Mitt. Münch. Ent. Ges. 99	45-90	München, 01.11.2009	ISSN 0340-4943	
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# Revision of the genus *Amarygmus* Dalman, 1823 and related genera. Part LV.

#### The Amarygmini of the Solomon Archipelago

(Coleoptera: Tenebrionidae: Amarygmini)

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#### Abstract

The Amarygmini of the islands of the Solomon Archipelago are revised. An abridged version of the characters of the following species together with collection data are provided: Amarygmus curprarius iodicollis Guérin-Méneville, 1830, A. egenus Bremer, 2002, A. greensladei Bremer, 2008, A. honestus Bremer, 2008, A. hydrophiloides Fairmaire, 1849, A. nigroopacus Gebien, 1920, A. orientalis (Fairmaire, 1883), A. parallelus Kaszab, 1958, A. rufidorsis Pic, 1915, A. salomonis Gebien, 1920, A. violatinctus Bremer, 2008, A. zoltani Bremer, 2005, and Spathulipezus miritarsis Gebien, 1920. If not published previously the species are also illustrated. Of these species A. cuprarius iodicollis Guérin-Méneville, A. egenus Bremer, and A. orientalis (Fairmaire) are recorded to occur on the Solomon Islands for the first time.

New taxa which are described and illustrated (in brackets the islands on which they have been found): Amarygmus adversus sp. n. (Bougainville), A. alius sp. n. (Kolombangara), A. browni sp. n. (Guadalcanal), A. externus sp. n. (Russels, Kolombangara, Santa Ysabel), A. fordi sp. n. (Bougainville, Fauro, San Cristoval, Santa Ysabel, Guadalcanal), A. gressitti sp. n. (Guadalcanal), A. lividus sp. n. (Guadalcanal), A. nigroopacus ssp. viciscornis ssp. n. (Choiseul, New Georgia group, Santa Ysabel, San Cristoval, Fauro, Savo, Russels, Florida group, Guadalcanal), A. pauper sp. n. (Bougainville), A. propensus sp. n. (Bougainville), A. remotus sp. n. (Savo, Guadalcanal), A. (Hyperamarygmus) securiger sp. n. (Guadalcanal, Gizo, Small Nggela, Bougainville), A. shanahani sp. n. (Vella Lavella), A. virtus sp. n. (islands of New Georgia group), A. virtus kolombangaraensis ssp. n. (Kolombangara).

Taxonomic change: Amarygmus nigroopacus Gebien, 1920 [stat. rehabil.] nec Amarygmus rufidorsis Pic, 1915. A determination key of all Amarygmini of the Solomon Islands is provided.

#### Introduction

The islands of the Solomon Archipelago are situated east of New Guinea and south of the islands of the Bismarck Archipelago. Most of the larger islands are of volcanic origin and had primarily been covered with rain forest.

Most Tenebrionidae which are currently known from the Solomon Islands are described as sole descriptions, mostly from neighbouring islands, or within revisions of Tenebrionidae or tribes of Tenebrionidae of the whole Papuan area (Gebien 1920, Kaszab 1939). There is one paper which is dealing with the Tenebrionidae of one of these islands, the Renell Island, the outmost southern island of this Archipelago (Kaszab 1980). The *Strongyliini* of the Solomon Islands are covered in Kaszab's monography of the *Strongyliini* of the Papuan faunal area (1977).

Out of all tribes of Tenebrionidae of the Papuan faunal area *Amarygmini* possess the highest diversity of species. The majority of species of this tribe belongs to the genus *Amarygmus* DALMAN, 1823. The genus *Amarygmus* of New Guinea alone contains 179 already described species; approximately the same number of species are awaiting description.

The *Amarygmini* of the Solomon Islands in their entirety have never been investigated. Few species are considered in the remarkable monography on the Tenebrionidae of New Guinea of Gebien (1920). Additionally, some species have been described by Kaszab in papers published 1939, 1958, and 1980. Recently, I revised species related to *Amarygmus hydrophiloides* Fairmaire, 1849, and described within this revision two new species from the Solomon Islands (Bremer 2008a). Additionally, I renamed one species found on the Solomon Islands and described by Kaszab (1939) because of its preoccupied name (*A. zoltani* Bremer, 2005 for *A. chry-*

someloides Kaszab, 1958) (Bremer, 2005b). Prior to this revision of the *Amarygmini* of the Solomon Islands 7 species of *Amarygmus* Dalman, 1823 and 1 species of the genus *Spathulipezus* Gebien, 1920 could be considered to occur on these islands.

Between 1955 and 1970 Gressitt, Ford, Jr., Sedlacek, Brandt, O'Brien, and Greenslade systematically collected on the Solomon Islands. Their material is mainly deposited in the Bishop Museum, Honolulu, and in the Natural History Museum, London.

The late Dr. ZOLTAN KASZAB of the Hungarian Museum of Natural History intended a new revision of the Tenebrionidae of the whole Papuan faunal area. He, therefore, tried to get the type specimens and undetermined material on loan, among them also *Amarygmini* from the Solomon Islands. Regarding *Amarygmini*, his sudden death 1986 finished this attempt just after a provisional grouping of species and designating some of those species which he suggested to be new.

The material lent by Dr. Kaszab is still located in the Museum of Natural History, Budapest. Some years ago Dr. Ottó Merkl, curator of coleoptera of the Hungarian Museum for Natural History, asked me to carry on the revision of *Amarygmini* of the Papuan faunal area which Kaszab started. After finishing revisions of several groups of *Amarygmus* Dalman, 1823 of New Guinea (Bremer 2001c, 2004a, b, 2005a, 2007, 2008a, b), and of the Bismarck Archipelago (Bremer 2002), I also started the revision of the *Amarygmini* of the Solomon Islands. The results of this effort are the topic of this paper.

From the Solomon Islands only two genera of *Amarygmini* are known: *Amarygmus* Dalman, 1823 and *Spathulipezus* Gebien, 1920. The number of species of *Amarygmus* on the Solomon Islands is not as numerous as on New Guinea. I only recognized 26 species or subspecies. Concerning *Spathulizezus* only 1 species is presently known.

The Amarygmus species most frequently found on the Solomon Islands are those affine Amarygmus hydrophiloides FAIRMAIRE, 1849 and those affine A. rufidorsis Pic, 1915. I already revised the species related to A. hydrophiloides and added two new species to this group: A. greensladei Bremer, 2008 and A. violatinctus Bre-MER. 2008. The species affine A. rufidorsis require additional remarks. Formerly two taxa had been recognized from the Solomon Islands which belong to this group: A. rufidorsis Pic, 1915 and A. nigroopacus Gebien, 1920. As I presently know, both taxa can easily be separated by their colouration (if the specimens are mature) and by the length of antennae. However, when the specimens are immature (which is a frequent finding in Amarygmus) it is difficult to delimitate them: this is especially true when the specimens are not cleaned and are not mounted in such a way that the antennae can easily be inspected. Some years ago, when I examined the types of both taxa (which had been immature or mounted in such a way that the antennae could not easily be inspected) I concluded that both taxa are synonyms (Bremer 2004a, 126). Kaszab obviously came to the same conclusion as he, according to his determination labels, did no longer separate both taxa. But, for this revision, I examined about 160 specimens of the A. rufidorsis/nigroopacus complex and, by genitalia preparation, I committed the gender of most specimens; moreover, among the specimens I found enough mature specimens to recognise the real colouration of both taxa. As result of this new investigation I have to revoke my former statement that both taxa are synonym. Additionally, I recognised that within this group there is a third taxon which possesses shorter antennae than the typical A. nigroopacus, especially apparent in  $\mathbb{Q}\mathbb{Q}$ . While the typical A. nigroopacus is found only on Bougainville and the neighbouring island of Buka the taxon with shorter antennae occurs on the islands south of Bougainville.

I now ascertained the following taxa to be present on the Solomon Islands (in alphabetic order):

Amarygmus adversus sp. n.

Amarygmus browni sp. n.

Amarygmus cuprarius ssp. iodicollis Guérin-Méneville, 1830

Amarygmus egenus Bremer, 2002

Amarygmus externus sp. n.

Amarygmus fordi sp. n.

Amarygmus greensladei Bremer, 2008

Amarygmus honestus Bremer, 2008

Amarygmus hydrophiloides Fairmaire, 1849

Amarygmus lividus sp. n.

Amarygmus nigroopacus Gebien, 1920

Amarygmus nigroopacus Ssp. viciscornis ssp. n.

Amarygmus orientalis (Fairmaire, 1883)

Amarygmus parallelus Kaszab, 1958

Amarvgmus pauper sp. n.

Amarygmus propensus sp. n.

Amarygmus remotus sp. n.

Amarygmus rufidorsis Pic, 1915

Amarygmus salomonis Gebien, 1920

Amarygmus (Hyperamarygmus) securiger sp. n.

Amarygmus shanahani sp. n.

Amarygsmus violatinctus Bremer, 2008

Amarygmus virtus sp. n.

Amarygmus virtus ssp. kolombangaraensis ssp. n.

Amarygmus zoltani Bremer, 2005

Spathulipezus miritarsis Gebien, 1920

#### Morphometry

Length corresponds to distance between the middle of frontal edge of pronotum and apices of elytra; width to maximum width across the elytra; length of elytra to distance between base of scutellum and apices of elytra; length of pronotum to distance between the middle of their anterior and posterior edges, respectively.

#### Abbreviation of collections

ANIC = Australian National Insect Collection, CSIRO Division of Entomology, Canberra, Australia

BMH = Bishop Museum Honolulu, Hawai, U. S. A. BMNH = National History Museum, London, U.K. MNHP = Muséum National d'Histoire Naturelle, Paris

HNHM = Hungarian National Museum of Natural History, Budapest, Hungaria NHMBF = Collection of G. Frey of the Naturhistorisches Museum, Basel, Switzerland

NMHUB = Naturkunde-Museum der Humboldt-Universität, Berlin, Germany

SMND = Staatliches Museum für Naturkunde, Dresden, Germany

ZSM = Zoologische Staatssammlung München, Germany

ZSMB = Collection of the author (now in Zoologische Staatssammlung, Munich).

#### Determination key of Amarygmini of the Solomon Islands

One should keep in mind that any determination key of genera rich in species lead to an accurate determination only with characteristic species and specimens. This is especially true if one has to expect many undescribed species in addition to already described ones, if only few specimens of a species are known and, therefore, the variability within this species cannot be judged, and if very similar species occur within this genus. This holds true for the genus *Amarygmus* of the Solomon Islands. In this case one should always, after determination with the following determination key, compare the unknown specimen with accurately determined specimens or with the holotype. Moreover, one should not only inspect the upperside; it is essential also to compare the width of frons, the length and form of antennomeres and of legs, the density and size of punctures, and the shape of prosternal apophysis.

1.	The tarsomeres 2 to 4 are widened and partially bilobal in both sexes, the 3 <sup>rd</sup> and 4 <sup>th</sup> pro- and mesotarsomeres are linked on the upperside of the preceding tarsomeres because the soles of the preceding tarsomeres are drawn forwards. Body ovate. On elytra striae with densely set, small punctures. Upperside brown, slightly lustrous. Length 6.45 - 9.16 mm (Bougainville, Buka I., Florida Is. Group, Guadalcanal (Fig. 19)
_	The tarsomeres 3 to 4 are linked at the apices of the preceding tarsomeres, and, if tarsomeres are widened, than these are only the protarsomeres $1 - 3$ in $33$ (Amarygmus species)2.
2.	Very small species (length appr. 3.9 mm); black; with short, convex elytra, on them rows of medium-sized punctures and flat intervals; frons relatively wide; antennae short (Bougainville) (Fig. 10)
_	Species clearly longer than 4.5 mm
3.	Species with a blue or blue-violet upperside, body more or less elongately ovate; from relatively narrow; antennae of medium length or long; elytra with incised striae4.
_	These characters do not occur together, if the colour of the upperside is blue than the species present either rows of punctures on elytra and not (!) striae or they are ovate, or the ground colour is black and there is only a faint bluish tinge
4.	In $\Im \Im$ meso- and metatibiae present a broadening at the inner sides within the apical 2/3 (mesotibiae bulging, metatibiae wave-like) ( $\Im \Im$ lack these broadenings); in $\Im \Im$ metasternum is very densely covered with long hairs which hide the structure of the metasternum (in $\Im \Im$ only few short hairs); protarsomeres 1 - 3 clearly enlarged in $\Im \Im$ (in $\Im \Im$ not enlarged); striae on elytra markedly incised with closely set, elongate punctures; fronto-clypeal suture markedly incised in the whole width of head. Length/width ratio of elytra 1.51 - 1.57 : 1. Length 5.60 - 7.27 mm (abundantly occurring on all islands of the Solomon Archipelago; besides islands of the Pacific, Bismarck Archipelago, New Guinea, The Moluccas, Australia, Sri Lanka) (illustration: Bremer 2008a, 76)
_	In 33 without a broadening at the insides of meso- and metatibiae, in 33 metasternum is also covered with hairs but they are by far not so closely set as in the preceding species and, therefore, they do not hide the surface of metasternum
5.	In size, shape and colour very similar to <i>hydrophiloides</i> FAIRMAIRE, but in 30 the sexual dimorphisms on meso- and metatibiae not present; the fronto-clypeal suture only incised in its middle part (not on the lateral parts of head). Length/width ratio of elytra 1.53 - 1.64:1. It is easy to separate male specimens of this species from <i>hydrophiloides</i> but this is difficult with respect to female specimens. Length 6.53 - 7.63 mm (on all islands of the Solomon Archipelago) (description and illustration: Bremer 2008a, 93-95)
_	Elytra more ovate than in the preceding species (length/width ratio of elytra 1.32 - 1.43); somewhat larger than preceding species (length: 7.56 - 8.44 mm); in 33 protarsomeres 1 - 3 less strongly enlarged than in <i>A. hydrophiloides</i> ; fronto-clypeal suture only slightly incised (Choiseul, Big Nggela Island) (description and illustration: Bremer 2008a, 102-103)
6.	Small, elongately ovate species (length appr. 5.7 - 6.2 mm), elytra with faint or marked striae7.
_	These characters do not occur together, most species longer than 6.2 mm

7.	Intervals of elytra well punctate; frons narrow (in 33, width corresponds about to the diameters of two ocellae of the eyes, in 99 frons slightly wider); length/width ratio of elytra 1.46 - 1.53 : 1; protarsomeres 1 - 3 enlarged in 33; upperside black or copper-coloured and only slightly shining. Length 5.73 - 6.21 mm (Buka, Guadalcanal, Malaita, New Ireland, New Britain) (Fig. 4)
_	Intervals of elytra with few, tiny punctures; frons wider than in the preceding species (about as wide as 3 <sup>rd</sup> antennomere long); length/width ratio of elytra 1.47 : 1; upperside black with a faint bluish tinge, only slightly shining. Length 5.57 mm (Bougainville) (Fig. 7)
8.	With rows of punctures on elytra which are not connected by lines; species winged or wingless9.
_	On the elytra the punctures of the rows are linked by more or less distinct lines; species winged or wingless
9.	Species oblong and slightly ovate; length/width ratio of elytra >1.50 : 1; antennae bent backwards overlapping elytra only towards the first third; intervals on disc flat
_	Species distinctly ovate and markedly convex and of different length (length >6.3 mm), intervals on disc of elytra also flat; length/width ratio of elytra <1.45 : 1. Antennae long, bent backwards overlapping the elytra at least to their middle, in $33$ antennae somewhat longer than in $99$ ; in $33$ protarsomeres 1 - 3 not clearly enlarged
10.	Elytra with rows of superficial, small to medium punctures, some of them are connected by faint lines, distances between the punctures of the 4 <sup>th</sup> row on disc correspond to 1 - 3 times the diameters of the punctures. Intervals flat, with tiny but well visible punctures; frons of medium width; antennae bent backwards overlapping elytra towards their first third. Elytra dark violett; pronotum green. Length 7.96 mm (Is. Vella Lavella) (Fig. 16) (currently only one female known, therefore, it is unknown whether in 33 protarsomeres 1 - 3 and antennomeres 4 - 5 are enlarged)
_	Smaller than the preceding species (length 6.45-7.32 mm), on elytra rows with medium-sized punctures which are not linked by lines; punctures of rows bigger than those of the preceding species. Antennae somewhat shorter than in <i>A. shanahani</i> (bent backwards overlapping elytra towards their first fifth); in 33 the antennomeres 4 and 5 are markedly enlarged and much wider than the antennomere 6. Elytra either blue, dark coppery or black, pronotum either dark blue or black. In 33 protibiae within their apical third at their inside suddenly and markedly widened. Basal part of aedeagus balloon-like enlarged (Bougainville, Florida Group, New Georgia Group, Guadalcanal) (Fig. 15)
11.	Relatively large species (length 9.6-12.1 mm, most specimens >10 mm). Winged. Intervals of elytra with minute, distinct and relatively dense punctures; length/width ratio of elytra 1.31 - 1.44 : 1. Upperside lustrous, dark coppery; legs dark brown to black; antennomeres 1 - 5 brown, 6 - 11 black (Bougainville, Guadalcanal, San Cristoval, Santa Ysabel, Florida) (Fig. 14) <i>A. salomonis</i> Gebien
-	Smaller (length 6.3 - 9.55 mm)
12.	Upperside dark blue; on elytra medium-sized punctures, about 28 punctures in the 4 <sup>th</sup> row; intervals flat, with sparse, minute, distinct punctures; winged; length/width ratio of elytra 1.34 - 1.36 : 1; antennae bent backwards overlap elytra to their middle. Length 7.8 - 8.2 mm (Guadalcanal) (Fig. 8)  A. lividus sp. n.
_	Upperside dark coppery to brown, lustrous or with a certain sericeous shine

13.	Punctures on intervals of elytra minute, distinct, relatively dense (see Fig. 6A); winged; antennae very long (bent backwards overlapping elytra to their hind fifth in ♂♂, in ♀♀ clearly overlapping the middle of elytra); length/width ratio of elytra 1.28 - 1.35 : 1. Length 6.3 - 7.9 mm (Bougainville, Guadalcanal, San Cristoval, Santa Ysabel, Fauro) (Fig. 6)
_	Punctures of intervals of elytra less dense (see Figs. 2A, 3A, 11A)14.
14.	With a clear sericeous shine; the punctures of the rows of elytra are situated within slightly depressed rows; wingless (but the general shape of elytra does not indicate this!); more ovate than the two following species; antennae long, bent backwards overlapping elytra towards their middle (only $\cite{Q}$ known, $\cite{d}$ probably have longer antennae); length/width ratio of elytra $1.31 - 1.40 : 1$ . Upperside brown to dark brown. Length $8.04 - 9.55$ mm (Guadalcanal) (Fig. 3)
_	Without sericeous shine; rows of elytra not depressed
15.	Antennae shorter than in the following species, bent backwards overlapping elytra towards their middle in both sexes; winged; very similar to <i>A. lividus</i> <b>sp. n.</b> but with a different colour of the upperside, and with somewhat bigger and more distantly set punctures within the rows of elytra; length/width ratio of elytra 1.36 - 1.38: 1. Length 7.7 - 8.4 mm (Bougainville) (Fig. 11)
_	Antennae longer than those of the preceding species in $\Diamond \Diamond$ , bent backwards overlapping elytra to their hind fifth; winged; very near to <i>A. fordi</i> <b>sp. n.</b> but the antennae are somewhat longer, and intervals of the elytra are less densely punctate. Length/width ratio of elytra 1.28 - 1.35 : 1. Length 7.7 - 8.2 mm (Kolombangara) (Fig. 2)
16.	Metasternum very short (distance between meso- and metacoxae much shorter than the longitudinal diameter of one mesocoxa); these species are wingless
_	Metasternum of normally length (the distance between meso- and metacoxae longer than the longitudinal diameter of one mesocoxa); these species are winged
17.	The upperside is (in mature specimens) dark greyish and markedly sericeous. Intervals of elytra convex and densely punctate (see Fig. 5A). Frons of medium width. Antennae of medium length. Length 6.45 - 7.88 mm (Russell, Kolombangara, Santa Ysabel) (Fig. 5)
_	Upperside not markedly sericeous and greyish. Intervals of elytra either densely but indistinctly punctured or with few tiny punctures, intervals either flat or convex
18.	Striae of elytra incised; intervals of elytra convex; pronotum dark brown, elytra black but intervals 1 and 2 brown, lustrous; frons of medium width; antennae long; prosternal apophysis posterior coxae slightly convergent, and medium space between coxae with a relatively wide and moderately deep groove; intervals of elytra either with dense, indistinct punctures or with few tiny punctures. Length 6.05 - 7.25 mm (Kolombangara)
_	Striae of elytra faint and not incised, within striae small, superficial punctures; elytra globose and short; intervals of elytra flat, with spaciously set, tiny punctures. Head and pronotum black, elytra bronze, slightly lustrous. Prosternal apophysis stretched backwards, posterior to coxae with parallel margins, space in between coxae without a groove and therefore flat, with a median, low keel. Length 8.28 mm (Bougainville) (Fig. 18)
19.	Species markedly longer than 10 mm
-	Species markedly shorter than 10 mm
20.	Upperside with strong colourful reflections, pronotum more or less violet, elytra with different co-

	on elytra with densely set, small punctures, intervals slightly convex, densely punctate; frons relatively narrow. Shape elongate and ovate. Length 10.7 - 12.4 mm (Australia, Solomon Isls., New Guinea, some islands of the Northern Moluccas) (Fig.: Bremer 2005a, 55)
_	Intervals of elytra not densely set with small punctures; upperside without colourful reflections, mostly uniformly coloured (in one instance with brown to reddish brown intervals 1 and 2 but with darker coloured lateral parts of elytra)
21.	Sides of elytra straight, mostly slightly widening towards the hind third; within the incised striae there are small, closely set punctures. Elytra and pronotum uniformly dark red or dark green. Antennae relatively short. Metatibiae straight. 1st metatarsomere shorter than 4th metatarsomere. Length 13.1-13.9 mm (Bougainville, New Guinea) (Fig.: Bremer 2004a, p.17)
_	Elytra elongate, ovate, maximum of width somewhat in front of middle; within the incised striae relatively big punctures which are not set very closely. Metatibiae moderately bent. Metatarsomere 4 markedly shorter than metatarsomere 1. Upperside dark coppery. Length 10.4 - 13.5 mm (Bougainville, Santa Ysabel Group, Guadalcanal, Malaita) (Fig.: Bremer 2008b, 50)
22.	Upperside lustrous
_	Upperside more or less opaque or sericeous
23.	Striae of elytra somewhat incised, within them small, almost concealed, round punctures; intervals slightly convex, impunctate; in 33 outside of protibiae in their basal 60 per cent bent, apically thence straight, at their inside basally with a very gentle convexity passing over into a straight margin; metatarsomeres tender, dark brown or black. Length 8.36 mm. (Bougainville) (Fig. 1)
_	Striae of elytra less incised, and the punctures within striae bigger and therefore better visible; legs are slightly shorter than in the preceding species. In 33 protibiae not abruptly bent. Metatarsomeres are thicker and shorter than in the preceding species, and metatarsomere 1 is relatively short, metatarsomeres are brown to reddish brown. Length 6.76 - 8.53 mm (Guadalcanal, San Cristoval; Vanuata; Bismarck Archipelago, New Guinea, the Moluccas up to Morotai) (Fig.: Bremer 2007, 45)
24.	The disc of elytra is reddish brown, it is circumvented by an oblique, faintly black macule which is extending from shoulders to apex (this macule is scarcely visible in immature specimens); head and pronotum greyish to black; femora and apical parts of pro- and mesotibiae dark brown to black, metatibiae completely light brown. Very long antennae. Antennomere 10 more than double as long as wide. Length 8.04 - 8.28 mm (Bougainville) (Fig. 13)
_	The disc of elytra either of the same dark colour as the rest of elytra, or, if reddish brown, than this colour is restricted to the first three intervals of elytra
25.	The head is black, the pronotum and the intervals 1 - 3 of elytra are reddish brown, the more lateral intervals of elytra are blackish, the legs are light brown. Length 6.77 - 7.48 mm (New Georgia Group) (Fig. 17)
_	Upperside uniformly greyish black and sericeous; legs black (there are many immature specimens which may have a uniformly reddish upperside); antennae long, and in $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$
	(On the Solomon Islands south of Bougainville there is a subspecies of <i>A. nigroopacus</i> Gebien which has somewhat shorter antennae than <i>A. nigroopacus</i> ssp. <i>nigroopacus</i> from Bougainville and Buka I.: <i>Amarygmus nigroopacus viciscornis</i> <b>sp. n.</b> )

#### A. Species of the genus Amarygmus Dalman, 1823

Annotations on already described species and description of new taxa (in alphabetic order). Except one species, which belongs to the subgenus *Hyperamarygmus* Kaszab, 1964, the other species belong to the subgenus *Amarygmus* Dalman, 1823.

