

Mitt. Münch. Ent. Ges.	102	5-34	München, 15.10.2012	ISSN 0340-4943
------------------------	-----	------	---------------------	----------------

Revision of the genus *Amarygmus* DALMAN, 1823 and related genera (LXIV).

The species of the genera *Amarygmus* DALMAN and *Cerysia* BREMER of Sulawesi. Part III

(Coleoptera: Tenebrionidae: Amarygmini)

Hans J. BREMER

Abstract

This paper continues the revision of the genus *Amarygmus* DALMAN and related genera of Sulawesi of which parts I and II have already been published. It provides new collection data of described species, the description of seven new species, and an extended determination key of the species of *Amarygmus* DALMAN, 1823 and *Cerysia* BREMER, 2004 of Sulawesi.

The following new species are described and illustrated: *Amarygmus* (*Amarygmus*) *ceucharis* **sp. n.**, *Amarygmus* (*Amarygmus*) *connatus* **sp. n.**, *Amarygmus* (*Amarygmus*) *imitator* **sp. n.**, *Amarygmus* (*Amarygmus*) *laetus* **sp. n.**, *Amarygmus* (*Amarygmus*) *reliquus* **sp. n.**, *Amarygmus* (*Amarygmus*) *sulciceps* **sp. n.**, and *Amarygmus* (*Amarygmus*) *vitiosus* **sp. n.**

New records for Sulawesi are *Amarygmus* (*Amarygmus*) *baluensis* PIC, 1951 and *Amarygmus* (*Amarygmus*) *sumbaensis* BREMER, 2005.

Amarygmus (*Amarygmus*) *bipartitus* Bremer, 2004, hitherto only known from Sulawesi, also occurs on Sumba Island (Smaller Sunda Islands).

Introduction

The tribe Amarygmini contains many genera in the Oriental and Papuan regions. But only three of them are known to be present on Sulawesi: *Amarygmus* DALMAN, 1823, *Cerysia* BREMER, 2001 and *Plesiophthalmus* MOTSCHULSKY, 1857. In the parts I and II of the revision of the genera *Amarygmus* DALMAN and *Cerysia* BREMER of Sulawesi (BREMER 2004a+b) I redescribed and illustrated formerly known species from Sulawesi. Moreover, I described new species and provided a determination key of *Amarygmus* and *Cerysia*. The genus *Plesiophthalmus* MOTSCHULSKY of the Palaearctic and Oriental regions has been revised by MASUMOTO (1988-1991); in this revision only one specimen of one species is mentioned to occur on Sulawesi. It is a species affine *Plesiophthalmus insignis* (PASCOE, 1871). Because this specimen is a female, a more precise classification was impossible.

During the last years I received newly collected material for evaluation. Descriptions of new species, present in this material, are the main topic of this paper. Additionally new records of species formerly unknown from Sulawesi are announced. An extended determination key of *Amarygmus* and *Cerysia* is provided. It includes the newly described and newly documented species

Currently we know 49 species of *Amarygmus* from Sulawesi of which 40 are probably endemic, additionally 1 species of *Cerysia* and 1 species of *Plesiophthalmus*.

Morphometry

“Body length” corresponds to distance between middle of frontal edge of pronotum and apices of elytra, “body width” to maximum width across elytra; “length of elytra” to distance between base of scutellum and apices of elytra; “length of pronotum” to distance between middle of their anterior and posterior edges when both edges are on the same level.

Acronyms of collections

BMNH = Museum of Natural History, London, U. K.

CA = Collection of Dr. K. ANDO, Osaka, Japan

CM = Collection of Prof. Dr. K. MASUMOTO, Tokyo, Japan

CS = Collection of A. SKALE, Hof/Saale, Germany

CW = Collection of A. WEIGEL, Wernburg, Germany

NME = Naturkundemuseum Erfurt, Germany

SMNS = Staatliches Naturkundemuseum, Stuttgart, Germany

SSB = Collection of S. BEČVÁŘ, České Budějovice, Czech Republic

ZSM = Zoologische Staatssammlung, Munich, Germany

Data on the labels

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

Description of new species

Amarygmus (Amarygmus) ceucharis sp. n.

(Fig. 1A-E)

Holotype, ♀, ZSM: Indonesia, C. Sulawesi, Toro, Kec. Kulawi, UTM 51 S, (WGS-84) X 9832664, Y 168724, Alt. 815 m, cacao plantation, understorey, fogging, 3.V.2005, Coll. M. M. Bos, 6c030505, spec.19.

Diagnosis. Of medium size, elongate oval. Elytra with rows of medium-sized punctures and flat intervals. Frons relatively wide. Antennae relatively short. Legs short; protibiae moderately bent, meso- and metatibiae markedly bent. Elytra violet to brown reddish, but also green at different incidence of light, somewhat lustrous; pronotum and frons green, lustrous.

Amarygmus ceucharis resembles *A. conspectus* BREMER, 2004 (2004a, 40-42). This species also possesses an elongate oval shape, a similar colouration, bent tibiae, but it is larger (body length 6.73-7.13 mm), the punctures of the elytral rows are larger, the frons is narrower, and the upper side is more opaque. Another species with an elongate oval shape and a similar colouration is *A. connatus* sp. n.; *A. connatus* is somewhat smaller than *A. ceucharis* sp. n. (body length 4.75-5.97 mm); it displays elytral striae and not rows of punctures as *A. ceucharis* does; the frons of *A. connatus* is markedly narrower than the frons of *A. ceucharis*, and pro- and mesotibiae are not bent in *A. connatus*.

Annotation. When the holotype was figured and described the antennae and legs had been in good order; they became damaged when the specimen was removed from the plate where it had been glued.

Description. Body length: 6.13 mm. Body width: 3.18 mm.

Ratios. Pronotum: width/length 1.85; width between hind corners/width between front corners 1.62. Elytra: length/width 1.60; length elytra/length pronotum 3.76; maximum width elytra/maximum width pronotum 1.27.

Colouration. Upper side, see “Diagnosis”. Underside brown, lustrous. Femora dark brown, tibiae, tarsomeres black,

Head. Frons relatively wide, approximately as wide as lengths of antennomeres 3-5 jointly; with minute, not very closely set punctures. Lateral margins of genae only slightly raised, they anteriorly terminate well in front of the level of the middle part of fronto-clypeal suture. Fronto-clypeal suture allusively incised in the middle, not impressed. Clypeus shortly stretched forwards, only laterally slightly bent downwards, punctures minute and somewhat closer set than on frons. Mentum reversely trapezoidal, with flat, narrow, lustrous lateral margins; space in between opaque, slightly convex transversely. Underside of neck with closely set punctures of medium size. Mandibles sulcated on outer surface, apically bifid.

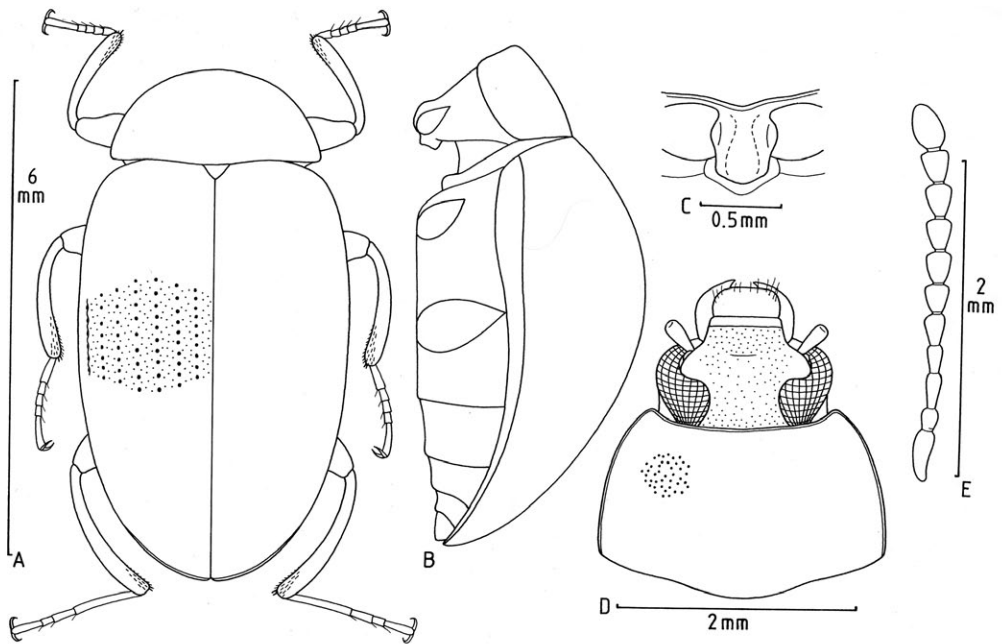


Fig. 1: *Amarygmus (Amarygmus) ceucharis* sp. n.: **A** Habitus, ♀; **B** Body, lateral view; **C** Prosternal apophysis; **D** Head and pronotum; **E** Antenna.

Pronotum. Relatively narrow; convex transversely, slightly convex longitudinally. Widest at base; anteriorly narrowing and slightly bent. Hind corners in dorsal view angular, very obtuse; front corners rounded, Anterior margin slightly excavated. Lateral and anterior margins continuously bordered. Lateral borders in dorsal view narrowly visible. Front and hind corners in lateral view equally obtuse, front ones rounded, hind ones not clearly angular. Surface with small, distinct, not very closely set punctures.

Scutellum. Triangular, impunctate.

Elytra. Elongate oval. Markedly convex transversely, moderately convex longitudinally. Maximum of height and width at the beginning of second third. Shoulders rounded, slightly accentuated. Apices of elytra mutually rounded. Lateral edges in dorsal view visible in the hind third. Surface with rows of medium-sized punctures, their distances on disc in row 4 equal to 1- to 1½-time the diameter of a puncture. Intervals on disc flat, laterally allusively convex, with tiny, distinct, widely separated punctures.

Prosternum. Anterior margin continuously and narrowly bent upwards, slightly retracted towards apophysis at the middle. Apophysis nearly horizontal, lateral margins slightly widened along procoxae and raised; space in between with a shallow, wide, median groove; sides posterior to procoxae subparallel, apex rounded.

Mesosternum. Hind part short, opaque. Anterior margin of hind part widely and deeply excavated in the middle.

Metasternum. Anterior margin between mesocoxae rounded, bordered. Anterior ¼ of metasternum with large, relatively widely separated punctures. Median line impressed in the hind third of disc.

Sternites. Anterior margin between metacoxae ogive; its border thick and lifted. Sternites 1+2 with scattered small punctures; otherwise impunctate.

Antennae. Reaching over 20 percent of elytra. Length/width ratio of antennomeres 1-11 equals to 15:7 / 6:5 / 10:5 / 8:5 / 9:7 / 9:8 / 10:8½ / 11:8½ / 11:8½ / 10:8½ / 16:8½.

Legs. Short. Femora towards second third club-like broadened. Tibiae, see "Diagnosis". Lengths of protarsomeres 1-5 as 5:4:4:4:19; lengths of mesotarsomeres 1-5 as 14:7:7:5:19; lengths of metatarsomeres 1-4 as 34:12:6:18.

Etymology. Ceucharis (Lat.); ceu (Lat.) = just as; charis (Greek), from χαίρῃς = delight.

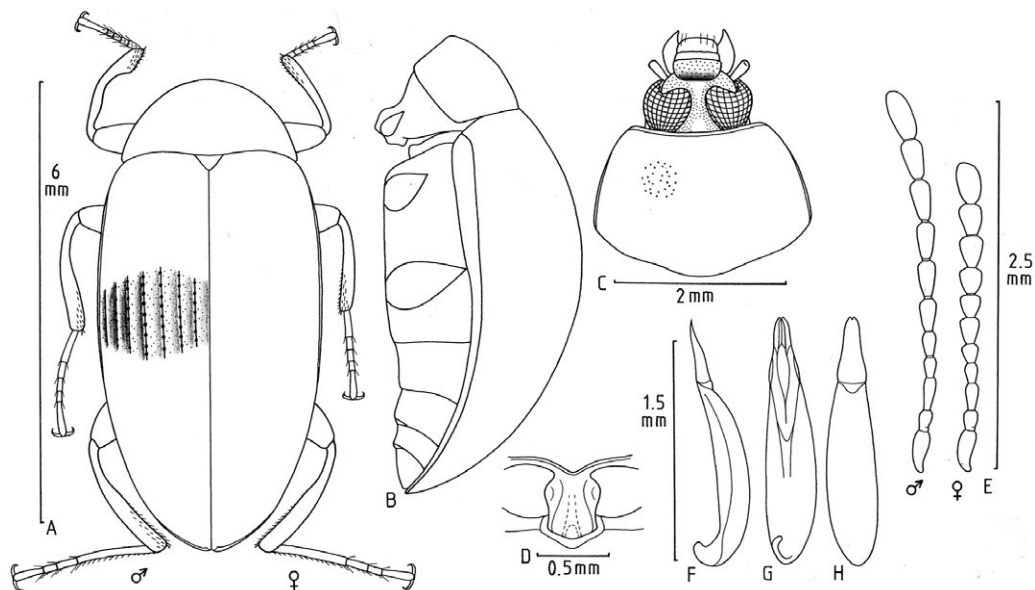


Fig. 2: *Amarygmus (Amarygmus) connatus* sp. n.: **A** Habitus, left side legs of ♂, right side legs of ♀; **B** Body, lateral view; **C** Head and pronotum; **D** Prosternal apophysis; **E** Antennae, ♂ and ♀; **F** Aedeagus, lateral view; **G** Aedeagus, ventral view; **H** Aedeagus, dorsal view.

