

Notes en Cerambycidae, XV¹⁾

Potemnemus (Potemnemini; Lamiinae) in the Leiden and Amsterdam Musea

by

Dr. C. DE JONG

(Rijksmuseum van Natuurlijke Historie, Leiden.)

When identifying a number of Cerambycidae for the Amsterdam Museum I came across a new species in the genus *Potemnemus*. I used this opportunity to make a revision of the genus in the Leiden collection. The number of specimens is not very large but still useful details concerning the distribution of the species could be obtained. From the descriptions and the material available I could establish a new synonymy and a new species, and also I made a key to the species.

Potemnemus Thoms.

Potemnemus Thomson, 1864, Syst. Ceramb., p. 81.

Protamnemus Pascoe, 1866, Trans. Ent. Soc. Lond., (3) vol. 3, pp. 260, 280.

Protamnemus Vollenhoven, 1871, Tijdschr. v. Ent., vol. 14, p. 218.

Potamnemus Lacordaire, 1869, Gen. Col., vol. 9, pp. 354, 357.

Protamnemus Leay, 1918, Rec. S. Austral. Mus., vol. 1, p. 98.

Potamnemus Aurivillius, 1922, Col. Cat., vol. 23, pars 73, p. 117.

From the descriptions and other literature it appeared to me that the representatives of this genus are rather rare and that relatively little is known about the distribution of the species.

The genus is distinguished by the following characters. Rather stout animals, legs slender, antennae rather long and slender, pronotum with stout transverse thorns, disk with generally sharp anterior transverse furrow and with less sharply bordered posterior one, disk often covered with more or less distinct small granules. The elytra are almost flat dorsally, sloping nearly perpendicularly towards the sides, forming a distinct costa which is covered in most species with a series of rather strong thorns or granules. Towards the apex the surface slopes down more gradually in the apical fifth. The apex is distinctly notched. The angles thus formed are slightly prolonged, the sutural angle is generally tooth-shaped, the apical angle is often more strongly thorn-shaped. The disk of the elytra bears a number of distinct granules which often are

¹⁾ Notes on Cerambycidae, I—XIV: 1942. Zool. Med., voll. 24, pp. 18—48, pls. I—V.

thorn-like in the basal part. They are arranged in longitudinal rows, parallel with the suture and the longitudinal costae. On the lateral parts of the elytra also one or two distinct rows may be found. Besides these rows some scattered granules are found between them on the basal part of the elytra. In most cases a more or less strongly developed humeral thorn is present, which is directed laterally, sometimes more or less forwards. In the ♀♀ the antennae are $1\frac{1}{2}$ —2 times as long as the body, in the ♂♂ they are about 2—3 times that length.

The animals are covered with a rather dense pubescence which, however, is often interrupted at a great many spots on thorax, head, legs and abdomen, showing thus a more or less mottled surface.

To distinguish the species I consider the following characters as important: general shape of the elytra, absence or presence of a distinct elevation on the middle of the elytra, colour-pattern of the elytra, absence or presence of a distinct elevation at the elytral base.

After an exact comparison of the specimens present and the descriptions I could identify some specimens which, in consequence of their minute size, gave difficulties at first.

***Potemnemus scabrosus* (Ol.) (fig. 1a).**

Cerambyx scabrosus Olivier, 1790, Encycl. méth., vol. 4, p. 294.

Cerambix scabrosus Olivier, 1795, Ent., vol. 4, genre 67, p. 8, pl. 10 fig. 70.

Potemnemus sabrosus Thoms. J., 1864, Syst. Ceramb., p. 81. ♂.

Protamnemus scabrosus Pascoe, 1866, Trans. Ent. Soc. Lond., (3) vol. 3, p. 281.

♂ and ♀.

Protamnemus Scabrosus Vollenh., 1871, Tijdschr. v. Ent., vol. 14, p. 218.

Potamnemus trimaculatus Lea, 1918, Rec. S. Austral. Mus., vol. 1, p. 98, pl.

9 fig. 8. ♂.

Potemnemus scabrosus Auriv., 1922, Col. Cat., pars 73, p. 117.

Potemnemus trimaculatus Auriv., 1922, Col. Cat., pars 73, p. 117.

(? *Potemnemus trituberculatus* Breun., 1942, Fol. Zool. et Hydrobiol., vol. 11, p. 120).