The data of the labels are given in the original language and with the abbreviations as they were used by the collectors.

### Amarygmus (Amarygmus) adversus sp. n. (Fig. 1A-H)

**Holotype**, ♂, BMH: Solomon Is., Bougainville, Mumurai, VI-8-'56, J. L. Gressitt Collector.

**Diagnosis**. Of medium size; ovate, winged; elytra markedly convex, with incised striae on elytra in which punctures are very small and concealed. In the ♂ protibiae are bent and, at their inside at 35 per cent from base, show an obtuse angle. Protarsomeres 1 - 3 not widened nor prolonged in ♂.

Very similar in size and shape to A. orientalis (Fairmaire, 1883) but the punctures in the striae are smaller, and they are much less visible than in A. orientalis, in  $\Im \Im$  the protibiae of A. orientalis are not abruptly bent especially at their inside; the legs of A. adversus are slightly longer than those of A. orientalis. The metatarsomeres of A. adversus are thinner than those of A. orientalis, and the tarsomeres of A. adversus are not markedly lighter brown than tibiae in A. orientalis.

A. adversus also resembles A. microthorax Gebien, 1920 from New Guinea. It possesses the same sexual dimorphism at the protibiae in the 3 as A. microthorax shows, the striae with their punctures are of the same shape in both species, but A. microthorax is larger than A. adversus, in relation to pronotum A. microthorax has more voluminous elytra.

Concerning size, outline of elytra, pronotum, width of frons, length of antennae *A. adversus* is also near to *A. weiri* Bremer, 2002 from New Britain and to *A. clandestinus* Bremer, 2002 from New Ireland [Bismarck Archipelago], but both species do not show incised striae on elytra, and the small punctures of the rows are mostly not linked by lines.

**Description**. Length: 8.36 mm. Width: 4.94 mm.

Ratios. Pronotum: width/length 1.66; width hind corners/width front corners 1.73. Elytra: length/width 1.32; length elytra/length pronotum 3.28; maximum width elytra/maximum width pronotum 1.49.

Colour. Upperside dark coppery, lustrous. Legs including tarsomeres dark brown. Antennae black. Underside brown, slightly lustrous (metasternum more so than sternites).

Head. Frons of medium width, somewhat narrower than the length of the 3<sup>rd</sup> antennomere (like 14:16). Genae markedly raised, terminating anteriorly a little in front of the level of the middle part of the frontoclypeal suture. Fronto-clypeal suture depressed. Clypeus markedly stretched forward, sides slightly convergent apically; longitudinally slightly convex. Clypeus and frons densely set with small punctures. Mandibles apically bifid.

Pronotum. Convex transversely, less convex longitudinally. Margins of the hind half subparallel, of the anterior half convergent. Front corners acute-angled; anterior margin markedly excavated. Lateral margins and front margin continuously bordered; in dorsal view the lateral borders are visible. Front corners in lateral view are appr. rectangular, basal corners are obtuse. Surface with indistinct, tiny punctures.

Scutellum. Triangular, impunctate.

Elytra. Ovate, transversely markedly convex, longitudinally less so than transversely. Maximum height and width approximately at middle. Shoulders angular, pointed; apices of elytra mutually rounded; lateral edges in dorsal view very narrowly visible. With markedly incised striae with very small, nearly concealed, round to slightly elongate punctures. Intervals convex, impunctate.

Prosternum. Anterior margin continuously and narrowly bent upwards, medianly slightly retracted towards apophysis like a trough. Apophysis narrow, long; alongside coxae margins somewhat widened and their margins raised ventrad, median space in between coxae with a marked groove; behind coxae margins subparallel, apex pointed.

Mesosternum. Hind part short, anteriorly medianly excavated.

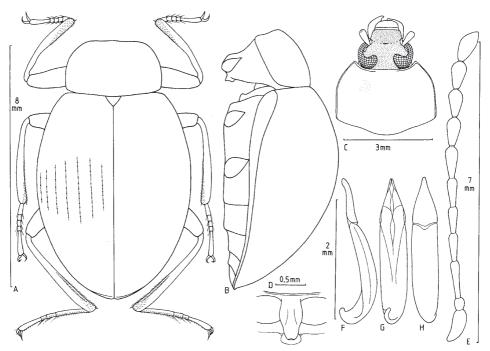


Fig. 1: Amarygmus (Amarygmus) adversus sp. n.: A Habitus &; B Body lateral; C Head and pronotum; D Prosternal apophysis; E Antenna &; F Aedeagus lateral; G Aedeagus ventral; H Aedeagus dorsal.

Metasternum. Apophysis between mesocoxae closely covered with irregularly set punctures. Disc almost impunctate. Median line in its middle part incised.

Sternites. Anterior margins between metacoxae widely ogive. Sternites opaque, with indistinct, small punctures which are the origin of thin, short hairs. In 3 5th sternite apicomedianly without depression.

Antennae. Of medium length, bent backwards overlapping elytra to their middle. Length/width ratio of antennomeres 1-11 corresponds to  $14:6 / 6:4\frac{1}{2} / 16:4\frac{1}{2} / 11:4\frac{1}{2} / 12:4\frac{1}{2} / 11:4\frac{1}{2} / 13:5\frac{1}{2} / 13:6 / 12:6 / 11:6 / 14:6.$ 

Legs. Of medium size. Femora broadened up to their second third. The outside of protibiae in their basal 60 per cent bent, apically then straight, at their inside basally with a very gentle convexity passing over into a straight outline (this shape of protibae certainly only in 33). Meso- and metatibiae slightly bent. Lengths of protarsomeres 1-5 as  $14:4:3\frac{1}{2}:3\frac{1}{2}:18$ , lengths of mesotarsomeres 1 - 5 as  $8:4\frac{1}{2}:4:4:19$ , lengths of metatarsomeres 1 - 4 as 26:9:5:19.

**Etymology**. Adversus (lat.) opposite to (*orientalis*).

## Amarygmus (Amarygmus) alius sp. n. (Fig. 2A-H)

Platolenes fordi ssp. kolombangaraensis Kaszab in litt.

Holotype, J, BMH: Solomon Is., Kolombangara, Pepele, 10.II.1964, P. Shanahan Collector BISHOP.

**Paratypes**: dito (1  $\circlearrowleft$  BMH, 1  $\circlearrowleft$  ZSMB, 1  $\circlearrowleft$  BMH) – dito, but 15.II.1964 (1  $\circlearrowleft$  ZSMB).

**Diagnosis**. Of medium size, winged, upperside lustrous, copper-brown; elytra ovate, markedly convex, maximum of height in the middle, with rows of medium-sized punctures on the elytra, intervals flat, with few minute

punctures; pronotum rather closely and indistinctly punctate; from of medium width, clypeus and from rather closely punctate; antennae very long and slender (in  $\Im \Im$  longer than in  $\Im \Im$ ); legs of medium length; protarsomeres 1-3 very slightly enlarged in  $\Im \Im$ .

Very similar to *Amarygmus fordi* **sp. n.** (see *A. fordi*) but the antennomeres 7-11 of *A. alius* are longer than the antennomeres 7-11 of *A. fordi*; transversely the pronotum of *alius* is more convex than the pronotum of *A. fordi*, the lateral margins of the pronotum of *A. alius* are more bent than the sides of the pronotum of *A. fordi*, elytra somewhat shorter in *A. alius* than in *A. fordi*; the intervals of the elytra are less distinctly punctate in *A. alius* than in *A. fordi*.

**Description**. Length: 7.76-8.12 mm. Width: 4.77-5.06 mm.

Ratios. Pronotum: width/length 1.76 - 1.84; width hind corners/width front corners 1.76 - 1.87. Elytra: length/width 1.28-1.35; length elytra/length pronotum 3.24 - 3.47; maximum width elytra/maximum width pronotum 1.36 - 1,46.

Colour. Upperside lustrous, coppery, underside brown, legs dark brown, tarsi light brown; antennomeres brown to black.

Head. Frons of medium width, in both sexes of the same width; in \$\int \cap\$ anarrower than the length of the \$3^{rd}\$ antennomere (like 29 : 36). Genae clearly raised, anteriorly terminating at the level of the middle part of fronto-clypeal suture. Fronto-clypeal suture in its middle part visible only as an impunctated line, neither incised nor depressed. Clypeus apically stretched forward, slightly convex. Clypeus densely punctate, punctures small; frons in its middle part less densely punctate than clypeus. Mentum apically widened with slightly bent margins; lateral margins flat and lucent, in between its middle part is raised and possesses a heart-like shape. Underside of neck densely punctate, punctures coarse. Mandibles on their outside with a sulcus, apically bifid.

Pronotum. Transversely markedly convex, longitudinally slightly convex. Lateral margins apically convergent and bent. Anterior margin markedly excavated. Front corners acute. Lateral and anterior margins bordered. In dorsal view the borders of the sides are visible. Front corners in lateral view rectangular, hind corners obtuse. Punctation with small, shallow, densely set punctures.

Scutellum. Triangular. with fine punctures.

Elytra. Ovate, transversely markedly convex; maximum height and width slightly anterior of middle. Shoulders slightly prominent. Apices of elytra slightly retracted towards suture but not protruded. Lateral edges in dorsal view nearly invisible. With rows of medium-sized punctures which are not linked by lines; the distances between punctures in 4th row correspond to 1 to 1½ time of their diameters; in 4th row about 45 punctures. Intervals flat, with minute and sparse punctures.

Prosternum. Anterior margin bent upwards, medianly with a wide, flat, short projection into apophysis. Margins of apophysis widened alongside coxae and raised ventrad, median space in between with a wide, shallow groove; behind coxae apophysis slightly descends, its lateral margins convergent; apex straight.

Mesosternum. Hind part very short and without structural peculiarities; anterior margin of hind part medianly very slightly excavated.

Metasternum. Lustrous. Anterior part of disc closely punctate, punctures of medium size; hind part with much smaller and sparser punctures.

Sternites. Lustreless. Anterior margin between metacoxae widely ogive. Sternites with small and shallow punctures. In 33 sternite 5 apicomedianly neither depressed nor excavated.

Antennae. Very long, in 33 longer than in 99. In 33 bent backwards overlapping elytra to their hind fifth. Ratios of length/width of antennomeres 1 - 11 corresponds in 3 to 17:12 / 12:8 / 36:9 / 22:9 / 31:9 / 28:9 / 31:10½ / 31:10½ / 31:11 / 29:11 / 35:11, in <math>9 to 28:11 / 11:7 / 32:8 / 22:8 / 25:8½ / 24:8½ / 27:11 / 25:11½ / 25:11½ / 23:11½ / 30:11½.

Legs. Of medium length. Femora to their second third club-like broadened, Protibiae nearly straight, in both sexes at their apical inside with short, oblique bristles. Mesotibiae in their apical 2/3 straight, on their apical inside in both sexes with oblique bristles which are somewhat longer than those of protibiae. Metatibiae slightly bent, in both sexes on their inside in their apical half with oblique bristles. Lengths of protarsomeres 1 - 5 as 10:10:10:9:36, lengths of mesotarsomeres 1 - 5 as 17:13:11:8:37, lengths of metatarsomeres 1 - 4 as 49:18:9:35.

Etymology. alius (lat.) the other.

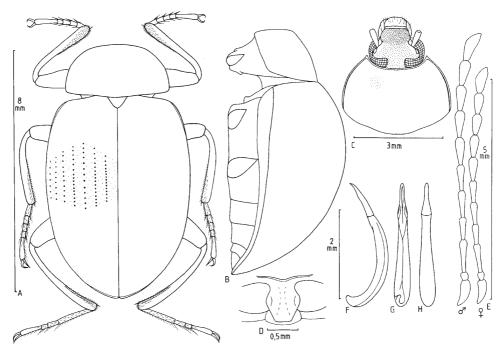


Fig. 2: Amarygmus (Amarygmus) alius sp. n.: A Habitus  $\mathcal{S}$ ; B Body lateral; C Head and pronotum; D Prosternal apophysis; E Antennae,  $\mathcal{S}$  and  $\mathcal{S}$ ; F Aedeagus lateral; G Aedoeagus ventral; H Aedoeagus dorsal.

## Amarygmus (Amarygmus) browni sp. n. (Fig. 3A-E)

Amarygmus browni Kaszab in litt.

**Holotype**, ♀, BMNH: Solomon Is., Guadalcanal, Tabalusi, Foliage, 1200', 20574, 30/11/1965, leg, Matunga con P. J. M. Greenslade; Roy. Soc. Exped. Brit. Mus. 1966-1. (label with red margins): Holotypus 1969, *Amarygmus browni* KASZAB.

**Paratypes**: Solomon Is., Guadalcanal, J.P.16, Vunavelakava, 31.IX.'65, Roy. Soc. B.S.I.P., B.M. Acc. No. 2182 (Moll.); under moss on logs and tree trunks. (label with red margins): Paratypus 1969, *Amarygmus browni* KASZAB. (1 ♀ BMNH) − Solomon Is., Guadalcanal, Suta, 5333, 27.VI.1956, E. S. Brown; Pres. by Com. Inst. Ent. B.M.1958-79. (label with red margins): Paratypus 1969, *Amarygmus browni* KASZAB (1 ♀ ZSMB).

**Diagnosis**. Of medium size; wingless; elytra ovate; upperside brown to dark brown with a clear sericeous shine; on elytra with rows of medium-sized punctures which are set in somewhat depressed rows; antennae long (it has to be expected that  $\lozenge \lozenge$  have longer antennae than  $\lozenge \lozenge$ ).

**Description**. Length: 8.04 - 9.55 mm. Width: 5.21 - 5.77 mm.

Ratios. Pronotum: width/length 1.86 - 1.96; width hind corners/width front corners 1.71 - 1.82. Elytra: length/width 1.31 - 1.40; length elytra/length pronotum 3.46 - 3.58; maximum width elytra/maximum width pronotum 1.32 - 1.39.

Colour. Upperside brown to dark brown, with a sericeous shine; femora and tibiae somewhat lighter brown than upperside; antennomeres 1 - 5 brown, 6 dark brown, 7 - 11 black. Underside brown, lustrous (including sternites).

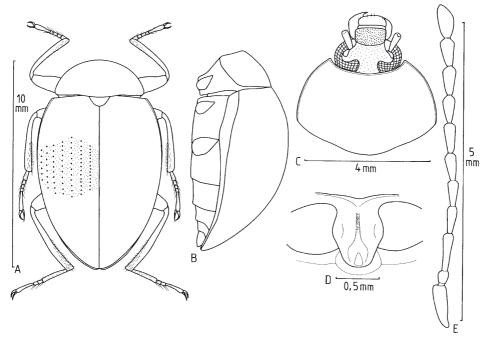


Fig. 3: Amarygmus (Amarygmus) browni sp. n.: A Habitus ♀; B Body lateral; C Head and pronotum; D Prosternal apophysis: E Antenna.

Head. Frons of medium width, slightly narrower than the length of 3<sup>rd</sup> antennomere (like 14:15). Genae short, terminating anteriorly behind the level of the middle part of fronto-clypeal suture; they are somewhat raised. Fronto-clypeal suture translucent or very slightly incised. Clypeus stretched forward; transversely and longitudinally very slightly convex. Clypeus with small, relatively densely set punctures, those on frons smaller and sparser.

Pronotum. Wide. Somewhat convex transversely and longitudinally. Widest at base, narrowed and bent towards front corners. In dorsal view hind corners obtuse; front corners rectangular. Anterior margin excavated. Lateral and anterior margins bordered. Lateral borders in dorsal view narrowly visible. Front corners in lateral view rectangular, hind corners angular and obtuse. Surface with indistinct, small, relatively densely set punctures.

Scutellum. Widely triangular; with some tiny punctures.

Elytra. Ovate, transversely markedly convex, longitudinally less convex. Maximum width and height at the end of the first third. Shoulders not prominent. Apices of elytra mutually rounded. Lateral edges in dorsal view visible. With rows of medium-sized punctures which are slightly depressed; the punctures are mostly not linked by lines; punctures of rows indistinct at the apex; in the 4<sup>th</sup> row the distances between punctures correspond to 1- to 2-fold their diameters; in the 4<sup>th</sup> row approximately 32 punctures. Intervals slightly convex, with indistinct, small, relatively densely set punctures.

Prosternum. Anterior margin continuously and narrowly bent upwards, medianly very shortly retracted towards apophysis. Margins of apophysis alongside procoxae widened and markedly raised ventrad; median space in between with a deep, narrow groove; behind coxae apophysis shortly protruded backwards, margins convergent; apically widely rounded and apicomedianly with a short, raised nose.

Mesosternum. Anterior margin of hind part medianly slightly excavated; its lateral margins somewhat raised and with some tubercles; medianly surface smooth.

Metasternum. Short, distance between meso- and metacoxae somewhat shorter than longitudinal diameter of a mesocoxa. Anterior margin between mesocoxae rounded, broadly bordered. Anterior part of metasternum with some shallow, big punctures; posterior part with minute punctures.

Sternites. Anterior margin between metacoxae ogive, broadly bordered. Sternite 1 and the anterior half of sternite 2 with densely set, small, superficial punctures. The punctures on other sternites minute and superficial.

Antennae. Long. Bent backwards overlapping elytra towards their middle (in  $\bigcirc$ !).  $11^{th}$  antennomere asymmetrically pointed. The length/width ratio of antennomeres 1 - 11 corresponds to  $14:5\frac{1}{2} / 6:4 / 14:4 / 12\frac{1}{2}:4 / 13:4 / 12:4 / 14:5 / 12\frac{1}{2}:6 / 13:6 / 11\frac{1}{2}:6 / 15:6$ .

Legs. Of medium length. Femora towards their second third moderately broadened. Protibiae nearly straight or slightly bent; meso- and metatibiae moderately bent. Lengths of protarsomeres 1 - 5 as 5:4:4:3:16, lengths of mesotarsomeres 1 - 5 as 10:7:6:4:17, lengths of metatarsomeres 1 - 4 as 26:8:6½:18.

**Etymology**. Kaszab named this species *A. browni* honouring the collector; I accept this name.

#### Amarygmus (Amarygmus) cuprarius iodicollis Guérin-Méneville, 1830

Amarygmus iodicollis Guérin-Méneville, 1830: 101.

Amarygmus cuprarius ssp. iodicollis Guérin-Méneville, 1830: Bremer 2001b, 198.

A redescription of *A. cuprarius* s. str. and its subspecies with drawings of habitus, elytra, and aedeagus has been published: Bremer 2005a, 54-57.

**Diagnosis**. A large, flat species with striae on elytra and densely punctate and mostly slightly convex intervals; pronotum densely punctate; frons relatively narrow. Pronotum is more or less violet but different colours may be mixed into, especially near margins of pronotum. Elytra lustrous and, depending on light angle, reflecting light in the different spectrum colours; frequently colours are forming longitudinal stripes.

Concerning shape, punctation, and aedeagus I did not find differences between *A. cuprarius cuprarius* (Weber, 1801) and *A. cuprarius iodicollis* Guérin-Méneville. *A. cuprarius cuprarius* occurs abundantly in the Oriental and East Palaearctic faunal areas (from Nepal up to Japan, to the Philippines, to the Greater and Smaller Sunda Islands, and to Sulawesi). The subspecies *A. iodicollis* possesses a more or less violet colour of pronotum while the subspecies *cuprarius* possesses an iridescence of all spectrum colours. The ssp. *iodicollis* occurs in Australia, New Guinea, on the Solomon Islands, and on the islands of the central and northern Moluccas. On Flores and Timor intermediate forms are found.

Length: 9.7 - 11.9 mm. Width: 5.6 - 6.5 mm. Ratios. Pronotum: width/length 1.87 - 2.03; width hind corners/width front corners 1.66 - 1.74. Elytra: length/width 1.43 - 1.56; length elytra/length pronotum 3.59 - 4.09; maximum width elytra/maximum width pronotum 1.30 - 1.34.

Material. Bougainville, P. RIBBE (2 ZSM) – Solomon Islands, Bougainville Island, Kukugai Village (Buin), 17.10.1960-2.2.1961, W. W. BRANDT (1 ANIC).

#### Amarygmus (Amarygmus) egenus Bremer, 2002 (Fig. 4A-G)

Platolenes gressitti Kaszab in litt. Amarygmus egenus Bremer, 2002: 199.

**Diagnosis**. Small, narrow, elongately ovate, black or copper-coloured; with very long, thin and brown antennae which, bent backwards, overlapping clearly the middle of elytra; frons very narrow, width corresponds to the diameters of two ocellae of the eyes in  $\Im \Im$ , in  $\Im \Im$  frons somewhat wider; on elytra with striae which are slightly incised and intervals with small but well visible punctures, intervals very slightly convex. Density of punctation of pronotum differs between specimens. Protarsomeres 1 - 3 enlarged in  $\Im \Im$ .

A. egenus Bremer, 2002 was formerly known only from New Ireland and New Britain (Bismarck Archipelago). Because of some differences of colour and density of punctation I cannot exclude that there are subspecies of A. egenus on the different islands, but, because of too little material, I cannot define characters which may delimitate possibly existing subspecies.