***Amarygmus (Amarygmus) connatus* sp. n.**

(Fig. 2A-H)

Holotype, ♂, ZSM: Indonesia, UMS 15; C. Sulawesi, Toro, Kec. Kulawi, alt. 810 m, (WGS-84) X 9832081, Y 170129, cacao plantation, understorey, fogging, 18.IV.2005, Coll. M. M. Bos, 1c180405f (photo 246).

Paratypes: Indonesia, C. Sulawesi, Kab. Dongala, Toro, alt. 750-1000 m, 1°30'S-120°02'E, cacao plantation, planted Fabec. shade, off *T. cacao*, fogging, (sample code and date): F 3.V.2005, Coll. M. M. Bos, 6c030505 F, Te 45 (1 ♀ ZSM). – Indonesia, C. Sulawesi, Kab. Dongala, Toro, alt. 750-1000 m, 1°30'S-120°02'E, cacao plantation, planted Fabec. shade, off *T. cacao*, fogging, (sample code and date): F 18.IV.2005, Coll. M. M. Bos; 1C180405 F, Te 46 (1 ♀ ZSM). – Indonesia, UMT 51 S, C. Sulawesi, Toro, Kec. Kulawi, alt. 815, (WGS-84) X 9833613, Y 170666, cacao plantation, understorey, fogging, 8.II.2004, Coll. M. M. Bos, 5c080204 e (photo 239), Tenebrionidae, *Amarygmus* (cf) spec. 44♂ (1 ♂ ZSM). – Indonesia, UMT 51 S, C. Sulawesi, Toro, Kec. Kulawi, alt. 815, (WGS-84) X 9832664, Y 168724, cacao plantation, understorey, fogging, 3.V.2005, Coll. M. M. Bos, Tenebrionidae, *Amarygmus* (cf), spec. 45, 4c030505 f (photo 238) (1 ♂ ZSM). – Indonesia, C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, cacao plantation, planted Fabec. shade, off *T. cacao*, fogging, (sample code and date): F 29.XII.2003, Coll. M. M. Bos (1 ♂, antennae missing, ZSM).

Diagnosis. Elongate oval. Of medium size. Elytra with striae, elytral intervals flat to slightly convex on disc. Frons relatively narrow. Antennae of medium length. Protibiae in males abruptly bent on inner side, anteriorly thence the protibiae are thickened. Elytra reddish brown, somewhat metallic, with a greenish interval 1; pronotum filthy green or dark blue, legs black. Very long metatarsomere 1.

Belongs to a group of species with special characters on legs in males; these species occur on Java, Bali, Sumba, Sulawesi and New Guinea (see BREMER 2005a); already known species of this group from Sulawesi are *Amarygmus viridilineatus* GEBIEN, 1935 (redescription and illustration: BREMER 2004a, 36-37), *A. ceucharis* sp. n. and *A. wallacei* BREMER, 2004 (2004a, 38-40).

A. connatus is smaller than *A. viridilineatus* (body length of *A. viridilineatus* 8.27-8.60 mm), the elytral stripes are better observable in *A. viridilineatus*, the elytrae display rows of punctures in *A. viridilineatus* and not striae as in *A. connatus*, the basal part of aedeagus of *A. connatus* is narrower than that of *A. viridilineatus*.

Concerning distinguishing from *A. ceucharis* sp. n., see *A. ceucharis*.

A. wallacei is also larger than *A. connatus* (body length of *A. wallacei* 6.44 mm); elytra and pronotum are uniformly green and lustrous in *A. wallacei* (colouration of *A. connatus*, see above), the elytra have rows of punctures instead of striae, the base of aedeagus is wider.

A species of this group with elytral striae is *A. longior* BREMER, 2005 (2005a, 194-196) from Java and Bali. In contrast to *A. connatus* **sp. n.** *A. longior* displays a uniformly black upper side and - in males - there are rows of short, closely set, projecting hairs on the frontal side of profemora and on the back on meso- and metafemora; moreover, it is larger (body length 7.25-8.12 mm),

Description. Body length: 4.75-5.97 mm. Body width: 2.37-2.97 mm.

Ratios. Pronotum: width/length 1.73-1.81; width hind corners/width front corners 1.62-1.73. Elytra: length/width 1.67-1.78; length elytra/length pronotum 3.81-4.04; maximum width elytra/maximum width pronotum 1.31-1.36.

Colouration. Colour of elytra, pronotum and legs, see "Diagnosis". Underside black. Antennomeres 1+2 dark brown, 3-11 black.

Head. Frons relatively narrow, as wide in both sexes, width equals in a male to length of antennomere 3; in its hind part of frons with closely set, minute punctures, in its frontal part with a few minute punctures. Genae barely raised, anteriorly terminating somewhat in front of the level of the middle part of fronto-clypeal suture. Fronto-clypeal suture moderately impressed in its middle part. Clypeus is situated on a lower level than frons, it is short; its punctures are larger than those of frons. Mentum reversely trapezoidal, with flat, lustrous lateral margins; space in between markedly convex. Underside of neck with minute, indistinct, closely set punctures. Mandibles with a longitudinal sulcus on outer surface; apically bifid.

Pronotum. Narrow. Markedly convex transversely, moderately convex longitudinally. Widest at base; anteriorly narrowing and bent. Hind and front corners in dorsal and lateral view rounded, obtuse. Anterior margin straight. Lateral and anterior margins bordered. Lateral borders in dorsal view narrowly visible in the hind 60 percent. Surface with small, not very widely separated punctures.

Scutellum. Triangular; with a few minute punctures.

Elytra. Elongate, oval. Markedly convex transversely, moderately convex longitudinally. Maximum of width and height somewhat in front of middle. Shoulders somewhat accentuated. Apices of elytra mutually rounded. Lateral edges in dorsal view narrowly visible. Surface with somewhat incised striae with small, round punctures; their distances on disc in stria 4 equal to about 2-times diameter of a puncture. Intervals on disc slightly convex, laterally moderately convex, covered with minute, distinct punctures.

Prosternum. Anterior margin continuously and narrowly bent upwards, trough-like retracted towards apophysis in the middle. Apophysis somewhat widened along procoxae, button-like raised, space in between with a relatively wide median groove; posterior to procoxae somewhat descending and with straight lateral margins, these lateral margins are nearly as wide as the lateral margins along procoxae; apex nearly straight.

Mesosternum. Anterior margin of hind part slightly excavated in the middle.

Metasternum. Anterior margin between mesocoxae rounded, bordered. Within the anterior apophysis with a few small punctures, otherwise metasternum nearly impunctate. Median line distinctly impressed and somewhat incised.

Sternites. Anterior margin between metacoxae ogive, bordered. Sternites 1-5 impunctate. Sternite 5 in males postero-medially with a clear depression and laterally on each side with a shallow depression.

Antennae. Reaching over one third of elytra in males, in females antennae shorter. Length/width ratio of antennomeres 1-11 in a male equals to 11:6 / 7:4½ / 9:4 / 7½:4 / 8:5 / 11:7 / 11:7½ / 11:7½ / 12:7½ / 12:7½ / 16:8, in a female of the same size to 11:5½ / 6:4½ / 8:4½ / 5:4½ / 5:5 / 7:7 / 8:7 / 8:7 / 7:7 / 14:8.

Legs. Femora towards second thirds club-like thickened. Tibiae and tarsi thin. Protibiae in males within the basal half straight and thin, abruptly bent in the middle and thence straight and thickened on inner side; protibiae in females nearly straight. Mesotibiae in males moderately bent in basal third, thence straight, slightly thickened on inner 60 percent; mesotibiae in females with the same shape but without the inner thickening. Metatibiae moderately bent in both sexes. Protarsomeres 1-3 not widened in males, but 1-4 with a brush-like pilosity on soles. Lengths of protarsomeres 1-5 as 5:5:5:5:21; lengths of mesotarsomeres 1-5 as 21:10:7:7:21; lengths of metatarsomeres 1-4 as 44:15:7:20.

Etymology. *Connatus* (Lat.) = born at the same time or on the same location.

Amarygmus (Amarygmus) imitator **sp. n.**

(Fig. 3A-H)

Holotype, ♂, ZSM: Indonesia, C. Sulawesi, Kab. Donggala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, cacao plantation, planted Fabec. shade, off T. cacao, fogging, (sample code and date): F 3.V.2005, leg. M. Bos; Ten. 7c, 5C030505 F.

Paratypes. Same data as holotype (1 ♀ ZSM) – Indonesia, C. Sulawesi, Kab. Donggala, village Toro, alt. 835 m, UMT 51 S, (WGS-84) X 9834756, Y 170497, from *T. cacao* under leguminose shade, canopy fogging, 06C1712003 F,

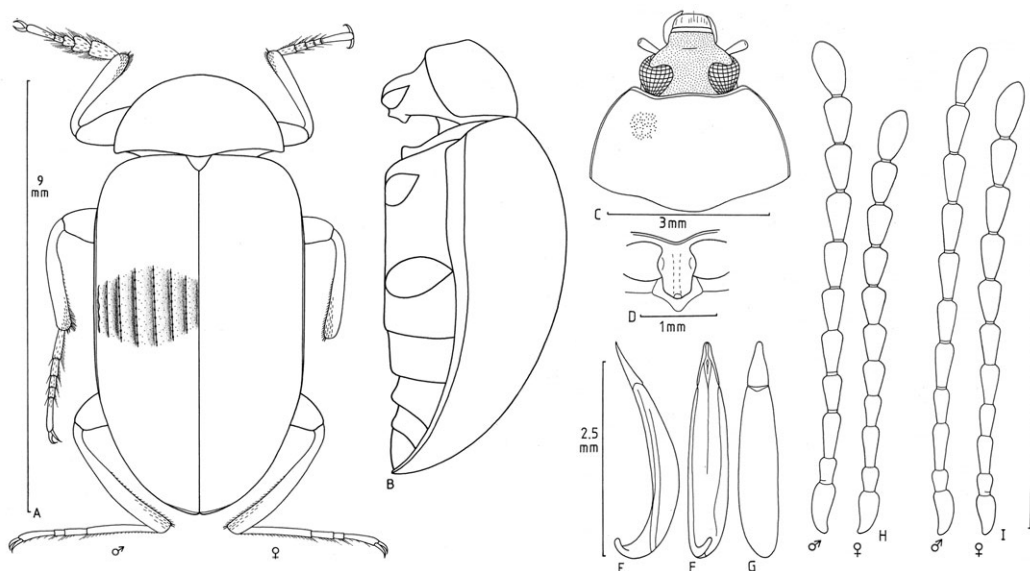


Fig. 3: *Amarygmus (Amarygmus) imitator* sp. n.: **A** Habitus, left side legs of ♂, right side legs of ♀; **B** Body, lateral view; **C** Head and pronotum; **D** Prosternal apophysis; **E** Aedeagus, lateral view; **F** Aedeagus, ventral view; **G** Aedeagus, dorsal view; **H** Antennae, ♂ and ♀; **I** *Amarygmus (Amarygmus) festivus* BREMER, 2004: Antennae, ♂ and ♀.