Leiden Museum :

? Borneo : 1 ♂, Borneo Bor., VI 1899, leg. J. Dumas.

Aru Islands : 2 ♂♂.

New Guinea : 2 ♂♂ and 1 ♀.

Aurivillius mentions this species from New Guinea only, Pascoe gives Saylee, Dorey²⁾ as its locality. The localities given by the elder authors are more or less dubious: Olivier: Moluques; Thomson: Moluques et Java? *P. trimaculatus* Lea has been described from Queensland. This locality is not as dubious

²⁾ Breuning (1942, l.c., p. 120) mentions his type specimens from the British Museum. In his idea the specimens from Dorey identified by Pascoe as *scabrosus*, constitute a separate species: *trituberculatus*.

as it would seem, as the faunae of Queensland and New Guinea possess more common elements. As neither from Lea's description nor from his figure it is apparent that his species is different from *scabrosus* Ol. I establish the here-mentioned synonymy. The character on which Lea distinguishes his species from *scabrosus* is the shape of the dark spot round the scutellum. This shape, however, is within the limits of variation of this spot in *scabrosus*. The faint elevation on the elytra at $2/5$ from the base, mentioned by Lea, is also found in the specimens from New Guinea in the Leiden collection (fig. 1a).

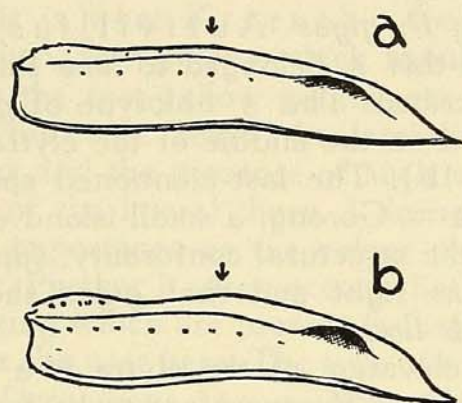


Fig. 1. a, *Potemnemus scabrosus* (Ol.), ♀ left elytron, lateral view; b, *Potemnemus lima* (Pascoe), ♀ left elytron, lateral view. $\times 1\frac{1}{2}$.

In my idea Breuning compared his specimens with Olivier's figure of *scabrosus*. In that figure the breadth at the shoulders is 12 mm, the length of the elytra 27 mm, and the length of the whole animal 35 mm. The antennae are about $1\frac{1}{2}$ times as long as the body. The 7th joint surpasses the apex of the elytra. From this character I deduce that the type is a ♀. I made a graph in which I placed the length against the breadth of all specimens available. This graph shows no special slenderness of the type versus the other specimens. When the graph is made with the breadth at the shoulders against the length of the elytra, then the type specimen stands slightly isolated. However the possibility is not to be excluded that Olivier's figure is not altogether correct, which often occurs in books of that period. The only character which I could deduce with certainty from the graphs is that head and thorax together are relatively longer in the ♂♂ than in the ♀♀.

As to the fact whether Breuning ever saw specimens corresponding in all details with Olivier's figure I could not yet get confirmation from him. When *scabrosus* Ol. exists only as the figure, I am inclined to consider *P. tribuberculatus* Breun. as synonymous with *scabrosus*, the more so as the differences are of only inferior importance.

Potemnemus lima (Pascoe) (fig. 1b).

Protamnemus lima Pasc., 1866, Trans. Ent. Soc. Lond., (3) vol. 3, p. 282.? ♀.

Potamnemus lima Auriv., 1922, Col. Cat., pars 73, p. 117.

Potamnemus gigas Auriv., 1924, Treubia, vol. 7, p. 103. ♂.

Leiden Museum :

Ceram: 1 ♀, Wahaai, leg. H. A. Bernstein.

New Guinea: 1 ♀, Doreh, leg. C. B. H. von Rosenberg.

Amsterdam Museum :

Buru: 1 ♂, VI 1921, Station 6, leg. L. J. Toxopeus (Holotype of *Potamnemus gigas* Auriv.)

When describing *P. gigas* Aurivillius already expressed the probability that this ♂ belonged to *lima* Pasc. of which the ♀ only had been described. The ♂ holotype of *gigas* also possesses the distinct elevation on the middle of the elytra as is found in the ♀♀ of *lima* (fig. 1b). The last-mentioned species had been described from Goram = Gorong, a small island east of Ceram. This too, in addition to the structural conformity, supports my view that Aurivillius was right and that *gigas* should be considered as synonymous with *lima*.