Measurements, Length: 5.73 - 7.27 mm. Width: 3.07 - 4.29 mm. Ratios. Pronotum: width/length 1.68 - 1.92; width hind corners/width front corners 1.76 - 1.86. Elytra: length/width 1.46 - 1.53; length elytra/length

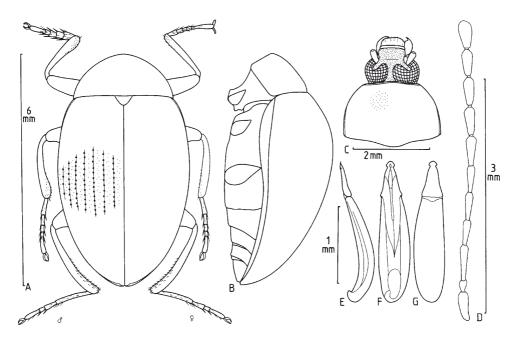


Fig. 4: Amarygmus (Amarygmus) egenus Bremer, 2002: A Habitus, left side legs ♂, right side ♀; B Body lateral; C Head and pronotum; D Antenna; E Aedeagus lateral; F Aedeagus ventral; G Aedeagus dorsal.

pronotum 3.32 - 3.46; maximum width elytra/maximum width pronotum 1.33 - 1.37. Lengths of metatarsomeres 1 - 4 as 24:8:6:12.

Colour. Upperside black or copper-coloured, not very shining. Femora and tibiae dark brown; antennae brown.

Material. Solomon Is., Guadalcanal, (handwritten, not well decipherable): Koilotumaria, 25.VII.1955, E. S. Brown; Pres. by Com. Inst. Ent. B.M.1958, 79; (label with red border) Paratypus 1969, Platolenes gressitti Kaszab (1 ♂ BMNH) – Solomon I., Buka I., Gagan, 40 m, VI-15-1956 (1 ♂ ZSMB) – Solomon Is., Malaita: E. of Kwalo (E. of Auki), 350 m, Sept.29, 1957. J. L. Gressitt Collector (2 ♂ BMH). Further Distribution. Bismarck Archipelago: N. Ireland, N. Britain.

### Amarygmus (Amarygmus) externus sp. n. (Fig. 5A-H)

Amarygmus sericeus Kaszab in litt.

Amarygmus sericeus kolombangaraensis Kaszab in litt. (partim).

**Holotype**, ♂, BMNH: Solomon Is., Russells Is., Somata, 22.II.1934, R. A. Lever; Pres. by Com. Inst. Ent.; B. M. 1967-3; Paratypus, 1969, *Amarygmus sericeus* Kaszab.

**Paratypes**: dito ( $1 \circlearrowleft$ ,  $1 \circlearrowleft$  BMNH) - Solomon Is., R. A. Lever; .....[badly legible], Russell; Pres. by Com. Inst. Ent., B.M. 1967-3; Paratypus 1969, Amarygmus sericeus Kaszab ( $1 \circlearrowleft$  ZSMB) - Solomon Is., R. A. Lever; Russell, ?Lugatu [badly legible]; Pres. by Com. Inst. Ent., B.M. 1967-3; Paratypus, 1969, Amarygmus sericeus Kaszab (3, sex not determined, BMNH, 1 ZSMB) - Solomon Is., Kolombangara, Kusi, Sept.7,1965, P. Natunga [badly legible], Roy. Soc. Exped., Brit. Mus.1966; Paratypus 1969, Amarygmus sericeus kolombangaraensis Kaszab ( $1 \circlearrowleft$  BMNH) - Solomon Is., Kolombangara, 3000°, Moss, 28/8.1965, P. Natunga; Roy. Soc. Exped.,

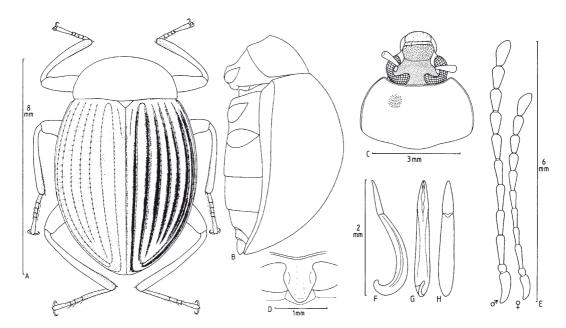


Fig. 5: Amarygmus (Amarygmus) externus sp. n.: A Habitus  $\mathcal{J}$ ; B Body lateral; C Head and pronotum; D Prosternal apophysis; E Antennae,  $\mathcal{J}$  and  $\mathcal{G}$ ; F Aedeagus lateral; G Aedeagus ventral; H Aedeagus dorsal.

Brit.Mus. 1966-1; Paratypus, Amarygmus sericeus kolombangaraensis Kaszab 1969 (1 ♀ BMNH) – Solomon Is., Kolombangara, 3000', Foliage, 1965, leg. Ezikiel [not decipherable]:......, Roy. Soc. Exped., Brit. Mus. 1966-1; Paratypus, Amarygmus sericeus kolombangaraensis Kaszab 1969 (1 ♀ BMNH) – Solomon Is., Kolombangara, 1000', Foliage, 3/9.1965, P. Natunga, Roy. Soc. Exped., Brit. Mus. 1966-1; Paratypus, Amarygmus sericeus kolombangaraensis Kaszab 1969 (1, sex not determined, BMNH) - Solomon Is., R. A. Lever, Aatura [? badly legible], Ysabel; Pres. by Com. Inst.Ent., B.M. 1967-3; Paratypus 1969, Amarygmus sericeus Kaszab (1 ♀ BMNH) – Solomon Is., Isabel, Pela, 10.VII.1935, R. A. Lever; 4888; Pres. Com. Inst. Ent., B.M.1967-3; Paratypus, Amarygmus sericeus Kaszab 1969 (1 ♀ BMNH).

**Diagnosis**. Highly convex, elytra relatively short; intervals of elytra clearly convex and densely punctate. Upperside with sericeous shine. Wingless and therefore metasternum very short. Frons of medium width. Antennae of medium length, those of  $\Im \Im$  slightly longer than those of  $\Im \Im$ .

Annotation. I could not find essential differences between specimens which Kaszab labeled as *A. sericeus* and some specimens which Kaszab determined as *A. sericeus kolombangaraensis* except length (*A. sericeus* ssp. *kolombangaraensis* on avarage somewhat shorter than *A. sericeus*). I, therefore, regard them as belonging to merely one species. The name *sericeus* which Kaszab proposed for this species is preoccupied by *Amarygmus sericeus* Gebien, 1927 from Sumatra.

**Description**. Length: 6.45 - 7.88 mm. Width: 3.98 - 5.25 mm.

Ratios. Pronotum: width/length 1.83 - 2.07; width hind corners/width front corners 1.70 - 1.83. Elytra: length/width 1.10 - 1.20; length elytra/length pronotum 2.92 - 3.19; maximum width elytra/maximum width pronotum 1.39 - 1.43.

Colour. Upperside with sericeous shine, dark grey (many specimens immatur and more or less brown, especially the 1st interval of elytra reddish brown). Underside in mature specimens black, lustrous. Femora black to dark brown; tibiae in some specimens black, in others brown; tarsomeres brown. Antennomeres 1 - 3 brown, 4 - 11 black.

Head. Frons of medium width, slightly narrower than the length of 3<sup>rd</sup> antennomere (like 12:16). Genae slightly raised, anteriorly terminating at the level of the middle part of fronto-clypeal suture. Fronto-clypeal

suture slightly incised. Clypeus stretched forward. Clypeus and frons densely punctate. Mandibles on their exterior sulcate, apically bifid.

Pronotum. Transversely slightly convex. Lateral margins bent, in some specimens with maximum of width in the middle, in others behind the middle, towards front corners convergent, less so towards hind corners. Hind corners more or less rounded, front corners acute-angled. Anterior margin excavated. Lateral and anterior margins continuously bordered, lateral borders in dorsal view visible in their whole length. Front corners in lateral view rectangular, hind corners clearly obtuse. Surface with small, densely set, indistinct punctures.

Scutellum. Triangular, with indistinct punctures.

Elytra. Ovate; relatively short. Transversely and longitudinally markedly convex. Towards the shoulders convergent. Apices of elytra mutually rounded. Lateral edges in dorsal view narrowly visible. With deeply incised striae with oblong, small punctures. Intervals markedly convex, with closely set, indistinct punctures.

Prosternum. Anterior margin continuously bent upwards, medianly not retracted towards apophysis. Apophysis ovate, lateral margins convergent behind coxae, with nearly straight margins; apically narrowly rounded; median space between coxae scarcely grooved.

Mesosternum. Very short, wide; laterally with a longitudinal, short, deep sulcus on each side. Outside these sulci with dense, irregularly set punctures.

Metasternum. Very short; distance between meta- and mesocoxae much shorter than longitudinal diameter of a mesocoxa. Anterior margin between mesocoxae convex, bordered. Disc with dense, irregularly set, deeply impressed punctures, some are origin of very short, obliquely projecting hairs.

Sternites. Anterior margin of  $1^{st}$  sternite between metacoxae widely ogive, with broad borders.  $1^{st}$  sternite on its anterior part with oblong, dense punctures; posterior part of sternite 1 and sternites 2 - 5 with indistinct, small punctures. In 33 apicomedian part of sternite 5 neither depressed nor excavated.

Antennae. Long. In  $\Diamond \Diamond$  slightly longer than in  $\Diamond \Diamond$ . Antennae of  $\Diamond \Diamond$ , bent backwards, overlap elytra to their middle, in  $\Diamond \Diamond$  about 40 percent of elytra are overlapped. Length/width ratio of antennomeres 1 - 11 corresponds in  $\Diamond$  to  $17:6 / 4\frac{1}{2}:4\frac{1}{2} / 16:4\frac{1}{2} / 12\frac{1}{2}:4\frac{1}{2} / 13:4\frac{1}{2} / 12:4\frac{1}{2} / 12:5\frac{1}{2} / 11:5\frac{1}{2} / 12:5\frac{1}{2} / 11\frac{1}{2}:5\frac{1}{2} / 14:6$ , in  $\Diamond$  of the same size to  $16:6 / 5:4\frac{1}{2} / 18:4\frac{1}{2} / 13:4 / 15:4 / 13\frac{1}{2}:4 / 15:5 / 13\frac{1}{2}:6 / 13:6 / 12\frac{1}{2}:6 / 14:6\frac{1}{2}$ .

Legs. Of medium length. Femora at their second third club-like widened. All tibiae bent, at the inside of pro- and mesotibae with a very slight angle. Protarsomeres 1 - 3 not enlarged in 33. Lengths of protarsomeres 1 - 5 as 7:7:7:7:35, lengths of mesotarsomeres 1 - 5 as 15:10:9:8:35, lengths of metatarsomeres 1 - 4 as 45:14:9:35.

**Etymology**. Externus (lat.) outward appearance.

### Amarygmus (Amarygmus) fordi sp. n. (Fig. 6A-H)

Platolenes fordi Kaszab in litt.

Holotype, & BMH: Solomon Is., Bougainville (S.), Kokuro, 690 m, June 16, 1956, E. J. Ford, Jr. Collector.

Paratypes: dito (1 ♀ BMH) – dito, June 8, 1956 (1 ♀ BMH) – dito, but 800 m, June 12, 1956 (1 ♀ ZSMB) – dito, but 680 m, June 14, 1956 (1 ♀ BMH) – Pamaita, South Bougainville, 13.III.1966, 1100 ft. (1 ♀ HNHM) – Solomon Is., Bougainville Island, Konga Village (Buin), 6.2.-21.3.1961, W. W. Brandt (1 ♀ ANIC) – Solomon Is., Bougainville (S.), Buin (Kongu), 1-50 m, V-31-1956, E. J. Ford Jr. Collector (1 ♀ BMH) – Solomon Is., Bougainville, Kukugai Vill., 150 m, XII.1960, W. W. Brandt Collector (1 ♂ 1 ♀ BMH) – dito, but XI.1960 (1 ♂ 1 ♀ BMH) – dito, but XI.1960 (1 ♂ 2SMB) – Bougainville: NE, Mutahi, 700 m, 18 km SE Tinputz, 1.-7. XII.1968 (1 ♂ BMH, 1 ♀ ZSMB) – Solomon Is., Fauro I.: NE, 12.IV.1964, P. Shanahan Collector (1 ♂ ZSMB) – Solomon Is., San Cristoval, Wigiroga, 8.VIII.1960, C. W. O'Brien Collector (1 ♀ BMH) – Solomon Is., Santa Ysabel, Sukapisu, 900 m, 13.VI.1960, C. W. O'Brien Collector (1 ♀ BMH) – Solomon Is., Guadalcanal, Sutakiki R., 3,000', 5/4 1963, P. Greenslade 47684 (1 ♀ BMNH) – Solomon Is., Guadalcanal, Koai Ridge, 2500', 17/6 1965, P. J. M. Greenslade 18475 (1 ♀ BMNH).

**Diagnosis**. Of medium size; winged; upperside lustrous, coppery. Elytra ovate, convex, with rows of medium-sized punctures; intervals flat, with minute, densely set punctures; pronotum with rather dense and small

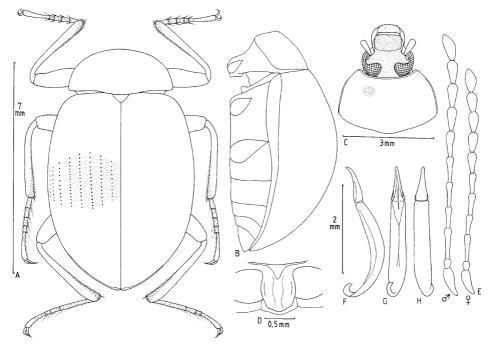


Fig. 6: Amarygmus (Amarygmus) fordi sp. n.: A Habitus  $\Diamond$ ; B Body lateral; C Head and pronotum; D Prosternal apophysis; E Antennae  $\Diamond$  and  $\Diamond$ ; F Aedeagus lateral; G Aedeagus ventral; H Aedeagus dorsal.

punctures; frons of medium width; antennae slender and very long; legs of medium size with protibiae on their outside slightly bent, meso- and metatibiae slightly bent; protarsomeres 1 - 3 moderately enlarged in 33.

A. fordi is a relative of A. salomonis Geben, 1920 which is markedly larger (length 9.7-12.1 mm). In A. salomonis the front corners of pronotum are narrowly rounded, in A. fordi they are distinct and slightly acuteangled; the punctation of pronotum of A. salomonis is somewhat coarser than in A. fordi, protibiae in A. salomonis on outside are slightly bent (in A. fordi straight to slightly concave).

**Description**. Length: 6.39 - 7.88 mm. Width: 3.98 - 5.02 mm.

Ratios. Pronotum: width/length 1.83 - 2.07; width hind corners/width front corners 1.75 - 1.85. Elytra: length/width 1.30 - 1.38; length elytra/length pronotum 3.50 - 3.90; maximum width elytra/maximum width pronotum 1.36 - 1.45.

Colour. Upperside coppery, slightly lustrous. Underside black. Legs and antennae black.

Head. Upperside flat and closely punctate. Frons of medium width; width corresponds about to length of 4<sup>th</sup> antennomere. Genae clearly raised, terminating anteriorly in front of the level of middle part of fronto-clypeal suture. Fronto-clypeal suture in its middle part shallowly incised. Clypeus stretched forwards. Lateral margins of mentum bent, flat; median space in between convex. Mandibles exteriorly sulcate, apically bifid.

Pronotum. Markedly transversely convex, longitudinally slightly convex. Lateral margins convergent apicad, in the hind half with straight margins. Anterior margin markedly excavated. Front corners acute. Lateral parts of anterior margin bordered, medianly border mitigated. Borders of the lateral margins in dorsal view narrowly visible. Front corners in lateral view rectangular, hind corners obtuse. Surface with small, densely set punctures.

Scutellum. Triangular. with minute punctures.

Elytra. Ovate, markedly convex transversely; maximum height and width about at middle. Shoulders slightly prominent. Apices of elytra slightly retracted towards suture. Lateral edges in dorsal view visible only in the hind third. With rows of medium-sized punctures, the distances between punctures on disc in the 4<sup>th</sup> row correspond to the diameters of the punctures, in the apical third punctures become smaller; in 4<sup>th</sup> row about 50 punctures. Intervals flat, densely punctate with minute punctures.

Prosternum. Anterior margin narrowly bent upwards, medianly with a wide, shallow, short keel directed towards apophysis. Apophysis rather short, elliptical, median space between coxae with a wide, shallow groove.

Mesosternum. Anterior margin of hind part medianly only slightly excavated. Hind part of mesosternum short, without peculiarities.

Metasternum. Disc of the metasternum closely punctate, punctures small.

Sternites. Lustreless. Anterior margin between metacoxae widely ogive. Sternites with small, shallow punctures. In 33 5th sternite apically without depression or excavation.

Antennae. Long, tender, bent backwards overlapping elytra to the apical third; antennae of 33 slightly longer than those of 99. Length/width ratio of antennomeres 1 - 11 corresponds in 3 to 16:6 / 6:4½ / 18:4 / 13:4 / 15:4 / 14:4½ / 14:5½ / 14:5½ / 13:5½ / 16:6.

Legs. Of medium length. Femora towards the second third somewhat widened. Protibiae on outside at the apical third straight or slightly concave; mesotibiae straight or slightly bent; metatibiae in both sexes slightly bent, on inside in the apical 2/3 with dense, oblique bristles. Protarsomeres 1 - 3 in  $\Im$  somewhat wider than in  $\Im$ . Lengths of protarsomeres 1 - 5 (in  $\Im$ ) as 6:6:6:5:23, lengths of mesotarsomeres 1 - 5 as 9:7:7:4½:24, lengths of metatarsomeres 1 - 4 as 25:11:6:23.

**Etymology**. KASZAB named this species after E. J. FORD Jr. who collected important material of Tenebrionidae for the Bishop Museum, Honolulu, I accept the name which KASZAB chose for this species.

#### Amarygmus (Amarygmus) greensladei Bremer, 2008

Amarygmus greensladei Bremer, 2008: 2008a, 93-95.

**Diagnosis.** A. greensladei is very similar to A. hydrophiloides Fairmaire, 1849 concerning colouration, size, shape of body, structure of elytra, width of frons, enlargement of protarsomeres 1-3 in 33. But 33 of A. greensladei do not possess curved enlargements at the inside of meso- and metatibiae nor a densely haired metasternum which are characters of A. hydrophiloides.

Length: 6.53 - 7.63 mm. Width: 3.40 - 3.97 mm. Length/width of elytra 1.53 - 1.64 : 1. Lengths of metatar-someres 1 - 4 as 28:10:4:13.

Material. Solomon Is., Guadalcanal Is., Honiara, 4.-8.X.1953, J. D. Bradley (holotype, & BMNH) - Solomon I., Tulagi [9°06'S-160°09'E], R. A. Lever, on trunk of *Poinciana regia* (1 paratype, ♂, BMNH) – Solomon Islands, Santa Ysabel, Tatamba, 2.X.65 (3 paratypes, 3, BMNH, 1 paratype, 3, ZSMB) – Solomon Island, Santa Ysabel, Tatamba, 2.X.65, Roy. Soc. Exped., B.M.1966-1, under thin bark, dead felled tree (1 ♂, 1 ♀ HNHM) - Solomon Is., Guadalcanal I., Tapenanje, c. 1,100 ft., 10.-15.XII.1953, J. D. Bradley, Rennell I. Expedition, B.M.1954-222 (1 & BMNH) - Solomon Is., Guadalcanal, Rua Vatu, 9.XI.1955, 4068, E. S. Brown; Amarygmus hydrophiloides Fm., E. A. J. Duffy det. 1956 (1 & BMNH) - Ontong Java, Leuaniua, 29.IX.1953, J. D. Bradley, Rennell Expedition, B.M.1954-222 (1 ♀ BMNH) – Solomon Is., Florida Is., Nggela I., Haleta, 0-100 m, 7.X.1964, R. Straatman, Light Trap BISHOP (1 & BMH) – Tulagi, Florida Group, Solomon Islands, Sept.13,1944, H. E. Milliron (1 ♀ BMH) – Solomon Is., Honiara, 19/3/67, P. J. M. Greenslade, 815 (1 ♂ BMNH) - Solomon Is., Honiara, 9/12/61, P. J. M. Greenslade, 379 (1 & BMNH) - Solomon Is., Honiara, 19/2/62, P. J. M. Greenslade, 815 (1 ♂ BMNH) - Solomon Is., Guadalcanal, Kukum, July 1965, 20809, P. Greenslade (1 & ZSMB) – Solomon Is., Kukum, Guadalcanal, MV light, 18431, May 1965, P. J. M. Greenslade (1 ♂ BMNH) – Solomon Is., Guadalcanal, Kukum, 32281, 1/1.1963, P. Greenslade (1 ♀ BMNH) – Solomon Is., R. A. Lever, Guadalcanal, .....(not decipherable); Amarygmus sp. det. K. G. Blair, Com. Inst. Ent., B.M.1967-3 (1 ♀ BMNH) - Metanikau River, Guadalcanal, May 26,1944, H. E. Milliron; H. E. MILLIRON Collection (1 ♂ BMH) - Île de Bougainville, Arch. Salomon (1 ♀ MNHP) – Solomon Islands, Bougainville Island, Konga Village (Buin), 6.2.-21.3.1961, W. W. Brandt (6  $\circ$  ANIC, 1  $\circ$  ZSMB, 1  $\circ$  ANIC) – Solomon Is., Bougainville, E. Buin, June 1-3,1958, E. J. Ford, Jr. Collector (1 & BMH) – Solomon Is., Buka I., Gagan, 40 m, VI-16-1956, Light Trap, J. L. Gressitt (1 ♀ BMH) – Solomon Is., Russell Is., Bamika, 1/6 1963, P. Greenslade (1 ♂ ZSMB).

## Amarygmus (Amarygmus) gressitti sp. n. (Fig. 7A-E)

**Holotype**, ♀, BMH: Solomon Is., Bougainville, Kukugai Vill., 150 m, XI.1960, W. W. Brandt Collector, BI-SHOP

**Diagnosis**. Small, elongately ovate; markedly convex; black with a weak bluish tinge; with faint, slightly depressed striae and small punctures; intervals of elytra slightly convex, with few tiny punctures; frons of medium width; antennae moderately long; legs short, tibiae either straight or slightly bent.

I do not know a similar species on the Solomon Islands but there are some similar species on New Guinea which are undescribed yet.

**Description**. Length: 5.57 mm. Width: 3.15 mm.

Ratios. Pronotum: width/length 1.76; width hind corners/width front corners 1.71. Elytra: length/width 1.47; length elytra/length pronotum 3.60; maximum width elytra/maximum width pronotum 1.40.

Colour. Upperside black, with a faint bluish tinge, slightly opaque. Femora and tibiae dark brown, tarsi brown. Antennomeres 1 - 6 brown, 7 - 11 black (11<sup>th</sup> antennomere apically brightened). Underside black, slightly lustrous.