Date: 17.XII.2003, Coll. M. M. Bos, Ten 7c (1 ♂ ZSM) – Indonesia, C. Sulawesi, village Toro, Kab. Donggala, alt. 815 m, UMT 51 S, (WGS-84): X 9833613, Y 170666, from *T. cacao* under diverse planted shade, canopy fogging, 04C241203 E, Date: 24.XII.2003, Coll. M. M. Bos, 04C241203 E, Ten. 7c (1 ♂ ZSM) – Indonesia, C. Sulawesi, Toro, 1°30'S-120°02'E, alt. 750-1000 m, cacao plantation, planted Fabec. shade, off *T. cacao*, fogging, (sample code and date): F 29.XII.2003, Coll. M. Bos, Ten. 7c (1 ♀ ZSM) – Indonesia, C. Sulawesi, Kab. Donggala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, cacao plantation, planted Fabec. shade, off *T. cacao*, fogging, (sample code and date): F 13.II.2004, Coll. M. Bos, Ten.7c (1 ♂ ZSM) – Indonesia, C. Sulawesi, Kab. Donggala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, cacao plantation, planted Fabec. shade, off *T. cacao*, fogging, (sample code and date) F 3.VI.2005, leg. M. Bos, Ten. 7c, 6C030505 F (1 ♀ ZSM). – Indonesia, C.- Sulawesi, 20 km NE Palu, ca 3 m W Tawaeli, 170 m, 0°43'58"S-119°55'30"E, 3.III.2009, leg. A. WEIGEL (1 ♂ NME).

Diagnosis. Of medium length. Elongate, narrow, elytra with subparallel sides between shoulders and hind third. Frons of medium width, in females wider than in males. Antennae of medium length, in males longer than in females. Protarsomeres 1-3 very wide in males with a tendency to become narrower from 1 to 3. Membranes between sternites 3 and 4 and 4 and 5 very broad in males, and postero-medially sternite 5 impressed in males.

Amarygmus imitator resembles *A. festivus* BREMER, 2004 (2004b, 189-192) concerning body shape, size, width of frons, sexual dimorphisms on legs and sternites, moreover, the length of antennae is the same in males of both species. However, the elytra of *A. festivus* are elongate-oval (Fig. 10B), the lateral margins of *A. imitator* are subparallel (Fig. 10A); the elytral intervals of the disc of *A. festivus* are nearly flat to slightly convex, those of *A. imitator* are more convex; the lengths of antennae of females of *A. imitator* are definitely shorter than those of *A. festivus*; the elytral colour of *A. imitator* is reddish brown, that of *A. festivus* is mostly blue, green or dark violet.

Description. Body length: 8.12-8.44 mm. Body width: 4.22-4.30 mm.

Ratios. Pronotum: width length 1.71-1.86; width hind corners/width front corners 1.78-1.91. Elytra: length/width 1.57-1.64; length elytra/length pronotum 3.58-3.77; maximum width elytra/maximum width pronotum 1.28-1.29.

Colouration. Pronotum on a green ground with intensive violet, yellow, blue iridescence; elytra on a reddish brown ground with intensive violet, yellow and blue iridescence. Underside black. Frons greenish blue, genae and clypeus black. Legs dark brown to black. Antennomeres 1+2 dark brown, 3-11 black.

Head. Frons of medium width, in females wider than in males; in males width equals to length of antennomere 3 as 12:9; in females as wide as lengths of antennomeres 3+4 jointly; covered with minute punctures. Genae slightly raised, anteriorly terminating somewhat in front of the level of the middle part of fronto-clypeal suture. Fronto-clypeal suture slightly incised in its middle part. Clypeus moderately stretched forward, punctures more distinct than on frons. Mentum anteriorly widening, with bent lateral margins and a rounded transition between lateral margins and basal margin; lateral margins flat, lustrous; space in between moderately convex transversely, opaque. Mandibles sulcated on outer surface, apically bifid.

Pronotum. Relatively narrow and short; markedly convex transversely, less convex longitudinally. Widest at base; anteriorly narrowing, in the hind half with straight margins, in the frontal half rounded. Hind corners angular, angle about 100° in dorsal and lateral view; front corners rounded in dorsal and lateral view. Anterior margin straight. Lateral and anterior margins bordered. Lateral borders in dorsal view narrowly visible in the hind half. Surface with small, distinct, closely set punctures.

Scutellum. Triangular; impunctate.

Elytra. Oblong, Shape, see "Diagnosis". Markedly convex transversely, moderately convex longitudinally. Maximum of height somewhat in front of middle. Shoulders slightly accentuated. Apices of each elytron inconspicuously retracted towards median suture. Lateral edges in dorsal view very narrowly visible posterior to shoulders. Slightly incised striae with small, round, narrowly set punctures; their distances on disc in row 4 are approximately 1 diameter of a puncture. Intervals on disc slightly convex, laterally and near apex moderately convex; with minute, distinct punctures.

Prosternum. Anterior margin narrowly bent upwards, widely interrupted in the middle. Apophysis slightly ascending between anterior margin and level along procoxae, and slightly descending posterior to procoxae; apophysis widened along procoxae, and the lateral margins are raised there, space in between with a moderately deep median groove; lateral margins behind procoxae subparallel and slightly lifted; apex widely pointed and with a small "nose" in the middle.

Mesosternum. Anterior margin of hind part excavated at midlength. Surface of hind part smooth.

Metasternum. Anterior margin between mesocoxae rounded, faintly bordered. Disc of metasternum nearly impunctate. Median line somewhat impressed within hind quarter.

Sternites. Anterior margin between metacoxae ogive, faintly bordered. Discs of sternites 1+2 with a few small, indistinct punctures. Sternite 5 postero-medially impressed and depression circumvented with long, recumbent, posteriorly directed hairs.

Antennae. Reaching over 35 percent of elytra in males, over 20 percent of elytra in females. Length/width ratio of antennomeres 1-11 equals in a male to 8:4½ / 5½:4 / 9:3½ / 8:4 / 10:4 / 9:4½ / 11:5½ / 12:5½ / 11:5½ / 10:5½ / 13:6, in a female to 7:3½ / 4:3 / 8:3½ / 6:4 / 7:4½ / 7:5 / 7½:5 / 8:5 / 8:5 / 8:5 / 10½:5½.

Legs. Of medium length. Femora towards second thirds club-like thickened. Protibiae in the basal half slightly bent, in the apical half straight; mesotibiae moderately bent and anteriorly somewhat thickened, in the males more thickened than in the females and with a small area of semi-erect, closely set hairs of medium length on inner side near apex; metatibiae moderately bent. Shape of tarsomeres, see Fig. 3A. Lengths of protarsomeres 1-5 in a male as 10:9:6:3:15; lengths of mesotarsomeres 1-5 as 14:9:6:4:14; lengths of metatarsomeres 1-4 as 30:10:6:15.

Etymology. Imitator (Lat.) = imitator.

Amarygmus (Amarygmus) laetus sp. n.

(Fig. 4A-E)

Holotype, female, ZSM: Indonesia/C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, fogging, leg. M. Bos; cacao plantation, planted Fabec. shade, off *T. cacao*, (sample code and date): F 14.IV.2005.

Paratype: 14.IV.2005, Toro, Kec. Kulawi, C. Sulawesi, Indonesia, UTM 51 S, (WGS-84) X 9834756, Y 170497, Alt. 835 m, Tenebrionidae (cf), sp. 5d♀, M. M. Bos (1 female ZSM).

Diagnosis. Small; short elytra, markedly convex; short pronotum with rounded front corners; frons wide; elytra with rows of medium-sized punctures and flat intervals; legs short, meso- and metatibiae distinctly bent. Elytra greenish blue with a slight iridescence, pronotum also greenish blue but the blue component is more intensive; femora and tibiae dark brown, tarsi light brown.

In size, colour, width of frons and shape *A. laetus* is resembling *A. discretus* BREMER, 2004 (2004a, 43-44) which also occurs on Sulawesi; but *A. discretus* presents less bent meso- and metatibiae, a more oval shape, upper side of head and pronotum show a much more distinct, closer and, on head, a nearly scarred punctation, and their elytral intervals are not as smooth as in *A. laetus*.

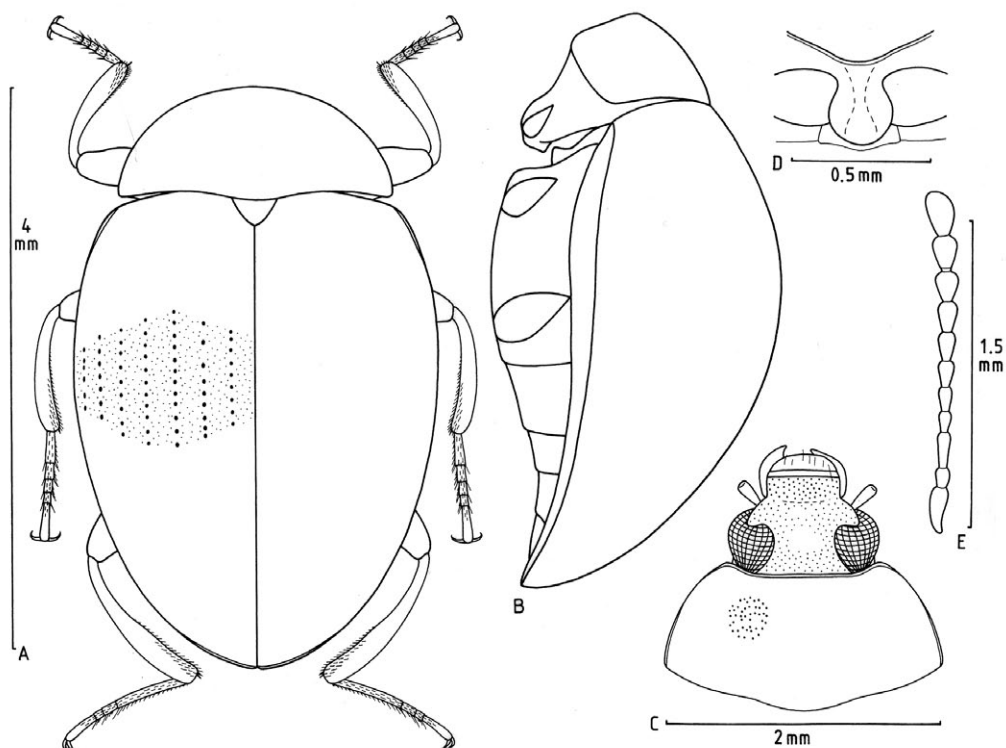


Fig. 4: *Amarygmus (Amarygmus) laetus* sp. n.: **A** Habitus, ♀; **B** Body, lateral view; **C** Head and pronotum; **D** Prosternal apophysis; **E** Antenna.

Description. Body length: $3.77+3.81$ mm. Body width: $2.41+2.53$ mm.

Ratios. Pronotum: width/length $2.09+2.16$, width hind corners/width front corners $1.70+1.76$. Elytra: length/width $1.22+1.29$; length elytra/length pronotum $3.59+3.64$; maximum width elytra/maximum width pronotum $1.34+1.37$.

Colouration. Upper side and legs, see “Diagnosis”, upper side of elytra and pronotum somewhat lustrous; upperside of head dark brown; antennomeres 1-7 yellowish brown, 8-11 dark brown to black. Underside brown, lustrous except sternites 4+5 which are nearly black.

Head. Frons wide; width equals to length of antennomeres 3-5 jointly; with indistinct, not very closely set punctures. Genae only slightly raised and therefore not easily separable from frons; anteriorly terminating in front of the level of the middle part of fronto-clypeal suture. Fronto-clypeal suture barely incised in the middle. Clypeus short, slightly convex transversely; its punctures small and somewhat more distinct and narrower than on frons. Mentum reversely trapezoidal; lateral margins flat, lustrous; space in between more opaque, somewhat convex transversely. Underside of neck with small, indistinct, not very closely set punctures. Mandibles on outer surface sulcated, apically bifid.

Pronotum. Wide. Moderately convex transversely, little convex longitudinally. Widest at base; lateral margins narrowing towards front corners, straightly narrowing within hind 65 percent, somewhat bent within frontal 35 percent. Hind corners in dorsal and lateral views angular, moderately obtuse; front corners in dorsal and lateral views rounded. Anterior margin slightly excavated. Lateral and anterior margins continuously bordered. Lateral borders in dorsal view continuously visible. Surface with small, relatively closely set, not very distinct punctures.

Scutellum. Triangular. With a few tiny punctures.

Elytra. Short; markedly convex transversely and longitudinally; maximum width and height slightly in front of middle. Shoulders rounded. Apices of elytra mutually rounded. Lateral edges very narrowly visible on shoulders. Surface with rows of unconnected, medium-sized punctures which become evanescent near

apex; their distances on disc in row 4 equal to diameter of a puncture; about 29 punctures in row 4. Intervals flat, with fine, moderately closely set punctures.

Prosternum. Anterior margin continuously and narrowly bent upwards. Apophysis oval and relatively narrow; median groove shallow.

Mesosternum. Hind part of mesosternum with rough lateral margins and a smooth middle; its anterior margin excavated in the middle.

