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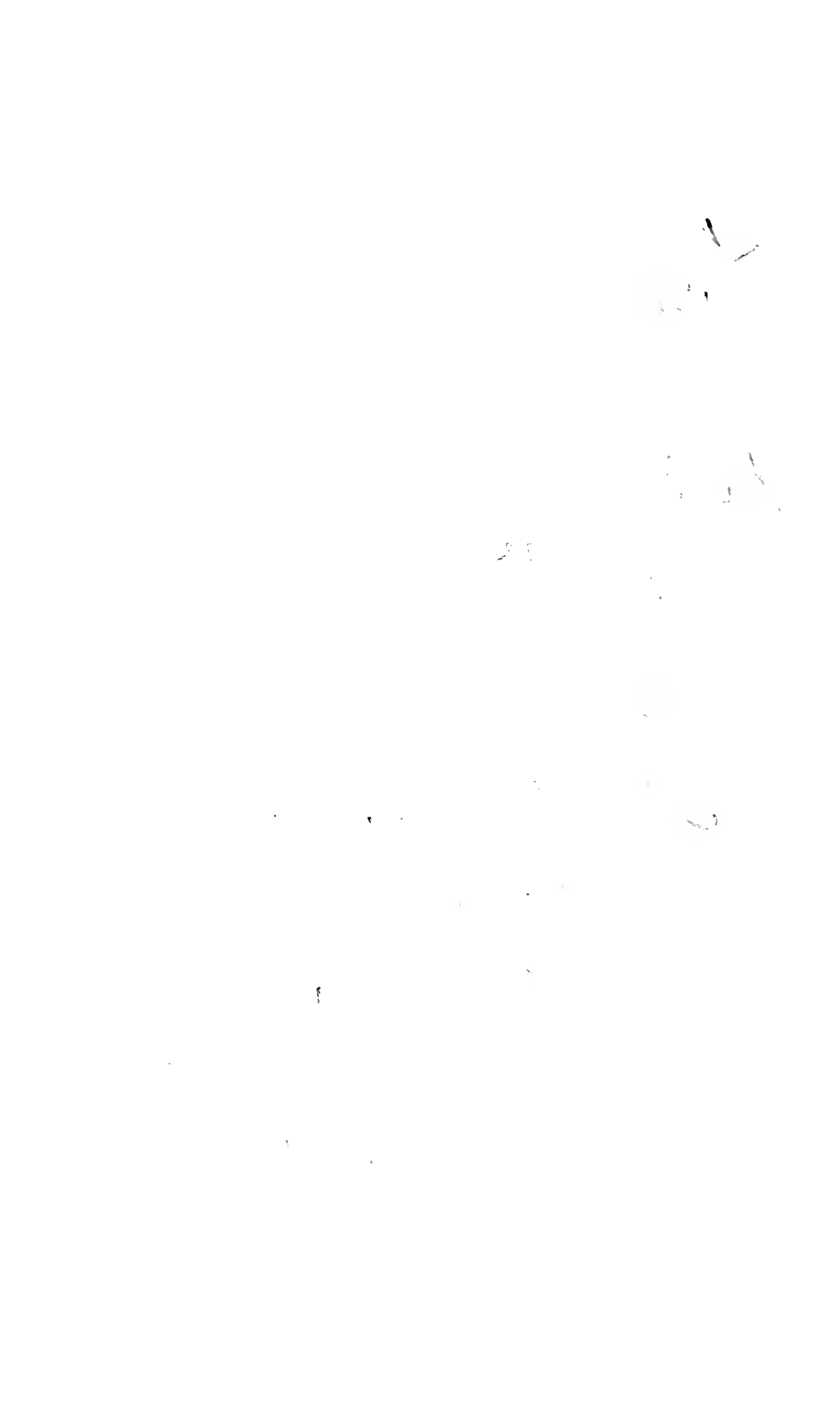
BY

Prof. H. SCHLEGEL,

Director of the Museum.

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VOL. IV.

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1) Correction: p. 95, line 6 (from bottom), for "*Xylobanus divisus*" read "*Xylobanus dimidiatus*".

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**Vol. IV was issued in parts in the following order:**

N<sup>o</sup>. 1 -- January 1882, Note I—IV.

N<sup>o</sup>. 2 — April 1882. Note V—XIV.

N<sup>o</sup>. 3 — July 1882. Note XV—XXVI.

N<sup>o</sup>. 4 — October 1882. Note XXVII—XXVIII.



## NOTE I.

A MONOGRAPH OF THE AFRICAN SQUIRRELS,  
WITH AN ENUMERATION OF THE SPECIMENS IN  
THE LEYDEN MUSEUM

BY

**Dr. F. A. JENTINK.**

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The African Squirrels have never been monographically studied, although a large number of more or less important descriptions of different species have been given, which are to be found in different periodicals. The late Temminck in his »Esquisses zoologiques sur la côte de Guiné. 1853" was the first to give a revision of the Squirrels from West-Africa known at that time. The late Gray in »the Annals and Magazine of Natural History, 1867" published a Synopsis of the African Squirrels and Huet described in his »Recherches sur les Écureuils Africains 1880" the Squirrels of the Paris Museum. These three publications are the principal sources. There are further several separate descriptions of species by Kerr, Ét. Geoffroy Saint-Hilaire, Desmarest, Smith, Fr. Cuvier, Rüppell, Wagner, v. Heuglin, Ogilby, Lesson, Waterhouse, Fraser, Peters, Le Conte, Du Chaillu, Gray, A. Milne Edwards, etc. More or less critical enumerations or compilations on this matter have been given by Fischer, Wagner, Schinz,

Fitzinger and Trouessart. These several authors have described no less than fifty Squirrels inhabiting Africa! This large number is *a priori* somewhat suspect and a careful study has indeed led me to the conclusion that of this number only nineteen species may stand.

The origin of the prodigious confusion which reigns in this group of Rodents is not far to seek and will be obvious by reading Temminck's *Esquisses zoologiques* and Gray's *Synopsis*. It seems that Temminck suffered from a sort of Anglophobia, fatal for science, but which may in some measure be attributed to his efforts to keep the Leyden Museum ahead of the British Museum. This led him into several mistakes and inaccurate considerations and was also the cause of a violent attack by Gray in the »Synopsis» just referred to; Gray accepted only two of Temminck's new species and accused him of having encumbered the list with *doubles emplois*, etc. It should be observed that Temminck had not seen the type-specimens in the British Museum and that he could not find or understand some of the original descriptions and that Gray on the other hand had not examined Temminck's types in the Leyden collection; he found them however described »in Temminck's usual general style". Nearly all the succeeding authors, adopting either Temminck's or Gray's opinion, have proved by their several mistakes that the African Squirrels require a complete and impartial revision, based upon an examination of the types.

Some time ago I had the advantage of visiting nearly all the Zoological Collections which contain type-specimens of these Squirrels and I undertook the task of studying these animals monographically, at the same time intending to give a catalogue of the specimens of this group in the Leyden Museum. We owe the large collection at present contained in this institution to the care of the late Temminck and of Prof. Schlegel.

I am very much obliged to the officers attached to the different Musea which I visited, but especially to Dr. Günther,

Prof. Peters, Dr. Steindachner and Prof. A. Milne Edwards for their great liberality which simplified my inquiries and for their kind informations. I may here be allowed to express my sincere and special thanks to all those gentlemen for their kindness.

The African Squirrels offer certain peculiarities which are not or rarely found in other Squirrels; they mostly present an olivaceous or greenish tinge, others a so-called desert-color: the fur, with a few exceptions, is not so soft and less dense than in other Squirrels, in some species the body is even covered with harsh and spiny hairs, a phenomenon not met with in Squirrels of other parts of the world. *Pari passu* with the harshness of the fur goes the straightness and the increased length of the claws. The ears are generally less developed and covered with very short hairs, which never form a tuft. Finally Africa has its own species of Squirrels, not a single species having hitherto been found in Asia which can be confounded with an African one.

Only a small number of skeletons of African Squirrels is preserved in the Musea and these skeletons moreover belong to only four species, viz: .

|                                                                           | costa-<br>les. | lum-<br>bares. | sacra-<br>les. | cauda-<br>les.  |
|---------------------------------------------------------------------------|----------------|----------------|----------------|-----------------|
| <i>Sciurus annulatus</i> Desmarest<br>( <i>multicolor</i> Rüppell) with . | 12             | — 7            | — 5            | — 25            |
| <i>Sciurus conqicus</i> Kuhl ( <i>flavivittis</i> Peters) with . . .      | 12             | — 7            | — 3            | — 29            |
| <i>Sciurus getulus</i> C. Gessner .                                       | 12             | — 7            | — 3            | — 22            |
| <i>Xerus erythropus</i> É. Geoffr.                                        |                |                |                |                 |
| St. H. ( <i>leucoumbrinus</i> Rüppell)                                    | 12             | — 7            | — 4            | — 25, 26 or 27. |

A very great difference in the shape and size of the skull obtains in the different species. As it is here however not my intention to enter into osteological discussions, the reader will find sufficient materials concerning this matter in the measures of skulls which I give in the respective descriptions.

Of the nineteen species which I distinguish, there are ten which have four molars in each jaw and nine which

present a small fifth molar in each upper jaw. It is however an impossibility to bring them for this reason under two heads, as it often happens that of two closely allied species the one has  $\frac{1}{4}$  and the other  $\frac{5}{4}$  molars. The number of molars is a very constant and thus a good characteristic for distinguishing the several species. In adult specimens the first small upper molar does not fall out, as some writers assert. The smoothness of the upper incisors can however not be regarded as the characteristic of a distinct group, nor does their grooved state enable us to separate the species which present such peculiarities from their congeners. Of the nineteen species only two show the latter characteristic, viz: *Sciurus rufo-brachiatus* and *getulus*.

Although many attempts have been made to divide the Squirrels into distinct restricted groups, only a few of them can stand a more critical inquiry, as these sections have been for the greater part based upon inconstant and accidental characters and on the other hand upon inexact and partly fanciful observations. As to the African Squirrels I only admit two distinct groups, viz: the genera SCIURUS and XERTUS and I believe that it will be prudent to content ourselves provisionally with these two sections as up to this time hardly anything is known about the habits of these animals and as the skeletons and the other inner parts have even not yet been studied. Prof. Peters is the only author who gives some accounts of the anatomy of a couple of his new African Squirrels.

I have endeavored to bring all the African Squirrels hitherto described under one or other of my species, but I do not know to what species may belong *Sciurus abyssinicus* Thevenot, described in »les Voyages aux Indes Orientales, 1789, Chap. V. p. 34". He says »son poil est long et »rude et d'un roux noirâtre. Celui du ventre et des pieds »de devant est gris comme le poil du lièvre..... Les »Hollandais l'avaient acheté d'un Abyssin..... Il est »trois fois plus grand que ceux que nous avons en France". I never saw a Squirrel of a similar size!

***Sciurus.***

Fur soft. Ears <sup>1)</sup> well developed. Claws curved. Fourth toe the longest. Palate short, not extending further backwards than the hind-most molars. Jugalia compressed. Tail generally cylindrical <sup>2)</sup>).

Although the hairs, contrary to what obtains in the genus *Xerus*, are circular in circumference and never channelled, there are however varying degrees in the softness of the fur. Certain *Sciuri* are rough to the touch in consequence of several bristle-like hairs being interspersed among the soft ones. This is especially the case in the largest species. Other species have the fur as soft and dense as possible; and this is especially to be found in the smallest species. In the majority there is no trace of peculiar colored stripes or streaks on the body, others present very distinct longitudinal stripes of a whitish or blackish color ornating the back or sides of the body. Some species have the under-parts of the body sparingly covered with hairs, in other species those parts are quite as hairy as the upper parts.

As to coloration the different specimens of a given species are apt to vary, sometimes even in a very high degree, as will be obvious from the descriptions. About forty species of this genus have been described by the different authors as living in Africa. I refer them to sixteen species.

One species, *Sciurus getulus*, has been met with only in N. W. Africa, nine are exclusively inhabitants of W. Africa, four exclusively of E. Africa, whereas only two species,

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1) In my descriptions I give no measures of the ears, as they have no importance at all if taken from dried skins.

2) The form (cylindrical or distichous, depressed) of the tail is a very good characteristic for distinguishing species, but it can rarely be properly applied to the study of mounted specimens. As only a small number of squirrels have as yet been preserved in spirits, I prefer to leave this characteristic out of consideration in my descriptions of the species of this Genus. The species of the Genus *Xerus* always present the tail distichous.

*Sciurus annulatus* and *congius* live both in West and in East Africa. The greatest number of species is found in West Africa about two degrees North and South of the Equator.

In order to simplify the revision of the different species I propose to divide them in the following groups:

A. Squirrels with a single very small stripe on each side or without stripes on back or sides.

B. Squirrels with two stripes on each side.

C. Squirrels with several stripes on back and sides.

α. Fur soft.

β. Fur harsher.

A. Squirrels with a single very small stripe on each side or without stripes on back or sides.

*Sciurus stangeri*.

1842. *Sciurus stangeri* Waterhouse. Proc. Zool. Soc. London. p. 127; Ann. and Mag. Nat. Hist. X. p. 202.
1849. *Sciurus stangeri* Fraser. Zoologia typica. Plate 23.
1853. *Sciurus caniceps* Temminck (non Gray). Esquisses sur la côte de Guinée. 1<sup>e</sup> partie. p. 127.
1860. *Sciurus nordhoffi* Du Chaillu. Proc. of the Boston Soc. of Nat. Hist. p. 363; *Sciurus eborivorus* Du Chaillu. l. c. p. 363; *Sciurus subalbidus* Du Chaillu. l. c. p. 365.
1861. *Sciurus nordhoffi*, *eborivorus* and *subalbidus* Gray. Proc. Zool. Soc. London. p. 276.
1867. *Macroxus stangeri* Gray. Ann. and Mag. of Nat. Hist. XX. p. 326; *Macroxus caniceps* Gray (not Gray 1842), l. c. p. 327; *Macroxus rufobrachiatu*s Gray. l. c. p. 328 (partim).
1874. *Sciurus calliurus* (Buchholz) W. Peters. Monatsber. d. K. Pr. Akad. d. Wissch. Berlin. p. 707.
1876. *Sciurus calliurus* Peters. Monatsb. d. K. Pr. Ak. d. Wiss. p. 476. pl. I.

1878. *Sciurus temminckii* Anderson. Yunnan Expedition. p. 229. Note.
1880. *Sciurus stangeri* Huet. Nouv. Arch. du Museum. p. 142 (partim).
1880. *Heliosciurus stangeri* Trouessart. Catalogue des Rongeurs viv. et foss. p. 82 (partim); *Heliosciurus gambianus* Trouessart. l. c. p. 83 (partim).
1881. *Sciurus temminckii* Jentink. Notes from the Leyden Museum. p. 65.

An abrupt line of demarcation between the hairs of the sides and the scarcely hairy abdomen characterizes this species. It is one of the largest African Squirrels, with strongly developed incisors.

It presents a highly different hue according to season and age. If not yet in full dress it agrees with the description and figure given by Fraser and Waterhouse and may be described as follows: all the hairs of the upper parts and sides of body are black with two broad yellowish white rings; towards the fore feet one of these rings disappears, likewise on the head above and beneath; towards the hind-feet there are several reddish rings on the hairs. The under parts are scarcely hairy, the hairs being short and blackish with a yellowish ring. The root of the bushy tail is of the same color as the back, but each hair has several reddish rings. The hairs of the tail are black with four pure white rings and a white tip, forming on the upper parts of the tail numerous alternate bands of black and white, indistinct towards the apex. On the back several wholly black hairs are interspersed.

When in full dress all the hairs of the upperparts become glossy. The number of rings to the hairs of the corresponding parts of the body are the same, but the whitish or yellowish white rings on the back, sides of the body, hind-legs and root of tail have turned to bright red; on the fore-feet, upper part of head and cheeks to pure white. The fore part of the shoulders, the breast, inside of fore-legs, middle of belly and a small band bordering the above named line of demar-

cation between the sides of the body and the abdomen are changed into a pure white. The remaining parts of the belly and the inside of the hind-legs are scantily covered with reddish hairs. The white rings of the tail have turned red, but the tip of each hair has remained pure white, thus the tail seen from above shows alternate bands of black, white and red.

Between the two described modes of coloration there are several stages, described as different species by the several authors.

The ears are covered with short hairs. Whiskers long, black. Eyes dark brown. A red or reddish spot behind the ears.

|                                                          | m. m. |
|----------------------------------------------------------|-------|
| Length of head and body . . . . .                        | 331   |
| » » tail without tuft . . . . .                          | 333   |
| » » » with tuft . . . . .                                | 418   |
| » » hind foot . . . . .                                  | 69    |
| » » skull . . . . .                                      | 71    |
| Width of skull between the jugalia . . . . .             | 42    |
| » » » » » orbits . . . . .                               | 21    |
| Length of upper molar series . . . . .                   | 12    |
| Distance between incisor and first upper molar . . . . . | 18    |

There are four molars in each jaw. Incisors very stout, not grooved, bright orange. It must here be remarked that Prof. Peters states in his description of *Sciurus calliurus* Buchholz: »die oberen Schneidezähne haben eine einzige mittlere Längsfurche. Der vorderste obere Backzahn »ist nur ein ganz feines, nicht über das Zahnfleisch hervorstechendes Stiftchen". Prof. Peters now agrees with me that this scarcely perceptible impression can hardly be called a longitudinal groove and also that the small fifth supposed upper molar must be considered as a spurious tooth, which is not even placed in the teeth-row. Moreover this type-specimen is not fullgrown, the hindmost molars being not yet entirely developed, and finally I saw another skull in the collection under the care of Prof. Peters, which belongs to a specimen entirely



agreeing externally with the type of *Sc. calliurus* but presenting neither the indistinct grooved upper incisors nor the small fifth upper molar-tooth. Giebel (*Zeitschrift f. d. ges. Naturwissensch.* 1877, II, p. 310) asserts that *Sciurus stangeri* has grooved upper incisors like *Sciurus bicolor*, *insignis*, *plantani* and *griseus*, but I am convinced that the species which Giebel studied were wrongly labelled, for not a single of the named species presents this character.

N. i. Neongo, Mboko (Du Chaillu).

Hab. Bavia and Soforé-Place, St. Paul-river, Liberia (Büttikofer and Sala); Gold-coast, Dabocrom (Pel); Calabar (Laurein); Gaboon (Buchholz), Dongila (Laglaize, Verreaux); source of the Ovenga-river and near the Ashira prairies (Du Chaillu); Ogobai-river, Mungo, Mbusa (Buchholz, Fischer); Fernando-Po (Fraser, Thompson, Burton, Du Chaillu).

Pel has found this species in the extensive forests towards the frontiers of Fantee. It does not appear in the neighborhood of the coast. Du Chaillu relates that it is found in the mountainous country situated near the Ashira prairies at a distance of one hundred and fifty miles from the coast and in the mountains of the interior where the Ovenga-river has its source. It is not met with on the seashore. Du Chaillu named it *ivory-eater* and says that it shows a curious partiality for ivory, and loves to feed on the newly fallen tusks of the elephant, but does not touch them after they have lain on the ground long enough to lose the animal matter; many tusks are found with the marks of its teeth. Büttikofer writes that this species feeds on nuts of the oil-tree. There are other Rodents which also show this curious appetite for hard animal matter, for instance Du Chaillu relates that the Porcupine of West Africa is said by the natives to feed sometimes on the tusks of the elephant and I saw in the Stuttgart collection a piece of a deer's antler, which was gnawed by the common European Squirrel. Mr. Liebe (*Der Zoologische Garten*, 1881, N<sup>o</sup>. 3, p. 93) supposes that squirrels

and other gnawing animals gnaw stones, shells and other hard substances for the purpose of shortening the incisors.

Mounted specimens in the Leyden Museum:

1. Adult male, Soforé-place, St. Paul-river, Liberia (Büttikofer and Sala), killed 3 May 1880. — 2. Adult female, Bavia, St. Paul-river (Büttikofer and Sala), killed 28 February 1880. — 3 and 4. Adult males, Dabocrom, Gold-coast (Pel), killed May 1849. — 5. Adult female, Dabocrom, Pel, 1849. — 6. Adult male, Gaboon, Frank, 1865. — 7. Adult male, Ogobai, W. Schlüter. — 8. Young male, Ogobai, W. Schlüter. — 9. Adult male, West Africa, Frank, 1880. — 10 and 11. Adult male and female, Fernando-po. — 12. Skull of n<sup>o</sup>. 6. — 13. Skull of n<sup>o</sup>. 7. — 14. Skull of n<sup>o</sup>. 8. — 15. Skull of n<sup>o</sup>. 9. — 16. Skull of n<sup>o</sup>. 11. — 17. Skull, Gold-coast, Pel. — 18. Skull, Ashantee, Frank, 1880.

Nos. 3, 4 and 5 are the type-specimens of *Sciurus caniceps* Temminck. — N<sup>o</sup>. 6 received s. n. *Sciurus eborivorus* Du Chaillu. — Nos. 7 and 8 received s. n. *Sciurus nordhoffi* Du Chaillu. — N<sup>o</sup>. 11 agrees in coloration wholly with *Sciurus stangeri* Waterhouse.

### *Sciurus ebii.*

1853. *Sciurus ebii* Temminck. Esquisses Zool. sur la côte de Guiné, 1<sup>e</sup> partie, p. 129.
1860. *Sciurus wilsoni* Du Chaillu. Proc. Boston Soc. of Nat. Hist., Vol. VII, p. 364.
1861. *Sciurus wilsonii* Gray. Proc. Zool. Soc. London, p. 276.
1867. *Macroæus wilsonii* Gray. Ann. and Mag. of Nat. Hist. XX, p. 328; *Macroæus pyrrhopus* var. *erythropros* Gray, l. c. p. 330 (partim.)
1880. *Sciurus stangeri* Huet. Nouv. Arch. du Museum, p. 142 (partim); *Sciurus ebii* Huet, l. c., p. 148.
1881. *Heliosciurus stangeri* Trouessart. Catalogue des rongeurs viv. et foss. p. 82 (partim); *Heliosciurus erythrogenys* Trouessart, l. c. p. 83 (partim).

Fur short. Back blackish olivaceous, head and limbs red, tail brownish-black or black. It resembles the foregoing species in external appearance, but there are such striking differences in the distribution of the colors, shortness of the fur and form of the skull, that it cannot be confounded either with *Sciurus stangeri* or with any other Squirrel.

Hairs of back, sides and upper parts of fore-limbs mouse-colored at the base, then white, black, yellowish red and a hardly visible blackish tip. Hairs of head and upper parts of hind legs conspicuously red tipped. Lower parts of limbs, feet, inside of limbs, ears and sides of head shining red. Belly, breast and throat scarcely covered with yellowish red hairs. The bushy tail is at its root colored like the back, further on each hair is black with three white rings and a white tip, towards the apex the rings diminish in number and the white rings grow red and at the apex the hairs are red with long black or blackish-brown tips. Whiskers black.

The type of *Sciurus wilsoni* Du Chaillu and two other individuals in the British Museum from Ashantee agree wholly with the typical specimens of Temminck's *Sciurus ebii* in our collection.

|                                                         | m. m. |
|---------------------------------------------------------|-------|
| Length of head and body. . . . .                        | 290   |
| » » tail without tuft . . . . .                         | 280   |
| » » » with tuft . . . . .                               | 360   |
| » » hind foot . . . . .                                 | 65.5  |
| » » skull . . . . .                                     | 69    |
| Width of skull between the jugalia . . . . .            | 36    |
| » » » » » orbits . . . . .                              | 19    |
| Length of upper molar series. . . . .                   | 10    |
| Distance between incisor and first upper molar. . . . . | 18    |

There are four molars in each jaw. Cutting-teeth not grooved, orange. The form of the skull is smaller and more elongate than in *Sciurus stangeri*, nasalia longer. Further differences will be found in comparing the measures above given with those of *Sciurus stangeri*.

Hab. Gold-coast, Dabocrom (Pel), Ashantee (Aubinn); source of the Ovenga-river (Du Chaillu).

According to Pel this rare Squirrel frequents the same localities as *Sciurus stangeri*. Du Chaillu has found it in the mountainous country situated on the head waters of the Ovenga-river, where it lives among the trees.

Mounted specimens in the Leyden Museum:

1 and 2. Adult male and female, Dabocrom, Gold-coast (Pel), killed in June, type-specimens.

3 and 4. Skulls of Nos. 1 and 2.

*Sciurus aubinnii*.

1873. *Macroxus aubinnii* Gray. Ann. and Mag. Nat. Hist. XII, p. 65.

1881. *Heliosciurus aubinnii* Trouessart. Catalogue des Rongeurs viv. et foss. p. 84.

1881. *Sciurus salae* Jentink. Notes from the Leyden Museum, p. 63.

Distinguished from all its congeners by the uniform grizzled aspect of all the hairs of upper and under parts and by the slender black tail.

Head and body above and below grizzled, each hair being black with one or two brown rings. Among these rings there are a few broader ones on the middle of the belly and inside of legs, those parts thus showing a browner hue. Outside of legs colored like back, towards the feet the hairs grow shorter. Tail black above, down to the last caudal vertebra, the long tuft being nearly brownish throughout, in consequence of the very broad brownish rings to the hairs. Under parts of tail present a grizzled aspect along the middle, broadly bordered with black.

When in full dress a broad black band runs along the middle of the back and joins the black tail. The feet are blacker and the toes are wholly black.

Whiskers long, black. Ears short, rounded, thickly

covered with short black hairs, with a small subterminal brownish ring. Eyes black. No lighter colored spot behind the ears.

|                                                          | m. m. |
|----------------------------------------------------------|-------|
| Length of head and body. . . . .                         | 270   |
| » » tail with tuft. . . . .                              | 390   |
| » » » without tuft. . . . .                              | 325   |
| » » hind foot . . . . .                                  | 65    |
| » » skull. . . . .                                       | 58    |
| Width between the jugalia . . . . .                      | 34    |
| » » » orbits . . . . .                                   | 17    |
| Length upper molar series . . . . .                      | 11    |
| Distance between incisor and first upper molar . . . . . | 13    |

There are five molars in each upper, four in each lower jaw. The first upper molar is more developed than is usually the case with this generally small molar. Incisors slender, ungrooved, orange colored.

After having seen Gray's type of this species I am convinced that my *Sciurus salae* is the same squirrel but in its full dress.

N. i. Bushcat (Büttikofer and Sala).

Hab. Liberia, St. Paul-river, Bavia; Soforé-place, Bendo (Büttikofer and Sala); Gold-coast, Fantee (Aubinn).

The natives distinguish this species very well and give it the name *Bush-cat* pretending that it is not a *Squirrel*. It lives in cavities of trees.

Mounted specimens in the Leyden Museum:

1. Adult male, Soforé-place, St. Paul-river, Liberia, killed 15 May 1880, Büttikofer and Sala. — 2. Adult male, Soforé-place, 16 May 1880, Büttikofer and Sala. — 3. Adult male, Soforé-place, 25 May 1880, Büttikofer and Sala. — 4. Adult female, Soforé-place, 5 July 1880, Büttikofer and Sala. — 5. Adult female, Bavia, St. Paul-river, 13 March 1880, Büttikofer and Sala. — 6. Adult male, Bendo, Fisherman-lake, 3 December 1880, Büttikofer and Sala.

7. Skull of n<sup>o</sup>. 2 — 8. Skull of n<sup>o</sup>. 3. — 9. Skull of n<sup>o</sup>. 6.

*Sciurus rufo-brachiatus.*

1842. *Sciurus rufo-brachiatus* Waterhouse. Proc. Zool. Soc. London. p. 128; *Sciurus rufo-brachium* Waterhouse. Ann. and Mag. Nat. Hist. X. p. 202.
1849. *Sciurus rufobrachiatus* Fraser. Zoologia typica. pl. 24.
1853. *Sciurus maculatus* Temminck. Esquisses Zool. sur la côte de Guiné. 1<sup>e</sup> partie. p. 130; *Sciurus rubrobrachiatus* Temminck. l. c. p. 136.
1867. *Sciurus aubryi* Alph. Milne Edwards. Rev. et Mag. de Zoologie. p. 228.
1867. *Macroxus rufobrachiatus* Gray. Ann. and Mag. Nat. Hist. XX. p. 328 (partim); *Macroxus isabellinus* Gray. l. c. p. 329.
1867. *Funambulus rufobrachium* Fitzinger. Sitzb. d. K. Akad. d. Wissensch. p. 33.
1880. *Sciurus rufobrachiatus* Huet. Nouv. Arch. du Museum. p. 144 (partim); *Sciurus aubryi* Huet. l. c. p. 150.
1881. *Heliosciurus gambianus* Trouessart. Catalogue des Rongeurs viv. et foss. p. 82 (partim); *Heliosciurus annulatus* Trouessart. l. c. p. 83 (partim); *Heliosciurus aubryi* Trouessart. l. c. p. 84.

This species is characterized by having the upper parts grizzled, the under parts red and the upper incisors grooved.

Hairs of the upper surface of the head, neck, sides of the collar, upper parts and sides of body and outside of limbs glossy black with two olivaceous yellow rings; the subapical one is the smallest. Inside of legs wholly red. Chin, throat, breast and belly yellow or reddish, each hair being black at its base. Hairs of the very bushy tail repeatedly ringed with black and white, the tips being always white, except towards the apex of the tail, where the hairs are conspicuously tipped with black. The tail is not always clearly banded. Young specimens are colored like the adult ones.

In some individuals instead of the black color a more brownish or reddish tinge prevails: they must be regarded as moulting stages.

Fur of the back longer and denser than that of the belly. Ears sparingly hairy. Whiskers black, short. Eyes black.

|                                                          | m.m.  |
|----------------------------------------------------------|-------|
| Length of head and body . . . . .                        | 282   |
| » » tail with tuft . . . . .                             | 320   |
| » » » without tuft . . . . .                             | 270   |
| » » hind foot . . . . .                                  | 56    |
| » » skull . . . . .                                      | 57.5  |
| Width between the jugalia . . . . .                      | 33    |
| » » „ orbits . . . . .                                   | 19    |
| Length upper molar series . . . . .                      | 11    |
| Distance between incisor and first upper molar . . . . . | 12.75 |

There are four molars in each jaw. Upper incisors orange or yellowish red: they are longitudinally grooved. The depth however of this groove varies considerably. In some specimens another depression is to be found close to the inner border of the upper incisors, as Gray and Peters have remarked.

Hab. Liberia, St. Paul-river, Soforé-place and Bavia; Fisherman-lake, Bendo (Büttikofer and Sala); Gold-coast (Nagtglas), Saccondé, Rio Boutry (Pel); Calabar (Laurein), Cameroon-mountains, Aqua-town (Reichenow); Gaboon (Aubry-Lecomte, Verreaux, Laglaize), Dongila (Buchholz); Fernando-po (Fraser); Angola, Kuango (v. Mechow).

It frequents the woody banks of the rivers.

The type of *Sciurus aubryi* Alph. Milne Edwards is a young individual and Prof. A. Milne Edwards told me that he did not believe it to be a good distinct species, but that it is the young of *Sciurus rufo-brachiatus*, in which opinion I entirely agree with him. *Macrourus isabellinus* Gray also belongs to this species. I have examined the very incomplete skull, but could clearly make out that there is no trace of a fifth molar in the upper jaw and that the upper incisors show a slight groove.

Mounted specimens in the Leyden Museum:

1. Adult female, Liberia, St. Paul-river, Soforé-place, 20 April 1880 (Büttikofer and Sala). — 2. Adult male, Soforé-place, 19 May 1880 (Büttikofer and Sala). — 3. Adult male, Soforé-place, 4 September 1880 (Büttikofer and Sala). — 4. Adult female, Soforé-place, 14 September 1880 (Büttikofer and Sala). — 5. Adult male, St. Paul-river, Bavia, 18 February 1880 (Büttikofer and Sala). — 6. Adult male, Fisherman-lake, Bendo, 23 November 1880 (Büttikofer and Sala). — 7. Young male, Bendo, 24 November 1880 (Büttikofer and Sala). — 8. Adult, Liberia, died in the Zoological Gardens at Rotterdam, 1878. — 9 and 10. Adult males, Gold-coast, Rio Boutry (Pel). — 11. Adult female, Rio Boutry (Pel). — 12. Adult male, Gold-coast, Saccondé, 25 April 1842 (Pel). — 13. Young female, Rio Boutry (Pel). — 14. Adult male, Gold-coast, 1861 (Nagtglas). — 15. Adult, neighborhood of Cameroon-mountains, Frank, 1880. — 16 and 17. Adult male and female, Fernando-po. — 18. Half grown male, Fernando-po.

19. Skull of N<sup>o</sup> 8. — 20. Skull of N<sup>o</sup> 9. — 21. Skull of N<sup>o</sup> 11. — 22. Skull of N<sup>o</sup> 12. — 23. Skull of N<sup>o</sup> 15. — 24. Skull of N<sup>o</sup> 17.

N<sup>os</sup> 9, 10, 11, 12 and 13 are the type-specimens of *Sciurus maculatus* Temminck.

*Sciurus palliatus*.

1852. *Sciurus palliatus* Peters. Monatsb. d. K. Pr. Akad. d. Wissensch. Berlin. p. 273; Reise nach Mosambique. Zoologie. I. Säugethiere. p. 134. pl. XXXI, fig. 1 and pl. XXXII, fig. 3.
1864. *Sciurus ornatus* Gray. Proc. Zool. Soc. London. p. 13. pl. I.
1867. *Macroscelus palliatus* Gray. Ann. and Mag. Nat. Hist. XX. p. 330.
1867. *Funambulus palliatus* Fitzinger. Sitzb. d. K. Akad. d. Wissensch. p. 34.



- 1873 *Macroxus annulatus*, var. *Frerei* Gray. Ann. and Mag. Nat. Hist. XII. p. 265.
1881. *Heliosciurus palliatus* Trouessart. Catalogue des Rongeurs viv. et foss. p. 83 (partim); *Heliosciurus multicolor* Trouessart. l. c. p. 83 (partim).

Upper parts of head and body and of the outside of limbs and the root of tail black, sprinkled with yellow and rusty red, showing a banded aspect. The remaining parts of head, body, limbs and the tail are also rusty red.

Each hair of head, back, outside of body and of limbs is black with a broad yellow, rusty brown or rusty red subapical ring; a few hairs are black throughout. Among the similarly colored hairs of the root of the tail there are some with two lighter colored rings and others with yellow or rusty red tips. The rusty red hairs of the belly and limbs are uniform throughout: those of the underparts of the tail and also of its apex are rusty red, the other hairs of that organ have a broad black ring, which towards the apex occupies a lower place on the hairs.

*Macroxus annulatus*, var. *Frerei* Gray is a young individual; the hindmost molars being not yet developed. The hairs of the upper parts have a dusky white subapical ring. Those of the middle part of the tail are annulated with black and whitish yellow, the tips however are constantly colored rusty red. A small fifth upper molar tooth is present and it can never be looked upon as a variety of *Sciurus annulatus*, where that small tooth is always wanting.

The figure of *Sciurus palliatus* given by Prof. Peters is that of a young specimen, the adult female is not to be found in the collection of the Berlin Museum; the skull of the latter however is present, although in a very bad state of preservation as nearly all the molars as well as the incisors are wanting. There is however an adult specimen from Zanzibar in the Berlin collection agreeing in all parts with the description given by Peters, except the hairs of the tail which show four black rings.

The type specimens of *Sciurus ornatus* Gray are of a brighter red color.

Whiskers black. Eyes dark-brown. Ears with short, dense fur.

|                                                         | m. m. |                      |
|---------------------------------------------------------|-------|----------------------|
| Length of head and body . . .                           | 185   |                      |
| » » tail with tuft . . .                                | 140   |                      |
| » » hind foot . . .                                     | 47    |                      |
|                                                         |       | <i>Paris Museum.</i> |
| » » skull . . .                                         | 48    | 51.5                 |
| Width between the jugalia . . .                         | 27.5  | 29                   |
| » » » orbits . . .                                      | 13    | 16                   |
| Length of upper molar series . .                        | 8.75  |                      |
| Distance between incisor and first<br>upper molar . . . | 10.5  |                      |

There are five upper molars in each jaw and four lower ones.

The smooth incisors are yellow-brown or orange-red.

N. i. Poculuti (Gray).

Hab. Galla-land and Pangani-river (Paris Museum); Dana-river, Muniuni (Fischer); Zanzibar (Bartle Frere, Hildebrandt); Mossambique, Mossimboa and Quitangonha (Peters); Natal (Fosbrooke).

No specimen in the Leyden Museum.

### *Sciurus mutabilis.*

1852. *Sciurus mutabilis* Peters. Monatsb. d. K. Pr. Akad. d. Wissensch. Berlin. p. 273; Reise nach Mossambique. Zoologie. I Säugethiere. p. 131. pl. XXX and pl. XXXII. fig. 2.

1867. *Macroxus stangeri*, var. *mutabilis*(?) Gray. Ann. and Mag. Nat. Hist. XX. p. 326.

1867. *Funambulus mutabilis* Fitzinger, Sitzb. d. K. Akad. d. Wissensch. p. 34.

1881. *Heliosciurus stangeri* Trouessart. Catalogue des Rongeurs viv. et foss. p. 82 (partim).

Upper parts of snout, cheeks, sides of throat and sides

of the foremost part of the body and outside of fore legs the fore feet included, black speckled with brownish yellow; upper parts of head, collar, and middle part of the back glossy brown black. The whole hindmost part of the body, the hind legs included, is yellowish rusty brown. Foremost part of breast and inside of fore limbs yellowish white, lower parts of chin and throat rusty colored like the belly. Feet black, tipped with white. Tail black indistinctly banded with yellowish white, towards the apex rusty red.

Each hair of the foremost part of head and of the foremost parts of the sides of the body is black with a yellowish white or brownish yellow subterminal ring, sometimes there is another similar ring more downwards at the base of the hair. The woolly hairs are also black with a broad yellowish brown subterminal ring. The hairs of the upper parts of head and collar are black-brown throughout, a few however have a small bright-brown subterminal ring; the hairs of the middle part of the back are brown-black throughout; those of the hind parts of the body are rusty brown with one or two yellowish rings, dark-brown at the base, but among them there are shorter ones ringed with black and white or black throughout. Each hair of the tail is ringed with black and white, the tip broadly pointed with black. Towards the apex of the tail there are to be found some rusty colored hairs: the apex however is wholly rusty red, the base of the hairs being dark-brown.

Whiskers black. Eyes dark-brown. Ears with short hairs.

|                                                          | m. m. |
|----------------------------------------------------------|-------|
| Length of head and body. . . . .                         | 200   |
| » » tail with tuft . . . . .                             | 300   |
| » » hind foot. . . . .                                   | 55    |
| » » skull . . . . .                                      | 50    |
| Width between the jugalia . . . . .                      | 28.5  |
| » » » orbits. . . . .                                    | 16    |
| Length of upper molar series. . . . .                    | 10    |
| Distance between incisor and first upper molar . . . . . | 11    |

There are five molars in each upper, four in each lower jaw. Incisors ungrooved, honey-yellow.

The type-specimen of this species is now in the Berlin Museum, but I could not inspect the skull; there still is a skull in the skin, but this skull seems to be in a very bad condition, the lower incisors being absent, and moreover Prof. Peters cannot say with certainty whether that skull does indeed belong to the individual, the true skull having perhaps been lost in the time of Prof. Peters' predecessor.

It is not without hesitation that I here introduce this species, as I am convinced that it is based upon a specimen which is moulting. But as it at present is an impossibility to decide to what fully dressed species it may belong and because it cannot be confounded with the other hitherto known species <sup>1)</sup> from the East Coast of Africa, the above given short extract of Prof. Peters' exact description will suffice to bring it under the attention of naturalists.

N. i. Injerêre (Peters).

Hab. Mossambique, Boror, Tipino (Peters), Murchison Rapids, River Shire, Zambesi valley, Sena (Kirk).

It frequents high trees, called *mucondocondo* by the Negros.

It feeds on the soft fruits of this tree. Very frequent in »Mopane" forests (Kirk).

No specimen in the Leyden Museum.

### *Sciurus shirensis.*

1867. *Macroxus shirensis* Gray. Ann. and Mag. of Nat. Hist. XX. p. 327.

1881. *Heliosciurus stangeri* Trouessart. Catalogue des Rongeurs viv. et foss. p. 82 (partim).

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1) It can in no case belong to *Sciurus stangeri* Wat. as Gray and Trouessart seem to believe, for it has five upper molars in each jaw and not four as is the case in the latter species and besides the other differences nobody has hitherto met with a specimen of *Sciurus stangeri* Wat. on the East Coast of Africa.

Upper parts closely punctulated with black and white, under parts dirty yellow, bi-colored.

Hairs of the head above, upper parts and sides of the body and outside of legs brownish black with two white rings, except those of the feet which have but a single white ring. Root and body of the tail with four white and four black rings, the points being always white. The hindmost part of the back and the tail towards its apex darker colored, the apex is black throughout with a light brown tinge. Chin, throat, chest, belly and inside of limbs dirty yellow, light brown at the base of the hairs.

The young individual, collected by Dr. Livingstone, shows head and extremities lighter colored, but on the back the hairs have a reddish brown hue, with a broad whitish yellow subterminal ring. The under parts bear a lighter color.

Whiskers black. Ears covered with short hairs.

|                                                   | m. m.    |
|---------------------------------------------------|----------|
| Length of head and body. . . . .                  | 250      |
| » » tail with tuft . . . . .                      | 290      |
| » » » without tuft . . . . .                      | 220      |
| „ » hind foot. . . . .                            | 57       |
| » » skull (incomplete) . . . . .                  | about 56 |
| Width between the jugalia . . . . .               | 32       |
| » » » orbits . . . . .                            | 18       |
| Length upper molar series. . . . .                | 11       |
| Distance between incisor and first upper molar. . | 12.2     |

There are four molars in each jaw. The smooth incisors orange colored.

Hab. Shire-river (Dr. Livingstone).

No specimens in the Leyden Museum.

This species cannot be confounded with *Sciurus annulatus* as it presents a wholly different mode of coloration and as it is distinct from the other East African large sized Squirrels by having four molars in each jaw.

*Sciurus punctatus.*

1853. *Sciurus punctatus* Temminck. Esquisses Zool. sur la côte de Guinée. 1<sup>e</sup> partie. p. 138.

1867. *Macroxus punctatus* Gray. Ann. and Mag. of Nat. Hist. XX. p. 328.  
 1880. *Sciurus rufobrachiatus* Huet. Nouv. Arch. du Museum. p. 144 (partim).  
 1881. *Heliosciurus gambianus* Trouessart. Catalogue des Rongeurs viv. et foss. p. 82 (partim).

Fur uniformly grizzled, tail clearly banded. Under parts bi-colored.

The hairs of the upper parts of head and body, sides of body and upper parts of limbs are black with two olivaceous yellow rings, those of the feet with one ring. Hairs of tail repeatedly ringed with black and brownish red, the tips being white; the apex of the tail black or rusty brown. There are several transitions in coloration of the rings of the hairs in the different individuals, in some specimens they are even rusty red and the white tips of the hairs of the tail are also turned rusty red; that organ seen from above being banded as follows: black, white and red, or black and rusty red. Hairs of the belly tipped with white.

Whiskers black. Eyes black. Ears with short brownish or reddish hairs.

|                                                  | m. m. |
|--------------------------------------------------|-------|
| Length of head and body . . . . .                | 190   |
| » » tail with tuft . . . . .                     | 275   |
| » » » without tuft . . . . .                     | 215   |
| » » hind foot . . . . .                          | 43    |
| » » skull . . . . .                              | 44    |
| Width between the jugalia . . . . .              | 27    |
| » » » orbits . . . . .                           | 14    |
| Length of upper molar series . . . . .           | 7     |
| Distance between incisor and first upper molar . | 9.25  |

There are four molars in each jaw. Incisors smooth, orange colored.

Hab. Banana-islands (Leyden Museum); Liberia, Soforé-place, St. Paul-river, Buluma (Büttikofer and Sala); Ashantee (British Museum); Gold-coast, Rio Boutry, Dabocrom (Pel), Elmina (Nagtglas), Aburi (Reichenow); Fantee (Leyden Museum); Gaboon, Dongila, Limbareni (Buchholz); Ogobai (Du Chaillu); Chinxoxo (Dr. Falkenstein).

Mounted specimens in the Leyden Museum:

1. Adult female, Banana-islands, died in the Zoological Gardens at Rotterdam, 1878. — 2 and 3. Adult males, Liberia, St. Paul-river, Soforé-place, 3 May 1880, Büttikofer and Sala. — 4 and 5. Adult females, Gold-Coast, Dabocrom, June and July, Pel. — 6. Adult male, Dabocrom, Pel. — 7 and 8. Adult females, Gold-Coast, Rio Boutry, June, Pel. — 9. Adult male, Gold-Coast, Elmina, July 1861, Nagtglas. — 10. Adult male, Fantee, Frank, 1880. — 11 and 12. Male and female (in spirits), Buluma, 20 April 1881, Büttikofer and Sala.

13. Skull of n<sup>o</sup> 2. — 14. Skull of n<sup>o</sup> 4. — 15. Skull of n<sup>o</sup> 5. — 16. Skull of n<sup>o</sup> 6. — 17. Skull of n<sup>o</sup> 7.

N<sup>os</sup> 4, 5, 6, 7 and 8 are the type-specimens of the species.

*Sciurus annulatus.*

1820. *Sciurus annulatus* Desmarest. Mammalogie. Première partie. p. 338.
1835. *Sciurus gambianus* Ogilby. Proc. Zool. Soc. London. p. 103.
- 1835—1840. *Sciurus multicolor* Rüppell. Neue Wirbelthiere. p. 38. pl. 13.
1845. *Sciurus annularis* Schinz. Synopsis Mammalium. Zweiter Band. p. 14.
1853. *Sciurus annulatus* Temminck. Esq. Zool. sur la Côte de Guinée. 1<sup>e</sup> partie. p. 137; *Sciurus gambianus* Temminck. l. c. p. 140.
1867. *Macroæus annulatus* Gray. Ann. and Mag. Nat. Hist. XX. p. 329 (partim).
1867. *Funambulus gambianus* Fitzinger. Sitzb. d. K. Akad. d. Wissensch. p. 33; *Funambulus annulatus* Fitz. l. c. p. 33; *Funambulus multicolor* Fitz. l. c. p. 34.
1877. *Sciurus bongensis* v. Heuglin. Reise N. O. Afrika. T. II. p. 59.
1880. *Sciurus rufobrachiatus* Huet. Nouv. Arch. du Mu-

seum. p. 144 (partim); *Sciurus annulatus* Huet. l. c. p. 150; *Sciurus multicolor* Huet. l. c. p. 152 (partim).

1881. *Heliosciurus gambianus* Trouessart. Catalogue des Rongeurs viv. et foss. p. 82 (partim); *Heliosciurus annulatus* Trouessart. l. c. p. 83 (partim); *Heliosciurus multicolor* Trouessart. l. c. p. 83 (partim); *Heliosciurus bongensis* Trouessart. l. c. p. 84.

Upper parts grizzled, under parts uniformly dirty white or light rusty red; four upper molars in each jaw.

Hairs of head above, back and sides of the body and outside of the upperparts of the limbs mouse-colored at the base, then rusty yellow, black, yellowish white and with a small black tip. Outside of the lower parts of the limbs rusty yellow, blackish at the base. Hairs of chin, throat, chest, belly and inside of legs dirty white throughout. Tail seen from above annulated with numerous alternate bands of black and light rusty yellow; each hair repeatedly ringed with the named colors, the points however always bearing the latter color. This is the mode of coloration of the West-African specimens. The greater part of the specimens of East-Africa however generally show a more light rusty red tinge, the hairs being ringed with that color instead of with rusty yellow and the under parts also are uniform reddish white. One of the specimens collected by v. Heuglin in Abyssinia and now in our collection presents in all respects the same mode of coloration as the West African individuals.

Whiskers black. Ears with short, dense fur, dirty yellow colored. A yellowish white circle round the eyes.

|                                   | m.m.     |
|-----------------------------------|----------|
| Length of head and body . . . . . | 247      |
| » » tail with tuft. . . . .       | 310      |
| » » » without tuft. . . . .       | 250      |
| » » hind foot . . . . .           | 50       |
| » » skull (incomplete) . . . . .  | about 50 |



|                                                    | m.m. |
|----------------------------------------------------|------|
| Width between the jugalia . . . . .                | 28   |
| »       »       » orbits . . . . .                 | 15   |
| Length of upper molar series . . . . .             | 9    |
| Distance between incisor and first upper molar . . | 10   |

There are four molars in each jaw. The smooth incisors are of an orange or honey-yellow color.

This species can only be confounded with *Sciurus punctatus* and *cepapi*, but is easily distinguished from *Sciurus punctatus* by its larger size and longer tail and by the uniformly colored under parts of the body, from *Sciurus cepapi* by its larger size and by having four molars in each jaw and not five as is the case in that species.

The type-specimen of Desmarest's *Sciurus annulatus* is not to be found in the Museum du Jardin des Plantes. According to Prof. Alph. Milne Edwards it was usual with Geoffroy to put a more beautiful specimen of the same species in the place of another if the latter was in a bad state of preservation and in this way the type in question appears also to have been lost. Happily the description given by Desmarest is so clear that there can be no matter of doubt.

N. i. Sakie (Rüppell).

Hab. Gambia (Rendall); Senegal (Perrottet); Quanza-river (Mus. Leyden); Fernando-po (Verreaux); Tigre, Hamedo (Schimper); Abyssinia (Rüppell), Bahr-el-Abiad, Djur and Dembea (v. Heuglin), Sennar (Clot-Bey), Schoa (Rüppell).

Lives on trees, feeds upon fruits and buds.

Mounted specimens in the Leyden Museum:

1. Adult male, Senegaambia. — 2 and 3. Adult males, Senegal. — 4. Half grown male, Senegal, 1822. — 5. Adult male, Quanza-river, Frank, 1880. — 6 and 7. Adult females, Abyssinia, Rüppell. — 8. Adult male, Abyssinia, v. Heuglin, 1865. — 9. Young male, Abyssinia, v. Heuglin, 1865. — 10. Adult female, Abyssinia, Paris Museum, 1868.

11. Skull of n<sup>o</sup> 1. — 12. Skull of n<sup>o</sup> 6. — 13. Skull of n<sup>o</sup> 10.

N<sup>os</sup> 6 and 7 are type-specimens of *Sciurus multicolor* Rüppell. N<sup>o</sup> 8 is colored like the West-African specimens.

*Sciurus cepapi.*

1836. *Sciurus cepapi* A. Smith. App. to Rep. of Exp. p. 43.  
 1838. *Sciurus cepapi* A. Smith. Illustrations of the Zoology of South Africa. plate V.  
 1843. *Sciurus cepate* Gray. List of the Spec. of Mamm. p. 140.  
 1843. *Sciurus superciliaris* Wagner. Schreb. Säugethiere. Supplem. Bd. III. p. 212. Note.  
 1867. *Macroxus annulatus* Gray. Ann. and Mag. of Nat. Hist. XX. p. 329 (partim); *Macroxus congius* Gray. l. c. p. 331 (partim).  
 1867. *Funambulus superciliaris* Fitzinger. Sitzb. d. K. Akad. d. Wissensch. I. p. 34; *Funambulus cepapi* Fitzinger. l. c. p. 34 (partim).  
 1880. *Sciurus mutabilis* Huet (non Peters). Nouv. Arch. du Museum. p. 143; *Sciurus multicolor* Huet. l. c. p. 152 (partim).  
 1881. *Heliosciurus multicolor* Trouessart. Catalogue des Rongeurs viv. et foss. p. 83 (partim).

This species resembles *Sciurus annulatus* in many respects, especially in the coloration of the upper parts and the uniform color of the under parts of the body. It is however distinguished by its smaller size, shorter tail and by having five molars in each upper jaw.

Hairs of back and sides of the body black with a reddish brown ring and a yellowish brown subapical one. Hairs of upper parts of head blackish with yellowish red points; those of chin, throat, chest, belly and inside of legs are rather long and entirely dirty yellow colored, with a reddish brown tinge. Outside of legs with long hairs dark mouse-colored at the base and largely yellowish red pointed. Hairs of tail reddish yellow with two or three black rings and large reddish yellow tips, forming indistinct bands.

Whiskers black. The well developed ears with short dirty white hairs. A circle of the same color surrounds the dark-brown eyes.

|                                                          | m. m.    |
|----------------------------------------------------------|----------|
| Length of head and body . . . . .                        | 205      |
| » » tail with tuft . . . . .                             | 205      |
| » » » without tuft . . . . .                             | 163      |
| » » hind foot . . . . .                                  | 45       |
| Length of skull (incomplete) . . . . .                   | about 45 |
| Width between the jugalia . . . . .                      | 26       |
| » » » orbits . . . . .                                   | 12       |
| Length of upper molar series . . . . .                   | 8        |
| Distance between incisor and first upper molar . . . . . | 9        |

There are five molars in each upper jaw: the fifth is strongly developed. The smooth incisors are orange colored.

N. i. Sindi (Peters).

Hab. Dana-river, Kipini (Fischer); Ukambani, Kitui (Hildebrandt); Mombas and Dar-es-Salam (Kirk); Zanzibar (Grandidier, v. d. Decken); Tette (Peters, Kirk); Limpopo-river (Smith); Masilikats-land (Verreaux, Delgorgue); Damara-land and Miriqua-land (Leyden Museum); Cape (Drege, Verreaux).

Smith relates that the first specimens of this Squirrel were observed upon the banks of the Limpopo-river. The species was occasionally discovered on the ground, but more frequently upon trees; and when it happened to be surprised in the former situation, it invariably endeavoured to reach the latter, and if successful, either attempted to conceal itself in the forks of the branches, or in holes, if any existed, in the trunk, or elsewhere. Its flight, when on the ground, was effected with amazing rapidity, and the perpendicular ascent of the tree was accomplished with equal facility. It feeds by day, and, according to the natives, also by night, and in all the specimens he obtained, the stomachs were fully distended with berries.

Mounted specimens in the Leyden Museum:

1 and 2. Adult male and female, Damara-land. — 3. Adult male, Miriqua-land.

4. Skull of n<sup>o</sup>. 1. — 5. Skull of n<sup>o</sup>. 3.

*Sciurus poensis.*

1830. *Sciurus poensis* A. Smith. South Afric. Quarterl. Journ. XI. p. 64.
1853. *Sciurus poensis* Temminck. Esquisses zool. sur la côte de Guiné, 1<sup>e</sup> partie, p. 141; *Sciurus musculinus* Temminck, l. c. p. 142.
1857. *Sciurus pumilio* Leconte. Proc. Acad. Philadelphia, p. 11. *Sciurus subviridescens* Leconte. l. c. p. 11.
1867. *Macroxus poensis* Gray. Ann. and Mag. of Nat. Hist. XX. p. 329.
1867. *Sciurus olivaceus* Alph. Milne Edwards. Revue et Mag. de Zoologie. p. 228.
1867. *Funambulus poensis* Fitzinger. Sitzb. d. K. Akad. d. Wissensch. I. p. 34 (partim).
1880. *Sciurus poensis* Huet. Nouv. Arch. du Museum. p. 149, pl. 7, fig. 1; *Sciurus musculinus* Huet. l. c. p. 151.
1881. *Heliosciurus poensis* Trouessart. Catalogue des Rongeurs viv. et foss. p. 84; *Heliosciurus musculinus* Trouessart. l. c. p. 84; *Heliosciurus pumilio* Trouessart. l. c. p. 84.