Head. Frons of medium width, as wide as the 3<sup>rd</sup> antennomere long. Genae terminate anteriorly somewhat in front of fronto-clypeal suture, they are slightly raised. Fronto-clypeal suture negligibly incised. Clypeus stretched forward, slightly convex. Clypeus and frons with sparse, small punctures on a somewhat microreticulated ground. Mentum reversely trapezoidal, with lateral margins somewhat bent and widely flat, lustrous; in between transversely opaque and convex. Mandibles outwardly sulcate, apically bifid.

Pronotum. Not very wide, transversely strongly convex; longitudinally less convex. Widest at base; within the basal 60 percent margins bent and convergent, in the anterior 40 percent straightly convergent. Front corners somewhat stretched forwards with an acute tip. Lateral parts of anterior margin shortly retracted, the wide middle part nearly straight. Lateral margins bordered, anterior margin laterally bordered, medianly border mitigated. Borders of lateral margins in dorsal view narrowly visible. Front corners in lateral view slightly acute-angled, hind corners rounded, obtuse. Surface with indistinct, sparse, tiny punctures.

Scutellum. Triangular with few tiny punctures.

Elytra. Egg-shaped; transversely markedly convex, longitudinally less convex. Maximum height and width at the beginning of second third. Shoulders slightly prominent. Apices of elytra mutually rounded. Lateral edges in dorsal view narrowly visible in the hind third. With very faint striae which are slightly depressed; within the striae small, round punctures; in the 4th stria about 36 punctures. Intervals slightly convex, with few tiny punctures.

Prosternum. Anterior margin narrowly bent upwards; medianly somewhat retracted towards apophysis. Apophysis rises ventrad towards the part between coxae, and behind coxae it descends; margins alongside coxae raised ventrad, median space in between with a relatively narrow and deep groove; behind coxae the margins are slightly raised towards middle part, and they converge somewhat; apex rounded and apicomedianly raised like a nose.

Mesosternum. Anterior margin of hind part medianly scarcely excavated; with some short, clinging hairs. Metasternum. Anterior margin between mesocoxae rounded and bordered. Disc impunctate. Median line only very slightly incised.

Sternites. Without punctures.

Antennae. Bent backwards overlapping elytra towards middle.  $11^{th}$  antennomere apically rounded. Length/width ratio of antennomeres 1 - 11 corresponds to  $13:6\frac{1}{2}$  /  $7\frac{1}{2}:5\frac{1}{2}$  / 18:5 / 13:5 / 13:5 / 13:5 / 18:8 / 16:8 / 17:8 / 16:8 / 19:9.

Legs. Short. Femora towards their second third clearly widened. Protibiae straight; mesotibiae very slightly bent; metatibiae slightly bent. Lengths of protarsomeres 1 - 5 as 7:6:6:5:22, lengths of mesotarsomeres 1 - 5 as 10:9:7:4½:25, lengths of metatarsomeres 1 - 4 as 31:10:8:25.

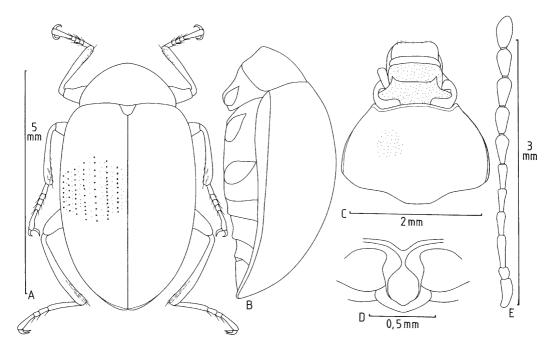


Fig. 7: *Amarygmus (Amarygmus) gressitti* sp. n.: A Habitus ♀; B Body lateral; C Head and pronotum; D Prosternal apophysis; E Antenna.

Etymology. Dedicated to the late Dr. J. Linsley GRESSITT, specialist of Chrysomelidae, and eminent collector of coleoptera in the countries and on the islands a round Pacific Ocean. The material which he collected is mainly deposited in BMH. Together with R. W. HORNABROOK he is author of "Handbook of Common New Guinea Beetles" (with a determination key to the families of New Guinea coleoptera).

#### Amarygmus (Amarygmus) honestus Bremer, 2008

Amarygmus honestus Bremer, 2008: 2008b, 19-20, Fig. p.50.

**Diagnosis**. Large; oblong, ovate; relatively flat, on elytra with punctate striae (punctures medium-sized), and with convex intervals covered with very tiny, closely set punctures (visible at 25-fold magnification); maximum of height and width at the beginning of the second third. Frons of medium width, somewhat narrower than the length of the  $4^{th}$  antennomere (like 14:16), with dense, minute punctures. Genae short. Fronto-clypeal suture slightly depressed. Pronotum with slightly projecting and narrowly rounded front corners, surface with tiny, rather dense punctures, lustrous. Antennae of medium length, bent backwards not drawing up to the middle of elytra; of equal length in both sexes. Prosternal apophysis long, narrow. In  $\delta \delta$  pro- and mesotibiae with slight bending; in  $\varsigma \varsigma$  protibiae less bent and mesotibiae nearly straight. Metatibiae within basal 60 percent nearly straight in both sexes, apically somewhat incurved. Protarsomeres 1 - 3 not enlarged in  $\delta \delta$ . Metasternum bald in  $\delta \delta$ .

A. honestus is closely related to A. morio (Fabricius, 1775) which occurs from Hawai'i over Fiji, the islands of Bismarck Archipelago, Australia, New Guinea up to the Northern Moluccas, and A. morio is abundantly occurring on most locations. But I did not see any specimen of morio from the Solomon Islands yet. — Shape, size, width of frons and length of antennae of A. honestus correspond to those of morio; the punctures of the striae of elytra in honestus are smaller than those of A. morio, and they are set closer to each other; the lateral edges of elytra of honestus are markedly narrower than the explicitly broad ones of A. morio; the hairs at the inside of metatibiae in 33 of honestus are longer than those of 33 of A. morio.

Length: 10.4 - 13.5 mm. Width: 5.6 - 7.3 mm. Ratios. Pronotum: width/length 1.74 - 1.82; width hind corners/width front corners 1.70 - 1.78. Elytra: length/width 1.44 - 1.59; length elytra/length pronotum 3.61 - 4.06; maximum width elytra/maximum width pronotum 1.35 - 1.43.

Colour. Upperside dark coppery, lustrous. Underside dark brown. Legs dark brown to black. Antennae black. Hairs on legs reddish brown.

Material.: Bougainville: NE, Mutahi, 700 m, 18 km S.E. Tinputz, 1-7.III.1968, Tawi Collector, BISHOP (holotype, ♂, BMH) - dito, but 8.-14.III.1968 (1 paratype, ♂, ZSMB) – dito, but 15.-21.III.1968, L. & R. Straatman Collectors (paratypes, ↑ ♂, 1 ♀, ZSMB) – Solomon Is., Bougainville, Simba Mission, June 29,1956, E. J. Ford, Jr. Collector (1 paratype, ♀, BMH) – Solomon Is., Bougainville, Kukugai Vill., 150 m, X.1960, W. W. Brandt Collector (1 paratype, ♂, BMH) – Solomon Is., Bougainville, Kokuro, 690 m, June 8,1956, E. J. Ford Jr. (1 paratype, ♀, BMH) – Solomon Is., Bougainville (S.), Buin (Kangu), 1-50 m, V-31-1956, E. J. Ford, Jr. Collector (1 paratype, ♀, BMH) – Solomon Is., Malaita: Tangtalau, Kwalo, 200-350 m, Sept. 24,1957, J. L. Gressitt Collector (1 paratype, ♀, BMH) – Solomon Is., Santa Ysabel: SE, Tatamba, 0-50 m, 27.VIII.1964, R. Straatman Collector BISHOP (1 paratype, ♀, BMH) – Solomon Is., Guadalcanal: Gold Ridge, 500 m, VI-25-1956, Light Trap, J. L Gressitt Collector (1 paratype, ♀, BMH) – Lunga River (Mentb.), Guadalcanal, June 27,1944, H. E. Milliron, H. E. Milliron Collection (1 paratype, ♀, BMH).

#### Amarygmus (Amarygmus) hydrophiloides Fairmaire, 1849

Amarygmus hydrophiloides Fairmaire, 1849: 450.

Amarygmus zelandicus Bates, 1874: 112; [syn.]: Bremer 2001a: 85 (from New Zealand).

Amarygmus tarsatus Fairmaire, 1902: 337; [syn.]: Ardoin 1967: 1619 (from Madagascar).

Amarygmus cyaneus Pic, 1915: 24; [syn.]: Bremer 2001a: 85

Amarygmus bradleyi Buck, 1958: 117; [syn.]: Kaszab 1980: 47.

Amarygmus samoensis Haag-Rutenberg, 1879: 133; [syn.]: Bremer 2008a, 75.

Concerning references of the synonyms of A. hydrophiloides I refer to a preceding paper: Bremer 2008a, 75-78.

**Diagnosis**. Oblong, ovate, small; upperside blue to slightly violet; transversely markedly convex; with incised striae on elytra, within striae small, elongate, medium-sized punctures; intervals of elytra convex, with minute punctures; frons relatively narrow; fronto-clypeal suture markedly incised; in 37 protarsomeres 1 - 3 and less so mesotarsomeres 1 - 3 enlarged, and inside of meso- and metatibiae widened with a curved shape; additionally in 37, the metasternum is densely covered with hairs.

A. hydrophiloides has to be distinguished from A. greensladei Bremer, 2008 and A. violatinctus Bremer, 2008. Both species are very similar to A. hydrophiloides, they also have a blue colouration on their upperside (in A. violatinctus with a violet tinge), bear striae on elytra and somewhat convex intervals, have antennae nearly of the same length, and, also in  $\lozenge \circlearrowleft$ , show an enlargement of protarsomeres 1-3. A. greensladei has about the same size and shape as A. hydrophiloides, and, in  $\lozenge \circlearrowleft$ , it is difficult to distinguish specimens of A. hydrophiloides from those of A. greensladei; in  $\lozenge \circlearrowleft$  metasternum of A. hydrophiloides is closely covered with hairs, not so in A. greensladei, moreover, the inside of meso- and metatibiae are enlarged in A. hydrophiloides, not so in A. greensladei. – A. violatinctus is somewhat longer and wider and more ovate than A. hydrophiloides (length 7.56 - 8.44 mm), and, in  $\lozenge \circlearrowleft$ , the metasternum is less densely covered with hairs, the enlargements of protarsomeres 1 - 3 are less marked, and A. violatinctus lacks the enlargements at the inside of meso- and metatibiae which  $\lozenge \circlearrowleft$  of A. hydrophiloides possess.

Length: 5.60 - 7.27 mm. Width: 3.35 - 4.70 mm. Length/width ratio of elytra 1.51 - 1.57:1. Lengths of metatarsomeres 1 - 4 as  $23:5\frac{1}{2}:4\frac{1}{2}:12$ .

Antennae overlap the elytra nearly to their middle. Length/width ratio of antennomeres 1 - 11 corresponds (in 3) to  $10:4\frac{1}{2}$  /  $5\frac{1}{2}:3\frac{1}{2}$  /  $15:3\frac{1}{4}$  / 8:3 / 10:3 /  $10:3\frac{1}{2}$  /  $10:4\frac{1}{2}$  / 9:5 /  $9:5\frac{1}{2}$  /  $9:5\frac{1}{2}$ ; antennae of 9 somewhat shorter.

SE, Tatamba, 0-50 m, 30.VI.1964 (1 ♀ BMH) – dito, but 15.IX.1964 (1 ♂, 1 ♀ BMH) – Tatamba, 2/3/1962 (1  $\stackrel{?}{\circ}$  BMNH) – dito, but 30/7/1962 (2  $\stackrel{?}{\circ}$ , 2  $\stackrel{\square}{\circ}$  BMNH) – dito, but 1/8/1962 (3  $\stackrel{?}{\circ}$  BMNH) – dito, but 9/1/1963 (1 ♀ BMNH) – Isabel, Tolana, 16.12.1964 (1 ♂ BMNH) - Guadalcanal Is., Rere, 6.VIII.1955 (1 ♂ BMNH) - Rare, 16.VIII.1965 (1 ♂ BMNH) - Guadalcanal VII-10-1944 (1 ♂ BMH) - Betikama R., IX.1960 (1 ♀ BMNH) – Honiara, 18/1/62 (1  $\circlearrowleft$  BMNH) - Honiara Dist., Kukum, 20.VII.1954 (1  $\circlearrowleft$ , 1  $\hookrightarrow$  BMNH) – dito, but 20. VIII. 1954 (1 ♂ BMNH) - dito, but 22. IX. 1954 (2 ♂ BMNH) - dito, but 7. XII. 1954 (1 ♀ BMNH) - Kukum, 25.II.1962 (1 BMNH) - Honiara Dist., Tenaru, 1.VII.1954 (3 ♀ BMNH) - Honiara, Mt. Austen, 19.9.62 (1 BMNH) – dito, but 25/4.1963 (1 BMNH) – Honiara, Mamar R., 7/11/61 (1 ♀ BMNH) – Tina, 7.3.1965 (1 ♂ BMNH) - Lunga, 6.IV.1956 (1 ♂ BMNH) - dito, but 19.I.1955 (1 ♀ BMNH) - Tambalia, 35 km W. Honiara, 300 m, 22.-25.V.1963 (1  $\supseteq$  BMH) – Savo, 9.4.62 (2  $\supseteq$  BMNH) - Savo 96, 9/1.1963 1 BMNH) - Savo, 4/4/62 (2 BMNH) – dito, but 5/4/62 (6 BMNH) – dito, but 6/4/62 (3 BMNH) – dito, but 6/6/65 (1  $\bigcirc$  BMNH) - Mamara, 30/3/62 (1 BMNH) – dito, but 23/7.1962 (4 BMNH) - Vitalo, 6/1.1963 (2 BMNH) – Metanikau River, May 21,1944 (1  $\upsigma$  BMH) – Paripao, 22.V.'60 (1  $\upsigma$  BMH) – Tanamba, 21/2/62 (1  $\upphi$  BMNH) - Guadalcanal I., Sol Is., 12-20 (6 ♀ BMH) - New Georgia Is., Banga, 15.X.1954 (1 ♂ BMNH) – New Georgia, Gizo Is., 21/8.1963 (5 BMNH) –Gizo I., 30 m, 26.VI.1964 (1 BMH) – dito, but 70 m, 18.VIII.1964 (1 ♀ BMH) - New Georgia, Wana Wana Is., 16/8.1963 (3 BMNH) – New Georgia Group, Kolombangara, Iriri, 2 m, 29.VI.1964 (1 ♀ BMH) – Kolombangara, Hunda, 20/8/1963 (1 ♀ BMNH) - Rendova Island [8°32′S-157°20′E], Kokorana, 7.X.1954 (1 ♂ BMNH) – New Georgia Group, Buruku summit of Rendova Peak, 1050 m, July 17, 1959 (1 ♀ BMH) – Rendova I., NE end, July 16,1959 (1 & BMH) – Ontong Java [5°20'S-159°30'E], Muokara, 6.11.1956, E. S. Brown (1 ♀ BMNH) – *Ulawa Is.* [9°46′S-161°57′E], 27.X.1955 (1 ♂ BMNH) – *San Cristoval* Is. [10°36′S-161°45°E], Goge, VII.1955 (1♀BMNH) –Waimamura, 20.IV.1955 (1♂, 1♀BMNH) –Kira Kira, 24/4/62 (7 BMNH) – Kira Kira, 1. VIII. 1960, under bark (1 ♂ BMH) – Kira Kira, 23.-30. VII. 1960 (9 ♂, 4 ♀ BMH) – Napagiwae, 18.VIII.1960 (1 ♂ BMH) - Choiseul Is.: Sumbi, 28.III.1957 (1 ♀ BMNH) - Malangano, 25/8.1963 (4 BMNH, 2 ZSMB) - Florida Isls., Nggela I., Haleta, 0-300 m, 4.X.1964 (1 & BMH) - Small Nggela I., Vunuha, 19.IX.1960 (1 ♀ BMH) -Small Nggela I., Dende, 17.IX.1960 (1 ♂ BMH) - Florida Is., Tulagi, Sept.18.1944  $(1 \supseteq BMH)$  – Gairava, 14.IX.1960  $(1 \supseteq BMH)$  – Malaita, Resende, 24/9/1963  $(1 \supseteq BMNH)$  – Malaita, Auki, 11/6/1962 (2 ♀ BMNH) - Santa Cruz Isls.: Reef Is., 25.II.1954 (1 BMNH, 1 ZSMB) - dito, but 30.6.1962 (7 BMNH) -Reef Is., VI.1957 (1 BMNH) - dito, but 27.II.62 (6 BMNH, 2 ZSMB) - Santa Cruz, 21/11/1954 (1 ♂ BMNH) – Santa Cruz, Nangu, 26/8/1962 (1 ♀ BMNH) - Buka I., Gagan, 40 m, VI-16-1956, Light Trap (1 ♀ BMH) - Shortlands Ins., C. RIBBE (1 ♂, 1 ♀ ZSM) - dito (1 ♂ MNHB) - Three Sisters [Islands], Malau Paina, 25.IV.1955 (2 🖒 BMNH) - Russell Is. [9°04'S-159°12'E], Foialan, 10.IX.1955 (1 🖒 BMNH) - Bamika, 1/6 1963 (16 ♂, 10 ♀ BMNH).

## Amarygmus (Amarygmus) lividus sp. n. (Fig. 8A-H)

Holotype, &, BMH: Solomon Is., Guadalcanal, Tambalia, 30 km W. Honiara, 20.V.'64, J. Sedlacek Collector.

**Paratype**: dito  $(1 \supseteq ZSMB)$ .

**Diagnosis**. Of medium size, ovate, winged; upperside dark-blue; elytra transversely and longitudinally strongly convex, maximum height and width of elytra at ¼ of length; with rows of medium-sized punctures on elytra, intervals flat, with minute, sparse punctures; from of medium width; antennae relatively long, in both sexes with about the same length. Protarsomeres 1-3 not enlarged in 3.

Belongs to the species group of A. salomonis Gebien, 1920; within this group A. lividus is a close ally of A. propensus sp. n. A. propensus has about the same size and the same width of frons as A. lividus, but its upperside is copper-coloured, its maximum of height and width of elytra is slightly anterior of middle; concerning additional differences, see A. propensus sp. n. - Resembles also A. alius sp. n. (from Kolombangara Island of New Georgia Group); in this taxon the antennae are markedly longer than in A. lividus, the upperside is copper-coloured, and the maximum of height and width of elytra is situated shortly anterior of middle.

**Description**. Length: 7.88 - 8.20 mm. Width: 5.18 - 5.25 mm.

Ratios. Pronotum: width/length 2.00 - 2.13; width hind corners/width front corners 1.88 - 2.00. Elytra: length/width 1.34 - 1.36; length elytra/length pronotum 3.78 - 3.95; maximum width elytra/maximum width pronotum 1.35 - 1.41.

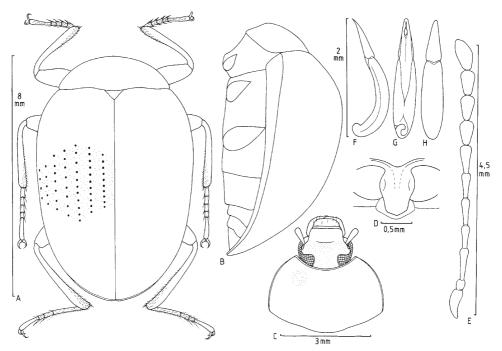


Fig. 8: Amarygmus (Amarygmus) lividus sp. n.: Habitus ♂; B lateral; C Head and pronotum; D Prosternal apophysis; E Antenna; F Aedeagus lateral; G Aedeagus ventral; H Aedeagus dorsal.

Colour. Clypeus black; frons blue; pronotum and elytra dark blue, slightly lustrous; underside black (metasternum lustrous, sternites opaque); femora black, tibiae and tarsi dark brown; antennae dark-brown to black.

Head. Frons of medium width, width corresponds to length of 3<sup>rd</sup> antennomere, with relatively densely set, small punctures. Genae short, anteriorly terminating approximately at the level of the middle of frontal-clypeal suture, slightly raised. Fronto-clypeal suture slightly incised in its middle part. Clypeus stretched forward, very slightly convex, with very small and densely set punctures. Mandibles apically bifid.

Pronotum. Wide; transversely and longitudinally convex, lateral margins subparallel in their posterior half, in their anterior half convergent anteriorly and bent. Anterior margin markedly excavated. Front corners acutely pointed. Lateral and anterior margins bordered; lateral borders in dorsal view very narrowly visible only in the hind half. Front corners in lateral view rectangular, hind corners obtuse. Punctation with small, irregularly and densely set punctures.

Scutellum. Triangular with some minute punctures.

Elytra. Ovate; transversely markedly convex, longitudinally also clearly convex; maximum height at about ¼ of its length. Shoulders prominent. Apices of elytra mutually rounded. Lateral edges in dorsal view narrowly visible at shoulders and at apex. With rows of distinct, medium-sized punctures, about 28 punctures in 4th rows. Intervals flat, with distinct, minute, spaciously set punctures.

Prosternum. Lateral parts of anterior margin narrowly bent upwards; medianly interrupted. Margins of apophysis alongside coxae somewhat widened and margins slightly raised, median space in between with a shallow groove; margins behind coxae slightly converging; apicomedianly with a widely obtuse angle.

Mesosternum. Anterior margin of hind part medianly slightly excavated.

Metasternum. Disc with coarse punctures, only near median line punctures become smaller; with very short hairs which are originating from some punctures.

Sternites. Sternites with minute punctures; 5th sternite without any structural peculiarity in 3.

Antennae. If bent backwards overlapping elytra to their middle. Length/width ratio of antennomeres 1 - 11 corresponds to 13:6 / 5:4 / 16:4 / 11:4 / 11:4 / 11:4 / 13:5 / 12:6 / 12:6 / 11:6 / 15:6.

Legs. Of medium size. Femora club-like widened at second third. Protibiae bent within their posterior half, straight at their apical half. Mesotibiae nearly straight. Metatibiae incurved within their apical third. In the 3

the inside of pro- and mesotibiae apically with areas of dense, short hairs. Lengths of protarsomeres 1 - 5 as 6:6:6:5:19, lengths of mesotarsomeres 1 - 5 as 8:7:6:5:20, lengths of metatarsomeres 1 - 4 as 21:10:6:20.

Etymology. lividus (lat.) dark blue.

#### Amarygmus (Amarygmus) nigroopacus ssp. nigroopacus Gebien, 1920 (Fig. 9A-H)

Amarygmus nigroopacus Gebien, 1920: 440. Amarygmus rufidorsis Pic, 1915; [syn.]: Bremer 2004a, 126. Amarygmus nigroopacus Gebien, 1920 [stat. reestablished] nec Amarygmus rufidorsis Pic, 1915.