Metasternum. Anterior margin between mesocoxae rounded, bordered. Anterior apophysis between mesocoxae closely punctured; rest of metasternum covered with distinct, minute, clearly separated punctures. Median line neither incised nor impressed.

Sternites. Anterior margin between metacoxae ogive, bordered. Sternites with tiny, widely separated punctures.

Antennae. Relatively short; reaching over a quarter of elytra. Length/width ratio of antennomeres 1-11 equals to $10:4\frac{1}{2} / 4\frac{1}{2}:3 / 8:3 / 5:3\frac{1}{2} / 6:4 / 7:4\frac{1}{2} / 7\frac{1}{2}:5 / 7\frac{1}{2}:5 / 7:5 / 12:5\frac{1}{2}$.

Legs. Short. Femora towards second thirds club-like thickened. Protibiae slightly bent; meso and metatibiae markedly bent. Lengths of protarsomeres 1-5 as 3:3:3:3:12; lengths of mesotarsomeres 1-5 as $9\frac{1}{2}:5:4:4:12$; lengths of metatarsomeres 1-4 as 22:6:4:12.

Etyymology: Laetus (Lat.) = cheerful.

Amarygmus (Amarygmus) reliquus sp. n.

(Fig. 5A-E)

Holotype, female, ZSM: Indonesia/Sulawesi, Kab. Dongala, Toro, $1^{\circ}30'S-120^{\circ}02'E$, 750-1000 m, fogging, leg. M. Bos, natural forest, off understorey tree, (sample code and date) A 29.IV.2005; Te 58 (left foreleg, right antennomeres 7-11 missing).

Diagnosis. Small, ovate; elytra markedly convex transversely, moderately convex longitudinally, with slightly incised striae with medium-sized striae punctures; elytral intervals on disc flat. Frons relatively wide. Antennae of medium length. Upper side dark green, very lustrous; legs and antennae yellowish brown.

Concerning shape, size somewhat similar to *A. sulciceps* sp. n., but, in contrast to *A. reliquus*, *A. sulciceps* possesses elytral rows of punctures and not elytral striae, its fronto-clypeal suture is markedly more incised, the colour of upper side is dark blue, and the femora, tibiae and antennae are dark, nearly black.

The same size and colouration is found in *A. aemulus* BREMER, 2004 (2004a, 33-36). Only the male holotype is known of this species. *A. aemulus* possesses characteristic particularities on inner sides of mesotibiae in males. Frons and clypeus of *A. aemulus* are on the same level (the clypeus of *A. reliquus* is on a lower level than the frons); the genae terminate anteriorly in front of the level of the middle part of fronto-clypeal suture (in *A. reliquus* the genae terminate anteriorly at the level of the middle part of fronto-clypeal suture); the body shape of *A. aemulus* is oval (of *A. reliquus* ovate); elytra with rows of medium-sized punctures in *A. aemulus* (faint striae with medium-sized punctures in *A. reliquus*); prosternal apophysis oval and somewhat elongate (shorter in *A. reliquus*).

Description. Body length: 3.93 mm. Body width: 2.41 mm.

Ratios. Pronotum: width/length 1.95; width hind corners/width front corners 1.72. Elytra: length/width 1.37; length elytra/length pronotum 3.86; maximum width elytra/maximum width pronotum 1.44.

Colouration. Upper side, legs, antennae, see "Diagnosis". Scutellum dark brown. Underside brown, lustrous; it is contrasting with the yellowish brown femora.

Head. Frons relatively wide, slightly wider than length of antennomere 3 (like 14:12); somewhat convex longitudinally; with small, relatively widely separated punctures. Genae moderately raised, anteriorly terminating at the level of the middle part of fronto-clypeal suture. Fronto-clypeal suture impressed in its middle part, and clypeus is situated on a lower level than frons. Clypeus short, very slightly convex transversely; punctures on clypeus somewhat more distinct and larger than those of frons, they are the origin of tiny hairs. Mentum widened anteriorly, with bent and flat lateral margins; space in between slightly convex transversely, opaque. Underside of neck with medium-sized punctures. Mandibles sulcated on outer surface, apically bifid.

Pronotum. Clearly convex transversely, slightly convex longitudinally. Widest at base, anteriorly narrowing and bent. Hind corners allusively rounded, obtuse; front corners rounded. Anterior margin nearly straight. Lateral and anterior margins continuously bordered. Lateral borders in dorsal view narrowly visible within hind 60 percent, invisible within frontal 40 percent. Front corners in lateral view rounded, obtuse, hind corners angular, obtuse. Surface with small, distinct, moderately closely set punctures.

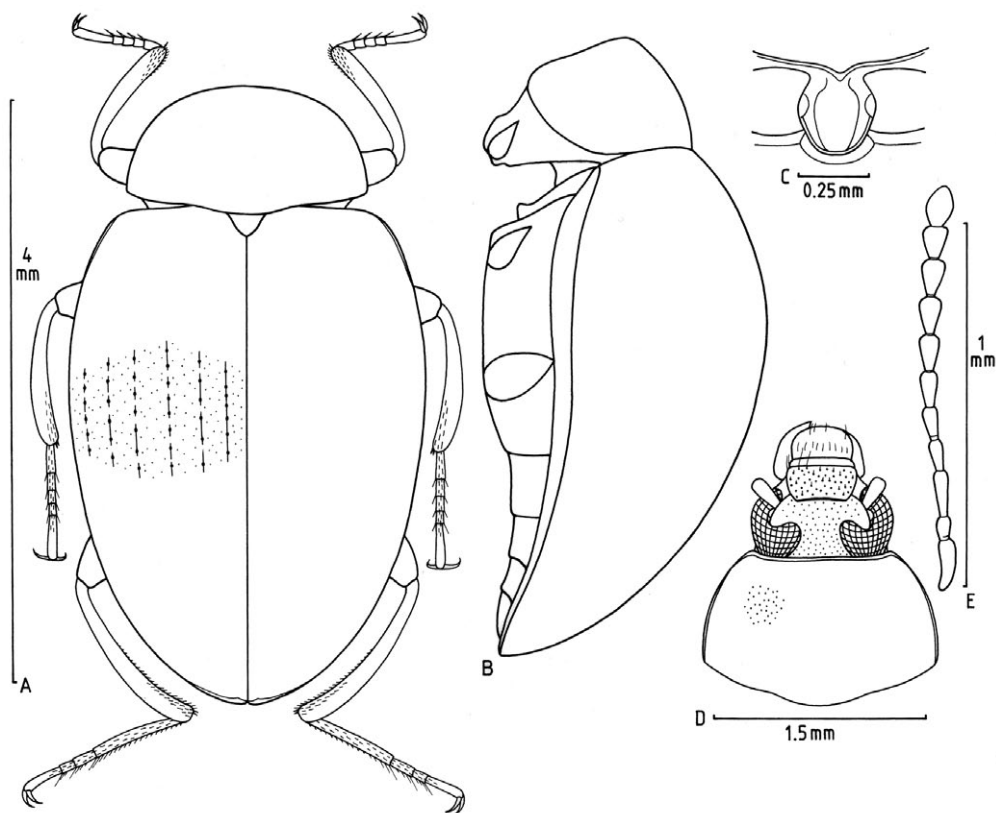


Fig. 5: *Amarygmus (Amarygmus) reliquus* sp. n.: **A** Habitus, ♀; **B** Body, lateral view; **C** Prosternal apophysis; **D** Head and pronotum; **E** Antenna.

Scutellum. Triangular; with a few tiny punctures.

Elytra. Ovate. Shape, see "Diagnosis". Maximum of width and height at the end of first third. Shoulders outlined dorsad. Apices of elytra mutually rounded. Lateral edges in dorsal view very narrowly visible in frontal half. Surface with faint striae and medium-sized strial punctures which become evanescent near apex, their distances on disc in row 4 equal to 1- to 2-times diameter of a puncture, about 24 punctures in stria 4. Intervals on disc flat, laterally allusively convex; with widely separated, minute punctures.

Prosternum. Anterior margin narrowly bent upwards laterally; a short keel is branching off anterior margin in the middle. Apophysis short, nearly as wide as long; along procoxae lateral margins somewhat button-like raised; space in between with a wide, shallow median groove; behind procoxae margins are narrowing roundedly to apex.

Mesosternum. Hind part short, wide. Anterior margin of hind part shallowly excavated in the middle.

Metasternum. Anterior margin between mesocoxae rounded, bordered. Frontal apophysis with an uneven surface; disc with widely separated, minute punctures. Median line neither incised nor impressed.

Sternites. Anterior margin between metacoxae ogive, bordered. Sternites impunctate (at 50-fold magnification), but with short, thin hairs.

Antennae. Of medium length; reaching over 40 percent of elytra. Length/width ratio of antennomeres 1-11 equals to 10:7 / 6:4 / 12:3½ / 9:4 / 8:4 / 9:4½ / 10:5½ / 9:6 / 9:6 / 8½:6 / 14:7.

Legs. Short. Femora towards second thirds club-like thickened. Protibiae slightly bent, mesotibiae moderately bent; metatibiae markedly bent. Lengths of protarsomeres 1-5 as 3:3:3:3:14; lengths of mesotarsomeres 1-5 as 9:6:4½:4:14; lengths of metatarsomeres 1-4 as 25:9:5:16.

Etymology. Reliquus (Lat.) = being left.

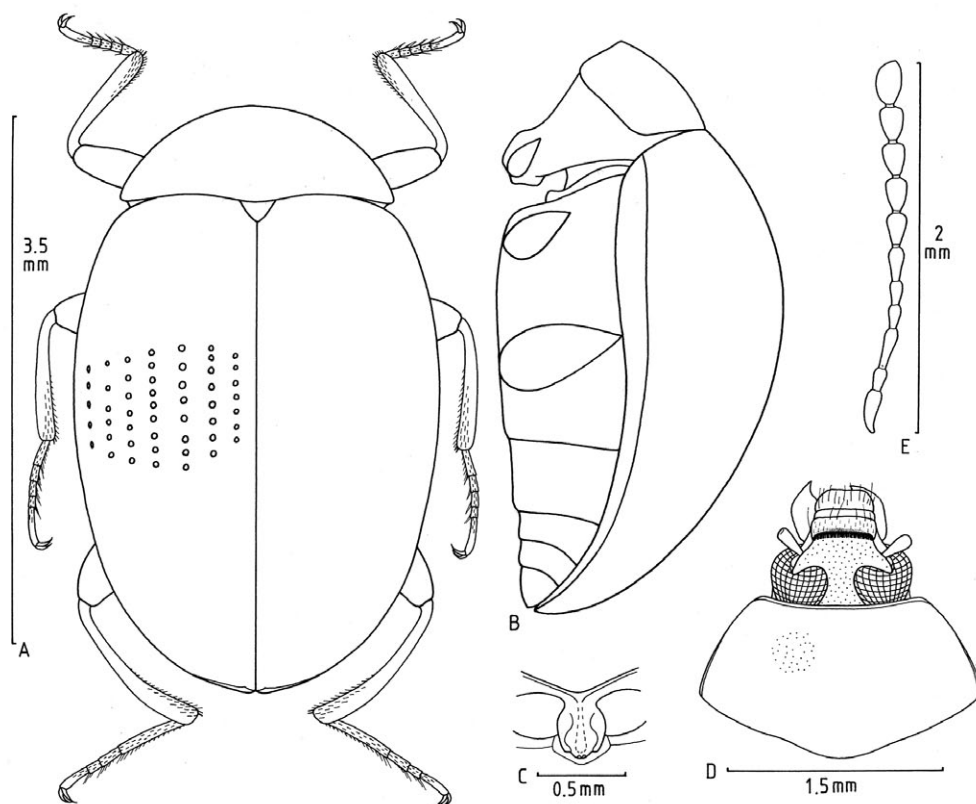


Fig. 6: *Amarygmus (Amarygmus) sulciceps* sp. n.: **A** Habitus, ♀; **B** Body, lateral view; **C** Prosternal apophysis; **D** Head and pronotum; **E** Antenna.

***Amarygmus (Amarygmus) sulciceps* sp. n.**

(Fig. 6A-E)

Holotype, female, ZSM: Indonesia, C. Sulawesi, Toro, Kec. Kulawi, 3.V.2005, alt. 850 m, UTM 51S, (WGS84) X 9832664 Y 168724, Tenebrionidae (cf), sp. 5b, 8.II.2004, M. M. Bos, 2005, Cacao plantation, understorey, fogging 3c030505f (photo 270), coll. M. M. Bos.

