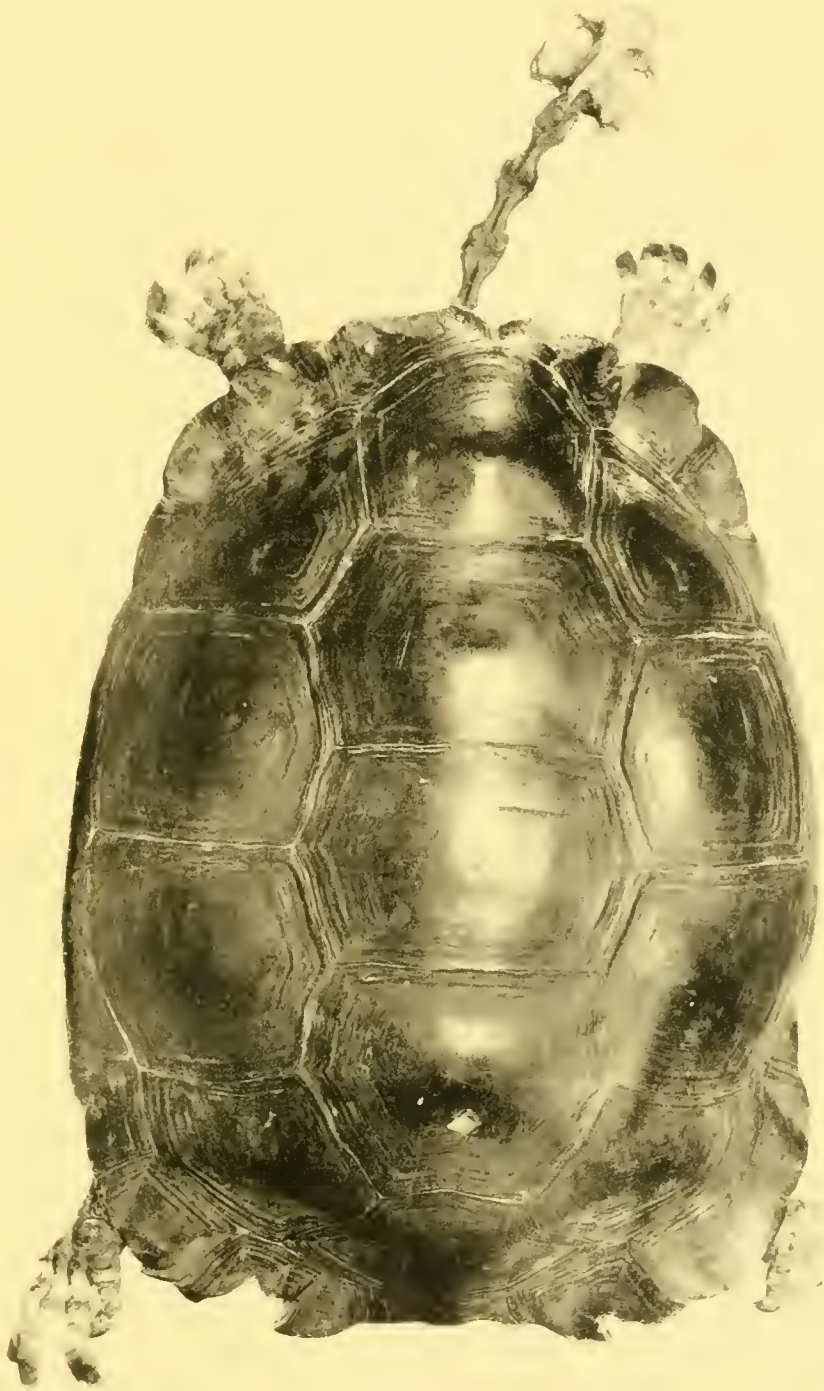
Plate 2.



DR. NIEUWENHUIS AT NAT. PHOT.

LICHTDRUK VAN EMRIK & BINGER, HAARLEM.

BIBOS BANTENG (RAFFLES).