In the ♀♀ the elevation of the elytra is a little stronger than in the ♂, but no other differences are to be found. This character is also found in *scabrosus* but less abrupt in that species.

The specimen from Doreh is reddish brown, somewhat different from the colour given by Pascoe.

From the material at my disposal it appears already that the area in which this species is found is more extended than would appear from Aurivillius' catalogue.

In the ♂ the 5th antennal joint reaches the apex of the elytra, the antennae are $2\frac{1}{4}$ times as long as the body (head included).

In the ♀ the apical part of the 7th joint just surpasses the elytral apex, the antennae are $1\frac{1}{4}$ times as long as the body.

Potamnemus rosenbergii Snellen van Vollenhoven,

Protamnemus Rosenbergii Voll., 1871, Tijdschr. v. Ent., vol. 14, p. 108, pl. 4 fig. 8.

Protamnemus Rosenbergii Voll. 1871, Tijdschr. v. Ent., vol. 14, p. 218.

Potamnemus Rosenbergi Auriv., 1922, Col. Cat., pars. 73, p. 117.

Potamnemus rosenbergi ferrugineus Kriesche, 1923, Deutsch. Ent. Zeitschr., p. 429.

Leiden Museum :

New Guinea: 1 ♀, Doreh (holotype).

Many details of this beautiful species are not described in a comprehensible way or not described at all. From the description it is clear that the author did not study the specimen with a strong magnification, otherwise he would have described some details in another way, e.g. the legs brown, spotted with black. The legs

appear to be dark pitch-brown, covered with rather broad hairs which are reddish brown, intermingled with whitish grey ones. The so-called black spots are bare spots, generally of an oval shape, with one or two whitish more or less erected hairs which are longer and stronger than those composing the normal pubescence. The dark spots on the antennal joints 1 and 3, and on the ventral surface are formed in the same way. Concerning the size and colour of the type *Vollenhoven* wrote that it has the same size and colour as *scabrosus*, but without the silky gloss. From the material present here I can gather which specimen he used for comparison and indeed there is a specimen of *scabrosus* which is somewhat reddish brown. This is what *Kriesche* could not know when he described his subsp. *ferrugineus* which should distinguish itself from *rosenbergii* by the rust-yellow pubescence. A second point is the absence of a white spot below the lateral white band of the thorax in *ferrugineus* and the presence of such a spot on the dorsal surface at the base of the lateral thorn. I do not regard these differences of enough importance as the colour pattern of these animals is not constant. Further it often occurs that in small specimens some details are lacking which are present in larger specimens of the same species. This is the case here. The type of *rosenbergii* measures 44 mm and that of *ferrugineus* 33 mm. As to the dorsal white spot I can make the following remark: In the type of *rosenbergii* such a spot is also present, but it is slightly darkened by fat. This is probably the reason why *Vollenhoven* did not mention it. The variability of the spots on the elytra has already been mentioned by *Vollenhoven* as he writes: "Les taches des deux élytres sont très-différentes quant à la forme". The colour of the elytra (below the pubescence) is reddish brown in the type of *rosenbergii* like in that of *ferrugineus*. So I conclude that *ferrugineus* should be considered as synonymous with *rosenbergii*.

The characters mentioned above are also found in *Potemnemus wolffi* Berchmans, but this species really shows a distinct difference in the light ashy grey pubescence on legs, antennae and ventral surface. The dorsal pattern of the elytra is, within some variation, conform with that of the species mentioned above, also in the details of the white spots on the thorax there is no essential difference.

***Potemnemus wolffi* Berchmans.**

Potemnemus wolffi Berchmans, 1925, Ent. Rundsch., Stuttgart, vol. 42, p. 3.

Leiden Museum :

New Guinea : 1 ♀, N. New Guinea, IV/V 1911, leg. Dr. P. N. van Kampen, Nederl. New Guinea Exp.

Mr. P. H. van Doesburg's Collection :

New Guinea : 1 ♀, Hollandia.