Diagnosis. Small, oval; elytra with rows of medium-sized punctures and flat intervals. Frons of medium width; fronto-clypeal suture extremely deeply incised with frons and genae forming a mutual border towards the suture; antennae of medium length; legs short. Elytra dark blue, lustrous, in view from the front with a slightly green to purple iridescence. Pronotum blue, lustrous; femora and tibiae dark brown.

Concerning shape, size, and form of fronto-clypeal suture *Amarygmus sulciceps* is resembling *A. cephalotes* BREMER, 2010 (pp.173-175) from Borneo, but the colour of upper side in dark blue in *A. sulciceps*, in *A. cephalotes* it is filthy green; the maximum of width of elytra is shortly behind shoulders in *A. cephalotes*, in *A. sulciceps* it is at the middle, the elytral punctures of the rows are somewhat larger, and they are somewhat more distantly set in *A. cephalotes* than in *A. sulciceps*, the elytra are more compact in *A. cephalotes* than in *A. sulciceps*; the mutual border of frons and genae towards fronto-clypeal suture is bent in *A. cephalotes*, that of *A. sulciceps* is straight.

Description. Body length: 3.66 mm. Body width: 2.33 mm.

Ratios. Pronotum: width/length 1.96; width hind corners/width front corners 1.70. Elytra: length/width 1.31; length elytra/length pronotum 3.50; maximum width elytra/maximum width pronotum 1.30.

Colouration. Elytra dark blue, lustrous, in view from the front slightly green to purple iridescent. Pronotum blue, lustrous. Frons and genae green; clypeus dark brown. Underside dark brown. Femora and tibiae dark brown, tarsi brown. Antennomeres 1-4 brown, 5-11 black.

Head. Frons of medium width, width equals to length of antennomere 3; frons and genae form a mutual plain level, they are steeply descending to the fronto-clypeal sulcus, and from frons and genae short hairs of different length are projecting over the incised suture; frons and genae are covered with small, distinct punctures. Fronto-clypeal suture extends over the whole width of head. Clypeus short, markedly convex longitudinally, with small, not very closely set punctures. Mentum widening anteriorly, lateral margins flat, lustrous, bent, with a rounded transition between lateral margins and base; space in between opaque, slightly convex transversely. Underside of neck with large, transversely fusing punctures. Mandibles on outer surface with a longitudinal sulcus, apically bifid.

Pronotum. Short. Convex transversely, slightly convex longitudinally. Widest at base. Markedly narrowing anterior, straight margins within posterior 60 percent, bent within anterior 40 percent. Hind corners angular, moderately obtuse; front corners rounded. Anterior margins slightly excavated. Lateral and anterior margins continuously bordered. Lateral borders in dorsal view visible. Front corners in lateral view broadly rounded, obtuse, hind corners angular, obtuse. Surface with small, distinct, irregularly and not very closely set punctures.

Scutellum. Triangular; impunctate.

Elytra. Oval. Markedly convex transversely, moderately convex longitudinally. Maximum of width and height somewhat in front of middle. Shoulders slightly accentuated. Apices of elytra mutually rounded. Lateral edges in dorsal view narrowly visible within the hind third. Surface with rows of medium-sized, distinct punctures not connected by lines; their distances equal 1- to 2-times diameter of a punctures on disc in row 4, about 30 punctures in row 4. Intervals flat, impunctate.

Prosternum. Anterior margin continuously and narrowly bent upwards, slightly retracted towards apophysis in the middle. Apophysis oval, but with a widely pointed apex; lateral and apical margins narrowly bordered; median groove shallow.

Mesosternum. Hind part very short, its anterior margin deeply excavated in the middle.

Metasternum. Anterior margin between mesocoxae rounded, bordered. Anterior part of metasternum with large punctures; posterior part with minute punctures; these punctures are the origin of short, semi-erect hairs. Median line neither incised nor impressed.

Sternites. Anterior margin between metacoxae ogival, bordered. Sternites with minute punctures which are the origin of short, semi-erect hairs.

Antennae. Of medium length, reaching over one third of elytra. Length/width ratio of antennomeres 1-11 equals to 11:4 / 6:3½ / 13:3½ / 7:3½ / 8:3½ / 10:5½ / 11:6½ / 11:6½ / 10:7 / 9:7 / 13:7½.

Legs. Femora towards second thirds club-like thickened. Tibiae tender, protibiae straight, mesotibiae slightly bent; metatibiae in basal half straight, in apical half slightly incurved.

Etymology. Sulcus (Lat.) = incision; ceps = abbreviated form of cephalon, head.

***Amarygmus (Amarygmus) vitiosus* sp. n.**

(Fig. 7A-E)

Holotype, female, ZSM: 3.V.2005, Indonesia, C. Sulawesi, Kec. Kulawi, Toro, UTM 51 S, (WGS-84): X9832664, Y168724, Alt. 815 m, Cacao Plantation, Understorey, Coll. M. M. Bos, fogging, Bc030505f (photo 254); Tenebrionidae, *Amarygmus* (cf.) sp. 48, ♀, M. M. Bos.

The type specimen was glued on a plate and intact when I received it. But at handling it in order to inspect the underside it became obvious that the membranes were macerated and the head, pronotum and elytra disintegrated; by remounting the antennomeres 8-11 got lost, additionally the left foreleg, and the protarsomeres 2-5.

Diagnosis. *A. vitiosus* sp. n. is of medium size; elongate, slightly oval. All tibiae are uniformly bent; elytra with rows of small to medium-sized, relatively closely set punctures which partly are connected by faint lines; elytral intervals flat on disc. Frons of medium width. Antennae short. Upper side dark coppery, legs and antennae black.

Similar to *A. conspectus* BREMER, 2004 (2004a, 40-42) which also occurs on Sulawesi. *A. conspectus* displays about the same size, a similar shape, it also shows rows of elytral punctures, uniformly bent tibiae, and the same width of frons. *A. conspectus* differs from *A. vitiosus* by distinctly larger and more impressed punctures of the elytral rows, by more oval elytra which are more lustrous and which shows more intensively colourful reflections.

Description. Body length: 7.88 mm. Body width: 4.14 mm.

Ratios. Pronotum: width/length 2.10; width hind corners/width front corners 1.75. Elytra: length/width 1.60; length elytra/length pronotum 4.15; maximum width elytra/maximum width pronotum 1.24.

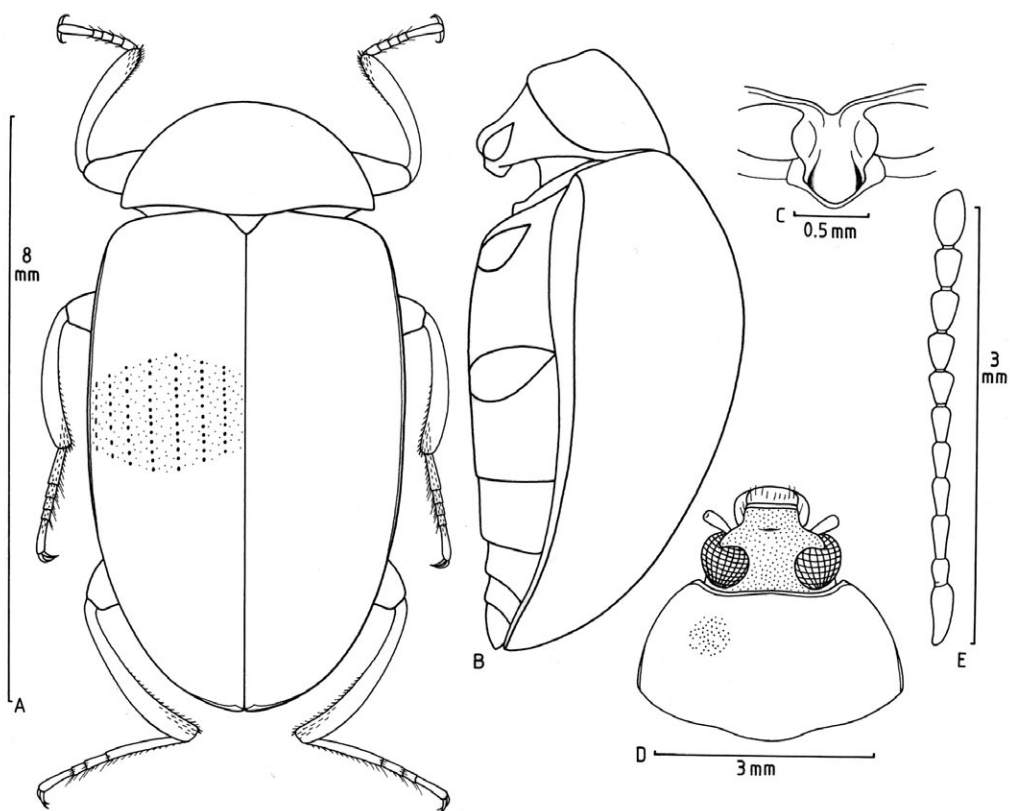


Fig. 7: *Amarygmus (Amarygmus) vitiosus* sp. n.: **A** Habitus, ♀; **B** Body, lateral view; **C** Prosternal apophysis; **D** Head and pronotum; **E** Antenna.

Colouration. Upperside dark coppery, slightly lustrous and with slightly coloured reflections; pronotum more lustrous, greenish, and with more intensive colourful reflections than elytra. Frons green, lustrous, genae and clypeus black. Underside lustrous, black. Legs black. Antennomeres 1+2 dark brown, 3-11 black. Head. Frons of medium width, clearly wider than length of antennomere 3 (like 25:15), covered with minute, not very closely set punctures. Genae separated from frons by their slight convexity; they terminate anteriorly somewhat in front of the level of the middle part of fronto-clypeal suture. Fronto-clypeal suture only slightly incised in the middle part. Clypeus relatively short, nearly flat, punctured as frons. Mentum widened anteriorly, with somewhat bent lateral margins; lateral margins flat, lustrous; space in between opaque, somewhat convex transversely. Underside of neck with small, closely set punctures. Mandibles with a longitudinal groove on outer surface, apically bifid.

Pronotum. Narrow; markedly convex transversely, slightly convex longitudinally. Maximum of width at base; sides are bent and narrowed to the front. Hind corners in dorsal view obtuse and nearly rounded; front corners rounded. Anterior margin somewhat excavated. Lateral and anterior margins continuously bordered. Lateral borders in dorsal view narrowly visible in the posterior half only. Hind and front corners in lateral view angular and with an angle of about 105°. Surface with small, distinct, irregularly set punctures.

Scutellum. Ogive, impunctate.

Elytra. Elongate, slightly oval. Markedly convex transversely, moderately convex longitudinally. Maximum of width and height at the end of first third. Shoulders accentuated, rounded, somewhat obtuse. Apices of elytra mutually rounded. Lateral edges in dorsal view very narrowly visible. Surface with rows of slightly impressed, mostly small punctures which on disc are relatively closely set in row 4, about 50 punctures in row 4. Intervals on disc flat, laterally slightly convex, with minute, not very closely set punctures.

Prosternum. Anterior margin narrowly bent upwards laterally, this border is interrupted in the middle. Apophysis laterally widened along prococxae, and its lateral margins somewhat raised; space in between with a shallow, wide, median groove; posteriorly the lateral margins are straight, subparallel, with a slightly lifted lateral edge, space in between with a slight convexity transversely; apex rounded.

Mesosternum. Hind part short, narrowing towards base, lateral margins somewhat lifted; anterior margin distinctly excavated in the middle.

Metasternum. Anterior margin between mesocoxae rounded, bordered. Anterior part of disc with distinct, medium-sized, not too closely set punctures; posterior part impunctate. Median line neither incised nor impressed.

Sternites. Anterior margin between metacoxae ogive, bordered. Sternites slightly opaque, with irregular, chagreen-like surface, without clear punctures.

Antennae. Short, thin; slightly overlapping base of elytra. Length/width ratio of antennomeres 1-10 equals to 19:7 / 8:6 / 15:6 / 12:6 / 14:6 / 12:8 / 11:9 / 13:9 / 14:9 / 13:9.

Legs. Femora moderately club-like broadened towards second third. Pro- and mesotibiae uniformly and distinctly bent. Metatibiae also bent. Lengths of mesotarsomeres 1-5 as 9:6:4:3:11; lengths of metatarsomeres 1-4 as 22:7:6:12.

Etymology. Vitiosus (Lat.) = defective.

Newly collected material of formerly described species

Cerysia celebensis (BLAIR, 1929)

Elixota celebensis BLAIR, 1929: 245.

Cerysia celebensis (BLAIR, 1929): BREMER 2004a, 72.