J. C. WÄKERLIN AD NAT: PHOT.

LICHTDRUK VAN EMRIK & BINGER, HAARLEM.

TESTUDO EPHIPIUM GÜNTHER.





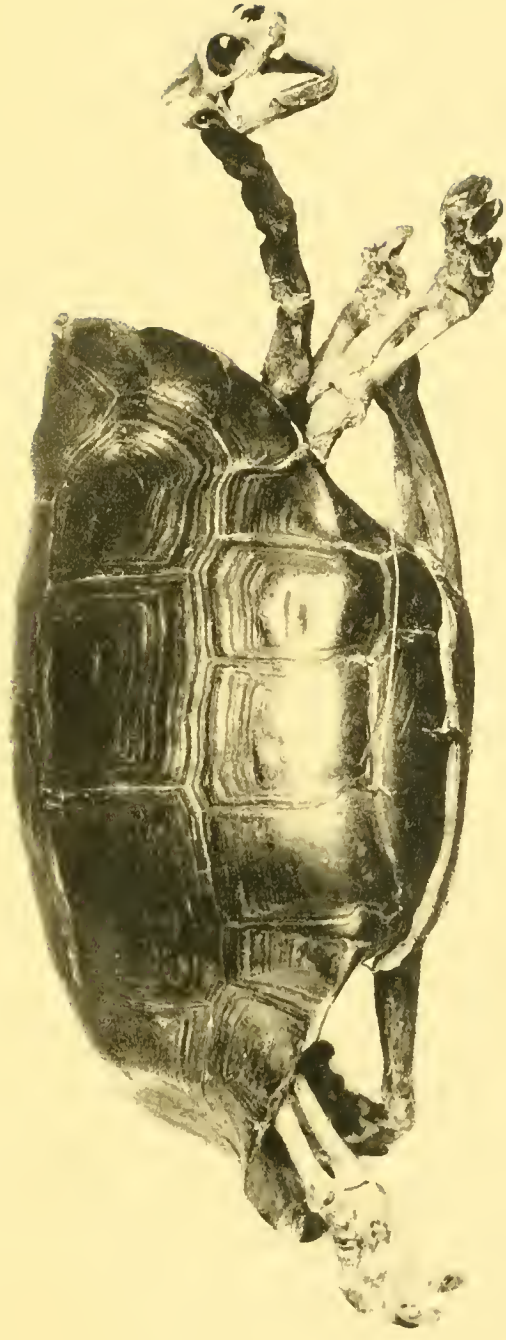
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N. L. M. 1898.

Plate 5.