Easily distinguished from all the other Squirrels by the peculiar color of the fur showing a very striking greenish tinge.

The soft dense fur of the upper parts and sides of the body and the outside of legs is mouse-colored at the base, with a distinct greenish yellow ring and a minute black tip. On the back some wholly black hairs are spread. Hairs of tail black, at its root with numerous greenish yellow rings, further on with two rings of the same color; at the apex of the tail the black tips of the hairs are very large. Hairs of chin, throat, chest, belly and inside of legs mouse-colored, at the base with rather large cinereous green tips, in younger individuals however the hairs have a more white hue. If moulting the mouse-color prevails above and beneath.

Whiskers black. The well developed ears with short greenish brown hairs. The black eyes surrounded by a cinereous green circle.

|                                                   | m. m. |
|---------------------------------------------------|-------|
| Length of head and body . . . . .                 | 190   |
| » » tail with <sup>5</sup> tuft . . . . .         | 232   |
| Length of tail without tuft . . . . .             | 182   |
| » » hind foot . . . . .                           | 33    |
| » » skull . . . . .                               | 38    |
| Width between the jugalia . . . . .               | 23    |
| » » » orbits . . . . .                            | 10.5  |
| Length upper molar series . . . . .               | 6     |
| Distance between incisor and first upper molar. . | 8.25  |

There are five molars in each upper jaw: the fifth very well developed. Incisors ungrooved, pale orange.

Hab. Liberia, St. Paul-river, Soforé-place (Büttikofer and Sala); Ashantee (British Museum); Gold-coast, Rio Boutry (Pel), Elmina (Nagtglas); Gaboon (Laglaize); Fernando-po (Thompson).

It frequents wooded countries (Pel).

Mounted specimens in the Leyden Museum:

1. Adult male, Liberia, St. Paul-river, Soforé-place, 3 May 1880, Büttikofer and Sala. — 2. Adult female, Soforé-place, 28 May 1880, Büttikofer and Sala. — 3. Half grown male, Soforé-place, 29 May 1880, Büttikofer and Sala. — 4. Adult male, Gold-coast, Rio-Boutry, 1842, Pel. — 5 and 6. Adult male and female, Gold-coast, 1842, Pel. — 7. Half grown individual, Gold-coast, 1842, Pel. — 8. Young male, Gold-coast, 1842, Pel. — 9. Adult male, Gold-coast, Elmina, July 1861, Nagtglas. — 10. Half grown male, Elmina, November 1862, Nagtglas. — 11 and 12. Adult males, Gaboon, Frank, 1854 and 1859.

13. Skull of n<sup>o</sup>. 2. — 14. Skull of n<sup>o</sup>. 6.

N<sup>os</sup> 4, 5, 6, 7 and 8 are the type-specimens of *Sciurus musculus* Temminck.

*Sciurus minutus*.

1861. *Sciurus minutus* Du Chaillu. Proc. of the Boston Soc. of Nat. Hist. VII. p. 366.

1881. *Heliosciurus minutus* Trouessart. Catalogue des Ron-geurs viv. et foss. p. 84.

Distinguished by its small size from all the other African Squirrels.

The hairs of the upper and under parts of the body mouse-colored at the base. Those of upper parts of head, of back, outside of legs and sides of the body tipped with bright ferruginous, those of the chin, throat, chest, belly and inside of legs tawny tipped.

The hairs of the tail are rufous with a blackish ring. Whiskers long and black. Ears, scantily furnished with yellowish white hairs, well developed; length of the ears about 10 m. m.

|                                                    | m. m. |
|----------------------------------------------------|-------|
| Length of head and body . . . . .                  | 75    |
| » » tail with tuft. . . . .                        | 50    |
| » » hind foot . . . . .                            | 19.5  |
| Width between the jugalia (incomplete) . . about   | 14    |
| » » » orbits (incomplete) . . about                | 8.5   |
| Length upper molar series . . . . .                | 2.5   |
| Distance between incisor and first upper molar . . | 6     |

There are four molars in each jaw. The smooth incisors are of a yellowish white color.

N. i. Kendo (Du Chaillu).

Hab. It is found on the mountainous range or tablelands situated in the interior along the western coast of Africa, between two degrees north and two degrees south of the equator. Du Chaillu did not meet it in the maritime plains situated between these mountains and the sea.

It is always found on the trees in the forest, and to get a sight of it is most difficult, not only on account of its small size, but of its constant and rapid movements (Du Chaillu).

No specimens in the Leyden Museum; the two known specimens of this beautiful but rare species are preserved in the British and in the Berlin Museum.

## B. Squirrels with two stripes on each side.

*Sciurus pyrropus.*

1833. *Sciurus pyrropus* Fr. Cuvier. Mammifères lithogr. Vol. IV.
1836. *Spermosciurus pyrropus* Lesson. Histoire natur. des Mammifères. T. V. p. 400.
1842. *Sciurus erythrogeus* Waterhouse. Proc. Zool. Soc. London. p. 129; *Sciurus leucogeus* Waterhouse. Ann. and Mag. of Nat. Hist. p. 202.
1843. *Sciurus (Xeros) pyrrhopus* Wagner. Schreber's Säugethiere. Supplem. Bd. III, p. 215.
1843. *Sciurus poensis* Gray. List of specimens of Mammalia. p. 140 (partim).
1849. *Sciurus erythrogeus* Fraser. Zoologia typica, pl. 25.
1853. *Sciurus erythrogeus* Temminck. Esquisses zool. sur la côte de Guinée. 1<sup>e</sup> partie, p. 130; *Sciurus pyrrhopus* Temminck. l. c. p. 132; *Sciurus leucostigma* Temminck. l. c. p. 133.
1860. *Sciurus rubripes* Du Chaillu. Proc. Boston Soc. of Nat. Hist. VII. p. 366.
1867. *Macroæus pyrrhopus* Gray. Ann. and Mag. Nat. Hist. XX. p. 330 (partim); *Macroæus erythrogeus* Gray. l. c. p. 331.
1867. *Funambulus poensis* Fitzinger. Sitzb. d. K. Akad. d. Wissensch. I. p. 34 (partim).
1880. *Sciurus erythrogeus* Huet. Nouv. Arch. du Museum. p. 155; *Sciurus pyrrhopus* Huet. l. c. p. 157.
1881. *Heliosciurus pyrrhopus* Trouessart. Catalogue des Rongeurs viv. et foss. p. 83; *Heliosciurus erythrogeus* Trouessart. l. c. p. 83 (partim).

Upper parts olivaceous black, legs red, under parts pure white.

Hairs of head above and of back black with a single olivaceous yellow ring, on the hind part of the back with two rings. Hairs of cheeks, sides of collar, outside

of legs and sides of the body mouse-colored at the base, red tipped. A band, somewhat darker colored than the back and running from shoulder to thigh, separates from each red colored side of the body a smaller band <sup>1)</sup> of a lighter color than the sides. Chin, throat, breast, belly and inside of legs covered with pure white hairs. Hairs of the upper parts of tail black with a white ring and a ditto tip; the apex is reddish with large black tips; below, the hairs are broadly red with a black subapical ring and reddish white tips.

Inside of ears red, outside white; a white spot behind each ear. The black eyes are surrounded by a reddish circle. Whiskers black.

In the different specimens of this species there is a great variation in the mode of coloration of the upper parts of the head, the sides of the body and the upper parts of the fore-legs. In some individuals the head is red or brownish red, the sides of the body like the back but with a lighter tinge and the upper parts of the fore legs reddish brown instead of red; in others all these parts have a brownish shade: in some specimens a cinereous tinge prevails. That this curious variation has induced several writers and naturalists to describe mere variations as distinct species needs no demonstration. But it is indeed incomprehensible how this and the following species are so often regarded as belonging to the genus *Xerus*, *Sciurus pyrropus* and *congius* actually being two of the most softly furred Squirrels which exist.

|                                                         |          |
|---------------------------------------------------------|----------|
| Length of head and body . . . . .                       | 235      |
| » » tail with tuft . . . . .                            | 210      |
| » » » without tuft . . . . .                            | 165      |
| » » hind foot . . . . .                                 | 45.5     |
| » » skull (incomplete) . . . . .                        | about 51 |
| Width between the jugalia . . . . .                     | 28       |
| » » » orbits . . . . .                                  | 12.5     |
| Length of upper molar series . . . . .                  | 9        |
| Distance between incisor and first upper molar. . . . . | 12       |

1) In some individuals this band is very indistinct.



There are five upper molars in each jaw: the fifth is very well developed. Incisors smooth, orange colored.

N. i. Ngori (Du Chaillu).

Hab. Senegambia, Casamanza-river (Paris Museum); Liberia, St. Paul-river, Soforé-place and Fisherman-lake, Buluma (Büttikofer and Sala); Ashantee (British Museum); Gold-coast, Dabocrom, Rio-Boutry (Pel), Elmina (Nagtglas, Pel), Accra, Mungo (Buchholz), Akim (Mohr), Akropong (Dieterle), Victoria (Reichenow), Fantee (British and Berlin Museum); Calabar (Laurein); Fernando-Po (Fraser, Montemart); Gaboon (Aubry Lecomte); Rivers Nazareth, Ogobai, Fernando-Vaz, Rembo and Ovenga (Du Chaillu); Angola, Kuango (v. Mechow).

It inhabits the forests.

Specimens in the Leyden Museum:

1. Adult male, Liberia, St. Paul-river, Soforé-place, Büttikofer and Sala, 19 April 1880. — 2, 3 and 4. Very young individuals (in spirits), Liberia, Fisherman-lake, Buluma, January 1881, Büttikofer and Sala. — 5 and 6, Adult males, Gold-coast, Dabocrom, May 1842, Pel. — 7. Adult female, Dabocrom, May 1842, Pel. — 8. Adult female, Dabocrom, February 1843, Pel. — 9, 10 and 11. Adult female and adult males, Dabocrom, 1842, Pel. — 12 and 13. Adult male and female, Gold-coast, Elmina, 1861 and 1865, Nagtglas. — 14. Young individual, Gold-coast, 1865. — 15. Very young specimen, Liberia, died in the Zoological garden at Rotterdam, 1875. — 16. Adult female, Elmina, July 1861, Nagtglas. — 17. Adult female, Gaboon. — 18. Adult female, Ogobai, Schlüter.

19. Skull of n<sup>o</sup>. 8. — 20. Skull of n<sup>o</sup>. 9. — 21. Skull of n<sup>o</sup>. 15. — 22. Skull of n<sup>o</sup>. 18.

Nos. 5, 6, 7, 8, 9, 10 and 11 are the type-specimens of *Sciurus leucostigma* Temminck. N<sup>o</sup>. 18 received s. n. *Sciurus rubripes* Du Chaillu.

*Sciurus congicus.*

1820. *Sciurus congicus* Kuhl. Beiträge zur Zoologie. p. 66.

Notes from the Leyden Museum, Vol. IV.

1836. *Spermosciurus congicus* Lesson. Histoire naturelle des Mammif. T. V. p. 401.
1843. *Sciurus (Xeros?) congicus* Wagner. Schreber's Säugethiere. Supplem. Bd. III. p. 217. Note.
1852. *Sciurus flavivittis* Peters. Monatsb. d. K. Pr. Akad. d. Wissenschaften. Berlin. p. 274; Reise nach Mossambique, Zoologie, Säugethiere. p. 128. pl. XXIX and pl. XXXII. fig. 4.
1853. *Xerus flavivittis* Temminck. Esquisses Zool. sur la Côte de Guiné. 1<sup>e</sup> partie. p. 124. Note.
1867. *Macroxus congicus* Gray. Ann. and Mag. of Nat. Hist. XX. p. 330.
1867. *Funambulus congicus* Fitzinger. Sitzb. d. K. Akad. d. Wissensch. I. p. 33; *Funambulus flavivittis* Fitzinger. l. c. p. 34.
1880. *Sciurus ochraceus* Huet. Nouv. Arch. du Museum. p. 154. pl. 7. fig. 2.
1881. *Heliosciurus ochraceus* Trouessart. Catalogue des Rongeurs viv. et foss. p. 84; *Spermosciurus flavivittis* Trouessart. l. c. p. 84; *Spermosciurus congicus* Trouessart. l. c. p. 84 (partim).

Upper parts olivaceous or rusty ochraceous, sides less dark, under parts yellowish white, bi-colored. The more ochraceous tinge, the smaller size and the not wholly whitish colored under parts distinguish this species at once from the former.

The hairs are short and very soft to the touch. There are very striking differences in the mode of coloration of the different specimens, similarly to what was noticed for the foregoing species. The specimens resembling the type of Knhl agree as to the color of the upper parts with the same parts in *Sciurus pyrropus*, the tail, the sides of the body and outside of legs however are never red, but also olivaceous although not so dark as the upper parts. A white band, bordered by a band somewhat darker colored than the back, runs from shoulder to thigh. The hairs of the under parts and of the inside of the legs bear white tips. A white circle surrounds the eyes. Whiskers black.

The specimens agreeing with *Sciurus flavivittis* Peters are colored as follows: the hairs of upper surface of head, neck and back are black with a subapical rusty ochraceous ring. Hairs of the sides of the body and outside of legs black at the base and for the rest light ochraceous brown or slightly black tipped. A band darker colored than the back and running from shoulder to thigh cuts from each light ochraceous brown colored side of the body a smaller band colored much lighter than these parts. Chin, throat, breast, belly and inside of legs covered with yellowish white hairs, at the base of the hairs nearly always blackish. Hairs of tail ochraceous yellow, ringed with black. Inside of the well developed ears ochraceous, outside whitish; behind the ears a whitish spot. The dark-brown eyes are surrounded by a whitish circle. Whiskers black.

Some specimens from Angola present a mode of coloration just intermediate between *Sciurus congius* Kuhl and the ochraceous form described as *Sciurus flavivittis*.

|                                                    | m. m. |
|----------------------------------------------------|-------|
| Length of head and body. . . . .                   | 187   |
| » » tail with tuft . . . . .                       | 175   |
| » » » without tuft . . . . .                       | 160   |
| » » hind foot. . . . .                             | 41.5  |
| » » skull . . . . .                                | 37    |
| Width between the jugalia . . . . .                | 19.5  |
| » » » orbits. . . . .                              | 9     |
| Length upper molar series . . . . .                | 7     |
| Distance of incisor and first upper molar. . . . . | 7.5   |

There are five molars <sup>1)</sup> in each upper jaw: the first one

---

1) Prof. Peters called my attention to the fact, that there is in the Berlin Museum a skull of a *Sciurus congius* which shows the molars more worn out than those in a skull of a *Sciurus flavivittis*, although the latter belongs to an older individual. He therefore believed that *Sciurus congius* and *Sciurus flavivittis* are two distinct species. But in my opinion the more or less worn-out aspect of the molars *can be* a consequence of age, but it *need not always* have the same reason, as it can also be a mere local phenomenon, resulting for instance from the nature of the food.

is strongly developed. Incisors smooth, orange colored.

Hab. Congo (Tuckey); Quanza-river (British Museum); Angola (Monteiro), Novo Rodondo (Falkenstein); Mossamedes, Cirravel (Sala), Cunene-river (British Museum); Zambesia, Cabaceira (Kirk); Mossambique, Quitangonha, Mesuril, Mossimbôa (Peters); Zanzibar, Bogamoyo (Pères du Saint-Esprit), Mombaça (Kirk).

It is very common in mango-plantations and builds its nest in hollowed trees.

Mounted specimens in the Leyden Museum :

1. Adult male, Mossamedes, Cirravel, 13 July 1868, Sala. —
2. Adult male, Cirravel, 28 August 1868, Sala.
3. Skull of n<sup>o</sup>. 1.

C. Squirrels with several stripes on back and sides.  
 α. Fur soft.

*Sciurus lemniscatus.*

1857. *Sciurus lemniscatus* Le Conte. Proc. Acad. Philadelphia. p. 11.
1862. *Sciurus isabella* Gray. Proc. Zool. Soc. London. p. 180. pl. XXIV.
1873. *Sciurus sharpei* Gray. Ann. and Mag. of Nat. Hist. XII. p. 265.
1881. *Heliosciurus sharpei* Trouessart. Catalogue des Rongeurs viv. et foss. p. 84; *Funisciurus lemniscatus* Trouessart l. c. p. 84.

The soft hairs of the upper parts and the sides of head and body and the outside of legs mouse-colored at the base. Back ornated with four black stripes, the two middle ones are the longest and run from the nape of the neck to the root of the tail, both the other ones from the shoulders to the upper parts of the thighs. Head and outside of legs olivaceous rusty brown; line along the spine rather indistinct olivaceous brown; lines between the black stripes lighter colored; sides of the body mixed with greyish. Sometimes a more ochraceous tinge prevails. Tail olivaceous brown

with a black ring. Hairs of chin, throat, breast, belly and inside of legs pure white throughout.

A light spot behind the well developed ears. A whitish circle surrounds the eyes. Whiskers black.

|                                                  | m. m. |
|--------------------------------------------------|-------|
| Length of head and body. . . . .                 | 186   |
| » » tail with tuft (incomplete) . . . about      | 180   |
| » » » without tuft (incomplete) . . »            | 140   |
| » » hind foot. . . . .                           | 41    |
| » » skull . . . . .                              | 42    |
| Width between the jugalia (incomplete) . . about | 22    |
| » » » orbits. . . . .                            | 10.5  |
| Length upper molar series . . . . .              | 7     |
| Distance of incisor and first upper molar . . .  | 10    |

There are five molars in each upper jaw; the first is a very well developed tooth. The smooth incisors are orange colored.

Hab. Cameroon mountains (Burton); Gaboon (Ansell, Verreaux, Laglaize); Ogobai-river (Marche); Chinxoxo (Falkenstein); Angola, Kuango (v. Mechow).

Captain Burton found this squirrel 7000 feet above the level of the sea in the Cameroon-mountains.

Mounted specimens in the Leyden Museum:

1 and 2. Adult females, Ogobai, Schlüter.

3 and 4. Skulls of nos. 1 and 2.

β. Fur harsher.

*Sciurus getulus.*

1560. *Sciurus getulus* C. Gessner. Icones animalium quadrupedum viviparum et oviparum. First edition.

1788. *Sciurus getulus* Lin. Systema naturae. T. I. p. 150.

1842. *Xerus trivittatus* Gray. Ann. and Mag. of Nat. Hist. X. p. 264.

*Sciurus (Xeros) praetextus* Wagner Schreber's Säugethiere. Supplem. Bd. III. p. 216.

1853. *Xerus getulus* Temminck. Esquisses Zool. sur la Côte de Guinée. 1<sup>e</sup> partie. p. 124. Note.

1867. *Macroscius getulus* Gray. Ann. and Mag. of Nat. Hist. XX. p. 331; *Xerus trivittatus* Gray. l. c. p. 334; *Xerus setosus* Gray. l. c. p. 333 (partim). *Funambulus getulus* Fitzinger. Sitzb. d. K. Akad. d. Wissensch. I. p. 33; *Xerus trivittatus* Fitzinger. l. c. p. 36; *Xerus praetertus* Fitzinger. l. c. p. 36. — *Xerus trivittatus* Gray = *Sciurus getulus* Linnaeus. Selater. Proc. Zool. Soc. London. p. 817. Note.

1881. *Spermosciurus congicus* Trouessart. Catalogue des Rongeurs viv. et foss. p. 84 (partim); *Spermosciurus getulus* Trouessart l. c. p. 85.

Fur short, flattened and harsher to the touch than in the other species of this genus. The ears very small. Upper incisors grooved.

Upper parts and sides of head, back and outside of legs, except the feet, black, ringed with brownish yellow. A stripe running on each side of the back from above the shoulder to the upper parts of the thigh, chin, throat and feet white throughout. On the middle of the back along the spine is an indistinct pale colored stripe. Sides of the body, belly and inside of legs mouse-colored, largely tipped with white. Sometimes the stripe along the spine, the hind parts of the body and outside of legs of a more reddish brown color. Root of tail above same color as back. Hairs of tail dirty white with one or two black rings.

Whiskers black. Eyes surrounded by a whitish circle. The earconch scarcely perceptible.

|                                                  |          |
|--------------------------------------------------|----------|
|                                                  | m. m.    |
| Length of head and body . . . . .                | 256      |
| » » tail with tuft (very incomplete). . . .      | 140      |
| » » hind foot . . . . .                          | 50       |
| » » skull (incomplete) . . . . .                 | about 48 |
| Width between the jugalia (incomplete). . . »    | 31       |
| » » » orbits (incomplete) . . . »                | 15       |
| Length of upper molar series . . . . .           | 10       |
| Distance between incisor and first upper molar . | 10.25    |

There are five upper molars in each jaw: the fifth is a strongly developed tooth. Upper incisors distinctly grooved, light orange colored.

Hab. Marocco, Mogador (Delaporte), prov. Haha (Drummond-Hay).

Nothing is known about the habits of this species.

Mounted specimens in the Leyden Museum:

1. Adult female, Marocco, died in the Royal Zoological garden at Amsterdam. — 2. Half grown individual, Mogador, Delaporte, 1837, exchanged with the Paris Museum, 1868.

3. Skull of n<sup>o</sup>. 2.

As it externally resembles the species of the genus *Xerus*, it has been regarded as belonging to this genus by the majority of naturalists. But a closer examination shows that although the ears are very short compared with these organs in the other true *Sciuri* and the hairs generally rather rigid and flattened, the latter nevertheless show a great difference in structure with the hairs of the true *Ground squirrels*, viz: they are not nearly so fragile, and not channelled. Moreover the claws are curved as in true *Sciuri* and not so straight; this is indicative of a climbing and not of a burrowing habit.

It still is a very rare species in the collections, two specimens being contained in the Leyden, two in the Paris, four in the British, two in the Berlin and a single individual, *Xeros praetextus* Wagner in the Munich Museum. When better known, it may perhaps prove to belong to a genus between *Sciurus* and *Xerus*, but for the moment it is most appropriately placed at the end of the genus *Sciurus*.

C. Gessner was the first to describe this species under the name *Sciurus getulus*. I did not see the first edition of his book, but consulted the third edition; on page 112 a rather good figure and a very clear description are to be found. The specific title *getulus* is derived from Getulia, the ancient name of Barbaria, the locality where this species was found. I believe that *Mustela africana* Clusius and *Mustela lybica* Nieremberg also belong to the above named species.

***Xerus.***

The harshness of the fur, the shortness of the ears, the long claws and the elongated middle toe characterise this genus. Palate extending a rather considerable distance behind the molars. Jugalia depressed. The hairs are short and very sparingly spread, especially on the under parts of the body: they are attenuated at both ends, acutely pointed and flattened. Each hair is provided with a longitudinal channel or groove, and so the hairs are not circular in a transverse section; they are very rigid and but little flexible. The hairs of the depressed tail are always less rigid.

The ear is less developed than in any other Squirrel and is either quite absent or is shaped nearly as the human earconch.

The middle toe of fore and hind legs is longer than the other toes. All the claws are more developed than in other Squirrels and are nearly straight.

The characters cited clearly indicate a peculiar manner of living and indeed the species of this group have without exception burrowing habits; contrary to the species of the genus *Sciurus* which are *Tree-Squirrels*, they are *Ground-Squirrels*.

The several authors and compilers have described or cited a large number of species as belonging to this genus, for instance: Wagner six, Temminck six, Giebel five, Fitzinger eleven, Gray three with one variety, Huet eight and Trouessart nine species. — After a very careful examination and after having seen nearly all the specimens of this group contained in the different Musea, I cannot distinguish more than three well defined species. One of these, *Xerus capensis*, is only found in South Africa, the two others *Xerus erythropus* and *Xerus rutilus* inhabit both East and West Africa and apparently do not occur in those districts, where the South African species is living.

According to the presence or absence of the external ear and to the form of the skull I distinguish the following groups:



- A. Ear-conch developed. Skull elongate and small.  
 B. No ear-conch. Skull short and broad.

- A. Ear-conch developed. Skull elongate and small.

*Xerus rutilus.*

1826. *Sciurus rutilus* Cretzschmar. Atlas zu der Reise im nördl. Afrika. Erste Abth. Zoologie. p. 59, Taf. 24.  
 1828. *Sciurus brachyotus* Hemprich und Ehrenberg. Symbolae physicae. Déc. I. Taf. 9.  
 1836. *Sciurus (Spermosciurus) simplex* Lesson. Histoire Nat. des Mammif. T. V. p. 402.  
 1843. *Xerus rutilans* Gray. List of the specimens of Mammalia in the coll. of the British Museum. p. 144.  
 1861. *Xerus dabagála* v. Heuglin. Petermann's Mittheilungen. p. 17. — Nova acta Ac. Caes. Leop. p. 4. pl. II. fig. 3.  
 1867. *Xerus flavus* Alph. Milne Edwards (non Linné). Revue et Magazine de Zoologie. p. 229.  
 1880. *Xerus fuscus* Huet. Nouvelles Archives du Muséum. Deuxième Serie. p. 139. pl. VI. fig. 1. — *Xerus flavus* Alph. Milne Edwards (non Linn.). l. c. p. 140. pl. VI. fig. 2.

Hairs of the upper parts and sides of the body, outside of the legs and fore and hind feet uniformly colored. Each hair is straw-colored with a white tip; the side of the hairs turned towards the body is white and glossy. The under parts of the body and inside of legs are pure white. The hairs of the tail have the same color as those of the upper parts of the body, but here each hair is embellished with four pure white rings and a tip of the same color, this white tip growing longer towards the apex of the tail. Out and inside of the ears with very short hairs. A pure white circle surrounds the brown eyes. Whiskers black.

It seems however that this mode of coloration is not constant, in some individuals the straw-color partly being replaced by a more fleshy tinge, whereas in other ones a blackish brown predominates. The straw-color is peculiar to the type of this species, viz: to some specimens collected by Rüppell in Abyssinia. The more fleshy tinge has induced v. Heuglin to describe a new species *Nerus dabagála* from the Somali-Coast and also Prof. Alph. Milne Edwards to create his *Nerus glarus*; the type specimens of the latter species were from the Gaboon, but lately the Paris Museum has received specimens from the Somali-Coast which altogether show the same coloration. Under the name *Nerus fuscus*, Huet described specimens from Abyssinia; the upper parts of these individuals present the above named blackish brown color.

|                                                   | m.m. |
|---------------------------------------------------|------|
| Length of head and body . . . . .                 | 244  |
| » » tail with hairs . . . . .                     | 260  |
| » » tail without hairs . . . . .                  | 196  |
| » » hind foot with claw . . . . .                 | 55   |
| » » skull . . . . .                               | 51   |
| Width between the jugalia (incomplete) . . about  | 32   |
| » » » orbits . . . . .                            | 15   |
| Length of upper molar series . . . . .            | 10   |
| Distance between incisor and first upper molar. . | 11.5 |

There are four molars in each jaw. Incisors light orange, smooth.

N. i. Schillu (Rüppell), Dabagála (v. Heuglin).

Hab. Senegal (Lesson)?; Gaboon (Guislain). — White Nile (d'Arnaud), Abyssinia (Rüppell), Mounts of Adel (Schoeffer . Bocourt), Bogos, Keren, Massaua (v. Heuglin), Somali-coast (Révoil), Zeila and Berbera (v. Heuglin).

Rüppell and v. Heuglin relate that *Nerus rutilus* lives in holes, which it digs very quickly. Sometimes it frequents trees and shrubs, but if detected it rapidly disappears in its underground habitation; here also parturition takes place. It lives in pairs. In the morning and in the evening it leaves the

hole in search of buds, leaves, seeds and fruits on which it feeds. v. Heuglin has captured it in sandy plains on the Somali-coast and Blanford has observed this species in rocky places close to the shore of the Annesley-Bay and saw it also at an elevation of 1500 feet. Frequently five or six are seen together keeping to the ground.

Mounted specimens in the Leyden Museum:

1. Adult male, Abyssinia, Voyage of Rüppell. — 2 and 3. Adult females, Rüppell, Abyssinia. — 4. Adult male, Frank, 1880, Abyssinia. — 5. Adult, Somali-coast, Révoil 1881, presented by Prof. Alph. Milne Edwards.

6. Skull of N<sup>o</sup>. 1. — 7. Skull of N<sup>o</sup>. 2. — 8. Skull of N<sup>o</sup>. 3. — 9. Skull of N<sup>o</sup>. 4. — 10. Skull of N<sup>o</sup>. 5.

*Xerus erythropus.*

1803. *Sciurus erythropus* Ét. Geoffroy Saint Hilaire. Catalogue des Mammifères du Muséum national d'Histoire naturelle. p. 178. (A very rare book).
1817. *Sciurus alborittatus* Desmarest. Nouveau dict. d'Hist. Nat. T. X. p. 110.
1830. *Sciurus erythropus* Fr. Cuvier. Mammif. lithogr. T. IV.
- 1835—40. *Sciurus leucombrinus* Rüppell. Neue Wirbelthiere zu der Fauna von Abyssinien gehörig. p. 38.
1836. *Sciurus (Spermosciurus) congicus* (?) Lesson. Histoire naturelle des Mammif. T. V. p. 401 — *Sciurus (Spermosciurus) marabutus* and *prestigiator* Lesson. l. c. p. 402. — *Sciurus (Spermosciurus) pyrropus* Lesson (non Fr. Cuvier). l. c. p. 400.
1843. *Sciurus pyrropus* Wagner (non Fr. Cuv.). Schreiber's Säugethiere. Suppl. Bd. III. p. 215. — *Sciurus erythropus* Wagner. l. c. p. 215. — *Sciurus congicus* (?) Wagner. l. c. p. 217.
1845. *Sciurus erythropus* Schinz. Synopsis Mammalium. Bd. II. pp. 23 (partim) and 27. — *Sciurus leu-*

- cumbrinus* Schinz. l. c. p. 27 (partim). — *Sciurus setosus* Schinz. l. c. p. 27 (partim).
1853. *Xerus congicus* Temminck (non Kuhl). Esquisses zoologiques. T. I. p. 125. — *Xerus erythropus* or *lucoumbrius* Temminck. l. c. p. 124.
1867. *Xerus setosus* Gray. Ann. and Mag. of Nat. Hist. III Series. XX. p. 333 (partim).
1867. *Xerus lessonii* Fitzinger. Sitzb. d. K. Akad. d. Wissensch. I Abth. p. 36.
1880. *Xerus congicus* Huet (non Kuhl). Nouvelles Archives du Muséum d'Hist. nat. Deuxième Série. p. 135 (partim).
1881. *Geosciurus erythropus* Trouessart. Catalogue des Rongeurs vivants et fossiles. p. 28.

This species in many points resembles the foregoing, except the pure white streak along each side from the shoulder to the upper part of the thigh, of which streak there is not a trace in *Xerus rutilus*: a closer inspection however furnishes the following remarks: the general color is the same as in *Xerus rutilus*, we even find here the three tinges above noticed, viz: straw-color, a more fleshy tinge and blackish-brown; the first mode of coloration being peculiar to the type-specimens of this species, the third to *Xerus congicus* Temminck (non Kuhl), whereas I observed the second color in a specimen from Sudan, collected by v. Henglin and now in the Stuttgart-collection, and also in an individual in the Darmstadt Museum and in another in the Mainz Museum.

In all specimens there is a more or less important number of wholly blackish brown hairs irregularly planted among the other hairs. The hairs on the back are somewhat longer than in *Xerus rutilus* and although channelled the grooves are not so clear and the hairs less rigid. Each hair has a yellowish brown tip and the side of the hair turned towards the body has the point similarly colored and is for the rest glossy white. The hairs of the tail present the following coloration: each hair is reddish brown at its

base, further ringed with black and white, the tip always being white.

The hairs of the side-streaks are white throughout, only a few being brown tipped.

A white circle surrounds the black eyes. Whiskers black. Ears a little more developed than in *Xerus rutilus*, but this may perhaps be merely a relative difference, because *Xerus erythropus* is in all its proportions a stronger animal and of a considerably larger size.

|                                                    | m. m. |
|----------------------------------------------------|-------|
| Length of head and body . . . . .                  | 297   |
| » » tail with hairs . . . . .                      | 300   |
| » » » without hairs . . . . .                      | 230   |
| » » hind foot . . . . .                            | 73    |
| » » skull . . . . .                                | 62    |
| Width between the jugalia (incomplete) . . about   | 34    |
| » » » orbits . . . . .                             | 16    |
| Length of upper molar series. . . . .              | 12.5  |
| Distance between incisor and first upper molar . . | 13.5  |

There are five molars in each upper and four in each lower jaw: here the fifth molar, as usual when this tooth is developed, is very small. Incisors smooth, light orange or yellowish. It seems that exceptionally fullgrown individuals have pure white incisors, for instance this is the case in two specimens in the Museum at Prague. A skull in our collection (vide infra N<sup>o</sup>. 21) has the lower incisors and an upper one pure white, the other upper incisor being yellowish. In young individuals the small foremost upper molar is absent and the incisors always have a white or yellowish white color. I observed this in all the young specimens from Senegal, Liberia, Gold-coast and Bogos in the Leyden Museum, from Kitui and Chinxoxo in the Berlin collection, from an unknown locality in the Munich Museum and also in two specimens from Bogos in the Stuttgart collection.

N. i. Schillu (Rüppell) and Sabera (Rüppell).

Hab. Senegal; Sierra Leone; Liberia (Büttikofer and Sala);

Gold-coast (Pel), Ashantee (Verreaux), Yoruba (Mann), Aburi (Reichenow); Loango, Chinxoxo (Dr. Falkenstein); Burnu (Fr. Cuvier), Sudan (v. Heuglin); Egypt (Clot-bey), Nubia, Keren, Bogos, Sennar, Kordofan (Rüppell, v. Heuglin and Dr. Prunner); Abyssinia (Rüppell, v. Heuglin, Blanford); Zanzibar, Kitui (Hildebrandt).

Temminck (fide Pel) reports that this species is very common on the Gold-coast there where the woods border upon the cultivated grounds. It feeds on millet and other grains, is very shy and by day it hides away in holes at the base of trees or in shrubs. Von Heuglin says that it has the same manner of living as *Xerus rutilus*. Blanford found this species in rocky places about Senafé and elsewhere, in Tigré up to about 9000 feet and as low as 4500 feet in the Anseba valley. It has six mammae. On the second of March near Takonda he shot a gravid female containing four well developed young ones: two, a male and female in each horn of the uterus. Büttikofer relates that they are very numerous in groundnut plantations and also in newly planted cassave-farms: they dig out the young cassave-plants, the bark of which they gnaw off. They burrow holes in the ground in which they sleep at night. They feed at each hour of the day, even during the hot meridian sun. They are very attentive and shy, and more easy to observe than to shoot, as they mostly make their escape in the neighboring shrubs, where nobody can find them. In captivity they soon grow very tame.

Rüppell relates that his specimens from Abyssinia were darker colored than the Kordofan-individuals and Blanford states that the specimens from Western Africa are of the same size of the Abyssinian species, but much darker in color.

Étienne Geoffroy Saint Hilaire was the first to describe this species. He only disposed of a single individual from an unknown locality. As his description is very clear and the book in which he described this species seems to be exceedingly rare (cf. Catalogue méthodique de M. Is. Geoffroy

Saint Hilaire, 1851, p. V de l'introduction) and unknown to several naturalists, I transcribe here what I find on page 178 of the *Catalogue des Mammifères du Museum national d'Histoire naturelle de Paris*, 1803: »10 Esp. l'Écu-  
 »reuil fossoyeur. *Sciurus erythropus* (Geoff). Caract. Roux,  
 »blanc-jaunâtre en dessous; une ligne blanche sur les flancs;  
 »queue ronde et à poils courts à sa base. Espèce inédite.  
 »Descript. T. 0,24 m. (10 p.). Dessus de la tête et du corps  
 »d'un roux teint de brun, les poils étant annelés de ces  
 »deux couleurs; une ligne d'un blanc-jaunâtre sur les flancs,  
 »pates et dessous du corps d'un blanc sale tirant sur le  
 »jaune; cuisses d'un fauve assez vif; queue plus longue que  
 »le corps, ronde et à poils courts à sa base seulement, à  
 »longs poils gris, et brun dans le reste de sa longueur.  
 »Patrie inconnue, N<sup>o</sup>. CCCLXVI. Cet individu provenant  
 »des collections de Hollande est remarquable par la lon-  
 »gueur extraordinaire de ses ongles et la brièveté singulière  
 »de ses oreilles." — This typical individual is not to be found in the Museum of the Jardin des Plantes, but in its stead there is now another specimen labelled 1820. The specimens in the named Museum labelled *leucoumbrinus* are the type-specimens of *albovittatus* Desmarest, as M. Huet personally told me.

Mounted specimens in the Leyden Museum:

1. Very young male, Senegal, 1823. — 2. Young male, Buluma, Fisherman-lake, Liberia, 4 February 1881, Büttikofer and Sala. — Young male, Buluma, 24 January 1881, Büttikofer and Sala. — 4 and 5. Young males (in spirits) Buluma, 4 February 1881, Büttikofer and Sala. — 6. Adult male, Saccondé, Gold-coast, March 1852, Pel. — 7. Adult male, Rio-Boutry, 1842, Pel. — 8. Not fullgrown female, Gold-coast, Pel. — 9 and 10. Young individuals, Gold-coast, 1842, Pel. — 11. Adult male, Egypte, presented by M. Clot-Bey. — 11. Adult female, Egypte. — 13. Male, Sennar, 1868, from the Paris-Museum. — 14. Young female, Bogos, v. Heuglin, December 1863. — 15. Adult male, Abyssinia. — 16. Nearly fullgrown specimen, Abyssinia, Frank, 1880.

17. Skeleton of an adult individual that formerly lived in Schönbrunn, presented by M. v. Pelzeln, 1881.

18. Skull of N<sup>o</sup>. 6. — 19. Skull of N<sup>o</sup>. 10. — 20. Skull of N<sup>o</sup>. 13. — 21. Skull of N<sup>o</sup>. 15. — 22. Skull of N<sup>o</sup>. 16.

B. No ear-conch. Skull short and broad.

*Xerus capensis.*

1792. *Sciurus capensis* Kerr. The animal kingdom or Zoological System of the celebrated Sir Charles Linnaeus. p. 266. (A very rare book).
1793. *Sciurus namaquensis* Lichtenstein. Catalogus rerum naturalium rarissimarum. Hamburg. p. 2. n<sup>o</sup>. 16.
1811. *Sciurus capensis* Thunberg. Mémoires de l'Acad. de St. Pétersb. T. III. p. 309. n<sup>o</sup>. 29.
1820. *Sciurus levaillantii* Kuhl. Beiträge zur Zoologie. p. 67.
1829. *Sciurus ocularis* Smith. Zool. Journ. IV. p. 439. *Sciurus alborittatus*, var.  $\delta$ . *erythropus* Fischer. Synopsis mammalium. p. 360 (partim).
1832. *Sciurus setosus* Smuts. Enumeratio mammalium capensium. p. 33 (partim).
1843. *Sciurus leucumbrinus* Wagner. Schreber's Säuge-thiere. Supplem. Bd. III. p. 213 (partim). *Sciurus setosus* Wagner. l. c. p. 214. (partim).
1845. *Sciurus erythropus* Schinz. Synopsis mammalium. Bd. II. p. 23 (partim); *Sciurus leucumbrinus* Schinz. l. c. p. 27 (partim); *Sciurus setosus* Schinz. l. c. p. 27 (partim).
1867. *Xerus (Geosciurus) setosus* Gray. Ann. and Mag. of Nat. Hist. III Series. XX. p. 333 (partim).
1880. *Xerus capensis* Huet. Nouvelles Archives du Museum. Deuxième Série p. 133.
1881. *Geosciurus setosus* Trouessart. Catalogue des Rongeurs vivants et fossiles. p. 28.



Agrees with *Xerus erythropus* in having a pure white streak along each side from the shoulder to the upper parts of the thighs and with *Xerus rutilus* by the shortness and nature of the hairs of the upper parts of head and body: the hairs of the named parts are straw-colored with white tips, a few wholly blackish brown ones are interspersed. In the Stuttgart collection I saw an individual from the Cape colored like *Xerus dabagála* v. Heuglin, viz: with a fleshy tinge. The entire absence of an earconch distinguishes this species not only from the other *Xerus*-species but also from all the other *Sciuri* hitherto discovered, so that this alone at once suffices to characterize this form.

The black eyes are surrounded by a white circle. Whiskers black.

|                                                  | m. m. |
|--------------------------------------------------|-------|
| Length of head and body. . . . .                 | 318   |
| » » tail with hairs (incomplete). . . about      | 260   |
| » » » without hairs (incomplete). . »            | 225   |
| » » hind foot. . . . .                           | 68    |
| » » skull . . . . .                              | 59    |
| Width between the jugalia . . . . .              | 38.5  |
| » » » orbits . . . . .                           | 17.5  |
| Length of upper molar series . . . . .           | 12    |
| Distance between incisor and first upper molar . | 13    |

In each jaw there are never more than four molars. Incisors without exception always pure white and without groove.

It is not without reason that the form of the skull has attracted the attention of different naturalists. In 1835 Rüppell observed that there is a difference in the form of the skull between *Sciurus setosus* and *leucoumbrinus* and Sundevall wrote (Om Professor I. Hedenborgs insamlingar of Däggdjur i Nordöstra Africa och Arabien. 1842) „Maxime memorabilis est „similitudo externa et dissimilitudo craniorum *Sciuri leucoumbrini* et *setosi*, qui, secundum externa, varietates „unius speciei, secundum crania diversi genera haberi pos-

„sent. Cranium *Sc. leucoumbrini* ♂ adult., longit. 58 mill., „lat. in arc. zyg. 31; sat angustum, arcu zyg. in hoc „genere singulari, angusto, parum curvato; rostro conico, „subacuto. *Sc. setosus*, ♀ ex Afr. merid. Cranium long. 59 „mill., lat. in arc. zyg. 38 (fere  $1\frac{1}{4}$  praec.s); latum, arcu „zyg. lato, curvato-patente, rostro brevi, obtuso, lineari; „forma ossium nasi et cet. longe a prioris diversa. . . .” That Sundevall’s observation is very exact must be acknowledged by every one who takes the trouble of using his eyes and it is indeed very curious and incomprehensible how Gray (Ann. and Mag. of Nat. Hist. 1867 p. 333) could object to it and finish his very insignificant opposition with the following statement; „the two species may be „distinct; but I am inclined to regard the characters given (by Sundevall) as only individual peculiarities, though „my idea may prove incorrect when a large series from „each country can be compared; skulls, however, are as „apt to vary as other parts of the animal, and are only „to be depended on when a series can be examined and „compared.” — If skulls and other parts of animals of the same species did vary as a rule in such a remarkable degree as in the case in question, how would it then ever be possible to distinguish any two species from each other? But happily and notwithstanding Gray’s sentence nearly always and especially in this case the skulls of the different species of mammals show more or less important differences, which facilitate their distinction. I need not enter into a detailed discussion, and I will suffice to remark that the nasalia of *Xerus capensis* are much broader in front and the jugalia much broader and stouter than in any other African Squirrel. Moreover on comparison of the measures given above of the skull of *Xerus capensis* with those of *Xerus erythropus* and *rutilus* one must wonder that Gray being acquainted with the observation of Sundevall, has not taken advantage of this beautiful opportunity to create a new genus for the Cape species.

It seems that up to this day it has remained a fact

unknown to the majority of naturalists, that Kerr was the first to describe this species under the name *capensis*. Some authors give it the specific title *capensis* Thunberg, but Thunberg wrote in 1811 and nineteen years earlier Robert Kerr (1792) characterised it in the following excellent terms: „Cape Squirrel. *Sciurus capensis*. Of „a pale ferruginous colour on the upper parts of the „body, mixed with black; with a white line from the „shoulder along each side: the tail is black in the middle „and hoary at the sides; the ears are scarcely apparent. „(Earless Dormouse. Penn. hist. of quadr. n<sup>o</sup>. 290). — The „head is flat, with a blunt nose, full black eyes, divided „upper lip and long whiskers, the belly and feet are dirty „white, and there is a white line above each eye: the toes „are long and distinct, with a large knob on each fore „foot in place of a thumb: the claws are long; the hind „legs are black and naked behind. It is „about the size of the Common Squirrel but much broader „and flatter in its make.”

The name *setosus* Forster would have been the oldest, if Forster had indeed described this squirrel anywhere; in vain however I have carefully scrutinized periodical works, catalogues, etc., and neither I nor one of my friends, who kindly investigated this question at my request, have been able to find a description of the Cape Squirrel by Forster. Lichtenstein in 1844 published: „Forsteri descriptiones Animalium in itinere ad Maris australis terras per annos 1772—74 suscepto observatorum,” and there we read on page 39: „*Sciurus palmarum* Linn. Var.  $\beta$  = *Sciurus albovittatus* Desm. = *Sciurus setosus* Smuts. = *Sciurus capensis* Thunb. . . Habitat „ad Cap. bon. spei. . .” If Forster had named this Squirrel *setosus*, Lichtenstein would not have cited *setosus* Smuts, this author having written in 1832. Fischer (1829) was the first author, as far as I know, who cited *setosus* Forster and all the succeeding writers have merely copied this name without giving any account as to where it had properly been described by Forster.

N. i. Aguimp. Thunberg and Smuts.

Hab. Namaqua-land (Thunberg and Lichtenstein), Masilikats-land, Lattaku (Verreaux), Griqua-land (Staib) and southwards the whole Cape-colony (v. Horstock, v. Ludwig, Krebs, Smith, etc.)

Kerr tells us that it lives near the Mountains of Sneeberg, 800 miles north from the Cape of Good Hope. It never climbs trees, but burrows in the ground, forming a warm nest, with a round hole, in which it lodges, closing up the orifice. It feeds on bulbous roots, especially potatoes; it is very tame and never offers to bite, walks often on its hind feet, frequently lies on its belly, and often flirts up the tail. Thunberg very pithily describes the harshness of the hairs: „pili caudae longi, molles; „corporis vero duriores, sic ut, dum baculo castigatur, „sonus edatur fere ut in Hystrice.”

Mounted specimens in the Leyden Museum:

1. Adult female, Cape of Good Hope. — 2. Half grown female, Cape of Good Hope, v. Horstock.
3. Skull of N<sup>o</sup>. 1. — 4. Skull of N<sup>o</sup>. 2.

### **Recapitulation.**

#### *Sciurus.*

|                                                                     | Mounted<br>skins. | Spirits. | Skel. | Skulls. |
|---------------------------------------------------------------------|-------------------|----------|-------|---------|
| Sciurus stangeri. — West Africa (Liberia<br>Ogobai-river) . . . . . | 11                |          |       | 7       |
| „ ebii. — West Africa (Gold-coast<br>— Ovenga-river) . . . . .      | 2                 |          |       | 2       |
| „ aubinnii. — West Africa (Liberia<br>— Gold-coast). . . . .        | 6                 |          |       | 3       |
| „ rufo-brachiatus. — West Africa<br>(Liberia — Angola) . . . . .    | 18                |          |       | 6       |
| „ palliatus. — East Africa (Galla-<br>land — Natal).                |                   |          |       |         |
| „ mutabilis. — East Africa (Boror<br>— Zambesi valley).             |                   |          |       |         |
|                                                                     | 37                |          |       | 18      |

|                                                                                                                | Mounted<br>skins. | Spirits. | Skel. | Skulls. |
|----------------------------------------------------------------------------------------------------------------|-------------------|----------|-------|---------|
| Transport . . .                                                                                                | 37                |          |       | 18      |
| <i>Sciurus shirensis</i> . — East Africa (Shire-<br>river).                                                    |                   |          |       |         |
| ” <i>punctatus</i> . — West Africa (Ba-<br>nana-islands — Chinxoxo) . . .                                      | 10                | 2        |       | 5       |
| ” <i>annulatus</i> . — West Africa (Gam-<br>bia-river — Quanza-river); East<br>Africa (Tigre — Sennar). . . .  | 10                |          |       | 3       |
| ” <i>cepapi</i> . — East Africa (Dana-ri-<br>ver — Cape). . . . .                                              | 3                 |          |       | 2       |
| ” <i>poensis</i> . — West Africa (Liberia<br>— Gaboon). . . . .                                                | 12                |          |       | 2       |
| ” <i>minutus</i> . — West Africa (2 degrees<br>north — 2 degrees south of the<br>Equator) . . . . .            |                   |          |       |         |
| ” <i>pyrropus</i> . — West Africa (Casa-<br>manza-river — Angola). . . .                                       | 15                | 3        |       | 4       |
| ” <i>congius</i> . — West Africa (Congo-<br>river) — Cunene-river); East<br>Africa (Bogamoyo — Cabaceira). . . | 2                 |          |       | 1       |
| ” <i>lemniscatus</i> . — West Africa (Ca-<br>meroon-mountains — Angola) . . .                                  | 2                 |          |       | 2       |
| ” <i>getulus</i> . North West Africa (Ma-<br>rocco) . . . . .                                                  | 2                 |          |       | 1       |

*Xerus*.

|                                                                                                             |     |   |   |    |
|-------------------------------------------------------------------------------------------------------------|-----|---|---|----|
| <i>Xerus rutilus</i> . — West Africa (Senegal-<br>Gaboon); East Africa (Massaua-<br>Somali-coast) . . . . . | 5   |   |   | 5  |
| ” <i>erythropus</i> . — West Africa (Sene-<br>gal-Chinxoxo); East Africa (Egypt-<br>Zanzibar) . . . . .     | 14  | 2 | 1 | 5  |
| ” <i>capensis</i> . — South Africa . . .                                                                    | 2   |   |   | 2  |
|                                                                                                             | 114 | 7 | 1 | 50 |



## NOTE II.

DESCRIPTION OF A NEW GENUS AND SPECIES  
OF THE COLEOPTEROUS FAMILY  
COLYDIDAE.

BY

**E. REITTER.**

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*Munaria*, g. n

Corpus valde elongatum, convexum. Antennae 11-articulatae, sub frontis margine ante oculos insertae, apicem versus sensim incrassatae, articulo ultimo rotundato. Fronte lateribus elevata. Oculi antice emarginati. Prothorax elongatus, carinatus. Scutellum minutum. Elytra punctato-striata, interstitiis alternis carinatis, apice bidentato. Coxae anticae contiguae, acetabulis oclusis, posticae approximatæ. Tibiæ apice extus dentato productæ. Tarsi breves, articulo primo secundo parum longiore. Abdominis segmentum primum ventrale reliquis haud longius.

This new genus belongs to the true Colydidae and is closely allied to *Mecedanops* Rtrr. <sup>1)</sup> With the latter it has in common the shape of the antennae, that of the body and of the apex of the elytra; it differs however from

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1) *Deutsche Entomologische Zeitschrift*. 1878. p. 120.

it by its short tarsal joints, contiguous anterior coxae and ribbed thorax.

*Munaria Ritsemæ*, sp. n.

Subcylindrica, valde elongata, nigra, opaca, antennis pedibusque brunneis; antennis crassis, articulo tertio subelongato, penultimis tribus transversis, capite thorace haud angustiore, hoc elongato, disco quadricarinato, medio profunde canaliculato, costis sublateralibus ante basin abbreviatis, supra parce punctatis; elytris thorace fere duplo longioribus, dense fortiter punctato-striatis, striis approximatis, punctis striarum quadratis, confertis, sutura interstitiisque (3) alternis costato-elevatis, apice conjunctim emarginatis, extus in dentem productis, supra parce pilosis. — Long. corp. 7,4 mm.

Narrow and elongate, semi-cylindrical, dull black, antennae and legs reddish brown. — Head as broad as the thorax, slightly and sparingly punctured, the sides turned upwards. Vertex provided with two slightly raised lines which are convergent towards the thorax; eyes large, transverse, finely granulate, bare, emarginated anteriorly by a prolongation of the frontal carens. Clypeus covered with a fine yellow pubescence. — Thorax twice and a half as long as broad in the middle, slightly narrowed towards the base, the sides finely margined, the disk with four longitudinal ribs; of these ribs the outer ones are less pronounced, and abbreviated before the base, between the inner ones a deep longitudinal furrow may be observed; between the ribs the disk is distantly, strongly although shallowly punctured. — Elytra almost twice as long as the thorax, at the base somewhat broader than the latter, at the apex semicircularly emarginated, each elytron being in this way provided with a toothshaped projection. Upersurface towards the apex distantly covered with erect hairs, disk with strongly and deeply punctured striae, the punctures square, placed close together, grafted, the in-



terstices narrow, the alternating ones and the sutural one raised in a keel, the outer keel united at the apex with the first interstice from the suture, the remaining ones do not reach it. — Anterior coxae contiguous, the cotyloid cavities closed behind, the posterior coxae approximate, the tibiae enlarged at the apex on the outside in the shape of a tooth, tarsi simple, short, as in *Colydidium*. — The first ventral segment not longer than the following segments, all, excepting the two last and the apical margin of the segments, with a strongly warted punctuation. Antennae and legs finely pubescent.

This genus must be placed next to *Colydidium*, from which it is however essentially distinguished by the contiguous anterior coxae and the shape of the antennae. — The species is dedicated to Mr. C. Ritsema Cz.

Sent over from Kotta Zuydewijn near Solok (Sumatra) by Mr. J. H. Schagen van Leeuwen to Prof. P. J. Veth, who kindly presented the described unique specimen to the Leyden Museum.

Mödling near Vienna, October 3rd, 1881.

## NOTE III.

## DESCRIPTION OF A NEW SPECIES OF THE COLEOPTEROUS FAMILY STAPHYLINIDAE.

BY

**A. FAUVEL.**

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*Osorius cordicollis*, sp. n.

*Osorio puncticollis* Kraatz (Indiæ orientalis) vicinus, sed paulo minor et praesertim angustior, niger, nitidus, palpis, antennis pedibusque rufis, capite toto longitudinaliter subtilius densiusque strigoso, fronte media vix carinulata, angulis anticis externis rotundatis, tuberculis ocularibus minus elevatis, vertice puncto nullo, thorace longiore et angustiore, vix transverso, cordato, ante basin minus abrupte coarctato, multo subtilius densiusque asperatim punctato, elytris etiam duplo subtilius crebriusque punctatis, abdomine haud perspicue alutaceo, punctura asperata crebriore, duplo subtiliore, pube aurea longius densiusque vestito, tibiis anticis extus spinis 9 vel 10 (neque 5 ut in *puncticollis*) armatis, 5 apicalibus majoribus maxime distinctus. — Long.  $7\frac{1}{2}$  mm.

Found in Sumatra: in October at Alahan pandjang by the Dutch Scientific Sumatra-Expedition (Leyden Museum), in September at Soengei-Boeloe by Dr. Beccari (Civic Museum at Genoa and the Author's collection).

Caen, October 6th, 1881.

## NOTE IV.

NEW SPECIES OF GYRINIDAE IN THE  
LEYDEN MUSEUM.

DESCRIBED BY

**Dr. M. RÉGIMBART.**1. *Enhydrus Sumbawae*, sp. n.

Long  $11\frac{1}{2}$  mm. — Ovatus, sat convexus, post humeros dilatatus; supra aeneo-olivaceus, nitidulus, in capite et prothorace leviter purpurascens; infra niger, pedibus anticis nigro-piceis, intermediis et posticis nigro-ferrugineis. Elytris subtilissime reticulatis, haud transversim striolatis, ante apicem extus emarginato-dentatis, ad apicem truncatis, angulo externo obtuso, haud prominulo, interno recto, extus sulcis tribus scriceo-aeneis, 1<sup>o</sup> externo apicem attingente, 2<sup>o</sup> paulo ante apicem, 3<sup>o</sup> paulo post basin abbreviato. ♂ tibiis anticis rectis, triangularibus, angulo apicali externo prominulo.