Both specimens mentioned above show a strong resemblance with *P. rosenbergii* Voll., even in minor details, e.g., the distribution of the white pubescence on elytra and thorax, the dark spots on the legs, antennae and ventral surface. The species can easily be distinguished from *rosenbergii* by the dominating grey pubescence on the ventral surface, the legs and the antennae. The pubescence of the elytra like in *rosenbergii* is not very close, the tegument is shining through; except the corresponding white spots there are a number of minor additional spots, which together with the lighter shade of the pubescence makes the animal look more bright.

In the ♀ the end of the 7th antennal joint surpasses the apex of the elytra. The ♂ is not yet known.

Measurements of the above-mentioned specimens, those of the ♀ from Hollandia in parentheses (in mm):
 general length (antennae excluded) 40 (35), length pronotum $6\frac{1}{2}$ (6), length elytra 29 ($26\frac{1}{2}$), breadth at the shoulders $12\frac{1}{2}$ (12), length antennae 60 ($50\frac{1}{2}$).

Both specimens agree very well with *Berchmans'* description.

I am inclined to consider *wolfi* as a colour-variety of *rosenbergii*, but the scanty material available of both species is not sufficient to support this view.

***Potemnemus ennevei* nov. spec. (fig. 2).**

Amsterdam Museum:

New Guinea: 1 ♂, Etna Bay, 1904/05, New Guinea Exp. (holotype); 1 ♀, Resi Camp, 10 IX 1907, leg. H. A. Lorentz (allotype); 1 ♂, Sabang, VII 1907, leg. H. A. Lorentz (paratype); 1 ♀, Merauke, New Guinea Exp. 1904/05 (paratype); 1 ♀, Hill Camp (Heuvel Bivak), XI 1909, S. New Guinea, Lorentz exp. 1909/10 (paratype).

The present species which for as far as I could trace is new to science, resembles most and is closest related to *Potemnemus tuberifer* Gahan, and to *P. sepicanus* Kriesche which are also reported from New Guinea. From *tuberifer* it differs in the following characters: the disk of the prothorax is not smooth, it bears the normal tubercles, the anterior transverse groove is very distinct; the large rounded hump, thickly studded with black shining granules, at the base of each elytron is not found in *ennevei*. According to the description of *tuberifer* I cannot find other differences from that species than the colour of the elytra; the integument is dull black, the pubescence is greyish brown intermingled with orange and white, with two nebulous grey transverse bands, one before the middle of the elytra, which is slightly curved towards the shoulders, the second at the base of the apical third.

General characters as given for the genus. Dorsal surface of the elytra almost flat, slightly elevated in the middle, lateral parts sloping down almost rectangularly. Humeral angle with a strong,