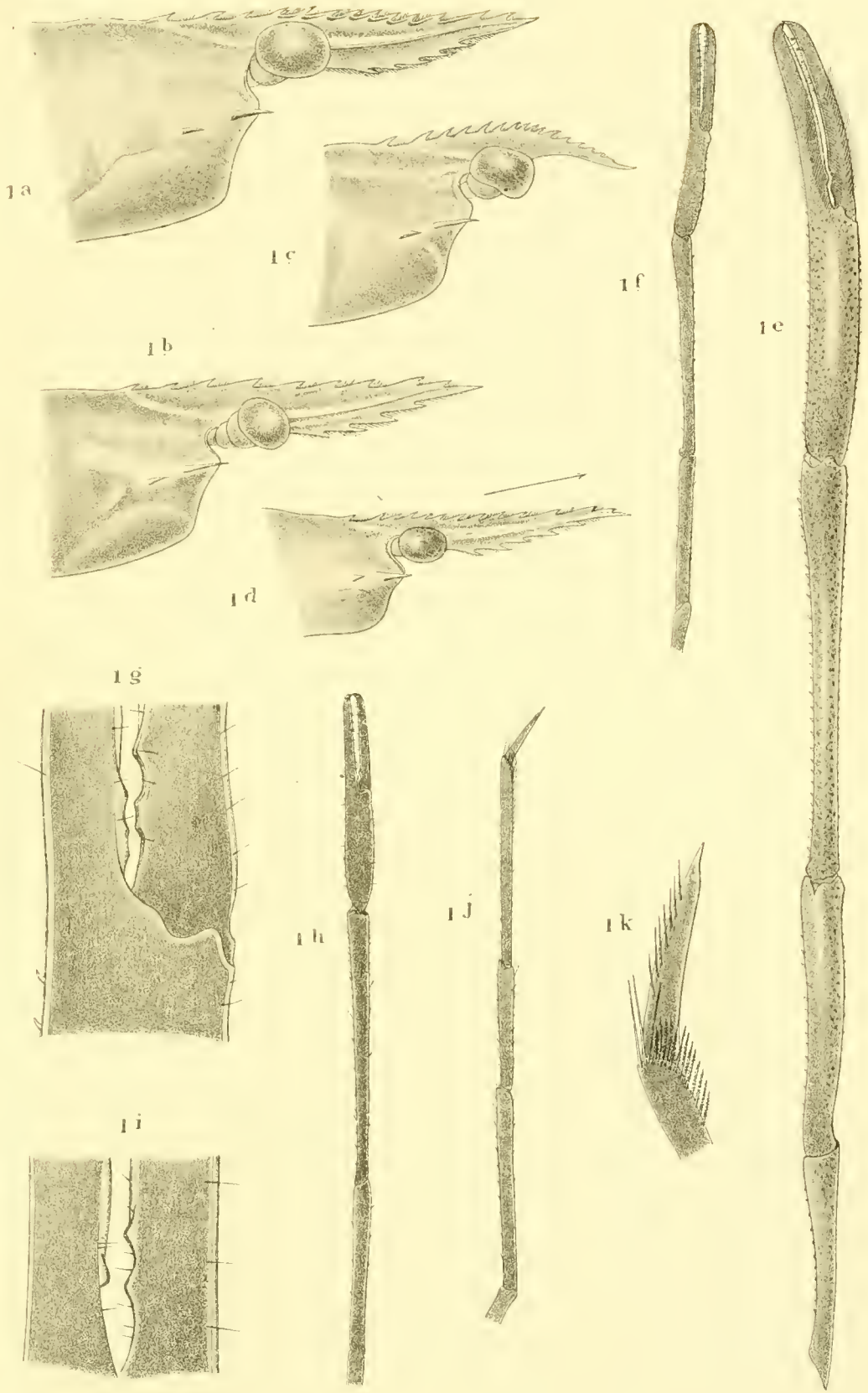


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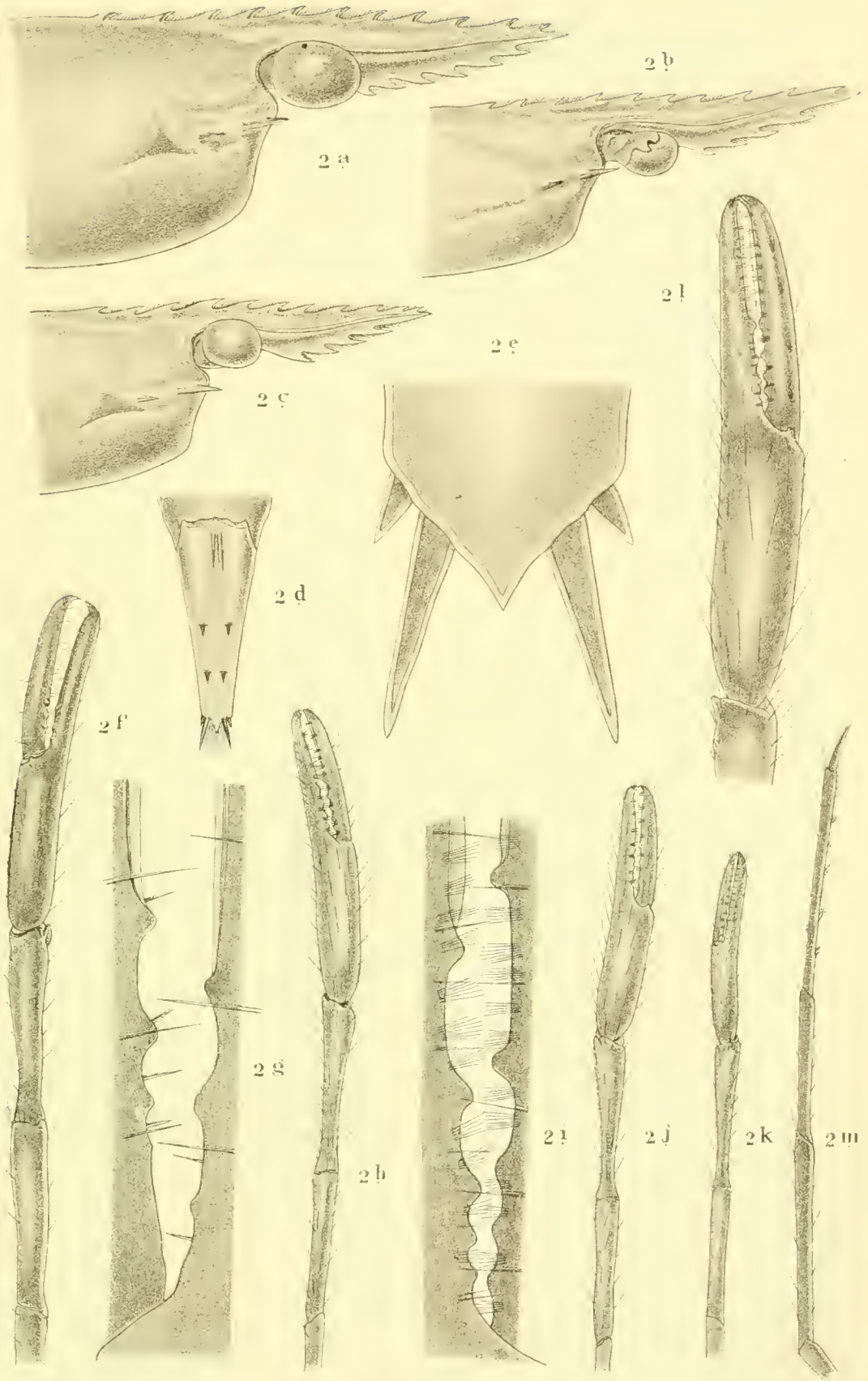


Dr. J. G. de Man del.

A. J. J. Wendel lith.

P. W. M. Trap impr.

Palaemon (Eupalaemon) sintangensis de Man.