Of an oval shape, rather convex, the greatest width a little behind the shoulders. The uppersurface of the body very glossy, of a beautiful olivaceous bronze color, with purplish tinges which are more especially visible on the head, the prothorax and the scutellum. The undersurface of the body glossy black, the anterior legs blackish brown, the middle- and hind-legs ferrugineous red, somewhat brownish on the femur. The elytra, which are very delicately reticulated, have no transverse striolae; before the extremity they are slightly emarginate on the outer mar-

gin so as to form a tooth, further on they are transversely truncated, the angles not blunted, the outer one obtuse, the inner or sutural one rectangular. Laterally the elytra are provided with three grooves of a sericeous bronze color of which the outer one is entire, the second abbreviated at a short distance before the apex and the third marked only at the base; sometimes there are almost imperceptible traces of other grooves. The anterior tibia of the male is straight, triangular, with the outer apical angle in the shape of a short tooth which is curved outwards.

Very closely allied to *Enhydrus venator* Boisd. from which it differs especially by the more ventricose and more convex shape, by the more distinct grooves of the elytra of which the third however is very short instead of being almost entire, by the outer angle of the truncation being obtuse instead of acute, and finally by the shape of the male tibiae which are straight and triangular instead of attenuated at the base.

Hab. Sumbawa (van Lansberge). — A single specimen.

## 2. *Enhydrus aenescens*, sp. n.

Long 10—11 mm. — Ovalis, paululum elongatus, antice ac postice parum attenuatus, depressiusculus; supra viridi-aenescens, nitidulus; infra nigro-piceus, pedibus intermediis ac posticis rufis, femoribus infuscatis; elytris leviter et remote transversim striolatis, sulcis quatuor sericeo-viridibus extus notatis, ante apicem leviter emarginatodentatis, postice truncatis, angulis rectis, haud deletis. ♂ tibiis anticis angulo externo apicali prominulo.

Of a somewhat elongate oval shape, slightly attenuated at both ends. Uppersurface of the body depressed, of a greenish bronze, especially on the sides; undersurface black, often ferruginous black; anterior legs blackish brown, the middle- and hind-legs red with the femur infuscate; sometimes the abdominal segments are reddish posteriorly. Elytra besprinkled with short transverse very fine and distant

striolae, laterally marked with four grooves of a sericeous green color and with a few others on the disk which however are hardly indicated, very slightly emarginate-dentate before the apex, further on truncated at almost right angles, which are not at all blunted; the truncation slightly concave. In the male the outer apical angle of the anterior tibiae projects in the shape of a tooth which is but little acute.

Hab. Timor (Macklot and Wienecke). — Several specimens of both sexes.

3. *Dineutes Regimbarti* (Ritsema in litt.), sp. n.

Long.  $18\frac{1}{2}$ —23 mm. — Ovatus, sat convexus, nitidus; supra subtilissime reticulatus, nigro-olivaceus, plus minus aeneo-micans; infra nigro-piceus, abdomine pedibusque posticis brunneo-ferrugineis; prothorace elytrisque vitta submarginali lata, opaca et sericea, apicem haud attingente, ornatis; elytris apice rotundatis, extus vix subsinuatis, angulo suturali valde obsoleto. ♂ femoribus anticis intus sulcatis et ante apicem dentatis; tibiis rectis, angulo apicali externo obtuso, haud deleto nec prominulo.

This magnificent species, the largest of the genus, is very closely allied to *Dineutes politus* Mc. Leay; it differs from it by its more regular oval and more convex shape, by the sides and apex of the elytra being less distinctly depressed, by the anterior tibiae which are straight and not curved inwards, by the much less sinuated outer edge of the elytra and finally by the broad submarginal opaque and sericeous band, which is present on the sides of the prothorax and of the elytra, and which does not surpass the three fourths of the length of the latter. The upper-surface of the body has all over an olivaceous bronzy black color and is glossy with the exception of the sericeous band which is opaque and resplendent. The undersurface pitchy black, the middle- and hind-legs as well as the abdomen ferruginous brown. The anterior legs are very stout; the anterior femur of the male shows on the inside at three fourths

of its length a double tooth, which is the termination of the edges of the groove in which the internal margin of the tibia is lodged; the tibia is straight and very feebly dilated at the apex, the exterior angle of which is obtuse, not blunted and not projecting.

Hab. Timor (Macklot). — Several specimens of both sexes.

I have retained the name of *Regimbarti* for this beautiful species for the sole reason that Mr. Ritsema has strongly insisted on my doing so, and I take this occasion to tender him my sincere thanks for the numerous entomological services which he does not cease to render me in the most generous way.

#### 4. *Dineutes Ritsemæ*, sp. n.

Long.  $10\frac{1}{2}$ —12 mm. — Ovatus, antice ac postice oblique attenuatus, paululum rhomboideus, in medio convexus, ad latera et apicem depressus; infra brunneo-ferrugineus, abdominis lateribus, pedibus intermediis ac posticis rufis; capite cupreo, nitido, ad latera virescente, subtiliter reticulato; pronoto nigro-coerulescente, nitidulo, ad latera sericeo-opaco; elytris subtilissime reticulatis, remote et obsolete punctulatis, extus striarum vestigia praebentibus, ante apicem leviter, fortius apud feminam, dentato-sinuatis, postice bitruncatis, haud rotundatis, ad apicem leviter dehiscens, angulo suturali valde obtuso, ad suturam cupreo-micantibus, utrinque latissime sericeo-opacis, coerulescentibus. ♂ femoribus anticis dente valido armatis, tibiis ad basin intus incurvatis ac fortiter attenuatis.

Oval, obliquely attenuated<sup>ly</sup> anteriorly and posteriorly, giving it a somewhat rhomboidal shape. The undersurface of the body is of a ferruginous brown, the middle- and hind-legs lighter. The head bronze, glossy, with greenish tinges on the sides; the pronotum less glossy, of a bluish black color, with a broad sericeous and opaque marginal band. The elytra are convex and on the sutural region of a very glossy coppery color; they are provided with a

broad sericeous and opaque marginal band of a steelblue color and by the aid of the magnifying glass they show fine inconspicuous parallel purplish lines and sometimes externally an indistinct narrow ferrugineous border; at the apical three fourths they are slightly dentate-sinuate, more strongly in the female, obliquely truncated posteriorly and internally, not rounded; they show at the apex a small truncation in the opposite direction, which forms with the former truncation a very obtuse and blunt angle; the sutural angle is very obtuse and blunt. The uppersurface of the body is very delicately reticulated all over and covered with a fine and very distant punctuation. In the male the anterior femur shows inwardly a broad and strong tooth and the tibia is much attenuated and curved inwards at the base.

Hab. Gorontalo: North Celebes (von Rosenberg).—Both sexes.

5. *Orectochilus validus*, sp. n.

Long.  $10\frac{1}{2}$ — $11\frac{1}{2}$  mm. — Ovatus, latus, valde convexus; supra niger, nitidus; infra nigro-piceus, pedibus, epipleuris et ano ferrugineis; pronoto ad latera fortiter punctato et breviter tomentoso; elytris ad latera minus late et postea latius usque ad extremam suturam punctato-tomentosis, ad apicem recte truncatis, angulo externo subacuto prominulo, interno recto. ♂ tibiis anticis latis, angulo externo obtuso, rotundato.

Oval, broad and very convex, of a beautiful glossy black on the uppersurface, pitchy black on the undersurface; the legs, the epipleurae and the apex of the abdomen of a ferrugineous reddish color. The tomentous border of the elytra, which is a little narrower than that of the pronotum at the base, widens out before the middle in the ♂, behind the middle in the ♀, and attains the suture a little before the apex. The truncation is straight; the outer angle is rather acute and projecting and the inner angle is a right one. The anterior legs, especially in the ♂,

are very stout, the tibiae triangularly enlarged with the outer apical angle obtuse and narrowly rounded.

Hab. Gorontalo: North Celebes (von Rosenberg). — Several specimens of both sexes.

In many collections this species bears the name of *Patrus Celebianus* Deyr.

6. *Orectochilus conspicuus*, sp. n.

Long.  $10\frac{1}{2}$ —12 mm. — Ovatus, sat elongatus, valde convexus, postice vix attenuatus; supra subtilissime reticulatus, nitidulus, niger, anguste fulvo-marginatus; infra nigro-piceus, pedibus anticis nigro-ferrugineis, posticis atque ultimis abdominis segmentis rufo-ferrugineis, epipleuris flavis. Prothorace utrinque sat late (latius antice) punctato-tomentoso; elytris ad apicem paulo oblique truncatis, angulo externo leviter acuto, prominulo, interno recto, utrinque ad basin minus late, postice latissime usque ante apicem suturae punctato-tomentosis. ♂ tibiis anticis rectis, latis, angulo apicali externo recto, haud prominulo nec deleto; tarso tibia latiore, breviter ovato.

Oval, rather elongate, very convex and hardly attenuated commencing from the first fourth of the elytra; upper-surface of a beautiful rather glossy black, with a narrow fulvous border on the prothorax and elytra; undersurface pitchy black, the anterior legs of a ferrugineous black, the middle- and hind-legs, as well as the four apical segments of the abdomen of a ferrugineous red, the epipleurae of a beautiful yellow. Sides of the prothorax strongly punctured and covered with a short and yellowish toment forming a band which is a little broader anteriorly than posteriorly. Elytra provided with a broad similar punctate-tomentous border which is situated in the continuation of that of the prothorax and regularly widens out so that it attains the suture at about three fourths of its length. The elytra are somewhat obliquely truncated at the apex, with the outer angle rather acute and slightly projecting; the



sutural angle is a right one. In the ♂ the anterior legs are stout, the tibiae broadly triangular, with the outer apical angle rectangular, not obtuse and not projecting; the tarsus, which is somewhat broader at the base than the tibia, has a shortened oval shape. In the ♀ the tibia is as usual less broad and the outer angle is very blunt.

Hab. Rambodde: Ceylon (Felder). — Two specimens.

7. *Orectochilus bipartitus*, sp. n.

Long.  $6\frac{1}{4}$  mm. — Ovatus, sat elongatus, convexus, antice et postice paululum attenuatus; supra nitidissimus, niger, anguste flavo-marginatus; subtus nigro-piceus, pedibus ultimisque abdominis segmentis rufis, epipleuris flavis. Labro rotundato, nigro, antice rufo-marginato; prothorace utrinque late (latius antice) punctato-tomentoso; elytris ad apicem paulo oblique truncatis, angulo externo obtuso, haud deleto, interno fere recto, leviter deleto, ab humero ad extremam suturam bipartitis: interna pars laevis, nitidissima, parce et leviter punctulata, obsolete quadrisulcata; pars externa crebre punctato-tomentosa. ♂ ignotus. ♀ tibiis anticis rectis, angulo externo obtusiusculo, valde deleto.

This species is closely analogous to *Orectochilus marginipennis* Aubé (*subsulcatus* Régimb. <sup>1</sup>), but may be distinguished from it by several characteristics which will here be enumerated: somewhat larger size and somewhat more elongate shape, less ventricose at the shoulders; black labrum, bordered with red at the front margin, whereas it is entirely yellow in the other species; the tomentous border of the prothorax is broader, that of the elytra very broad, triangular and dividing the elytra diagonally from the inner portion of the shoulder down to the sutural angle in two portions of about equal size: the inner smooth portion showing only four superficial glossy grooves, whereas

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1) *Notes from the Leyden Museum*. Vol. II (1880) p. 215. — *Midacn-Sumatra*. Dl. IV, afd. 6 (Coleoptera) p. 12; pl. I, fig. 10.

in *marginipennis* the tomentous portion is much less developed and the glossy portion, which is visibly reticulated, provided with five glossy grooves; finally in the new species the truncation of the elytra is a little more convex and the outer angle less pronounced.

Hab. Java (Blume). — A single ♀.

N. B. I here re-establish the synonymy: *Orectochilus subsulcatus* Régimb. = *O. marginipennis* Aubé, as I have convinced myself of this by comparison with the type specimen of Aubé, from the Collection of Mr. Chevrolat, which is now in the collection of the Brussels Museum. Aubé has wholly neglected to mention the superficial grooves of the smooth portion of the elytra, which had led me to believe the species to be undescribed.

#### 8. *Orectochilus lucidus*, sp. n.

Long.  $5\frac{1}{2}$  mm. — Ovatus, sat elongatus, valde convexus, gibbosus, antice et postice satis attenuatus; supra nitidissimus, niger, anguste flavo-marginatus; infra nigro-ferrugineus, thorace medio, abdomine pedibusque rufescentibus; labro rotundato, nigro; prothorace utrinque late (latius antice) punctato-tomentoso; elytris laevibus, ad apicem paulo oblique truncatis, angulo externo obtuso, leviter deleto, interno fere recto, haud deleto, utrinque sat late, postice latius, usque paulo ante apicem suturae punctato-tomentosis. ♂ ignotus. ♀ tibiis anticis rectis, angulo externo obtuso, valde deleto.

Oval, moderately elongate, rather attenuated at both ends, very convex, with the elytra gibbous; uppersurface of a very glossy beautiful black, narrowly margined with yellow, undersurface ferruginous black, the middle of the sternum, the abdomen and the legs reddish. Labrum rounded, black; the tomentous border of the prothorax tolerably broad, that of the elytra, of the same width on the sides, widens out posteriorly and attains the suture a little before the apex; the outer angle of the truncation is

obtuse, slightly blunted, the inner one almost rectangular and not blunted.

Hab. Java (Blume). — A single ♀.

9. *Orectochilus Ritsemae*, sp. n.

Long. 8 mm. — Oblongus, valde elongatus, ad humeros inflatus, ad suturam fortiter convexus, gibbosus; supra nitidissimus, nigro-aeneus, angustissime luteo-marginatus; subtus brunneo-ferrugineus, abdomine, epipleuris, pedibus et antennis rufescentibus. Labro semicirculari, nigro; prothorace subparallelo, ad latera paulo latius antice quam postice punctato-tomentoso; elytris paulo oblique truncatis (truncatura extus convexa et sinuata, angulis rectis haud deletis), in medio laevibus, subtiliter et remote punctulatis, ad latera valde irregulariter punctato-tomentosis; haec regio tomentosa, antice angustissima, ante medium in duobus lobis transversim juxtapositis et ad medium in tertio lobo sat dilatatur, postea multo ante apicem oblique suturam attingit. Tibiis anticis intus leviter incurvatis. ♂ ignotus.

Oblong, very elongated, very convex and gibbous at the sutural region, swollen at the base of the elytra with the thoracico-elytral angle well marked; the upper surface very glossy, of a beautiful bronzy black, with a narrow yellow edge on the prothorax and on the elytra. Under-surface of the body of a blackish brown, with the abdomen, the epipleurae, the legs and the antennae reddish. Labrum semi-circular, very protruding and black. Prothorax almost parallel, with a rather narrow tomentous border especially posteriorly. The truncation of the elytra somewhat oblique, and somewhat convex and sinuate outwardly, the angles rectangular, not blunted. The elytra are smooth in the middle, and provided with a few very fine and distant punctures; the punctate-tomentous region is very irregular: it forms a very narrow margin at the first fourth of the elytra, widens out at this point very

suddenly into two equal, transversely confluent lobes and a second time at the middle into a third single similar lobe, and finally it attains the suture in an oblique direction towards the three fourths of its length; these three lobes are rounded, rather narrow, and directed forwards. The tibia is slightly curved.

Hab. Java (Blume).

The Leyden Museum only possesses a single ♀ specimen of this species which is especially remarkable by the pattern on the elytra; in the male this pattern must be somewhat different.

10. *Orectochilus suturalis*, sp. n.      .

Long.  $10\frac{1}{2}$  mm. — Elongato-ovalis, valde convexus; infra testaceo-ferrugineus, pectore ad latera, abdomine ad basin nigricantibus; pedibus anticis nigris, femoribus praeter ad apicem nigris, intermediis ac posticis pallide testaceis; capite coeruleo-viridi, subtilissime reticulato, ad latera tomentoso, labro aeneo, valde punctato-piloso, antice longissime ciliato; prothorace tenuiter coriaceo-reticulato, aeneo, plus minus transversim purpureo, ad latera late punctato et argentato-tomentoso, anguste luteo-marginato; elytris truncatis, anguste luteo marginatis, valde punctatis, argentato-tomentosis; costa discoidali postice abbreviata, spatio suturali lato, post basin ♂, ante apicem ♀ abbreviato glabris, haud punctatis, subtilissime reticulatis; truncatura leviter convexa, extus sinuato emarginata, angulo externo prominulo, acuto, interno recto. ♂ tibiis anticis angulo apicali externo recto.

This beautiful species is closely allied to *Orectochilus bicostatus* Bohem. but differs from it by the following characteristics: the costa of the elytra not exceeding two thirds of their length; the glossy sutural region not exceeding the same point in the ♀, and in the ♂ hardly attaining one fourth of their length, whereas in the other species it is of equal length in both the sexes and reaches at least

as far as the three fourths; undersurface of the body with the sides of the sternum, the first abdominal segment and the base of the second one of a beautiful black, which is well marked off against the yellow colour of the other portions; finally the anterior tibiae are black, not yellowish, and their outer apical angle is less acute and somewhat more curved outwards.

Hab. Natal: South Africa (Finsch). — A single specimen.

11. *Gyretes scaphidiformis*, sp. n.

Long.  $6\frac{1}{2}$ —7 mm. — Ovatus, brevis, valde convexus; supra nitidissimus, coeruleo-niger, infra piceo-niger; pectore medio et abdominis segmentis (praeter primum) rufo-ferrugineis, pedibus et epipleuris rufis; prothorace ad latera, latius antice, punctato-tomentoso; elytris postice ferrugineo stricte vix limbatis, anguste ad latera, latius ad apicem et usque ad extremam suturam punctato-tomentosis, fere recte truncatis, angulis rectis, haud deletis. ♂ tibiis anticis angulo externo recto; tarso parum dilatato, tibia paulo angustiore.

Very closely allied to *Gyretes morio* Aubé, but a little larger, shorter and more convex; tomentous border of the elytra widening out somewhat more suddenly posteriorly and only towards the two thirds of their length. This border only reaches the suture at a very short distance before the apex; the truncation hardly oblique; undersurface of the body black, with the middle of the sternum and the abdomen (with the exception of the first segment) of a more or less reddish ferrugineous color, whereas the entire undersurface is ferrugineous in *morio*. In the ♂ the anterior tibiae are but little dilated, the outer angle is rectangular and only slightly projecting; the tarsus is very slightly dilated and a little less broad than the tibia.

Hab. Bogota: Columbia (van Lansberge). — A ♂ and a ♀.

The Leyden Museum moreover possesses a ♂ individual (also from Columbia) which I can as yet only arrange un-

der this species; it only differs from *scaphidiformis* by the somewhat smaller size (hardly 6 mm.) and by the tomentous border of the elytra. which widens out very suddenly in the middle, forming here a projection in the shape of an obtuse angle, and attains the suture at a somewhat larger distance from the apex.

12. *Gyretes glabratus*, sp. n.

Long.  $5\frac{1}{2}$ —6 mm. — *G. cincto* Germ. simillimus. Ovatius, convexus, postice paululum attenuatus, supra nitidissimus, nigro-coeruleus, plus minus iricolor, anguste luteo-marginatus; subtus nigro-piceus, pectore medio, abdominis apice pedibusque rufis, epipleuris flavis; prothorace anguste ad latera punctato-tomentoso; elytris ad apicem paulo oblique truncatis (♀ magis oblique), angulis rectis, haud deletis; elytris angustissime utrinque a medio et ad truncaturam punctato-tomentosis. ♂ tibiis anticis angulo apicali externo obtuso, vix deleto; tarso dilatato, ovato.

This species is closely allied to *Gyretes cinctus* Germ. but differs from it by the following characteristics: the tomentous border of the prothorax is a little narrower; that of the elytra begins on the middle as a narrow edge which posteriorly widens out inconspicuously and, accompanying the contour of the outer edge and of the truncation, attains the suture scarcely before the apex; the outer apical angle of the anterior tibia of the ♂ is obtuse and hardly blunted, whereas it is strongly rounded in *cinctus*; tarsus likewise dilated and oval.

Hab. Brasil (Mus. Berol., von Winthem and Veth). — Both sexes.

13. *Gyretes pygmaeus*, sp. n.

Long.  $4\frac{1}{2}$  mm. — Ovalis, valde convexus; supra nitidissimus, coeruleo-niger, tenuissime luteo marginatus; infra nigro-piceus, pectore medio, abdomine pedibusque anticis

rufis, intermediis ac posticis epipleurisque flavo-testaceis; pronoto latius antice quam postice ad latera punctato-tomentoso; elytris fere recte truncatis, angulis rectis haud deletis, anguste ad latera, paulo latius postice et usque ad angulum internum punctato-tomentosis.

Oval, very convex; uppersurface of a very glossy black color with bluish tinges, and with an exceedingly narrow yellow border on the thorax and elytra; undersurface pitchy black, the middle of the sternum, the abdomen and the anterior legs reddish; the middle- and hind-legs, as well as the epipleurae of a bright yellow; the tomentous band of the pronotum tolerably broad anteriorly, narrower posteriorly; that of the elytra is very narrow, but widens out a little towards the outer angle of the truncation and terminates at the sutural angle; the truncation of the elytra almost straight, with the angles not blunted and not projecting.

Hab. Brasil (Westwood). — Two specimens.

Evreux, November 1881.





## NOTE V.

REMARKS ON CERTAIN AMERICAN DIPTERA IN  
THE LEYDEN MUSEUM AND DESCRIPTION  
OF NINE NEW SPECIES.

BY

**F. M. VAN DER WULP.**

Having been occupied of late with the determination of a large number of Diptera from North- and South-America, I have also examined the Diptera from these parts of the world, which are in the Leyden Museum. Some of them, which were already described, have given me occasion for making certain remarks on the synonymy etc., whilst a few appear to be hitherto undescribed. The following pages contain the results of my researches.

1. *Anthrax Halcyon*, Say.

Say, Long's exped. App. 371. 1. — Wied. Auss. Zweifl. I. 288. 44; pl. 3, f. 6. — Macq. Dipt. ex. II. 1. 68. 39; pl. 19, f. 6. — O. Sack. West. Dipt. 239.

In the Leyden Museum there are two quite similar male specimens from Arizona in North-America (Neumögen).

Wiedemann's description — I could not compare that of Say — agrees tolerably well; nevertheless I may not leave unnoticed certain differences. Firstly I find the scu-

tellum almost wholly testaceous, only with a black spot at the base (Wiedemann describes it as black with a tawny tip); furthermore the third posterior cell is not divided by a cross-vein as Wiedemann has figured it, but there is only at the curvation of the discoidal cell a short super-numerary vein, running almost in the same direction as the basal part of the longitudinal vein between the second and third posterior cell. According to Osten Sacken the third posterior cell in this species is not always completely bisected by a cross-vein, though it is the case in the majority of the individuals. Finally none of the other North-American species of the group to which *A. Halcyon* belongs (*A. Ceyx* Löw, *Demogorgon* Walk., *flaviceps* Löw, *fuliginosa* Löw, *Alpha* O. Sack.) can here be taken into consideration. Most of all it reminds one of *A. Alpha* O. Sack., but there the second submarginal cell is divided near its base in two parts by a small cross-vein, which does not exist in the above mentioned specimens.

2. *Anthrax melasoma*, n. sp.

Tota atra opaca; facie subprominente; antennarum articulo tertio coniformi, stylo breviusculo; alis cinereis, basi, costa fasciaque lata nigro-fuscis. — ♀ Long. 13.5 mm.

The specimen of which the pubescence is somewhat rubbed off is deep black and almost opaque, the scutellum more piceous. The front and face as well as the sides of the thorax and abdomen are clothed with black hairs; on the anterior part of the thorax and on the occiput there are remains of an erect dense grayish-yellow pubescence. In the middle of the front is a small impression; the face is a little prominent; the proboscis hardly reaches beyond the oral margin. Antennae black; the first joint beset with black hairs; the third joint oblong-conical, with a short style a little thickened at the end. Legs black, slender; hind tibiae with fine spines. Wings broad; their base and a broad crossband which anteriorly coalesces with it, blackish brown; the dark

colour of the base invades a little the basal cells: the dark crossband extends inwards halfway into these cells, runs outwards along the anterior margin down to the end of the marginal cell, reaches the forkcell and leaves the end of the three first posterior cells untouched; the middle of the fourth posterior cell and especially that of the discoidal cell is paler; the remaining hyaline part of the wings has a rather obscure gray tinge and the hind corner is even brownish.

A ♀ from Arizona in North-America (Neumögen).

I cannot bring this specimen to one of the many North-American species already described; it cannot even be arranged in one of the groups, into which O. Sacken has divided them (West. Dipt. 238).

### 3. *Anthrax hypomelas*, Macq.

Macq. Dipt. ex. II. 1. 76. 63.

A female specimen from Arizona in North-America (Neumögen) belongs, in my opinion, to this species. Though it is not in a very perfect state, it quite evidently shows the black hairs on the sides of the second and third abdominal segments, which prevents me to regard it as *A. molitor* Löw (Dipt. Amer. Sept. Cent. VIII. 42), the description of which in other points agrees tolerably well, but in that species the black hairs are found on the fifth and sixth segments. The hind tibiae are beset on the outside with many recumbent bristles, a character common to *A. molitor* and a few allied species. The radial vein has at its angulous base a small recurrent vein, such as is also to be found in certain individuals of our indigenous *A. hottentotta* L., with which the nervation of the wings generally agrees.

In the Leyden Museum there is also a male specimen from the same locality and very similar to the foregoing female; however it is considerably smaller (it measures no more than 7 mm., whilst *A. hypomelas* has a length of 12 mm.);

the legs are not black but testaceous, and the face and occiput are clothed with white hairs. I cannot bring it to any of the described North-American species with hyaline wings; it seems to agree most with *A. mucorea* Löw (Cent. VIII. 48), but of this the legs are likewise black, though covered with a pale tomentum, and the upper-arm of the second submarginal cell is said to terminate almost in the tip of the wing, which is not the case in my specimen.

4. *Anthrax festiva*, Phil.

Philippi, Verh. zool. bot. Ges. Wien, XV (1865). 668. 16.  
Two male specimens from Chili (Dohrn).

The description given by Philippi especially agrees with one of these individuals. The other differs in some measure by the darker coloured scutellum and the greater extension of the brown margin at the costa of the wing, which still enters into the radial cell (of which only the enlarged end remains hyaline) and which also occupies the upper basal cell till a little beyond the medial cross-vein; moreover some of the cross-veins show an indication of a dark margin. As the specimen does not show any other difference, I take it merely for a dark variety.

5. *Diogmites rufescens*, Macq.

*Dasygogon rufescens*, Macq. Suites à Buffon, Dipt. I. 295. 8.

Two female specimens from Arizona in North-America (Neumögen).

Macquart's description agrees very well with these specimens, at least if we admit that he has overlooked the spur at the end of the front-tibiae, for he has classed the species in the group where the spur is absent. I am still more inclined to hold this opinion, because Baron Osten Sacken (Cat. of the Dipt. of N. Amer. p. 72) has on the same ground placed *Dasygogon rufescens* in the genus

*Diogmites*. The particular design on the abdomen is more especially clearly indicated by Macquart: on both sides of the second and following segments of the abdomen there is a whitish dust, which in front is limited by a black oblique patch; in one of the two specimens this design is still visible; in the other, which in all other respects entirely agrees with it, it is effaced.

Osten Sacken (l. c.) holds this species, although doubtfully, to be a synonym of *Diogmites discolor* Löw (Dipt. Amer. sept. Cent. VII. 37). Indeed both species appear to be nearly allied; however there are points of difference, and certainly the two specimens I have before me cannot be identified with *D. discolor*, which must be much darker; for Löw calls the abdomen black in ♂ and dark brown in ♀, whilst in both my specimens the ground-colour of the abdomen is tawny and Macquart, in his description of *Das. rufescens*, merely says: »abdomen testacé" without making mention of the sex. According to Löw the palpi of *D. discolor* are provided with black hairs: in the specimens of the Leyden Museum they are on the contrary beset with fulvous hairs (Macquart says nothing of the palps). Finally the wings of *discolor* are cinereous or dark cinereous at the tip and the posterior margin: in my specimens there is but a feeble trace of grayish tinge at the tip, whilst Macquart says: »ailes presque hyalines."

#### 6. *Mallophora nigratarsis*, Fabr.

*Dasypogon nigratarsis*, Fabr. Syst. Antl. 168. 18. — *Asilus* ead., Wied. Dipt. ex. I. 208. 46; id. Auss. Zweifl. I. 479. 84. — *Mallophora* ead., Macq. Dipt. ex. I. 2. 86. 4. — Schin. Verh. zool. bot. Ges. Wien, XVII (1867). 386. 66.

In the collections of the Leyden Museum there are four male specimens and a single female from Brazil (Bescke), in my own collection two males, one of them labelled »Suriname". In most respects all these specimens agree

with Wiedemann's description; I must however observe that not only of the black coloured hind-tarsi, but also of the other tarsi (which are rufous with hairs of the same colour and black bristles), all the joints are very short and broad. The antennae are slender; the antennal bristle is longer than the third joint. Wiedemann calls the hairs of the palpi fox-red: in all the specimens I find them black, which, according to Schiner, also occurs in the typical specimens of the Vienna Museum. Macquart sees a sexual difference in the colour of the hairs of the palpi and describes them as yellow in ♂, black in ♀, which however is contrary to my experience. I see nothing of the yellow hairstripe on the hind-tarsi, mentioned by Wiedemann.

#### 7. *Erax rufinus*, Wied.

*Asilus rufinus*, Wied. Zool. Mag. III. 47. 8; id. Auss. Zweifl. I. 441. 25. — *Erax rufinus*, Schin. Verh. zool. bot. Ges. Wien, XVII (1867). 393. 84.

A male and two females from Brazil (Mus. Berol.).

The characters given by Wiedemann are present in these specimens. The antennae are pale reddish-yellow; the first joint is the longest, cylindrical and beset with black bristles, on the underside over the whole length, on the upperside only at the end; the second joint is short, and is also provided with black bristles; the third is not much longer, lanceolate, with a black dorsal stripe and a black endbristle, which is at least as long as the second and third joint together. The face is not broad and becomes narrower yet towards the vertex. I do not see the brownish colour in the middle of the metathorax, which Wiedemann mentions. The bristles of the thorax and of the legs are black. The mediastinal cell is blackish brown and forms a dark stripe along the costa; the upperarm of the cubital fork is at its base somewhat angulous, but in none of my specimens it has a recurrent vein.

8. *Volucella scutellata*, Macq.

Macq. Dipt. ex. II. 2. 25. 9; pl. 6, f. 2. — Blanchard in Gay, Hist. fis. y pol. de Chile, VII. 405. 1; pl. 4, f. 6. A male from Chili (Dohrn).

Macquart's expression: »bord postérieur de l'écusson à six petits tubercules terminés chacun par une soie" is not quite exact; there are no bristles, but in reality six black spines, which are warty, thickened at their base and placed three by three on the margin. On account of this character the species approaches to the genus *Temnocera*; however the third joint of the antennae is hardly impressed in front. The yellow margins of the thorax are almost invisible, and the colour of the antennae is rather obscure testaceous.

9. *Eristalis bogotensis*, Macq.

Macq. Dipt. ex. II. 2. 52. 3.

In the Leyden Museum there is a ♂ of this species whereas I possess both sexes myself; they are all from the Argentine republic and were presented by Prof. Weyenbergh.

Macquart was only acquainted with the ♀; his description agrees with my female specimens, except an insignificant difference in the pattern of the abdomen, the yellow lateral spots of the second segment not being extended on the third, and the metallic band of the latter not being interrupted in the middle, but merely a little incised in front. In the ♂ the pilosity of the eyes is, as usual, longer and the yellow spots of the abdomen are larger and extend on the third segment.

10. *Eristalis quadraticornis*, Macq.

*E. quadraticornis*, Macq. Dipt. ex. II. 2. 31; pl. 20, f. 2. — Blanch. in Gay, Hist. fis. y pol. de Chile, VII. 406.

2. — *E. testaceiscutellatus*, Macq. Dipt. ex. Supp. 4. 138. 61; pl. 13, f. 2. — Blanch. l. c. 407. 3.

Two males and three females from Chili (Dohrn), the male specimens labelled »*testaceiscutellatus*».

Both species, *quadraticornis* and *testaceiscutellatus*, are closely allied; of the former only the ♀ is known, of the latter only the ♂. I consider them without hesitation as the two sexes of the same species. By its small size and its stature it much resembles our *E. sepulcralis*; it is however distinguished by the yellow scutellum, which only shows two black spots placed one on each side. Of the hind legs the femora are rather thick, the tibiae curved and the first joint of the tarsus swollen.

#### 11. *Dolichogyna fasciata*, Macq.

Macq. Dipt. ex. II. 2. 66. 1; pl. 12, f. 1. — Blanch. in Gay, Hist. fis. y pol. de Chile, VII. 408. 1; pl. 4, f. 8. — Phil. Verh. zool. bot. Ges. Wien, XV (1865). 744.

A ♀ from Chili (Dohrn).

Both the figures cited are unexact with reference to the yellow pattern of the abdomen, of which Macquart's description gives a better idea. Moreover in Macquart's figure the wings are, as usual in his drawings, of a disproportionately large size. In that of Blanchard the very broad head with protuberating eyes gives a strange aspect; the yellow bands on the thorax are wanting and in the nervation of the wings the subcostal cell is represented closed instead of open at the end.

#### 12. *Syrphus calceolatus*, Macq.

Macq. Dipt. ex. II. 2. 91. 8; pl. 16, f. 1. — Blanch. in Gay, Hist. fis. y pol. de Chile, VII. 411. 6.

Both sexes from Chili (Dohrn)

By its conical projecting face this small species shows a certain affinity to the genera *Melithreptus*, *Mesograpta*



and *Allograpta*, but on account of the abdomen, which is evidently broader than the thorax, it must remain in the genus *Syrphus*.

13. *Jurinia nigriventris*, n. sp.

Cinerea; capite pallido; antennis sordide rufis, articulo tertio nigricante; palpis rufis, in apice subdilatatis; abdomine nigro nitido; pedibus nigris; calyptris alisque dilute brunneis. — ♀ long. 13 mm.

Face perpendicular, almost conically projecting at the oral margin and together with the cheeks and jaws of a pale grayish yellow with brownish reflexion. On both sides one large bristle and some smaller ones are placed a little above the mouth. Front cinereous, with a narrow ferruginous band, which is somewhat dilated anteriorly; the frontal bristles not very numerous but strong; occiput with a rough yellowish pilosity and the usual crown of black bristles. Antennae sordid rufous; the third joint ovate, blackish at least on the fore-side and at the tip; arista black. Palpi ferruginous, a little thickened near the end. Thorax and scutellum with a dense cinereous dust; at the anterior extremity of the thorax an indication of black stripes; the bristles on the hind part of the thorax and at the hind border of the scutellum strong and of considerable length. Abdomen convex, black, shining, on the last segment a lateral silvery spot, with a somewhat yellowish reflexion; second segment without macrochetæ; at the margin of the third segment strong ones; the last segment with a dense black pilosity and numerous spines; venter in the middle with numerous thick, rather blunt, spiny bristles. Legs black; the femora and especially the tibiae with many long and strong bristles. Calyptrae and wings grayish brown; veins blackish; discal vein curved with an acute angle; discal cross-vein slightly undulated.

A female specimen from Chili (Dohrn). My own collection contains another, completely similar, from the Ar-

gentine republic, sent to me by Prof. Weyenbergh in Cordova.

The species is closely allied to *J. bicolor* Wied. (Auss. Zweifl. II. 282. 3), and I would have identified it with this, had not Wiedemann mentioned a pattern on the thorax, of which hardly anything is visible in my specimens, though they are in general well preserved. He moreover describes the anus as being a little transparent and reddish.

14. *Jurinia nitida*, n. sp.

Nigra nitida; capite pallescente sericeo; fronte antennis pedibusque nigris; palpis rufis subdilatatis curvatis; alis dilute brunnescentibus, ad basin rufis. — ♀ long. 15.5 mm.

Black, shining. Head sericeous, pale yellow; face perpendicular; oral margin somewhat prominent, on both sides with one great and several shorter bristles; the front black; its middle band opaque, split up posteriorly, its lateral borders shining; frontal bristles strong; occiput with a dense yellowish pilosity and a crown of black bristles. Antennae black; the second joint rather thin; the third one enlarged, half as long as the second, truncated at the end; arista thickened till close to the tip. Palpi rufous, curved, a little thickened towards the end. Abdomen convex, without any gray dust; macrochetæ at the hind-border of the second and third segment; those of the second recumbent, those of the third erect and more spinous; venter in the middle of the segments with strong bristles. Legs black, on the underside of the front-femora and on the outside of the tibiae several bristles. Calyptrae and base of the wings yellowish-rufous, this colour reaching along the costa down to the middle of the wings; the remaining part of the wing with a brownish gray tinge; veins fuscous, in the basal part of the wing testaceous; curvation of the discal vein with nearly a right angle; apical cross-vein curved, discal cross-vein almost straight.

A ♀ from Arizona (Neumögen).

15. *Echinomyia immaculata*, Macq.

Macq. Dipt. ex. Supp. 4. 169. 6; pl. 15. f. 8.

A ♂ from Arizona (Neumögen).

I bring it to this species, as the description of Macquart can in all respects be applied to it. The difference of native country (Macquart mentions it as being a native of Brazil) could however be a reason for doubt.

The face has a distinct yellowish red reflexion, especially at the oral margin; the cheeks are without bristles; the palpi are very slender; the third joint of the antennae is about as long as the second.

16. *Nemoraea erythropyga*, n. sp.

Nigra; facie, antennis pro parte majore, abdominisque segmento quarto rufis; thorace striis quatuor griseis; pedibus piceis; alarum nervo transversali medio infuscato. — ♂ long. 11 mm.

The hairy eyes, the facial ridges (the lower part excepted) without bristles, the broad cheeks and jaws, the third antennal joint which is not longer than the second, the ovate abdomen and the discal vein which is not prolonged beyond its curvation, bring this species to the genus *Nemoraea*.

Face and cheeks sordid rufous; front much narrowed towards the vertex, blackish, only somewhat lighter at the orbits; on both sides of the root of the antennae a rounded black spot; the lower frontal bristles not descending beyond this spot. Eyes with yellowish-gray pilosity; oral bristles ascending along the facial ridges no further than the tip of the antennae; the cheeks also beset with many bristles. Antennae ferrugineous, reaching to the middle of the face; the two basal joints with short bristles on the upper side; the second joint elongated; the third as long as the second, a little enlarged and darkbrown towards the end; arista black, thickened till about the middle. Palpi black. Thorax black, on the upperside with four light-gray lon-

gitudinal stripes, those on the outside broader and forming spots; pleurae on the foreside sordid fulvous; there is a black pilosity on the whole thorax; long bristles are present on the light stripes and also on the hind part and on both sides. Scutellum black, covered with gray dust and beset with black hairs and a few long bristles laterally and on the hind margin. Abdomen oblong-ovate, black; the second and third segments with a gray reflexion, which forms, according to the light, either lateral spots or an anterior margin on the segments; macrochetæ at the hindborder of the segments, on the third segment also in the middle, and on the fourth spread over the whole surface. Legs (in comparison to other species of this genus) long and slender, piceous; the coxæ and base of the femora rather fulvous; femora with regularly placed, tibiae with more dispersed bristles; ungues and pulvilli long. Calyptrae dark gray with yellowish margin. Wings with a gray tinge; the apical cross-vein as well as the discal cross-vein curved; the latter joining the apical cell at three fourths of its length; medial cross-vein placed in an oblique direction and bordered with a blackish shadow.

A ♂ from Chili (Dohrn).

17. *Belvosia leucopyga*, n. sp.

Nigra; capite griseo-albo; fronte nigricante, in ♂ postice attenuato; vitta frontali rufescente; thorace antice albedo-pollinoso, substriato; scutella piceo (♂) vel obscure rufo (♀); abdominis segmento ultimo albescente; antennis pedibusque nigris; palpis ex rufo fuscis; alis infuscatis. — ♂ ♀ 12 mm.

Head at least as broad as the thorax; face and cheeks grayish white; front blackish, in ♂ considerably narrowed towards the vertex and here hardly occupying a fourth part of the head; in ♀ the front broader, occupying a third part of the head on the vertex; frontal band obscure rufous, rather narrow; frontal bristles moderate, descending

on both sides in a single row till below the root of the antennae; facial ridges less prominent than in *B. bifasciata*, beset with bristles, which ascend till the middle of the face; occiput with a dense grayish pilosity. Antennae black; the second joint rather short; the third at least three times as long as the second; arista thickened on the basal half. Palpi blackish brown, ferruginous near the tip. Thorax black, with a whitish dust anteriorly and an indication of black longitudinal stripes; scutellum in ♂ piceous, in ♀ obscure rufous. Abdomen black; the fourth segment whitish, the anus black; macrochetæ all recumbent, at the hind-border of the third segment some of them thick and spinous. Legs black, with numerous bristles; on the underside of the front-femora and the outside of the front tibiae the bristles are regularly placed; at the outside of the middle tibiae and the underside of the hind-femora some bristles of particular length; hind-tibiae with numerous bristles on the outside, which however not are placed frangelike. Ungues ferruginous with a black tip and in ♂ stouter and surrounded by some bristles as is also the case with the ochraceous pulvilli. Wings and calyptrae darkbrown; the nervation agrees with that of *B. bifasciata*.

A single pair from Brazil (Bescke).

This species seems to be nearly allied to *B. analis* Macq. (Dipt. ex. Supp. 1. 460. 2; pl. 14, f. 4), which is however smaller and in which the basal joints of the antennae are testaceous.

#### 18. *Masicera insignis*, n. sp.

Cinerea; antennis, striis thoracis quatuor, abdominis segmento primo, segmentorum 2—4 limbo postico, linea dorsali pedibusque nigris; palpis testaceis; thoracis stria media et scutelli apice rufescentibus; abdominis segmento ultimo limbo antico flavo. — ♂ long. 8.5 mm.

On account of the naked eyes, the absence of bristles along the facial ridges, the situation of the oral bristles just

at the margin, the elongate third joint of the antennae, the broad ovate abdomen and the discal vein which is not continued beyond its curvation, I bring this species to the genus *Masicera*.

Head blackish with a silvery whitish reflexion; front narrowed towards the vertex; the middle band narrow, only distinct by the absence of white reflexion; frontal bristles on both sides in a double row and descending till a little beneath the second joint of the antennae; face perpendicular; oral margin not projecting and with a reddish tint; behind the large oral bristle several shorter ones; occiput with gray pilosity and a crown of black bristles. Antennae black, a little shorter than the face; the basal joints with bristles on the upperside; third joint at least three times as long as the second; arista thickened as far as the middle. Palpi testaceous. Thorax on the upperside cinereous, with four black stripes along the whole length; the medial interstice grayish red, the lateral ones with white dust; pleurae and breast black; scutellum grayish red; the lateral and posterior parts of the thorax and the hind margin of the scutellum beset with long bristles. Abdomen ovate, light gray; the first segment, a dorsal stripe, the hind margin of the second and third segments and the anus black and somewhat shining; the black margin of the medial segments on both sides enlarged in a triangle; the anterior part of the fourth segment pure yellow till beyond the middle, the remaining part black; both these colours strongly separated; the yellow part divided by a black line, which is the continuation of the dorsal stripe; macrochetae of the medial segments only at the hind margin. Legs black; middle tibiae with several long bristles; hind tibiae on the outside fringed with bristles; ungues and pulvilli rather long. Calyptrae and wings hardly tinged with grayish; no costal spine; apical cell opened at some distance from the wing tip; apical cross-vein almost straight; discal cross-vein hardly curved and joining the apical cell on two thirds of its length.

A well preserved male specimen and another of which the abdomen is lost, both from Chili (Dohrn).

19. *Phrissopoda splendens*, Macq.

Macq. Dipt. ex. II. 3. 96. 1; pl. 11, t. 3. — Blanch. in Gay, Hist. fis. y pol. de Chile, VII. 427. 1; pl. 5, f. 3.

A ♂ from Chili (Dohrn).

Neither Macquart's figure nor that of Blanchard gives a clear idea of this insect. In the latter the whole body is much too broad and the abdomen at the base is incorrectly represented broader than the thorax; the legs on the contrary are too thin and the hind tibiae not curved; finally the apical cell is erroneously represented as closed almost at the tip of the wing. The figure of Macquart is still more defective; it is quite unnaturally coloured; the form is also too broad, and in the separate figure of the head the arista is represented as plumose down to the end. It seems as if Macquart, when making the drawing, did not look at the insect, but merely kept in mind the characters, which he had formerly attributed to the genus, for he has indicated *Phrissopoda* as principally differing from *Sarcophaga* by a broader body and the plumosity of the entire arista. I do not know in how far this may be true for *Phr. praeceps* Wied., which he considers as the type of the genus (Suit. à Buff. Dipt. II. p. 222); but certainly *Phr. splendens* is not broader than most other Sarcophaginae, and its arista is naked at the end. In almost all respects it shows a remarkable resemblance with the genus *Cynomyia*, of which it is only distinct by the more hairy legs, the incrassated femora and the curved hind tibiae. The white dorsal stripes of the thorax are not continued behind the suture.

20. *Sarcophaga chlorogaster*, Wied.

*Sarcophaga chlorogaster*, Wied. Auss. Zweifl. II. 359.

Notes from the Leyden Museum, Vol. IV.

9. — *Sarconesia* ead., Bigot, Ann. soc. ent. France. 3me série, V. 301; pl. 7, f. 5.

A female specimen from Chili (Dohrn).

I cannot find any valid reason for a generical separation of this species; it shows all the characters of *Sarcophaga*; the metallic colour of the abdomen being the only difference.

21. *Sarcophaga rufipalpis*, Macq.

Macq. Dipt. ex. II. 3. 102. 11.

A female specimen from Curaçao (Rev. Father Jansen).

Though Macquart indicates Brazil as its native country, I believe that it is indeed the same species which I have before me, the description agreeing perfectly, with the only exception that the femora are said to be testaceous on the outside, whilst in my specimen, which however is not very well preserved, the legs are altogether black.

22. *Sarcophaga chilensis*, Macq.

Macq. Dipt. ex. II. 3. 104. 15; pl. 11, f. 6. — Blanch. in Gay, Hist. fis. y pol. de Chile, VII. 429. 3.

Two females from Chili (Dohrn).

The species is closely allied to *S. quadrivittata* Macq. (Dipt. ex. II. 3. 102. 12; pl. 12, f. 4), but it is smaller and the anus is not so pure fulvous, but merely covered with a reddish yellow dust; at the basal part of the costa the wings show a yellowish tinge.

23. *Calliphora phacoptera*, n. sp.

Chalybea: thorace antice striis albis; capite nigro, griseo pollinoso; antennis, palpis, barba pedibusque nigris; calyptris fuscis albo-limbatis. — ♀ long. 10 mm.

Stature corresponding to that of our *C. erythrocephala*; the front a little narrower; the antennae shorter; the cheeks



and jaws more developed. Head black, covered by a whitish dust, the cheeks and orbits white. Antennae distinctly shorter than the face, black with grayish dust; arista long, thickened at the basal half and plumose along two thirds of its length. Proboscis and palpi black. Thorax, scutellum and abdomen steel-blue; on the thorax five whitish longitudinal stripes, which are almost effaced behind the suture; on both sides of the two first segments of the abdomen a whitish dust. Legs black, the femora more or less steel-blue. Calyptrae darkbrown, with a white margin. Wings hyaline with a grayish tinge; nervation similar to that of *C. erythrocephala*; the apical cell however being wider open and the medial cross-vein a little nearer to the base of the wing, before the middle of the discal cell.

A ♀ from Chili in the Leyden Museum; it has been received from Dr. C. A. Dohrn, under the name of *C. phacoptera* Ph.; however as far as I know, the species is as yet nowhere described.

#### 24. *Cyrtoneura stabulans*, Fall.

*Musca stabulans*, Fall. Musc. 52. 32. — Meig. Syst. Besch. V. 75. 42. — Zett. Ins. lapp. 660. 29. — *Cyrtoneura stabulans*, Macq. Suit. à Buff. Dipt. II. 277. 10. — Zett. Dipt. Scand. IV. 1354. 9. — Schin. Fn. austr. I. 597. — *Anthomyia cinerascens*, Wied. Zool. mag. I. 1. 79. 28. — *Cyrtoneura vicina*, Macq. Dipt. ex. II. 3. 157. 3. — Blanch. in Gay, Hist. fis. y pol. de Chile, VII. 437. 2.

A female specimen from Chili (Dohrn); it resembles in all respects our european individuals; only the discal cross-vein seems to be straighter.

According to Macquart and Blanchard, *C. vicina* differs from *C. stabulans* merely by the absence of the black dorsal stripe on the abdomen; but this stripe is not always visible in the european specimens; it is probably for this reason that Schiuer makes no mention of it in his elaborate description. Upon such a vague distinction a separate species cannot be admitted.

*C. stabulans* seems to belong to those insects, which easily move their headquarters and follow man everywhere; usually we find it more in our houses than out of doors. Osten Sacken reckons it under the North-American species (see his Catalogue); Schiner (Dipt. Nov. Reise p. 304) mentions a specimen from Auckland, and according to Macquart (Dipt. ex. Supp. 4. 256) the Paris Museum contains specimens from Australia.

25. *Urophora diaphana*, n. sp.

Aeneo-nigra: capite, antennis, coxis anticis, genubus, tarsorumque articulis duobus basalibus rufis; abdominis basi flava diaphana; alis fasciis quatuor fuscis; prima basali; secunda nervum transversalem medium attingente: tertia et quarta ad costam conjunctis. — ♂ (?) long. 2 mm.

Metallic greenish black, shining. Head a little broader than the thorax, brownish red as are also the antennae, the proboscis and the palpi. Face short, enlarged towards the underside, impressed in the middle, projecting at the oral margin. Third joint of the antennae ovate: arista long, thin and straight. Abdomen attenuated towards the end; the two first segments reddish-yellow and transparent. Legs piceous; the front coxae, the knees and the two basal joints of the tarsi brownish red. Wings hyaline with four darkbrown cross-bands: the first close to the base, the second issuing from the mediastinal cell (at about half the length of the wing), striking along the medial cross-vein and dilated towards the hind border of the wing, the third band going obliquely over the discal cross-vein and at the costa coalescing with the fourth band, which forms a broad margin at the tip of the wing.

A single specimen (which I take to be a ♂ on account of the absence of the ovopositor) from the isle St. Martin, presented by Mr. Rijgersma.

26. *Heterochroa picta*, Schin.

Schiner, Dipt. Nov. Reise, 236. 16.

A ♀ from Chili (Dohrn). It agrees well enough with Schiner's description of the ♂ to allow of its identification with this species. The scutellum has a black spot on each side, which is a continuation of both lateral stripes of the thoracic dorsum.

In the genus *Heterochroa* the costal vein does not end, as is usual in the family of the Muscidae, at the orifice of one of the longitudinal veins at the wing tip, but it surrounds the whole hind-border of the wing, though becoming thinner beyond the cubital vein.

Schiner arranges this genus in the group of the Geomyzinae, and describes, besides the above mentioned species, still another which he names *H. bicolor*. The Leyden Museum contains a third species, which is from Chili as are both the others; although it is represented by a single female specimen, I will describe it, because it can easily be distinguished.

27. *Heterochroa pictipennis*, n. sp.

Ochracea; vitta frontali unica, vittis thoracis sex cum fasciis abdominis nigro-fuscis; femoribus annulo subapicali fusco; alis fusco- et albo variegatis, basi flavescente, nervis transversalibus colore fusco non obtectis; nervorum partibus in colore fusco situatis nigris et incrassatis. — ♀ long. 5 mm.

Ochraceous. Front with a narrow darkbrown longitudinal stripe, ending in a point before it reaches the antennae; face with a whitish reflexion, the ridges on both sides very narrowly margined with black. Second joint of the antennae with a rather long black bristle; the arista also black and provided with microscopic hairs (in *picta* it is more distinctly plumose). Thorax on the upperside with two distant black longitudinal stripes, not reaching the front margin, but continued backwards as a lateral border of the scutellum; on both sides a similar stripe from the shoulders down to the root of the wing, and on the under-

side moreover a shorter one above the middle-coxae. Anterior margin of the abdominal segments black or blackish brown. Legs pale ochraceous, with a brown ring before the tip of the femora. Wings much longer than the abdomen, yellowish at the base as far as the end of the subcostal vein (on about one third of the length of the wing), furthermore with a darkbrown and whitish pattern; whitish spots around both cross-veins also invading the cells above and beneath them; moreover there are two rounded whitish spots, connected together, in the centrum of the cubital cell and of the first posterior cell; there is another, somewhat trigonal one, in the second posterior cell, and finally a pair of semicircular ones at the end of the wing; the veins, as far as they traverse the dark pattern, are thickened and black; the postical vein reaches the wing border.

A ♀ from Chili (Dohrn).

The three species of the genus *Heterochroa* may be distinguished by the following characters: *H. picta* shows on the thoracic dorsum three black stripes; in *pictipennis* and *bicolor* there are but two, the intermediate one having disappeared; *bicolor* has the wings immaculate, almost hyaline, in both the others the wings have a brownish and whitish pattern. In *picta* the dark pattern covers the discal cross-vein; in *pictipennis* on the contrary this cross-vein lies in the hyaline or whitish part; moreover in *picta* the postical vein does not touch the wing border, whilst it is continued down to the end in both the other species.

The Hague, November 26th, 1881.

## NOTE VI.

NEW SPECIES OF LYCIDAE, LAMPYRIDAE AND  
TELEPHORIDAE FROM SUMATRA.

DESCRIBED BY

the Rev. H. S. GORHAM.

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*Lycidae.*1. *Metriorrhynchus pellitus*, sp. n.

Aterrimus, prothorace, scutello, elytrorumque triente basali laete rufis, antennis acute fortiter serratis. —

Long. 17 millim. ♀.

Head not rostrate, antennae half as long as the body, widely dilated, basal joint stout, angularly produced on its inner margin, not longer than wide, second joint very short, third to about the seventh joints with a subflabellate production, overlapping, twisted, seventh to tenth joints similar but more triangular and less wide, terminal joint ovate acuminate.

Thorax with only four distinct areolets in addition to the central groove, the two lateral areae not being divided in front. Centre of the basal margin not notched. Scutellum foveolate near the apex which is notched but not deeply. Elytra black with about a third at the base of a beautiful ferruginous red; the interstices of the four principal costae are divided by a double row of transverse cells, which are clothed with a sericeous but very faint scaly pile.

There is only one female of this distinct and beautiful species in the collection; it is from Solok (Schagen van Leeuwen).

Mr. Waterhouse has included in *Metriorrhynchus* species without rostra, and I do not think any useful purpose would be served by separating the present insect.

At all events it will be better to wait till other species without rostra have been examined, the absence of any division of the lateral areae of the thorax may not be of more than specific value.

### 2. *Metriorrhynchus cinnabarinus*, sp. n.

Aterrimus; elytris lacte rufis, basi nigro-maculatis, antennis latis fortiter serratis. — Long. 12 millim. ♀.

Rostrum broad and short, being square or as long as broad, antennae broad not narrowing much, joints 3 to 10 being nearly equally dentate internally. The whole insect is of the deepest black excepting the bright red elytra. The thorax has the usual six areolae in addition to the central groove; the hind angles are acute and produced and the width of the base is rather greater than the length. The scutellum is black. The elytra have four costae with double rows of square cells and are sericeous throughout. Towards the apex the two external costae are not more apparent than the intermediate lines, but the second costa is continued to the apex.