New Material: N-Sulawesi, 1 km W Toraut, Damoga Bone N. P., 0°33'43''N-123°54'38''E, clearing at riverside, leg. A. SKALE (1 CS). – C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, 750-1000 m, cacao plantation, mixed planted shade, off T. cacao, fogging, 1.I.2004, M- M. Bos leg. (1 ZSM).

Amarygmus (Amarygmus) andoi BREMER, 2004

Amarygmus andoi BREMER. 2004: 2004a, 17-20.

New material: C-Sulawesi, W. of Wotu, Bonebone env., V.1999, local collector (1 ♂ SSB). – C. of S. Sulawesi, Luwu, Puncak Palopo, Salu-Bua, 18.-19.I.2000, BECCE GALA leg. (1 ♂ CA). – S-Sulawesi, Palopo env., Puncak, V.1999, loc. collector (1 ♂ ZSM).

In ZSM there are three female specimens from Sumba Is. which are either *A. andoi* BREMER, 2004 or *A. wiedemanni* BREMER, 2004.

Amarygmus (Amarygmus) baluensis PIC, 1951

Amarygmus baluensis PIC, 1951: 15.

Redescription and illustration: BREMER 2004c: 14-15, fig. p.57.

Material: S. Sulawesi, Puncak, Palopo, 2.I.2000, K. ANDO leg. (1 ♂ CA).

Annotation: First record for Sulawesi; formerly only known from Borneo.

Amarygmus (Amarygmus) bipartitus Bremer, 2004

Amarygmus bipartitus Bremer, 2004: 2004b, 186-189.

New material: Sumba East, Kananggar env., 600-800 m, 10.II.2001, P. VOTRUBA lgt. (1 ♀ ZSM).

Note: This species was formerly only known from Sulawesi. Beside *A. sumbaensis* Bremer, 2005 this is the second species which occurs on Sulawesi and on Sumba.

Amarygmus (Amarygmus) cuprarius cuprarius (WEBER, 1801)

Helops cuprarius WEBER, 1801: 40.

Amarygmus cuprarius (WEBER, 1801): GEMMINGER et DE HAROLD 1870, 2023.

Redescription, illustration and synonyms: BREMER 2005b, 54.

New Material: N-Sulawesi, 1 km W Toraut, Dumoga Bone N. P., 0°34'17''N-123°54'19''E, 200-300 m, leg. A. WEIGEL (3 NME). - C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, cacao plantation, mixed planted shade,

off *T. cacao*, fogging, 2C060505 E, Te 42, E 6.V.2005, leg. M. Bos (1 ZSM). - C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, cacao plantation, planted Fabec. shade, off *T. cacao*, fogging, Te 42, 2C180405 F, F 18.IV.2005, leg. M. Bos (1 ZSM). - Indonesia UTM 51 S, C. Sulawesi, Kec. Kulawi, Toro, (WGS-84) X 9832081, Y 170129, alt. 810 m, cacao plantation, understorey, fogging, 2c180451 (photo 256), 18.IV.2005, *Amarygmus* sp. 42, M. M. Bos (1 ZSM).

***Amarygmus (Amarygmus) delectus* BREMER, 2004**

Amarygmus delectus BREMER, 2004: 2004b, 182-184.

New Material: C. Sulawesi, Kec. Kulawi, Toro, UTM 51 S, (WGS-84) X 9835472, Y 170256, alt. 1080 m, Natural forest, understorey, fogging, 20.IV.2005, Coll. M. M. Bos, 4c200405a (photo 227) (1 ♀ ZSM).

***Amarygmus (Amarygmus) discretus* BREMER, 2004**

Amarygmus discretus BREMER, 2004: 2004a, 43-45.

New Material: N-Sulawesi, 1 km W Toraut, Dumoga N. P., 0°34'17''N-123°54'19''E, 200-300 m, 2.II.2006, leg. A. WEIGEL (1 CW). - N-Sulawesi, 4 km E Batu Putih, 150 m, 1°32'54''N-125°07'94''E, 17.II.2009, A. SKALE leg. (1 CS). - Sulawesi bor., 1 km S Sawangan, Flußtal b. River Park Resort, 250-300 m, 1°22.5'S-124°56'56''E, 1.-3.II.2004, leg. A. SKALE (2 ♂ ZSM, 1 ♂ CS, 2 ♀ CS, 1 ♀ ZSM). - C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, 750-1000 m, fogging, leg. M. Bos, cacao plantation, mixed planted shade, (sample code and date): E 28.XII.2003 (4 ZSM). - Same data as before, but E 16.I.2004 (1 ♂ ZSM). - Same data as before, but E 4.II.2004 (3 ZSM). - Same data as before, but E 8.II.2004 (1 ZSM). - Same data as before, but E 12.II.2004 (1 ZSM). - Same data as before, but D 30.IV.2005 (3 ZSM). - Same data as before, but E 6.V.2005 (1 ZSM). - Same data as before, but planted Fabec. shade, off *T. cacao*, F 17.XII.2003 (5 ZSM). - Same data as before, but F 29.XII.2003 (3 ZSM). - Same data as before, but F 2.II.2004 (1 ZSM). - Same data as before, but F 9.II.2004 (2 ZSM). - Same data as before, but 24.XII.2004 (5 ZSM). - Same data as before, but F 1.IV.2005 (1 ZSM). - Same data as before, but F 14.IV.2005 (6 ZSM). - Same data as before, but F 18.IV.2005 (1 ZSM). - Same data as before, but F 3.V.2005 (4 ZSM). - Same data as before, but natural shade, D 26.XII.2003 (2 ZSM). - Same data as before, but 30.XII.2003 (1 ZSM). - C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, 750-1000 m., fogging, Coll. M. Bos, cacao plantation, natural shade, off *T. cacao*, D 22.XII.2003 (1 ZSM). - Same data as before, but D 30.XII.2003 (2 ZSM). - Same data as before, but D 6.II.2004 (1 ZSM). - Same data as before, but D 26.IV.2005 (1 ZSM). - Same data as before, but D 30.IV.2005 (4 ZSM). - Same data as before, but D 6.V.2005, (2 ZSM) - C. Sulawesi, Kab. Donggala, village Toro, UTM 51S, (WGS-84): X9834172, Y169506, 840 m, from *T. cacao* under forest remnants, 30.XII.2003, coll. M. Bos, canopy fogging (1 ZSM). - Sulawesi, Kab. Donggala, village Toro, 815 m, UTM 51 S, (WGS-84): X 9833664, Y 168724, from *T. cacao* under leguminose shade, canopy fogging, 29.XII.2003, Coll. M. M. Bos (3 ZSM). - C. Sulawesi, Keb. Kulawi, Toro, UTM 51 S, (WGS-84): X 9832081, Y 170129, 810 m, 18.IV.2005, Cacao plantation, Understorey, fogging, Coll. M. M. Bos (1 ZSM).

Annotation: *Amarygmus discretus* is probably a somewhat variable species concerning size (body length 3.30-4.80 mm), shape and colour of pronotum (more or less rounded front corners of pronotum; blue or brightly coppery colour of pronotum), more or less bending of metatibiae. I cannot exclude that within the taxon of *A. discretus* (as I determined it) there are two different taxa, but I did not find clear characters for separation.

***Amarygmus (Amarygmus) effulgens* BREMER, 2004** (Fig. 8A-H)

Amarygmus effulgens BREMER, 2004: 2004b, 192-194.

New material: C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, cacao plantation, planted Fabec. shade, off *T. cacao*, (sample code and date) F 18.IV.2005, Coll. M. M. Bos (1 ♀ ZSM). - C. Sulawesi, Toro, Kec. Kulawi, Indonesia, UTM 51 S (WGS-84) X 9832664, Y 168724, Alt. 815 m, Coll. M. M. Bos, cacao plantation, understorey, fogging 4c030505f (photo 211) (1 ♂ ZSM). - C. Sulawesi, Indonesia, Kec. Kulawi, 21.IV.2005, UTM 51 S (WGS-84) X 9833613, Y 170666, alt. 815 m, cacao plantation, understorey, Coll. M. M. Bos, fogging, 5c210405e (photo 213); Tenebrionidae, *Amarygmus* (cf), sp. 76 ♀, M. Bos 2005 (1 ♂ ZSM). - Te 30, 6c030505F, Indonesia, C. Sulawesi, Dongala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, fogging, leg. M. Bos, cacao plantation, Fabec, off *T. cacao*, (sample code and date): F3.V.2005 (1 ♀, 1 ♂ ZSM).

Annotation. Only the female holotype was previously known. Males present markedly widened protasomeres 1-3 as shown in Fig. 8A, additionally broadened intersegmental membranes between sternites 3+4 and between 4+5. Concerning differences between *A. effulgens* and *A. festivus*, see below at *A. festivus*.

***Amarygmus (Amarygmus) festivus* BREMER, 2004** (Fig. 9A-E)

Amarygmus festivus BREMER, 2004: 2004b, 189-192.

Additional material: Sulawesi Selatan, Puncak Palopo, 30.-31.XII.1999, N. OHBAYASHI leg. (1 ♀ CA). - Indonesia, C-Sulawesi, ca. 20 km NE Palu, ca. 5 km W Tawaeli, 250 m, 0°43'45''S-119°55'95''E, 2.III.2009, leg. A. SKALE (019) (1 ♂ ZSM). - C. Sulawesi, Kec. Kulawi, Toro, alt. 845 m, UTM 51 S, (WGS-84) X 9834876, Y 169911, 12.II.2004; ca-

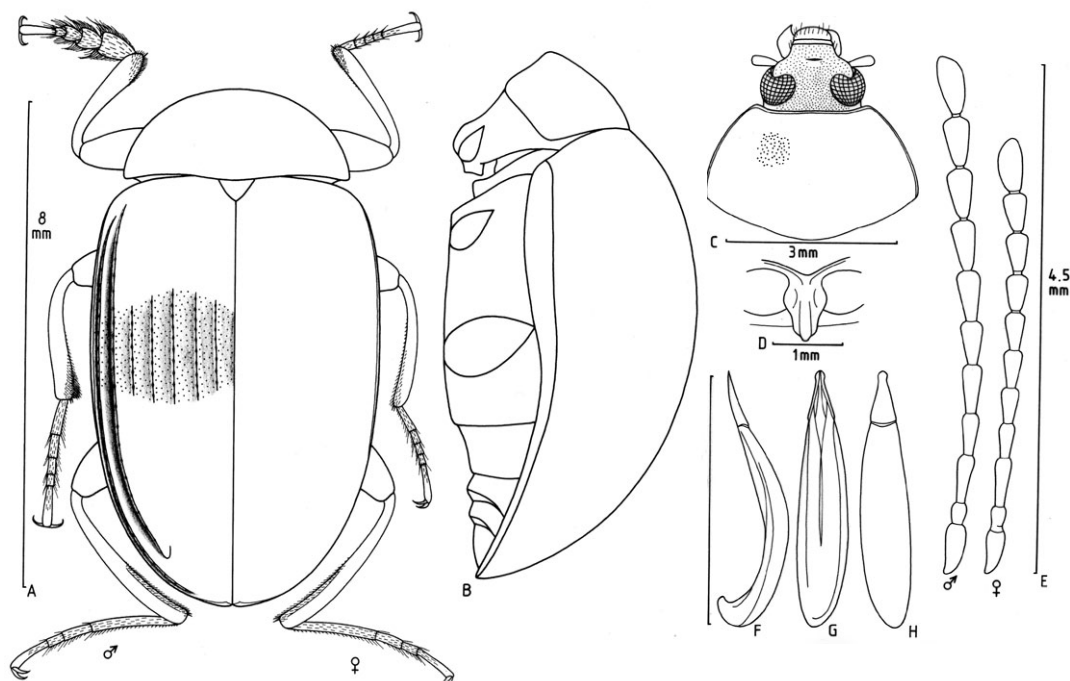


Fig. 8: *Amarygmus (Amarygmus) effulgens* BREMER, 2004: **A** Habitus, left side legs of ♂, right side legs of ♀; **B** Body, lateral view; **C** Head and pronotum; **D** Prosternal apophysis; **E** Antennae, ♂ and ♀; **F** Aedeagus, lateral view; **G** Aedeagus, ventral view; **H** Aedeagus, dorsal view.

cajo plantation; understory, fogging, Coll. M. M. Bos, 3c120204e (photo 264); Tenebrionidae, *Amarygmus* (cf) sp. 31 (1 ♀ ZSM). – Indonesia, C. Sulawesi, Kab. Dongala, 1°30'S-120°02'E, alt. 750-1000 m, fogging, (sample code and date): F17.XII.2003, cacao plantation, planted Fabec. shade, off *T. cacao*, leg. M. Bos (1 ♀ ZSM). – Indonesia, C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, fogging, cacao plantation, natural shade, off *T. cacao*, (sample and date): D 3.II. 2004, leg. M. M. Bos (1 ♀ ZSM).