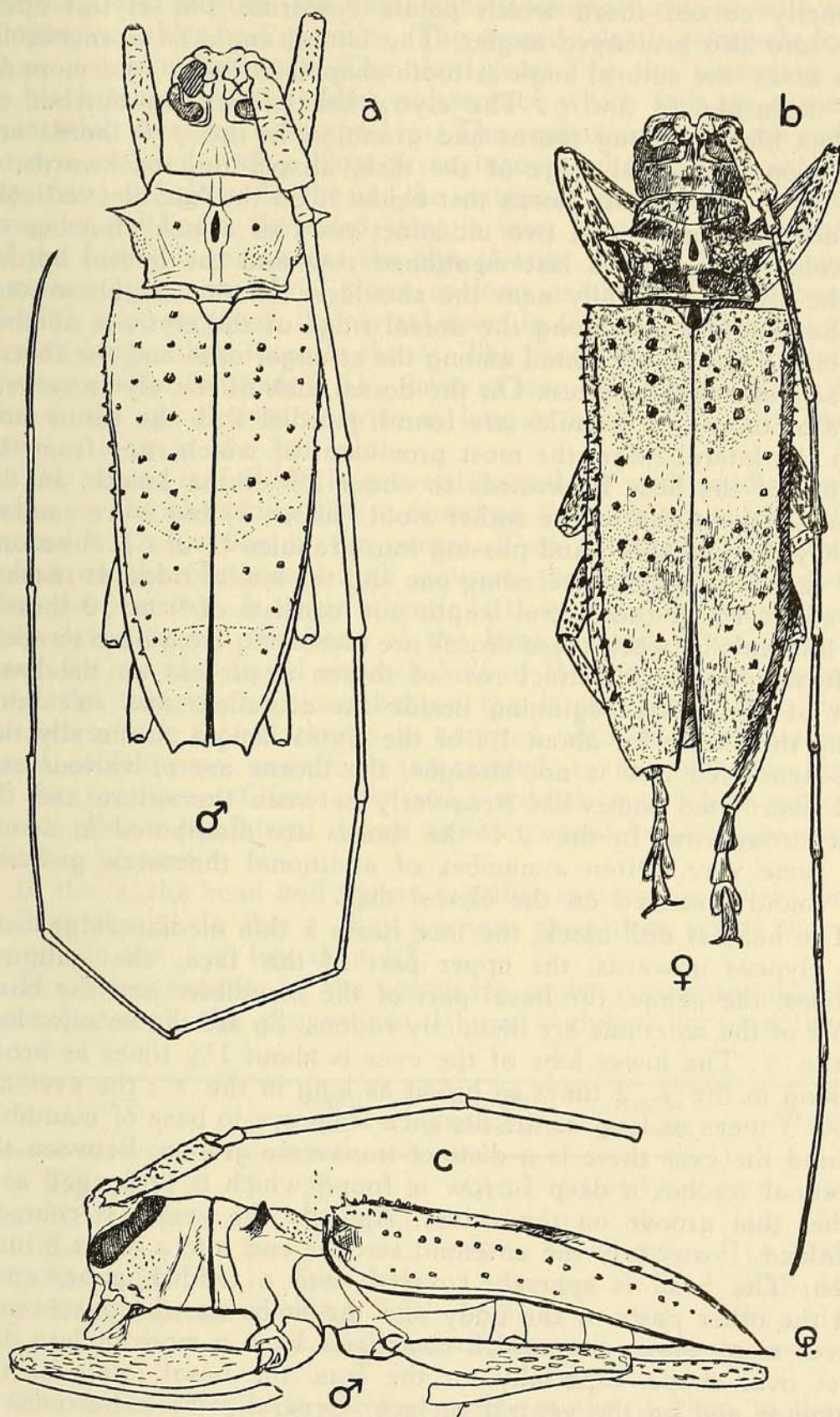


Fig. 2. *Potemnemus ennevei* nov. spec. a and c, ♂ (holotype), resp. dorsal and lateral view; b. ♀ (allotype), dorsal view. $\times 1\frac{1}{2}$.

distinctly curved thorn which points upwards. The elytral apex ends into two prolonged angles. The lateral angle is thorn-like in both sexes, the sutural angle is tooth-shaped in the ♀ and more or less thorn-like in the ♂. The elytra bear a varying number of distinct black, shining thorns and granules. In the ♂ 9 thorns are found on the dorsal ridge of the disk, all pointing backwards, a row of 12—14 strong thorns just below it on the lateral (vertical) surface, and, moreover, two indistinct rows of a small number of granules between this last mentioned row and the lateral border of the elytra, especially near the shoulders. In the neighbourhood of the shoulder and along the dorsal ridge of the elytra a number of small granules are found among the stronger ones and the thorns already mentioned before. On the dorsal disk of the elytra several rows of thorns or granules are found, parallel with the suture and with the lateral ridge, the most prominent of which runs from the middle of the base backwards to about $\frac{2}{3}$ of the length. In the basal third the thorns are rather stout (about 7) but more caudally they are less sharp and passing into granules (5 or 6). A second row runs between the preceding one and the lateral ridge. It reaches till about $\frac{4}{5}$ of the elytral length and consists of 9 or 10 thorns, the intervals between these thorns are increasing from base to apex. A further but less distinct row of thorns is present on the basal part of the elytra beginning beside the scutellum and stretching along the suture for about $\frac{1}{4}$ of the elytral length. Generally this last-mentioned row is not straight, the thorns are of various size and distributed somewhat irregularly between the suture and the first strong row. In the ♀♀ the thorns are distributed in nearly the same way. Often a number of additional thorns or granules are found scattered on the elytral disk.