The base especially near the shoulder is black, but only to the length of the scutellum.

Only a single specimen from Lebong (Sum. Exp.).

### 3. *Metriorrhynchus purpurascens*, sp. n.

Nigro-fuscus, prothorace elytrorumque dimidio basali indeterminate purpureis; thorace angusto, distincte septem-areolato, basi medio emarginato. — Long. 10½ millim. ♂.

Rostrum very short, antennae nearly as long as the body, their third joint longer than wide, the succeeding

ones serrate but not much produced or acuminate; thorax longer than wide, the sides subparallel, and slightly contracted in the middle, the seven areolets very distinct and deep, the posterior pair trapezoidal, the lateral carinae running into the margin considerably above the hind angles.

The colour of the thorax and base of the elytra is a rich maroon red shading off imperceptibly into the smoky-black of the apex. The interstices have a double row of square cells or punctures but they are thickly clothed with a silky pile so as not to appear distinct.

A single specimen from the district of Rawas (Sum. Exp.).

#### 4. *Metriorrhynchus amoenus*, sp. n.

Niger, prothorace, scutello, elytrorumque basi laete luteis. — Long. 8—9 millim. ♂ ♀.

The thorax has seven areolets inclusive of the central channel, the posterior and anterior lateral pairs are not very clearly divided, the carina between them running near to the hind angle where it is lost. The middle of the base is not notched. The antennae are flabellate, subpectinate, each joint from the third to the tenth is angularly produced internally, and from the apex of the inner side a flat branch about equal in length to each joint takes its rise. The flat side of this branch being (as usual) opposed to the plane of compression of the antenna itself.

Five specimens of this were taken at Lebong (Sum. Exp.).

The males have rather narrower thoraces with their sides a little contracted in the middle. In colour it closely resembles *Xylobanus divisus* described in this paper.

#### 5. *Metriorrhynchus luteus*, sp. n.

Nigro-fuscus; prothorace, scutello, elytrisque luteo-flavis. antennis compressis, breviter flabellatis. — Long. 10 mm. ♀.

Head not rostrate, antennae as in *M. amoenus*, thorax with six distinct areolets and a central groove, the divi-

ding carina between the front and posterior lateral areae meets the margin near the middle of the side; the length of the thorax rather greater than its width at the base. Elytra with four slightly raised costae, and a double row of square cells in each interval.

There is only one female of this in the collection. I think it better therefore only briefly to indicate it at present. It is amply distinct from any other Sumatran or Javan species I have seen.

The specimen is from the district of Rawas (Sum. Exp.).

6. *Metriorrhynchus infuscatus*, sp. n.

Niger; elytris rufo-brunneis, nigro-punctatis, ad apicem nigris. — Long. 11 millim. ♀.

Head not rostrate, antennae widely and acutely serrate, the apices of the joints only a little twisted. Thorax black, the length equal to the width of the base, the sides straight but narrowing to the rather distinct front angles, whence they are sinuate to the apex; the seven areolae are distinct, the posterior pair nearly square. Scutellum black. Elytra with the raised lines and transverse ridges red-brown to about one fourth from the apex, the bottoms of all the cells and the whole apex being dull black, but the brown shades off imperceptibly into the black portion.

This species almost exactly resembles *Bulenides obsoletus* in colour as well as being very similar to *Cautires excellens* and some other species.

A single female specimen from the district of Rawas (Sum. Exp.).

7. *Xylobanus* <sup>1)</sup> *reticulatus*, sp. n.

Nigro-fumosus, elytris (apice excepto) brunneo-reticulatis,

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1) The principal difference between this genus and *Metriorrhynchus* appears to consist in the intervals between the costae having a single row of cells. The head is not rostrate, the antennae are acutely dentate or serrate. The males of some of the species assigned to it by Mr. Waterhouse have the antennae with branches from the apices of the joints.



costis quatuor, intervallis uniseriatim regulariter foveatis. foveis scalariformibus. — Long. 9—10 millim. ♀.

The antennae are compressed with broad triangular joints from the third to the tenth; the fourth and succeeding joints are acutely produced, but have not their apices twisted nor overlapping. The thorax has seven areolets, the posterior pair nearly square, the middle of the basal margin not notched.

The distinguishing character of this species lies in the single series of distinct, transverse, regular cells between the four costae and the margins. In colour it precisely resembles *M. infuscatus* and its allies, but the raised lines and transverse ridges are alone redbrown.

Two specimens from the district of Rawas (Sum. Exp.), and one from Boenga mas: Palembang (I. C. van Hasselt).

#### 8. *Xylobanus* (?) *dimidiatus*, sp. n.

Nigra; prothorace elytrisque dimidio basali flavis, antennis pectinatis, elytris uniseriatim crebre foveatis. — Long. 7 millim. ♂.

Extremely like *M. amoenus*; to be distinguished by the pectinate antennae and single row of cells in the costal intervals.

Head with large eyes, antennae with joints 3—10 internally produced triangularly, the apex of each being prolonged into a ramus. Thorax with seven areolets deeply impressed, the sides are contracted, the hind angles acute.

The scutellum is black. The elytra have not distinct costae nor transverse ridges, but they are present, the cells are transverse and numerous, clothed with scales or pile.

A single male specimen from Lebong (Sum. Exp.).

#### 9. *Xylobanus tinctus*, sp. n.

Niger, prothorace elytrisque flavis, his apicibus indeterminate infuscatis, antennis acute serratis, elytris intervallis regulariter uniseriatim foveatis, foveis scalariformibus. — Long. 7—8 millim. ♂.

This species agrees closely in sculpture with the preceding one but the antennae are not pectinate although the specimens appear to be males. The eyes are rather large and prominent. The thorax has deep areolets all well defined, the centre of the base is produced, and the sides of the thorax contracted and the hind angles accordingly acute. The scutellum is black, at least at the base, but the apex is yellowish. The elytra have distinct squarish cells, the costae and transverse ridges equally raised.

Two specimens are all I have seen; they are from the district of Rawas (Sum. Exp.).

10. *Conderis* <sup>1)</sup> *miniatus*, sp. n.

Nigro-fuscus; capite nitido, prothorace brevissimo, quadrifoveolato, nigro-piceo, scutello apice rufo, elytris miniatis, limbo tenui apiceque flavescens, obsolete quadricostatis, intervallis irregulariter biserialiter reticulatis. — Long. 10 millim. ♀.

This *Conderis* differs from either of Mr. Waterhouse's species in not having any central groove on the thorax, and in the extreme shortness of that part, it being quite twice as broad as long; the raised margins and lines on its disk are pitchy-yellow. The antennae are acutely and widely serrate.

In size and colour it very much resembles the insect described in this paper as *Lyropaeus Waterhousei*. The structure of the antennae and thorax are so totally different in that insect that the likeness is of course only superficial.

A single female taken at Soeroelangoen (Sum. Exp.).

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1) *Conderis* differs from the foregoing genera in having the thorax with only four areolets in addition to the central groove; there are thus two frontal transverse anterior and two squarish posterior areolets, the division between which joins the margins of the central groove where it is widest. The structure is best understood by a reference to Waterh. Illust. of Typical Col. Tab. XV. fig 6 (*Conderis major*)

11. *Ditoneces* <sup>1)</sup> *rufo-brunneus*, sp. n.

Niger, prothorace, scutello, elytrisque rufo-brunneis, his apicem versus indistincte infuscatis, antennis acute serratis, elytris pubescentibus. — Long. 8—10 millim. ♀.

Head not rostrate, antennae two thirds of the body's length, widely and acutely serrate. Thorax round in front, sides narrowing from the base, basal margin faintly notched in the centre, disk without areolets, the middle widely and rather irregularly channelled, the front faintly carinate. Elytra with four costae, with double rows of punctures but so thickly pubescent or squamose, as to render the latter indistinct.

The scutellum is rufous, the elytra more or less clouded in their apical half.

Two specimens: one from the West coast, the other from the district of Rawas (Sum. Exp.).

*Var.?* thorace et scutello infuscatis.

One example from Koetoer (Sum. Exp.).

12. *Ditoneces tricolor*, sp. n.

Niger, prothorace et scutello piceis, elytris dimidio basali ultra medium pallide flavis, antennis acute serratis. — Long. 8 millim. ♀.

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1) The extreme difficulty which surrounds any attempt to find permanent characters for any of the smaller, or indeed the larger species of Lycidae, will explain my reason for reserving *Plateros* for the American species rather than assign the present insects, which agree with it in most respects, to that genus. *Ditoneces* according to Mr. Waterhouse has the antennae of the male pectinate, the rami (in those species which he has examined) springing either from the middle or apex of each joint which bears them. In four specimens from Sumatra which have plain thoraces with a simple central groove, the antennae are strongly serrate, these may be all females. In one male specimen (which from the structure of its thorax and elytra I cannot separate from the same genus) the antennae are pectinate, but the separate rami start from the bases of the joints; this is a character of *Cautires* Waterh., but that genus has seven areolets to the thorax. Without making a fresh genus, for which I see no necessity, there is no alternative but to refer it to either of those genera, according as we give most weight to the structure of the antennae or thorax.

Easily distinguished by its colour among any Eastern species possessing the general characters of the genus. The head and thorax are smooth and shining, the latter paler pitchy at the sides and in front. The elytra are thickly but finely squamose, the intercostal spaces very finely and rather irregularly punctured.

One specimen from the district of Rawas (Sum. Exp.).

13. *Ditoneces flavicolor*, sp. n.

Nigro-fuscus, capite flavo, prothorace, scutello, elytris que pallide luteis, his apice tenuiter indistincte infuscatis, antennis pectinatis. — Long.  $7\frac{1}{2}$  millim. ♂.

The head is clear yellow, the eyes rather large, the basal joint of the antennae swollen, the rami from the base of each joint are longer than the joints themselves and are pubescent. The thorax very smooth and even but not shining, the margin strongly reflexed, an impression on each side near the front angles and at the base, the channel distinct but the carina hardly visible, a shallow oblique impression on each side of the disk. Elytra with the four costae scarcely more than raised lines, the intervals being very obsoletely biserially celled. The legs are pale at their bases within.

A single male example from the district of Rawas (Sum. Exp.).

14. *Lyropaeus* <sup>1)</sup> *Waterhousei*, sp. n.

Nigro-fuscus, depressus, capite minuto, antennis line-

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1) This singular genus is characterised by its linear, somewhat rigid antennae, and very small head and thorax. These together with the carinate shoulders and gradually expanded elytra, remind one very much of some species of *Hispidae*, more particularly of *Cephalodonta*.

Mr. Waterhouse has only referred one species from Ceylon to the genus as its type, but there is in the British Museum a broken specimen of the same insect as the one described below, which he had considered as closely allied to it, and in naming it after him I take this opportunity of expressing my obligations to him for the kind assistance and urbanity with which he has afforded me every facility for examining his types contained in the national collection in London.

ribus, sub-compressis, thorace parvo, trapeziformi, angulis posticis acutis, disco opaco, subflavo, medio obsolete carinato; scutello medio fusculo; elytris aurantiacis, lineis duabus elevatis. unâ humerali, alterâ subsuturali, ante apicem desinentibus. — Long. 10 millim.

Head very small, even, eyes prominent, small, subglobose; palpi (maxillary?) small with cylindrical apical joint, acuminate at apex, antennae two thirds the length of body, basal joint small, obliquely truncate, inner apical angle acute, second joint minute not easily observed, third joint half as long again as the fourth, the succeeding joints gently narrowing towards the apex. The thorax has the sides straight, considerably narrowed towards the front, the front and base truncate, but both slightly sinuous and produced. The scutellum is notched at its apex. The elytra are ample but not so much expanded in proportion as in *L. fallax*; the punctuation is close, irregular and confluent; they are even and firm in consistence, the humeral carina is well pronounced. The abdomen is distinctly punctured, it has eight distinct plates, the apical being small and narrow, the sub-apical finely notched.

One specimen, probably a male, from Lebong (Sum. Exp.).

15. *Lyropaeus Ritsemae*, sp. n.

Nigro-fuscus, depressus, capite minuto, antennis linearibus, subcompressis, thorace angulis posticis acutis, elytris nigris, basi aurantiacis. — Long.  $10\frac{1}{2}$  millim.

Although this species is very closely allied to *L. Waterhousei*, and may perhaps vary in colour, yet there are permanent structural differences. The thorax has much more prominent acute hind angles, so that its sides are concave, and it is black as is the scutellum. The elytra have the humeral carina more prominent and extending quite a third of the elytral length; they are also more expanded from beneath the carina till near the apex.

One specimen (male?) taken at Lebong (Sum. Exp.).

These species seem to me, while pertaining to the true subfamily *Lycidae*, to form a passage to the *Calochromidae*, and perhaps *Homalisidae*. The abdominal segments are however normal in the two males here described.

### ***Lampyridae.***

#### 16. *Vesta sumatrensis*, sp. n.

Nigro-picea, sub-nitida; prothorace, coxis anticis et intermediis, abdominisque segmentis duobus ultimis ventralibus rufis; thorace brevi, disco obsolete canaliculato, antice et ad latera fortiter subrugose punctato. — Long. 10 millim. ♂ (?).

Antennae as long as would reach to the middle of the abdomen, joint 2 short but easily seen, three much larger triangular, four to ten compressed widely serrate, apical as long as preceding one, simple.

The thorax is transversely semicircular, narrowed in front, so that the hind angles are acute and a little produced backwards, the central part is raised and smooth, and with a short channel, distinct in the middle, but not continued on the punctured part in front. The elytra have three distinct raised nervures, and a fourth less distinct sub-costal one. The legs are black excepting the bases of the two anterior pairs.

A specimen from Simanoeng, from Si Bakoer and from Alahan pandjang (Sum. Exp.), and a specimen of a variety from Solok (Schagen van Leeuwen).

The smaller species of *Vesta* are so singularly like species of the American genus *Lucidota* that the only characters by which I can distinguish them are that the second joint of the antennae is quite distinct and obconic, whereas in *Lucidota* the same joint is *very* small and transverse and closely articulated with the third joint. Again in *Vesta* the first tarsal joint is always as long as the two

or three succeeding it, and the claw seems to be stouter and less appendicular.

The present species almost exactly resembles the central American *Lucilota bella*. The thorax is rather shorter, and less brightly coloured, or the insects might really be confounded!

17. *Diaphanes fuscipennis*, sp. n.

Latus, obongus, pallide testaceus; thorace amplo, elytrorum fere latitudine, antennis, tibiis et tarsis elytrisque plumbeo-fuscis his tenuissime testaceo-marginatis. — Long. 15 millim., lat. 7 millim. ♂.

Thorax nearly as long as wide, broadly rounded not narrowed in front; the front margin reflexed, translucent in the concavity, the disc shining at the base, very obsoletely carinate in front. The whole underside pale yellow, almost white in places, and the legs with the exception of the tibiae and tarsi of the same pale colour.

The eyes are sub-contiguous beneath, the mouth slightly pale pitchy.

This species is unlike any *Diaphanes* yet described in having the underside of the body quite pale. The thorax is also shorter than in the other species.

A single specimen from the Peak of Indrapoera (Sum. Exp.).

18. *Luciola cerea*, sp. n.

Oblonga, parallela, ferruginea; capite, abdomineque basi nigris; thoracis disco maculâ indistinctâ, antennis, tibiis, tarsis, elytrisque in dimidio apicali infuscatis; his costa humerali valde elevata, ad apicem fere provectâ. — Long. 5—6 millim. ♂.

Nearly allied to *L. costipennis* Gorb. Trans. Ent. Soc. Lond. 1880, p. 102; and with it forming a distinct section easily recognised by the single elevated humeral costa, which divides the elytron into two flat areas.

The head is black or obscurely testaceous in some specimens, the eyes not very prominent.

The thorax is transverse, narrowed in front, thickly punctured, the punctures deep and often confluent, the front finely carinate, the carina being lost in an obsolete impression in the middle, hind angles a little obtuse and depressed. Elytra thickly, deeply, and rather evenly punctured, the punctures ocellated, and often confluent; testaceous or ferruginous but more or less clouded in the apical two thirds, the suture and margin reflexed, and with the costa are not infuscate till near the apex.

The breast is sometimes clouded, at others entirely red. The abdomen has the basal four segments black, but with the base itself more or less reddish, the two apical (fifth and sixth) segments pure white and smooth, the fifth being widely, not deeply emarginate, and the sixth quite evenly rounded and not excised in any manner at the apex.

I have no doubt the specimens are all males, although there is a considerable series of them, the females no doubt being of secluded habits, while the males assemble. That this is the habit of all *Luciolae* I think not probable, from the fact that of some species the females are nearly as common as the males.

The specimens are from Soepajang, Alahan pandjang, Lebong, Koetoer, Mesauw and Kloempang (Sum. Exp.).

#### 19. *Luciola picea*, sp. n.

Elongata, subcylindrica, nigro-picea, pube brevi griseo vestita; ore, palpis, pedibusque rufo-piceis, abdominis segmentis tribus apicalibus flavis. — Long.  $6\frac{1}{2}$ —7 millim. ♂.

Eyes large but not very prominent, antennae short, reaching only to the middle of the breast, joints four to eleven sub-equal, a little longer than broad, pubescent. Thorax transverse, as wide as the elytra at the base. very closely punctured, hind angles very little acute, base



margined and more reddish than the rest of the upper-surface (except the suture which is narrowly pitchy-red). Elytra with two indistinct raised lines, closely punctured, and scarcely shining unless denuded of pubescence. Underside smooth, the breast, legs and base of the abdomen pitchy-red, the first four segments dark pitchy black, and the three apical translucent, and quite pale.

This is the only *Luciola* I know which is so entirely dark coloured, excepting only the luminous parts.

The specimens are from Simauoeng, Alahan pandjang, Lebong and the Highlands of Palembang (Sum. Exp.).

### ***Telephoridae.***

#### 20. *Telephorus viridanus*, sp. n.

Niger, nitidus; ore, antennis (articulis duobus basalibus exceptis), prothoracisque lateribus late flavis; elytris viridibus, apicem versus subfuscis, leviter subrugulosis. — Long. 8—10 millim. ♂ ♀.

Head black, shining; mouth, palpi and mandibles yellow, the latter pitchy at the tips. Antennae yellow, except the two basal joints, which are black in the male, — yellow spotted with black above in the female. Thorax shining, quadrate in the male, wider than long in the female, with broadly rounded angles; the sides yellow, the centre with a black vitta as broad as the yellow of the sides. Scutellum black. Elytra bright green, shining at the base, becoming more pubescent, and faintly coriaceous or wrinkled towards the apex, where they also become indistinctly fuscous brown.

Legs and underside pitchy black, the ventral segments narrowly edged with pitchy.

The present species belongs to an Eastern section of *Telephorus* which corresponds to the American genus *Discodon* in having the claws of the male split, and the apical segment in the same sex longitudinally divided. Till

the whole of the Eastern species have been examined and revised, it will be most convenient to retain these under *Telephorus*, as they do not present any striking divergence from the Old World form in the thoracic structure, as is the case in *Discodon*.

Specimens from Silago, Soerian, the district of Rawas, the Highlands of Palembang and Koetoer (Sum. Exp.).

21. *Telephorus varicornis*, sp. n.

Flavus subnitidus; occipite, antennis basi, geniculis, tibiis, tarsis, elytrisque nigro-fuscis, prothoracis angulis posticis acutis. — Long. 8—9 millim. ♂.

Head with the eyes rather prominent, shining black above, mouth and beneath, yellow. Antennae with the base black, at the fifth or sixth joint shading into yellow; from joint 4, very slightly serrate. The thorax is longer than wide, round in front, the base truncate, faintly sinuate, the sides narrow towards the front. Scutellum, underside and base of the legs yellow.

Elytra widening a little to the apex, finely alutaceous, and with a very fine shining pubescence.

There is a single specimen only of this in the collection. It is from the district of Rawas (Sum. Exp.).

22. *Telephorus angusticollis*, sp. n.

Sordide niger, prothorace elytrisque rufo-brunneis, his bicostatis, dimidio apicali indeterminate sordide nigricante. — Long. 10—11 millim.

Head black, a good deal narrowed behind, eyes prominent, antennae about as long as body, filiform, joint 1 moderately long and stout, 2<sup>nd</sup> not more than half as long as 3<sup>rd</sup>, 3<sup>rd</sup> and succeeding ones sub-equal, elongate, simple. Thorax half as long again as wide, gently rounded in front, hind angles acute, the disk tumid, shining; a short central groove, and near the front angles a smooth

depression running out obliquely to the sides. Scutellum dark. Elytra soft and liable to distortion after death, two raised nervures before the humeral callus. Antennae, palpi, legs, and body beneath black.

Specimens from Sidjoendjoeng, Alahan pandjang and Moeara Laboe (Sum. Exp.).

*Obs.* This belongs to a section of *Telephorus* peculiar to the East, which have narrow thoraces, formed like those of *Rhagonycha*, the claws are simple in both sexes, and the abdominal terminal plate formed as in *Telephorus* proper, from which I cannot at present separate them. They have however a very different facies.

### 23. *Telephorus sordidus*, sp. n.

Sordide niger, prothorace elytrisque rufo-brunneis, his dimidio apicali plus minusve nigricantibus; antennis basi latis, articulo secundo perbrevis, tertio et sequentibus dentatis, prothorax haud longior quam latus. — Long. 10—11 millim.

Very similar in colour to *T. angusticollis*, but differing essentially in the structure of the antennae, in the narrower smaller head, the shorter thorax which is more rounded in front and in the elytra having only one short and indistinct costa, a second nervure is visible before the humerus. The scutellum also is yellow.

Three specimens; they are from Soepajang, Moeara Laboe and Bedar Alam (Sum. Exp.).

### 24. *Polemius*<sup>1)</sup>? *depressus*, sp. n.

Niger, depressus haud nitidus; capitis lineâ occipitali, prothorace, elytrorumque dimidio basali purpureo-rufis, his bicostatis. — Long. 12 millim. ♀.

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1) Waterhouse, *Ent. Mo. Mag.* XIV (1877/78) p. 28; it is however not identical with Leconte's genus *Polemius* (*Proc. Philad. Acad. Nat. Sc.* V (1851) p. 338), and being a distinct genus it ought to be described under a new name.

This insect and the very nearly allied species described by Mr. Waterhouse as *Polemius basalis* will I have little doubt come into the group Silini. *Polemius* is nearly allied to *Discodon* proposed by myself (*Biologia Centr. Amer.* III, 2. p. 78); they are insects which in the male sex have the sides of the pronotum »nicked”, as the American author expressively terms it. I have not yet been able to see a male of the insect here described, but I have no doubt but that all the Eastern Silini, this species included, will require new genera for their reception.

The present species has rather short antennae, 2<sup>nd</sup> joint shorter than 3<sup>rd</sup>; all the joints widened on each side so as to be somewhat obconic, they are however a little serrate internally. The thorax is very flat on the disk, its sides have a small callosity caused by the crease which crosses the reflexed margin (as in *Discodon*); there are two small black linear spots on the front of the disk, and a black spot on the reflexed margin behind the crease. The width of the thorax is nearly twice its length; the small, acute hind angles are a little deflexed and point forwards, the base sinuous and with a marginal line.

The elytra are firm, with two costae and a prolonged humeral callus.

The general aspect of this species is that of some species of Lycidae.

A single female specimen from the district of Rawas (Sum. Exp.).

#### 25. *Silis hamatus*, sp. n.

Niger, prothorace et scutello rufis, antennis serratis. — Long. 6—8 millim. ♂ ♀.

Mas, oculis majoribus, prothoracis lateribus juxta angulum posticum sinuatis, abdominis segmento ventrali apicali diviso, extus hamato.

This is rather a puzzling species, because the thorax only exhibits the characters of *Silis* in a very small degree,

and it is more on account of other characters that I assign it to that genus. It is moreover very close in its size and coloration to several species of veritable *Silis*, e. g. *S. ruficollis* F. from which it differs however (apart from structure) in having the scutellum red, and the abdomen black.

Five specimens, three male two female, from Sidjoendjoeng, the district of Rawas and Koetoer (Sum. Exp.).

26. *Silis simplex*, sp. n.

Totus testaceus; oculis nigris, alis fuscis, antennis filiformibus. — Long. 7—8 millim. ♂ ♀.

Mas, oculis subglobosis, magis prominulis, prothoracis lateribus in medio obliquiter incisis, segmento ventrali apicali fisso.

This is a sufficiently typical *Silis*, and in its wholly pale colour is unlike any other known to me. It has the facies of the Europæan *Tel. bicolor*.

Specimens from Moeara Laboe, Peak of Indrapoera, the district of Rawas and Koetoer (Sum. Exp.).

Shiple, Horsham, January 18th, 1882.

## NOTE VII.

A NEW SUMATRAN SPECIES OF THE CLERID  
GENUS CALLIMERUS.

DESCRIBED BY

the Rev. H. S. GORHAM.

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*Callimerus ornatus*, sp. n.

Nigro-cyaneus, squamis albis variegatus; ore, antennis, palpis, pedibusque pallidis; occipite, prothoracis disco, elytris maculis duabus lateralibus, alteraque suturali communi, et fascia postica nudata coeruleis, his striato punctatis. — Long. 8 millim. ♂.

This lovely little *Callimerus* is allied to and resembles *C. mirandus*, but may be distinguished by being smaller, and more densely clothed with white scales, and whereas in that species there are three lateral blue spots or patches, here there are but two. The punctures which are in series are also larger and deeper in *C. ornatus*, the head is shining steel-blue, behind the centre of the eyes, with a few scattered small punctures, the epistoma and front densely clothed with scales. The thorax has the middle, and a line across the tubercular part of the sides denuded and shews some large punctures. The elytra have each a somewhat triangular spot on the shoulder, an irregular one on each side near the middle, a common one on the

suture between these two, and a fascia near the apex, widest on the suture and margins denuded of scales, shining steel-blue and shewing the series of large, deep punctures. The apex is also blue, but has a few setae and detached scales. Of the underside the middle of the sterna and abdomen is nude, the rest thickly clothed with the white scales.

One specimen only from Koetoer (Sum. Exp.).

Shiple, Horsham, January 18th, 1882.

## NOTE VIII.

NEW SPECIES OF COLEOPTERA BELONGING TO THE  
FAMILIES PEDILIDAE AND ANTHICIDAE.

DESCRIBED BY

**S. DE MARSEUL** <sup>1)</sup>.***Pedilidae*** <sup>2)</sup>.1. *Xylophilus fasciolatus*, sp. n.

Length 2 mm., breadth 1 mm. — Oblong, rather broad, slightly convex, but little glossy, of a reddish testaceous colour, provided with a large elongated brown spot on the middle of each elytron, and covered with a very fine and short greyish pubescence; the elytra show moreover a second pubescence which is recumbent, fine and white, covers the base and the extremity, and forms an M- or zigzagshaped band. --- Head closely punctured, broad and thick, a little convex on the vertex; eyes black, large, prominent, reaching almost to the posterior border, sinuated in front, rather approximate on the fore-head. Antennae reaching beyond the shoulders, the first joints slender and oblong, the 3rd a little smaller than the 2nd, the following ones a little broader and transverse, the apical joint obtuse

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1) See also *Tijdschrift voor Entomologie*. Vol. XXV. p. 54.

2) I have come to the conclusion that the genus *Macratia* Newm. ought to be classed in the family of the Anthicidae (*L'Abeille*. Vol. XVII. p. 8).



oval. — Prothorax punctured in the same way as the head, narrower than the latter and having nearly the shape of a transverse square, truncated anteriorly with rounded angles, hardly narrowed in a curve on the sides, slightly emarginated at the middle of the base with rounded angles and with a feeble depression before the scutellum. The latter is small and rounded. — Elytra rather strongly punctured, subparallel obovate, broadly rounded at the apex, truncated at the base and much broader than the prothorax, the humeral angles raised, rounded, the small swellings rather distinct. — Legs slender, posterior femora but little thick.

To a certain extent this species resembles *X. populneus* with respect to the size and facies, but the zigzaglike design of the pubescence on the elytra and especially the disposition of the 2nd and 3rd antennal joints distinguish it at first sight.

Hab. West Java: Batavia (Sijthoff).

### *Anthicidae.*

#### 2. *Macratría lineella*, sp. n.

Length 4 mm., breadth 1,2 mm. — Narrow, elongated, but little convex; black, with the anterior part of the head, the mouth, the palpi, the antennae and the legs testaceous red, the base of the femora and the middle of the tibiae slightly infusate. — Head rounded, rather convex, slightly impressed on the middle of the occiput, glossy and having a smooth appearance; eyes large, oval, but little convex, placed close to the base of the antennae; palpi stout, apical joint securiform. Antennae very slender, slightly dilated towards the tip, not reaching to the shoulders, the joints long, the apical one acuminate, less long than the two preceding. — Prothorax oblong ovate, but little convex, broader than the head, much narrowed anteriorly, with a neck which is but little distinct; the thorax is moreover curved on the sides, its

greatest width before the middle, feebly edged at the base, the angles but little produced, the surface densely and very finely punctured in a rasplike manner, clothed with a greyish recumbent pubescence which is rather dense. Scutellum square, pubescent. — Elytra truncated and much broader than the prothorax at the base, with rather prominent and rounded shoulders, three times as long as broad, attenuated behind, the apices separately rounded, the suture sunken behind the scutellum, further on raised, bordered by an impressed stria; they are closely and finely rugose, slightly grooved and clothed with a greyish recumbent pubescence which forms very delicate stripes. — Pygidium dark red, projecting beyond the elytra. — Undersurface covered with a pubescence which is fine and white on the flanks of the sternum. — Femora much swollen.

This species may be distinguished by its small size, by the colour of the foreside of the head and the legs, by the prothorax which has its greatest width before the middle. by the pubescence of the elytra which is arranged in stripes.

Hab. East Java: Mount Ardjoeno (Hekmeyer).

### 3. *Macratría soricina*, sp. n.

Length 5 mm., breadth 1,8 mm. — Strongly elongated, slightly convex, very finely granulate-punctate, with the head more smooth and glossy, clothed with a short and dense greyish pubescence which hides the black ground-colour. — Head subrounded, rather convex; eyes large, rounded, but little convex, closer to the antennae than to the strongly rounded postocular angles, rather approximate on the forehead; parts of the mouth testaceous red with the tip of the mandibles black; the apical joint of the palpi long, cultriform. Antennae slender, testaceous red, not reaching to the shoulders, the joints elongate, the apical ones somewhat thickened, the terminal joint acuminate, almost as long as the two preceding joints together. — Prothorax oval, long, rather convex, attenuated in front,

the neck but little distinct; the thorax has its greatest width towards the middle where it is not broader than the head; it is truncated and edged at the base, with produced angles. Scutellum square. — Elytra broader at the base and twice as long as the prothorax, the shoulders rounded, but little prominent, the small swellings but little distinct; the elytra are gradually attenuated from the shoulders backwards, conjointly rounded at the apex and surpassed by the pygidium; the striae are fine, but little marked and placed close together. — Undersurface black, finely pubescent. — Legs testaceous red, posterior tibiae slightly fuscous, femora much swollen.

Resembles *M. pallidicornis*, but in the new species the pronotum is much less attenuated in front and less strongly granulate-punctate; its head has no deep emargination at the occiput.

Hab. Aru-islands (von Rosenberg).

#### 4. *Macratria bicincta*, sp. n.

Length 6 mm., breadth 1,5 mm. — Narrow, much elongated, but little convex, glossy black, covered with a fine yellow pubescence. — Head of a subrounded oval shape, convex, punctured, occipital border narrowly sinuated; eyes large, black, oval, convex, placed on the sides, their front border rather close to the antennae; the clypeus closely rugose-punctate, separated from the forehead by a slight transverse depression; labrum and parts of the mouth red, palpi very long, the three apical joints stout. Antennae slender, reaching to the shoulders, red, hardly infusate towards the tip, the joints elongated, the long-pointed apical one longer than the two preceding together. — Prothorax elongate ovate, slightly convex, very closely and very finely punctured in a rasplike manner, slightly attenuated in front, with a rather stout neck, rounded at the base and narrowly edged; it has its greatest width towards the middle and is a little broader than the head

with the eyes. Scutellum square, rugose. — Elytra one and a half as long and much broader than the prothorax at the base, anterior angles produced, rounded, small swellings distinct; the sides subparallel, attenuated in a curve towards the extremity, the apices separately rounded; the suture raised, rugose between the two grooves; surface strongly punctured, with rather inconspicuous grooves in the central region, the anterior portion confusedly rugose-punctate, the posterior portion almost smooth; provided with two bands of a short and dense white pubescence, an arc-shaped one on the anterior third, the other transverse and straight on the posterior fourth. — Under-surface black, finely pubescent. — Legs of a ferruginous red colour; femora strongly swollen, infusate towards the tip; the tibiae darker.

Hab. Philippine-islands: Luçon (Dohrn).

5. *Tomoderus fusicornis*, sp. n.

Length 3 mm., breadth 1,5 mm. — Reddish yellow, glossy, covered with suberect rather dispersed yellow hairs; antennae black, with the two basal joints red, and the apical one pale. — Head obcordiform, smooth, slightly convex, much dilated posteriorly, postocular angles rounded, swollen; eyes black, small, rounded, placed at the posterior third. Antennae stout, reaching to the middle, the first joint obconical, but little thick; the second small, rounded, the following ones (3rd—10th) thick, transverse, serrate, the apical one small, pointed. — Prothorax long, divided in two lobes by a wide and deep rugose constriction, the anterior lobe subcordiform, very convex, narrower than the head, smooth, provided with a short and distinct neck, the posterior lobe short, dilated, smooth, truncated and finely edged at the base where it is a little narrower. Scutellum sunken, almost imperceptible. — Elytra oblong ovate, convex, rounded at the base, the shoulders but little marked; they become wider towards the end,

are truncated in a curved line at the apex, and are rather dispersedly besprinkled with large punctures. — Legs rather stout and long, the femora swollen externally, the basal joint of the posterior tarsi not very elongate.

The shape of this curious species is analogous to that of certain *Tomoderus* as *Piocharidi*, *ventralis* etc., but the prothorax is more elongate, more strongly constricted and the antennae have a quite different shape, being fusiform, thickened at the middle, with the apical joint small, acuminate.

Hab. Sumatra: district Rawas, captured in May (Scientific Sumatra-Expedition).

6. *Mecynotarsus bisetiger*, sp. n. 1)

Length 1,5 mm., breadth 0,5 mm. — Oblong, slightly convex, black, very finely pruinose, rather glossy on the

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1) In the collection Laferté I find a pretty undescribed species which I think it advisable to describe on this occasion, because it inhabits the East Indies, a vast region which has hitherto only furnished but few species to this interesting group:

*Mecynotarsus obliquemaculatus* (Coll. Laf.), sp. n.

Length 2 mm., breadth 1 mm. — Oblong, but little convex, very finely aulaceous, clothed with a short pubescence which is silky, dense and recumbent; groundcolour pale yellow with the head slightly infusate, a dark spot close to the scutellum and an oblique black one behind the middle of the elytra, shortened both inwards and outwards; eyes black. — Antennae filiform, reaching to the shoulders, the joints long, the apical one somewhat thickened. — Prothorax rather convex, transverse, rounded at the sides, provided in front with a triangular horn which is rather broad, rounded at the tip, bordered with numerous small black denticules, with a concentric crest in the shape of a very acute angle and likewise crenulated; in the interval very small distant granules may be observed; the thorax is strongly narrowed at the base which is truncated and edged, and provided on each side with two small distant denticules each of which bears a long erect hair. Scutellum very small. — Elytra truncated at the base with the humeral angles distinct although but little prominent, small swellings none; suture neither raised nor sunken; the sides slightly curved, having their greatest width behind the middle, rounded at the apex. — Legs very pale, tibiae and tarsi elongated and nearly filiform.

The shape of the elytra and the well-defined black spots distinguish it immediately from the pale varieties of *M. rhinoceros*.

elytra. — Head triangular, very convex, rounded behind; eyes rather large, sinuated on the front border, placed close to the antennae; apical joint of the palpi swollen, securiform. Antennae reaching to the middle, elongated, slender, the basal half testaceous, the apical one infusate and somewhat thickened, the joints long, the terminal one fusiform and longer than the preceding joint. — Prothorax elevated on the back, provided in front with a long appendage; this appendage is but little enlarged, bordered by a finely denticulated fringe, rounded at the tip, surmounted by two distinct raised lines, which are subparallel and meet under a very acute angle; the sides of the thorax are strongly dilated towards the middle in an obtuse angle, further on very much narrowed to the base and provided with two distant small denticules, each of which bears a long erect hair or seta; the base of the thorax narrow, with a thickened margin. Scutellum small. — Elytra subelliptical oblong, convex, broader than the prothorax, rounded at the apex, truncated in a curved line at the base, the shoulders distinct although rounded; surface dispersedly and faintly punctured. — Legs elongate, femora swollen, dark-coloured; the tibiae slender, testaceous as well as the tarsi; the posterior tarsi are as long as, if not longer than the tibiae.

The smallest of all the known species; it does not resemble any other in particular, its coloration, the shape and the armature of the horn distinguish it perfectly.

Hab. Sumatra (Müller).

7. *Anthicus serricornis*, sp. n.

Length 5 mm., breadth 2 mm. — Of a glossy testaceous red colour, with the eyes, the middle of the antennae and a large median spot common to both the elytra black, covered with a pubescence which has the colour of the body; the elytra are moreover provided with lines of long erect distant hairs. — Head obconical, rounded and

circularly notched at the neck, very convex, rugosely punctured; eyes reniform, granulate, swollen, moderately distant; palpi stout, apical joint long, securiform. Antennae stout, reaching to the shoulders, the first and second joint red, the former ovoid, the latter small, short; the following joints black, oblongly triangular with projecting inner tooth, the apical joint fusiform, ending in a point. — Prothorax oblong, punctured, convex on the back and more or less heartshaped, rounded in front at the sides and as broad as the head, narrowed and excavated towards the base which is broad and thickened, thicker yet on the sides, the neck narrow, well-marked. Scutellum sunken, of an acute triangular shape. — Elytra oblong, delicately reticulated, depressed on the back, broader than the prothorax, with the shoulders and small swellings prominent, the sides slightly curved, broadly rounded at the apex; median dorsal spot stretching out in a very acute angle towards the scutellum, leaving the basal and apical border untouched. — Abdomen densely clothed with a fine yellow sericeous pubescence. — Legs rather long and rather thick; the basal joint of the posterior tarsi very elongated.

This species offers a certain analogy in its shape to *A. longiceps*, but the dentate antennae, the more prominent shoulders and small swellings, and finally the coloration remove it considerably from this species. By the structure of the head and prothorax it belongs however to the same section.

Hab. Sumatra: Koetoe, captured in June (Scientific Sumatra-Expedition).

8. *Anthicus cruciellus*, sp. n.

Length 3,5 mm., breadth 1,5 mm. — Rather long, pitchy black, glossy; mouth, antennae, legs and two broad bands on the elytra of a pale yellow colour, scutellum and extreme margin of the prothorax brownish red; strongly punctured on the uppersurface, more closely on the pron-

tum; covered with a grey pubescence. — Head convex, of a short triangular shape, truncated behind, the post-ocular angles rounded; eyes round, but little prominent, placed anteriorly; palpi elongated, the apical joint large, securiform. Antennae reaching about to the middle, slender, somewhat thickened at the tip, the joints long. — Prothorax less broad than the head, capitate anteriorly and provided with a narrow neck; it is rather convex on the back, a little longer than broad, sinuated at the sides behind the middle; the base is broad, slightly curved and indistinctly edged. Scutellum small, square, sunken. — Elytra 2.5/1.5 mm., much broader than the prothorax, truncated at the base, the shoulders marked but rounded, slightly incurved at the sides, somewhat depressed on the back, rounded at the apex, provided with two broad pale bands which are a little shortened at the outer margin and at the suture and of which one is situated behind the shoulder, the other at two thirds; the base and the tip remain black and the interval by which the bands are separated is somewhat broader than those bands. — Legs pale, elongate and slender.

This species somewhat resembles *A. transversalis*; the prothorax is similarly shaped, the triangular head is broader and straighter at the base, the elongated elytra are provided with spots which are analogous but much larger, the base does not show the small swellings so distinctly and the colour is on the whole very different.

Hab. East Java: Mount Ardjoeno (Hekmeyer).

9. *Anthicus subrubrocinctus*, sp. n.

Length 4 mm., breadth 1,3 mm. — Elongated, slightly convex, very glossy black, covered with long suberect grey hairs, and provided with a distant punctuation which is inconspicuous on the head and coarse on the prothorax and the elytra. — Head thick, triangular, rather convex, subrounded, the angles placed posteriorly; eyes large, round,



but little prominent; mouth somewhat testaceous; apical joint of the palpi long, strongly securiform. Antennae very elongated, reaching beyond the shoulders, the joints long, slender, infusate with the exception of the basal ones, the apical one a little thicker and hardly longer than the preceding. — Prothorax oblong, narrower than the head, rounded in front but not dilated at the sides, provided with a rather distinct neck, the back but little convex, even, the sides hardly sinuated, the base edged, with slightly protruding angles. Scutellum small, sunken. — Elytra obovate, long, a little convex, dilated in a curved line at the sides, having their greatest width behind the middle, rounded at the end, base subtruncated, narrow, the angles as well as the small swellings distinct, the suture margined, sunken behind the scutellum; they are provided with two dark red spots, one at about one third, the other at about two thirds of their length, oblique in opposite direction. — Legs elongated, slender, testaceous red, tibiae slightly infusate.

Belongs to the group of *A. longicollis*; it may be distinguished from that species at first sight by its coarse and distant punctuation, by the dark red spots of the elytra, etc.

Hab. Sumatra: Kloempang, captured in August (Scientific Sumatra-Expedition).

10. *Anthicus javanus*, sp. n.

Length 3 mm., breadth 1 mm. — Oval oblong, slightly convex, glossy black, provided with a few erect yellow hairs; the prothorax red, base of the antennae, legs, the middle of the breast and two spots on the elytra testaceous yellow. — Head of a broad triangular shape, convex, truncated at the base with the angles distinct but rounded; surface densely rugose-punctate, with a faint smooth slightly raised line on the middle; eyes round, small, approximating the antennae, the latter not reaching to the shoulders, slender, somewhat thickened externally, the joints

oblong, 8th-11th shorter, the apical one swollen and rather stout, pearshaped, truncated at the tip, but projecting internally in an acute point. — Prothorax dilated at both sides in a rounded gibbosity and in this region as broad as the head, provided in front with a well-marked neck, sinuate attenuated towards the base which is narrow, edged and truncated; surface strongly punctured. Scutellum small, round. — Elytra oboval, with their greatest width behind the middle, ending in a rounded point, truncated at the base, with prominent obtuse shoulders; small swellings a little marked, with a slight depression behind them; suture a little raised, with a stria at both sides; closely and evenly punctured; provided with two broad oblique yellow spots, the anterior one running from the external border to the suture and from the shoulders to one third of the length of the elytra, the second somewhat before the apex and not touching either the suture or the external margin. — Legs but little thick, tibiae and tarsi slender.

Differs from *A. quadrioculatus* by its small size, its lighter colour, the much stronger punctuation of the head and prothorax, and from *A. mincii* by its black head which is rugosely punctured, by the much larger punctures of its prothorax etc.

Hab. West Java: Batavia (de Gavere).

11. *Anthicus bizonellus*, sp. n.

Length 2,6 mm., breadth 1 mm. — Oblong, tolerably convex, glossy, pale yellow, more or less chest-nut on the undersurface, beset with a few rather long yellowish hairs; provided on the elytra with a double girdle of a black colour. — Head of a broad triangular shape, very convex, truncated in a straight line posteriorly, with the post-ocular angles but little prolonged, rounded; it has a smooth appearance; the eyes are rounded, but little prominent and rather small. Antennae reaching to the shoulders, filiform, the joints elongated. — Prothorax not longer than

broad, strongly dilated in a rounded gibbosity at the sides anteriorly, without becoming as broad as the head, provided in front with a strong neck, narrowed and sinuated behind, base truncated, edged, with the angles but little produced; surface strongly punctured. Scutellum small, rounded. — Elytra elongated, subparallel, rounded at the end, truncated at the base and much broader than the prothorax, with the shoulders prominent although blunted; small swellings inconspicuous; suture with a sulciform stria at both sides, sunken behind the scutellum, further on raised; surface rather strongly punctured, the punctures more or less arranged in lines on the back, provided with two black bands which appear shortened externally, the first placed at the middle, larger, forming a double curve and stretching forwards along the suture. — Legs long, femora rather thick.

This species may be classed close to *A. ocellatus* from which it differs by the punctuation, the colour, the spots on the elytra, etc. etc.

Hab. East Java: Mount Ardjoeno (Hekmeyer).

## 12. *Anthicus bataviensis* sp. n.

Length 2,5 mm., breadth 1 mm. — Oblong, slightly depressed on the back, of a testaceous red colour, paler on the elytra which are provided behind the middle with a transverse black spot; the external half of the antennae brownish black. — Head triangular, rather convex, curved at the sides, truncated in a straight line at the base, with the postocular angles well marked but blunted, surface densely and very delicately chagrined, covered with a fine grey pubescence; eyes but little prominent, placed anteriorly close to the antennae; apical joint of the palpi broad, swollen and securiform. Antennae reaching to the shoulders, slender, the joints oblong, becoming thicker and shorter towards the tip, the terminal one pearshaped, pointed. — Prothorax sculptured and pubescent in the same

way as the head, almost as broad as the head, not longer than broad, but little convex, slightly arcuate at the hind border, with a very thin neck, the sides dilated anteriorly in a rounded gibbosity, narrowed and sinuated towards the base, the latter almost straight, but little dilated at the angles and slightly edged. Scutellum small, rounded. — Elytra broader at the base than the prothorax, the angles marked although rounded, small swellings but little conspicuous; the elytra are dilated in a curved line at the sides, having their greatest width behind the middle, rounded at the end, slightly convex, glossy, with strong, distant punctures which are arranged in lines on the anterior portion; the black transverse spot rather long, reaching neither to the suture nor to the external border; they are provided with suberect yellowish hairs. — Legs very pale, tibiae slender, tarsi very fine, not very elongate.

Must be placed close to *A. nebulosus* to which it resembles; however in addition to the distribution of the spots on the elytra the punctuation is very different: it is more dense on the elytra, stronger and more distant on the pronotum and on the head.

*Var.* Sometimes the black colour extends further, invades the head and more or less the pronotum, the black band widens out, ascends along the borders, is prolonged on the suture and along the apical margin, and shows a tendency to meet again and to enclose a yellow spot which is formed by the groundcolour.

Hab. West Java: Batavia (de Gavere and Sijthoff).

Paris, December 13th, 1881.

## NOTE IX.

A NEW AFRICAN SPECIES OF THE COLEOPTEROUS  
GENUS HISTER.

DESCRIBED BY

**S. DE MARSEUL.**

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*Hister Ritsemae*, sp. n.

Length 6 mm., breadth 5 mm. — Oval, but little convex, broadly rounded at the sides; glossy black, legs ferruginous brown. — Head broad, clypeus subdepressed, separated from the front by a strong stria which is subangularly curved; mandibles concave. — Prothorax transverse, broad and almost straight at the base, the sides oblique, the front border notched, with produced obtuse angles, the internal lateral stria strong, entire, slightly arcuated towards the base, the external stria running from the middle to the eyes. The scutellum narrow, triangular. — Elytra rounded and dilated at the sides, truncated at the end, having their greatest width at the shoulders; their striae strong, crenulated, the first, second and third dorsal ones entire, the fourth and the sutural one a little shortened at the base which is also the case with the internal subhumeral stria; the fifth much shorter; the epipleura excavated, provided with two grooves of which the internal one is interrupted. — Pygidium arc-shaped, and densely and rugosely punctured as well as the propygidium. — Prosternum narrow, blunt at the base, pro-

vided in front with a deflexed narrow projection, mesosternum truncated, broadly margined. — Tibiae broad, much compressed, the anterior ones quadridentate, the posterior ones biserially spined.

Must be arranged close to *H. Loandae*. — I feel obliged to dedicate this rather curious species, of which a single specimen has been sent over from Liberia (West Africa) by Messrs. Büttikofer and Sala, to the learned Conservator of the Entomological Department of the Leyden Museum, whose intelligent activity is a sure guarantee for the prosperity of that establishment.

Paris, January 31th, 1882.

## NOTE X.

LIST OF THE HOLOTHURIANS IN THE COLLECTION  
OF THE LEYDEN MUSEUM

DRAWN UP BY

**Prof. Dr. HUBERT LUDWIG**

in Giessen.

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The collection of Holothurians in the Leyden Museum was sent over to me with the request that I would subject them to a systematic revision. I undertook this task in the hope of being able at the same time by the aid of this material to make a step in advance with respect to their anatomy. Unfortunately in nearly all the specimens the intestines were so insufficiently preserved, that I was forced to limit myself to the identification of the species. This, however, was not superfluous, as the majority of the specimens were incorrectly named and as certain localities are not without interest for the question of geographical distribution. The collection of Holothurians in the Leyden Museum contains a total of 52 species (two of them being new), most of which were obtained from the Oriental and Moluccan regions.

## SYNAPTIDAE.

1. *Synapta distincta* v. MARENZELLER.

v. Marenzeller, Verhandl. zool.-botan. Gesellsch. in Wien. 1881.  
p. 123. Taf. IV, Fig. 2.

A badly preserved fragment from Amoy.

Notes from the Leyden Museum, Vol. IV.

2. *Synapta beselii* JÄGER.

Jäger, de Holothuriis. 1833, p. 15. Taf. 1. — Semper, Holothurien. 1868. p. 264<sub>2</sub>). — Ludwig, Zeitschr. f. wissensch. Zool. XXXV. 1881. p.p. 576—577.

One specimen from the Indian Ocean.

3. *Synapta grisea* SEMPER.

Semper, Holothurien. 1868. p. 265.

One specimen from the Indian Ocean.

4. *Synapta vittata* JÄGER (FORSKAL sp.).

Fistularia vittata Forskal. Descriptio animalium qua in itinere orientali observavit. 1775. p. 121. Taf. 37 E. — *Synapta vittata* Jäger, De Holothuriis. 1833. p.p. 14—15. — Semper, Holothurien. 1868. p. 265.

One specimen without indication of locality.

This specimen agrees very well with Jäger's description. It possesses 15 tentacles. The anchors and anchor-plates resemble those of *S. indivisa* and *S. recta* Semper.

5. *Chirodota rufescens* BRANDT.

Brandt, Prodrömus. 1835. p. 59. — Ludwig, Zeitschr. f. wissensch. Zool. XXXV. 1881. p.p. 578—579. — *Chirodota variabilis* Sluiter, Natuurk. Tijdschr. v. Nederlandseh-Indië. XL. 1880. p.p. 20—21 des Separatabdruckes. Taf. VI, Fig. 2. Taf. VII, Figs. 7—10.

Two specimens from Japan, two from Timor and two from Batavia.

6. *Chirodota laevis* LÜTKEN.

Holothuria laevis Fabricius. Fauna groenlandica. 1780. p. 353. — *Chirodota laevis* Lütken, Oversigt over Grönlands Echinodermata. 1857. p.p. 16—21. — Semper, Holothurien. 1868. p. 267. — Ijungman, Öfvers. K. Vetensk.-Akad. Förhandl. 1879. p. 130.

Two specimens from Greenland.

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1) In this and in the following references to Semper's monograph of the Holothurians, notice has only been taken of the reference in Semper's list of synonyms, in which the remaining literature concerning the respective species will be found in full.



## MOLPADIDAE.

7. *Haplodactyla australis* SEMPER.

Semper, *Holothurien*. 1868. p. 268.

One specimen from Timor and one from Padang.

8. *Haplodactyla hyaloeides* SLUITER.

Sluiter, *Natuurk. Tijdschr. v. Nederlandsch-Indië*. XL. 1880. p.p. 13—15 des Separatabdruckes. Taf. V.

One specimen from Amoy.

In the genital organs are dendritic calcareous corpuscles; the intestinal tract is without calcareous deposits; in the integument calcareous corpuscles, which resemble those figured by Sluiter, are only present in the anal region and in the anal papillae.

9. *Caudina arenata* STIMPSON (GOULD sp.)

*Chirodota arenata* Gould, *Invertebrata of Massachusetts*. 1841. p.p. 345 and 346. — Stimpson, *Smithson. Contrib. to Knowledge*. Vol. VI. 1854. p. 17. — Semper, *Holothurien*. 1868. p. 268.

Eight specimens from Grand Manan.

10. *Eupyrgus scaber* LÜTKEN.

Lütken, *Oversigt over Grönlands Echinodermata*. 1857. p.p. 23—24. — Semper, *Holothurien*. 1868. p. 268. — Ljungman, *Öfvers. K. Vetensk.-Akad. Förhandl.* 1879. p. 130.

One specimen from Greenland.

## DENDROCHIROTAÆ.

11. *Cucumaria frondosa* FORBES (GUNNER sp.)

*Holothuria frondosa* Gunner, *Art. Holm.* 1767. p. 115. Tab. IV, Figs. 1—2. — *Cucumaria frondosa*, Forbes, *Hist. Brit. Starf.* 1841. p. 209. — Semper, *Holothurien*. 1868. p.p. 268--269. — Ljungman, *Öfvers. K. Vetensk.-Akad. Förhandl.* 1879. p. 127.

Two specimens from the Shetland Islands, one from Greenland, three from Grand Manan, one from the Bay of Fundy, from a depth of 40 fathoms, and one specimen without indication of locality.

Notes from the Leyden Museum, Vol. IV.

12. *Cucumaria planci* v. MARENZELLER.

v. Marenzeller, Verh. zool.-bot. Gesellsch. Wien. 1874. p.p. 300—303. — Ludwig, Mittheil. zool. Stat. Neapel. I. 1879. p. 565.

Two specimens from the Mediterranean.

13. *Cucumaria syracusana* SARS (GRUBE sp.)

*Cucumaria syracusana* Sars, Bidr. til Kundskab. om Middelhav. Littoralfauna. 1857. p.p. 123—125. Tab. I, Figs. 24—29. — Cladodaetyla syracusana, Grube. Actin. Echinod. u. Würmer d. Adriat. u. Mittelm. 1840. p. 40. — Ludwig, Mittheil. zool. Stat. Neapel. I. 1879. p. 567.

Four specimens from the Mediterranean.

14. *Cucumaria grubei* v. MARENZELLER.

v. Marenzeller, Verh. zool.-bot. Gesellsch. Wien. 1874. p.p. 305—306. — Ludwig, Mittheil. zool. Stat. Neapel. I. 1879. p. 566.

One specimen from the Mediterranean.

15. *Cucumaria köllikeri* SEMPER.

Semper, Holothurien. 1868. p. 271. — Ludwig, Mittheil. zool. Stat. Neapel. I. 1879. p. 567.

One specimen from the Mediterranean.

16. *Cucumaria frauenfeldi* n. sp.

Semper notices, on p. 236 of his monograph of the Holothurians, a *Cucumaria* from Java in the Vienna Museum, which v. Frauenfeld intended to describe. He figures the calcareous corpuscles of this species on Pl. XXXIX, fig. 22. According to Semper this species belongs to the group of *Cucumaria frondosa*, notwithstanding its being provided with rather numerous calcareous corpuscles. Among the Holothurians of the Leyden Museum I find three specimens of a *Cucumaria*, which I take to be identical with the Vienna specimen on account of their appearance and of the shape of the calcareous corpuscles. One of the specimens is labelled: Cape of Good Hope; the two others bear no indication of locality. To avoid confusing the literature any further by this nameless species, I have taken leave to name it after Mr. v. Frauenfeld.