Additions to “Diagnosis” of the original description: Elongate, slightly oval; elytra with striae and with punctures of medium size within these striae. Frons relatively wide, Antennae of medium length. In males protarsomeres 1-3 very wide, intersegmental membranes between sternites 3 and 4 and between sternites 4 and 5 very broad, and, additionally, postero-medial part of sternite 5 impressed and pilose. Frons of the same width in both sexes. Pronotum with an intensively blue or greenish golden lustre; elytra with interrupted blue and purple stripes on a brownish-golden background.

Because of its elongate shape and its size *A. festivus* has to be delimited from *A. effulgens* BREMER, 2004 (see Figs. 8+9). Both species possess markedly widened protarsomeres 1-3. *A. effulgens* is somewhat larger; its upperside is less colourful than that of *A. festivus*; *A. festivus* and *A. effulgens* possess elytral striae but the elytral punctures of *A. festivus* are well visible while those of *A. effulgens* are barely visible; the pronotum of *A. festivus* displays a violet iridescence.

***Amarygmus (Amarygmus) formosus* BREMER, 2004**

Amarygmus formosus BREMER, 2004: 2004b, 203-205.

Additional material: N. Sulawesi, 1 km W Toraur, Dumoga Bone NP, 200-300 m, 0°34'17"N-123°54'19"E, 2.II.2006, leg. A. WEIGEL (1 ♀ ZSM). – C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, 750-1000 m, fogging, cacao plantation, planted Fabec. shade, off *T. cacao*, F 9.II.2004, Coll. M. Bos (1 ZSM). – Same data as before, but F 3.V.2005 (7 ZSM). – Same data as before, but F 18.IV 2005 (1 ZSM). – Same data as before, but F 25.IV.2005 (2 ZSM). – Same data as before, but 3.VI.2005 (1 ZSM). – Same data as before, but natural shade, off *T. cacao*, D 26.XII.2003 (1 ZSM).

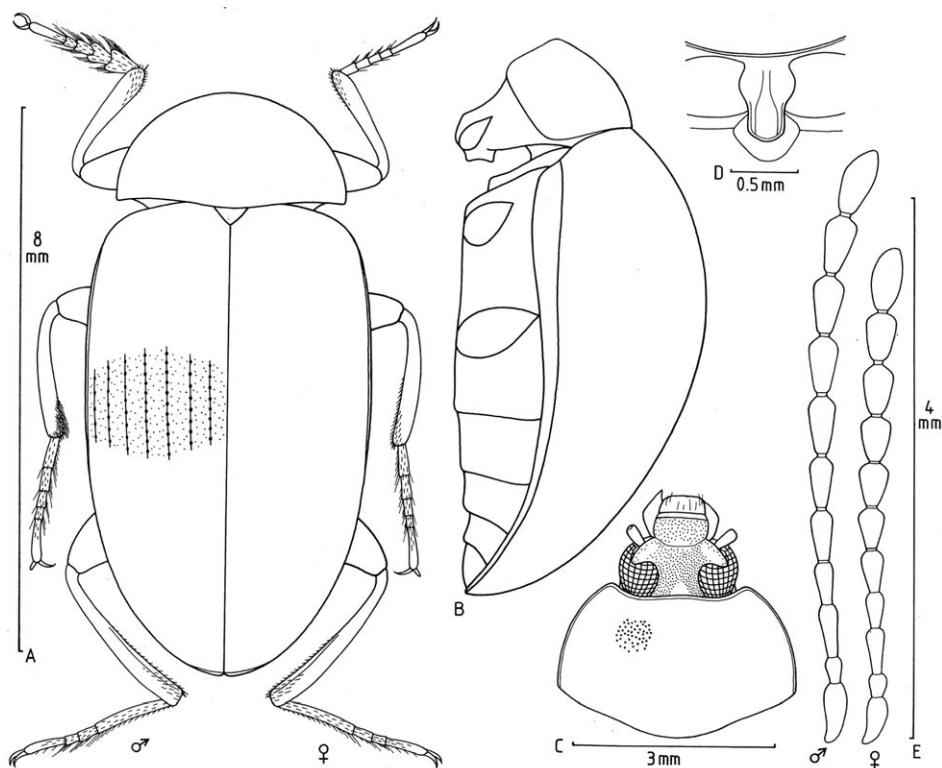


Fig. 9: *Amarygmus (Amarygmus) festivus* BREMER, 2004: **A** Habitus, left side legs of ♂, right side legs of ♀; **B** Body, lateral view; **C** Head and pronotum; **D** Prosternal apophysis; **E** Antennae, ♂ and ♀.

– C. Sulawesi, Kab. Donggala, village Toro, UTM 51 S, (WGS-84): X 9834756, Y 170497, 835 m, from *T. cacao* under leguminose shade, canopy fogging, 17.XII.2003 (1 ZSM). – C. Sulawesi, Kec. Kulawi, Toro, UTM 51 S, 3.V.2005, (WGS-84): X 9832664, Y 168724, 815 m, cacao plantation, understorey, fogging, Coll. M. M. Bos (1 ZSM). – Coffee Plant., Sulawesi, 13.VI.1982, M. TAO leg. (1 CM).

Annotation: The specimens from Central Sulawesi, Toro, 750-1000 m. represent probably a subspecies of the taxon of the type specimens from South Sulawesi. They are smaller, their frons is a little wider, the elytra are a little narrower. Their measurements: Body length: 5.41-5.57 mm; body width: 3.28-3.50 mm. Ratios. Pronotum: width/length 2.07-2.27; width hind corners/width front corners 1-72-1.75. Elytra: length/width 1.31-1.36; length elytra/length pronotum 4.00-4.14; maximum width elytra/maximum width pronotum 1.33-1.42.

I presently abstain from describing a new subspecies of *A. formosus*, because I could examine too few specimens from South and North Sulawesi.

***Amarygmus (Amarygmus) gebieni* PIC, 1921**

Amarygmus celebensis GEBIEN, 1920: 444 [nom. praecocc.]

Amarygmus gebieni PIC, 1921: 135 [nom. n.].

Redescription and illustration: BREMER 2002, 290-291, fig. pp.296, 297.

Additional material: N-Sulawesi, 7 km W Toraut, Dumoga Bone NP, 200-300 m, 0°34'17''S-123°54'19''E, 2.II.2006, leg. A. WEIGEL (1 ♂ NME, 1 ♀ ZSM). – N. Sulawesi, Tondano, 10.IV.1989, I. MIYAKE leg. (1 ♂, 1 ♀ CM). – Indonesia, C. Sulawesi, 1°30'S-120°02'E, alt. 750-1000 m, fogging, cacao plantation, Fabec. shade, off *T. cacao*, (sample code and date): F 18.IV.2005, leg. M. Bos (1 ♀ ZSM). – C. Sulawesi, Toro, Kec. Kulawi, Indonesia UTM 51 S, (WGS-84) X 9833613, Y 170666, Alt. 815 m, cacao plantation, understorey, fogging, 4c210405e (photo 248), Coll. M. M. Bos, sp. 20 (1 ♀ ZSM). – C. Sulawesi, Kab. Donggala, Toro, Kec. Kulawi, 1.I.2004, Indonesia UTM 51 S, (WGS-84) X 9833662, Y

169937, Alt. 820 m, cacao plantation, understorey, fogging, 5c010104e (photo 255), sp. 40 BORIS BÜCHE 2005 (1 ♂ ZSM). – Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, Alt. 750-1000 m, fogging, cacao plantation, mixed planted shade, off *T. cacao*, (sample code and date): E 1.I.2004, leg. M. Bos (1 ♂ ZSM). – C. Sulawesi, Toro, Kec. Kulawi, UTM 51 S, (WGS-84) X 9832664, Y 168724, Alt. 815 m, cacao plantation, understorey, fogging, 5c030505f (photo 212), Coll. M. M. Bos, sp. 7 (1 ♀ ZSM).

***Amarygmus (Amarygmus) harpagon* BREMER, 2004**

Amarygmus harpagon BREMER, 2004: 2004a, 25-28.

Annotation: A very similar species, also with this unusual shape of aedeagus, has been found on Sumbawa Is. (Smaller Sunda-Islands): *A. tetricus* BREMER 2007: 20-23.

***Amarygmus (Amarygmus) metallicus* (PERTY, 1831)**

Cnodalon metallicum PERTY, 1831: 41.

Amarygmus metallicus (PERTY, 1831): GUÉRIN-MÉNEVILLE 1832: 102.

Synonyms and redescription; BREMER 2001, 162-172; illustration: BREMER 2009, 318.

Additional material: S-Sulawesi, Palopo env., Puncak; V.1999, local collector (1 ♀ ZSM).

***Amarygmus (Amarygmus) palopoensis* BREMER, 2004**

Amarygmus palopoensis BREMER, 2004: 2004b, 204-208.

Additional material: C.-Sulawesi, Kab. Donggala, village Toro, UTM-51 S, (WGS-84): X9834876, Y169911, 815 m, 28.XII.2003, from *T. cacao* under diverse planted shade, canopy fogging, M. M. Bos, Ten.6B (1 ♀ ZSM).

***Amarygmus (Amarygmus) praecipuus* BREMER, 2004**

Amarygmus praecipuus BREMER, 2004: 2004a, 55-57.

Additional material: Sulawesi Tengah, Mt. Tambusisi, 4000', 1°39'S-121°21'E, 3.-13.IV.1980, M. J. D. BRENDELL, B.M. 1980-280 (1 ♀ BMNH).

***Amarygmus (Amarygmus) segnis* BREMER, 2004**

Amarygmus segnis BREMER, 2004: 2004a, 28-30.

Additional material: C. Sulawesi, Kab. Dongala, Toro, alt. 740-1000 m, 1°30'S-120°02'E, cacao plantation, planted Fabec. shade, (sample code and date) F18.IV.2005, fogging, leg. M. Bos (3 ♂, 2 ♀ ZSM). – C. Sulawesi, Kec. Kulawi, Toro, UTM 51 S, (WGS-84): X 9832081, Y 170129, alt. 810 m, cacao plantation, understorey, fogging, Coll. M. M. Bos, 5c180405 (photo 274) (1 ♀ ZSM).

***Amarygmus (Amarygmus) subditus* BREMER, 2004**

Amarygmus subditus BREMER, 2004: 2004a, 57-60.

Additional material: Sulawesi Tengah, Mt. Tambusisi, 500', 1°40'S-121°26'E, 3.-13.IV.1980, M. J. D. BRENDELL, B.M. 1980-280 (1 BMNH).

***Amarygmus (Amarygmus) sulawesiensis* BREMER, 2004**

Amarygmus sulawesiensis BREMER, 2004: 2004b, 201-203.

Additional material: Sulawesi, Tondano, 11.IV.1989, Y. MIYAKE leg. (1 CM). – Sulawesi, Coffee plant., 13.VI.1982, M. TAO leg. (1 CM). - S-Sulawesi, Palopo env., Puncak, V.1999, loc. collector (1 ♀ ZSM).

***Amarygmus (Amarygmus) sumbaensis* BREMER, 2005**

Amarygmus sumbaensis BREMER, 2005: 2005a, 199-201.

Additional material: Sulawesi, Sampaga [2°19'S-119°07'E], 15.VII.1995, local collector (1 ♂ ZSM) [first record for Sulawesi].

Annotation. This remarkable species belongs to the species group of *A. viridilineatus* GEBIEN, 1935. *A. sumbaensis* was formerly only known from Sumba Island, one of the Smaller Sunda Islands. Now it has been found in the coastal area of Sulawesi. Sumba Island is situated south of Sulawesi, and it is conceivable that this species is either introduced into Sulawesi from Sumba Is. by traffic over sea or vice versa. See also above at *A. bipartitus* BREMER, 2004.

***Amarygmus (Amarygmus) toliensis* PIC, 1951**

Amarygmus toliensis PIC, 1951: 16; redescription and illustration: BREMER, 2004a, 13-17.

Additional material: N. Sulawesi, Tandano, 11.IV.1989, Y. MIYAKE leg. (1 CA). - C. of S. Sulawesi, Luwu, Puncak Palopo, Salu-Bua, 18.-19.I.2000, BECCE GALA leg. (3 CA). - S-Sulawesi, Palopo env., Puncak, V.1999, loc. collector (1 ZSM). - Puncak Palopo, Sulawesi, IV.2007 (1 ♂ CA). - Sulawesi, Palolo, Keleakan, IX.1994 (2 CA). - C. Sulawesi, Totaja region, Pulu Pulu, V.1999, local collector (2 SSB). - S-Sulawesi, Palopo env., Puncak, V.1999, local collector (13 SSB). - C-Sulawesi, W of Wotu, Bonebone env., V.1000, local collector (1 SSB). - Sulawesi, Pakani, 12.V.1984, M. TAO leg. (1 ♂ CM).