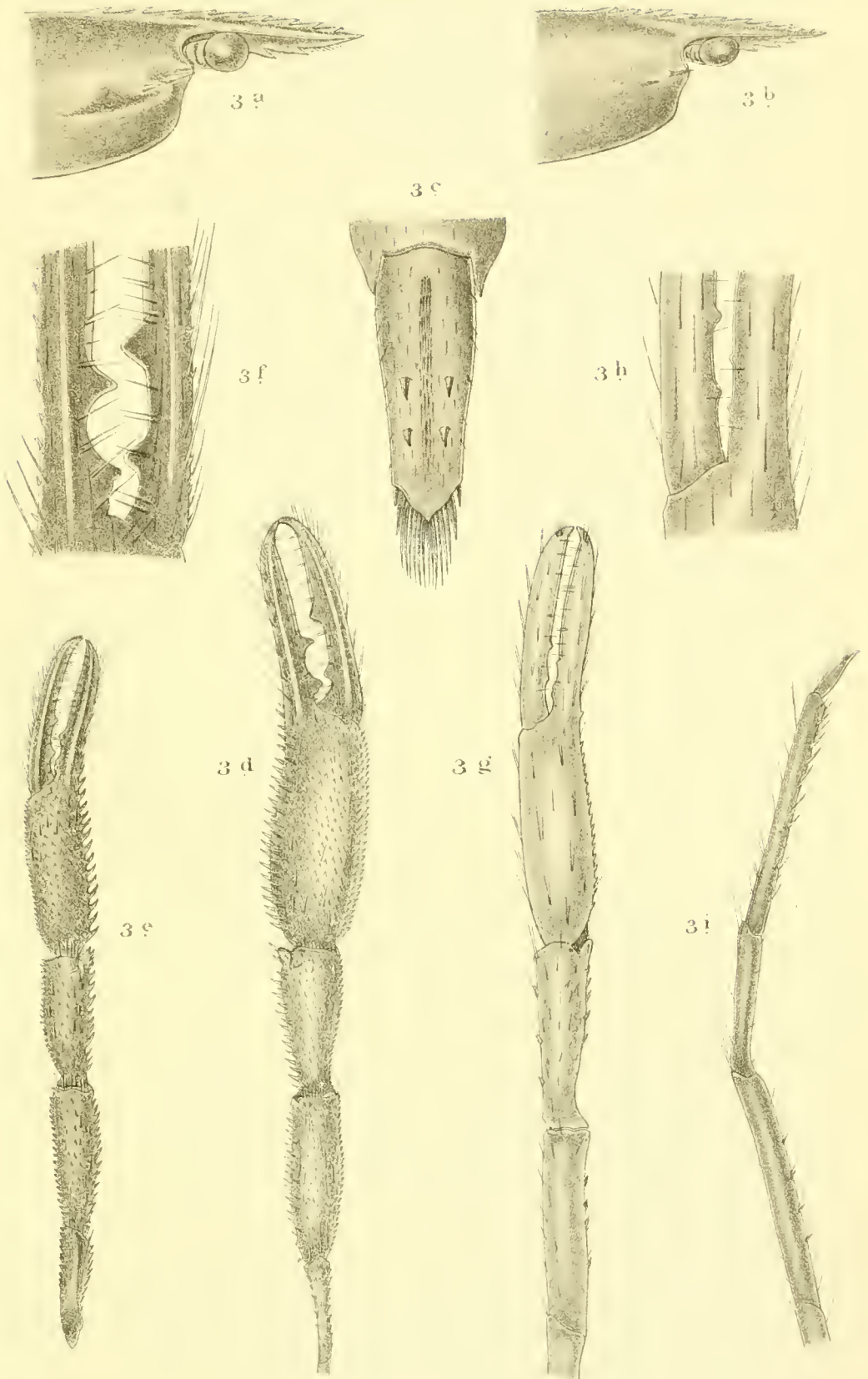


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P. W. M. Trap impr.

Palaemon (Parapalaemon) Trompii de Man.