17. *Ocnus javanicus* SLUITER.

Sluiter, Natuurk Tijdschr. v. Nederlandsch-Indië. XI. 1880. p.p.  
9—12 des Separatabdruckes. Taf. IV.

One specimen from Java and two typical specimens also from Java, presented to the Museum by Sluiter.

18. *Colochirus quadrangularis* SELENKA (LESSON sp.)

Holothuria quadrangularis Lesson, Centur. Zoolog. 1830—32.  
p.p. 90—91. Taf. 31. Fig. 1. — Colochirus quadrangularis  
Selenka, Zeitschr. f. wissensch. Zool. XVIII. 1868. p. 112  
(partim). — Semper, Holothurien. 1868. p. 271.

One specimen from Macassar and one from Sumatra.

19. *Colochirus tuberculatus* SEMPER (QUOY et  
GAIMARD sp.)

Holothuria tuberculosa Quoy et Gaimard, Voy. de l'Astrolabe.  
Zool. T. IV. 1833. p. 131. — Semper, Holothurien. 1868.  
p. 271.

Three specimens from Amoy and one from Macassar.

20. *Pseudocucumis acicula* LUDWIG (SEMPER sp.)

Ludwig, Arbeiten zool. zootom. Institut Würzburg. II. 1874.  
p. 14. Fig. 17. — Semper, Holothurien. 1868. p. 270.

One specimen from Ceram.

21. *Actinocucumis typica* LUDWIG.

Ludwig, Arbeiten zool. zootom. Institut Würzburg. II. 1874.  
p.p. 15—16. Fig. 24.

One specimen from Amoy.

22. *Psolus phantapus* JÄGER (STRUSSENFELDT sp.)

Holothuria phantapus Strussenfeldt, Art. Holm. 1765. p. 265.  
Taf. 10. — Psolus phantapus Jäger, De Holothuriis. 1833.  
p. 21. — Semper, Holothurien. 1868. p. 272. — Ljungman,  
Öfvers. K. Vetensk.-Akad. Förhandl. 1879. p. 130.

One specimen from Norway.

23. *Psolus fabricii* LÜTKEN (DÜBEN et KOREN sp.)

*Cuvieria fabricii* Düben och Koren X. Vetensk. Akad. Handling. (för 1844) 1846. p. 316. — *Psolus fabricii* Lütken, Oversigt over Grönlands Echinodermata. 1857. p.p. 13—15. — Semper, Holothurien. 1868. p. 272. — v. Marenzeller, Coelenterat., Echinod. u. Würmer der öst.-ung. Nordpol-Expedit. Wien. 1877. p. 32.

Three specimens from Greenland, one from Grand Manan, and one from the Bay of Massachusetts, the latter from a depth of 20—30 fathoms.

24. *Thyone briareus* SELENKA (LESUEUR sp.)

*Holothuria briareus* Lesueur, Journ. Acad. Nat. Sc. Philadelphia. Vol. IV. 1824. p.p. 161—162. — *Thyone briareus* Selenka, Zeitschr. f. wissenschaft. Zool. XVII, 1867, p. 353. — Semper, Holothurien. 1868. p.p. 272—273.

Two specimens from Charleston.

25. *Thyonidium magnum* n. sp.

The only available fragment, obtained at Amboina, consists of no more than the anterior body-region, measures 7.5 cm. in length and encloses no internal organs except the pharynx. The colour of the whole fragment is bright yellowish brown, the tube-feet and the tentacles being of a darker brown. Round the mouth are placed twenty larger and smaller tentacles, arranged in the way which is characteristic for the genus; the five pairs of large tentacles are 7 mm. thick at their root and are 45 mm. long; the five pairs of small ones, alternating with the others are 2 mm. thick at their root and are 7 mm. long. The insertion of the small tentacles is somewhat farther inwards than is that of the large ones. The calcareous ring has a length of 7 cm.; it is elongated posteriorly and spirally coiled, as is also the case in other species of this and of the allied genera (*Cucumaria*, *Thyone*). At the posterior end of the calcareous ring is suspended a water-tube (stone-canal) which is 2 cm. long and ends in a small truncated protuberance, and 4 tubular Polian vesi-

cles, each of which measures 15—18 cm. in length. The calcareous corpuscles of the integument are small disks measuring 0.07 mm. in length and 0.05 mm. in width. They are pierced in the middle by 4 diametrically opposite openings, and peripherally by numerous, much smaller openings.

In the direction of the longitudinal axis of the disk two vertical calcareous rods 0.04 mm. high and terminating at their tips in 2 to 4 prongs are situated on the calcareous material which separates the four larger openings. These rods are united together by a transverse bridge about on the middle of their height.

In the anterior parts of the body the tube-feet are present only on the radii; as far as I can judge from the present fragment, they are distributed further backwards on the interradii also.

A more detailed description of this species can only be given when more complete specimens are available.

### ASPIDOCHIROTAÆ.

#### 26. *Stichopus regalis* SELENKA (CUVIER sp.)

*Holothuria regalis* Cuvier, Règne animal. 1817. — *Stichopus regalis* Selenka, Zeitschr. f. wissensch. Zool. XVII. 1867. p.p. 317—318. Taf. XVIII. Fig. 32. — Semper, *Holothurien*. 1868. p. 275. — Ludwig, *Mittheil. zool. Station Neapel*. I. 1879. p. 569.

One specimen from Naples.

#### 27. *Stichopus ananas* SEMPER (JÄGER sp.)

*Trepang ananas* Jäger, *De Holothuriis*. 1833. p. 24. Tab. III, Fig. 1. — *Stichopus ananas* Semper, *Holothurien*. 1868. p. 275. — Ludwig, *Zeitschr. f. wissensch. Zool.* XXXV. 1881. p.p. 591—592.

One specimen from the Bay of Geelvink.

#### 28. *Stichopus chloronotus* BRANDT.

Brandt, *Prodrom*. 1835. p. 50. — Semper, *Holothurien*. 1868. p. 275. — Ludwig, *Zeitschr. f. wissensch. Zool.* XXXV. 1881. p. 591.

Four specimens from the Indian Ocean and one from Macassar.

29. *Stichopus variegatus* SEMPER.

Semper, Holothurien. 1868. p. 275.

Two specimens from the Indian Ocean and one from Timor.

30. *Mülleria lecanora* JÄGER.

Jäger, de Holothuriis. 1833. p. 18. — Semper, Holothurien. 1868. p. 276. — Ludwig, Zeitschr. f. wissensch. Zool. XXXV. 1881. p.p. 592—593.

One specimen from Timor.

31. *Mülleria mauritiana* BRANDT (QUOY et GAIMARD sp.)

Holothuria mauritiana Quoy et Gaimard, Voy. de l'Astrolabe Zool. T. IV. 1833. p. 138. — Mülleria mauritiana Brandt, Prodröm. 1835. p. 74. — Semper, Holothurien. 1868. p. 276.

One specimen from Padang, one from Amboina, one from Java and one without indication of locality.

32. *Mülleria echinites* JÄGER.

Jäger, De Holothuriis. 1833. p.p. 17—18. Taf. 3, Fig. 6. — Semper, Holothurien. 1868. p. 276.

Two specimens from the Indian Ocean and one from Padang.

33. *Mülleria miliaris* BRANDT (QUOY et GAIMARD sp.)

Holothuria miliaris Quoy et Gaimard, Voy. de l'Astrolabe, Zool. T. IV. 1833. p. 137. — Mülleria miliaris Brandt, Prodröm. 1835. p. 74. — Semper, Holothurien. 1868. p. 276. — Ludwig, in Kossmann's Ergebnisse einer Reise nach dem rothen Meere. 1880. p. 7 des Separatabdruckes.

One specimen from the Indian Ocean, one from Amboina, one from Padang, two from Timor and one *sine patria*.

34. *Holothuria monacaria* LESSON.

Lesson, Centur. Zool. 1830. Taf. 78. p. 225. — Semper, Holothurien. 1868. p. 276.

Two specimens from Waigeou, one from Celebes and one *sine patria*.

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35. *Holothuria decorata* v. MARENZELLER.

v. Marenzeller, Verhandl. zool.-bot. Gesellsch. Wien. 1881. p.p. 137—139. Taf. V, Fig. 12.

One incomplete specimen from Japan was examined, which I identify with *H. decorata* only with considerable doubt; for although the calcareous corpuscles are the same, the integument is very thick, whereas v. Marenzeller remarks that the integument is thin.

36. *Holothuria graffei* SEMPER.

Semper, Holothurien 1868, p. 276.

Two specimens from Timor.

37. *Holothuria marmorata* SEMPER (JÄGER sp.)

Bohadschia marmorata Jäger, De Holothuriis. 1833. p.p. 18—19. — *Holothuria marmorata* Semper, Holothurien. 1868. p. 277. — Ludwig, Zeitschr. f. wissensch. Zool. XXXV. 1881. p.p. 594—595.

Two specimens from the Geelvink-bay and one from Amboina.

38. *Holothuria scabra* JÄGER.

Jäger, De Holothuriis. 1833. p. 23. — Semper, Holothurien 1868. p. 277. — Ludwig in Kossmanu's Ergebnisse einer Reise nach dem rothen Meere. 1880. p. 6 des Separatabdruckes.

Three specimens from Macassar, two from Banka, one from Timor, and nine *sine patria*.

39. *Holothuria argus* SEMPER (JÄGER sp.)

Bohadschia argus Jäger, De Holothuriis. 1833. p. 19. Taf. 2, Fig. 1. — *Holothuria argus* Semper, Holothurien. 1868. p. 277.

Three specimens from Timor, one from Padang, one from Waigeou and one *sine patria*.

40. *Holothuria vagabunda* SELENKA.

Selenka, Zeitschr. f. wissensch. Zool. XVII. 1867. p. 334. Taf. XIX, Figs. 75—76. — Semper, Holothurien. 1868. p. 277. — Ludwig, Arbeit. zool.-zootom. Institut Würzburg. II. 1874. p.p. 36—37. Fig. 40. — Ludwig, Zeitschr. f. wissensch. Zool. XXXV. 1881. p.p. 595—596.

One specimen from Java.

41. ***Holothuria impatiens*** GMELIN (FORSKAL sp.)

*Fistularia impatiens* Forskal, *Descript. anim. etc.* 1775. p.p. 121—122. Taf. 39, Fig. B. — *Holothuria impatiens* Gmelin, *Systema naturae*. Ed. XIII. 1788. p.p. 3142—3143. — Semper, *Holothurien*. 1868. p. 277. — Ludwig, *Arbeit. zool.-zootom. Institut Würzburg*. II. 1874. p. 36. Fig. 51. — Ludwig, *Mittheil. zool. Station Neapel*. I. 1879. p. 569. — Ludwig, in *Kossmann's Ergebnisse einer Reise nach dem rothen Meere*. 1880. p. 6 des Separatabdruckes.

Two specimens from Timor, one from Banda, one from Amboina and four *sine patria*.

42. ***Holothuria tenuissima*** SEMPER.

Semper, *Holothurien*. 1868. p. 277.

Two specimens from the Indian Ocean, one from Timor, six from Padang and three *sine patria*

43. ***Holothuria fusco-punctata*** JÄGER.

Jäger, *De Holothuriis*. 1833. p. 23. — Semper, *Holothurien*. 1868. p. 277.

One specimen *sine patria*.

44. ***Holothuria martensii*** SEMPER.

Semper, *Holothurien*. 1868. p. 277.

One specimen from Celebes and one from Banda.

45. ***Holothuria verrucosa*** SELENKA.

Selenka, *Zeitschr. f. wissensch. Zool.* XVII. 1867. p. 338. Taf. XIX, Fig. 88. — Semper, *Holothurien*. 1868. p. 278.

One specimen from the Indian Ocean and two *sine patria*.

46. ***Holothuria lineata*** LUDWIG.

Ludwig, *Arbeit. zool.-zootom. Institut Würzburg*. II. 1874. p. 27. Fig. 42. — Ludwig, in *Kossmann's Ergebnisse einer Reise nach dem rothen Meere* 1880 p. 7 des Separatabdruckes.

One specimen *sine patria*.

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47. *Holothuria pardalis* SELENKA.

Selenka, Zeitschr. f. wissensch. Zool. XVII. 1867. p. 336. Taf. XIX, Fig. 85. — Semper, Holothurien. 1868. p. 278.

One specimen *sine patria*.

48. *Holothuria atra* JÄGER.

Jäger, De Holothuriis. 1833. p. 22. — Semper, Holothurien. 1868. p. 278. — Ludwig, Zeitschr. f. wissensch. Zool. XXXV. 1881. p. 596. — Ludwig, in Kossmann's Ergebnisse einer Reise nach dem rothen Meere. 1880. p. 6 des Separatabdruckes.

Four specimens from Macassar, seven from Timor, six from Amboina, one from Padang, one from Djedda, two from the Indian Ocean and one *sine patria*.

49. *Holothuria fusco-cinerea* JÄGER.

Jäger, De Holothuriis. 1833. p. 22. — Semper, Holothurien. 1868. p. 278.

One specimen from Japan.

50. *Holothuria edulis* LESSON.

Lesson, Centur. Zool. 1830. p.p. 125—126. Taf. 46, Fig. 2. — Semper, Holothurien. 1868. p. 278.

Fifteen specimens from Amboina, four from Celebes, one from Java and one from Timor.

51. *Holothuria rugosa* LUDWIG.

Ludwig, Arbeit. zool.-zootom. Institut Würzburg. II. 1874. p. 34. Fig. 33.

One specimen from Waigeou.

52. *Holothuria lubrica* SELENKA.

Selenka, Zeitschr. f. wissensch. Zool. XVII. 1867. p. 329. Taf. XVIII. Figs. 59—60. — Semper, Holothurien. 1868. p. 279.

Two specimens from Sanghir, Molucca's.

## NOTE XI.

LIST OF REPTILES AND AMPHIBIANS BROUGHT  
FROM BRITISH INDIA BY M<sup>R</sup>. FRANCIS DAY

DRAWN UP BY

**Dr. A. A. W. HUBRECHT.**

In addition to the extensive collection of fishes which Mr. F. Day has brought home from India and which has furnished the material for his important and well-known standard works on the ichthyology of the Indian continent <sup>1)</sup> — the able counterparts of Bleeker's Atlas of the Fishes from the Archipelago — this gentleman had occasion to bring together a small collection of reptiles and amphibians from the same region. The specimens being as a rule very well preserved and the exact locality of their capture carefully noted, it may perhaps be worth while to give a list of the specimens contained in the collection. Addition to our knowledge of the distribution of some of the species may thus be acquired. It must be noted that some few of the specimens were not collected by Mr. Day himself but presented to him by Dr. Stoliczka, the able naturalist who did such good service in the advancement of our knowledge of the countries he explored.

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1) F. Day. The fishes of Malabar. London. 1865.

— The fishes of India, Burma and Ceylon. London. 1878.

The collection was handed over to me for identification of the species by Mr. Day, who has generously presented it to the Leyden Museum.

## REPTILIA.

### *Varanus dracaena* L.

One specimen from Sind, one from Suddaya.

### *Acanthodactylus cantoris* Gthr.

Eighteen specimens from Sind.

### *Euprepes rufescens* Shaw.

One specimen from Calcutta, others from Jubbulpore, Bombay. Whereas the latter are darkbrown, the first is a gray variety.

There is another specimen in the collection, representing a rather interesting variety. The postfrontals form a broad suture together, as they do in *E. monticola* Gthr. to which species the coloration also closely resembles. Moreover there is a white vertical band as was noted for the variety *trivittata* Gray. The three-keeled scales, however, constitute its principal difference from *E. monticola*.

The specimen came from Sind.

### *Euprepes macularius* Blyth.

Specimens from Calcutta and Suddaya.

### *Mabouia maculata* Blyth.

Five specimens from Darjeeling collected by Dr. Stoliczka.

### *Eumeces modestus* Gthr.

Specimens from the Punjab, Simla and the Himalayas.

### *Eumeces albopunctatus* Gray.

Five specimens were collected by Dr. Stoliczka in Calcutta.

### *Hemidactylus frenatus* D. & B.

Specimens from Hurdwar, Bombay, Assam.

***Hemidactylus coctaei*** D. & B.

Specimens from Hurdwar.

***Eublepharis fasciolata*** Gthr.

Five specimens from Sind, two of which are young ones; the latter having a larger number of cross bands, viz. five on the body and six on the tail, which are moreover darker.

***Sitana minor*** Gthr.

Specimens from Parisnath and Bombay, the former collected by Dr. Stoliczka.

***Calotes versicolor*** Daud.

Specimens from Coonoor, Hurdwar (N.-W. Provinces), Sind, Darjeeling, Bombay, Madras.

***Calotes nemoricola*** Jerd.

Two specimens from Jubbulpore.

***Uromastix hardwickii*** Gray.

Eleven specimens from Sind.

***Charasia dorsalis*** Gray.

Specimens from Coonoor, Madras.

***Stellio tuberculatus*** Gray.

Eight specimens of different sizes from Hurdwar in the N. W. provinces.

Three specimens from Chumba which are of a much darker ground colour and which are provided with much less strongly carinated scales on the back and limbs would answer to the variety described by Blyth as *Stellio indicus*.

***Trapelus isolepis*** Jerd.

Three specimens from Sind which were compared with

Jerdon's type specimens in the British Museum. The smallest specimen of the three exactly corresponds with Jerdon's, the two others are of a larger size and have lost the distinct markings of the young specimens. They have nevertheless retained the characteristic longitudinal stripes on the chin.

***Typhlops brahinus*** Daud.

From Coonoor.

***Geophis microcephalus*** Gthr.

A uniform brown variety, collected near Madras. Only on the underside of the head and neck a little white is visible.

***Compsosoma hodgsoni*** Gthr.

A young and an adult specimen from Simla. In the young specimen alternating brown and black transverse bands are present: the latter caused by coloration of the margin of the scales.

***Ptyas mucosus*** L.

One very large specimen from Simla.

***Zamenis diadema*** Schleg.

Four specimens from Sind, three of which have not the characteristic row of scales under the eye, a defect which I similarly noticed in a specimen of *Z. diadema* from Southern Persia now in the British Museum. That collection moreover contains several specimens of *Z. diadema* from India not yet noticed in the Catalogues hitherto published.

***Zamenis himalayanus*** Steindachner.

One specimen (most probably from Simla, the exact indication was unfortunately lost) of this rare snake which I had occasion to compare with the specimens preserved in the British Museum. A specimen of *Bufo vulgaris* was

found in its stomach. A certain amount of variation appears to prevail in this species, the pholidosis on the head of Dr. Day's specimen only corresponding entirely with the right side of two of the British Museum specimens (three postoculars, two elongated temporals) whereas the left side of the same animal was different. The difference with the third specimen was even more considerable.

***Tropidonotus quincunciatus*** Schleg.

Specimens from the N. W. Provinces, Sind and Simla. The number of the ventral scutes varies from 151 to 157, that of the subcaudals from 62 to 82. In the specimen from Simla the 4th and 5th upperlabials are united into one plate.

***Tropidonotus platyceps*** Blyth.

Three specimens from Simla.

***Tropidonotus stolatus*** L.

Two specimens from Madras.

***Tropidonotus plumbicolor*** Cantor.

Two specimens from Madras.

***Tragops prasinus*** Reinw.

A green and a brown variety from Suddya.

***Dipsas multifasciata*** Blyth.

One specimen from Simla in which there are 108 subcaudals.

***Lycodon striatus*** Shaw.

One specimen from Simla.

***Naja tripudians*** Merr.

A specimen from Madras.

***Bungarus coeruleus*** Schneid.

One specimen from Sind.

***Hydrophis jerdoni*** Gray.

A specimen from the Indian Ocean.

***Hydrophis cantoris*** Gthr.

One specimen from Madras distinguished by having no less than 26 shields round the neck, whereas twenty-three were noted by Günther.

***Hydrophis curta*** Shaw.

Three specimens from the Sunderbunds. The occipital plates in one of the specimens are entire, in the two others they are more or less subdivided.

Young specimens of *Arius* sp. were found in the stomach of two of these snakes.

***Halys himalayanus*** Gthr.

Specimens from Simla, differing from Günther's original description by the presence of only 21 transverse rows of scales. Similar specimens were noticed by Steindachner (Novara Reise, p. 87), Blanford and Anderson. The throat in one of the specimens (young) is black, in another (more advanced in age) yellow.

***Echis carinata*** Schneid.

One specimen from Sind.

## AMPHIBIA.

***Rana cyanophlyctis*** Schneid.

Four specimens from Hurdwar, one from Simla, the largest specimen being distinguished by having the belly marbled.

***Rana tigrina*** Daud.

A large specimen from the N. W. Provinces.

Notes from the Leyden Museum, Vol. IV.

***Rana liebighi*** Gthr.

One specimen from Simla.

***Pyxicephalus breviceps*** Schneid.

One specimen from Bombay, in which the markings on the back and the median line are however absent.

***Bufo vulgaris*** Laur.

Three specimens from Simla.

***Hylorana malabarica*** D. & B.

Two specimens from Coonoor.



## NOTE XII.

THE PSELAPHIDAE AND SCYDMAENIDAE FROM THE  
SUNDA-ISLANDS IN THE LEYDEN MUSEUM.

BY

**Dr. L. W. SCHAUFUSS** <sup>1)</sup>.***Pselaphidae.***1. *Bythinus atomus*, n. sp.

Rufo-testaceus, pubescens, abdomine castaneus, breviter obovatus; capite cum oculis triangulari; thorace rotundato-subcordato, majore quam caput; elytris caput thoracemque longitudine aequantibus, latioribus, striis suturali integra, discoidali ad mediam partem obsoleta; abdominis segmentis primo et quinto latioribus, subaequalibus, 2—4 angustis; femoribus clavatis. — Long.  $\frac{3}{5}$  mm., lat. fere  $\frac{1}{4}$  mm.

Hab. Batavia (de Gaverre and Sijthoff). — Not rare.

Eyes large, prominent, black, coarsely granulate. — Maxillary palpi: the terminal joint as long and half as thick as the breadth of the eyes, short-oval, slightly acuminate, pale yellow. (Unfortunately I cannot make a more careful examination of the few and partly imperfectly preserved specimens. It is not impossible that I have overrated the size and the thickness). — Antennae: joint 1 and 2 large, globose, 3 to 7 very small, moniliform, 8 twice as broad as thick, broader than 7; 9 and 10 trans-

1) See also *Tijdschrift voor Entomologie*. Vol. XXV. p. 65.

verse, 10 broader than 9, 11 very thick and large, short-oval, more than four times as broad and five times as long as 3. — The femora, especially those of the intermediate legs, are strongly swollen at the basal third. — The coxae are sub-contiguous, those of the hind legs very large, occupying two fifths of the breadth of the abdomen. — There are five abdominal segments; the first and fifth are very broad, the latter broader than the former, the 2nd to 4th narrow, when taken together they are as broad as the first.

This species seems to be allied to the genus *Cercocerus* Motsch.; the palpi are somewhat too stout and too long for the genus *Bythinus*.

## 2. *Panaphantus squamiceps*, n. sp.

Rufo-sanguineus, nitidus, ochraceo-pilosulus, segmentis abdominalibus supra et subtus, elytris posticis, thoracis foveola lateribusque dense squamosis; capite subrotundato, apice porrecto, opaco, ruguloso, ochraceo-pilifero, inter oculos triimpresso subcanaliculatoque; thorace subcordato, antice subconstricto, nitido, supra laxe cribrato-punctato; elytris parum convexis, postice dilatatis, nitidis, quadristriatis, interstitiis suturali seriatim, reliquis disperse punctulatis piliferisque. — Long.  $1\frac{1}{2}$  mm., lat.  $\frac{2}{3}$  mm.

Hab. Batavia (Sijthoff). — Common.

Antennae as long as the head and prothorax taken together, approximate, inserted under a projection which is placed before and between the eyes. The first joint twice as long as broad, cylindrical, the 2nd as thick as the first, quadrate, the 3rd to 7th a little narrower, moniliform but nevertheless broader than long, the 8th and 9th hardly broader, the 10th and 11th forming a club, the 10th almost as broad as the length of the first, the 11th three times as long as and nearly one half broader than the 10th. — Maxillary palpi very small, filiform, slightly dilated towards the tip, the two apical joints together scarcely as long as the 2nd antennal joint, and four times as

long as broad, bluntly acuminate at the tip. — Eyes very large, coarsely granulate. — Head densely squamose, opaque, impressed between the eyes. — Thorax inversely heartshaped, contracted in front superiorly as well as laterally, provided before the scutellum with a large groove which is densely tomentous as are the margins; glossy, distantly covered with small round pits. — Elytra: the sides nearly straight, widened towards the end, the angles rounded. The sutural stria entire, impressed at the base, the dorsal stria slightly curved inwards at the end. Along the suture, between this and the sutural stria, a row of punctures is present, the other intervals are distantly, nearly serially punctured and similarly beset with short and thick erect yellow hairs, which are more closely set on the sides and on the hindborder. The insect has whitish wings which are faintly transparent. — The abdominal segments are, above and beneath, densely margined at the base with yellowish white; behind the base erect white hairs are present which are less close together. — The femora are hardly thickened, slightly convex above. Those of the intermediate legs at the tip provided with a spine, at the base somewhat concave. — The first tarsal joint distinctly separated, small, as long as broad, the succeeding ones lepismatiform; the claw simple.

I have classed this species in the genus *Panaphantus*, although the shape of the palpi does not agree with the figure given by von Kiesenwetter; the diagnosis: »palpi max. art. penult. parvo, ult. ovato, subacuminato” admits of very numerous and varied interpretations.

### 3. *Zethus batavianus*, n. sp.

Brunneus, cribrato-punctatus, breviter disperse pilosus, ore pedibusque testaceis, elongato-obovatus; capite transverso, apice subtus rotundato, ante basin leviter curvato, medioque lineola abbreviata impresso; elytris subquadratis, antice parum angustatis, lateribus rotundatis, cribrato-

punctatis, striis suturali integra. discoidali ad basin solum notata; abdominis segmentis tribus primis subaequalibus, convexis. — Long.  $1\frac{1}{3}$  mm., lat. fere  $\frac{1}{2}$  mm.

Hab. Batavia (Sijthoff). — Not abundant.

Neck closely punctured, gullet with a longitudinal channel, the chin convex, impressed anteriorly, provided on both sides with a callosity before which small setae are present; underlip twice as long as broad, emarginated in a curvilinear manner on both sides. The lateral longitudinal groove of the head, in which the maxillary palpi are lodged, is better visible from below than from above. The upperlip is broad; it has rounded angles and projects over the underlip in roofshape. — The intermediate coxae are large, nearly globose, and as well as the anterior ones contiguous; the posterior coxae are oblong, plain, subcontiguous. — Wings are present. — The abdominal segments margined.

Differs from *Z. opacus* Schauf. by the elytra which are convex, and rounded at the sides, by the abdomen which is somewhat widened towards the end, by the head which is larger and rounded in front, and finally by the size.

#### 4. *Bryaxis siamensis*, Schauf.

(Schaufuss, Pselaphiden Siam's. Dresden, 1877. p. 9).

Abundant in Java: East Java (Mulié); Batavia (de Gaverre and Sijthoff).

To the description, which was made at the time from a unique specimen, I may now add the following:

Above the insertion of the antennae are two small tubercles behind which an oblique shallow impression which is directed backwards, may be observed. The shining lustre behind the tubercles may easily lead to the assumption that an impression is present: this is however an optical illusion in the majority of the cases, as I only succeeded in finding a real small pit in two specimens. — The 11th antennal joint is the largest, short, inversely ovate, slightly acuminate; the penultimate one nearly globose, the first

and 2nd somewhat longer than broad, but little stouter than the succeeding ones.

The male shows on the middle of the head sometimes a very shallow small groove. The metasternum is widely- and deeply-, the fourth abdominal segment deeply-impressed; the first abdominal segment is broad, notched in the middle.

The female shows only a feeble impression on the metasternum; the abdominal segments have no peculiar characteristics.

The Javan individuals have the thorax somewhat wider than my type specimen from Siam. In many specimens the base of the thorax, the suture as well as the abdomen are slightly brownish.

#### 5. *Bryaxis cordata*, Schauf.

(Schaufuss, Pselaphiden Siam's. Dresden, 1877. p. 9).

Very common in Java.

A well preserved specimen from Batavia (Sijthoff) shows a richer pubescence on the elytra and on the thorax which makes it appear opaque. In many specimens a small oblong groove may be observed on the vertex; this groove is much smaller than the three other cephalic grooves. — The first abdominal segment has on the uppersurface on both sides a transverse line (longitudinal when seen from above).

The milkwhite opalescent wings are longer than the insect.

#### 6. *Bryaxis Fonensis*, Schauf.

(Schaufuss, Pselaphiden Siam's. Dresden, 1877. p. 10).

A single specimen from Batavia (Sijthoff).

When it is full coloured the insect has brighter tarsi, antennae and palpi.

#### 7. *Euplectus acuminatus*, n. sp.

Rufo-ferrugineus, disperse punctulato-pilifer; capite antice curvato impresso, medio elevato; thorace obcordato,

profunde trifoveolato, foveolis linea supra basin conjunctis, antice medio longitudinaliter linea impressa, basi emarginata, angulis posticis excisis, lateribus breviter unispinulosis; elytris quadratis, subconvexis, fere lineatim disperse punctulato-piliferis, striis suturali integra, discoidali apice evanescente; segmentis abdominis tribus primis aequalibus, utrinque medio plicatuliformiter impressis. — Long.  $1\frac{1}{6}$  mm., lat.  $\frac{2}{5}$  mm.

Hab. Batavia (Sijthoff). — Appears to be rare.

Maxillary palpi: the terminal joint as long as the terminal joint of the antennae and as broad as one third of its own length, acuminate towards the tip. — The club of the antennae 3-jointed. The first and 2nd joints of the antennae thickened, 3rd to 8th moniliform, a little broader than long, 9 strongly transverse, one half broader than long, 10 broader than 9, short, conical, nearly as broad as 11. — The head is provided with a deep horse-shoe-shaped impression of which the convexity is directed forwards and the sides grooved behind. — By the emargination of the hind angles of the thorax a small acute spine is formed before the middle of the lateral margins; the external hind angles of the elytra are acute. — The abdomen is not margined, smooth beneath, distantly punctured at the borders, the punctures beset with rather long decumbent hairs. — The hind coxae are not contiguous; I must for the present suspend my judgment as to the question whether this may authorize us to place this insect in the genus *Philus*.

#### 8. *Batrisus Ritsemae*, n. sp.

Castaneus, nitidus, longe ochraceo-hirsutus, amplus, abdomen cum elytris breviter ovalibus, convexis; antennis robustis, moniliformibus, articulis tribus ultimis parum majoribus, non clavatis; capite inter et post antennis impresso; thorace rotundato-cordato, basi plicatim-foveolato et curvatim-impresso; humeris parum sed distincte prominulis; tibiis curvatis, anticis fere angulatis. — Long.  $1\frac{1}{2}$  mm., lat. fere 1 mm.

Hab. Sumatra: Benkoelen (Leembrugge). — Not rare.

The basal impression of the thorax sends towards the scutellum an impressed line, whereas the base itself is impressed by several pits. — The elytra are very finely and distantly punctured, glossy, and, as well as the whole insect, very densely covered with erect long hairs.

The insect would belong to Motschulsky's genus *Harmophorus* <sup>1)</sup> (to the further consolidation of which I do not however wish to contribute as yet), when the Author had not written: »la forme du corselet rapproche ce genre des *Centrophthalmus* et des *Tyrus*», which is not well applicable to *B. Ritsemae*. The terminal joint of the maxillary palpi is very fine, setiform. The rest agrees.

Dedicated to Mr. C. Ritsema Cz., who has kindly sent me in communication the Pselaphidae and Scydmaenidae of the Leyden Museum.

#### 9. *Batrisus fundaebraccatus*, n. sp.

Rufo-sanguineus, nitidus, disperse ochraceo-pilosellus; femoribus posticis apice valde clavatis, cavatis, cavea extus dentata; capite inter antennis impresso, inter oculos bifoveolato, fronte lineola longitudinali impresso; thorace valde cordato, longitudinaliter tri- et basi impresso, foveis tribus conjunctis, basi utrinque plicato; elytris pilosulis, subquadratis, subconvexis, antice rotundatis, humeris vix spinulose prominentibus, striis suturali discoidalique distinctis; abdominis segmento primo maximo, basi utrinque minute plicatuliformiter impresso. — Long. 1½ mm., lat. ⅔ mm.

Hab. Batavia (Sijthoff). — Not abundant.

This species is well characterized by the strongly swollen hind femora (♂?) which are hollowed out, and provided at the margin of the opening of the cavity with one or more small teeth.

The antennae are a little longer than the head and tho-

1) *Bulletin de Moscou*. 1851. Separate copy p. 12.

rax taken together. The first joint is stout, nearly quadrangular, the 2nd hardly larger than one of the joints 3—7 which are moniliform, joints 8—11 form a loosely coherent, but little thickened club.

The thorax has a small spine on each side posteriorly, similar to that on the shoulders but more distinct.

10. *Batrisus sculpturatus*, n. sp.

Castaneus, nitidus, ore pedibusque testaceis, obsolete disperse punctulatus. pilifer; capite quadrato, angulis posticis rotundatis, inter oculos bifoveolato, inter antennis biimpresso; thorace cordato, subtiliter punctulato, basi utrinque dense punctato foveolatoque, utrinque longitudinaliter et supra basin lineâ impressâ; elytris nitidis, dense punctato-pilosis, striis suturali et discoidali apice evanescentibus, interstitiis convexis, humeris distinctis; abdominis segmento primo supra utrinque valde exciso et medio utrinque minute dentato, intus utrinque sculpturato, apice medio cornutulo. — Long. fere 2 mm., lat.  $\frac{3}{4}$  mm.

Hab. Java or.: Ardjoeno (Hekmeyer). — A single specimen.

The first joint of the palpi is as long as or longer than the 3rd, thin, slightly thickened from the middle towards the tip, a little curved; the 2nd joint small, triangular, longer than broad; the 3rd joint has the shape of an elongate parallelogram. The palpi are still brighter than the tarsi. — The antennae are long and slender, beset with setae, each joint clearly separated, the first thickened, longer than broad, emarginated superiorly in front, obliquely truncated forwards and outwards forming a point at one side only, joints 2—8 one and a half to twice as long as broad, gradually increasing in length, 9 and 10 thicker, larger, oval, 11 two thirds of the length of joints 9 and 10 taken together, nearly oval, acuminate. — Head slightly impressed longitudinally between the antennae and provided with two grooves between the eyes. — Thorax heartshaped, shallowly and dispersedly punctured and be-



set with setae; on the sides there is a longitudinal impressed line which is directed towards the hind angles; from there an impressed transverse line runs along the base; this line is very shallow in the middle and bends towards a small groove before the scutellum. — The elytra together with the abdomen form an oval which is shortened anteriorly and posteriorly; both are closely punctured, convex; the last segment occupies when seen from above the whole abdomen; it is deeply notched on both sides, truncated in the middle superiorly, the truncation provided on both sides with small teeth, and inferiorly to the notch on both sides (inwardly) a few deeply impressed lines are present. These lines are directed backwards, whereas posteriorly they show a small tubercle in the middle.

I could not venture the risk of further researches upon the unique specimen.

11. *Centrophthalmus quadristriatus*, Schauf.

(Schaufuss, Pselaphiden Siam's. Dresden, 1877. p. 22).

Batavia (Sijthoff); Java or. (Mulié). — Not rare.

12. *Centrophthalmus punctipennis*, Schauf. var.  
*punctatissimus*, Schauf.

(Schaufuss, Pselaphiden Siam's. Dresden, 1877. p. 22).

A specimen from Batavia (de Gavere) which is in a much better condition than my type specimen. The insect is rather densely covered with hairs above and beneath. The terminal joint of the antennae is globose.

13. *Enoptostomus javanus*, n. sp.

Rufo-testaceus, subopacus; antennarum clava fere cylindrica, dimidiâ antennarum longitudine; capite inter oculos bifoveolato; thorace subgloboso, antice constricto, basi unifoveato; elytris subnitidis, breviter ochraceo-piliferis, postice dilatatis, striis suturali et discoidali integris, ad basin profunde impressis, apice et segmentis abdominali-

bus primis basi dense ochraceo pilosis. — Long.  $1\frac{1}{3}$  mm., lat.  $\frac{1}{2}$  mm.; antenn. long.  $\frac{3}{4}$  mm.

Hab. Java (Raadt). — Rare.

Maxillary palpi: the 2nd joint reniform, narrower than the 3rd, provided on the outside with a fine hair, posteriorly bent inwards, narrowed; the 3rd joint a little longer than the 2nd, the elongate lateral point from tip to base as long as the arc before it; the 4th joint not longer than the 2nd, triangular, the elongate lateral point but short. — Antennae: the first joint a little longer than broad, the 2nd quadrate, the 3rd—7th smaller, globose, 8th—11th cylindrical, hardly widened towards the tip; 9th and 10th, which are obliquely truncated, shorter than the 8th or 11th, the apical joint rounded at the tip. — The head with the large prominent eyes wider than long, strongly narrowed before the eyes, widening out again behind the insertion of the antennae. — The femora hardly thickened, the tibiae a little wider towards the end, but little curved. — The anterior coxae but little, the posterior ones considerably distant.

Differs from the *Enoptostomi* with which I am acquainted (*Aubei*, *opacus* Schauf., *ponticus*, *siamensis* Schauf.) by the cylindrical club of the antennae.

#### 14. *Ctenistes mitis*, n. sp.

Elongato-obovatus, pallidus, ochraceo-adpresse-pilosulus, thorace antice bi-, basi tri-alboplagiato, elytris apice, segmentis abdominalibus basi tenuiter albomarginatis; capite (sine oculis) elongato, inter oculos bifoveolato, inter antenas longitudinaliter impresso; thorace elongato, antice subangustato, convexiusculo, pilis brevibus divergentibus praedito; elytris postice parum dilatatis, leviter convexis, pilis ochraceis adpressis, striis suturali integra, discoidali apice evanescente.

♂ antennis  $\frac{4}{5}$  corporis longitudine, articulis quatuor ultimis  $\frac{1}{5}$  antennarum longitudine, 3—7 minutis, moniliformibus, 8, 10, 11 inter se longitudine aequalibus, nono

parum octavo brevior. — Long. fere  $1\frac{2}{3}$  mm., lat.  $\frac{2}{3}$  mm.

Hab. Batavia (Sijthoff). — A single specimen.

Eyes large, coarsely granulate, black, prominent. — Wings hyaline, milkwhite. — Legs long, tibiae straight, anterior femora hardly thickened, the posterior ones in the middle club-shaped.

Somewhat smaller and narrower than *Ct. palpalis* Reichb., of a pale ferruginous-yellow colour, the antennal club longer in the ♂, the abdominal segments but narrowly edged with whitish hairs. Only the suture and antennal club are a little darker coloured than the rest of the insect.

### ***Scydmaenidae.***

#### 15. *Eumicrus epopsimus*, n. sp.

Rufus, antennis pedibusque rufo-testaceis, disperse ochraceo hirsutulus, parum convexus; antennis 11-articulatis, clavâ biarticulatâ; capite subquadrato, angulis posticis rotundatis; thorace latitudine longiore, lateribus medio rotundatis, antice angustatis; elytris obovatis, disperse punctulatis, humeris distinctis; femoribus parum clavatis, tibiis rectis, ad apicem vix dilatatis. — Long. 1 mm., lat.  $\frac{2}{5}$  mm.

Hab. Batavia (de Gavere). — Rare.

Joints 3—6 of the antennae hardly longer than broad, 7 and 8 not broader, small, quadrate, 9 similar but one half thicker, 10 and 11 twice as thick, forming a stout club of two fifths of the length of the antennae; joint 9 although thicker than 8 cannot be regarded as belonging to the club. — The elytra are remotely punctured and beset with very fine hairs; on the head and thorax a fine almost imperceptible punctuation is also present. — The anterior coxae are nearly contiguous, the hind ones distant. — The metasternum is almost as large as the abdomen.

Differs from *Scydmaenus alatus* Nietn., which belongs to the genus *Eumicrus*, by its size and colour, by the

punctuation of the elytra, and moreover by the shape of the two apical antennal joints, these being of equal width. It is however allied to that species by the two-jointed antennal club.

The eyes are not prominent. — The prothorax is broadly heart-shaped, elongated anteriorly, in other words: longer than broad, the sides are strongly rounded, more narrowed in front than behind.

16. *Scydmaenus pyriformis*, Nietn.

(Ann. and Mag. of Nat. Hist. 2nd Ser. Vol. XX (1857). p. 188).

(= *brunnipennis* Motsch. Etud. ent. 1858. p. 30).

Rufus, antennarum articulis tribus ultimis obscurioribus, pedibus pallidis, longius disperse hirsutus; antennarum articulis 1—8 tenuibus, primo et secundo elongatis, 3—8 moniliformibus, clava triarticulata, nono et decimo globosis, undecimo obovato; capite majore, convexo, subquadrato, lateribus ad apicem parum angustatis, angulis posticis rotundatis; thorace hirsutulo, parum latitudine longiore, antice rotundato-ampliato, angulis posticis subrectis, basi leviter rotundata, linea utrinque plica abbreviata impressa, medio profunde bi-foveolato; elytris ovatis, lateribus rotundatis, sutura antice, basi utrinque impressis, supra disperse punctatis, hirsutulis; femoribus subelevatis, obscurioribus. — Long. 1 mm., lat.  $\frac{4}{5}$  mm.

Hab. (Ceylon); Java (Raadt); Batavia (Sijthoff). — Very common.

Both the small grooves in the basal line of the thorax are less deep and wide in the specimens from Batavia than in certain other specimens, which only bear the general indication of habitat: Java. The little fold, by which the basal line is bounded on both sides near the hind angles of the prothorax, is almost imperceptible.

The head in the female is somewhat more rounded posteriorly.

This species is easily recognized by the very remotely

punctured elytra; these as well as the prothorax, perhaps also the head, are beset with long yellow glossy hairs, which are somewhat decumbent and quite as distant as the punctuation of the elytra.

Ober-Blasewitz near Dresden, December 13th, 1881.

## NOTE XIII.

A NEW AFRICAN SPECIES OF THE COLEOPTEROUS  
FAMILY ELATERIDAE.

DESCRIBED BY

**Dr. E. CANDEZE.***Pantolamprus auratus*, n. sp.

Cupreus, aureo-micans, nitidissimus, pilositate subtili, flavida vix visibiliter vestitus; antennis nigris; prothorace latitudine longiore, aequaliter convexo, crebre fortiterque cum fronte convexa punctato, postice partius et nitidiore, sulcato, angulis posticis nigris, carinatis; elytris parallelis, seriatim punctatis; pedibus laete rufis. — Long. 18 mm., lat. 4 mm.

Hab. Liberia: Cape Mount (Büttikofer and Sala). — A single specimen.

The species of the genus *Pantolamprus* are exceedingly variable as to size and colour, and they have not the definite value which they may have in other genera. One hardly finds two specimens which are quite similar. From the large *P. nitens* of the Gaboon to *P. perpulcher*, the smallest of all, of the Senegal, all intermediate stages are represented.

The one here described, which might perhaps be considered as a small red-legged, golden variety of *P. Dohrni*, nevertheless appears to me to deserve a distinct specific name.

Glain near Liège, February 27th, 1882.

## NOTE XIV.

DESCRIPTION OF A NEW SPECIES OF APOGONIA  
DISCOVERED BY M. L. RITSEMA IN JAVA.

BY

**D. SHARP.**

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Having recently described several species of *Apogonia* from the collection of the Leyden Museum <sup>1)</sup>, I need make no apology for adding another to the number. This species was discovered by the lamented Marius Leonard Ritsema, of the Dutch Indian medical service, who died in July last on the passage from Atjeh to Batavia, and I have with melancholy pleasure named it in honour of this esteemed physician and zealous naturalist.

*Apogonia Ritsemae*, n. sp.

Parvula, breviter oblonga, sed anterieus angustata, capite parvo, ferruginea (corpore interdum nigro-aeneo) nitida; capite fortiter punctato, clypeo late et fere profunde emarginato; thorace fortiter crebre punctato, brevi, lateribus rotundatis; elytris fortiter punctatis, lineis bigeminatis parum discretis; pygidio parvo, fortiter profunde punctato. — Long. 6—7 mm.

This is one of the smallest species of the genus, and is of short form; it will be readily identified by the

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1) *Notes from the Leyden Museum*. Vol. III (1881). pp. 220—223.

small head, with conspicuously emarginate clypeus; its position appears to be between *A. splendida* Boh. and *A. brevis* Shp. The width of the head is scarcely one half of that of the afterbody; the emargination of the clypeus is broad and very distinct, but the lobe on either side is not angulate. The thorax is short, very discontinuous in outline with the afterbody, and much rounded at the sides. The punctuation of the wing-cases is coarse, but not dense, and the double lines of punctures are not very distinct, the space separating these is broad behind, and bears some irregular punctures, but becomes narrow at the base. The front tibiae are bidentate, or very obscurely tridentate.

Hab. Java. — Found in December 1868 at Soerabaya by the late M. L. Ritsema, who moreover captured a specimen belonging to a distinct variety at Simpang in October of the same year; the species is likewise found by Mr. Hekmeyer near Mount Ardjoeno and by Dr. de Gavere at Batavia.

Thornhill, March 8th, 1882.

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## NOTE XV.

## ON THE GENUS ARAEOSTERNUS DE M.

BY

**Dr. J. G. de MAN.**

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I am sorry to have to announce that the genus *Araeosternus*, which I described some time ago as new (Notes from the Leyden Museum, Vol. III (1881) p. 131, and in Dutch in the: Tijdschrift voor Entomologie, Vol. XXV (1881/82) p. 1; pl. 1 and 2), is identical with the genus *Palimurellus*, described by Prof. Ed. von Martens in 1878 as a new form of the family of Loricata in the: »Sitzungsberichte der Gesellschaft naturforschender Freunde zu Berlin, 1878, pag. 131". Being myself acquainted with the genus *Palimurellus* by the diagnosis which Dr. George Pfeffer has given in his treatise: »Die Panzerkrebse und die Clypeastriden des Hamburger Museums, mit 1 Taf.", published in the »Verhandlungen des naturwissenschaftlichen Vereins zu Hamburg, 1880", I was the more surprised of this fact, to which Prof. von Martens called my attention after I had sent him a copy of my Dutch description and figures of the genus *Araeosternus*. Unfortunately an important slip of the pen occurs in Dr. Pfeffer's diagnosis, the author describing the sternum as being »halb so lang als breit" instead of »halb so breit als lang". I therefore supposed *Palimurellus* to be quite a different genus and created the new name of *Araeosternus* for the Indian animal.

Our Indian form however, which should henceforth be

Notes from the Leyden Museum, Vol. IV.

called *Palinurellus wienecki*, is undoubtedly a distinct species different from the American *Palinurellus Gundlachi*, described by von Martens and afterwards by Pfeffer, and may, I believe, be distinguished from it by its larger size and by the fifth pair of the ambulatory legs not being provided with a rudimentary hand.

I may finally be allowed to remark that the description of *P. Gundlachi*, given by Prof. von Martens, is rather short and incomplete and that the learned Professor did not publish a figure of that animal, and so I trust the descriptions and figures given by myself, to which I have above referred, may not be altogether superfluous.

Erlangen, March 2nd, 1882.

P. S. After this note had been sent to the press, I received the »Zoologischer Anzeiger» of March 6, 1882. In this number Dr. J. E. V. Boas of Copenhagen shows that *Palinurellus* has last year also been described by Spence Bate under the new name of *Synares* in the »Annals and Magazine of Natural History. 5th ser., vol. VII (1881) p. 220". In this paper Dr. Boas further adds some remarks concerning the affinities and the phylogeny of this interesting genus of Crustaceans.

Erlangen, March 12th, 1882.

## NOTE XVI.

TWO NEW SPECIES OF LUCANOID COLEOPTERA  
FROM SUMATRA

DESCRIBED BY

**C. RITSEMA Cz.**

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Both species here described are sent over in a single male specimen from Kotta Zuydewijn near Solok by Mr. J. H. Schagen van Leeuwen, and kindly presented to the Leyden Museum by Prof. P. J. Veth.

1. *Gnaphaloryx tricuspis*, n. sp. ♂.

Length (with mandibles) 26,5 mm. — The uppersurface is covered all over, although not densely, with an erect scale-like pubescence planted in large round punctures which are not deep but well-defined. — The mandibles are about as long as the head, porrect, their outer margin nearly straight although curved at the base and slightly sinuated between the middle and the tip, their inner margin forms a very obtuse angle so as to make the mandibles widest about the middle. The pointed tip is preceded at a short distance by a broad and very obtuse tooth which is obliquely directed forwards and upwards. About the middle of the mandibles their upper edge shows a short and broad obtuse tooth, whereas their inner edge is provided with three blunt teeth of which the anterior one is

the strongest and obliquely directed upwards and inwards; in front of this tooth a faint arc-shaped notch may be observed. The clypeus is strongly tricuspidate (whence I have derived the specific name), the anterior margin of the head slightly convex, the ocular canthus rounded, with an angular incision just behind the eyes. On the middle of the vertex the head is armed with a strong spine or horn which is directed forwards, and in front of which the head is rather deeply excavated. — The prothorax anteriorly a little wider than the head, the anterior angles broadly but not obliquely truncate, the outer angle of the truncation thickened and rather acute, the posterior angles subrounded; the lateral margins strongly concave, which makes the thorax contracted in the middle. The disk is provided with a faint longitudinal central groove and with two shallow transverse impressions on each side of the central one; the front margin bisinuate, the hind margin quadrisinuate. — The elytra have the suture raised and each has four longitudinal elevated costae which are as well as the suture thickly clothed with erect scales, but gradually evanesce towards the lateral margin and the apex. — The legs are slender and squamose, the anterior tibiae armed on the outer margin with six teeth besides two at the extremity; the four posterior tibiae are unarmed in the middle on the outside. — The body beneath is closely but shallowly punctured and sparingly covered with scale-like hairs.

Agreeing with *Gnaphaloryx miles* v. Voll. in having a spine or horn on the middle of the vertex of the head, and with *Gnaphaloryx sculptipennis* Parry (*aper* Gestro) in having strongly raised costae on the elytra. The new species is however easily distinguished by its larger size, by the tricuspidate clypeus, by the contracted prothorax, etc.

2. *Aegus Leeuweni*, n. sp. ♂.

Length (with mandibles) 27 mm. — Black and subshining. The mandibles opaque by a delicate sculpture which

is intermixed with very small although distinct punctures; at the base, especially towards the outer corner, large but shallow round punctures are present which are surrounded by a shining margin; the mandibles are about as long as the head, regularly curved on the outside, broad at the base within which is a strong process which is slightly emarginate at the tip; between this process and the tip the mandibles are strongly curved; about the middle a broad and short tooth proceeds from the uppersurface. — The head shows a sculpture similar to that of the mandibles (except on the vertex which has a smooth and shining space preceded by a rather inconspicuous transverse impression) but the punctures are more numerous, larger and deeper and behind the eyes strongly confluent; the front margin is distinctly concave and provided in the middle with two rounded tubercles which are separated by a narrow but rather deep emargination; the lateral angles rounded off, the outer margin of the ocular canthus slightly concave, and the sides of the head behind the eyes slightly produced into a rounded tubercle. — The prothorax is a little wider than the head and rather uniformly covered with strong punctures which are coarser and more or less confluent on the sides and on the anterior margin; the middle of the disk is strongly depressed or even slightly impressed, the lateral margins are parallel, the anterior angles obliquely truncated. The scutellum with a few large punctures. — The elytra are strongly and closely punctured at the base, sides and apex; each of them shows seven deeply impressed striae; the interstices between the first and 5th striae are provided with three rather regular rows of very fine punctures; on the first (the sutural one) and the 6th and 7th interstices the punctures are more distinct and more irregularly placed; the 7th interstice is very narrow.

Undersurface: the jugulum (with the exception of its base) and the mentum are opaque and provided with large margined shallow punctures; the sides of the head are

very shining and show a few large punctures, the base is finely rugose: the middle of the prosternum is coarsely rugose, the base shallowly punctured, the sides very shining, impunctate; the metasternum shining, rather distantly punctured, the punctures of the sides crescent-shaped; the epipleural fold of the elytra rather strongly punctured; the abdomen sub-opaque, rather densely punctured and slightly pubescent. The anterior tibiae are serrated along the outer margin, the intermediate and posterior tibiae armed with three spines about the middle on the outside.

According to a communication received from Major Sidney Parry, to whom I had sent a figure of the specimen of *Aegus Leeuweni* in order to compare it with *Aegus impressicollis*, the last named species has the mandibles more porrect, flat on the uppersurface and strongly grooved. — Moreover the four posterior tibiae of this species are described by the author<sup>1)</sup> as possessing only *one* spine on the middle of the outer edge, whereas in the new species they are armed with *three* spines.

I have named the species in honour of its discoverer.

Leyden Museum, March 21th, 1882.

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1) *Transactions of the Entomological Society of London*. 3rd Ser. Vol. 11 (1864). p. 59.

## NOTE XVII.

TWO NEW SPECIES OF THE DYNASTID GENUS  
DICHODONTUS, BURM.

DESCRIBED BY

**C. RITSEMA Cz.**1. *Dichodontus hexagonus*, n. sp. ♂.

Judging from the description this species must be allied to *Dichodontus coronatus* Burm.<sup>1)</sup> from the coast of Malabar, by the shape of its prothorax which resembles more or less that of *Coclosis biloba* Fabr. in outline, but may readily be distinguished by the different punctuation.

Length 31 mm., width of the shoulders of the elytra 17 mm. — Uppersurface, tibiae and tarsi dark pitchy-brown approaching to black; undersurface, club of the antennae, palpi, coxae and femora reddish brown; the pubescence of the sternum pale ferruginous, that of the undersurface of the head, sides of prosternum, legs and abdomen dark brown-red.

The head and the rather slender, slightly curved cephalic horn coarsely and transversely sculptured, the latter strongly punctured towards the tip and nearly smooth on the hind surface; the front margin of the clypeus narrower than in *Dichodontus Croesus* Fabr. (= *clypeatus* de Haan in Mus.

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1) Burmeister, *Handbuch der Entomologie*. Bd. V (1847). S. 218, n<sup>o</sup>. 1.

Lugd. Bat.), very faintly emarginate, sharply and strongly reflexed, the lateral angles not rounded off at all; the basal joint of the antennae coarsely punctured.

The prothorax is distinctly margined and has the shape of a transverse hexagon; it is widest at the middle, strongly narrowed towards the front margin, but slightly so towards the base; before the middle the sides are concave, behind the middle they are faintly convex, the front margin is distinctly trisinate, with strongly protruding lateral angles, the base slightly bisinate, the lateral angles obtuse (containing more than ninety degrees), not rounded off at all. The basal half of the thorax is elevated; the front margin of the elevated portion (situated between the median lateral angles) slightly protrudes and shows two pairs of small tubercles, of which the outer, more distinct pair is placed a little more backwards and separated from the inner one by an arc-shaped emargination. The prothorax is strongly sculptured but shows three smooth and very shining patches on the anterior half, one (the largest) in the middle and a small one on each side of it; moreover a nearly impunctate and very shining transverse streak is present on the middle of the elevated basal half. The scutellum is covered (except on its margins) with a reticulate sculpture.