The head is dull black, the face bears a thin median ridge from the clypeus upwards, the upper part of the face, the antennal scrobes, the genae, the basal part of the mandibles and the basal joints of the antennae are distinctly rugous. So are the anterior legs in the ♂. The lower lobe of the eyes is about $1\frac{1}{2}$ times as broad as long in the ♀, 2 times as broad as long in the ♂; the eyes are about 3 times as long as the distance from eye to base of mandible. Behind the eyes there is a distinct transverse groove. Between the antennal scrobes a deep furrow is found which is prolonged as a rather thin groove on the vertex. Apically the vertex is coarsely wrinkled. Posteriorly the antennal scrobes end into a blunt bifurcation. The head is sparsely covered with a reddish pubescence. On the other parts of the body and the limbs too the pubescence leaves many bare spots which sometimes have a more or less distinct oval shape, especially on the legs, the basal joints of the antennae and on the ventral surface. Generally the pubescence is brown, but it is intermingled with ashy grey which is dominating in some areas, and with scattered erect white setae (most of which are found at the apical end of the oval bare spots). The antennae

are long and slender, the basal joint is strongly rugose with many shining wrinkles and granules. The second joint is relatively longer than usual in Lamiinae. The third joint like the preceding ones is black with a faint reddish pubescence which fails on the many somewhat elevated dark speckles. The remaining joints are reddish brown, covered with a close ferrugineous pubescence. Joints 3—8 are fringed below. In the ♂ the antennae are nearly 3 times as long as the body, the third joint is very long, the apical quarter of the fifth joint surpasses the elytral apex. In the ♀♀ the antennae are approximately 2 times as long as the body, the base of the 7th joint surpasses the elytral apex. In the ♂ the antennal joints are all longer than those in the ♀. The proportion is approximately the same. The 3rd joint is $1\frac{1}{2}$ times as long as joints 4—10 each. In the ♂ the apical joint is twice as long as each of these, in the ♀ it is as long as the 3rd joint.

The thorax is dull black, covered irregularly with reddish pubescence, a whitish median line is found on the disk, which encircles a faint black elevation in the centre. Two transverse furrows are found on the prothorax, both sinuous, the anterior more distinct than the posterior. A single tubercle left and right half-way between this elevation and the base of the lateral thorn. Two groups of granules are also found on each half of the thoracic disk, one behind the tubercle and one behind the lateral thorn. The dorsal surface of the lateral thorns is adorned with an indistinct white band, which runs, sometimes interrupted, to the posterior border of the prothorax. Often only some reddish and white spots are visible. Below the lateral thorns an interrupted longitudinal whitish band is present.

In the ♂ the head and thorax together are comparatively longer than in the ♀. In the ♂ they measure more than $\frac{1}{3}$ of the total length, in the ♀♀ less than $\frac{1}{3}$.

The measurements of the specimens under consideration follow here (in mm), the proportions (thorax : elytra) in parentheses :

	length body	breadth at shoulders	length antennae	(th : e)
♂ Etna Bay	55	17.5	15.5	(19 : 36)
♀ Resikamp	51	16.5	9	(15 : 37)
♀ Sabang	51	15	8.7	(14.5 : 33)
♀ Merauke	44	13.5	7.2	(13.5 : 31.5)
♀ Heuvel Bivak	52.5	15.5	9.2	(15 : 34.5)

The anterior legs are much stronger in the ♂ than in the ♀. The femora are as long as the 3rd joint of the antennae. The femora of the ♂ are slightly rugose, especially on their dorsal and external surface. The legs are covered by an orange-red pub-

escence, intermingled with whitish grey, interrupted by a great number of oblong bare spots which are glossy pitch-brown.

The general colour is brown or greyish brown, this colour being caused together by the dark brown integument, the rather thin orange brown and the grey pubescence.

The elytra show two indistinct greyish transverse bands, one before the middle, which is prolonged towards the shoulders, and one behind the middle, which reaches to the longitudinal carina. Sometimes this last-mentioned transverse band is extended towards the lateral margins of the elytra, the posterior border of this band is sometimes indistinct and the grey nebulous pubescence reaches even to the apex.

The ventral surface too is covered with a distinct and even rather dense pubescence, orange-brown with strong whitish areas on the lateral parts of the prosternum, the metasternum and the abdominal segments (less distinct on the 3rd and following). All these parts are more or less mottled with dark brown as indicated for the legs.

As I could not study the type of *Potemnemus sepicanus* Kriesche (1923, p. 429) which according to the description is very closely allied but which shows differences in the pubescence, I am not altogether sure whether I have the same species before me.

I dedicate the species to the Netherlands Entomological Society which exists 100 years at this moment. (The name is derived from the pronunciation of N. E. V., the abbreviation for "Nederlandsche Entomologische Vereeniging").

Key to the species.