**Diagnosis.** Winged. Of medium size, ovate. Upperside opaque with a sericeous shine, pronotum black, elytra greyish. Elytra strongly ovate, with markedly incised striae and, within striae, with very small, round punctures; intervals of elytra clearly convex on disc, densely but indistinctly punctate. Pronotum transversely and longitudinally slightly convex; lateral margins bent, maximum of width mostly in front of hind corners, towards hind corners less, towards front corners more converging (in some specimens posterior parts of lateral margins subparallel); lateral margins bordered, these borders in dorsal view visible; anterior margin clearly excavated, front corners about rectangular and slightly prominent, disc of pronotum with shallow, indistinct, small punctures; laterally the punctures become bigger, and they are denser set. Surface of frons and clypeus nearly flat, densely covered with small punctures; frons of medium width; genae slightly raised; fronto-clypeal suture somewhat incised; clypeus stretched forwards. Antennae of medium length, in  $\Diamond \Diamond$  antennae slightly longer than in  $\Diamond \Diamond$ . Legs of medium length; femora markedly and densely punctate, at their second third somewhat enlarged but, beyond this widening towards apices, again slender; pro- and mesotibiae nearly straight; metatibiae in their posterior half straight, within apical half incurved; protarsomeres 1 - 3 not enlarged in  $\partial \Diamond$ ; on legs and on underside of body no sexual dimorphic characters in  $\partial \Diamond$ .

There is a small series of specimens from Buka Island [situated north of Bougainville: 5°15′S, 154°36′E], which are smaller than the specimens from Bougainville. However, I did not find additional characters which allow a separation from *A. nigroopacus* s. str.

Concerning shape of body, width of frons, punctation of head, and colouration *A. nigroopacus* ssp. *vicis-cornis* ssp. n. is very near to *A. nigroopacus* s. str.. In *A. n. viciscornis* antennae are shorter, especially in  $\mathcal{P}$ , this subspecies is found on Solomon Islands south of Bougainville.

There are many immature specimens of *A. n. nigroopacus* which have a black pronotum and more or less red elytra; in this case a delimitation from *A. rufidorsis* Pic, 1915 may be difficult, but *A. rufidorsis* possesses longer antennae than *A. nigroopacus*, and, at least in mature specimens of *A. rufitarsis*, the lateral parts of elytra possess, beside the red disc, a faint and oblique blackish macule on each elytron (see Fig. 13A).

A. nigroopacus also resembles A. buehleri Heller, 1933/34 (from New Ireland and Lavongai) and A. helleri Bremer, 2002 (from New Britain), both species have a similarly opaque upperside. A. buehleri is winged like A. nigroopacus, it possesses hind corners of pronotum which are approximately rectangular (those of nigroopacus are widely rounded and obtuse-angled). - On average A. helleri is longer than A. nigroopacus (length 8.8-9.2 mm), the frons of A. helleri is somewhat wider than that of A. nigroopacus, and the punctures of pronotum in A. helleri are less densely set than that in A. nigroopacus. A. helleri is apterous, consequently the metasternum of A. helleri is shorter than that of A. nigroopacus.

Measurements of *A. n. nigroopacus*: Length: 7.64 - 9.55 mm. Width: 4.54 - 5.77 mm. Ratios. Pronotum: width/length 1.88 - 2.00; width hind corners/width front corners 1.75 - 1.81. Elytra: length/width 1.37 - 1.42; length elytra/length pronotum 3.64 - 3.87; maximum width elytra/maximum width pronotum 1.36 - 1.48. Lengths of metatarsomeres 1 - 4 as 29:11:5:20.

Colour. Upperside: see Diagnosis. Underside black, lustrous. Femora mostly black or dark brown, in some specimens light brown. Antennomeres 1 - 3 brown, 4 - 11 black.

Antennae long, in 33 slightly longer than in 99; bent backwards they overlap elytra towards middle. Length/width ratio of antennomeres 1 - 11 corresponds in 30 to  $18:6\frac{1}{2}/7:5/22:5/16:5/17:5/15:5/16:6\frac{1}{2}/14:7/14:7/14:7/15:7$ , in 90 of about the same size to  $16:6/6:5/18:4/14:4/14\frac{1}{2}$ .  $14:4\frac{1}{2}$ .  $14:4\frac{1}{2}$ .  $14:4\frac{1}{2}$ .  $14:4\frac{1}{2}$ .  $14:4\frac{1}{2}$ .  $14:4\frac{1}{2}$ .

Material. (handwritten label) Salomo Ins.; (red label) Type: No. 698; (white label, handwritten, Gebien's handwriting) Amarygmus nigroopacus Geb. (holotype, ♂, NHMBF) - Bougainville (1 ♀ NMHUB) - Bougainville

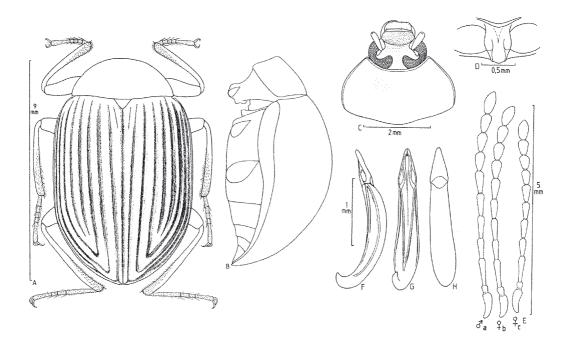


Fig. 9: Amarygmus (Amarygmus) nigroopacus Gebien, 1920: A Habitus  $\Diamond$ ; B Body lateral; C Head and pronotum; D Prosternal apophysis; E Antennae a  $\Diamond$ , b  $\Diamond$ , c antenna of a  $\Diamond$  of Amarygmus nigroopacus viciscornis ssp. n.; F Aedoagus lateral; G Aedeagus ventral; H Aedeagus dorsal.

(1 HNHM) – Bougainville, V. Ribbe (1 ZSM) - Buin, Bougainville (1 SMND) – Solomon Is., Bougainville (S.), Kokure nr. Crown Prince Ra., 900 m, VI-11-1956, J. L. Gressitt Collector (1  $\circlearrowleft$  ZSMB) – dito, but VI-10-1956 (1  $\circlearrowleft$  BMH, 1  $\Lsh$  BMH, 1  $\circlearrowleft$  ZSMB) – dito, but VI-9-1956 (1 BMH) - Solomon Is., Bougainville (S.), Kokure, 690 m, June 16, 1956, E. J. Ford, Jr. Collector (1  $\circlearrowleft$  BMH) – dito, but June 12, 1956 (2  $\backsim$  BMH) – Solomon Is., Bougainville (S.), Tokinoitu, 20 m, VI-2-1956, J. L. Gressitt Collector (10  $\circlearrowleft$  BMH, 1  $\circlearrowleft$  ZSMB, 1  $\backsim$  BMH, 1  $\backsim$  ZSMB) - Solomon Is., Bougainville: NE, Mutahi, 690 m, 18 km S.E. Tinputz, 1.-7.III, 1968, Tawi Collector (3  $\circlearrowleft$  BMH, 2  $\backsim$  BMH) – dito, but 8.-14.III.1968 (6  $\circlearrowleft$  BMH, 4  $\backsim$  BMH) - dito, but 15.-21.III.1968 (3  $\circlearrowleft$  BMH, 1  $\backsim$  ZSMB) – dito, but 22.-31.III.1968 (1  $\backsim$  BMH) – Solomon Is., Bougainville, Kukugai Vill., 150 m, XI.1960, W. W. Brandt Collector (1  $\backsim$  BMH) – Solomon Is., Bougainville (S.), Boku, 50 m, VI-3-1956, E. J. Ford, Jr. Collector (3  $\circlearrowleft$  BMH) - dito, but VI-4-1956 (1  $\backsim$  BMH) – dito, but VI-5-1956 (1 BMH) – Solomon Is., Bougainville (S.), Sovele Mission, 250 m, VI-6-1956, J. L. Gressitt Collector (1  $\backsim$  1  $\backsim$  BMH) – Solomon Is., Bougainville, Simba Mission, June 29, 1956, E. J. Ford, Jr. Collector (1  $\backsim$  BMH) – Solomon Is., Bougainville, Simba Mission, June 29, 1956, E. J. Ford, Jr. Collector (1  $\backsim$  BMH) – Solomon Is., Bougainville, Boku, June-4-6-1956, E. J. Ford, Jr. Collector (2  $\backsim$  1  $\backsim$  BMH) – Solomon Is., Bougainville (S.), Mumurai, 400 m, VI-7-1956, J. L. Gressitt Collector (2  $\backsim$  BMH) – Bougainville, Buin, 1930 (1 SMND) - Solomon Is., Buka I. [5°15′S-154°36′E], Gagan, 40 m, VI-16-1956, J. L. Gressitt Collector (3  $\backsim$  BMH, 1  $\backsim$  BMH, 1 ZSMB) – dito, but VI-15-1956 (2 BMH).

### Amarygmus (Amarygmus) nigroopacus viciscornis ssp. n. (Fig. 9Ec)

Holotype, &, BMNH: Solomon Is., Nggela, Boroni, 536, 11/1/62, P. M. Greenslade.

Paratypes: dito (3 ♀ BMNH) – Solomon Is., New Georgia, Munda, 8811, 18/8.1963, P. Greenslade (2 ♂ BMNH) – Solomon Is., New Georgia Group, Gizo I., 50-120 m, 15.VII.1964, J.&M. Sedlacek Collectors BISHOP (1 ♀ BMH) – dito, but 16.-26.IV.1964, Malaise Trap, J. Sedlacek Collector, BISHOP (1 ♀ BMH) –

Solomon Is., New Georgia Group, Gizo I., 30 m, 11.-18.VII.1964, J. + M. Sedlacek Collectors, M.V.Light Trap, BISHOP (1 ♀ BMH) – Solomon Is., New Georgia, Gizo I., 9041, 21/8.1963, P. Greenslade (1 ♂, 1 ♀ ZSMB) - Solomon Is., New Georgia, Gizo I., 130787, 3/1.1966, leg. L. Burgough, P. Greenslade (1 ♀ BMNH) - Solomon Is., New Georgia, Gizo I., 13148, 14/2.1966, leg. L. Burgough, P. Greenslade (1 ♀ BMNH) – dito, but 13199, 7/3.1966 (1 ♀ BMNH) - Solomon Is., New Georgia, Wanawana I. [?Vona Vona Is, 8°15'S-157°05'E], 8579, 16/8.1963, P. Greenslade (1 & BMNH) – Solomon Is., New Georgia, Wana Wana I., 8832, 19/8.1983, P. Greenslade (1 ♀ BMNH) - Solomon Is., New Georgia Gp., Vella Lavella, 9093, 11/8.1963, P. Greenslade (1 & BMNH) – Salomo I., Neu Georgia: Pauru, Fr. Malcher leg.; Amarygmus nigroopacus Geb. [Gebiens handwriting] (1 ♀ NMHUB) –Solomon Is., New Georgia Group, Kolombangara I., Kukundu SW Coast, 1-12 m, 10.VII. 1959, J. L. Gressitt Collector (1 ♀ BMH) - Solomon Is., Kolombangara, Pepele, 30 m, 9.II. 1964, P. Shanahan Collector BISHOP (1  $\supseteq$  ZSMB) – dito, but 31.I.1964 (1  $\circlearrowleft$ , 2  $\supseteq$  BMH) – dito, but 0-30 m, 31.I.1964 (1 ♀ BMH) - dito, but 12.II.1964 (1 ♀ BMH) - Solomon Is., Choiseul, Malangona, 9195, 25/8.1963, P. Greenslade (1 ♂ BMNH, 1 ♂ ZSMB, 6 ♀ BMNH) – Solomon Is., Choiseul, 10 m, 2.XII.1964, P. Shanahan Collector BISHOP (1 ♀ BMH) - Solomon Is., Santa Ysabel, Sukapisu, 900 m, 19.VI.1960, C. W. O'Brien Collector (1 ♂ BMH) – Solomon Is., Santa Ysabel, Tamatahi-Koloau, 4.VII.1960, Jungle track, C. W. O'Brien Collector 1 🗷 BMH) – Solomon Is., Tatamba, 2389, 30/7.1962, P. Greenslade (1 ♂, 5 ♀ BMNH) – dito, but 2444, 2/8.1962 (1 ∂ BMNH) – dito, but 7/8.1962 (1 ∂ BMNH) - Solomon Is., Santa Ysabel: SE, Tatamba, 0-50 m, 15.IX.1964, R. Straatman Collector BISHOP (2 ♂ BMH, 1 ♂ ZSMB, 3 ♀ BMH) – Solomon Is., Santa Ysabel, Kolotuve, 21.VI.60, C. W. O'Brien Collector (1 ♀ BMH) – Solomon Is., Isabel, Regi, 9556, 22/8.1963, P. Greenslade (1 ♂ BMNH) – Solomon Is., Ysabel, San Jorge, 1037, 2/3/1962, P. Greenslade (1 ♂, 1 ♀ BMNH) – Solomon Is., Isabel, Rasa, 2456, 2/8.1962, P. Greenslade (1 ♀ BMNH) – Solomon Is., Santa Ysabel, Molao, 29.VI.'60, C. W. O'Brien Collector (1 ♂, 2 ♀ BMH) – Solomon Is., Goreo, 987, 1/3/62, M. Greenslade (1 ♀ BMNH) – Solomon Is., San Cristoval, Wugiroga, 8.VIII.1960, C. W. O'Brien Collector (2 ♂, 1 ♀ BMH) – dito, but 10.VIII.1960 (1 ♀ ZSMB) – Solomon Is., San Cristoval, Napugiwae, 18.VIII.1960, C. W. O'Brien Collector (1♀ BMH) – Solomon Is., San Cristoval, Kira Kira, 29.VII. 1960, C. W. O'Brien Collector (1 & BMH) – dito, but 26.VII. 1960, under bark (1 ♂ BMH) – dito, but 31.VII.1960 (1 ♀ BMH) - Solomon Is., Malaita, Tangtalau-Kwalo, 200-350 m, Sept.28, 1957, J. L. Gressitt Collector (1 ♀ BMH) – Solomon Is., Guadalcanal, Sold Ridge, 2000', 4994, 6/4.1963, P. Greenslade (1 ♀ BMNH) – Solomon Is., Guadalcanal, Kukum, 25/7.1962, P. Greenslade (1 ♀ BMNH) – Solomon Is., Guadalcanal, Sufa, 4917, 5/4.1962, P. Greenslade (1 ♀ BMNH) – Lunga River (Mth.), Guadalcanal, Oct.8, 1943, H. E. Milliron, H. E. Millron Collection (1 & BMH) – Solomon Is., Guadalcanal, Mt. Austen, 18800, 25/8.1965, log. MA5, P. Greenslade (1 ♀ BMNH) – Solomon Is., Guadalcanal., Mt. Austen, 4437, 17/2.1963, P. Greenslade (1 ♀ BMNH) – dito, but 5216, 17/5.1963 (1 ♀ BMNH) – dito, but 16858, 20/4.65, P. J. M. Greenslade (1 ♂ ZSMB, 2 ♀ BMNH) – Solomon Is., Honiara, Mt. Austen, 719, 10/2/62, P. M. Greenslade (1 ♀ BMNH) – dito, but 1747, 24/5/62 (1 ♀ BMNH) – Solomon I., Savo [I., 9°08'S-159°49'E], 1351, 4/4/62, P. J. M. Greenslade (1  $\circlearrowleft$ , 1  $\circlearrowleft$  BMNH) – dito, but 1416, 5/4/62 (2  $\hookrightarrow$  BMNH) – dito, but 1462, 6/4/62 (1 & BMNH) – Tulagi, Florida Group, Solomon Islands, Sept.13, 1944, H. E. Milliron, H. E. Milliron Collection (1 ♀ BMH) – Solomon Is., Fauro I. NE [6°55′S-156°04′E], .12.IV.1964, P. Shanahan Collector BI-SHOP (1 ♂, 1 ♀ BMH) – Solomon Is., Russells [I., 9°04'S-159°12'E], Ilva, 898, 26/2/62, P. J. M. Greenslade  $(1 \circlearrowleft BMH)$ .

**Diagnosis**. Nearly identical in shape, size, and colouration with *A. nigroopacus* Gebien, 1920 s. str., but in ssp. *A. n. viciscornis* antennae in both sexes shorter than in *A. n. nigroopacus*, especially obvious in  $\mathbb{Q}\mathbb{Q}$ , and the basal part of metatibiae is slightly bent (in *A. nigroopacus* s. str. it is straight). *A. nigroopacus* s. str. occurs on Bougainville and on the island of Buka. The islands south of Bougainville, including Fauro Island, are the habitat of ssp. *viciscornis*.

**Additional data**. Length: 7.72 - 8.60 mm. Width: 4.86 - 5.14 mm.

Ratios. Pronotum: width/length 1.88 - 2.08; width hind corners/width front corners 1.74 - 1.80. Elytra: length/width 1.34 - 1.40; length elytra/length pronotum 3.50 - 3.71; maximum width elytra/maximum width pronotum 1.36 - 1.37.

Colour. Elytra dark grey, opaque to slightly sericeous; pronotum somewhat darker; femora and tibiae black to brown. In some specimens the interval 1 of elytra reddish brown. Underside black to brownish black, metasternum lustrous, sternites with a silky lustre. Femora brown, then contrasting with the darker underside, or they are nearly black; tibiae dark brown or black; tarsi light brown. Antennomeres 1 and 2 brown, 3 - 11 gradually darker to black.

Length/width ratio of antennomeres 1 - 11 corresponds in  $\circlearrowleft$  to  $14:6\frac{1}{2}/7:4\frac{1}{2}/19:4\frac{1}{2}/14:4\frac{1}{2}/14:4\frac{1}{2}/13:4\frac{1}{2}/13:6$  /  $11:6\frac{1}{2}/11:6\frac{1}{2}/11:6\frac{1}{2}/14:7$ , in  $\hookrightarrow$  to  $14:5\frac{1}{2}/5:4\frac{1}{2}/15:4\frac{1}{2}/11:4\frac{1}{2}/10:4\frac{1}{2}/11:5\frac{1}{2}/9:5\frac{1}{2}/9\frac{1}{2}:6$ .

Etymology. vicis (lat. gen.) opposite; cornis (lat.) from cornu, horn, in insects also used for antenna.

#### Amarygmus (Amarygmus) orientalis (Fairmaire, 1883)

Dietysus orientalis Fairmaire, 1883: 29

Amarygmus orientalis (Fairmaire, 1883): Gebien 1920, 411.

Amarygmus rufitarsis Pic, 1938: 1938b, 174; [syn.]: Bremer 2001b, 267.

Amarygmus orientalis (Fairmaire, 1883) var. erythromerus Gebien, 1920: 431.

Dietysus amboinensis Pic, 1951, 14.

Amarygmus amboinensis (Pic, 1951); [syn.]: Bremer 2007, 23.

Amarygmus doleschalli Kaszab, 1964: 293; [syn. to A. amboinensis (Pic, 1951)]: Bremer 2001, 57.

Amarygmus mimeticus Gebien, 1920: 441; [syn.]: Bremer 2007, 23.

Redescription and illustration: Bremer 2007, 23-26, fig. p.45.

**Distribution**: Vanuato; Bismarck Archipelago; Solomon Archipelago; New Guinea; The Moluccas (Ambon, Pulau Saparua, Buru, Morotai).

**Diagnosis.** *A. orientalis* (FAIRMAIRE) is a variable species which abundantly occurs in Pacific and Papuan faunal areas. It is widely ovate, elytra with slightly incised striae and within them small, elongate, densely set punctures. Frons of medium width (width corresponds to length of 3<sup>rd</sup> antennomere); fronto-clypeal suture incised and arched; pronotum relatively flat, widest at base; front corners are slightly projecting forwards; punctures on pronotum small, rather dense, indistinct. Maximum height and width of elytra about at their middle; intervals on disc slightly convex, they are nearly impunctate; antennae of medium length and in both sexes of the same length; 1<sup>st</sup> metatarsomere longer than 4<sup>th</sup> metatarsomere; tarsi relatively short, their reddish or lighter brown colouration contrasts with the mostly dark brown colouration of tibiae; colouration of femora and tibiae variable, usually they are black or dark brown (but in some specimens from New Guinea the basal 80 % of femora may be reddish or light brown, the apical 20 % black) [var. *erythromerus* Gebien, 1920], or, again in New Guinea specimens, femora and tibiae are light brown to reddish brown [var. *mimeticus* Gebien, 1920].

Length: 6.76 - 8.53 mm. Width: 3.94 - 4.60 mm. Ratios. Pronotum: width/length 1.64 - 1.77; width hind corners/width front corners 1.60 - 1.66. Elytra: length/width 1.24 - 1.36; length elytra/length pronotum 3.11 - 3.39; maximum width elytra/maximum width pronotum 1.35 - 1.49. Length/width ratio of antennomeres 1 - 11 corresponds to  $16:7/6:5\frac{1}{2}/18:5\frac{1}{2}/11:6/11:6\frac{1}{2}/11:6\frac{1}{2}/11:8/12:8/12:8/12:8/15:8$ . Lengths of metatar-someres 1 - 4 as 23:7:5:19.

Colour. Upperside dark coppery, somewhat lustrous; underside and femora mostly black; tibiae mostly dark brown; the first antennomeres brown, the penultimate ones black (see also Diagnosis).

Material. Solomon Is., Honiara, Mt. Austen, 19.IX.1962, P. J. Greenslade (3 BMNH, 1 ZSMB) – Solomon Is., Honiara, Mamara, 19.II.1962, P. J. Greenslade (3 BMNH) – dito, but 23.VII.1962 (3 BMNH) – Solomon Is., Guadalcanal, Kukum, 15.XII.1962, P. Greenslade (1 BMNH) – dito, but 25.III.1963 (1 BMNH) – Solomon Is., Guadalcanal, Tambalia, 30 km W., Honiara, 28.V.1964, R. Straatman, Light Trap (1 ♂ BMH) – Solomon Is., Guadalcanal, Batikama R., VIII.1960, W. W. Brandt Collector (1 BMH) – dito, but IX.1960 (1 BMH) – Solomon Is., Popanu, Guadalcanal, 500′, 3883, 11.XII.1934, R. A. Lever; Paratypus 1969, Amarygmus greensladei Kaszab (1 ♂ BMNH) – Solomon Is., Lunga, Guadalcanal, 24.IX.1934, Cocos log, R. A. Lever, Paratypus 1969, Amarygmus greensladei Kaszab (1 ♂ BMNH) – dito, but Cocus trunk, 30.III.1934 (1 ♀ BMNH) - Solomon Is., San Cristoval, Menai, 10.VIII.1960, C. W. O'Brien Collector (1 BMH).

#### Amarygmus (Amarygmus) parallelus Kaszab, 1958

Amarygmus parallelus Kaszab, 1958: 8.

Redecription and illustration: Bremer 2004a, 16-19.

**Diagnosis**. Large, relatively slender, transversely moderately convex; with long elytra, short antennae, and a relatively narrow frons; lateral margins of pronotum bent, in most instances slightly retracted towards hind corners, in some specimens with subparallel margins anterior to hind corners, pronotum in its baso-lateral parts with a shallow depression, pronotum with minute punctures; elytra with straight lateral margins which are slightly widening towards the hind third, with densely punctate striae, punctures small and about 48 ones in

 $4^{th}$  row; intervals with tiny punctures; prosternal apophysis narrow, median space in between procoxae scarcely grooved and apically without a median projection backwardly; upperside dark brown with a slightly reddish tinge;  $1^{st}$  metatarsomere shorter than  $4^{th}$  metatarsomere (!); in 33 underside bald.