The elytra are shining and rather short and broad, their lateral margins sharply edged; each of them shows, between the suture and the shoulder, three somewhat obliquely directed costae which are marked by two rows of ocellated punctures; the costae are flat and impunctate, the rest of the elytra is more or less regularly provided with punctures similar to those by which the costae are marked. The sutural striae are deeply impressed, and strongly crenulated on the outside.

The pygidium is delicately sculptured and densely covered with erect ferruginous hairs.

Undersurface: the middle of the prosternum, and the meso- and metasternum very densely covered with a long



and soft pubescence; the sides of the prosternum coarsely punctured and provided with erect hairs; the abdominal segments with a pro-apical row of punctures in which stiff hairs are planted, the apical segment moreover punctured and sparingly provided with erect hairs over its whole surface. The legs without distinctive characteristics.

Hab. Moeara Teweh (interior of Borneo). — Described from a single male specimen, presented to the Leyden Museum by Mr. J. Semmelink.

2. *Dichodontus grandis*, n. sp. ♀.

Length 46 mm., width of the shoulders of the elytra 23 mm. — Of a dark pitchy-brown colour approaching to black; the pubescence of the pygidium, undersurface of the body, and of the legs dark rusty red.

The head is densely covered with transverse wrinkles, and provided on the middle of the vertex with a raised tubercle; the front margin of the clypeus sharply and strongly reflexed, finely emarginate in the middle, the lateral angles subrounded. The basal joint of the antennae strongly punctured.

The prothorax is unmarginated, and similar in shape to that of the female of *Dichodontus Croesus* Fabr.; with the exception of a large slightly elevated rounded patch just before the middle of the basal margin its whole uppersurface is covered with a sculpture which is rather similar to that of the head; on the rounded patch alluded to only a few dispersed deep punctures are present, and between this patch and the front margin of the thorax a large impression may be observed. The middle and the margins of the scutellum are smooth, the rest is covered with an irregular sculpture.

The elytra are smooth and shining and apparently impunctate, but with the aid of a lens small punctures thinly scattered over the surface are visible; an impressed sutural stria is present on each elytron.

The propygidium, pygidium and apical ventral segment are very closely covered with small, deep and partially confluent punctures. The metasternum has a smooth patch and an elevated longitudinal line on the middle. The abdominal segments are rather uniformly and shallowly punctured. The legs without particularities.

Hab. Sumatra: Kotta Zuydewijn near Solok (Schagen van Leeuwen) and Soerian (Scientific Sumatra-Expedition <sup>1</sup>).

Leyden Museum, March 28th, 1882.

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<sup>1</sup> *Midden-Sumatra*. Dl. IV. Afd. 6 (Coleoptera). p. 44: *Dichodontus* spec.

## NOTE XVIII.

ON AN UNDESCRIBED CETONIID BELONGING TO  
THE GENUS CHALCOTHEA, BURM.

BY

**C. RITSEMA Cz.**

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Amongst the specimens of *Chalcothea smaragdina* G. & P.<sup>1)</sup> of the Leyden Museum, I lately found a female specimen from Sumatra of a distinct although nearly allied species, which, as I am informed by Mr. van Lansberge, bears in several, especially french collections the name of *Chalcothea affinis* Voll.<sup>2)</sup>

The specimen of the new species, which I propose to call

*Chalcothea neglecta*,

has the size of large specimens of *C. smaragdina* (28 mm.) and is similarly coloured; moreover the sculpture, the shape of the prosternal process etc. are quite the same, but *neglecta* may be at once distinguished from *smaragdina* by the shape of its prothorax, which is much wider at the base in consequence of the prolonged and divergent hind angles, a characteristic which it has in common with *C. affinis* Voll. and *resplendens* G. & P.<sup>3)</sup> These two spe-

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1) Gory et Percheron, *Monographie des Cétoines*. p. 311; pl. 61, fig. 2.

2) *Tijdschrift voor Entomologie*. Dl. I (1858) p. 23; pl. 2, fig. 2.

3) Gory et Percheron, *Monographie des Cétoines*. p. 311; pl. 61, fig. 3.

cies have however a short and broadly rounded prosternal process.

Besides by the shape of the prothorax *C. neglecta* differs from *C. smaragdina* in the somewhat shorter and broader clypeus, and in the longitudinal central impression of the prothorax which is narrower and less deep.

Our specimen has been sent over from Sumatra by Mr. J. T. R. S. van den Bossche.

Leyden Museum, March 29th, 1882.

## NOTE XIX.

A NEW GENUS OF THE CETONID GROUP  
MACRONOTIDAE

CHARACTERIZED BY

**C. RITSEMA Cz.**

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*Pseudochalcothea*, nov. gen.

This genus must be separated from the genus *Chalcothea* such as it has been hitherto defined by myself, in consequence of the distinctly margined sides of the pronotum in both sexes, and of the different conformation of the tibiae in the male: the anterior tibiae of this sex being nearly straight on the inside, the intermediate ones formed nearly as the anterior tibiae in *Chalcothea* (sens. restr.), the posterior ones provided on the inside of the base with a strongly compressed and irregularly impressed appendage, which extends a little behind the tip of the tibia itself; moreover the undersurface of the middle-, and especially that of the elongate hind-tarsi is rather densely covered with elongate hairs.

These characteristics are derived from specimens (two males and one female) sent over from Kotta Zuydewijn near Solok (Sumatra) by Mr. J. H. Schagen van Leeuwen, and belonging to the species which I described a few years ago<sup>1)</sup> under the name of *Chalcothea Hasseltii*. However

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1) *Notes from the Leyden Museum*, Vol I (1879) p. 237.

the single female specimen which was in my possession at that time, did not yet allow of the generic distinction which by the aid of the additional specimens I am at present able to draw. *Chalcothea Hasseltii* Rits. must consequently be considered as the type of the new genus.

Besides this species, *Chalcothea auripes* Westw.<sup>1)</sup> and *virens* Rits.<sup>2)</sup> (— *Bockii* Lansb.<sup>3)</sup>) of which only the female sex is known, will, I have no doubt, also prove to belong to the genus *Pseudochalcothea*, whereas *smaragdina* G. & P., *neglecta* Rits., *affinis* Voll. and *resplendens* G. & P. remain in the genus *Chalcothea*.

Leyden Museum, March 31th, 1882.

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1) *Transactions of the Entomological Society of London* for the year 1874. p. 474; pl. 7, fig. 2.

2) *Notes from the Leyden Museum*. Vol. I (1879). p. 235

3) *Annales de la Société Entomologique de Belgique*. Tom XXII (1879) p. CLIV, n° 28.

## NOTE XX.

A NEW SPECIES OF THE BUPRESTID GENUS  
CHRYSOCHROA FROM SUMATRA

DESCRIBED BY

**C. RITSEMA Cz.**

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*Chrysochroa Vethii*, n. sp.

Length 47 mm., width of the shoulders of the elytra 14 mm. — Very shining; bright golden green, with bluish reflexions according to the light. Thorax with a narrow pale golden red dorsal line, which widens a little at the front margin. The apical margin of the elytra, and the abdomen (especially towards the end) golden with strong coppery-red reflexions. The antennae black, with the exception of the three basal joints, the first joint being bright green, the second and third dark purplish with shades of green especially towards the tip of the third joint. The anterior tarsi, the front side of the anterior tibiae and the two apical joints of the intermediate and posterior tarsi dark purplish.

Head finely punctured behind the eyes and on the vertex, excavated and rugose between the eyes, with a very deep impression between their superior portions; on the vertex a deeply impressed longitudinal line is present. The antennae hardly extend beyond the middle of the lateral margins of the prothorax.

Prothorax widest at the base, once and a half as broad

as long; the anterior margin straight, a little more than half as long as the base; the sides gradually diverging in a curved line to the posterior angles which are acute; the base sinuate, its median lobe sub-angular; the disk finely and distantly punctured, with a faint smooth dorsal line; the anterior margin smooth; on the sides the punctures are much larger, deeper and closer together; a rounded fovea is present above each posterior angle and moreover there are two small ones on each side of the dorsal line, one before the middle, the other before the base<sup>1</sup>).

Elytra twice and four-fifths as long as the base of the prothorax; the shoulders but slightly angular; the sides subparallel for about two-thirds of their length; the apices subtruncate; the posterior margin irregularly spinous, the sutural spine the strongest of all. Surface finely punctured, the punctuation however becomes coarser towards the sides, evanescent about the region of the scutellum; on each elytron four obsolete costae may be observed.

Undersurface densely punctured on the sides, nearly smooth on the middle; the legs sparingly punctured.

Hab. Sumatra: Kotta Zuydewijn near Solok (J. H. Schagen van Leeuwen).

I have named this splendid species, which seems to belong to the group of *Chrysochroa ignita* Linn., in honour of Prof. P. J. Veth who kindly presented the unique here described specimen to the Leyden Museum.

Leyden Museum, March 14th, 1882.

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1) Perhaps these small foveae may prove to be accidental or at least inconstant, the right basal one being absent in my specimen.



## NOTE XXI.

ON THREE NEW SPECIES OF RHYNCHOPHOUS  
COLEOPTERA FROM SUMATRA

BY

**C. RITSEMA Cz.**1. *Dermatodes chrysochlorus*, n. sp.

Length (the rostrum included)  $14\frac{1}{2}$  mm. — Black; very densely covered all over (with the exception however of the mouth and a triangular space at the front margin of the rostrum) with greenish white scales, which show a golden lustre according to the light. Over the whole surface small black dots are present, which generally bear a short scale-like seta. The club of the antennae with the exception of its base is grayish black.

The hinder part of the head is depressed, and the space between this depressed portion and the transverse groove in front of the eyes a little broader than long and provided on the middle with a longitudinal narrow groove which widens a little on the rostrum. The head and rostrum are dispersedly punctured; the punctures on the rostrum are placed somewhat closer together than those on the head. The scape of the antennae is a little longer than the two basal joints of the funicle taken together; the first joint of the funicle is shorter than the 2nd, the 2nd as long as the 3rd and 4th taken together, the 7th joint as large as the 4th; the club is elongate ovate,

pointed at the tip, and nearly as long as the four apical joints of the funicle taken together.

The thorax is nearly as long as broad at the base, and becomes but very little narrower towards the front margin which is straight; the sides also are straight, the base bisinuate. The disk of the thorax is transversely wrinkled and provided on the middle with a longitudinal groove which is interrupted by the transverse wrinkles; on each side of the median groove a longitudinal fovea is present before the base and a less distinct rounded one before the anterior margin. Moreover the thorax is provided with small black dots. No visible scutellum.

The basal margin of each elytron is strongly curved forwards; the shoulders are prominent and oblique. The elytra are provided with longitudinal rows of strong punctures; these rows are irregular on the middle of the back, owing to irregular swellings of the 2nd to 4th interstices. On the bottom of the punctures and on the interstices black dots are present, which may also be found on the undersurface and on the legs.

A single specimen from Kotta Zuydewijn near Solok (J. H. Schagen van Leeuwen).

A smaller specimen (measuring not more than 11 mm.) from the same locality differs in some respects from the above described specimen: the color is somewhat greener; the wrinkles on the middle of the thorax are less distinct and less numerous, and do not interrupt the median groove which shows a fine black line on the bottom. Moreover in this specimen a *punctiform scutellum* is present. Nevertheless I am convinced that these two specimens are not specifically distinct from one another.

## 2. *Episomus gracilicornis*, n. sp. ♂.

Length (the rostrum included) 15 mm. — Black; covered all over with green and golden scales; the wrinkles

on the pronotum and the longitudinal and transverse ridges between the large and deeply impressed punctures or pits on the back of the elytra are scaleless, possibly from abrasion.

This species may be easily distinguished from *E. pauperatus* Fabr. (with which it shows a striking resemblance) by the somewhat longer and narrower head and rostrum, but especially by the longer and more slender antennae.

Two male specimens from Kotta Zuydewijn near Solok (J. H. Schagen van Leeuwen).

### 3. *Rhynchophorus lobatus*, n. sp. ♂.

Length (the rostrum included) 37 mm., width of the shoulders of the elytra 14 mm. — Deep black, smooth and subshining.

The scape of the antennae and the rostrum are finely and remotely punctured; the latter is slightly curved at its apical half, and a little wider and distinctly convex at its base; its uppersurface before the convex portion is provided with two longitudinal ridges formed by more or less confluent tubercles, which end at a compressed median tubercle placed a little before the apex of the rostrum. Between the eyes a small rounded fovea is present.

The prothorax is regularly convex, and about one and a half as long as broad; its sides are regularly rounded anteriorly, nearly parallel towards the base which is narrowly margined; the basal lobe has the shape of a triangle with rounded tip; it is separated from the disk of the thorax by a transverse slightly curved impression and provided with a few rather shallow punctures. The contracted anterior portion of the thorax is well-defined and provided with a few rather large punctures. On the disk, which shows an exceedingly delicate sculpture intermixed with fine punctures, a trace of a raised line may be observed along its whole length. The scutellum is flat, narrow and elongate.

The elytra are proportionally short, wide at the shoulders, strongly attenuated towards the end, and conjointly emarginated at the base and at the apex; they are covered with exceedingly fine granules not visible without the aid of a lens. Each elytron shows five longitudinal lines between the suture and the shoulder; the first of these lines which are faintly crenulated anteriorly, does not extend quite to the base, the 3rd to 5th are much more delicate, but considerably wider at the base; external to the second line the base of the elytra is slightly reflexed and somewhat thickened. The pygidium is curved downwards (convex in a transverse direction), rather remotely punctured, and provided on the middle of the apical two thirds with a faint longitudinal keel; the apex is obtusely rounded.

The pro- and mesosternum as well as the anterior femora are densely covered with small but distinct granules, the rest of the legs is finely and very sparsely punctured. The metasternum and abdomen are covered with exceedingly fine granules, not visible without the aid of a lens, leaving however a smooth streak on the middle. The last ventral segment shows on the middle of the hind margin a semicircular impression which is provided with and surrounded by a few very distinct punctures. The undersurface of the femora and tibiae is covered with a long and dense ferruginous black pubescence. The tarsi are spongy beneath.

A single male specimen from Kotta Zuydewijn near Solok (J. H. Schagen van Leeuwen).

Leyden Museum, April 18th, 1882.

## NOTE XXII.

SIX NEW SPECIES OF THE RHYNCHOPHOROUS  
GENUS OXYRRHYNCHUS, SCHÖNH. <sup>1)</sup>

DESCRIBED BY

**C. RITSEMA Cz.**1. *Oxyrrhynchus convexus*, n. sp. ♀.

A large and robust species without markings. It is easily recognized by its nearly globose thorax and proportionally short and very convex elytra.

Length from the anterior margin of the thorax to the apex of the elytra 14 mm, width of the middle of the elytra 6 mm. — The uppersurface of the smooth and shining narrowed portion of the rostrum is keeled at the base and provided with a few longitudinal rows of shallow punctures which however disappear beyond the middle; the dilated basal portion of the rostrum which is a little longer than wide at its base is incrustated <sup>2)</sup> and shows a few small punctures and a longitudinally impressed line; the rostrum is separated from the forehead, which is similarly incrustated

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1) This generic name, which dates from the year 1826, ought to be changed, being preoccupied by Gesner (Fishes: 1604), Temminck (Birds: 1820) and Spix (Reptiles: 1824), whereas Hagenbach's *MS* name *Octoloma* has been used in 1868 by Sufrian in the Coleopterous family Chrysomelidae.

2) This crust extends on the base of the narrowed portion in the shape of two elongate triangles which are separated by the basal keel.

and punctured, by a transverse impression, the centre of which shows a punctiform fovea.

The thorax is nearly globose, a little longer than wide in the middle, distinctly contracted anteriorly, and covered with large circular punctures, the bottom of which is incrustated and provided in the centre with a deeply impressed puncture; on the disk the punctures are somewhat more remote than on the sides and leave an indistinct longitudinal line along the middle. The basal margin is hidden in my specimen by that of the elytra. The scutellum is heart-shaped and convex.

The elytra are strongly convex, a little wider at the middle than at the base (which is bisinuate) and regularly attenuated in a slightly curved line towards the apex: the shoulders are not conspicuous and the apical tubercles absent. Each elytron shows ten longitudinal rows of very regularly placed more or less quadrate pits which are filled with a dirty pale yellow tomentum and provided with a deep central puncture; the 4th to 8th rows do not extend quite to the base, being separated from it by a slightly thickened smooth portion; the 10th or external row is but short. The interstices are very regular and all of equal width, the 4th and 6th, 3rd and 7th, and 2nd and 8th are united posteriorly. Along the suture and on the apical portion of the lateral margins a few small punctures are present.

The undersurface and the elongate legs are shallowly punctured and covered with a grayish crust.

Described from a single female specimen which has been sent over from Kotta Zuydewijn near Solok (Sumatra) by Mr. J. H. Schagen van Leeuwen.

2. *Oxyrrhynchus brevipennis*, n. sp. ♂ and ♀.

This species is without doubt closely allied to *O. philippinensis* Waterh. from the Philippine-islands with the description of which I am as yet only acquainted. It is

however of a smaller size and more or less different in its markings, the broad undefined pale band of the base of the elytra and the posterior half of the white dorsal cross being absent.

Length from the anterior margin of the thorax to the apex of the elytra  $7\frac{1}{2}$ — $9\frac{1}{2}$  mm., width of the middle of the elytra  $3$ — $3\frac{3}{4}$  mm. — Entirely covered with a more or less grayish brown crust, and provided with the following white markings: on the uppersurface of the prothorax three longitudinal stripes extending from the anterior margin to the basal one, on the elytra two lateral stripes extending from the lateral thoracical stripes to the apical (sutural) angle, and between these, a little before the middle, a transverse stripe which is strongly curved backwards; on the undersurface: a slightly curved longitudinal stripe just above the anterior coxae, and the lateral margins of the metasternum and abdomen, with the exception of the apical segment.

In the female the narrowed portion of the rostrum is a little longer and much more slender than in the male and moreover smooth and shining, the dilated basal portion of the rostrum on the contrary in the female somewhat shorter than in the male; this portion shows in both sexes a longitudinal groove and, as well as the forehead, a few punctures. The 3rd antennal joint is rather elongate in some of my specimens, distinctly shorter in others.

The thorax is rather distantly covered with large and deep punctures. It is convex (more strongly so in the male than in the female), and widest at the middle, the sides being slightly divergent from the base to the middle, from thence gradually narrowed in a curve to the contracted front portion. The base is strongly bisinuate, the scutellum small and ovate.

The elytra, which are shorter than in other species (perhaps of the same proportions as those of *philippinensis*), are rather strongly convex, a little wider at the middle than at the base and regularly attenuated in a slightly

curved line to the apex. The shoulders and apical tubercles are not well observable. Between the scutellum and the lateral white stripe the anterior margin of each elytron is reflexed, but slightly so in the female, very strongly however in the male. In the latter sex it is directed upwards and forwards, leaves a cavity beneath it and is deeply notched in front of the 3rd interstice. The elytra are regularly punctato-striate; the punctures tolerably large and deep and rather wide apart. The 2nd and 4th interstices are more distinctly raised than the others, subcostiform.

The undersurface and the very elongate legs are rather strongly punctured.

Several specimens of both sexes from Borneo (Dr. S. Müller), the largest of which (a male) shows traces of the posterior half of the white dorsal cross.

3. *Oxyrrhynchus regularis*, n. sp. ♂ and ♀.

Allied to *O. rufus* Bohem. but considerably larger (measuring from the anterior margin of the thorax to the apex of the elytra  $10\frac{1}{2}$ —13 mm.) and proportionately broader; the basal margin of the elytra in the male sex is but slightly reflexed, not produced nor strongly crenated as in the corresponding sex of *rufus*. Moreover the shoulders of the elytra are more prominent, the sides more parallel and the punctures arranged in very regular longitudinal rows. The longitudinal interstices are narrow and regular; on the apical third of the wing cases they are all slightly raised, on the basal two thirds only the alternate ones; the transverse interstices are likewise very regular. The longitudinal interstices (the sutural ones inclusive) are provided with a more or less continuous row of small punctures.

In this species, especially in the females, traces of white markings frequently are present, the disposition of which corresponds more or less in detail to that of the markings of the following species.



Several specimens of both sexes from Borneo (Dr. S. Müller and Dr. Schwane), and a single male specimen from Sumatra (Sumatra-Expedition).

4. *Oxyrrhynchus Sancti Andreae* (Voll. in Mus. Lugd. Bat.), n. sp. ♂.

Allied to and of the same color as *O. lateralis* Bohem. but considerably broader and with the sides more parallel. The thorax is shorter, proportionally broader and somewhat more convex. The basal margin of the elytra is still more produced, but less regularly and less deeply notched; the apical tubercles are very distinct. The punctuation, especially that on the elytra, is less deep. Moreover it is very different in its markings: the mesial longitudinal stripe of the thorax is absent, and the elytra show a dorsal cross which is united with the base by a prolongation of the lateral thoracal stripes.

Hab. Java (Kuhl and van Hasselt). — A single male specimen.

5. *Oxyrrhynchus collaris*, n. sp. ♂.

A large species, measuring from the anterior margin of the thorax to the apex of the elytra 12—13½ mm. — The white markings agree with those of *O. discors* Fabr. but they are somewhat broader, the color of the clothing or crust agrees with that of *O. lateralis* Bohem. It is widest about the middle of the thorax and from thence gradually attenuated in nearly straight lines to the apical tubercles of the elytra.

The thorax is very convex; the convexity commences just behind the contracted front portion which is consequently more distinctly set-off on the upper side than in the other species. The mesial longitudinal line is slightly impressed, and the puncturing rather remote and not deep.

The elytra are but inconspicuously convex; the basal margin of each elytron is much produced in the form of

a lobe which is directed upwards and forwards and leaves a deep cavity beneath it; the front margin of these lobes is strongly indented. The longitudinal interstices are regular and raised, the 2nd, 4th and 6th which are also broader, are more distinctly raised, subcostiform; the transverse interstices are regular and rather broad, the pits regularly arranged and more or less square. The apical tubercles are very distinct.

Hab. Amboyna (E. A. Forsten and D. S. Hoedt). — Three male specimens.

6. *Oxyrrhynchus Fabricii*, n. sp. ♂ and ♀.

Most closely allied to *O. discors* Fabr. and of the same size, but proportionately narrower and easily distinguished in the male sex by the crenate basal margin of each elytron which is directed upwards and forwards and leaves a cavity beneath it. Moreover the punctures on the elytra are more elongate, deeper and not filled with a pale colored crust. Besides with the markings of *discors*, the elytra of the new species are provided with a rather broad and short white stripe at the base external to the lateral stripe, with a narrow white stripe along the suture, and with a rather broad white stripe along the lateral margin of the apical half of the elytra. This pattern it has in common with *O. hydropticus* Chevrl. from the Andaman-islands, but in this species the elytra are shorter and much more convex.

Hab. Sumatra (Dr. S. Müller, Ludeking and Sumatra-Expedition) and Borneo (Dr. Schwaner). — A few specimens of both sexes.

Leyden Museum, April 29th, 1882.

*Obs* Up to the present time thirteen species of this genus have been described, viz.:

*O. Sancti Andreae* Rits. (in this Note) . . . . . Java.  
*„ brevipennis* Rits. (in this Note) . . . . . Borneo.

- O. collaris* Rits. (in this Note) . . . . . Amboyna.  
 „ *conceus* Rits. (in this Note) . . . . . Sumatra.  
 „ *discors* Fabr., Syst. Eleuth. II. p. 432; Labr. and  
 Imh, Gen. Cure. I. n<sup>o</sup>. 26 . . . . . Java, Sumatra, Borneo.  
 „ *Fabricii* Rits. (in this Note) . . . . . Sumatra, Borneo.  
 „ *Fortunei* Waterh., Tr. Ent. Soc. Lond. N. S. II. p. 172. North China, Japan.  
 „ *hydropicus* Chevrl., Ann. Soc. Ent. Fr. 1880. p. CXXIV. Andaman-islands.  
 „ *lateralis* Bohem., Schönh. Gen. et Spec. Cure. I.  
 p. 379 . . . . . Java, Borneo, Andaman-islands.  
 „ *philippinensis* Waterh., Tr. Ent. Soc. Lond. N. S. II. p. 173. Philippine-islands.  
 „ *regularis* Rits. (in this Note) . . . . . Borneo, Sumatra.  
 „ *rivulosus* Bohem., Schönh. Gen. et Spec. Cure. I. p. 381. Java, Sumatra, Borneo.  
 „ *suturalis* Röel., Notes Leyd. Mus. II. p. 235 . . . Sumatra.

They are all represented in the Leyden Museum with the only exception of *philippinensis*.

## NOTE XXIII.

A NEW SPECIES OF THE BRENTIID GENUS  
STRATIORRHINA, PASCOE

DESCRIBED BY

**C. RITSEMA Cz.***Stratiorrhina femoralis*, n. sp. ♀.

Length (the rostrum included) 29 mm., width of the shoulders of the elytra 5 mm. — Opaque, with the exception of the narrowed portion of the rostrum and the elytra which are subshining. Very narrow pale yellow scales are scattered over the whole insect, the antennae and legs inclusive, but with the exception of the narrowed portion of the rostrum; on the elytra these scales are hardly visible. The general color is dark vinous red, that of the antennae pale ferruginous, indistinctly spotted with black, that of the elytra bright reddish brown, with the shoulders, the bottom of the punctures or pits and, to a certain extent, the longitudinal ridges between them black; moreover the coxae and femora (the basal third of the latter excepted) are black, the extreme tip of the rostrum, the posterior margin of the 2nd and following abdominal segments and the tarsal claws blackish.

The head is widest at the base, slightly narrowed in straight lines towards the eyes and vaguely punctured; the dilated basal portion of the rostrum is similarly punctured and provided with a longitudinal shallow impression; its sides are sinuated. The eyes are a little more approximate to the base of the head than to the insertion of

the antennae. The latter are filiform and distinctly longer than the head and rostrum taken together; the first or basal joint is very convex on its upperside and nearly as long as the 2nd and 3rd taken together, the 2nd joint is the shortest of all; the 4th joint is equal in length to the first, the 5th a little shorter: the 6th, 7th and 8th shorter than the 5th, the 10th a little shorter than the 9th, the 11th the longest of all, slightly curved, and obtusely pointed at the tip. The narrowed portion of the rostrum is filiform, a little shorter than the thorax and delicately granulated.

The thorax is delicately punctured, slightly convex, elongate, longer than the narrowed portion of the rostrum, widest at the middle and narrowed anteriorly and posteriorly; the contracted basal portion is separated from the disk by a transverse impression.

The elytra are widest at the shoulders, slightly attenuated in straight lines to the apical declivity, from thence more strongly so; the apices are conjointly truncated; their outer angles prolonged in a short tooth-like projection. The elytra are deeply and rather irregularly punctato-striate: the transverse ridges between the pits are broader than the longitudinal ones and more or less confluent in a transverse direction.

The undersurface and the legs are finely punctured. The femora are armed with a sharply pointed slender tooth, the anterior tibiae somewhat angularly dilated on the inside a little before the middle.

Hab. Sumatra: Kotta Zuydewijn near Solok (J. H. Schagen van Leeuwen). — Two female <sup>1)</sup> specimens.

Leyden Museum, May 2nd, 1882.

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1) Of both the other species of this genus the *male* sex only is described. These species are: *Stratiorrhina xiphias* Westw., Cab. of Or. Ent. p. 31: pl. XV, fig. 1 (Arrhenodes); Pascoe, Ann. and Mag. of Nat. Hist. 4th Ser. Vol. X. p. 322; pl. XV, fig. 13, from Prince of Wales Island, and *Stratiorrhina Pascoei* Kirsch, Mitth. k. zool. Mus. zu Dresden. Heft I. p. 48, from Malacca.

## NOTE XXIV.

DESCRIPTION OF A NEW SUMATRAN SPECIES  
OF THE ANTHRIBID GENUS XYLINADES, LATR.

BY

**C. RITSEMA Cz.***Xylinades Roelofsi*, n. sp. ♂.

Length from the anterior margin of the prothorax to the apex of the elytra  $10\frac{1}{2}$  mm., width of the shoulders of the elytra 4 mm. — Dark piceous; covered with a rusty-red pubescence, variegated with numerous black dots and spots. The antennal club has the shape of a broad ellipse, and the outer margin of the four posterior tibiae is deeply grooved.

The head and rostrum are short and broad; the former is naked and finely chagrined on the vertex and behind the eyes and provided between the eyes with three smooth keels of which the external ones extend to the base of the rostrum and diverge towards the vertex of the head; the rostrum is rugose, sparsely pubescent, and provided with a faint smooth keel; the front margin is not deeply emarginate in the middle. The joints of the antennae are short and gradually decrease in length towards the club; the 5th and succeeding joints are provided with a short fringe at the undersurface; the club has the shape of a

broad ellipse, is strongly set-off and compressed; the pubescence of the two last joints is pale colored and sericeous.

The thorax is a little longer than broad at the middle: its sides are strongly convex; the sharp transverse keel before the basal edge is entire, curved backwards, and meets the lateral keels, which are continued nearly to the front margin of the thorax, under a very obtuse angle. The disk, with the exception of a rather broad streak before the front margin, is covered with shining warts or granules which are confluent in a transverse direction and form on the middle irregular transverse ridges. The rusty-red pubescence forms on the disk three not very distinct nor regular longitudinal lines or stripes. The scutellum is very small, punctiform.

The elytra are about twice as long as broad at the shoulders; the basal margin is nearly straight, the sides are parallel, the apices conjointly rounded, inconspicuously sinuated by the side of the suture. They are provided with punctate striae which are alternately separated by somewhat narrower and broader interstices; the striae are moreover provided with rows of shining granules which gradually decrease in size towards the end and sides; none of these rows extends to the apex and they become still shorter towards the outer margin of the elytra; a short stria provided with four granules is present at the base, close to the suture. The pubescence of the elytra is of a rusty-red color variegated with numerous more or less squarish black dots and irregular black spots. Each elytron has (perhaps constantly) one of these spots at the basal margin at some distance from the suture, three at the lateral margin (two about the middle and one at some distance from the apex), and one at the suture a little before the apex, whereas a nearly circular spot common to both is present just at the apex of the elytra. The pygidium is semi-elliptical, covered with a rusty-red pubescence and provided with large, deep punctures and a sharp longitudinal keel; the margins also are sharply raised.

The prosternum is covered with a rusty-red pubescence and provided with large and deep punctures. The meso- and metasternum and the undersurface of the abdomen show traces of a thin ashy pile and a few punctures at the lateral and apical margins. The femora are naked and shining with the exception of the vicinity of the knees where a rusty-red pubescence is present which is narrowly continued along the lower edge of the front side. The tibiae are compressed and covered in front and behind with a rusty-red pubescence; the outer margin is naked and deeply grooved all along; on the anterior tibiae this groove is shallow.

Hab. Sumatra: Kotta Zuydewijn near Solok (J. H. Schagen van Leeuwen). — A single male specimen.

I have dedicated this species, which has the broad elliptical shape of the antennal club and the grooved outer margin of the tibiae in common with *Nylinades rugosus* Gyll., to my friend Mr. W. Roelofs, of Brussels, who has so carefully worked out the Curculionidae and allied families from Japan.

Leyden Museum, May 10th, 1882.



## NOTE XXV.

REVISION OF THE MANIDAE IN THE LEYDEN  
MUSEUM

BY

**Dr. F. A. JENTINK.**

May 1882.

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Having been occupied for some time with a detailed and close examination of the specimens belonging to this group of Ant-eaters which form part of our collections, I have been led to observe certain points in the external form and in the structure of the skeletons which appear to me to be not without interest as these facts throw a clearer light upon the classification of these curious creatures. I wish to give a short exposition of them before proceeding to an enumeration of our individuals.

The observations which I have been able to make have been repeatedly confirmed and controlled by myself thanks to our unequalled and nearly complete collection of stuffed specimens and individuals in spirits, of skeletons and skulls, embracing all the species hitherto known.

In the year 1834 Bennett, P. Z. S. L. p. 82, cited as a peculiarity in the distribution of the scales of *Manis temminckii*: »the cessation of the middle series of them at a »short distance anterior to the extremity of the tail, so »that the last four transverse rows consist of four scales

»each, each of the preceding ones having five.” — Focillon, *Revue et Magasin de Zoologie*, 1850, p. p. 465—475 and 513—535. stated in the descriptions of the several species, which he accepted, that this »cessation” is to be found in *Manis longicaudata*, *tricuspis*, *tridentata* and *temminckii*, and not in *Manis gey*, *javanica*, *aspera*, *dalmanni* and *laticaudata*, but he entirely overlooked the fact that the species showing this peculiarity are exclusively inhabitants of Africa whereas the other ones without exception inhabit Asia and the Islands of the Indian Archipelago. I can indeed confirm that this discontinuity of the median series of scales at a short distance from the tip of the tail is a characteristic of all the African species, including *Manis gigantea*, this species not having been distinguished with accuracy at the time that Focillon wrote his monograph. On the other hand all the Asian and Indian species have the central series uninterrupted down to the end of the tail. By this very constant character it is indeed easy to settle certain questionable points in descriptions of Wagner, Focillon and other authors. Wagner describes the number of scales of the tail of an individual of *Manis javanica*, but writes; »Auf dem Schwanze »finden sich, so weit die Mittelreihe des Rückens sich auf »ihm fortsetzt nur 5 Längsreihen; wo die Mittelreihe auf- »hört, folgen sich nur noch 4 Längsreihen.” From this it is evident that Wagner’s specimen, *Manis wagneri* Fitzinger, can never have belonged to *Manis javanica*, which has always an uninterrupted median series of scales on its tail: the rule above given clearly shows that it is an African species and I am convinced that it is nothing else than *Manis gigantea*. — We find another example in *Manis gey* Focillon. As to the habitat of this species the author says: »Ce Pangolin est originaire d’Afrique, et, sauf un exemple »plaire du *Manis javanica*, encore jeune, que M. Guy affirme positivement lui être venu de l’Afrique, mais qui, »sans doute, n’avait fait qu’ y passer, etc.” I believe that the true *Manis gey* similarly only passed through

Africa, as it possesses according to Focillon's description an uninterrupted line of scales on the tail. Without the slightest hesitation I agree with Gray <sup>1)</sup> believing that it is only a young specimen of *Manis javanica*. — As a third example I wish to cite *Manis leptura* Blyth <sup>2)</sup>. The native locality of this species was unknown and Blyth terminates the description in the following terms: »altogether, this »species presents a marked approximation to the long-»tailed Pangolins of Africa." His assertion however, that there is a central row from the occiput to the tail-tip, points out precisely that his *Manis* is not an African form.

A second point to which I call the attention of naturalists is the following. Focillon <sup>3)</sup> remarks as to his *Manis guy*: »la queue se termine, en dessous par un espace nu, pulpeux, et qui peut, pour l'aspect, se comparer »exactement à la plante des pieds de l'animal. C'est, je »crois, un organe de toucher grossier et en même temps »un point de sustentation." Motley and Dillwyn <sup>4)</sup> describe the tail of *Manis javanica* as being powerfully prehensile and furnished with a little naked callosity. An examination of our specimens has proved that in all the species the end of the tail is naked on its lower surface, only with two exceptions, viz: *Manis gigantea* and *temminckii*.

It is a long-known fact, that in certain species of *Manis* a small number of bristles protrude from beneath every scale, and I also find these bristles very constantly, but only in the Asian and Indian species and not a trace of it in the African ones, if adult. However a young *Manis gigantea* in our collection and a young *Manis longicaudata*, cited by Thompson <sup>5)</sup> are armed with spiny hairs or bristles, although they never are to be found in the fullgrown

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1) P. Z. S. L. 1865. p. 366.

2) J. As. S. B. 1842. p. 454; 1847. p. 1247.

3) Revue et Magasin de Zoologie. 1850. p. 514.

4) N. H. Labuan. p. 51.

5) P. Z. S. L. 1834. p. 29.

African species, and thus this may be looked upon as being a characteristic difference between the Indian and African *Manidae*, when fullgrown.

Judging from the material at my disposition, it seems to me that the external ear-conch is always conspicuous, but that there are degrees in its development, in as much as they are largest in the species of the Indian Continent, smaller in those of the Indian Archipelago, whereas the African species have them very small.

The number of the rows of scales and the number of scales in each row, especially of the tail, has always taken a conspicuous part in descriptions and determinations of the several species and has given rise to the creation of numerous species, which on closer examination could not hold their ground. Two principal points have to be kept in mind: 1°. where the tail begins and 2°. whether the number of rows and of scales in each row in the same species is constant or not? As to the first point I must observe that the tail when seen from above constantly presents five rows of scales, the outer ones very characteristically and rectangularly curved inwards: I propose to call the first so shaped scale the first scale of the tail. From this scale I count backwards and upwards along the transverse series of scales and the median dorsal scale thus attained similarly ranks as first scale on the tail. This nomenclature was adopted (although the actual length of the tail is not determined in the same way, but by measuring the distance from the anus to the tip of the tail) because it is the only conventional system of counting the rows of scales on the tail which can be applied both to the African and Indian species. Moreover according to this plan the number of median tail-scales corresponds exactly to that of the marginal ones. An answer to the second question is thus obtained at the same time. As an example I take *Manis javanica*; of this species I have before me a large series from Salanga, Sumatra, Java, Banka and Borneo. I find the following numbers:

a specimen from Java measuring about 25 c. m. with 25 scales in the middle row of the tail.

a specimen from Java meas. about 39 c. m. with 24 scales.

|   |   |   |         |   |   |     |   |   |    |   |
|---|---|---|---------|---|---|-----|---|---|----|---|
| » | » | » | Banka   | » | » | 40  | » | » | 29 | » |
| » | » | » | Java    | » | » | 50  | » | » | 25 | » |
| » | » | » | ?       | » | » | 58  | » | » | 24 | » |
| » | » | » | Java    | » | » | 58  | » | » | 24 | » |
| » | » | » | »       | » | » | 70  | » | » | 21 | » |
| » | » | » | Salanga | » | » | 80  | » | » | 27 | » |
| » | » | » | Borneo  | » | » | 81  | » | » | 23 | » |
| » | » | » | Sumatra | » | » | 84  | » | » | 25 | » |
| » | » | » | Java    | » | » | 100 | » | » | 22 | » |
| » | » | » | »       | » | » | 100 | » | » | 27 | » |
| » | » | » | Borneo  | » | » | 116 | » | » | 26 | » |

The conclusion must necessarily be that the number of scales of the tail in this species is entirely independent of age or locality, is very inconstant and varies between 21 and 29, thus always exceeding 20. The specimens of other species present analogous phenomena and in conclusion I may remark that neither the number of scales of the head, nor those of the back, nor those of the underparts of the tail, nor even the number of rows of the back are constant in the same species, but that they vary between certain limits in the same way as it was just now demonstrated for the tail of *Manis javanica*.

Without entering in osteological details I will summarize what a comparison of our skeletons teaches as to the number of vertebrae, ribs, etc. Our collection contains only a single skeleton of each of the following species, viz: *Manis javanica*, *aurita*, *gigantea*, *temminckii*, *longicaudata* and *tricuspis*. As we possess no skeleton of *Manis crassicaudata* I cite the number of vertebrae given by Cuvier: this will facilitate comparison.

|                        | Cerv.                                     | Cost. | Lumb. | Sacr. | Caud.   |
|------------------------|-------------------------------------------|-------|-------|-------|---------|
| <i>Manis javanica</i>  | 7 +                                       | 15 +  | 5 +   | 4 +   | 30 = 61 |
| » <i>aurita</i>        | 7 +                                       | 16 +  | 6 +   | 3 +   | 27 = 59 |
| » <i>crassicaudata</i> | 7 + 15(16) + 6(5) + 3 + 26 = 57 apud Cuv. |       |       |       |         |

|                       |                                                     |
|-----------------------|-----------------------------------------------------|
| <i>Manis gigantea</i> | $7 + 14 + 5 + 4 + 27 = 57$                          |
| » <i>temminckii</i>   | $7 + 12 + 5 + 3 + 21 = 48$                          |
| » <i>longicaudata</i> | $7 + 13 + 6 + 2 + 38$ <sup>1)</sup> = more than 70. |
| » <i>tricuspis</i>    | $7 + 13 + 6 + 2 + 41 = 69$ .                        |

I cannot make out whether the hindmost part of the sternum presents the curious elongated shape, *processus xiphoïdeus*, in all the species, I can only confirm it for *Manis longicaudata* and *gigantea*. It is always cartilaginous and thus easily severed when the skeleton is being prepared. Guy (l. c. p. 532) has found it in *Manis longicaudata*, and also in *tricuspis* (*tridentata* Guy) and *temminckii*. Cuvier figures it in the skeleton of his Pangolin à courte queue. It thus is very probable that it will turn out to be peculiar to all the species of the Genus *Manis*. A hitherto unmentioned fact is that the vertebrae of the tail of *M. longicaudata* and *javanica* present no trace of *haemapophysys*, meanwhile these bones are very well developed in the other skeletons which I examined and also in Cuvier's figure of the skeleton of *M. crassicaudata*. It must be remembered that in all the species the phalanges bearing the claws are bifid (*Manis ceonyx* apud Rafinesque).

The skulls in the different species present very striking differences, but I believe it to be prudent to abstain from conclusions, until a more complete collection of fullgrown specimens of each species can be compared.

As to the synonymy I have only to add that the descriptions given by Brisson, Linnæus, Erxleben, Desmarest and others are generally so short and incorrect and the localities so confused, that I pass them over in silence, although I will always endeavour to preserve specific names given by those authors, when it is in any way possible.

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1) Tail incomplete, tip wanting. According to Cuvier there are 47 caudales.

A. Central row of scales of tail uninterrupted down to the tip. Bristles between the scales. — *Manidae* from the *Indian Continent* and from the *Malay Archipelago*.

α. More than 20 scales on the median row of the tail.

1. *Manis javanica*.

1820. *Manis javanica* Desmarest. Mammalogie. p. 377.  
 1822. *Manis pentadactyla* Raffles. Linn. Transact. p. 249.  
 1842. *Manis (Pholidotus) aspera* Sundevall. K. Vet. Acad. Handl. p. 253. T. IV, fig. 11. — *Manis leptura* Blyth. J. A. S. B. p. 454.  
 1847. *Manis leucura* and *leptura* Blyth. J. A. S. B. p. p. 1273 and 1274.  
 1850. *Manis guy* Focillon. Revue et Magasin de Zoologie. p. 513. Pl. 10.  
 1865. *Pholidotus javanus* Gray. P. Z. S. L. p. 366.  
 1872. *Pholidotus gouyi* Fitzinger. Sitzb. d. K. Akad. d. Wissensch. Wien. p. 29; *Ph. asper* Fitz. l. c. p. 32; *Ph. malaccensis* Fitz. l. c. p. 42; *Ph. leucurus* Fitz. l. c. p. 44; *Ph. lepturus* Fitz. l. c. p. 46; *Ph. labuanus* Fitz. l. c. p. 48.  
 1873. *Pholidotus javanus* Gray. Handlist of the Edentate, Thick-skinned and Ruminant Mammals. p. 8.

Outside of fore and hind legs covered with scales. End of tail naked on its lower surface. Claws of hind feet nearly equal to those of fore feet. The number of scales in the middle row of the tail varies between 20 and 30. Body with 19 longitudinal series of scales. Nearly always keeled scales on the sides of the body and on the hindfeet.

Hab. Burma, Arakan to Mergui (Blyth); Malacca, Poeloe Pinang (Cantor), Singapore (B. M.); Salanga-island (v. Maltzan); Sumatra; Poeloe Nias (v. Rosenberg); Banka (Teysmann); Biliton and Karimata-Islands (Valentijn); Java; Madura (Valentijn); Borneo; Celebes, Macassar (Valentijn).

Mounted specimens in the Leyden Museum:

1. Female. Salanga-islands. H. v. Maltzan. 1881. Longitudo: 80 c. m. — 2. Nearly fullgrown individual. Sumatra. 1877. Joh. F. Snelleman. Long: 84 c. m. — 3. Young individual. Banka. v. d. Bossche. 1861 (in spirits). Long: 40 c. m. — 4. Adult. Borneo, Banjer Massing. Schwaner. 1845. Long: 116 c. m. — 5. Female. E. S. E. Borneo. C. Boek. 1879. Long: 81 c. m. — 6. Adult male. Java. Long: 100 c. m. — 7. Adult male. Java. Maeklot. Long: 100 c. m. — 8. Nearly fullgrown individual (in spirits). Java, Malang. Hildebrand. 1872. Long: 70 c. m. — 9. Young individual. Lidth de Jeude. 1866. Long: 58 c. m. 10. Young individual. Java. Diard. Long: 58 c. m. — 11. Young individual. Java. Diard. Long: 50. c. m. — 12. Very young individual. Java. Kuhl and v. Hasselt. Long: 39 c. m. — 13. Foetus. Java. Long: 25 c. m.

14. Skeleton of N<sup>o</sup>. 9.

15. Skull of N<sup>o</sup>. 2. — 16. Adult skull. Java. Kuhl and v. Hasselt. — 17. Young skull, locality unknown.

$\beta$ . Less than 20 scales on the median row of the tail.

Two species belonging to this group are found in the Indian Continent, a large and a small-scaled one. The first species had been described very minutely by Buffon <sup>1)</sup>, under the name *Pangolin*. In 1803 Et. Geof. St. Hilaire <sup>2)</sup> gave the name of *Manis crassicaudata* to Buffon's »Pangolin». The second or small scaled species has been described by Hodgson <sup>3)</sup> under the name of *Manis auritus*. It is a very curious fact that Sundevall has entirely overlooked the above named descriptions of Geoffroy and Hodgson, when he wrote his very useful »Ofversigt af slägtet Manis» <sup>4)</sup>. This is the more surprising as he adds a very

1) Histoire naturelle. 1763. T. X. p. p. 187—192. Pls. XXXIV and XXXVI, figs. 1 and 2.

2) Catalogue des Mammifères 1803. p. 213.

3) J. As. Soc. Beng. 1836. p. 234.

4) K. Vet. Acad. Handl. 1842. p. p. 245—283.



complete »Expositio literaturae de Genere Manis''. He accepted for the large scaled species Illiger's name <sup>1)</sup>, viz: *laticauda* (*laticaudata* Ill.) and described the other species as new, under the name of *Manis dalmanni*. It might have been an easy task for the late Gray to settle the question having as he had, a large number of specimens collected by Hodgson in Nepaul and by Swinhoe in China, Formosa and Hainan at his disposition. However a comparison of his statements with the individuals in our collection convinces me that he has even augmented the confusion. In 1843 <sup>2)</sup> *Manis auritus* Hodgson was according to Gray nothing else than *Manis pentadactyla* L. In 1865 <sup>3)</sup> Gray identified this species with *Pholidotus dalmanni* Sund. In his Catalogue (1869) Gray did not alter this opinion; but in his Handlist (1873) he cites *Manis auritus* Hodgson under *Pangolin indicus*, thus arranging it even in another genus. Nevertheless he gives no reason whatever for his doing so. I can only explain this strange behaviour as follows. I have before me three original specimens of Hodgson's from Nepaul, labelled *Manis aurita* Hodgson, which entirely agree with Hodgson's description published in 1836 and with Sundevall's description of *Manis dalmanni*. This puts beyond all doubt the fact that the small-scaled *Manis* inhabits Nepaul. In 1873 Gray brings all the skins from Nepaul which were collected by Hodgson under the head of *Pangolin indicus*, which species has larger scales and a smaller number of rows of scales on the body than Hodgson's true *auritus*. I thus conclude that Hodgson has collected in Nepaul two species of Ant-eaters, *M. aurita* and *M. crassicaudata* or the small and the large-scaled *Manis*; specimens of both these species must be in the British Museum and when Gray wrote in 1865 he must have had before him a specimen of the small-scaled species, whereas in 1873 he examined and described a large-scaled specimen.

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1) Abh. d. Kön. Akad. d. Wissensch. Berlin. 1815. p. 90.

2) List of the specimens in the British Museum. 1843. p. 188.

3) P. Z. S. L. 1865. p. 366.

2. *Manis aurita*.

1836. *Manis auritus* Hodgson. J. A. S. B. p. 234.

1842. *Manis* (*Pholidotus*) *dalmanni* Sundevall. K. Vet. Acad. Handl. p. 256. T. IV. fig. 10 (claw).

1872. *Pholidotus assamensis* Fitzinger. Sitzb. d. K. Ac. Wissensch. Wien. p. 49.

Outside of fore and hind feet covered with scales. End of tail naked on its lower surface. Claws of hind feet much smaller than those of fore feet. Body with 17 longitudinal series of scales. In young specimens the scales of the sides of the body and those of the hind feet strongly keeled. At that age all the scales present a peculiar purplish brown shining color<sup>1</sup>), in adult specimens they are of a blackish brown color.

Hab. China; Formosa and Hainan (Swinhoe); Nepaul (Hodgson); Upper Assam (Mc. Clelland); Western Yunnan (Anderson).

Mounted specimens in the Leyden Museum:

1. Female. China, Amoy. G. Schlegel. 10 febr. 1862. Long: head and body 30 c. m., tail 18 c. m. Tail with 17 scales. — 2. Male (in spirits). China, Amoy. G. Schlegel. 20 febr. 1862. Long: head and body 31 c. m., tail 19.5 c. m. Tail with 19 scales. — 3. Male (in spirits). China, Amoy. G. Schlegel. 20 febr. 1862. Long: head and body 25 c. m., tail 15 c. m. Tail with 17 scales. — 4. Male (in spirits). Amoy. G. Schlegel. 20 febr. 1862. Long: head and body 26 c. m., tail 17 c. m. Tail with 16 scales. — 5. Adult. Nepaul. Hodgson. Long: head and body 60 c. m., tail 40 c. m. Tail with 17 scales — 6. Nearly fullgrown individual. Nepaul. Hodgson. Long: head and body 56 c. m., tail 31 c. m. Tail with 17 scales. — 7. Nearly fullgrown individual. Nepaul. Hodgson. Long: head and body 53 c. m., tail 29 c. m. Tail with 16 scales.

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1) Swinhoe very appropriately compared the scales of the young individuals with the side-pieces of an acorn-barnacle (*Balanus*).

8. Skeleton of N<sup>o</sup>. 1.

Notwithstanding Hodgson has proposed to change the name of *auritus* into *plurisquamis*, if it was proved that the genus *Manis* is not earless, the epithet *auritus* thus ceasing to be characteristic, I have retained the specific title *auritus*, 1<sup>o</sup>. because this species has the largest ears among all the species of *Manis* hitherto known, 2<sup>o</sup>. to avoid further confusion and 3<sup>o</sup>. because the name *plurisquamis* signifies the same as *multiscutata*, a name given by Gray in 1843 to an African *Manis*, viz: *Manis tricuspis*.

It is still questionable whether a *Manis* occurs in Japan. Temminck (Fauna japonica p. 6) mentions that v. Siebold has sent over to our Museum two pieces of the skin of a *Manis* from Japan. But as at present these fragments are not to be found in our collection, it is as yet impossible to make out to what species they belonged. Mr. Serurier, director of the Leyden Ethnographical Museum, kindly informed me at my request that in the Japanese books at his disposition he finds nothing justifying the conclusion that the Ant-eaters should be inhabitants of Japan, but it appears that the Japanese introduce them from China for medical purposes. The Japanese relate that the Ant-eaters catch Ants in the following way: The *Manis* erects its scales and feigns to be dead; the Ants creep between the erected scales, after which the Ant-eater again closes its scales and enters the water; he now again erects the scales, the Ants are set floating and are then swallowed by the Ant-eater.

3. *Manis crassicaudata*.

1803. *Manis crassicaudata* Et. G. H. Hilaire. Catalogue des Mammifères. p. 213.  
 1834. *Manis indicus* Lesson. Suite des Mammifères. T. IV, p. 520.  
 1842. *Manis (Phatages) laticauda* Sundevall. K. Vet. Acad. Handl. p. 258.

Notes from the Leyden Museum, Vol. IV.

1843. *Manis pentadactyla* Gray. Catalogue. p. 188. (partim).  
 1852. *Manis crassicaudata* Kelaart. Prodrumus faunae ceylanicae. p. 74.  
 1872. *Pholidotus laticaudatus* Fitzinger. Sitzb. d. Ak. d. Wissensch. Wien. p. 59; *Ph. bengalensis* Fitz. l.c. p. 64.

Outside of fore and hind legs covered with scales. End of tail naked on its lower surface. Claws of hind feet much smaller than those of fore feet. Body with 11 or 13 longitudinal series of scales. Scales of the sides of the body and those of the hind feet not keeled. The scales are about twice as large as those of *Manis aurita* and *javanica*. The color of the scales is a fine pale yellow brown.

Hab. ? Nepaul (Hodgson); Bengal (Meyer); Hindustan (Tickel); Dukhun (Sykes); Madras; Pondicherry; Ceylon (Kelaart).

Mounted specimens in the Leyden Museum:

1. Fullgrown individual. Ceylon. Long: head and body 62.5 c. m., tail 46 c. m. Tail with 15 scales. — 2. Young individual. Ceylon. Long: head and body 45 c. m., tail 33 c. m. Tail with 14 scales.
3. Skull of an adult specimen.

B. Central row of scales of tail interrupted at some distance from the tip. No bristles between the scales. *Manidae from Africa.*

α. Outside of fore and hind legs covered with scales. Tail on its lower surface without naked patch. Scales not keeled. Claws of hind feet much smaller than those of fore feet. Tail shorter than head and body.

#### 4. *Manis gigantea*.

1815. *Manis gigantea* Illiger. Abh. d. K. Ak. d. Wissensch. Berlin. p. 84.  
 1865. *Pholidotus africanus* Gray. P. Z. S. L. p. 368. Pl. XVII, and woodcuts of skulls.

1869. *Pholidotus giganteus* Gray. Catalogue. p. 373. Fig. 44 (Skull).  
 1872. *Phatages giganteus* Fitzinger. Sitzb. d. K. Akad. Wien. p. 67; *Ph. wagneri* Fitz. l. c. p. 40.  
 1873. *Pangolin giganteus* Gray. Handlist. p. 9.

Tail shorter than head and body; tapering to the end. Body covered with 17 longitudinal series of scales. Tail with from 15 to 19 marginal scales; the interrupted middle row of the tail consists of from 12 to 15 scales, followed by two rows of from 3 to 4 scales each.

Hab. Liberia (Büttikofer and Sala); Niger (Baikie); Gaboon (British Museum); Verno-Vaz, Nkongou, Mboumba, about 2° South of the Equator (Du Chaillu).

Mounted specimens in the Leyden Museum:

1. Male. Liberia, Grand Cape Mount. Büttikofer. 13 October 1881. Long: head and body 79 c. m., tail 64.5 c. m. — 2. Young individual (in spirits), from unknown locality. Lidth de Jeude. Long: head and body 22 c. m., tail 15 c. m.

3. Skeleton of N°. 1.

Illiger contents himself with giving a new name, *Manis gigantea*, to a species which he distinguished in the following short terms: »das Guineische Schuppenthier, das im »Verzeichnisse *Manis gigantea* heisst, ist mit Unrecht mit »der Ost-Indischen *Manis brachyura* verbunden; es wird »4 Fuss, dieses nur anderthalb Fuss lang." Although this observation can hardly be called a diagnosis, I follow Gray in applying this name to our species, because it is the only African form of *Manis* which may to a certain extent be compared with an Indian species: it is thus very probable that Illiger actually had a specimen of our species before him.

### 5. *Manis temminckii*.

1832. *Manis temminckii* Smuts. Enumeratio mammalium capensium. p. 54. T. III. figs. 1 and 2 (Cranium).

Notes from the Leyden Museum, Vol. IV.