1. Prothorax without terminal transverse groove; pubescence whitish with grey nebulous spots *pristis* Pascoe ³⁾
- Prothorax with terminal transverse groove 2
2. Elytra with heart-shaped dark spot surrounding scutellum ... 3
- Elytra without dark spot surrounding scutellum 6
3. Elytra with rather strong elevation in the middle
..... *lima* Pascoe (♀) (*gigas* Aur. ♂)
- Elytra only faintly elevated before the middle 4
4. Prothorax with dark longitudinal band, lateral parts of elytra very dark, small median field on prothorax minutely transversely ridged *detzneri* Kriesche
- Prothorax without dark longitudinal band 5
5. Lateral parts of elytra lighter than the spot surrounding the scutellum *scabrosus* Ol. (*trimaculatus* Leay)
- Lateral parts of elytra darker than the spot surrounding the

³⁾ This species as well as *P. thomsoni* Lansb. (1880, l.c., p. CXXXVIII) from Mt. Arfak (New Guinea) is unknown to me. However, from the descriptions I am inclined to consider them as synonymous.

- scutellum ; slightly less slender than preceding species
..... *trituberculatus* Breuning
6. Elytra cinnamonbrown with distinct white spots on the disk,
ventral surface equally pubescent 7
- Elytra with more or less nebulous bands or spots, thorax with
distinct whitish median line which surrounds the small black
spot in the middle 8
7. Ventral surface and legs brownish grey ... *rosenbergii* Voll.
- Ventral surface and legs ashy grey *wolffi* Berchmans
8. Elytra with strongly granulated hunch at the base
..... *tuberifer* Gahan
- Elytra without a strongly granulated hunch at the base, very
strong antennal scrobes 9
9. Ventral surface for the greater part bare, dorsal pattern in-
distinct, nebulous *sepicanus* Kriesche
- Ventral surface distinctly covered with a brown and grey pu-
bescence, dorsal pattern : two transverse bands
..... *ennevei* nov. spec.

LITERATURE.

- Aurivillius, Chr., 1922. Coleopterorum Catalogus, pars 73, 322 pp.
- , 1924. Fauna Buruana, Coleoptera, Cerambycidae. Treubia, vol 7, pp. 100—109.
- Berchmans, Rev. Brother, 1925 Eine neue Bockkäferart aus der Gattung Potemnemus: Potemn. Wolfi spec. nov. Entom. Rundschau Stuttgart, vol 42, pp. 3, 4.
- Breuning, S., 1942. Novae Species Cerambycidarum XI. Fol. Zool. et Hydrobiol., vol. 11. pp. 113—175.
- Gahan, C. J., 1894. On the Characters of a new Genus and Six new Species of Longicorn Coleoptera from New Guinea. Ann. Mag. Nat. Hist. (6) vol. 13, pp. 288—293.
- Kriesche, R., 1923. Neue Potemnemen von Deutsch-Neu-Guinea (Col. Cer. Lam.). Deutsch. Ent. Zeitschr., pp. 428—430.
- Lacordaire, J. Th., 1869. Genera des Coléoptères, vol. 91, 409 pp.
- Lansberge, G. van, 1880. Description de quelques coléoptères de la Malaisie et de la Papouasie. Comptes rendus des Séances de la Soc. Ent. Belg., pp. CXVIII—CXXXIX.
- Leay, A. M., 1918. On Australian Coleoptera. Rec. S. Austral. Mus., vol. 1, pp. 83—104, pl. 9.
- Olivier, G., 1790. Encyclopédie Méthodique, Histoire Naturelle, Insectes, vol. 5, 743 pp.
- , 1795. Entomologie ou Histoire naturelle des Insectes, etc., Coléoptères, vol. 4, 508 pp., 71 pls.
- Pascoe, F. P., 1866. Longicornia Malayana. Trans. Ent. Soc. London, (3) vol. 3, pp. 1—712, 24 pls.
- Thomson, J., 1864. Systema Cerambycidarum 578 pp. Liège.
- Vollenhoven, S. C. Snellen van, 1871. Quelques espèces nouvelles de Curculionides et de Longicornes. Tijdschr. v. Entom., vol. 14, pp. 101—112, pls. 4, 5.
- , 1871. Les Batocérides du Musée de Leide. Tijdschr. v. Entom., vol. 14, pp. 211—220, pl. 9.