Resembles the smaller *A. redii* Bremer, 2004 from eastern parts of New Guinea (length 10.1 - 10.4 mm). *A. redii* possesses a stronger incised fronto-clypeal suture, a black, opaque pronotum, dark blue, nearly black elytra, and, additionally in contrast to *A. parallelus*, medianly a groove on prosternal apophysis.

The two similarly large *Amarygmus* from the Solomon Islands (*A. honestus*, *A. cuprarius iodicollis*) cannot be confounded with *A. parallelus*, see "Determination Key" of the *Amarygmini* of the Solomon Islands.

In size and shape *A. parallelus* also resembles *A. impressicollis* Gebien, 1920 from New Guinea; in *A. impressicollis* the latero-basal depressions on pronotum are more distinct than in *A. parallelus*, *A. impressicollis* is contrasting *A. parallelus* with rows of punctures on elytra (*parallelus* striae).

#### Additional data. Length: 13.1-13.9 mm. Width: 6.3-6.7 mm.

Ratios. Pronotum: width/length 1.41-1.56; width hind corners/width front corners 1.55-1.68. Elytra: length/width 1.67-1.81; length elytra/length pronotum 3.72-4.05; maximum width elytra/maximum width pronotum 1.43-1.49.

Colour. Upperside dark brown, with a reddish tinge, pronotum may also reflect golden; head and pronotum lustrous, elytra usually opaque. Underside black. Legs and antennae black.

Antennae, bent backwards, overlap 20 % of elytra. Length/width ratio of antennomeres 1 - 11 corresponds to  $20:11 / 8:7\frac{1}{2} / 28:7\frac{1}{2} / 16:7\frac{1}{2} / 17:8 / 13:8 / 17\frac{1}{2}:10 / 16:11 / 15:11 / 15:11 / 20:10\frac{1}{2}$ .

Legs short. Pro- and mesotibiae in their apical 60 % straight. Metatibiae as a whole straight, slender. Protarsomeres 1 - 3 not enlarged in  $\Im\Im$ . Lengths of metatarsomeres 1 - 4 as 34:10:9:40.

Material. Bougainville Island, 31-3-1956, Tenekau, in secondary bush, Coll. Dr. J. J. H. Szent-Ivany (holotype ♀ HNHM); additional material from several sites of New Guinea.

## Amarygmus (Amarygmus) pauper sp. n. (Fig. 10A-E)

Holotype, ♀, BMH: Solomon Is., Bougainville (S.), Kokure, 690 m, June 10,1956, E. J. Ford, Jr. Collector.

**Diagnosis**. Very small, highly convex; elytra short, with rows of punctures and flat intervals. Frons relatively wide. Antennae short. Upperside black, somewhat lustrous.

This is the smallest species currently known from the Solomon Islands. I do not know a similar species from the Solomon Islands.

A similar shape and size is present in *A. horaki* Bremer, 2001 from Ceram (The Moluccas) but contrasting *A. pauper* the upperside of *A. horaki* is blue, and *A. horaki* possesses a yellow 11<sup>th</sup> antennomere; in *A. horaki* the pronotum is longitudinally less convex than in *A. pauper*.

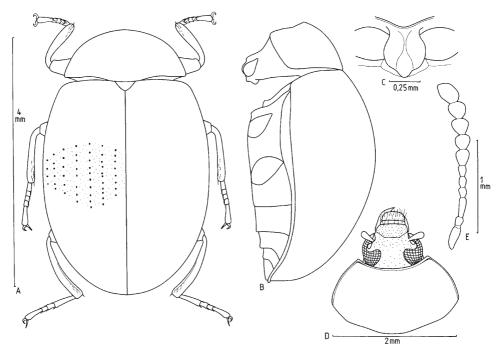
#### **Description**. Length: 3.97 mm. Width: 2.65 mm.

Ratios. Pronotum: width/length 1.96; width hind corners/width front corners 1.81. Elytra: length/width 1.22; length elytra/length pronotum 3.32; maximum width elytra/maximum width pronotum 1.38.

Colour. Upperside black, moderately lustrous. Legs dark brown. Antennae black (including 11th antennomer). Underside brown, nitid.

Head. Frons wide, wider than joint lengths of 3<sup>rd</sup> and 4<sup>th</sup> antennomeres (like 19: 16). Genae terminating anteriorly approximately at the level of the middle part of fronto-clypeal suture; they are somewhat raised. Fronto-clypeal suture depressed and slightly incised. Clypeus moderately stretched forwards; transversely and longitudinally convex; with distinct, dense, small punctures. Frons less densely punctate than clypeus. Mandibles apically bifid.

Pronotum. Wide; transversely and longitudinally markedly convex. Widest at base; lateral margins bent and constricted towards apex. Anterior margin excavated. Front corners in dorsal view rectangular. Lateral and anterior margins bordered. Lateral borders in dorsal view visible. Front and hind corners in lateral view



**Fig. 10:** *Amarygmus (Amarygmus) pauper* **sp. n.**: **A** Habitus ♀; **B** Body lateral; **C** Prosternal apophysis; **D** Head and pronotum; **E** Antenna.

narrowly rounded; front corners with an angle of appr. 100°, hind corners more obtuse. Surface with irregularly set, distinct, small punctures.

Scutellum. Triangular, with some tiny punctures.

Elytra. Ovate, short, markedly convex. Maximum of height and width about in the middle. Shoulders slightly prominent, rounded. Apices mutually rounded. Lateral edges in dorsal view invisible. With rows of medium-sized punctures which near apex become indistinct and small, in 4<sup>th</sup> row about 20 punctures. Intervals flat, with few tiny punctures, visible at 50-fold magnification.

Prosternum. Anterior margin continuously and narrowly bent upwards, medianly not retracted towards apophysis. Apophysis ovate but apicomedianly with a somewhat protruding keel; alongside procoxae margins raised ventrad, median space in between coxae with a narrow, deep groove.

Mesosternum. Hind part very short, wide; on its anterior margin medianly excavated.

Metasternum. Anterior margin between mesocoxae medianly straight, bordered. Disc slightly convex, on its anterior part with some small punctures, on its posterior part with sparse, tiny punctures and with very short, thin, clinging hairs originating from these punctures. Median line neither incised nor depressed.

Sternites. Anterior margin widely ogive. Discs with sparse, small punctures and with thin, clinging hairs originating from these punctures.

Antennae. Bent backwards overlapping 1/3 of elytra. Length/width ratio of antennomeres 1 - 11 corresponds to  $13:5 / 6:4 / 10\frac{1}{2}:4 / 5\frac{1}{2}:4 / 6:4\frac{1}{2} / 6:4\frac{1}{2} / 9:6\frac{1}{2} / 7:7 / 8:8 / 8:8 / 12:8.$ 

Legs. Short. Femora towards second third club-like widened. Pro- and mesotibiae slightly bent, metatibiae clearly bent. Lengths of protarsomeres 1 - 5 as  $5:4:3\frac{1}{2}:3\frac{1}{2}:14$ , lengths of mesotarsomeres 1 - 5 as 5:4:4:4:15, lengths of metatarsomeres 1 - 4 as 16:6:5:15.

Etymology, pauper (lat.) pauper, poor.

## Amarygmus (Amarygmus) propensus sp. n. (Fig. 11A-H)

Amarygmus solomonoides Kaszab in litt.

Holotype, &, BMH: Solomon Is., Bougainville (S.), Kokure nr. Crown Prince Ra., 900 m, VI-9-1956, J. L. Gressitt Collector; Amarygmus solomonoides sp. n. Dr. Z. Kaszab, 1975.

Paratypes. Bougainville: NE, Mutahi: 900 m, 18 km SE Tinputz, 1.-7.III.1968, R. Straatman Collector BI-SHOP (1 ♂ BMH) – Solomon Is., Bougainville (S.), Kokure nr. Prince Ra., 900 m, VI-11.1956, J. L. Gressitt Collector (1 ♂ ZSMB) – Solomon Is., Bougainville (S.), Kokure, 690 m, June 17, 1956, E. J. Ford, Jr. Collector (1 ♀ BMH) – Bougainville, Togerao, 600 m, 25.-21.4.1968, R. Straatman Collector BISHOP (1 ♀ BMH).

**Diagnosis**. A close ally of *A. lividus* **sp. n.**. *A. lividus* differs from *A. propensus* only by a blackish blue colouration of the upperside and by bigger punctures of the rows of elytra. Therefore, I first regarded *A. lividus* to be a colour variant of *A. propensus*. *A. propensus* is also related to *A. fordi* **sp. n.**, but in *A. fordi* intervals of elytra are markedly closer punctate than in *A. propensus*, and antennae of *A. fordi* are longer than those of *A. propensus*.

**Description**. Length: 7.72 - 8.35 mm. Width: 4.78 - 5.06 mm.

Ratios. Pronotum: width/length 1.83 - 1.91; width hind corners/width front corners 1.73 - 1.79. Elytra: length/width 1.36 - 1.38; length elytra/length pronotum 3.61 - 3.75; maximum width elytra/ maximum width pronotum 1.40 - 1.44.

Colour. Upperside coppery, somewhat lustrous; legs dark brown; antennae dark brown to black. Underside black, metasternum lustrous, sternites slightly opaque (the dark brown femora are contrasting with the black underside).

Head. Surface flat and with minute punctures. Frons of medium width, width corresponds to length of  $3^{rd}$  antennomere; frons is slightly wider in  $\Im$  than in  $\Im$ . Genae short, anteriorly terminating about at the level of the middle part of fronto-clypeal suture, slightly raised. Fronto-clypeal suture neither incised nor depressed. Clypeus stretched forwards, transversely very slightly convex. Mandibles apically bifid.

Pronotum. Shape most frequently trapezoidal (margins in its anterior part clearly bent in one specimen). Transversely markedly convex, longitudinally less convex. Anterior margin markedly excavated. Front corners acute. Lateral margins and anterior margin bordered. Borders in dorsal view visible only in their basal half. Front corners in lateral view rectangular, hind corners obtuse. Surface with minute, indistinct, irregularly set punctures.

Scutellum. Triangular, with some minute punctures.

Elytra. Ovate; transversely and longitudinally markedly convex; Maximum height and width anterior to middle. Shoulders prominent. Apices of elytra mutually rounded. Lateral edges in dorsal view nearly invisible. With rows of distinct, medium-sized punctures, about 28 punctures in 4<sup>th</sup> row. Intervals flat, with a distinct, minute, sparse punctation.

Prosternum. Lateral parts of anterior margin narrowly bent upwards; medianly this border is interrupted. Lateral margins of apophysis alongside coxae widened and slightly raised, median space in between with a shallow groove; behind coxae apophysis somewhat descending, and margins slightly constricted; apically with a wide, obtuse angle.

Mesosternum. Anterior margin of hind part medianly excavated.

Metasternum. Disc with big punctures, only near median line punctures are smaller, metasternum bald in 33. Sternites. Sternites 1 and 2 with shallow, small punctures. Sternite 5 without any structural peculiarity in 33. Antennae. Of medium length, bent backwards overlapping elytra to middle. Length/width ratio of antenno-

meres 1 - 11 corresponds to 12:5½ / 5½:3½ / 15:4 / 10½:4 / 10:4 / 10½:4 / 12:5 / 12:6 / 12:6 / 12:7 / 15:6.

Legs. Of medium length. Femora towards the second third club-like enlarged. Protibiae straight. Meso- and metatibiae slightly bent. Lengths of protarsomeres 1 - 5 as 12:10:10:10:40, lengths of mesotarsomeres 1 - 5 as 17:14:11:11:42, lengths of metatarsomeres 1 - 4 as 40:15:12:39.

**Etymology**. propensus (lat.) having a propensity for (for *A. fordi* **sp. n**. and *A. lividus* **sp. n**.).

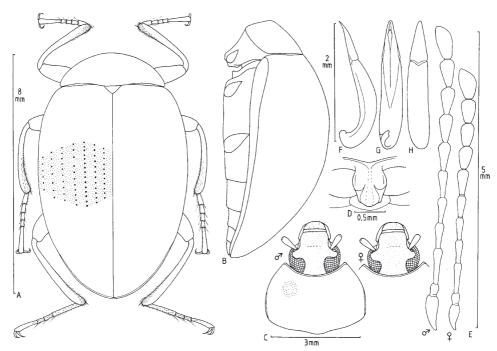


Fig. 11: Amarygmus (Amarygmus) propensus sp. n.: A Habitus  $\eth$ ; B Body lateral; C Head and pronotum  $\eth$ , head  $\diamondsuit$ ; D Prosternal apophysis; E Antennae  $\eth$  and  $\diamondsuit$ ; F Aedeagus lateral; G Aedeagus ventral; H Aedeagus dorsal.

### Amarygmus (Amarygmus) remotus sp. n. (Fig. 12A-H)

Amarygmus greensladei Kaszab in litt.

**Holotype**, ♂, BMNH: Solomon Is., Savo [9°08'S-159°49'E], 4/4/62, P. J. M. Greenslade.

**Paratypes**. dito ( $1 \circlearrowleft ZSMB$ ,  $1 \circlearrowleft BMNH$ ) – Solomon Is., Guadalcanal, Lunga, 31.III.1934, R. A. Lever ( $1 \circlearrowleft HNHM$ ) – Kiwi Creek, Guadalcanal, Sept.8, 1944, H. E. Millicon ( $1 \hookrightarrow BMH$ ) – Metanikan River, M...(not decipherable), Guadalcanal, May 21,1944, H. E. Millicon (1, sex not determined, BMH; antennae incomplete). The specimens from Guadalcanal are somewhat longer than those from Savo, other differences could not be found; Therefore I labeled them as paratypes.

**Diagnosis**. Winged. Medium size; ovate; head; pronotum and elytra black lustrous, with more or less brown legs and antennae; with clearly incised striae on elytra, and with convex intervals; frons wide, frons and clypeus with closely set, small punctures; antennae relatively short.

A. remotus is resembling A. punctifrons Gebien, 1920 (from New Guinea) and A. orientalis (Fairmaire, 1883) (which has a wide distribution from Vanuata, over Bismarck Archipelago, Solomon Islands, New Guinea to the Moluccas). These two species possess longer antennae than A. remotus; the tarsi of A. orientalis are shorter and wider than those of A. remotus. The other characters are similar in these species.

**Description**. Length: 6.53 - 8.68 mm. Width: 3.82 - 5.02 mm.

Ratios. Pronotum: width/length 1.65 - 1.75; width hind corners/width front corners 1.56 - 1.63. Elytra: length/width 1.32 - 1.38; length elytra/length pronotum 3.10 - 3.27; maximum width elytra/maximum width pronotum 1.37 - 1.43.

Colour. Pronotum and elytra lustrous, black; upperside of head black, its lustre somewhat reduced because of dense punctation. Legs brown. Antennae in most specimens brown, in some brownish black. Underside dark brown.

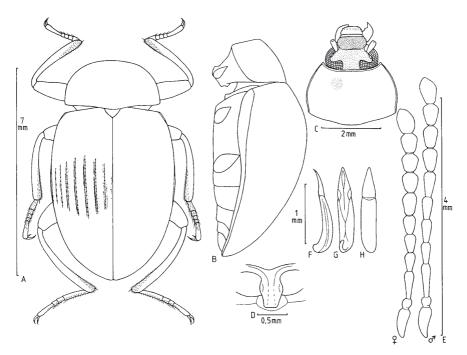


Fig. 12: Amarygmus (Amarygmus) remotus sp. n.: A Habitus  $\mathcal{S}$ ; B Body lateral; C Head and pronotum; D Prosternal apophysis; E Antennae  $\mathcal{S}$  and  $\mathcal{S}$ ; F Aedeagus lateral; G Aedeagus ventral; H Aedeagus dorsal.

Head. Frons wide and of the same width in both sexes; about as wide as the length of the 3<sup>rd</sup> antennomere. Genae anteriorly terminating at the level of the middle part of frontal-clypeal suture; they are raised. Fronto-clypeal suture slightly incised. Clypeus stretched forwards, slightly convex longitudinally. Clypeus and frons covered with dense, small punctures. Mentum reversely trapezoidal, laterally with broad, flat, shiny margins, in between these margins opaque and slightly convex. Mandibles exteriorly with a sulcus, apically bifid.

Pronotum. Not very wide. Transversely moderately convex, longitudinally less convex. Lateral margins bent, with a slight convergence towards base, somewhat more convergent anteriorly. Anterior margin slightly excavated. Front corners acute. Lateral and anterior margins bordered. Lateral borders in dorsal view narrowly visible. Front corners in lateral view rectangular, hind corners obtuse. Punctation with small, inconspicuous punctures.

Scutellum. Triangular, impunctate.

Elytra. Ovate, transversely and longitudinally markedly convex; widest and highest in the middle. Shoulders slightly prominent. Apices of elytra mutually rounded. Lateral edges in dorsal view narrowly visible. With continuous and deeply incised striae with small, relatively closely set punctures; intervals convex, nearly impunctate.

Prosternum. Lateral parts of anterior margin bent upwards, medianly this is interrupted. Apophysis relatively narrow, lateral margins alongside coxae slightly widened, median space in between with a shallow groove; behind coxae margins slightly convergent, and they apically pass over into a straight margin.

Mesosternum. Anterior margin of hind part excavated; lateral margins of hind part with irregular wrinkles. Metasternum. Apophysis behind anterior margin with small and dense punctures. On the middle part of disc with very small and relatively closely set punctures and with thin hairs. Median line depressed.

Sternites. Anterior margin between metacoxae widely ogive, bordered. Sternites 1 and 2 with many faint wrinkles. Sternite 5 apicomedianly slightly depressed in  $\lozenge\lozenge$ . Antennae. In  $\lozenge\lozenge\lozenge$  somewhat longer than in  $\lozenge\lozenge\lozenge$ . In  $\lozenge\lozenge\lozenge\lozenge$ , bent backwards, terminating shortly anterior to

Antennae. In 33 somewhat longer than in 99. In 33, bent backwards, terminating shortly anterior to middle, in 99 terminating at 1/3 of elytra. Length/width ratio of antennomeres 1 - 11 corresponds in 30 to 17:10 / 8:9 / 23:9 / 17:9 / 18:9 / 18:9 / 19:11 / 18:12 / 19:12 / 18:12 / 23:13, in a somewhat larger 90 to 17:10 / 9:9 / 25:11 / 16:11 / 15:11 / 19:12 / 18:13 / 17:13 / 16:13 / 22:14.

Legs. Of medium length. Femora gradually widening towards the second third and narrowing towards apex. Pro- and mesotibiae slightly bent; metatibiae moderately bent. Tarsomeres relatively narrow. Protarsome-

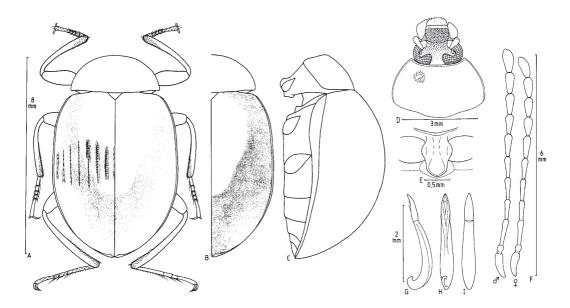


Fig. 13: Amarygmus (Amarygmus) rufidorsis Pic, 1915: A Habitus  $\delta$  (the faintly black macule as a faint shadow); B An elytron with a different macula pattern; C Body lateral; D Head and pronotum; E Prosternal apophysis; F Antennae,  $\delta$  and  $\varphi$ ; G Aedeagus lateral; H Aedeagus ventral; I Aedeagus dorsal.

res 1 - 3 not enlarged in  $\Diamond \Diamond$ . Lengths of protarsomeres 1 - 5 as 8:7:7:6:30, lengths of mesotarsomeres 1 - 5 as 15:13:10:8:31, lengths of metatarsomeres 1 - 4 as 35:11:8:31.

Etymology. remotus (lat.) remote, far away.

#### Amarygmus (Amarygmus) rufidorsis Pic, 1915 (Fig. 13A-I)

Amarygmus rufidorsis Pic, 1915: 239.

**Diagnosis**. Of medium size; ovate; elytra very convex, with striae and somewhat convex intervals; on elytra the ground colouration is ferruginous, but an oblique, faintly dark macule is extending from shoulders towards the apex; this macule is hardly visible in immature specimens. Pronotum wide, transversely relatively little convex, in the holotype (but not in all specimens) lateral margins somewhat constricted towards base. Frons of medium width. Antennae very long, bent backwards clearly overlapping the middle of elytra. Protarsomeres 1 - 3 not enlarged in 33.

Length: 8.04 - 8.28 mm. Width: 5.10 - 5.41 mm. Ratios. Pronotum: width/length 1.88 - 2.09; width hind corners/width front corners1.86 - 1.90. Elytra: length/width 1.26 - 1.29; length elytra/length pronotum 3.40 - 3.74; maximum width elytra/maximum width pronotum 1.39 - 1.46.

Colour. Head and pronotum greyish to black, opaque; elytra ferruginous, from shoulders a faint greyish to black macule is passing obliquely medial to apex, outward part of elytra again ferruginous (in some specimens the outward part entirely black). Femora, apical half of pro- and mesotibiae light brown, basal part of pro- and mesotibiae dark brown to black; metatibiae completely light brown; tarsomeres light brown. Antennomeres 1 - 6 brown, 7 - 11 black. Underside brown.

Antennae. Very long. Length/width ratio of antennomeres 1 - 11 corresponds in  $\circlearrowleft$  to 15:6 / 5:4½ / 18:4½ / 13:4½ / 14½:4½ / 14:4½ / 16:5 / 14:6 / 14:6 / 13½:6 / 15½:6; in  $\circlearrowleft$  to 16:6 / 6:4½ / 18:4½ / 13:4½ / 15:4½ / 13½:4½ / 14½:5 / 13:5½ / 13½:6 / 13:6 / 15:6½.

Legs. Lengths of metatarsomeres 1 - 4 as 25:9:6:20.

The next relative is A. nigroopacus Gebien, 1920 which also occurs on Bougainville. If specimens of A. nigroopacus are mature (many specimens which I had to determine were immature) pronotum and elytra are dark grey with a slight sericeous shine, and then, by its colouration, A. nigroopacus can easily be delimitated from A. rufidorsis, but immature specimens of both species are not easily separable by colouration. Antennae of A. nigroopacus are somewhat shorter than those of A. rufidorsis.