1834. *Manis temminckii* Bennett. P. Z. S. L. p. 81.  
 1842. *Manis (Phatages) temminckii* Sundevall K. Vet. Ac. Handl. p. 260. T. IV. figs. 2—9.  
 1838. *Manis temminckii* Smith. Illustr. of the Zoology of South Africa. Vol. I. T. 7.  
 1872. *Phatages hedenborgii* Fitzinger. Sitzb. d. k. Akad. Wien. p. 69; *Ph. temminckii* Fitz. l. c. p. 72.  
 1873. *Smutsia temminckii* Gray. Handlist. p. 11.

Tail very broad, rounded at the end. Body covered with 13 longitudinal series of scales. Tail with 13 marginal scales, the interrupted middle row of the tail consisting of 4 scales, followed by two rows of 9 scales each (see our n<sup>o</sup>. 1); or 11 marginal scales, with 7 on the middle row and two rows of 4 scales each (see our n<sup>o</sup>. 2).

Habitat Gold-coast (Leyden Museum); Angola, San Paolo de Loanda (Peters); Cape of Good Hope (v. Horstock, Steedman), Port Natal (Wahlberg); Senna (Kirk); Mozambique, Quelimane, Quitangonha, Cape Delgado (Peters); Makua country, Zanzibar (Holmwood); Somali-coast (v. Heuglin, Holmwood); Bahr-el-Abiad, Senaar, Kordofan (v. Heuglin).

Mounted specimens in the Leyden Museum:

1. Female. Cape of Good Hope, Masilikats-land, Lattaku. v. Horstock. Long: head and body 49 c. m., tail 35 c. m. —
2. Halfgrown individual. Gold-coast. Frank. Long: head and body 39 c. m., tail 28 c. m.
3. Skeleton. Lattaku. v. Horstock. Type of the species.
4. Skull of N<sup>o</sup>. 1.—5. Skull of N<sup>o</sup>. 2.

β. Outside of fore arm covered with hair. End of tail naked on its lower surface. Scales of hind feet and sides of body keeled. Claws of hind feet nearly equal to those of fore feet. Tail much longer than head and body.

#### 6. *Manis longicaudata*.

1756. *Pholidotus longicaudatus* Brisson. Règne anim. p. 31.  
 1777. *Manis macroura* Erxleben. Mammalia. p. 101.

1820. *Manis africana* Desmarest. Mammalogie. p. 376.  
 1842. *Manis longicauda* Sundevall. K. Vet. Acad. Handl. p. 251.  
 1843. *Manis tetradactyla* Gray. Catalogue. p. 188.  
 1872. *Manis guineensis* Fitzinger. Sitzb. d. K. Ak. d. Wissensch. Wien. p. 16; *M. senegalensis* Fitz. l. c. p. 17.  
 1873. *Manis longicauda* Gray. Handlist. p. 6.

Scales large. All the scales of body and tail bordered with white. The body covered with 13 longitudinal rows of scales. All the naked parts densely covered with rather long dark-brown hairs. Tail with 44 marginal scales; the interrupted middle row of the tail consists of 34 or 35 scales, followed by two rows of 10 or 9 scales each.

Hab. Senegal (Mus. Paris); Liberia (Büttikofer and Sala); Coast of Guinea (Pel, Nagtglas); Sierra Leone (Thompson); Gaboon (Fitzinger).

Mounted specimens in the Leyden Museum:

1. Adult. Locality unknown. Long: head and body 35.5 c. m., tail 64.5 c. m. — 2. Adult. Gold-coast, Dabocrom. Pel. May 1846. Long: head and body 34.7 c. m., tail 60.7 c. m. — 3. Young individual. Gold-coast, Elminà. Nagtglas. Juli 1861. Long: head and body 20.5 c. m., tail 35 c. m.

4. Skeleton of an adult male. Liberia, Soforé-place. Büttikofer and Sala. 1880.

In 1853 (See Esquisses Zoologiques de Temminck p. 173) our collection contained three specimens of *M. longicauda* viz. one from Senegal, one from Sierra Leone and another from the Gold-coast. The latter is my N° 2. My N° 1. is one of the two other specimens cited by Temminck, but as it bears no label, I cannot make out if it is from Senegal or from Sierra Leone. The third specimen is not to be found in our Museum.

Brisson's description of this species is so correct, that it cannot be confounded with any other species, although the author erroneously gives as habitat Brazil and Formosa. As the thumbs of *Manis longicauda* are always

very small, they have been overlooked by Brisson, Schreber, Linnaeus and others, although Erxleben in 1777 wrote, describing this species (his *Manis macroura*): »ungues »5—5 palmarum pollicis minimo vix apparente, inde *te-tradactyla* male dicta auctoribus.” Buffon has confounded *Manis longicaudata* and *Manis tricuspis*. He regarded a specimen of the latter, which was characterized by three-pointed scales, as a young individual of his *Phatagin*. Desmarest baptized this species in 1820 in calling it *Manis africana*, a name also adopted by Lesson in 1834 and given in 1865 by Gray to the much shorter tailed *Manis gigantea* Illiger.

#### 7. *Manis tricuspis*.

1820. *Manis tricuspis* Rafinesque. Ann. Gén. d. Sc. Phys. de Bruxelles. p. 214.
1843. *Manis multiscutata* Gray. P. Z. S. L. p. 22.
1849. *Manis multiscutata* Fraser. Zoologia typica. With a colored plate.
1850. *Manis tridentata* Focillon. Revue et Magasin de Zoologie. p. 472. Plate 11.
1872. *Triglochipholis tricuspis* Fitzinger. Sitzb. d. k. Ak. d. Wissensch. Wien. p. 19; *Trigl. multiscutata* Fitz. l. c. p. 23; *Trig. tridentata* Fitz. l. c. p. 25.
1873. *Phatagin tricuspis* Gray. Handlist. p. 7.

Scales small, tricuspidate and elongate. Body covered with 21 longitudinal rows of scales. All the naked parts closely covered with rather long white colored hairs. Tail with 34 till 37 marginal scales; the interrupted middle row of the tail consists of from 30 to 33 scales, followed by two rows each of from 3 to 6 scales.

Hab. Liberia (Büttikofer and Sala); Gold-coast (Pel, Nagtglas); Sierra Leone (Thompson); Fernando-Po (Fraser); Bembé (Monteiro); Ashango-land (Du Chaillu); Mozambique? (Guy, Peters).

Mounted specimens in the Leyden Museum:



1. An individual from unknown locality. Frank. 1877. Long: head and body 37 c. m., tail 50.5 c. m. Tail: marginal scales 36, above  $31 \times 3$  and  $5 \times 2$  scales. — 2. Half-grown individual. Gold-coast, Dabocrom. Pel. 1846. Long: head and body 30 c. m., tail 41 c. m. Tail: marginal scales 37, above  $33 \times 3$  and  $4 \times 2$  scales. — 3. Young specimen. Gold-coast, Dabocrom. Pel. 1846. Long: head and body 22.5 c. m., tail 28 c. m. Tail: marginal scales 36, above  $30 \times 3$  and  $6 \times 2$  scales. — 4. Young female (in spirits). Gold-coast. Nagtglas. Long: head and body 19 c. m., tail 27 c. m. Tail: marginal scales 37, above  $31 \times 3$  and  $6 \times 2$ . — 5. Young male (in spirits). Liberia, Soforé-place, Buluma. Büttikofer and Sala. 22 febr. 1881. Long: head and body 12 c. m., tail 14.5 c. m. Tail: marginal scales 34, above  $31 \times 3$  and  $3 \times 2$  scales.
6. Skeleton of N°. 2.
7. Skull of N°. 1.

### **Recapitulation.**

|                  | Mounted Spirits. | Skel. | Skulls. |
|------------------|------------------|-------|---------|
|                  | skins.           |       |         |
| Manis javanica.  | 11               | — 2   | — 1 — 3 |
| » aurita.        | 4                | — 3   | — 1     |
| » crassicaudata. | 2                |       | 1       |
| » gigantea.      | 1                | — 1   | — 1     |
| » temminckii.    | 2                |       | 1 — 2   |
| » longicaudata.  | 3                |       | 1       |
| » tricuspis.     | 3                | — 2   | — 1 — 1 |
|                  | 26 — 8 — 6 — 7   |       |         |

P. S. Mr. Oldfield Thomas kindly informs me that the four specimens of *Manis* from Nepaul by Hodgson have the body covered with 15 or 17 longitudinal series of scales. My hypothesis (see page 201) is therefore untenable, as it appears that Gray ascribed 13 longitudinal series to specimens with 15 or 17 series! The only species of *Manis* living in Nepaul thus is *Manis aurita* Hodgson.

## NOTE XXVI.

THREE NEW SPECIES OF THE BRENTHID GENUS  
DIURUS, PASCOE

DESCRIBED BY

**C. RITSEMA Cz.**1. *Diurus erythropus*, n. sp. ♀<sup>1)</sup>.

Allied to *D. furcillatus* Gylh.<sup>2)</sup> by the short head, by the shortness of the narrowed portion of the rostrum, by the short and rather stout antennae, and by the apical declivity of the elytra, but distinguished by the narrowed apex and the approximate tails of the elytra, by the red colored legs and antennae (the three apical joints of the latter excepted) etc.

Length (the rostrum and tails included) 26 mm. — Deep dull black, the legs and the antennae (the latter with the exception of the three apical joints which are nearly black) dark red, the narrowed portion of the rostrum and the tails dark reddish brown.

The head and basal portion of the rostrum are more slender than in *furcillatus*, very sparingly provided with white scales of different size, longitudinally impressed, and provided with a fovea between the eyes; the head is short, the eyes only once their diameter from the posterior au-

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1) The *male* sex in *Diurus* is easily recognized by the shape of the 4th abdominal segment which is shorter than the 3rd and strongly contracted in the middle.

2) See the *postscript*.

gles; the narrowed portion of the rostrum is short (somewhat more than half as long as the basal portion), glossy and finely punctured. The antennae, which are consequently more approximate to the apex of the rostrum than to the front margin of the eyes, are more slender than those of *furcillatus* and about as long as the head and rostrum taken together; the 4th joint is a little longer than the 3rd, the 3rd a little longer than the 5th, the 6th to 8th subequal, the club but little shorter than the 5th to 8th joints taken together; the eight basal joints are not densely covered with pale yellow setae; the three apical joints or club slightly thickened and finely pubescent.

The prothorax is similarly shaped as in *furcillatus*; its uppersurface is irregularly covered with large punctures or pits and marked on each side with a longitudinal line of large white scales; moreover a few small scales are scattered over the surface.

The elytra are decidedly narrowed at and slope rapidly to the apex; they show narrow longitudinal costae, the interstices between which are foveate; on the 5th and 6th interstices these foveae are very large and strongly transverse; those of the 3rd and 4th interstices bear large white scales which form two longitudinal lines; on the streak between these lines a few similar scales may be observed about the middle, between the middle and the base and on the apical declivity; moreover a line of white scales is present along the lateral margins. The tails are about as long as those of *furcillatus* but much more approximate; moreover their inner margins are straight and parallel; the tails are provided with white scales and dirty yellow setae.

The undersurface of the body is marked on each side with a narrow band of large white scales extending from the anterior margin of the prothorax to the apex of the abdomen, whereas broad and narrow scales are scattered over the middle. The legs are sparingly covered with white scale-like setae.

Hab. Sumatra: Kotta Zuydewijn near Solok (J. H. Schagen van Leeuwen). — A single specimen (female).

The two following species are remarkable by their 9-jointed antennae, the three apical joints being compact without showing the slightest traces of articulations.

2. *Diurus tarsatus*, n. sp. ♂<sup>1)</sup>.

A very distinct species, not only by the 9-jointed antennae, but also by the dilated and densely fringed anterior tarsi of which moreover the basal joint is equal in length to, if not longer than the succeeding joints taken together.

Length (the rostrum and tails included) 46 mm. — Dull black. The head and basal portion of the rostrum are covered with large punctures; on the uppersurface these punctures are provided with thickened dirty white scales, on the sides however with scale-like setae; the head is moreover provided with a longitudinal scaleless furrow and with a fovea between the eyes. The sides of the head and of the basal portion of the rostrum, which *inter alia* are considerably thicker and moreover shorter than in *D. forcipatus* Westw., are parallel, the eyes two times their diameter from the posterior angles. The antennae are inserted near the apex of the rostrum, and, although elongate, shorter and stouter than in *forcipatus*; they are but little longer than the head and rostrum taken together; the first to 8th joints are densely covered with setae which form a sort of fringe on the undersurface and are black on the first to 6th joints (on the three basal joints they are however intermixed with pale colored setae), white on the 7th and 8th joints; the 9th or apical joint is finely

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1) A male specimen of a closely allied species from the Philippine-islands (Manilla) is in the possession of Mr. G. Power; the anterior tarsi are however neither dilated nor fringed.

pubescent; the 2nd to 8th joints have the outer apical angle produced, the 9th is obtusely pointed at the tip and rather strongly curved; the first joint is somewhat longer than the 2nd which is half as long as the 3rd; the 3rd to 7th gradually decrease in length; the 8th is equal in length to the 7th, the 9th twice and a half as long as the 8th.

The sides of the prothorax are very convex; it is widest about the middle, slightly narrowed towards the base and strongly contracted anteriorly; the uppersurface is densely covered with large punctures and provided along the middle with a shallow furrow which disappears near the contracted front portion; moreover the pronotum shows three longitudinal lines of dirty white scales, whereas a few smaller scales are scattered over the surface.

The elytra are slightly narrowed in straight lines from the shoulders to the apex; they are regularly foveate (the foveae on the sides are considerably larger than those on the disk), and provided along the suture with a broad band of dirty white scales; this band is strongly contracted between the base and the middle and between the middle and the apex, and incloses just at the middle a rounded scaleless space; moreover a line of white scales is present along the lateral margins. The tails are rather straight and parallel and as long as the head and rostrum taken together.

The undersurface is covered with broad and narrow white scales, which are very densely set along the sides. The two basal segments of the abdomen are shallowly impressed along the middle; the 4th segment is very short and contracted. The legs are covered with narrow scales and scale-like setae. The anterior tarsi are dilated; the basal joint is equal in length to, if not longer than the succeeding joints taken together, and as well as the second joint densely fringed with long black hairs.

Hab. Borneo (Dr. Schwaner). — A single specimen (male).

3. *Diurus antennatus*, n. sp. ♂.

Strongly resembling *D. furcillatus* Gyllh. but narrower, and easily distinguished from that species by the 9-jointed antennae of which moreover the 5th joint is somewhat angularly curved outwards, and by the elongate tails of the elytra.

The head is short, the eyes only once their diameter from the posterior angles. The basal portion of the rostrum and the antennae are much more elongate and more slender; the latter about as long as the head and rostrum and half the prothorax taken together; the two basal joints are short, the first a little larger than the 2nd; the 3rd, 4th and 5th elongate and about equal in length to one another, the 5th joint moreover almost angularly curved outwards; the 6th, 7th and 8th joints short and likewise about equal in length to one another; the 9th or apical joint a little longer than the three preceding joints taken together, obtusely pointed at the tip and slightly curved. The tails are elongate, rather distant at the base and convergent. The two basal segments of the abdomen are impressed along the middle; the 3rd and 4th are very short, the 4th moreover strongly contracted in the middle.

Hab. Java (Prof. Blume). — A single specimen (male), which measures from the tip of the rostrum to that of the elytra (the tails excluded as they are injured in my specimen) 23 mm.

Leyden Museum, May 9th, 1882.

*Postscript.* The type specimen of *Diurus furcillatus* (a female) has been kindly lent to me by its present possessor, Mr. G. Power. It is the specimen described by Gyllenhal in Schönherr's *Genera et Species Curculionidum*. Tom. I, p. 359 and figured by Guérin-Ménéville in his *Iconographie du Règne animal*. Insectes, Pl. 36, fig. 8.

*Diurus forcipatus* Westwood (*Cabinet of Oriental Entomology*, p. 31; pl. 15, fig. 3) has incorrectly been regar-

ded by Lacordaire (*Genera des Coléoptères*. Tom. VII, p. 472, note 2) as the male sex of *D. furcillatus* Gylh.; it is a distinct species.

*Diurus dispar* Pascoe (*Journal of Entomology*. Vol. I, p. 393) is, I have but little doubt, based upon a *male* (not female) specimen of *D. furcillatus* Gylh., whereas the female with which it is compared did not belong to *furcillatus* Gylh. but to *forcipatus* Westw.

The *male* sex of *D. furcillatus* Gylh. and the *female* sex of *D. forcipatus* Westw. being not yet described *as such*, I wish to give short descriptions of them:

*Diurus furcillatus* Gylh. ♂ (most probably = *dispar* ♀ Pasc.).

Agrees with the female in all respects (even in the shortness of the tails) besides in the following: The basal portion of the rostrum is somewhat more elongate and more slender, the narrowed apical portion on the contrary about one third shorter and a little thicker; moreover this portion is opaque. The antennae are a little more slender, and the club decidedly longer. The two basal segments of the abdomen are impressed along the middle, the 4th segment is very short and strongly contracted, the apical one decidedly longer than in the female.

Of this species the collections of the Leyden Museum contain a male and a female; the former is about equal in size to the type specimen, the latter considerably smaller. Both are from Java and were sent over by Macklot.

*Diurus forcipatus* Westw. ♀ (most probably = *furcillatus* ♀ Pasc.).

Agrees with the male in all respects besides in the following: The head and the basal portion of the rostrum are somewhat broader, the former moreover a little shorter, the latter considerably shorter being not quite twice as long as the head; the narrowed apical portion of the rostrum on the contrary is much more elongate (as long as if not longer than the head and the basal portion taken together), filiform and glossy. The antennae are inserted be-

tween the middle of the rostrum and its base; they are shorter and proportionately thicker, and their 3rd to 8th joints neither knotty at the tip nor fringed at the under-surface. The tails are short, rather approximate at the base and divergent. The 4th abdominal segment is nearly as large as the 3rd.

This species is represented in the Leyden Museum by four males and four females which are from Java and were sent over by Macklot.





## NOTE XXVII.

DESCRIPTION D'UNE ESPÈCE NOUVELLE DU  
GENRE ATRACTOCERUS

PAR

**L. FAIRMAIRE.***Atractocerus luteolus*, n. sp.

Long. 18 millim. — Filiformis, parallelus, pallide flavo-lutescens; oculis nigris, magnis, antice fere conjunctis; antennis brevibus, infuscatis, articulis 2 primis flaveolis, intus penicillatis, sequentibus latis transversim, apicem versus angustioribus; palpis maxillaribus articulo ultimo paulo obscuriore, subtus crenatulo; prothorace longitudine paulo latiore, antice angustato, margine antico cum angulis rotundato, lateribus leviter arcuatis, margine postico ante angulos paulo sinuato, angulis obtusis, dorso tenuiter transversim coriaceo, ante marginem posticum transversim carinato; elytris incostatis, apice obtuse rotundatis; alis abdomine valde brevioribus, costa et nervis flavidis; abdomine nitidiore, apice paulo obscuriore; pedibus tenuibus.

Parait se rapprocher de l'*A. celebensis* Gestro, mais chez ce dernier le corselet présente au milieu une bande brune, qui n'existe pas chez notre individu, et n'offre pas de carène transversale à la base; en outre l'abdomen est rembruni en

dessous et à l'extrémité. Dans notre espèce le dernier article des palpes est à peine obscurci et très-brièvement flabellé.

Hab. Sumatra: Soeroelangoen (Expédition Scientifique Néerlandaise). — Un seul exemplaire.

Paris, 22 Mai 1882.

## NOTE XXVIII.

## COLÉOPTÈRES HÉTÉROMÈRES DE SUMATRA

DÉCRITS PAR

**L. FAIRMAIRE.*****Tenebrionidae.***1. *Scleron denticolle*, n. sp.

Long. 6½ millim. — Oblongum, subparallelum, fuscum, pube tenui ferruginea tinctum, et setulis ferrugineis in spatiis elevatis indutum; capite summo asperato, inter oculos breviter elevato, inter antennis sat acute transversim carinato, carina medio leviter et utrinque magis sinuato, antice paulo reclinato et angulatim emarginato; prothorace brevi, longitudine duplo latiore, basi utrinque sat fortiter angustato, lateribus antice vix arcuatis, angulis anticis lobatis, margine postico ad scutellum exciso, utrinque sinuato, angulis posticis productis, dorso asperato valde inaequali, ad latera paulo deplanato; scutello plano, apice triangulari; elytris foveolato-seriatis, foveolis parum profundis, intervallis transversim plicatulis, longitudinalibus alternatim magis elevatis, fere costulatis, sutura elevata, et densius setulosis; subtus tenuiter punctato-asperulum, ferrugineo-setulosum, tibiis anticis triangulariter dilatatis.

Ressemble au *S. multistriatum* Forsk. pour le facies et

la sculpture des élytres, mais bien distinct par le corselet dont les côtés sont fortement sinués à la base, avec le dessus très-inégal et fovéolé; la tête est aussi fort remarquable par la carène transversale antérieure, au dessous de laquelle la tête rentre un peu et est fortement échanerée.

Pris dans le district Rawas (Expédition scientifique néerlandaise) et à Boenga mas: Palembang (J. C. van Hasselt).

2. *Opatrum (Gonocephalum) acutangulum*, n. sp.

Long. 8 à 9 millim. — Oblongo-ovatum, parum convexum, fuscum, opacum, setulis ferrugineis brevissimis sat dense vestitum; capite ad oculos obtuse angulato, antice fortiter exciso, aspero-punctato, transversim impresso, antennis brevibus, sat gracilibus, articulo 3<sup>o</sup> quarto quintoque conjunctis aequalis, 4 ultimis latioribus, 8<sup>o</sup> 9<sup>o</sup> 10<sup>o</sup> que transversis; prothorace elytris angustiore, longitudine duplo latiore, lateribus rotundatis, basi breviter sinuatis, angulis posticis valde acutis, anticis paulo minus, dorso subtiliter alutaceo, ad latera explanato, disco obsolete biimpresso; scutello brevi, semirobundato, punctato; elytris paulo post medium leviter ampliatis, apice obtusis, punctato-striatis, striis primis minus impressis, intervallis planiusculis, ♂ tenuiter asperulis, ♀ alutaceis, striis fere crenatis; subtus asperulo-setosum, pedibus sat fortiter asperatis.

Cet *Opatrum* est facile à reconnaître par son corselet dont les côtés, fortement arrondis, se redressent tout à fait à la base pour former des angles postérieurs très-aigus, les antérieurs le sont un peu moins; le corps est revêtu de petites soies courtes, un peu dressées et suffisamment nombreuses pour donner une teinte un peu ferrugineuse lorsque les exemplaires sont bien frais.

Beaucoup d'exemplaires de différentes localités (Solok, Silago, Doesoen tengah, Moeara Laboe, Lochoe Gedang, Indrapocra, Soerian, Socroelangoen et Koetoer) rapportés par l'Exp. scient. néerl.

3. *Opatrum (Gonocephalum) mustelinum*, n. sp.

Long. 8 millim. — Oblongum, parum convexum, fusco-brunneum, subnitidum, tenuiter fulvo-setulosum; capite dense tenuiter aspero-punctato, profunde exciso, incisura intus rotundata; antennis piceo-rufescentibus, apicem versus latioribus; prothorace brevi, lateribus antice rotundatis, dense tenuiter punctato, margine postico utrinque late sat fortiter sinuato; elytris striatis, striis haud distincte punctatis, intervallis vix convexiusculis, tenuiter asperulis et postice tenuiter transversim plicatulis; subtus nitidius, tarsis piceo-rufescentibus, tibiis anticis paulo ante apicem acute angulatis.

Ressemble à l'*O. hispidum* Woll., mais la ponctuation est plus fine, le corselet a les côtés plus arrondis en avant et les angles moins aigus, les élytres ont les stries plus fines, non visiblement ponctuées et les intervalles sont presque plans; en outre, les tibias antérieurs présentent, un peu avant l'extrémité, un angle très-pointu.

Pris à Indrapoera et dans le district Rawas (Exp. scient. néerl.)

4. *Bradymerus crenulicollis*, n. sp.

Long. 7 millim. — Oblongus, medio subparallelus, parum convexus, fusco-brunneus, vix nitidus, subtus cum pedibus antennisque piceo-rufescens, nitidior; capite asperato, antice arcuatim sulcato, antennis sat gracilibus, articulis 6 ultimis paulo latioribus; prothorace elytris haud angustiore, longitudine duplo latiore, antice paulo angustato, lateribus vix arcuatis, crenulatis, sat fortiter asperato, medio leviter canaliculato, margine postico fortiter bisinuato, angulis anticis productis, sat acutis; elytris apice obtusis, punctato-substriatis, intervallis alternatim costulatis, costulis tenuiter crenulatis, parte laterali fortiter punctato-substriata; subtus sat tenuiter dense punctatus, abdomine paulo obscuriore.

Ressemble au *B. amicorum* Fairm., des îles de l'Océan

Pacifique, pour la forme générale, la sculpture et la denticulation du corselet, mais bien distinct par les intervalles des élytres, relevés alternativement et non interrompus.

Quelques exemplaires pris dans le district Rawas (Exp. scient. néerl.).

5. *Platydema laticornis*, n. sp.

Long. 8 millim. — Ovata, parum convexa, nigra, opaca, subtus cum pedibus paulo nitida; capite inter oculos subtiliter dense punctato, ante oculos impresso; antennis basin prothoracis vix attingentibus; prothorace elytris paulo angustiore, antice valde angustato, basi sat fortiter bisinuato, dorso subtilissime punctulato, ad latera evidentius; scutello triangulari, laevi; elytris apicem versus tantum angustatis, apice obtuse rotundatis, striato-punctatis, striis primis vix impressis ac tenuiter punctatis, intervallis planis, impunctatis, margine externo omni sulcato et dense punctato; pectore fere laevi, abdomine tenuiter dense punctulato.

Cette espèce ressemble à quelques *Platydema* d'Amérique, à corps peu convexe, et de couleur foncée, mate.

Pris dans le district Rawas (Exp. scient. néerl.) et à Boenga mas: Palembang (J. C. van Hasselt).

6. *Ceropria impressifrons*, n. sp.

Long. 12 millim. — Ovata, modice convexa, brunneo-cuprea, metallica, capite obscure aeneo, prothorace plaga oblonga media et lateribus late viridi-metallicis, macula brunnea signatis, elytris macula juxta-scutellari, vitta transversali media et vittulis 2 posticis prope suturam et ante marginem viridi-metallicis; capite subtiliter dense punctato, inter oculos transversim impresso et summo oblonge foveolato, antennis fusco-nigris, basi rufescentibus; prothorace lato, lateribus rotundato, antice angustiore, margine antice utrinque sinuato, angulis obtuse rotundatis, margine pos-

tio late bisinuato, angulis fere rectis, dorso subtilissime dense punctulato, basi utrinque foveola oblonga magis punctata impresso; scutello triangulari, laevi; elytris ovatis, basi truncatis, post medium leviter ampliatis, punctato-striatis, striis parum impresses sed dense punctatis, apice et extus profundioribus, intervallis planis, haud distincte punctatis, margine externo sulcato, punctato, ante apicem leviter sinuato, apice paulo producto; subtus fusco-violascentis, modice nitida, abdomine dense tenuiter punctato, tibiis punctatis, tarsis piceis, subtus fulvo-villosis.

Voisin de *C. versicolor*, de Java, avec les teintes métalliques moins nettement limitées, le sommet de la tête impressionné, le corselet plus large, ayant deux impressions basilaires et les élytres un peu plus courtes, plus fortement striées-punctuées.

Pris à Indrapoera et à Koetoer (Exp. scient. néerl.).

7. *Achthosus antimachoides*, n. sp.

Long. 21 millim. — ♂ Oblongus, subparallelus, nigropiceus, nitidus; capite concavo, margine antico valde elevato, laminato, utrinque late et sat acute dilatato, medio rotundatim angulato; antennis latis, articulis 5—10 valde transversis; prothorace transverso, lateribus leviter antice rotundato, antice retuso, punctato, utrinque cornu compresso, antice porrecto et leviter incurvo, basi fortiter angulato et subtus ad angulos anticos dente brevi armato, lateribus utrinque late sat profunde foveato; scutello laevi, subquadrato fere truncato; elytris sat fortiter punctato-striatis, striis apice profundioribus, intervallis vix convexiusculis, laevibus; subtus punctatus, pedibus castaneo-piceis, tibiis anticis fortiter 6-dentatis.

L'armure de la tête rappelle tout à fait le genre *Antimachus* et rend cette espèce bien facile à reconnaître; les cornes du corselet ressemblent à celles de l'*U. insularis* Guér.

Un seul exemplaire mâle (S. Müller).

8. *Aethosus furvicollis*, n. sp.

Long. 17 à 19 millim. — Praecedenti simillimus, sed minor, capite dense asperulo-punctato, antice vix reflexo, medio obtuse angulato, utrinque sat breviter lobato, lobo intus concavo, apice obtuse dentato, antice obtuse angulato, prothorace antice paulo retuso, vix punctato, utrinque cornus brevi crasso, apice incurvo, supra crenato armato, postice ad latera haud foveato, scutello laevi, apice obtuse angulato, elytris magis striato-punctatis distinctus.

Ressemble au précédent, en diffère par la forme de la tête dont le bord antérieur est à peine relevé au milieu et s'élargit de chaque côté en un lobe concave intérieurement, se terminant en une dent obtuse; le vertex est à peine concave et densément ponctué; les cornes du corselet sont bien plus courtes, non angulées en dessus et il n'y a pas de dent au dessus des angles antérieurs; les stries des élytres sont peut-être moins profondes, mais elles sont plus fortement ponctuées.

La ♀ est plus grande, la tête est inerme, densément ponctuée sauf le bord antérieur qui est assez convexe, impressionnée de chaque côté; le corselet est inerme, finement ponctué, sauf en arrière.

Deux mâles et une femelle pris à Koetoe (Exp. scient. néerl.).

9. *Uloma picicornis*, n. sp.

Long.  $7\frac{1}{2}$  millim. — Oblonga, parallela, modice convexa, nigro-fusca, nitida, prosterno, pedibus, antennis palpisque picco-rufis; capite antice trifide impresso, impressione punctata; antennis breviusculis, latis, articulis ultimis valde transversis et brevibus; prothorace transversim subquadrato, lateribus leviter arcuatis, angulis anticis rotundis, posticis obtusatis, dorso tenuiter dense punctato, (♂) antice sat late sed non profunde impresso; scutello triangulari, laevi; elytris crenato-striatis, striis apice profundio-



ribus, intervallis laevibus; subtus dense punctata, prosterno medio elevato, tibiis punctatis, anterioribus extus serratis.

L'impression de la tête n'est pas seulement transversale, elle remonte au milieu entre les yeux; elle est assez ponctuée.

Quelques exemplaires pris à Silago, dans le district Rawas et à Koetoer (Exp. scient. néerl.).

10. *Uloma lasifrons*, n. sp.

Long.  $7\frac{1}{2}$  millim. — Præcedenti simillima, paulo major, capite transversim ac late impresso, prothorace magis tenuiter punctato, antice latius ac profundius impresso, scutello lateribus rotundato, elytris paulo minus fortiter striatis, tibiis haud punctatis distincta.

Même forme que le précédent, mais un peu plus large, avec la tête fortement et largement impressionnée en travers, l'impression du corselet plus large et plus profonde avec les bords plus relevés vers les angles antérieurs; la ponctuation du corselet est plus fine et les élytres sont plus finement striées. L'individu que je décris est entièrement d'un roussâtre brillant; mais cette coloration est probablement due à un état immature.

Pris dans le district Rawas (Exp. scient. néerl.).

11. *Uloma denticornis*, n. sp.

Long. 9 à 13 millim. — Oblonga, parallela, convexiuscula, nigra, nitida, pedibus, palpis labroque piceis, antennis apice picescentibus; capite antice transversim concavo, punctulato, margine antico paulo elevato, obsolete sinuato; antennis latis, articulis  $5^{\circ}$   $7^{\circ}$  que intus acute productis; prothorace transverso, lateribus antice arcuatis, angulis anticis obtusis, dorso sat dense tenuiter punctato, antice sat late intruso, fortius punctato, lateribus impressionis breviter sulcatis, disco postico medio tenuiter sulcatulo; scutello laevi, apice obtuse angulato; elytris sat

fortiter striato-punctatis, intervallis laevibus, extus convexiusculis; tibiis anticis crenatis. ♀ minor, capite punctato, antice arcuatim impresso, antennis simplicibus, prothorace punctulato.

Le ♂ de cette espèce est facile à reconnaître par ses antennes dont les 5<sup>e</sup> et 7<sup>e</sup> articles sont prolongés en dedans en une pointe assez aigue.

Plusieurs exemplaires pris à Silago, à Si Bakoer et dans le district Rawas (Exp. scient. néerl.), et à Boenga mas: Palembang (J. C. van Hasselt).

### 12. *Uloma rufilabris*, n. sp.

Long. 5<sup>1</sup>/<sub>2</sub> à 7 millim. — Oblongo-ovata, convexiuscula, nigra, nitida, ore, antennis pedibusque plus minusve rufopiceis; capite subtiliter punctato, antice leviter impresso; antennis latis; prothorace transverso, antice paulo angustato, lateribus leviter arcuatis, dorso tenuiter sat dense punctulato, impressionibus nullis; scutello ogivali, laevi; elytris punctato-striatis, striis apice profundioribus, intervallis planiusculis, laevibus; tibiis anticis acute denticulatis.

Cette *Uloma* paraît semblable dans les deux sexes, la tête et le corselet ne présentent ni impressions, ni saillies qui puissent différencier les sexes dans les 25 individus que j'ai examinés.

Pris à Boekit Kandang, Solok, Silago, Moeara Laboe, Loeboe Gedang, Indrapoera, Soerian, dans le district Rawas, à Koetoer et à Boenga mas (Exp. scient. néerl. et J. C. van Hasselt).

### 13. *Uloma contracta*, n. sp.

Long. 6 millim. — Præcedenti simillima, brevior, magis ovata, prothorace paulo angustiore, elytris brevioribus, profundius ac latius striatis, striis fortius punctatis, crenatis, intervallis convexis, angustioribus, postice subcarinatis.

Cette espèce est reconnaissable à son corps plus court,

à ses élytres largement et profondément striées, les stries fortement crénelées avec les intervalles convexes; en outre les antennes ont les cinq derniers articles seulement notablement plus grands que les autres, au lieu de six comme chez les espèces précédentes.

Pris à Loeboe Gedang et à Soeroelangoen (Exp. scient. néerl.).

14. *Toxicum sumatrense*, n. sp.

Long. 8 à 9 millim. — Elongatum, parallelum, nigrum, subopacum; capite punctulato; prothorace transverso, lateribus a medio antice leviter arcuatis, dorso dense punctato; élytris substriato-punctatis, striis ad marginem et postice magis impressis; subtus nitidius, dense sat tenuiter punctatum; ♂ capite cornubus 2 cylindrico-conicis, glabris, fere parallelis armato; ♀ capite ad oculos vix elevato.

Ressemble au *T. curvicorne*, de Ceylan, mais plus allongé, la tête est arrondie plus anguleusement sur les côtés, la ponctuation est moins forte entre les cornes qui sont plus droites, plus parallèles et plus courtes; le corselet est moins droit sur les côtés, sa ponctuation et celle des élytres est bien moins forte.

Beaucoup d'exemplaires pris dans le district Rawas et à Koetoer (Exp. scient. néerl.).

15. *Toxicum distinctum*, n. sp.

Long. 7 à 8 millim. — Cette espèce ressemble encore plus au *T. curvicorne*; elle a les cornes céphaliques plus grêles, moins arquées, le corselet est un peu moins ponctué avec les angles antérieurs plus saillants, assez pointus; les élytres sont un peu moins fortement striées-ponctuées. Elle diffère de la précédente par le corps plus large, la tête plus arrondie sur les côtés, les cornes plus longues et plus minces, le corselet plus large en avant avec les angles saillants.

Pris à Koetoer (Exp. scient. néerl.).

16. *Nyctobates areipennis*, n. sp.

Long. 22 à 25 millim. — Oblongo-elongata, sat convexa, nigra, vage cyanescens, modice nitida, elytris æneis, nitidis; capite subtiliter punctato, sutura clypeali profunde arcuata, antennis brevibus, basin prothoracis haud attingentibus, paulo compressis et apicem versus latioribus; prothorace transversim subquadrato, antice paulo angustato, lateribus medio leviter arcuatis, angulis anticis obtuse rotundatis, dorso sat tenuiter punctato, intervallis subtiliter alutaceis, medio sulco parum profundo, sed apice et basi fere foveolato, medio utrinque foveola impresso, basi et lateribus sat fortiter marginatis; scutello ogivali, punctato; elytris prothorace latioribus, subparallelis, apice obtuse acuminatis, sat fortiter punctato-striatis, intervallis leviter convexis, subtiliter alutaceis; subtus eum pedibus nitida; ♂ major, pectore rugoso, fulvo-pubescente, abdomine punctato-strigosulo, segmentis 2 ultimis fere levibus, femoribus subtus fulvo-villosis, tibiis anterioribus intus bisinuatis, biangulatis, apice fortiter arcuatis, compressis et breviter fulvo-villosis, intermediis a medio intus longe sinuatis et fulvo-villosis, posticis basi sinuatis; ♀ minor, pedibus simplicibus, anticis vix arcuatis, pectore fere levi.

Voisin du *N. canaliculata* Esch., mais un peu plus étroit, plus convexe, à élytres métalliques, avec le sillon clypéal bien plus profond, les antennes plus élargies vers l'extrémité, le corselet plus fortement sillonné et impressionné, plus rebordé.

Pris à Solok, Soepajang, Rengkiang Loeloes, Silago, dans le district Rawas et à Koetoe (Exp. scient. néerl.).

17. *Nyctobates semisulcata*, n. sp.

Long. 16 à 22 millim. — Oblonga, sat convexa, nigra, nitida; capite punctato, sutura clypeali valde impressa; prothorace elytris angustiore, transverso, antice et postice fere æqualiter angustato, lateribus rotundatis, haud angu-

latis, basi tantum breviter sinuatis, angulis posticis acutis, dorso punctato, basi medio breviter sulcatulo; elytris fortiter striato-punctatis, intervallis convexis, subtiliter punctatis; pectore tenuiter punctulato, metasterno medio rugosulo; tibiis anticis ♂ ♀ apice arcuatis, medio intus obtuse angulatis.

Ressemble au *N. impressa* Fabr. (*tibialis* Guér.), mais plus grand, à corselet non sillonné au milieu, n'ayant qu'un sillon très-faible et très-court à la base, les côtés sont plus régulièrement arrondis, la ponctuation est plus forte et les tibias antérieurs sont angulés au milieu.

Le corselet est un peu soyeux et un peu moins brillant que les élytres.

Rapporté du district Rawas par l'Exp. scient. néerl., et de Boenga mas (Palembang) par M. J. C. van Hasselt.

18. *Nyctobates podagra*, n. sp.

Long. 10 à 15 millim. — Ovato-oblonga, parum convexa, atra, modice nitida; capite inter oculos tantum punctato, sutura clypeali obsoleta, arcuata, oculis fere integris; prothorace transverso, antice vix angustiore, lateribus medio sub-angulatis, postice sinuatis, angulis posticis acutis, margine postico late sat fortiter bisinnato, dorso laxè subtiliter punctulato, medio longitudinaliter sulcato et sat late impresso; scutello sat brevi, parce punctato, lateribus valde arcuato; elytris postice vix sensim ampliatis, punctato-striatis, striis extus fortius punctatis, intervallis suturam versus planiusculis, extus paulo convexis; subtus nitidior, pectore punctato, abdomine strigosulo-punctato; ♂ tibiis anticis apice valde arcuatis, extus sinuatis et subtus paulo concavis, metasterno medio rugato et longitudinaliter impresso; ♀ tibiis anticis apice paulo arcuatis, brevioribus, metasterno hand impresso, vix rugosulo.

Varie extrêmement de taille. Chez un individu un peu immature, les fémurs sont rouges.

Cette espèce ressemble au *N. sulcator* Klug, de Mada-

gascar, mais elle est plus petite, les côtés du corselet sont un peu angulés au milieu et les élytres sont plus courtes.

Rapporté du district Rawas et de Koetoer par l'Exp. scient. néerl., et de Boenga mas (Palembang) par M. J. C. van Hasselt.

19. *Nyctobates granifera*, n. sp.

Long. 20 millim. — Oblonga, convexa, subopaca, fusca; capite antice planato, sat tenuiter dense strigoso-punctato, antice rugoso, labro laevi, polito; antennis fuscis, nitidis, basi sat fortiter punctatis, subopacis, articulo ultimo oblongo, apice rotundato; prothorace fere quadrato, postice angustato, antice fere truncato, angulis anticis oblique truncatis, posticis acutis, lateribus medio obtuse angulatis, dorso sat tenuiter dense aspero-rugosulo, medio longitudinaliter et utrinque leviter impresso; scutello ogivali, punctulato; elytris brevioribus, utrinque seriebus 9 granulatis, granulis sat distantibus, nitidis, intervallis obsolete striatulis et tenuiter sat irregulariter granulatis; subtus nitidior, tenuiter dense ruguloso-punctata, tibiis anticis apice fortiter incurvis.

Cet insecte est remarquable par sa sculpture et par la forme du corselet, un peu élargi et presque tronqué en avant; les élytres présentent des séries de granulations régulières, formant des côtes étroites à peine marquées sur la partie dorsale, mais bien distinctes sur les côtés.

Un seul exemplaire a été pris dans le district Rawas (Exp. scient. néerl.).

20. *Nyctobates coracina*, n. sp.

Long. 19 millim. — Oblonga, subparallela, modice convexa, omnino nigra, nitida, subtus paulo nitidior; capite tenuiter, antice densius ac fortius punctato, sutura clypeali fere oblitterata; prothorace transverso, lato, antice fere recto, postice marginato et fortiter bisinuato, angulis

posticis acutis, dorso tenuissime dense punctato; scutello ogivali, obsolete punctulato; elytris prothorace parum latioribus, lateribus fere rectis, apice obtusis, parum fortiter punctato-striatis, striis 2 versus suturam profundioribus, intervallis vix convexiusculis, subtiliter densissime punctulatis; subtus dense subtiliter punctulato-rugulosa; pedibus sat gracilibus, femoribus medio leviter incrassatis, anticis subtus dente minutissimo armatis, tibiis anticis apice arcuatis.

En prenant le *N. gigas* pour type du genre, notre insecte s'en éloigne par divers caractères; le prosternum est tronqué à l'extrémité, le mésosternum est caréné à la base non échancré en avant, mais tronqué en arrière, les fémurs sont un peu épaissis au milieu; le menton est entier. Je propose le nom de *Pseudobates* pour ce groupe qui réunira plusieurs espèces asiatiques.

Un mâle et une femelle ont été rapportés du district Rawas par l'Exp. scient. néerl.

### *Cryptobates*, n. g.

Antennæ mediocres, apicem versus haud sensim incrassatæ, nec compressæ. Oculi transversi. Prothorax lateribus tenuiter marginatus. Prothorax elytris contiguus, antice vix emarginatus, dorso convexus. Processus intercoxalis latus; metasternum sat breve. Tarsi articulo ultimo integro. Corpus oblongum, convexum, apterum.

Bien que les antennes ne soient pas comprimées à l'extrémité, je crois que ce genre appartient au groupe des Hélopides; le faciès rappelle un peu celui des *Hegemona*, mais non la coloration qui est des plus ternes.

La tête est assez grande, avec les oreillettes un peu relevées; les yeux sont transversaux, très-convexes, la partie de la tête qui est derrière eux est renflée et bordée en arrière par un profond sillon; l'épistome est presque tronqué, la suture clypéale presque carrée; le dernier article des palpes maxillaires est large, court, tronqué. Le

corselet, presque aussi long que large, est très-finement rebordé sur les côtés. Les élytres sont oblongues-ovales, convexes, soudées; le prosternum et le mésosternum sont larges, unis, la saillie intercoxale est très-large, obtuse, les 2<sup>e</sup>, 3<sup>e</sup> et 4<sup>e</sup> segments de l'abdomen sont de longueur presque égale; les pattes sont grandes, les fémurs assez épais, nullement claviformes, les tarses sont étroits, sillonnés en dessous.

21. *Cryptobates rubiginea*, n. sp.

Long. 21 millim. — Oblonga, fortiter convexa, fusca, opaca, pube rubiginea tenuiter induta; capite antice leviter late impresso; antennis articulo 1<sup>o</sup> crasso, 2<sup>o</sup> brevi, 3<sup>o</sup> sequenti paulo longiore, ceteris subaequalibus, ultimo longiore; prothorace lateribus rotundato cum angulis anticis, posticis obtusis, subtiliter densissime punctulato; scutello minuto, triangulari; elytris oblongo-ovatis, basi prothorace haud latioribus, humeris leviter angulatis, parum profunde striatis, extus fere obsolete, intervallis vix convexiusculis, densissime tenuiter granulatis; subtus opaca, coxis politis, subtilissime dense granulata, abdominis segmento 1<sup>o</sup> planato, subimpresso, medio lateribus elevato, 3<sup>o</sup> 4<sup>o</sup> apice sat abrupte truncatis; tarsis 4 anticis articulis 4 primis aequalibus, posticis articulo 1<sup>o</sup> paulo longiore.

Un seul exemplaire a été pris près Solok par M. J. H. Schagen van Leeuwen.

*Helops rubripennis* Mars., du Japon, pourrait bien rentrer dans ce genre.

22. *Homœogenus laticorne*, C. O. Waterhouse.

(Ann. and Mag. of Nat. Hist. March 1882, p. 174).

Long. 32 millim. — Oblongum, sat convexum, nigrum, sericeum, elytris paulo nitidioribus; capite sat parvo, sat tenuiter dense punctato, utrinque antice leviter impresso, margine antico obsolete sinuato; oculis supra sat approximatis; antennis



brevibus, articulis 5—11 latis, compressis; prothorace longitudine media plus duplo latiore, antice late sat profunde emarginato, angulis anticis valde productis, apice obtusis, lateribus fere rectis, antice vix sinuatis, dorso tenuiter dense punctato; scutello triangulari-rotundato, punctato, medio impresso; elytris magnis, prothorace valde latioribus, fortiter striatis, striis sat tenuiter parum dense punctatis, intervallis regulariter convexis, subtilissime alutaceis; subtus cum pedibus vix nitidius, prosterno inter coxas transversim plicato, medio sulcatulo, apice acute angulato, mesosterno profunde triangulariter excavato; pedibus sat magnis, tibiis rectis, integris.

Ce bel insecte, dont un seul exemplaire a été pris à Boekit Kandang (Exp. scient. néerl.), est remarquable par la petitesse de la tête et du corselet; ce dernier est très-court et fortement entaillé au bord antérieur, dont les angles sont largement et fortement prolongés en avant. Mr. Waterhouse a créé pour lui un nouveau genre qu'il rapproche des *Nyctobates* et *Taraxiles*; cependant il me semblerait mieux placé près des *Camaria*. Voici les caractères du genre d'après Mr. Waterhouse:

General form elongate ovate, very convex. Third joint of the antennae as long as the first and second taken together; the sixth to eleventh broad, flat, and opaque. Prosternum prolonged posteriorly into a deflexed acuminate process. Mesosternum deeply excavated to receive the prosternal process; the sides of the excavation raised, but not angular (as they are in *Amenophis*). Epipleural fold of the elytra broad at the base, gradually narrowed to near the apex, where it suddenly vanishes. Legs rather long, the femora linear; the posterior tibiae cylindrical, not channelled. Thorax transverse, rather flat, deeply emarginate in front, all the margins very narrowly incrassate, the anterior angles very prominent.

Je ne vois rien dans cet énoncé de caractères que diffère sensiblement des *Camaria*.

23. *Encyalesthus viriditinctus*, n. sp.

Long.  $9\frac{1}{2}$  millim. — Oblongus, convexus, fusco-cyanescens, modice nitidus, elytris nitidioribus, æneis, basi, margine externo et apice viridi-metallicis, ante apicem cupreo tinctis; capite subtilissime vix perspicue dense punctulato, inter oculos foveato, oculis valde approximatis; antennis basin prothoracis vix attingentibus, articulis 6 ultimis latioribus, sed latitudine haud brevioribus aut aequalibus; prothorace vix transverso, valde convexo, lateribus rotundatis, angulis anticis obtusis, basi marginato, dorso subtiliter dense punctato; scutello triangulari, punctulato, fusco; elytris prothorace latioribus, postice paulo ampliatis, apice obtusis. striato-punctatis, intervallis planiusculis, vix perspicue tenuissime punctulatis; subtus fusco-niger, abdomine subtiliter strigosulo-punctato; femoribus 4 anticis valde clavatis.

Forme du *brevicornis* Mäkl., mais plus court, avec le corselet plus petit, plus globuleux, les antennes un peu moins larges, et les stries des élytres plus ponctuées.

Un seul exemplaire pris à Boenga mas (Palembang) par M. J. C. van Hasselt.

*Necrobioides*, n. g.

Antennæ breviuseulæ, articulis 6 ultimis latioribus. Oculi sat distantes. Labrum occultum; epistoma obsolete ac late sinuatum. Prothorax postice angustatus, lateribus basi tantum marginatus. Scutellum parvum. Elytra prothorace latiore, postice ampliata, apice obtusa, margine epipleurali basi fere verticali, postice angusto sed planiusculo. Prosternum arcuatum, mesosternum angulatim excavatum. Femora clavata, 2 anteriora paulo crassiora. Tarsi subtus apice pilosi, 4 antici articulo 1° secundo paulo longiore, 2 posteriores articulo 1° duobus sequentibus conjunctis aequali.

24. *Necrobioides cæruleatus*, n. sp.

Long.  $8\frac{1}{2}$  millim. — Oblongus, postice leviter ampliatus, sat fortiter convexus, supra cyaneus, nitidus, subtus fusco-cyaneus, paulo minus nitidus, pedibus, ore antennisque piceo-rufescentibus, his apice obscurioribus; capite convexiusculo, dense parum fortiter punctato, summo parcius; sutura clypeali recta, parum impressa; prothorace medio longitudine vix latiore et valde ampliato-rotundato, lateribus postice leviter sinuato, basi marginato, utrinque postice breviter marginato et subtus sat fortiter impresso, dorso sat dense punctato, medio obsoletissime lineato; scutello triangulari, lævi; elytris ad humeros obtuse rotundatis, tenuiter punctato-striatis, striis basi paulo profundioribus, intervallis planis, tenuissime punctulatis; subtus tenuiter punctatus, segmentis abdominalibus basi magis punctatis.

Cet insecte ressemble un peu à une grosse *Necrobia* et aussi, mais en petit, au genre *Encyalesthus*, dont il diffère par la suture clypéale transversale, droite, et le corselet marginé seulement à la base.

Un seul exemplaire en a été pris à Boenga mas (Palembang) par M. J. C. van Hasselt.

25. *Derosphærus alutaceus*, n. sp.

Long. 10 millim. — Elongatus, sat convexus, niger, sat nitidus; capite subtiliter punctato, ante oculos transversim profunde sulcato et utrinque sat profunde impresso; antennis apicem versus leviter incrassatis, basin prothoracis haud superantibus; prothorace vix transverso, lateribus rotundato, angulis anticis fere rotundatis, margine antico arcuato, dorso sat tenuiter dense punctato, basi sat fortiter marginato, utrinque sinuato; scutello triangulari, lævi; elytris prothorace dimidio latioribus, post medium leviter ampliatis, parum profunde striato-punctatis, intervallis vix convexiusculis, tenuiter alutaceis; subtus fere lævis, abdomine sat tenuiter punctato-strigosulo, femoribus anticis leviter clavatis.

Ressemble au *D. globicollis* Thoms. <sup>1)</sup> mais plus petit, plus étroit, moins convexe; la tête porte un sillon transversal non arqué, les élytres sont bien moins fortement striées et les intervalles sont presque plans; les fémurs sont aussi bien moins renflés.

Quelques exemplaires ont été rapportés par l'Exp. scient. néerl. du Fort de Kock, de Silago, Alahan pandjang et du district Rawas.

26. *Lyprops picinus*, n. sp.

Long. 13 millim. — Oblongus, postice leviter ampliatus, parum convexus, omnino fulvo-piceus, sat nitidus, labro, palpis pedibusque dilutioribus; capite fortiter rugoso-punctato. antice transversim obsolete impresso, antennis sat validis, articulo ultimo ovato, oblique truncato; prothorace transverso, postice paulo angustiore, lateribus angulatim arcuatis, subtiliter crenulatis, angulis anticis paulo productis, late obtusis, dorso grossius rugosulo-punctato, medio obsolete impresso; scutello semirotondo, tenuiter dense punctato; elytris ad humeros rotundatis, densissime sat fortiter punctatis, apicem versus tenuius et strigose subrugulosis; pectore lateribus rugoso, abdomine tenuiter asperulo-punctato.

Diffère du *chrysophthalmus* Hope par la forme plus large, le corselet moins rétréci en arrière, les épaules plus arrondies, la coloration d'un brun roussâtre et les yeux non dorés.

Pris à Loeboe Gedang, Bedar Alam et Palembang (Exp. scient. néerl.)

*Pseudolyprops*, n. g.

L'insecte sur lequel est fondé ce nouveau genre ressemble extrêmement aux *Lyprops*, mais ses yeux sont proportionnellement plus gros, plus convexes et ils touchent le bord

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1) Il faut réunir à cette espèce le *Nyctobates globicollis* Fairm. de Mayotte.

antérieur du corselet. Celui-ci est très-large, ondulé sur les côtés, son bord postérieur est distant des élytres, sinué longuement et un peu obliquement de chaque côté, ce qui rend les angles postérieurs assez aigus. L'écusson est triangulaire, lisse; les élytres sont plus courtes, les tarses sont grêles, le dernier article pas plus large que les autres, et le dessous des articles est moins vilieux. Du reste la sculpture du corps est la même que celle des *Lyprops*.

27. *Pseudolyprops dilaticollis*, n. sp.

Long 5½ millim. — Ovatus, supra planiusculus, fuscus, nitidus, fulvo-villosus, palpis, antennis apice pedibusque piceis, supra undique fortiter grosse sat dense punctatus; capite inter antennis arcuatim impresso, oculis convexis, prothoraci contiguis; antennis brevibus, crassiusculis; prothorace transverso, lateribus dilatato, utrinque obtuse biangulato, angulis posticis sat acutis, margine postico utrinque oblique sinuato; scutello polito, triangulari; elytris brevibus, prothorace paulo latioribus, apice tantum angustatis et obtuse rotundatis, margine reflexo, grosse punctato; subtus nitidior, fortiter parum dense punctatus.

Un seul exemplaire pris dans le district Rawas (Exp. scient. néerl.).

28. *Artactes corruscus*, n. sp.

Long. 5½ à 7 millim. — Orbicularis, convexus, nitidissimus, fusco-violaceus, capite obscuriore, prothorace lateribus cœrulescente, elytris vittis 3 transversis, apice et vitta suturali purpureis, aureo micantibus, parum limitatis; subtus fusco-brunneus; capite tenuiter densissime punctulato, summo fere obsolete; prothorace brevi, lato, elytris valde angustiore, subtilissime punctulato, lateribus parum arcuatis, marginatis, basi utrinque foveola obsoleta signato; elytris sat fortiter punctato-lineatis, intervallis haud perspicue punctulatis, planis, margine externo anguste reflexo.

Le type du genre, *A. nigritarsis* Pasc., de Sumatra, est entièrement d'un bleu verdâtre, brillant, avec les tarsi noirs. Quant au genre, voici ses caractères d'après Mr. Pascoe: *Hemicyclo* affinis. Tarsi articulo ultimo elongato. Prosternum postice subdepressum, excavatum. Corpus hemisphaericum.