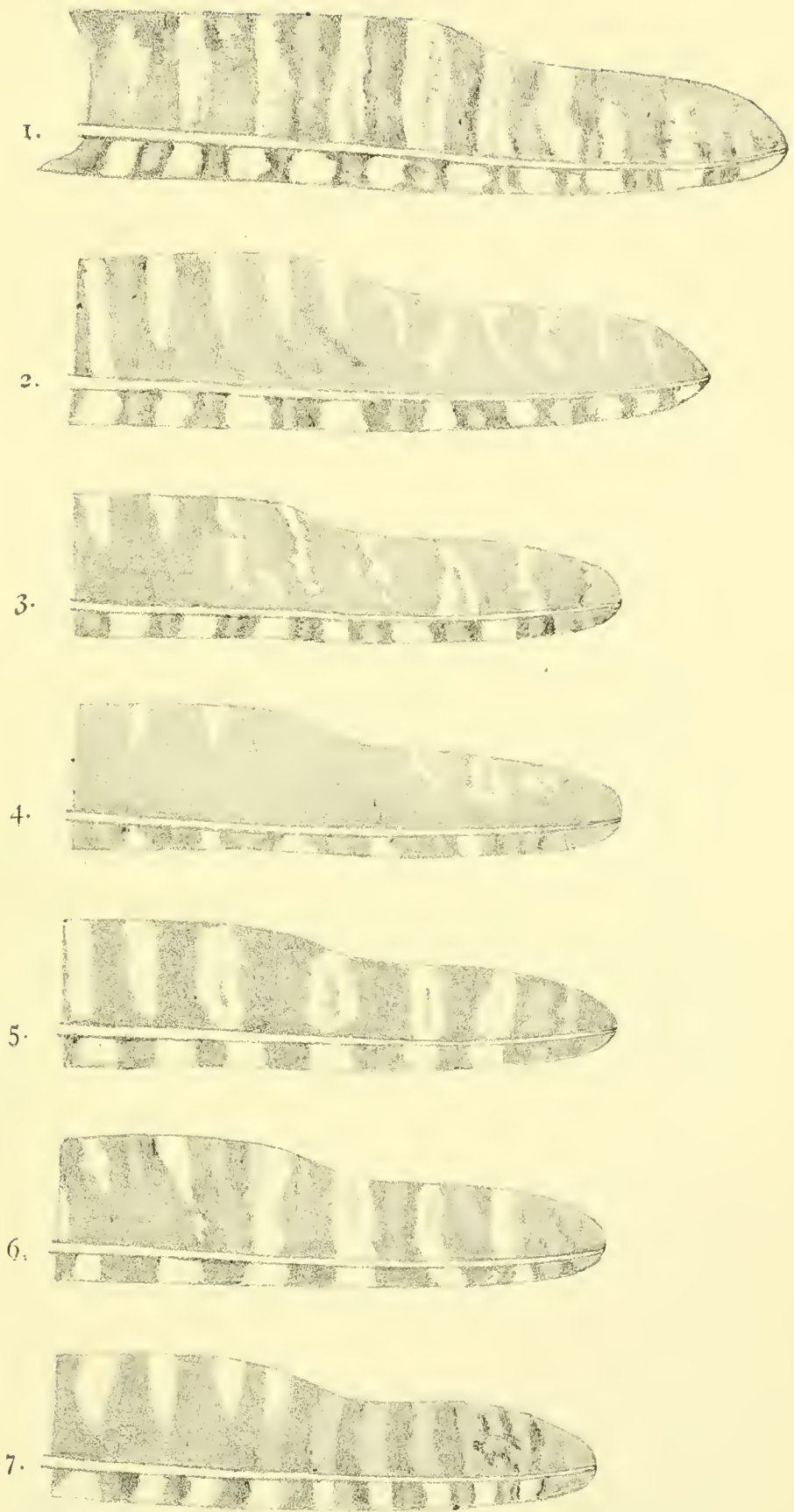


Dr. J. G. de Man del

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P. W. M. Trap impr.

Palaemon (Macrobrachium) callirhoë de Man.



Dr. O Finsch del.

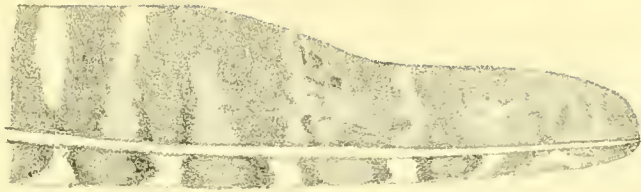
Ca Ritsema lith.

P W.M Trap impr.

1—2. Scops magicus (*S. Mill.*).

3—7. „ manadensis *Q. & G.*

8.



9.



10.



11.



12.



13.



Dr. O. Finsch del.

Ca Ritsema lith.

P.W.M. Trap impr.

8—10. *Scops rufus* Pucher.

11. *Scops sulaensis* (Hartert).

12—13. *Scops siaoensis* Schleg.

1.



2.



3.



J. C. Wäkerlin ad nat. phot.

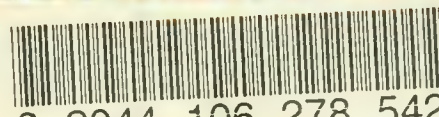
Lichtdruk van Emrik & Binger, Haarlem.

Fossa fossa (Schreber).



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