Material. (handwritten) Îles Salomon; (handwritten) Amarygmus rufidorsis Pic; (handwritten) type; (printed, red paper) TYPE; (printed) Muséum Paris, Coll. M. Pic (holotype, sex not determined, MNHP) - Îles Salomon (2 MNHP) - Île de Bougainville, Arch. Salomon (1 ♀ MNHP) - Solomon Is., Bougainville (S.), Boku, VI-4-'56, J. L. Gressitt Collector (1 \( \times \) BMH) – dito, but E. J. Ford, Jr. Collector (1 BMH) – Solomon Is., Bougainville (S.), Boku, 50 m, VI-3-1956, E. J. Ford, Jr. Collector (2 BMH) – Bougainville, Kukugai Vill., 150 m, X.1960, W. W. Brandt Collector (1 BMH) - dito, but XII.1960 (1 ZSMB) - Solomon Is., Bougainville (S.), Kokure nr. Crown Prince Ra., 900 m., VI-10-1956, J. L. Gressitt Collector, Amarygmus rufidorsis Pic; cum typo comp., Dr. Z. KASZAB 1964 (1 Q HNHM) – Bougainville, Kokure, 690 m, June 8, 1956, E. J. Ford, Jr. Collector (1 BMH) – dito, but June 9, 1956 (2 BMH) - dito, but June 11, 1956 (1 BMH, 1 ZSMB) - dito, but June 12, 1956 (1 BMH) - dito, but June 14, 1956 (1 BMH) - dito, but June 15, 1956 (2 BMH) - dito, but June 16, 1956 (1 ZSMB) - dito, but June 17, 1956 (1 BMH) - dito, but June 18, 1956 (1 BMH) - Bougainville (S.), Kokure nr. Crown Prince Ra, 900 m, VI-9-1956, J. L. Gressitt Collector (3 BMH) - dito, but VI-10-1956 (5 BMH) - dito, but VI-11-1956 (2 BMH) - Bougainville (S.), Kokure, 690 m, VI-8-13-1956, J. L. Gressitt Collector (2 BMH) - Bougainville, Humurai, VI-8-56, J. L. Gressitt Collector (1 BMH) – Bougainville: NE, Mutahi, 700 m, 18 km SE Tinputz, 1.-7.III.1968, Tawi Collector (1 BMH) - Bougainville (S.), Tokinoitu, 20 m, VI-2-1956, J. L. Gressitt Collector (1 BMH) - Bougainville (S.), Sovele Mission, 250 m, VI-6-1956, J. L. Gressitt Collector (1 BMH).

#### Amarygmus (Amarygmus) salomonis Gebien, 1920 (Fig. 14A-H)

Amarygmus salomonis Gebien, 1920: 437.

**Diagnosis**. Relatively large; elytra convex, ovate, with rows of punctures, intervals relatively densely punctate; shoulders prominent. Pronotum wide; front corners rounded. Frons of medium width, somewhat wider than length of  $3^{rd}$  antennomere (like  $20\frac{1}{2}$ : 18). Mandibles apically mostly bifid but in some specimens there are all transitions between apically truncate mandibles, those with an apical notching, up to those which are clearly bifid, but outwardly mandibles are always sulcate. Anterior part of metasternum covered with coarse punctures; pro- and mesotibiae very slightly bent, metatibiae in basal half straight, in apical half very slightly incurved. Protarsomeres 1 - 3 not enlarged in  $\frac{1}{2}\frac{1}{2}$ . – The next relative with a similar shape and punctation of elytra is  $\frac{1}{2}$ . Fordi sp. n.. This is much smaller (length 7.25 - 7.88 mm), antennae of  $\frac{1}{2}$ . Fordi are longer; concerning additional differences, see  $\frac{1}{2}$ . Fordi.

Length: 9.67 - 12.1 mm. Width: 6.1 - 7.4 mm. Ratios. Pronotum: width/length 2.02 - 2.24; width hind corners/width front corners 1.79 - 1.94. Elytra: length/width 1.31 - 1.44; length elytra/length pronotum 3.74 - 4.00; maximum width elytra/maximum width pronotum 1.36 - 1.43. Lengths of protarsomeres 1 - 5 as 9:9:7:6:29, lengths of mesotarsomeres 1 - 5 as 14:10:8:7:29, lengths of metatarsomeres 1 - 4 as 33:11:6:24.

Antennae. Length/width ratio of antennomeres 1 - 11 corresponds in 3 to  $16:8 / 7:5\frac{1}{2} / 18:5\frac{1}{2} / 14:6 / 13:6 / 14:6\frac{1}{2} / 15:7 / 14:8 / 15:8\frac{1}{2} / 15:8\frac{1}{2} / 19:8\frac{1}{2}$ . Antennae of 33 are somewhat longer than those of 99.

Material. (handwritten) Solomo-Ins.; (printed on red paper) Type No. 695; (Gebien's handwriting) Amarygmus salomonis Geb., Type (holotype, ♀, NMHUB) - Salomon Is., (not decipherable) ...., July 1937; Pres. Com. Inst. Ent. B.M.1967-3; salomonis Geb., det. Kaszab (1 BMNH) − Kieta arch., Bougainville, ex. coll. Théry 1933.137 (1 BMNH) − Bougainville; salomonis, det. Gebien (2 NMHUB) − Solomon Is., Bougainville, Simba Mission, July 1, 1956, E. J. Ford, Jr. Collector (1 BMH) − dito, but June 29, 1956 (1 ZSMB) − dito, but June 30, 1956 (1 ZSMB) − Bougainville: NE, Mutahi, 700 m, 18 km SE Tinputz, 8.-14.XII.1968, Tawi Collector (2 ZSMB) − dito, but 1.-7.XII.1968, E. R. Straatman Collector (2 BMH) − dito, but 15.-21.XII.1968, E. R. Straatman Collector (1 BMH) − dito, but 22.-31.XII.1968, Tawi Collector (1 BMH) − Solomon Is., Bougainville, Kokuro, 690 m, June 16, 1956, E. J. Ford, Jr. Collector (2 BMH) − dito, but June 8, 1956 (1 BMH) − dito, but June 9,

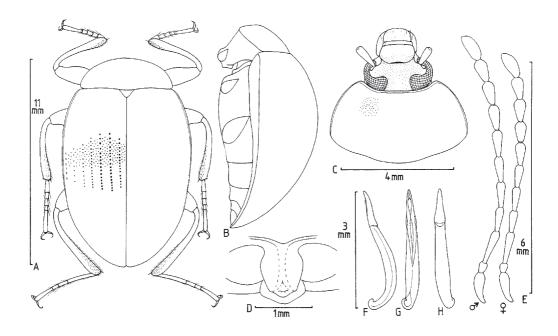


Fig. 14: Amarygmus (Amarygmus) salomonis Gebien, 1920: A Habitus ♂; **B** Body lateral; **C** Head and pronotum; **D** Prosternal apophysis; **E** Antennae ♂ and ♀; **F** Aedeagus lateral; **G** Aedeagus ventral; **H** Aedeagus dorsal.

1956 (1 BMH) – dito, but June 11, 1956 (1 BMH) – dito, but June 13, 1956 (1 BMH) – dito, but June 14, 1956 (1 BMH) – dito, but June 15, 1956 (3 BMH) – dito, but June 17, 1956 (1 BMH) – Solomon Is., Bougainville (S.), Kokura nr. Crown Prince Ra., 900 m, VI-11-1956, J. L. Gressitt Collector (1 BMH) – dito, but VI.9-1956 (1 BMH) - Solomon Is., Bougainville, Gold Ridge, 500 m, VI-24-1956, J. L. Gressitt Collector (1 BMH) – dito, but VI-22-1956 (1 BMH) – Solomon Is., Bougainville (S.), Guaba, 720 m, June 20, 1956, E. J. Ford, Jr. Collector (1 BMH) – Kiwi Creek, Guadalcanal, July 26, 1944, H. E. Milliron (1 BMH) – Wright's Creek, Guadalcanal, Aug. 10, 1944, H. E. Milliron (1 BMH) – Solomon Is., Guadalcanal, Honiara, 22.IV.64, R. Straatman Collector (1 BMH) – Solomon Is., Guadalcanal, Betikama R., VIII.1960, W. W. Brandt Collector (1 BMH) – Solomon Is., Guadalcanal, 11/2/65, P. J. M. Greenslade (1 BMNH) – Solomon Is., San Cristoval, Wugiroga, 8.VIII.1960, C.W. O'Brien Collector (3 BMH) – Solomon Is., Choiseul I., Kitipi R., 80 m, 17:III.1964, P. Shanahan Collector (1 BMH) – Solomon Is., Malaita: Tangtalau-Kwala, 200-350 m, Sept.30, 1957, J. L. Gressitt Collector (1 BMH) – Solomon Is., Santa Ysabel, Molao, 29.VI.'60, C. W. O'Brien Collector (1 BMH) – dito, but 30.VI.'60 (1 BMH) – Solomon Is., Florida Is., Nggela I., Haleta, 0-50 m, 14.X.1964, R. Straatman Collector (1 BMH).

## Amarygmus (Hyperamarygmus) securiger sp. n. (Fig. 15A-H)

Amarygmus securiger Kaszab in litt.

**Holotype**, ♂, BMNH: Solomon Is., Guadalcanal, ?Tenatra (handwritten, scarcely legible), 9976, 10/12.1963, P. Greenslade.

**Paratypes**: dito (1 ♀ BMNH) - Solomon Is., Guadalcanal, Honiara District, ?Tanaru (handwritten, scarcely legible), 5.VIII.1954, E. Brown; Pres. by Com. Inst. Ent. 1958-79; (separate label) Amarygmus sp., E. A. J.

**Diagnosis.** Of medium size, oblong; elytra slightly ovate; elytra dark coppery to black; pronotum dark blue to black; on elytra rows of medium-sized punctures and scarcely punctate intervals; frons of medium width; antennae short; in  $\delta\delta$  the curved protibiae are suddenly enlarged at their inside in their apical third; hind part of aedeagus enlarged. In  $\delta\delta$  antennae are slightly longer than in  $\varphi\varphi$ , and, additionally, antennomere 3 is apically more enlarged than usual, and antennomeres 4 and 5 are markedly wider than antennomere 6.

Because of body shape, form of aedeagus, form of protibiae in  $\Im\Im$ , and enlargements of antennomeres 3 to 5 this species belongs to the subgenus *Hyperamarygmus* Kaszab, 1964.  $\Im$  of this subgenus do not possess the enlargements on protibiae and on antennomeres. Two species of this subgenus have already been described: *Amarygmus (Hyperamarygmus) antennalis* (Kaszab, 1964) from Ambon (The Moluccas) and *Amarygmus (Hyperamarygmus) azureus* Bremer, 2002 from New Britain (Bismarck Archipelago) and from New Guinea. Several species of this subgenus from New Guinea are awaiting description.

**Description**. Length: 6.45 - 7.32 mm. Width: 3.10 - 3.66 mm.

Ratios. Pronotum: width/length 1.62 - 1.71; width hind corners/width front corners 1.71 - 1.75. Elytra: length/width 1.59 - 1.66; length elytra/length pronotum 3.15 - 3.29; maximum width elytra/maximum width pronotum 1.17 - 1.23.

Colour. Upperside slightly lustrous; head black or blue; pronotum either dark blue or black; elytra dark coppery, black, or more or less blue; femora and tibiae dark brown, tarsomeres lighter brown. Antennomeres 1 - 4 dark brown, 5 - 11 black. Underside dark brown, sternites 3 - 5 nearly black.

Head. Frons of medium width, width corresponds to joint lengths of the 2<sup>nd</sup> and 3<sup>rd</sup> antennomeres. Anteriorly the genae terminate in front of the middle part of fronto-clypeal suture; genae not separated from frons by a clear depression, lateral margins of genae only very slightly raised. Middle part of fronto-clypeal suture incised and somewhat depressed. Clypeus stretched forwards, but related to the apical end of genae it stretches only moderately forwards; longitudinally clypeus slightly convex. Upperside of head lustrous; with small and not very dense punctures. Mentum reversely trapezoidal, with flat, lateral margins, in between these margins slightly convex. Underside of neck with small and relatively dense punctation. Mandibles apically bifid.

Pronotum. Transversely and longitudinally uniformly convex; lateral margins convergent anteriorly and bent. Hind corners rounded; front corners not projecting. Anterior margin very slightly excavated, nearly straight. Lateral and anterior margins bordered; lateral borders in dorsal view visible, but in their apical half extremely narrow. Front corners in lateral view sharply rectangular, hind corners rounded and clearly obtuse. Surface with well visible, small, irregularly set punctures.

Scutellum. Triangular, impunctate.

Elytra. Oblong, slightly ovate. Transversely markedly convex, longitudinally convex; maximum of height just in front of middle. Shoulders prominent. Apices of elytra mutually rounded. Lateral edges in dorsal view very narrowly visible only in anterior half. On elytra rows of medium-sized punctures which are well separated, 4th row with about 26 punctures; intervals flat, only laterally slightly convex, covered with extremely tiny punctures (at 50-fold magnification visible).

Prosternum. Laterally anterior margin narrowly bent upwards, interrupted medianly where a flat keel is projecting; this keel passes the apophysis, and it widens towards apex. Margins of apophysis alongside procoxae widened and raised ventrad.

Mesosternum. Hind part short, medianly deeply excavated.

Metasternum. Anterior part of disc with some medium-sized punctures, behind there are tiny and sparse punctures. Without hairs in both sexes.

Sternites. Anterior margin between metacoxae ogive. 1st sternite with some small punctures, sternites 2 - 5 with tiny and spaciously set punctures.

Antennae. Short; bent backwards overlapping 1/5 of elytra. Length/width ratio of antennomeres 1 - 11 of a  $\bigcirc$  corresponds to 17 : 7 / 8:6½ / 14:6 / 11:6 / 9:7 / 10:7 / 11:8½ /11:9½ / 12:9½ / 12:9½ / 20:9½.

Legs. Short, femora towards second third club-like enlarged. Protibiae markedly bent in 33, at their inside in the apical third suddenly and strongly enlarged; in 99 slightly bent and at their inside not enlarged. Mesotibiae in 33 clearly bent, in 99 less distinctly bent. Metatibiae in both sexes equally bent. Protarsomeres

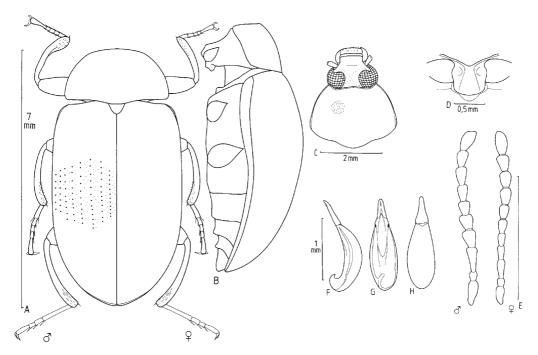


Fig. 15: Amarygmus (Hyperamarygmus) securiger sp. n.: A Habitus, left side legs  $\Diamond$ , right side legs  $\wp$ ; B Body lateral; C Head and pronotum; D Prosternal apophysis; E Antennae  $\Diamond$  and  $\wp$ ; F Aedeagus lateral; G Aedeagus ventral; H Aedeagus dorsal.

1 - 3 not enlarged in 33. Lengths of protarsomeres 1 - 5 as 9:8:7:7:21, lengths of mesotarsomeres 1 - 5 as 16:9:8:6:23, lengths of metatarsomeres 1 - 4 as 38:15:8:22.

**Etymology**. securiger (lat.) wearing an ax (because of the ax-like shape of the apical part of protibiae in 33. I accept the name which Kaszab chose for this species.

## Amarygmus (Amarygmus) shanahani sp. n. (Fig. 16A-E)

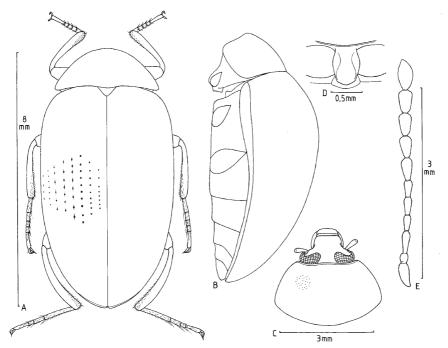
**Holotype**, ♀, BMH: Solomon Is., Vella Lavella [7°45′S-158°40′E], Pusisama, 14.XI.1963, P. Shanahan Collector, BISHOP.

**Diagnosis**. Of medium size, oblong, ovate. Upperside dark blue to dark violet. On elytra with rows of medium-sized punctures which sometimes are connected by faint lines; intervals flat. Width of frons medium-sized and, notably, fronto-clypeal suture not incised. Antennae of medium length.

I cannot exclude that this species belongs to the subgenus *Hyperamarygmus* Kaszab, 1964 because this subgenus is characterized, besides its elongate body shape, by sexual dimorphisms of the 33 on antennae and protibiae, moreover, they possess a special shape of aedeagus. There is some resemblance with *A. (Hyperamarygmus) securiger* sp. n.. The differences are shown in the "Determination Key".

**Description**. Length: 7.96 mm. Width: 4.06 mm.

Ratios. Pronotum: width/length 1.76; width hind corners/width front corners 1.84. Elytra: length/width 1.65; length elytra/length pronotum 3.65; maximum width elytra/maximum width pronotum 1.26.



**Fig. 16:** *Amarygmus (Amarygmus) shanahani* **sp. n.**: **A** Habitus ♀; **B** Body lateral; **C** Head and pronotum; **D** Prosternal apophysis; **E** Antenna.

Colour. Pronotum dark blue, with light violet tinge; elytra dark violet, slightly lustrous; femora and tibiae dark brown, tarsomeres lighter brown; antennomeres 1 - 5 brown, 6 - 11 dark brown to black, opaque. Underside dark brown, lustrous (including sternites).

Head. Frons of medium width; width corresponds to joint lengths of 2<sup>nd</sup> and 3<sup>rd</sup> antennomeres. Genae slightly raised. Fronto-clypeal suture neither incised nor depressed (!). Clypeus stretched forwards forming with frons a uniform, unseparated surface; transversely slightly convex. Clypeus and frons with tiny, spaciously set punctures. Mentum reversely trepezoidal, with broad, lucent, flat margins, in between slightly convex. Mandibles apically bifid.

Pronotum. Relatively narrow; transversely and longitudinally markedly convex; sides are narrowing towards front corners, in the hind half with straight margins, in the anterior half bent; front corners rounded; anterior margin straight; lateral and anterior margins continuously bordered; lateral borders in dorsal view nearly invisible. Front corners in lateral view narrowly rounded and obtuse, hind corners angular and obtuse. Surface with minute and spaciously set punctures.

Scutellum. Triangular, impunctate.

Elytra. Oblong, slightly ovate. markedly convex across, longitudinally less strongly convex; height maximum somewhat anterior to middle. Shoulders slightly obtuse and pointed. Apices of elytra mutually rounded. Lateral edges in dorsal view very narrowly visible only in the middle. With rows of superficial, small to medium-sized punctures, some of them are connected by faint lines, distances between them within 4th row on disc correspond to 1 to 3 times the diameters of the punctures. Intervals flat, with tiny but well visible punctures.

Prosternum. Anterior margin continuously and narrowly bent upwards. Apophysis not very long, margins alongside procoxae somewhat widened and slightly raised; median space in between like a shallow trough; behind coxae margins slightly convergent, apically widely pointed.

Mesosternum. Hind part of mesosternum markedly raised ventrad; anterior margin medianly excavated.

Metasternum. Disc (except hind part medianly) and lateral parts with medium-sized, distinct punctures. Hind part of disc with much smaller punctures and flattened.

Sternites. Anterior margin between metacoxae narrowly ogive, clearly bordered. Disc of sternites with very tiny and sparse punctures.

Antennae. Bent backwards overlapping appr. 1/3 of elytra. Length/width ratio of antennomeres 1 - 11 corresponds to  $18:8 / 7:6\frac{1}{2} / 15:6 / 13:6 / 13:6 / 13:6 / 13:6 / 13:6 / 18:10 / 18:10 / 17:10 / 24:10.$ 

Legs. Short, relatively slender. Femora towards second third slightly club-like widened. Protibiae straight, mesotibiae in their basal half bent, in their apical half straight; metatibiae bent. Lengths of protarsomeres 1 - 5 as 9:9:9:7:23, lengths of mesotarsomeres 1 - 5 as 19:12:9:7:25, length of metatarsomeres 1 - 4 as 47:16:9:27.

**Etymology**. The name refers to P. Shanahan, the collector of the type specimen.

#### Amarygmus (Amarygmus) violatinctus Bremer, 2008

Amarygmus violatinctus Bremer, 2008: 2008a, 102-104.

**Diagnosis**. Of medium size; ovate. Upperside dark blue with violet tinge. Frons relatively narrow, width corresponds to length of 2<sup>nd</sup> antennomere; fronto-clypeal suture little incised. Antennae of medium length. Pronotum relatively narrow, front corners acute-angled, hind corners rounded. Elytra ovate, maximum of height and width in the middle; striae clearly incised, with small, round punctures; intervals convex, with tiny punctures which become visible only at 25-fold magnification.

A. violatinctus belongs to the species group near A. hydrophiloides FAIRMAIRE, 1849. It resembles, according to length, width of frons, shape of legs and length of antennae, somewhat A. aspernans BREMER, 2008 from New Guinea; it can be separated from this species by the wider and ovate shape of body, and a longitudinally stronger convexity of elytra. — On the Solomon Islands A. violatinctus occurs together with A. hydrophiloides and A. greensladei BREMER, 2008. It can be delimitated from A. hydrophiloides and greensladei by its greater length, the more ovate shape of body, by a sparser pilosity of metasternum in 33; and, from hydrophiloides, by a less marked enlargement of protarsomeres 1 - 3 in 33, and the lack of enlargements at the inside of meso-and metatibiae in 33. A. greensladei possesses the same sexual dimorphisms in 33 as violatinctus regarding metasternum, meso- and metatibiae.

Length: 7.56 - 8.44 mm. Width: 4.36 - 4.86 mm. Ratios. Pronotum: width/length 1.73 - 1.81; width hind corners/width front corners 1.58 - 1.62. Elytra: length/width 1.32 - 1.43; length elytra/length pronotum 3.32 - 3.54; maximum width elytra/maximum width pronotum 1.40 - 1.42. Length of metatarsomeres 1 - 4 as 25:9:5:15.

Pro- and mesotibiae are straight, metatibiae in their basal half slightly, in their apical half markedly bent; protarsomeres 1-3 slightly enlarged in  $\Im \Im$ .

Colour. Upperside dark blue with a marked tinge of violet, slightly lustrous. Underside and legs brown, tarsi somewhat lighter brown. Antennomeres 1 - 5 dark brown, 6 - 11 black.

**Material**: Solomon Is., Choiseul, Malangona, 9194, 21/8/1963, P. Greenslade (holotype, ♂, BMNH) – dito (paratypes, 1 ♂ BMNH, 1 ♂ ZSMB) – Solomon Is., Big Nggela, Sandfly, 11498, Jan. 1964, P. Greenslade (1 ♂ BMNH).

## Amarygmus (Amarygmus) virtus sp. n. (Fig. 17A-H)

Holotype, &, BMNH: Solomon Is., New Georgia, Marovo, Cacao, 16174, 30/12.1964, P. Greenslade.