Ces insectes ont l'aspect des Coccinellides à couleurs métalliques. Je conserve à cette espèce le nom qu'elle porte dans la collection de Mr. Chevrolat.

Pris dans le district Rawas et à Koetoer (Exp. scient. néerl.).

29. *Thesilea rugifrons*, n. sp.

Long. 6½ millim. — Sat elongata, subparallela, sat convexa, caerulea, nitida, capite prothoraceque obscurioribus et leviter purpureo micantibus; capite densissime punctato-strigoso, antice tenuiter punctato, antennis fuscis, basi rufis; prothorace elytris parum angustiore, transverso, lateribus paulo arcuatis, leviter undulatis, basi breviter sinuatis, margine antico fere recto, utrinque leviter sinuato, postico late bisinuato, angulis posticis sat acutis, dorso sat dense punctato, ad latera et basin parum late deplanato; scutello laevi, triangulari; elytris parallelis, apice obtuse acuminatis, substriato-punctatis, striis extus et suturali apice profundioribus, intervallis planis, laevibus; subtus fusco-picea, nitida, punctulata, pedibus piceis.

Cet insecte diffère des véritables *Thesilea* par le corps plus parallèle, le corselet à bords latéraux déprimés, faiblement ondulés, et les antennes dont les 5 derniers articles sont élargis (au lieu de 4); mais je ne vois pas de caractères suffisants, au moins actuellement, pour créer un nouveau genre dans un groupe où les différences génériques sont peu nettement marquées.

Un seul exemplaire pris à Solok (Exp. scient. néerl.).

30. *Eucyrtus anthracinus*, Kraatz.

(Deutsche Entom. Zeitschr. 1880, p. 102).

Long. 14 à 16 millim. — Anthracinus, opacus, epistomo

leviter emarginato, capite confertim distinctius, thorace crebre subtiliter punctato, hoc transverso, pone medium parum emarginato, elytris subtiliter striatis, striis vage punctatis, 1 et 2, 3 et 4 basi conjunctis, interstitiis lævibus.

Quelques exemplaires de cette espèce ont été pris à Boenga mas (Palembang) par M. J. C. van Hasselt.

31. *Eucyrtus (Platycrepis) latitarsis*, n. sp.

Long. 13 à 14 millim. — Obscure cœruleus, modice nitidus, elytris nitidis, violaceis, margine externo cœruleo aut virescenti-cyaneo, violaceo-tincto; capite subtiliter punctato, antice paulo densius, epistomate haud emarginato; prothorace transverso, lateribus sat fortiter marginatis, antice rotundatis, basi sinuatis, angulis posticis acutis, basi bisinuato, tenuiter marginato, dorso subtiliter punctato, postice arcuatim impresso, impressione medio subinterrupta; scutello ogivali, haud impresso, indistincte punctulato, cyanescente; elytris sat fortiter striatis, striis lævibus aut obsolete punctatis, intervallis lævigatis; tibiis apice intus fulvo-pubescentibus, tarsis valde dilatatis, subtus dense fulvo-spongiosis.

Voisin de l'*E. violaceus*, en diffère par les élytres à intervalles lisses, le corselet finement mais distinctement ponctué, à côtés assez fortement arrondis en avant, l'écusson de taille ordinaire, sans impression, et les tarses très-larges, mais non épaissis.

Pris dans les parties montagneuses de la province de Palembang et dans le district Rawas (Exp. scient. néerl.).

32. *Eucyrtus interstitialis*, n. sp.

Long. 10 millim. — Oblongo-ovatus, lævis, nitidissimus, fusco-cyaneus, subtus minus nitidus, elytris cyaneis, striis sat late cupreis; capite brevi, tenuissime punctulato, epistomate haud emarginato; oculis valde transversis, magis approximatis; prothorace transverso, lateribus marginatis, postice vix sensim sinuatis, angulis posticis fere rectis,

dorso lævi, basi immarginato, medio utrinque transversim foveato; scutello triangulari, lævi; elytris tenuiter striatis, striis laevibus, 1<sup>a</sup> et 2<sup>a</sup>, 3<sup>a</sup> et 4<sup>a</sup> basi conjunctis, 6<sup>a</sup> sub humerum abbreviata; pedibus cyaneis, nitidis, femoribus tibiisque apice intus et tarsis dense fulvo-pubescentibus.

Voisin le l'*E. Lisæ* Kr., distinct par la coloration des élytres, les yeux plus rapprochés et le dessous des pattes pubescent.

Un seul exemplaire pris à Boenga mas (Palembang) par M. J. C. van Hasselt.

### 33. *Gauromaia dives*, Pascoe.

(Journ. of Ent. II, p. 474.)

Long. 13 à 15 millim. — Oblonga, convexa, postice vix ampliata, nitida, fusco-cyanescens, violaceo-tincta, elytris violaceo-purpureis, margine externo et interdum sutura anguste æneis; subtus fusca vage cyanescens, parum nitida, pedibus nitidioribus, femoribus sæpius medio late rufis; capite late, transversim subquadrato, subtiliter punctulato, antice leviter sinuato; prothorace transverso, elytris angustiore, antice haud angustato, lateribus leviter arcuatis, basi late bisinuato, leviter marginato, dorso dense tenuiter punctato; scutello triangulari, lævi; elytris substriato-punctatis, striis apice obsoletis, suturali magis impressa, intervallis ♂ lævibus, ♀ subtilissime punctulatis; subtus densissime subtiliter punctata; tibiis arcuatis, apice intus fulvo-pubescentibus, tarsis subtus dense fulvo-setosis.

Le *G. dives* Pasc., seule espèce du genre décrite et provenant de Malacca, semble se rapporter à notre insecte; mais la description anglaise, étant un peu courte, laisse quelques doutes. Dans notre insecte le prosternum est sillonné entre les hanches et forme une saillie assez mince, tronquée en angle droit.

Pris dans le district Rawas et à Koetoer (Exp. scient. néerl.), et à Boenga mas: Palembang (J. C. van Hasselt).



34. *Gauromaia viridi-janthina*, n. sp.

Long. 12 millim. — Oblonga, modice convexa, postice leviter ampliata, nitida, elytris violaceis, prothorace viridi-æneo, capite fusco-metallico, basi virescente, corpore subtus cum pedibus fusco, nitido, vage cyanescente; capite dense tenuissime punctulato; prothorace elytris valde angustiore, lateribus modice marginatis, ad angulos anticos rotundatis, basi late bisinuato, fortiter marginato, dorso subtiliter dense punctulato; scutello viridi-æneo, lævi, fere rotundato; elytris substriato-punctatis, punctis sat grossis, intervallis haud perspicue punctulatis; segmentis abdominalibus basi strigosulis; tibiis apice extremo fulvo-pubescentibus, tarsis fulvo-setosis.

Diffère du *G. dives* par la taille plus petite, le corps moins convexe, la tête plus arrondie aux angles, le corselet plus arrondi sur les côtés en avant, moins fortement marginé sur les côtés, plus ponctué, l'écusson plus court et les élytres un peu plus larges. La coloration est aussi différente, et le prosternum est arrondi, non angulé.

Un seul exemplaire pris à Alahan pandjang (Exp. scient. néerl.).

35. *Gauromaia alternata*, n. sp.

Long. 9 $\frac{1}{2}$  millim. — Ovato-oblonga, nitida, fusco-virescens, elytris viridibus, utrinque vittis 2 purpureis ornatis; capite dense sat tenuiter punctato, utrinque antice oblique plicatulo et prope oculos impresso, sutura clypeali medio obsoleta; prothorace elytris sensim angustiore, transverso, brevior, dense subtiliter punctato, lateribus et basi modice marginato; scutello minuto, impresso; elytris postice leviter ampliatis, substriato-punctatis, stria suturali profundior, intervallis fere inconspicue punctulatis; subtus cum pedibus brunnea, nitida, vage ænescens; prosterno inter coxas sulcato, apice angulato, mesosterno triangulater excavato, lateribus angulatis; abdomine basi punc-

tato; femoribus anticis dente acuto subtus armatis, tarsis subtus fulvo-setosis.

La suture clypéale, effacée au milieu, la dent des fémurs antérieurs et la coloration font reconnaître facilement cette espèce, que je ne crois pas devoir éloigner des *Gauromaia* malgré l'épine des fémurs antérieurs, caractère qui rapprocherait cet insecte des *Pseudeumolpus* de Mr. Kraatz.

Pris par feu M. Albarda à Atjeh.

36. *Gauromaia Hasseltii*, n. sp.

Long. 11 millim. — Oblonga, sat convexa, nitida, virescenti-cærulescens, capite cupreo tincto, elytris brunneo-cuprescentibus, margine externo anguste virescente, subtus fusca, vage violacea, parum nitida, pedibus nitidis, viridicyaneis; capite dense punctato, summo tenuiter punctulato; labro piceo, obsolete punctulato; prothorace elytris parum angustiore, transverso, lateribus fere rectis, antice tantum arcuatis, basi subtiliter, lateribus evidentius marginato, dorso sat dense parum fortiter punctato, postice utrinque transversim obsoletissime impresso; scutello sat parvo, impressiusculo; elytris postice haud sensim ampliatis, apice obtusis, lineato-punctatis, haud aut vix sensim striatulis, linea suturali profundiore, intervallis subtilissime punctulatis; abdomine dense tenuiter strigosulo; tibiis apice extremo fulvo-pubescentibus, tarsis sat angustis, fulvo-setosis.

Diffère des précédents par le corselet à peine plus étroit que les élytres, celles-ci plus parallèles. Le prosternum est sillonné entre les hanches antérieures et arqué, non angulé.

Un seul exemplaire pris à Boenga mas (Palembang) par M. J. C. van Hasselt, à qui je dédie cette espèce.

37. *Tetraphyllus iodochalceus*, n. sp.

Long. 8 $\frac{1}{2}$  millim. — Brevissime ovatus, valde convexus, nitidissimus, æneus, prothorace violaceo-tinctus, capite

obscure viridi-æneo, ore picescente, antennis fuscis, sat nitidis, fulvo-pubescentibus, elytris anguste cœruleo marginatis; capite dense tenuiter punctato, sutura clypeali transversim recta, parum impressa, margine antico late sinuato; antennis compressis, articulis 5 ultimis latioribus; prothorace late trapezoidali, longitudine triplo latiore, lateribus fere rectis, antice convergentibus, sat late marginatis, dorso sat fortiter sat dense punctato; scutello triangulari, lævi; elytris brevissime ovatis, prothorace basi latioribus, apice fere obtusis, sat fortiter marginatis, lævibus, punctis grossis sat distantibus lineatim dispositis, nullo modo striatis, punctis apicem versus obsolescentibus; subtus brunneo-violaceus, minus nitidus, abdomine lateribus striolato, pedibus magis fusco-cyaneis.

Il ne me paraît pas possible de séparer cet insecte des *Tetraphyllus* de Madagascar; la conformation des antennes, du sternum est la même; le facies est un peu différent parceque le corps est plus rebordé sur les côtés, que les élytres ne sont pas striées, n'ayant que des points peu serrés, rangés en lignes; le corselet est aussi plus large en arrière, plus rétréci en avant, plus droit sur les côtés.

Un seul exemplaire (S. Müller).

38. *Tetraphyllus orichalceus*, n. sp.

Long.  $5\frac{1}{2}$  millim. — Præcedenti valde affinis, sed multo minor, magis convexus, antennis gracilioribus, prothorace lateribus magis arcuatis, minus marginatis, capite subtilissime punctato, antice utrinque impresso, viridi-æneo, nitido, prothorace violaceo, lateribus viridi, elytris violaceis, extus usque ad scutellum viridi-marginato; prothorace subtilissime punctulato, elytris seriatim punctatis; subtus fusco-cyanescens, vix nitidus, femoribus nitidioribus.

Distinct du précédent par la taille bien plus petite, la coloration violacée à bordure verte, le corselet à peine distinctement ponctué, les élytres ayant 7 rangées de points au lieu de 8 et les antennes plus étroites.

Un seul exemplaire pris à Silago (Exp. scient. néerl.).

39. *Camarimena armipes*, n. sp.

Long. 13 millim. — Elongata, antice et postice similiter angustata, convexa, fusco-ænea, parum nitida, elytris cupreo-æneis, valde nitidis; capite dense punctato, fere ruguloso, oculis magis approximatis, fortius sinuatis; antennis basin prothoracis vix attingentibus, apicem versus paulo crassioribus, articulo ultimo majore, fuscis basi piceo-rufis; prothorace longitudine vix latiore, antice attenuato, dense fortiter punctato, margine postico elevato, angulis productis; scutello fere truncato, brevi; elytris elongatis, post medium attenuatis, apice oblique truncatis et extus spinosis, punctato-substriatis, punctis basi majoribus, striis 2 primis apice extremo sulcatis, intervallis subtiliter alutaceis, margine externo postice anguste cyanescente; subtus subopaca, dense cinerea sericans, femoribus clavatis, punctatis, purpureis, anterioribus magis inflatis, subtus breviter acute dentatis, tibiis anterioribus subtus apice nigrovillosis et medio acute fortiter unidentatis, tarsis omnibus subtus villosis, articulo ultimo longiore.

Cet insecte diffère des *Camarimena* par les yeux plus fortement sinués, plus rapprochés, l'écusson court et tronqué, les élytres épineuses et les pattes antérieures dentées; le dessous du corps est couvert d'une pubescence soyeuse qui rappelle celle des *Donacia*.

Un seul exemplaire pris dans le district Rawas (Exp. scient. néerl.).

40. *Hemicera compacta*, n. sp.

Long. 5 millim. — Breviter ovata, convexa, nitidissima, metallica, elytris purpureo, æneo, aureo et cyaneo sat regulariter vittatis, vittis extus arcuatis, prothorace medio transversim purpureo, utrinque cyanescente, antice et postice æneaurato, capite purpureo, subtilissime punctulato; antennis fuscis, basi piceis, articulo 3<sup>o</sup> longiore, 4<sup>o</sup> 5<sup>o</sup>que conjunctis subæquali, his brevibus, subcylindricis, sex ultimis

latis, intus angulatis: prothorace longitudine duplo latiore, elytris parum angustiore, antice angustato, lateribus marginatis, antice leviter arcuatis, margine postico utrinque late sinuato, angulis posticis paulo acutis, dorso subtiliter sat dense punctulato; scutello triangulari, laevi, obscure cupreo; elytris fere medio ampliatis, punctato-striatis, stria suturali postice profundiore, intervallis planis, politis; subtus cum pedibus brunneo-metallica, æneo tincta, femoribus paulo magis purpuratis, tibiis tarsisque picescentibus.

Cette espèce est remarquable par sa petite taille et sa forme courte; elle rappelle les *Eucyrtus* du 3<sup>e</sup> groupe, ressemblant à des *Lina*. Elle diffère des petits individus de l'*H. splendens*, espèce à laquelle elle ressemble extrêmement pour la coloration, par la forme courte, les élytres à stries plus enfouées, plus fortement ponctuées; le corselet est aussi un peu plus nettement ponctué, les angles antérieurs sont moins effacés.

Un seul exemplaire du district Rawas (Exp. scient. néerl.)

*Periphanes*, n. g. (Helopii).

Corpus oblongo-elongatum, convexum. Oculi convexi, reniformes, antennæ filiformes, medium corporis fere superantibus, articulo 3<sup>o</sup> quarto dimidio longiore, sed ultimo fere æquali. Labrum latum, breve; palpi maxillares articulo ultimo triangulari, lato, truncato; labiales subovato, truncato. Prothorax lateribus carinatus. Prosternum sat angustum, postice paulo productum; mesosternum valde excavatum; metasternum sat breve. Elytra margine reflexo basi verticali, postice sat horizontali, angusto, impressiusculo. Tarsi subtus dense villosis, antichi lati, articulo 1<sup>o</sup> sat magno, 2<sup>o</sup> 3<sup>o</sup>que brevibus, 4<sup>o</sup> cordato, 5<sup>o</sup> elongato, intermedio paulo minus lati, postici angustiores.

Ce genre se rapproche des *Hegemona* et *Elomosda*, en diffère par le corps presque parallèle, non gibbeux, les élytres à repli épipleural vertical et tranchant en avant, horizontal, impressionné et assez étroit en arrière; le pro-

sternum est plus étroit entre les hanches antérieures et plus angulé-comprimé à l'extrémité; les pattes sont moins robustes, les articles intermédiaires des 4 tarses antérieurs sont bien plus courts et proportionnellement plus larges. Enfin le dernier article des palpes maxillaires n'est pas tronqué aussi obliquement.

41. *Periphanes orichalceus*, n. sp.

Long. 14 millim. — Oblongo-elongatus, convexus, capite prothoraceque æneis, cupreo tinctis, sat nitidis, elytris æneis, leviter purpureo micantibus nitidioribus, antennis brunneis, basi ænescentibus, apice picescentibus, palpis rufopiceis, articulo ultimo fusco; capite tenuiter sat dense punctato, ante et ad oculos impresso, sutura clypeali sat profunda, medio recta, utrinque angulata; prothorace elytris multo angustiore, transverso, quadrato, lateribus fere rectis, ad angulos anticos tantum rotundatis, parum dense modice punctato, medio tenuiter sulcatulo, postice utrinque transversim sulcato, basi marginato, angulis posticis paulo acutis; scutello triangulari, polito; elytris sat fortiter convexas, posticis vix sensim ampliatis, sat fortiter striatis, striis leviter punctulatis, intervallis vix convexiusculis, haud sensim punctatis; subtus cum pedibus viridi-æneus, nitidus, cupreo et viridi tinctus, femoribus basi breviter testaceis.

Un seul exemplaire de Boenga mas: Palembang (J. C. van Hasselt).

42. *Synopticus dapsoides*, n. sp.

Long. 6 à 7 millim. — Oblongus, sat crassus sed parum convexus, brunneus, subopacus, pilis cinereo-fulvescentibus sat longe et sat dense vestitus, elytrorum sutura et lateribus interdum rufescentibus; capite sat parvo, reclinato, antice punctato, palpis piceis; antennis validis, apicem versus paulo crassioribus, corporis medium fere attingenti-

bus, articulo 1<sup>o</sup> sat crasso, 2<sup>o</sup> tertio paulo brevior, ceteris subæqualibus, ultimis dense punctatis, ultimo breviter ovato; prothorace elytris angustior, transversim subquadrato, lateribus antice arcuatis, basi leviter sinuatis, angulis anticis obtusis, posticis recte acutis, margine postico fortiter bisinuato, dense parum profunde punctato, postice medio sat late impresso; scutello punctato, ovato-rotundato; elytris parallelis, apice obtusis, basi leviter sinuatis, punctis grossis quadratis seriatis, intervallis latis, medio tenuiter carinatis; subtus tenuiter punctulatus, fulvo-pubescent, tarsis piceis, femoribus anticis compressis, apicem versus dilatato-angulatis, angulo sat acuto, tarsis anticis articulis 4 primis æqualibus, 5<sup>o</sup> elongato, posterioribus articulo 1<sup>o</sup> et 4<sup>o</sup> æqualibus.

La forme rappelle un peu celle des *Dapsa*, mais elle est plus parallèle.

Une seule espèce de ce genre a été décrite; elle est du Gabon, sa taille est beaucoup plus petite, son corselet plus large et les intervalles des stries des élytres ne sont pas carénés.

Pris à Paja Koemboeh, dans le district Rawas et à Boengamas (Exp. scient. néerl. et J. C. van Hasselt).

#### 43. *Amarygmus irideus*, n. sp.

Long. 7 $\frac{1}{2}$  millim. — Ovatus, modice convexus, nitidus, viridi-metallicus, prothorace ad latera ante marginem violaceo tincto, elytris sutura cyanea, postea aureo-cupreis, viridibus et aureo-cupreo longitudinaliter tinctis, subtus fusco-cyanescens, parum nitidus; capite subtiliter dense punctato, palpis maxillaribus articulis 2<sup>o</sup> et 3<sup>o</sup> flavidis, ultimo fusco, securiformi; prothorace longitudine duplo latiore, antice angustato, margine postico fere recto, medio leviter lobato, subtilissime dense punctato; scutello triangulari, lævi; elytris ovatis, grosse lineato-punctatis, linea suturali paulo impressa, intervallis subtilissime vix perspicue punctulatis; subtus dense sat subtiliter punctatus, segmento 3<sup>o</sup> transversum fortiter sulcato, 4<sup>o</sup> pluri-impresso, ultimo breviter

fulvo-piloso; pedibus validis ac nitidioribus, femoribus crassis, tarsis piceis, tibiis intermediis intus pilosis, posterioribus arcuatis.

Remarquable, outre sa belle coloration, par sa forme convexe, également rétrécie aux deux extrémités, ses élytres à séries de gros points et la sculpture des segments abdominaux.

Un seul exemplaire de Soeroelangoen dans le district Rawas (Exp. scient. néerl.).

44. *Amarygmus multicolor*, n. sp.

Long. 5 millim. — Ovoideus, convexus, postice attenuatus, viridi-metallicus, prothorace antice cupreo tincto, elytris disco cupreo-purpuratis, extus et ad suturam viridi-subaureis, basi et humeris cupreis; capite antice transversim recte bistriato, oculis magnis, fere supra conjunctis, profunde sinuatis; antennis fuscis, basi rufescentibus; prothorace longitudine plus duplo latiore, antice angustato, lateribus cum angulis anticis fere rotundatis, subtilissime vix perspicue punctulato, margine postico medio obsolete lobato, utrinque obsolete bisinuato; elytris lineato-punctatis, extus substriatis; subtus cum pedibus fusco-cyanescens, parum nitidus, subtilissime punctulatus.

Ressemble à l'*irideus*, mais plus petit, atténué en arrière, plus convexe, avec le corselet moins ample, à ponctuation presque indistincte, les points des élytres moins gros et les intervalles non distinctement ponctués.

Pris à Silago, Moeara Laboe, dans le district Rawas et à Koetoer (Exp. scient. néerl.)

45. *Amarygmus Hasseltii*, n. sp.

Long. 9 millim. — Ovatus, paulo oblongus, convexus, aeneus, nitidus, capite obscuriore et cyanescente, subtiliter punctulato et inter oculos obsolete impresso; epistomatis margine et palpis apice anguste rufis; antennis brevioribus,



medium corporis haud attingentibus, apicem versus paulo latioribus et leviter compressis; prothorace elytris parum angustiore, lateribus arcuatis, angulis anticis valde obtusis, margine postico utrinque leviter late sinuato, sat dense tenuiter punctato; scutello triangulari, lævi; elytris post medium tantum angustatis, punctato-lineatis, haud striatis, punctis oblongis, paulo violascentibus, intervallis planis, tenuiter laxè punctulatis. tribus externis apice convexis et linea suturali apice impressa; subtus fusco-niger, sat nitidus, subtiliter punctatus, abdominis segmento 4<sup>o</sup> brevissimo, basi transversim profunde sulcato, pedibus nigris, nitidioribus, tarsis subtus dense fulvo-villosis.

Cette espèce est plus courte et plus elliptique que la plupart des *Amarygmus*, les antennes sont plus courtes et plus épaisses; si la coloration des élytres n'est pas variée, la ponctuation est assez spéciale; le mésosternum n'est bisilloné que très-légèrement entre les hanches.

Un seul exemplaire pris à Boenga mas (Palembang) par M. J. C. van Hasselt, à qui je dédie cette espèce.

#### 46. *Dietysus ovoideus*, n. sp.

Long. 12 à 13 millim. — Ovatus, convexus, antice attenuatus, fuscus, vage ænescens, nitidus, femoribus medio late rufis; capite tenuiter dense punctato, sutura clypeali impressa, fere recta, antennis medio corporis longioribus, apicem versus leviter crassioribus, articulis 6 primis nitidis, ceteris opacis, punctatis; prothorace elytris angustiore, lateribus postice parallelis, a medio antice valde angustato, undique tenuiter marginato, margine postico medio obsoleto, dorso lævi; scutello triangulari, acuto, lævi, lateribus basi utrinque unipunctatis; elytris post medium ampliatis, tenuiter sed evidenter striatis. striis subtiliter punctulatis, intervallis planis, lævibus, elytrorum apice obtuse rotundato; subtus nigro-fusco-ænescens, parum nitidus, prosterno inter coxas impresso, apice sat fortiter angulato.

Ressemble aux *Plesiophthalmus* du Japon, mais bien plus

court et plus ovale, les yeux moins rapprochés en dessus, la tête moins fortement impressionnée en travers, le prosternum plus large, sillonné, l'écusson plus oblong, plus pointu, etc. Le mésosternum est horizontal, mais profondément excavé intérieurement et un peu échancré en avant, de manière à recevoir la pointe du prosternum.

Pris à Soepajang (Exp. scient. néerl.).

47. *Dietysus longicrus*, n. sp.

Long.  $10\frac{1}{2}$  millim. — *D. ovoideo* affinis, sed minor, magis metallicus et nitidior, femoribus concoloribus, magis oblongus, antennis gracilioribus, ad apicem haud crassioribus. capite prothoraceque evidenter punctulatis, hoc latiore, scutello paulo brevior, elytris angustioribus, sat tenuiter striatis, sed striis plus minusve fortiter punctatis.

Très-voisin du précédent, mais d'une forme plus svelte, avec le corselet plus large et les élytres plus oblongues; la tête et le corselet sont visiblement ponctués, les élytres ont des stries plus fortement ponctuées et les fémurs postérieurs atteignent, ou même dépassent un peu l'extrémité des élytres, tandis qu'ils sont plus courts que ces dernières chez le *D. ovoideus*; les tibias postérieurs sont plus fortement arqués; le dessus du corps est plus métallique d'un bronze foncé; les antennes sont plus grêles.

Du district Rawas (Exp. scient. néerl.) et de Boenga mas (J. C. van Hasselt).

48. *Dietysus picitarsis*, n. sp.

Long. 7 à 9 millim. — Ovatus, valde convexus, postice attenuatus, aeneus, nitidus, capite obscuro, subtus cum pedibus fusco-cyanescens, nitidus, tarsis piceis, antennis fuscis, articulo 2<sup>o</sup> rufescente, sat gracilibus, medium corporis longe superantibus; capite densissime tenuiter punctato, inter antennis transversim impresso, oculis sat approximatis; prothorace sat parvo, elytris angustiore, brevi, antice

valde angustiore, lateribus arcuatis, dorso subtilissime punctulato, margine postico utrinque fere obsolete sinuato; scutello fere ogivali, lævi; elytris ovatis, apice obtusis, striatis, striis laxe et sat tenuiter punctatis, extus paulo profundioribus, intervallis lævibus, planiusculis, externis vix convexiusculis; subtus lævis, abdomine vix perspicue punctulato; palpis rufopiceis.

Diffère du précédent, outre la taille plus petite, par le corps plus rétréci en avant et surtout en arrière; les côtés du corselet sont moins arrondis et convergent presque dès la base, les élytres paraissent plus convexes et proportionnellement plus striées.

Du district Rawas (Exp. scient. néerl.).

Un individu de petite taille (7 millim.), plus atténué en arrière, me paraît un ♂ de cette espèce; il provient de la même localité.

#### 49. *Dietysus oblongulus*, n. sp.

Long. 9 millim. — Oblongo-ellipticus, modice convexus, nitidus, fusco-niger, vage coerulescenti-micans, epistomate, labro tarsisque piceis; capite obsolete punctulato, utrinque ad oculos sulco verticali sat profundo et antice sulco transverso profundiore signato; antennis elongatis, medium elytrorum paulo superantibus, articulis 5—11 subæqualibus, articulo 1<sup>o</sup> brevioribus; prothorace lato, a basi antice leviter angustato, basi utrinque leviter sinuato, angulis posticis rectis, acutis; scutello latiore, obtuse ogivali, lævi; elytris ovato-oblongis, medio leviter ampliatis, basi prope scutellum arcuato-productis, ad humeros sat acute angulatis, fortiter striatis, striis basi tenuiter punctatis et apice decrescentibus, intervallis lævibus, vix convexiusculis; subtus cum pedibus piceo-fuscus, sat nitidus, femoribus anticis paulo crassioribus et subtus, paulo post medium, obsolete unidentatis.

La forme de cette espèce diffère assez de celle des précédentes; elle est plus oblongue, moins convexe; la tête est

fortement sillonnée et les fémurs antérieurs ont en dessous une dent obtuse, à peine distincte.

Un seul exemplaire du district Rawas (Exp. scient. néerl.).

50. *Strongylium cariosicolle*, n. sp.

Long. 14 millim. — Oblongo-elongatum, subparallellum, convexum, fusco-æneum, parum nitidum, subtus cum pedibus nitidius, elytris viridi-æneis, nitidissimis, antennis fuscis, subviolascens, opacis, articulis 4 primis fusco-æneis; capite dense fortiter punctato, inter oculos carioso; antennis apicem versus dilatatis; prothorace elytris angustiore, antice parum angustato, grosse carioso-punctato, basi fortiter elevato-marginato, levior ac nitidior; scutello ogivali, lævi; elytris striato-punctatis, ante medium transversim impressis, striis parum impressis, sed punctis basi et lateribus ovato-foveolatis, intervallis basi leviter transversim undulatis; pectore fortiter punctato, mesosterno medio carinulato, metasterno, lateribus exceptis, fere lævi; abdomine tenuiter dense punctulato; pedibus punctatis, tarsis cyaneis.

Voisin du *S. ambiguum*, en diffère par la tête non sillonnée, rugueuse entre les yeux, les élytres très-brillantes, ayant une dépression transversale avant le milieu, à fossettes s'étendant à la base jusqu'auprès de l'écusson; le corselet n'a pas d'impression à la base, les fémurs ne sont pas rouges, et le mésosternum présente une petite carène médiane.

Un seul exemplaire des parties montagneuses de la province de Palembang (Exp. scient. néerl.).

51. *Strongylium janthinipes*, n. sp.

Long. 9 millim. — Elongatum, subcylindricum, viridi-æneum, nitidum, prothorace capiteque carioso-punctatis, minus nitidis; antennis medium corporis fere attingentibus, fusco-cyaneis, subopacis, dense punctatis, basi nitidioribus, ab articulo 5<sup>o</sup> gradatim latioribus, articulis ultimis fere

quadratis; prothorace elytris angustiore, longitudine paulo latiore, lateribus antice leviter arcuatis et basi obsolete sinuatis, dorso medio obsolete longitudinaliter impresso, basi paulo evidentius, margine postico polito, sat incrassato; scutello triangulari, lævi, impresso; elytris fere parallelis, sat tenuiter punctato-substriatis, punctis basi (lineis 2 primis exceptis) majoribus et extus usque post medium foveatis, intervallis extus transversim plicatis, dorso prope suturam utrinque biimpresso, margine reflexo cyaneo; subtus cyanescens, nitidum, pectore lateribus punctato, pedibus sat elongatis, cyaneis.

Ressemble assez au précédent, mais plus petit, plus étroit, plus cylindrique, avec le corselet ponctué plus finement, mais plus densément et les élytres ayant chacune 2 faibles impressions près de la suture; le prosternum est conformé de la même manière.

Un seul exemplaire du district Rawas (Exp. scient. néerl.).

## 52. *Strongylium flavitarse*, n. sp.

Long. 10 millim. — Elongatum, subcylindricum, atroviolascens, nitidum, subtus paulo nitidius, elytris magis cœrulescentibus, pedibus rufis, tibiis basi infuscatis, tarsis testaceo-flavis; capite subtilissime punctulato, inter oculos impressiusculo, antice transversim fortiter impresso; oculis magis approximatis; prothorace subquadrato, lateribus ad angulos antice tantum rotundatis, angulis posticis acutis, dorso convexo, basi sat fortiter arcuatim impresso, subtiliter punctulato, disco fere lævi, margine postico anguste marginato; scutello convexiusculo, ogivali, basi utrinque impresso; elytris basi fere rotundatis, apice leviter emarginatis, angulo externo acuto, fortiter striato-punctatis, punctis basi et praesertim lateribus grossis, post medium fere abrupte minoribus, intervallis basi paulo transversim undulatis; prosterno inter coxas angusto, elevato, mesosterno late concavo, pedibus gracilibus, tarsorum articulo 1<sup>o</sup> ultimo æquali.

Cette espèce est remarquable par la terminaison des élytres, la gracilité des pattes et la ponctuation à peine visible du corselet. Elle me semble se rapprocher du *S. angusticollis* Mäkl. du Sylhet.

Un seul exemplaire de Soeroelangoen dans le district Rawas (Exp. scient. néerl.).

53. *Cœlolophus Ritsemæ*, n. sp.

Long. 10 millim. — Sat elongatus, alte convexus, niger, parum nitidus, elytris nitidioribus; capite fortiter punctato, oculis valde approximatis, fronte foveola minuta signata, antennis crassiusculis; prothorace transverso, lateribus rotundatis, medio obtuse angulatis, rugoso-punctato, linea media mediocriter impressa, basi utrinque obsolete foveolato; scutello triangulari-oblongo, valde punctato; elytris substriato-erenatis, punctis apice obsolete, intervallis lævibus, alternatim carinatis, omnibus basi et extus costatis; pectore lateribus fortiter punctato, abdomine leviter luteo-pubescente.

Diffère du *C. Schaumii* Mäkl. par le corselet à peine angulé sur les côtés, à peine sillonné au milieu, et les élytres à carènes non ondulées, ne disparaissant que sur les 2<sup>e</sup> et 4<sup>e</sup> intervalles et seulement après la base.

Un seul exemplaire de cette espèce, dédiée à M. C. Ritsema, a été pris à Koetoer (Exp. scient. néerl.).

***Cistelidae.***

54. *Allecula crassipes*, n. sp.

Long. 10 millim. — Elongata, elliptica, convexa, fusco-brunnea aut fusco-castanea, nitida, antennis, palpis, tibiarum apice tarsisque interdum dilutioribus; capite parvo, basi valde angustato, inter antennis profunde arcuatim sulcato, oculis approximatis, extus valde convexis, fere angulatis, antennis gracilibus, medium corporis superantibus, articulo 1<sup>o</sup> sat brevi, 2<sup>o</sup> brevissimo, sequentibus subæqua-

libus, elongatis; prothorace longitudine vix latiore, antice rotundato-angustato, dense punctato; scutello subtiliter punctato; elytris prothorace dimidio latioribus, ante medium postice paulatim attenuatis, fortiter punctato-striatis, punctis apice obsolescentibus, intervallis convexis, extus convexioribus, lævibus: subtus dense punctata, pedibus sat magnis, femoribus valde clavatis, tibiis 4 anticis arcuatis, posticis basi tantum. — ♀ pedibus minoribus, femoribus vix crassis, tibiis fere rectis, elytris paulo minus attenuatis.

Cette *Allecula* présente deux grandes lamelles aux 4 tarses antérieurs et une seulement aux postérieurs et rentrerait dans le genre *Dietopsis* de Solier.

Pris à Loeboe Tarab, dans le district Rawas et à Boenga mas.

55. *Cistela (Cteniopus) pygialis*, n. sp.

Long. 9 à 11<sup>1</sup>/<sub>2</sub> millim. — Oblongo-ovata, sat convexa, sulphureo-flava, nitida, ano, antennis (articulis 2 primis exceptis), tibiis tarsisque nigris; capite tenuiter densissime punctato, summo obsolete longitudinaliter impresso, ante antennis profunde arcuatim sulcato; prothorace transverso, antice valde angustato, margine postico fere recto, densissime tenuiter punctato, medio obsolete longitudinaliter sulcatulo; scutello triangulari, apice obtuso, dense punctulato; elytris medio leviter ampliatis, fortiter crenato-striatis, striis apice obsolescentibus, intervallis sat convexis, punctatis, 3<sup>o</sup>, 5<sup>o</sup> 7<sup>o</sup>que latioribus; subtus cum pedibus subopacus, parte apicali nigra nitidiore.

Plus ovalaire et plus convexe que la *C. (Cteniopus) lutea*, avec la tête jaune, les élytres plus fortement striées-punctuées, à intervalles plus convexes et inégaux.

De Silago et du district Rawas (Exp. scient. néerl.).

56. *Cistela (Cteniopus) melanocera*, n. sp.

Long. 8 millim. — Præcedenti valde affinis, sed multo minor, tota flava, minus sulphurea; antennis nigris, arti-

culis 3 primis exceptis; capite similiter punctato, ante et post oculos transversim impresso, antennis brevioribus, crassiusculis, articulis magis triangularibus; prothorace antice angustato; elytris minus fortiter crenato-striatis, intervallis minus convexis, minus alternatim inæqualibus; subtus nitidior.

Un seul exemplaire pris à Koetoer (Exp. scient. néerl.).

Ces deux insectes se rapprochent de la *C. (Cteniopus) lutea* par la forme du corselet qui est même un peu plus rétréci en avant; les élytres sont aussi moins convexes et plus ovalaires.

*Cisteloida*, n. g.

Genre voisin des *Cistela* et des *Allecula* mais distinct par les yeux très-rapprochés en dessus, presque contigus, les antennes ne dépassant pas le milieu du corps, à 2<sup>e</sup> article moins court, et le corps très-glabre, lisse; le dernier article des palpes maxillaires est tronqué très-obliquement et est prolongé d'un côté, mais non cultriforme; le prosternum sépare les hanches antérieures et est tronqué en arrière; le mésosternum est oblique, très-étroit entre les hanches, la saillie intercoxale est courte, obtuse, rebordée; le pénultième article des tarses est muni d'un lobe en dessous; les premiers articles des tarses antérieurs sont prolongés en dessous en un faisceau de poils, le 1<sup>er</sup> des postérieurs est bien plus long que les 2 suivants réunis, les crochets sont fortement pectinés.

57. *Cisteloida castanescens*, n. sp.

Long. vix 5 millim. — Ovata, antice attenuata, modice convexa, glabra, nitida, castaneo-rufa, elytris basi lateribus et apice fusco-plagiatis; capite parvo, brevi, antice transversim impresso, punctato, labro sat magno, punctato; antennis validiusculis; prothorace brevi, elytris paulo angustiore, antice angustato, lateribus cum angulis anticis rotundatis, margine postico late bisinuato, subtilissime punc-



tulato; scutello breviter triangulari, laevi; elytris ovatis, medio leviter ampliatis, tenuiter punctato-striatis, stria suturali tota et 2<sup>a</sup> apice profundioribus; subtus rufa, nitida. pectore punctato.

Un seul exemplaire de Leborg (Exp. scient. néerl.).

### *Nilionidae.*

#### 58. *Hades rufolimbatus*, n. sp.

Long. 4 $\frac{1}{2}$  millim. — Fere hemisphaericus, sat nitidus, castaneo-rufus, prothoracis macula magna discoïdali elytrisque, sutura margineque externo exceptis, fuscis, abdomine apice leviter infuscato; capite subtilissime dense punctulato, antice paulo evidentius, supra antennis vix elevato; prothorace brevi, elytris parum angustiore, longitudine triplo latiore, antice valde angustato et profunde emarginato, angulis anticis sat latis, productis, margine postico fere recto, obsolete bisinuato, dorso laevi, ad latera sat profunde oblonge impresso; scutello sat magno, triangulari, laevi; elytris latis, apice obtusissimis, fortiter substriato-punctatis, intervallis latis, planis, externo basi convexiusculo, apice carinato; pectore medio punctato.

Cet insecte ressemble à une Coccinelle; les côtés du corselet sont assez tranchants, non relevés, les élytres sont largement sillonnées le long du bord externe qui forme un très-étroit rebord. Peut-être est-ce la même espèce que *H. tenebrosus* Thoms. (Mus. Scient. p. 13; pl. 4, fig. 4); mais ni la description, ni la figure n'indiquent la forte impression de chaque côté du corselet, et dans notre individu les élytres ne sont pas échancrées en arc à la base, elles ne se rétrécissent pas aussi rapidement et leur extrémité est bien plus arrondie.

Un seul exemplaire de Solok (Schagen van Leeuwen).

Je partage l'opinion de Mr. Waterhouse qui trouve ce genre mal classé près des *Nilio*; mais j'avoue que sa véritable place est encore à trouver.

**Lagriidae.**59. *Lagria gigas*, Castelnau.

Long. 18 à 21 millim. — Oblongo-ovata convexa, nigro-fusca, sat nitida, obsolete metallescens, pilis luteis sat dense obsita; supra dense punctato-rugosa, capite prothoraceque vage cyanescentibus, illo inter antennis arcuatim sulcato, antice angulatim marginato, labro dense strigoso-punctato; oculis late ac profunde emarginatis; antennis medium corporis haud attingentibus, apicem versus vix sensim crassioribus, articulis 3<sup>o</sup> 4<sup>o</sup>que fere aequalibus; prothorace parvo, sed capite latiore, lateribus antice cum angulis rotundatis, basi sinuatis, basi transversim impresso et medio obsolete elevato; scutello dense punctato, apice fere truncato; elytris amplis, magnis, postice ampliatis, margine reflexo lato, fere horizontali, rugosulo-punctato; subtus cum pedibus caeruleus, sat dense punctata, abdomine lateribus impresso. fortius punctato, segmento ultimo rufo.

C'est, je crois, la plus grande espèce du genre; elle est remarquable par l'ampleur des élytres dont le bord réfléchi est large et presque horizontal. Je pense que c'est bien la *L. gigas* de Castelnau, mais la description est si insuffisante qu'il est utile de la refaire.

Pris à Agam, Grabak, Rengkiang Loeloes, Alahan pandjang et Loeboe Gedang (Exp. scient. néerl.).

60. *Lagria cineracea*, n. sp.

Long. 11 millim. — Oblonga, postice ampliata et convexa, fusca, parum nitida, dense cinereo-pubescentibus; capite prothoraceque minus pubescentibus, obscurioribus, subtilissime ac densissime alutaceo-punctatis; capite inter antennis profunde transversim sulcato; prothorace transverso, capite haud latiore, lateribus antice vix arcuatis, postice vix sensim sinuatis, angulis posticis fere rectis.

lineola media angustissima, supra caput prolongata albido-grisea; scutello triangulari, tenuiter dense punctato; elytris ante apicem ampliatis, dense fortiter punctatis, rugosis; subtus picescens, nitidior, tenuissime dense punctulata, sat tenuiter pubescens.

Le dernier article des antennes est un peu plus court que les 3 précédents réunis; mais néanmoins je crois que ces 3 individus sont des ♂.

Pris à Moeara Laboe et à Loeboe Gedang (Exp. scient. néerl.).

61. *Lagria hemichlora*, n. sp.

Long. 10 à 12 millim. — Oblonga, postice ampliata, convexa, nitida, capite prothoraceque testaceo-rufis, elytris cœruleis aut virescentibus, longe parum dense albido-hirta, abdomine pedibusque fusco-cyaneis, femoribus basi rufis, antennis fuscis; capite punctato, inter oculos arcuatim elevato; prothorace capite haud latiore, lateribus antice arcuatis, basi leviter sinuatis, antice paulo angustiore, sat fortiter punctato, basi marginato, angulis posticis paulo productis: scutello triangulari, rufo, punctato; elytris prothorace basi duplo latioribus, post medium ampliatis, fortiter et paulo transversim punctato-rugatulis; subtus tenuiter punctata, pedibus griseo-pilosis. ♂ antennis articulo 3<sup>o</sup> quarto brevior, 9<sup>o</sup> intus acute producto, 11<sup>o</sup> quatuor præcedentibus conjunctis haud brevior; ♀ articulis 3<sup>o</sup> 4<sup>o</sup> subæqualibus, 2<sup>o</sup> simplici, 11<sup>o</sup> multo brevior.

De Soepajang, Solok et Alahan pandjang (Exp. scient. néerl.).

62. *Lagria rufofusca*, n. sp.

Long. 8 à 9 millim — Oblongo-ovata, modice convexa, longe griseo-villosa, rufa, parum nitida, elytris fusco-cyanescentibus, nitidioribus; capite fortiter punctato, post oculos paulo inflato, antennis fuscis, basi rufis, apicem versus paulo crassioribus; prothorace transverso, antice paulo angustato,

fortiter punctato, lateribus medio obsolete sinuatis; scutello rufo, punctato; elytris prothorace duplo latioribus, postice ampliatis, apice acuminatis, fortiter dense punctatis et leviter rugosulis; subtus nitidior, pedibus infuscatis, femorum basi rufa; abdomine punctulato, lateribus impresso. ♂ gracilior, antennis longioribus, articulis 3—7 subæqualibus, crassioribus, 8<sup>o</sup>, 9<sup>o</sup> 10<sup>o</sup>que paulo minoribus, 9<sup>o</sup> intus acuminato, 11<sup>o</sup> quatuor præcedentibus conjunctis longiore; ♀ antennis brevioribus, minus crassis, articulis oblongis, ultimo 3 præcedentibus conjunctis haud brevior.

Ressemble un peu à la *L. hemichlora*, mais notablement plus petite, plus courte dans toutes ses parties, la ponctuation des élytres est bien plus fine et leur coloration n'est pas aussi bleue.

Quelques exemplaires pris à Boekit Kandang, à Soengei-Simanoeng, dans le district Rawas, dans les régions montagneuses de Palembang et à Koetoer (Exp. scient. néerl.).

### 63. *Lagria diffusa*, n. sp.

Long. 10 millim. — Oblonga, postice ampliata, parum convexa, rufescens, nitida, griseo-villosa, elytris paulo obscurioribus et ænescentibus; capite punctato, inter antennis fortiter impresso, antennis fuscis, basi rufescentibus, a medio leviter incrassatis, articulo ultimo 3 præcedentibus conjunctis fere æquali, apice oblique truncato; prothorace antice angustato, lateribus medio sat fortiter sinuatis, rugosulo-punctato, postice transversim obsolete impresso, medio linea longitudinali subelevata signato; elytris post medium sat ampliatis, apice obtusis, rugoso-punctatis; subtus subtiliter sat dense punctata.

Ressemble beaucoup à la *L. hemichlora*, mais outre la différence des antennes chez les ♂, le corselet est plus anguleusement arrondi sur les côtés, plus rétréci en avant, plus rugueux, les élytres sont moins longues, plus élargies en arrière et leur coloration est d'un roussâtre faiblement

bronzé au lieu d'un vert bronzé ou d'un bleu métallique bien caractérisés.

Trois exemplaires, pris à Moeara Laboe, à Loeboe Gedang et dans le district Rawas (Exp. scient. néerl.).

64. *Lagria gibbula*, n. sp.

Long. 8 $\frac{1}{2}$  millim. — Oblonga, postice ampliata et valde convexa, fusco-nigra, nitida, griseo-villosa; capite rugoso, inter antennis tuberculis 2 politis signato; antennis validis, medio paulo crassioribus, articulo 9<sup>o</sup> intus sat acute angulato, ultimo duobus præcedentibus conjunctis æquali; prothorace capite haud angustiore, antice paulo angustiore, lateribus ante basin obsolete sinuatis, dorso dense punctato, medio foveato; elytris basi prothorace fere duplo latioribus, postice ampliatis, apice obtusis, medio valde convexis, fortiter rugoso-punctatis, punctorum intervallis convexis, margine reflexo fortiter punctato; subtus sat tenuiter dense punctata, cum pedibus griseo-villosa.

Un seul exemplaire pris à Kotta Zuydewijn près Solok par M. J. H. Schagen van Leeuwen.

65. *Lagria lemoides*, n. sp.

Long. 5 à 6 millim. — Oblongo-elongata, convexa, cœrulea aut fusco-cœrulescens, nitida, griseo-villosa; capite punctato, inter oculos foveato; prothorace quadrato, capite haud angustiore, lateribus antice sat rotundatis, ante basin sinuatis, dorso sat dense punctulato; elytris post medium ampliatis, apice obtusis, sat fortiter dense punctatis, leviter transversim rugosulis; corpore subtus, antennis pedibusque fuscis, antennis basin prothoracis longe superantibus, apicem versus crassioribus, articulis subæqualibus, ultimis paulo brevioribus, ♂ ultimo præcedenti vix longiore, acuminato.

Cet insecte ressemble un peu à un *Lema* à raison de sa forme allongée et de sa coloration bleue; il est remarquable par les antennes qui sont semblables dans les deux

sexes, le dernier article étant acuminé et un peu plus long que l'avant-dernier. Il diffère de la *L. ferrulescens* Gyllh., de Java, par la taille plus grande, le corselet visiblement ponctué, la tête et le corselet bleus comme le dessus du corps; les antennes n'atteignant pas le milieu du corps, avec le dernier article non ou à peine plus grand que le précédent.

Quelques exemplaires pris à Soepajang, Boekit Kandang, Solok et Silagô (Exp. scient. néerl.).

66. *Lagria crenatostriata*, n. sp.

Long. 5½ millim. — Oblonga, convexiuscula, brunnea, nitida, capite prothoraceque rufescentibus; capite parvo, prothorace angustiore, sat dense punctato, antice transversim impresso, antennis fuscis, basi rufescentibus, brevibus, basin prothoracis vix attingentibus, apicem versus crassioribus, articulis 4—10 latitudine haud longioribus, 11<sup>o</sup> oblongo-ovato, duobus præcedentibus conjunctis haud longiore; prothorace transverso, postice paulo angustiore, fortiter punctato; elytris oblongo-ovatis, prothorace fere duplo latioribus, post medium vix ampliatis, postice angustatis, sat fortiter crenato-striatis, intervallis convexiusculis, punctatis, transversim leviter impressis.

Cette espèce diffère notablement des autres *Lagria* par la sculpture des élytres, par la tête plus étroite que le corselet et ce dernier transversal, légèrement rétréci en arrière; les antennes sont aussi plus courtes, à articles pas plus longs que larges, le dernier n'égalant que les 2 précédents.

Deux exemplaires dont l'un a été pris en Août à Soerelangoen, l'autre en Octobre à Loeboe Gedang (Exp. scient. néerl.).

67. *Nemostira unci pennis*, n. sp.

Long. 20 millim. — Valde elongata, sat convexa, rufescenti-testacea, modice nitida; capite parce punctato, sulco clypeali arcuato, profundo, epistomate et labro flavescenti-

bus, palpis maxillaribus articulo ultimo apice infuscato; oculis magnis, valde approximatis; prothorace elytris dimidio angustiore, lateribus antice rotundatis, basi sinuatis, basi valde marginata, angulis posticis valde extus productis, dorso sat fortiter sat dense punctato: scutello lævi; elytris elongatis, postice vix sensim ampliatis, pilis longis hirsutis, fortiter crenato-striatis, intervallis convexis, laxe seriato-punctatis, apice emarginato, angulo suturali arcuatim spinoso, angulo externo parum acuto; subtus cum pedibus nitidior, pectore lateribus sat fortiter punctato.

Il est intéressant de voir ce genre comprendre des espèces malaisiennes à côté d'espèces madécasses. Cet insecte est remarquable par la terminaison des élytres dont l'extrémité est échancrée avec l'angle sutural prolongé en une pointe un peu arquée en dehors.

Deux exemplaires pris en Juin, l'un à Silago, l'autre à Koetoer (Exp. scient. néerl.).

68. *Nemostira truncata*, n. sp.

Long. 16 millim. — Elongata, sat convexa, sat pallide lutescens, elytris sat nitidis, maculis fuscis numerosis, versus basin congestis, ornatis, prothorace opaco, lateribus late fuscato; capite inter antennis impresso; prothorace lateribus antice cum angulis rotundatis, postice sinuatis, margine postico elevato, angulis posticis extus valde exsertis; scutello lævi, fere truncato; elytris fortiter crenato-striatis, intervallis convexis, apice emarginato-truncatis; subtus nitidior, lateribus fortiter punctatis, infuscatis, ano infuscato, femoribus medio late infuscatis.

Plus petit et un peu plus étroit que le précédent, d'une coloration très-différente; la terminaison des élytres est tronquée, un peu échancrée, mais sans dent saillante; les intervalles des stries des élytres ne paraissent ni ponctués, ni hérissés de poils.

Un seul exemplaire pris à Kotta Zuydewijn près Solok par M. J. H. Schagen van Leeuwen.

*Casnonidea*, n. g.

Caput collo sat angusto allatum. Prothorax subcylindricus. Elytra oblonga, sat angusta, striata, convexa. Oculi magni, convexi, haud emarginati. Epistoma emarginatum, labrum magnum, truncatum. Palpi maxillares articulo ultimo cultriformi, acuto, elongato. Palpi labiales graciles, articulo ultimo fusiformi. Antennae sat graciles, articulo ultimo elongato. Prosternum mediocriter latum, postice declive, mesosternum sat angustum, medio concavum, processus intercoxalis sat productus, apice obtusus. Tarsi villosi, antici quatuor articulo 4<sup>o</sup> lato, bilobo, postici articulo 1<sup>o</sup> valde elongato, femora clavata.

Les insectes de ce genre ont le facies de certains Carabides, *Casnomia* ou *Agra*; ils sont remarquables par leurs gros yeux entiers, leur tête plus large que le corselet, à col assez étroit, par les fémurs claviformes, le pénultième article des tarses large, bilobé, par les élytres striées-punctuées et le dernier article des palpes maxillaires cultriforme pointu.

Ce genre diffère beaucoup des autres Lagriides par sa tête assez grosse et ses yeux non échancrés, gros, débordant le corselet.

69. *Casnonidea holomelæna*, n. sp.

Long. 10<sup>1</sup>/<sub>2</sub> millim. — Elongata, postice leviter ampliata, nigra, nitida; capite prothorace latiore, summo convexo, levi, inter oculos paulo inaequali, inter antennas transversim impresso, labro medio compresso-elevato; epistomate utrinque fortiter impresso; antennis gracilibus, brunneis, apice dilutioribus, basi obscurioribus et nitidis, articulo ultimo 3 precedentibus conjunctis longiore; prothorace antice tantum angustato, basi paulo elevato, angulis posticis parum productis, fortiter dense punctato; scutello parvo, truncato, vix punctulato; elytris elongatis, postice paulo ampliatis, apice breviter oblique truncatis, angulo suturali acuto, for-



titer crenato-sulcatis, intervallis convexis, lævibus; subtus lateribus fortiter punctata.

Insecte remarquable par sa forme et par son labre comprimé et relevé au milieu en dent obtuse; ressemble beaucoup à un *Ctenodactyla*.

Un seul exemplaire pris en Mai ou en Juin dans les parties montagneuses de Palembang (Exp. scient. néerl.).

70. *Casnonidea atriceps*, n. sp.

Long.  $8\frac{1}{2}$  millim. — Elongata, subparallela, flavida, nitida, elytris apice nigris, capite nigro, longe fulvo-villosa, ore fulvo, antennis paulo obscurioribus; capite inter oculos punctato, antice tenuiter punctulato, inter antennis sat fortiter arcuatim impresso; antennis medium corporis haud attingentibus, articulo ultimo 3 præcedentibus conjunctis paulo longiore; prothorace latitudine vix longiore, lateribus antice cum angulis valde rotundato, margine postico elevato, angulis posticis extus productis, dorso punctato; scutello truncato, punctulato; elytris fere parallelis, crenato-striatis, intervallis convexiusculis, fere lævibus, striis usque ad apicem profundis; subtus dense punctata.

Cette espèce est plus parallèle que la précédente, les antennes sont moins grêles, le dernier article des palpes est moins cultriforme, plus triangulaire, mais très-obliquement tronqué; le pénultième article des tarsi est un peu moins fortement bilobé.

Un seul exemplaire pris en Octobre à Moeara Laboe (Exp. scient. néerl.).

Paris, 22 Mai 1882.



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1) „divisus” must be changed in „dimidiatus”.

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<sup>1)</sup> Correction: p. 95, line 6 (from bottom), for "*Xylobanus divisus*" read "*Xylobanus dimidiatus*."



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