**Paratypes**. dito ( $2 \subsetneq BMNH$ ,  $1 \subsetneq ZSMB$ ) – Solomon Is., New Georgia, Wana Wan Is. [?Vona Vona Is.,  $8^{\circ}15^{\circ}S-157^{\circ}05^{\circ}E$ ], 8609, 16/8.1963, P. Greenslade ( $1 \circlearrowleft BMNH$ ,  $1 \circlearrowleft ZSMB$ ,  $1 \subsetneq BMNH$ ) – dito, but 8832, 19/8.1963 ( $1 \circlearrowleft BMNH$ ) – Ratuna (New Georgia), Salomonen, VII.29, E. Paravicini, Amarygmus nigroopacus Geb., Dr. Z. Kaszab det. ( $1 \subsetneq HNHM$ ).

**Diagnosis**. Winged. Of medium size. Elytra strongly convex, short, with convex intervals and incised striae. Pronotum rather flat, with acute and sharp-angled front corners. Frons of medium width. Antennae very long. Legs of medium length, in  $\Im \Im$  somewhat longer than in  $\Im \Im$ ; protarsomeres 1-3 not enlarged. A special character of this species is the colouration pattern of the upperside: see colour.

Belongs to a group of species affine A. rufidorsis Pic, 1915. Within this group it is especially near to the wingless A. externus sp. n.; pronotum of A. externus is black, elytra are uni-coloured, and intervals are still

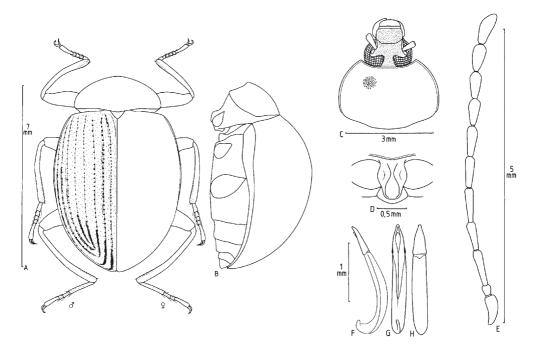


Fig. 17: Amarygmus (Amarygmus) virtus sp. n.: A Habitus, left side legs ♂, right side legs ♀; B Body lateral; C Head and pronotum; D Prosternal apophysis; E Antenna; F Aedeagus lateral; G Aedeagus ventral; H Aedeagus dorsal.

more convex and punctate than in *A. virtus*. – An additional taxon on Kolombangara Island is very near, and I regard it as a subspecies of *A. virtus*: *A. virtus kolombangaraensis* **ssp. n.**; This subspecies is devoid of the sericeous shine of the upperside, it is wingless; the colour differences between pronotum and elytra are not so marked as in *A. virtus virtus*.

**Description**. Length: 6.77 - 7.48 mm. Width: 4.33 - 4.78 mm.

Ratios. Pronotum: width/length 1.73 - 1.88; width hind corners/width front corners 1.73 - 1.83. Elytra: length/width 1.17 - 1.26; length elytra/length pronotum 2.91 - 3.22; maximum width elytra/maximum width pronotum 1.38 - 1.43.

Colour. Pronotum and elytra with a strong sericeous shine. Head black; pronotum ferruginous (in one specimen, from Ratuna, dark brown; probably this specimen represents a transitional form between *A. virtus virtus* and *A. v. kolombangaraensis*); lateral parts of elytra blackish, central intervals reddish brown. Legs light brown. Unterside black. Antennomeres 1 - 6 brown, antennomeres 7 - 11 dark brown.

Head. Upperside relatively flat. Frons of medium width, width corresponds about to joint lengths of  $2^{nd}$  and  $3^{rd}$  antennomeres. Genae terminate anteriorly at the level of the middle part of fronto-clypeal suture; they are slightly raised. Clypeus stretched forwards. Clypeus and frons covered densely with small punctures. Mentum relatively small, reversely trapezoidal. Mandibles outwardly sulcate, apically bifid.

Pronotum. Only slightly convex. Lateral margins bent, in most specimens with a maximum of width shortly behind middle, in few specimens the hind half subparallel; within the anterior half either straightly narrowed or even slightly concave towards front corners. Front corners acutely protruded; hind corners rounded. Anterior margin deeply excavated. Lateral margins bordered; anterior margin laterally bordered, medianly border interrupted. Lateral borders in dorsal view distinctly visible. Front corners in lateral view rectangular, hind corners angular, obtuse. Surface with medium-sized, distinct, densely set punctures.

Scutellum. Triangular; impunctate.

Elytra. Ovate; short; markedly convex. Maximum of width and height at 1/3 of their length. Shoulders angular, obtuse. Apices of elytra mutually rounded. Lateral edges in dorsal view narrowly visible. With distinctly incised striae and within them medium-sized, round punctures. Intervals convex, in some specimens indistinct, in other with small, densely set punctures.

Prosternum. Anterior margin continuously and narrowly bent upwards, not retracted towards apophysis. Apophysis alongside procoxae somewhat widened and margins raised ventrad, median space in between with a relatively wide and moderately deep groove; behind coxae lateral margins slightly convergent; apically widely rounded.

Mesosternum. Short, wide. Anterior margin of hind part medianly excavated; its lateral margins with irregular, coarse puncture.

Metasternum. Relatively short; distance between meso- and metacoxae corresponds approximately to the longitudinal diameter of a mesocoxa. Anterior part with coarse punctures, posterior part with some very tiny punctures.

Sternites. Anterior margin between metacoxae widely ogive, bordered; inner sulcus of this border and the laterad following sulci behind metacoxae coarsely punctuated. Sternites faintly strigose; with tiny punctures, nitid. Sternite 5 apicomedianly without depression in 33.

Legs. Of medium length; in  $\varphi\varphi$  somewhat shorter than in  $\partial\partial$ . Femora towards second third club-like enlarged. Pro- and mesotibiae bent, in  $\partial\partial$  somewhat more than in  $\varphi\varphi$ , and in  $\partial\partial$  at the inside in the middle with a kinkle. Metatibiae moderately bent in both sexes. Lengths of the protarsomeres 1 - 5 as 5:4:4:17, lengths of mesotarsomeres 1 - 5 as 9:6:5:3:16, lengths of metatarsomeres 1 - 4 as 24:8:5:16.

Etymology. virtus (lat.) excellent.

#### Amarygmus (Amarygmus) virtus kolombangaraensis ssp. n.

Amarygmus sericeus kolombangaraensis Kaszab in litt. (partim).

**Holotype**, ♂, HNHM: Solomon Is., Kolombangara, 3000', foliage, 1965, leg. Esekiel .......(illegible); (label with red margin): Paratypus 1969, Amarygmus sericeus kolombangaraensis Kaszab.

Paratypes: Solomon Is., Kolombangara, Gollifer's Camp, 100 m, 22.I.1964, P. Shanahan Collector (1 ♂ BMH, 1 ♂ ZSMB) – Solomon Is., Kolombangara, 2500', 1965, .......(illegible), J.F.P. PP22, Roy. Soc. Exped. Brit. Mus. 1966-1; (label with red margin): Paratypus 1969, Amarygmus sericeus kolombangaraensis Kaszab (1 ♀ BMNH).

**Diagnosis.** Of medium size; wingless; elytra short, strongly convex, with incised striae and convex intervals; upperside without sericeous shine, lustrous; pronotum dark brown, elytra black but intervals 1 to 2 brown; legs dark brown; frons, legs, aedeagus and the the other structural characters as in *A. virtus virtus*.

Differs from *A. virtus virtus* by the lack of wings, by the lustrous upperside without any sericeous shine, the darker brown pronotum, femora and tibiae.

Measurements: Length: 6.05 - 7.25 mm. Width: 4.18 - 4.86 mm. Ratios. Pronotum: width/length 1.76 - 1.83, width hind corners/width front corners 1.72 - 1.79. Elytra: length/width 1.17 - 1.25; length elytra/length pronotum 2.93 - 3.13, maximum width elytra/maximum width pronotum 1.41 - 1.45.

Colour. Upperside lustrous, without sericeous shine; head black, pronotum dark brown (when mature), elytra black (intervals 1 and 2 brownish brightened), antennae and legs dark brown.

**Etymology**. *Kolombangaraensis* from Kolombangara Island where these specimens have been collected, this is an island of the New Georgia Group.

#### Amarygmus (Amarygmus) zoltani Bremer, 2005 (Fig. 18A-E)

Amarygmus chrysomeloides Kaszab, 1958: 10 [nec Amarygmus chrysomeloides F. Walker, 1858]. Amarygmus zoltani Bremer 2005; [nom. n.]: 2005b, 212.

**Diagnosis**. Of medium size. Wingless. Metasternum very short. Elytra very short and nearly globose. On elytra rows of small, superficial punctures which are linked by faint lines. Prosternal apophysis stretched backwards,

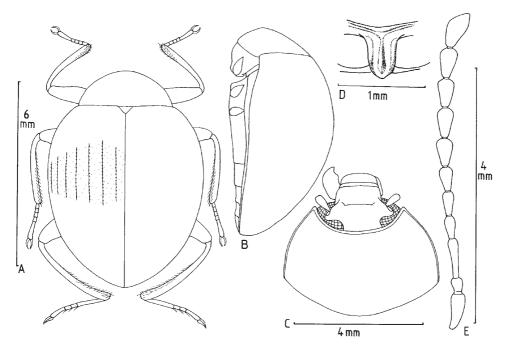


Fig. 18: Amarygmus (Amarygmus) zoltani Bremer, 2005: A Habitus ♀; B Body lateral; C Head and pronotum; D Prosternal apophysis; E Antenna.

with parallel margins behind procoxae; medianly without a groove and therefore flat, a narrow, median keel passes the whole apophysis in others with small, densely set punctures.

There is no species on the Solomon Islands which can be confounded with *A. zoltani*. But there are several undescribed species on New Guinea which look very similarly but possess a different shape of prosternal apophysis. The other two wingless species on the Solomon Islands (*A. externus* **sp. n.**, *A. virtus kolombangaraensis* **ssp. n.**), in contrast to *A. zoltani*, possess distinctly incised striae on elytra, and their elytra are longer.

Length: 8.28 mm. Width: 6.00 mm. Ratios. Pronotum: width/length 1.76; width hind corners/width front corners 1.74. Elytra: length/width 1.14; length elytra/length pronotum 3.12; maximum width elytra/maximum width pronotum 1.55. Lengths of mesotarsomeres 1 - 5 as 10:5:5:5:5:21, lengths of metatarsomeres 1 - 4 as 33:8:7:23. Length/width ratio of antennomeres 1 - 11 corresponds to 30:13 / 14:11 / 35:12 / 18:13 / 18:13 / 21:15 / 23:17 / 23:17 / 23:17 / 25:20.

Colour. Head and pronotum black, elytra dark bronze, slightly lustrous; legs, antennae, underside black.

**Material**. Bougainville (Salomon Inseln) (holotype, ♀, HNHM).

#### B. Species of the genus Spathulipezus Gebien, 1920

Spathulipezus Gebien, 1920: 458.

Type species: Spathulipezus miritarsis Gebien, 1920.

The genus *Spathulipezus* is characterized by the special form of the tarsomeres which is present in both sexes: The first pro- and mesotarsomeres are rather wide; the 2<sup>nd</sup> pro- and mesotarsomeres are linked to the 1<sup>st</sup> ones at the normal apical position; the 2<sup>nd</sup> and 3<sup>rd</sup> pro- and mesotarsomeres are apically drawn forth and rather wide, and the 3<sup>rd</sup> and 4<sup>th</sup> pro- and mesotarsomeres are linked on the upperside of the preceding tarsomeres; the 4<sup>th</sup> protarsomeres are tiny and scarcely visible; the 4<sup>th</sup> mesotarsomeres are also small but not as tiny as the 4<sup>th</sup> pro-

tarsomeres; the 5<sup>th</sup> pro- and mesotarsomeres are linked to the preceding tarsomeres at the normal apical point. The 1<sup>st</sup> metatarsomeres are long, the 2<sup>nd</sup> metatarsomeres are linked to the 1<sup>st</sup> metatarsomeres at the normal apical point; the 2<sup>nd</sup> metatarsomeres are widely enlarged and drawn forth, the 3<sup>rd</sup> metatarsomeres are linked to the 2<sup>nd</sup> metatarsomeres on their upperside; the 4<sup>th</sup> metatarsomeres are connected to the 3<sup>rd</sup> ones normally at the apex. The other characters of this genus are in accordance with those of *Amarygmus*. The mandibles are apically bifid.

#### Spathulipezus miritarsis Gebien, 1920 (Fig. 19A-H)

Spathulipezus miritarsis Gebien, 1920: 458-459.

**Diagnosis.** Of medium size (but length is markedly variable between specimens). Ovate. Elytra with striae which are formed by closely set, small punctures. Intervals very slightly convex, rather densely punctate with very small punctures. Pronotum with small and densely set punctures. Frons not very wide. Antennae rather long. Legs long and slender. Femora towards second third somewhat club-like widened. The outside of pro- and mesotibiae slightly concave in  $\Im \Im$ ; pro- and mesotibiae slightly bent in  $\Im \Im$ . Metatibiae bent in both sexes.

Length: 6.45-9.16 mm. Width: 3.66-5.49 mm. Ratios. Pronotum: width/length 1.73-1.96; width hind corners/width front corners 1.88-1.94. Elytra: length/width 1.39-1.46; length elytra/length pronotum 3.65-4.04; maximum width elytra/maximum width pronotum 1.45-1.51.

Colour. Upperside dark brown, slightly lustrous. Underside blackish brown; legs and antennae somewhat lighter brown than underside.

Material. Salomon Ins.; Type No. 709; (label with black margin): Spathulipezus miritarsis Geb., Type!; (a label with red margin which probably had been added on later because Gebien did not label holotypes): Holotypus; Spathulipezus miritarsis Gebien 1920 (holotype, ♂, NMHUB) - Solomon Is., Buka I.: Gagan, 40 m, VI-15-1964, J. L. Gressitt Collector (1 ♂ BMH) - Solomon Is., Florida Is., Nggela I., Haleta, 0-100 m, 7.X.1964, Sago stumps, R. Straatman Collector (1 ♂ BMH) - Solomon Is., Bougainville (S.), Boku, 50 m, VI-4-1956, J. L. Gressitt Collector (1 ♀ BMH) - Solomon Is., Guadalcanal, Gold Ridge, 500 m, VI-25-1956, J. L. Gressitt Collector (1 ♀ BMH) - Solomon Is., Vella Lavella, Pusisama, 24.XI.1963, P. J. Shanahan Collector (1 ♂ BMH) - Solomon Islands; Bougainville Island, Konga Village (Buin), 6.3.-21.3.1961, W. W. Brandt (1 ♂ ANIC).

#### Discussion

All *Amarygmini* from the Solomon Islands belong to groups which are typical for the Papuan fauna. This means that no single species could be found which was transgreding from the Oriental faunal area to the Solomon Islands

Concerning the high degree of diversity of forms and species of the *Amarygmini* on New Guinea the *Amarygmini* of the Solomon Islands show an impoverishment of species and forms. However, I guess that collection activities on the Solomon Islands had not been targeted towards the collection of the night active *Amarygmini* as it had been on New Guinea, especially within the last 20 years. Small *Amarygmus* are nearly lacking within the material which I had to evaluate from the Solomon Islands. On New Guinea and also within the Oriental fauna there is a high diversity of small to tiny species down to 2 mm of length. I guess that small *Amarygmus* are also present on the Solomon Islands, and, if they could be included, the number of *Amarygmus* species could easily be doubled.

It is remarkable that no species of the genus *Chalcopteroides* Strand, 1935 has been found on the Solomon Islands yet despite a great number of species are occurring in Australia and several of them have also been found on New Guinea.

Apart from two species with a very large range of distribution, *A. hydrophiloides* Fairmaire, 1849 and *A. orientalis* (Fairmaire, 1883), I found only one species which is occurring as well on the islands of the Bismarck as on the islands of the Solomon Archipelago (*Amarygmus egenus* Bremer, 2002). However, related species of both Archipelagoes are *A. salomonis* Gebien, 1920, *A. fordi* sp. n., *A. lividus* sp. n., *A. propensus* sp. n., *A. alius* sp. n. (on the Solomon Islands) and *A. melusinae* Bremer, 2002 (from the Bismarck Archipelago). Other examples are *A. rufidorsis* Pic, 1915, *A. nigroopacus* Gebien, 1920, *A. externus* sp. n., *A. virtus* sp. n. (on the

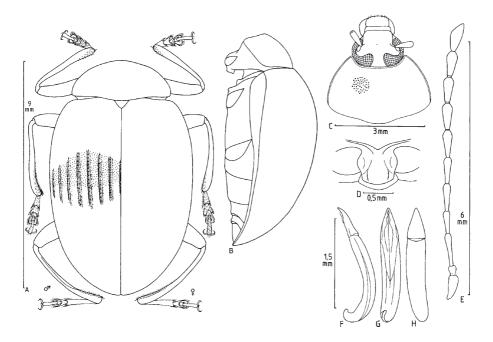


Fig. 19: Spathulipezus miritarsis Gebien, 1920: A Habitus, left side legs ♂, right side legs ♀; B Body lateral; C Head and pronotum; D Prosternal apophysis; E Antenna; F Aedeagus lateral; G Aedeagus ventral; H Aedeagus dorsal.

Solomon Islands) and *A. buehleri* Heller, 1933/34, *A. helleri* Bremer, 2002 (on the Bismarck Archipelago); furthermore *A. honestus* Bremer, 2008 (Solomon Islands) and *A. morio* (Fabricius, 1775) which shows a wide distribution within the Pacific and Australo-Papuan faunal areas.

A. pauper **sp. n.** is closely related to a group of similarly looking small species of New Guinea and Ceram (e. g. A. horaki Bremer, 2001, A. assimilis Bremer, 2001) which I already revised (Bremer 2001c).

Most of the species seem to be endemic for these islands of the Solomon Archipelago. Exceptions are:

- A. orientalis (Fairmaire, 1883): This species is also found on Vanuatu islands, on islands of the Bismarck Archipelago, on New Guinea, and on islands of the Moluccas.
- A. hydrophiloides Fairmaire, 1849: It shows a distribution covering most of the Pacific islands, the islands of the Bismarck Archipelago, New Guinea, the islands of the Moluccas, recent records also from Australia and Sri Lanka, old records from New Zealand and Madagascar;
- A. parallelus Kaszab, 1958: Beside Bougainville it is also present on New Guinea.
- A. egenus Bremer, 2002: Beside a record from Guadalcanal it has been found on New Ireland and New Britain (Bismarck Archipelago.

Habitats: Unfortunately, most specimens from the Solomon Islands carry no label indicating the conditions of collections or the habitat. The few examples are:

- collection at light: A. honestus Bremer, 2008, A. nigroopacus viciscornis sp. n., A. (Hyperamarygmus) securiger sp. n.;
- collection on a cocus log: A. orientalis (FAIRMAIRE, 1883);
- on a trunk of a cacao tree: A. virtus sp. n.;
- on a trunk of *Poinciana regia*: A. greensladei Bremer, 2008;
- under thin bark of a dead felled tree: A. greensladei Bremer, 2008;
- on a Sago stump: Spathulipezus miritarsis Gebien, 1920.

One has to assume that the majority of specimens are active at night, and they should be looked for at night on the bark of trees, on timber, and on timber decayed by fungi.

#### Acknowledgements

I want to thank the following colleagues for allowing to study the types and for evaluating the material which is topic of the present investigation: Maxwell V. L. Barclay, London, Dr. Claude Girard, Paris, Dr. Ottó Merkl, Budapest, Dr. Eva Sprecher, Basel, T. A. Weir, Canberra. I also thank Mr. Frank Forman, Stemwede, who performed the drawings of the specimens.

I have especially to thanks are Dr. Ottó Merkl who encouraged me to continue the revision of the Papuan *Amarygmini* which Dr. Zoltán Kaszab started, and he always had been very helpful to get type material for comparison on loan.

#### Zusammenfassung

Die Amarygmini der Inseln des Solomonen-Archipels werden revidiert. Eine kurze Charakterisierung der Eigenschaften wird von folgenden, schon früher beschriebenen Arten gegeben: Amarygmus cuprarius iodicollis Guérin-Méneville, 1830, A. egenus Bremer, 2002, A. greensladei Bremer, 2008, A. honestus Bremer, 2008, A. hydrophiloides Fairmaire, 1849, A. nigroopacus Gebien, 1920, A. orientalis (Fairmaire, 1883), A. rufidorsis Pic, 1915, A. salomonis Gebien, 1920, A. violatinctus Bremer, 2008, Amarygmus zoltani Bremer, 2005 und Spathulipezus miritarsis Gebien, 1920. Fundorte dieser Arten werden mitgeteilt, und es werden, soweit bisher keine Abbildungen dieser Arten vorlagen, Abbildungen geliefert. Erstmalig auf den Solomon-Inseln wurden nachgewiesen: Amarygmus cuprarius iodicollis Guérin-Méneville, 1830, A. egenus Bremer, 2002 und A. orientalis (Fairmaire).

Folgende neue Arten werden beschrieben und abgebildet (in Klammern die Inseln, auf denen diese Arten gefunden wurden): Amarygmus adversus sp. n. (Bougainville), Amarygmus alius sp. n. (Kolombangara), Amarygmus browni sp. n. (Guadalcanal), Amarygmus externus sp. n. (Russels, Kolombangara, Santa Ysabel), Amarygmus fordi sp. n. (Bougainville, Fauro, San Cristoval, Santa Ysabel, Guadalcanal), Amarygmus gressitti sp. n. (Guadalcanal), Amarygmus lividus sp. n. (Guadalcanal), Amarygmus nigroopacus viciscornis ssp. n. (Choiseul, Nggela, New Georgia group, Santa Ysabel, San Cristoval, Fauro, Savo, Russels, Florida group, Guadalcanal), Amarygmus pauper sp. n. (Bougainville), Amarygmus propensus sp. n. (Bougainville), Amarygmus remotus sp. n. (Savo, Guadalcanal), Amarygmus (Hyperamarygmus) securiger sp. n. (Guadalcanal, Gizo, Small Nggela, Bougainville), Amarygmus shanahani sp. n. (Vella Lavella), Amarygmus virtus sp. n. (Gruppe der New Georgia-Inseln), Amarygmus virtus kolombangaraensis ssp. n. (Kolombangara-Insel der New Georgia-Gruppe).

Taxonomische Änderung: *Amarygmus nigroopacus* Gebien, 1920 [stat. rehabil.] nec *Amarygmus rufidorsis* Pic, 1915.

Eine Bestimmungstabelle der Arten der Amarygmini der Solomon-Inseln wird vorgestellt.

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Jahr/Year: 2009

Band/Volume: 099

Autor(en)/Author(s): Bremer Hans-Joachim

Artikel/Article: Revision of the genus Amarygmus DALMAN, 1823 and related genera. Part LV. The Amarygmini of the Solomon Archipelago (Coleoptera:

Tenebrionidae: Amarygmini). 45-90