Annotation. The colour of the upper side may differ, there are specimens with either a coppery or with a reddish colouration.

***Amarygmus (Amarygmus) vetustus* BREMER, 2004**

Amarygmus vetustus BREMER, 2004: 2004a, 23-25.

Additional material: C. Sulawesi, Kec. Kulawi, alt. 835 m, UTM. 51S, (WGS-84) X 9834756 Y 170497, cacao plantation, understorey, fogging, 14.IV.2005, Coll. M. M. Bos, 4c14045f (photo 273) (1 ♂ ZSM). - C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, fogging, leg. M. M. Bos; cacao plantation, Fabec. shade, off T. cacao, (sample code and date): F18.IV.2005; T33, 2C180405F (1 ♀ ZSM).

***Amarygmus (Amarygmus) viridilineatus* GEBIEN, 1935**

Amarygmus viridilineatus GEBIEN, 1935: 74.

Redescription and illustration: BREMER 2004a, 36-37; remarks: BREMER 2005a, 190-191.

Additional material: Sulawesi, Puncak, Palopo, 3.XI.1985 (2 ♂ CA). - C. Sulawesi, Gn. Pedamaran, Tana Toraja, nr. Ranle Pao, 3.II.1985, M. TAO leg. (1 ♀ ZSM). - Sulawesi Selatan, To' Rea, I.2000, Native Collector (1 ♂ ZSM).

***Amarygmus (Amarygmus) wiedemanni* BREMER, 2004**

Amarygmus wiedemanni BREMER, 2004: 2004a, 20-22.

Additional material: C. of S. Sulawesi, Luwu, Puncak Palopo, Salu-Bua, 18.-19.I.2000, BECCE GALA leg. (1 ♂ CA). - C. Celebes, near Poso, 7.XI.1990, M. Itoh (1 ♂ CA). - S. Sulawesi, Palopo env., Puncak, V.1999, local collector (1 ♂ SSB). - Sulawesi, Palolo, Keleakan, IX.1994 (1 ♂ CA). - C. Sulawesi, Kab. Dongala, Toro, 1°30'S-120°02'E, alt. 750-1000 m, fogging, leg. M. M. Bos, cacao plantation, mixed planted shade, off. *T. cacao*, (sample code and date): E21.IV.2005, Te 33, 1C210405E (1 ♂ ZSM). - S-Sulawesi, Palopo env., Puncak, V.1999, loc. Collector (1 ♂, 2 ♀ ZSM).

In ZSM there are three female specimens from Sumba Is. which are either *A. andoi* BREMER, 2004 or *A. wiedemanni* BREMER, 2004.

Determination key of *Amarygmus* und *Cerysia* species of Sulawesi

In the following determination key I am omitting *Amarygmus (Amarygmus) morio* (Fabricius, 1775) which is frequently collected in the Papuan and Australian regions. Only one specimen of this species is currently known from Sulawesi, labeled "Menado, Wallaws" and deposited in BMNH. I did not find this species within the abundant material which was recently collected on Sulawesi.

(The mentioned figures I/1-19 are published in BREMER 2004a, those of figures II/20-36 in BREMER 2004b, and those of figures III/1-10 in this paper).

- 1 Antennae filiform and antennomeres not distinctly separated from each other, base of these antennomeres as wide as their apices. Tarsomeres somewhat shortened. Elytra green, lustrous, with a more or less intensively purple colouration of interval 1; elytral striae incised and elytral intervals distinctly convex. Front corners of pronotum are somewhat projecting. Frons of medium width; clypeus very short. Body length 6.6-7.4 mm (Fig. I/1) (Sulawesi, Borneo) *Cerysia celebensis* (BLAIR)
- Antennae not filiform, penultimate antennomeres more or less separated from each other by a narrower base and a wider apex 2

- 2 Antennomeres 1-4 conspicuously short, each of these antennomeres distinctly shorter than antennomere 5. Body small, oval; frons very narrow (width between eyes equals to the diameter of one ocellus in males, of 2 ocelli in females). Elytra with impressed striae and with small, not notching elytral punctures; elytral intervals slightly convex. Upper side brown to charcoal-grey. Body length 3.2-4.3 mm. (Fig. I/8) *Amarygmus alteritis* BREMER
- Antennomeres 1-4 not conspicuously short, antennomere 3 as long or (mostly) longer than the subsequent antennomeres 3
- 3 Winged species with a metasternum of normal length (distance between meso- and metacoxae longer than the longitudinal diameter of a mesocoxa). Protarsomeres 1-3 in males either widened or not widened 4
- Unwinged species with a conspicuously short metasternum (distance between meso- and metacoxae shorter than the longitudinal diameter of a mesocoxa). Metasternum in males covered with long and closely set hairs. Elytra with striae. Legs long and thin. Antennae long. Maximum of width of pronotum mostly in front of hind corners. Pro- and mesotarsomeres 1-3 somewhat widened in males 46
- 4 Elytra with black or yellowish red maculae. Antennomere 3 as long as antennomere 4 5
- Elytra without black or yellowish red maculae. Antennomere 3 distinctly longer than antennomere 4 7
- 5 Body length > 6.9 mm. Oblong. Pronotum and elytra with a pattern of characteristic black maculae circumvented by a yellowish red ground colour. Antennae very long, antennomere 11 nearly uniformly yellow and therefore contrasting with preceding ones which are black. Legs long and tender; the forelegs of males are prolonged; with prolonged and somewhat widened protarsomeres 1-3, laterally projecting hairs originate from the soles of these protarsomeres. Body length 6.9-7.1 mm (Fig. II/36) *A. ornatus* BREMER
- Body length < 5.6 mm 6
- 6 Elytra with transverse, black maculae as shown in Fig. II/34; interval 1 longitudinally not dark or black coloured. Basal half of pronotum uniformly black, anterior half yellowish red. Outer surface of metatibiae without tiny spines. Body length 3.87-5.56 mm (Sumatra; Malayan Peninsula, Borneo, Sulawesi) *A. nigrofasciatus* PIC
- Elytra with a more or less dark interval 1 (at least within the hind third, in some specimens the whole interval 1 dark). The black macula in the hind half of pronotum is divided into a lateral macula by a reddish median stripe. Outer surface of metatibiae with a few tiny spines. Body length 4.78-5.04 mm (Fig. II/35) *A. alessandrae* BREMER
- 7 Elytra with somewhat incised striae and moderately convex intervals. Ground colour of upper side blue, but with strong violet iridescence (rarely with uniformly blue upper side without strong violet reflections). Legs dark brown. Metasternum closely pilose and with obliquely projecting hairs in males. Body length 4.9-5.9 mm (Fig.: BREMER 2005b, 49-52) (from Sumatra over Sulawesi, the Moluccas to several islands of the Pacific Ocean) *A. micans* (FABRICIUS)
(This is a frequently occurring species, usually found in cities and villages on trees at low altitude at night)
- Species without strong violet reflections on elytra combined with somewhat incised elytral striae. ... 8
- 8 Body length <4.8 mm 40
- Body length >5 mm 9
- 9 Apices of elytra not mutually rounded: the apex of each elytron is separately rounded and somewhat retracted towards elytral median suture. Pronotum mostly slightly narrowing towards hind corners. Upper side lustrous, black to coppery. Elytra with superficial striae which consist of small, very closely set punctures. Elytral intervals on disc either flat or slightly convex (most specimens from Sulawesi present

- slightly convex elytral intervals). Body length 9.5-12.1 mm (South Thailand, Peninsular Malaysia, Greater Sunda Islands, The Philippines, The Moluccas, Sulawesi) (Fig. 37 in BREMER 2009, p.318).
 *A. metallicus* (PERTY)
- Apices of elytra mutually rounded, e. g. they are not retracted towards median suture. Pronotum widest at base 10
- 10 Species with elongate elytra (length/width ratio of elytra >1.50); either with subparallel or with somewhat bent sides (two species with striae on elytra are included here in which the length/width ratio of elytra are either somewhat above or inferior to 1.50; one of them, *Amarygmus cuprarius* ssp. *cuprarius* (WEBER) is large, body length 9.7-11.9 mm, with a lustrous upper side and mostly with colourful stripes on elytra; its intervals are closely punctured; length/width ratio of elytra 1.43-1.56:1; because most specimens of *A. cuprarius* have a elytral ratio of <1.50, one should follow the key at number 35; the second one is *A. baluensis* PIC, 1951, a large, relatively compact species which mostly have elongate elytra with a elytral length/width ratio >1.50) 11
- Species without explicitly long elytra (length/width ratio of elytra <1.50), most species have an oval body shape 25
- 11 Protibiae straight or nearly straight. Three of these species have markedly widened protarsomeres 1-3 in males (*A. festivus* BREMER, 2004, *A. effulgens* BREMER, 2004, *A. imitator* **sp. n.**); two more species (*A. blanchardi* BREMER, 2001 and *A. baluensis* PIC, 1951) possesses only slightly widened protarsomeres 1-3 in males. Species of this group display either short or long antennae. Aedeagus (as far as we currently know) not conspicuously bent ventrad, and the basal part of aedeagus not bulbously thickened. 12
- Protibiae markedly bent in males (in females either markedly or slightly bent); in males of four of these species (*A. viridilineatus* GEBIEN, 1935, *A. wallacei* BREMER, 2004, *A. sumbaensis* Bremer, 2005, *A. connatus* **sp. n.**) with a distinct excavation in the mid of protibiae on inner side; in these species the protarsomeres 1-3 are not widened in males; antennae relatively short, the penultimate antennomere displays length/width ratio of <1.9:1. The aedeagus of five of the species of this group (*A. viridilineatus*, *A. wallacei*, *A. sumbaensis*, *A. connatus*, and of *A. conspectus*) is conspicuously bent ventrad, and its basal part is bulbously thickened, see Fig. I/10A) 19
- 12 Large (body length 11.5-12.5 mm). Upper side relatively little convex. Pronotum and elytra uniformly blue, lustrous; legs and antennae black. Elytra with incised striae. Frons relatively narrow. Antennae very long and tender. Aedeagus displays a very special shape (Fig. I/6F-H), it differs from the shapes of aedeagus of most other *Amarygmus* *A. harpagon* BREMER
 (A second species with this particular shape of aedeagus and with a similar habitus is *A. tetricus* Bremer, 2007 from Sumbawa Is.: Bremer 2007, 20-23)
- Species do not display the characters in this combination and explicitly not this very special form of aedeagus 13
- 13 Large, relatively compact, markedly convex transversely. Elytra with moderately incised striae and with elongate to rhombic strial punctures. Elytral intervals flat on disc, with tiny punctures. Sides of elytra slightly bent. Inner sides of mesotibiae without sexual dimorphic characters in males. Frons narrow (as wide as length of antennomere 2). Antennae very short. Upper side green (on pronotum somewhat darker green than on elytra and with slight iridescence). Length/width ratio of elytra 1.46-1.60 (mostky >1.50). Body length 10.0-11.3 mm (Redescription: BREMER 2004c, 14-15, fig. p.57 (Sarawak, Sabah, Sulawesi)
 *A. baluensis* PIC
- Species smaller (body length 9.5 mm), body not relatively compact, upper side not green and lustrous 14
- 14 Upper side uniformly coppery or black, or elytra coppery and pronotum dark blue. Antennae short, penultimate antennomere either slightly longer than wide or as long as wide. Frons of medium width (see Fig. II/26C); only in one of the following species protarsomeren 1-3 slightly widened in males. Species either relatively small or of medium length 15

- Upper side distinctly colourful: pronotum either blue, green or dark purple with bluish tinge, elytra green, dark purple, in one species with purple, blue, green or yellow reflection according to angle of incidence of light; frons somewhat wider than in the species of the preceding group. Protarsomeres 1-3 very wide in males. Antennae either short or of medium length (see Fig. III/3A) 17
- 15 Smaller (body length ≈ 5.4 mm). Elytra with slightly incised striae and with small, round stria punctures; intervals flat; elytra very long (length/width ratio 1.78:1). Pronotum dark blue, elytra coppery, altogether gloomy. Antennae short, overlapping only slightly base of elytra; penultimate antennomere as long as wide (Fig. II/28E) *A. simplex* BREMER
- Larger (body length 7.1-8.9 mm); elongate oval. Elytra with rows of small punctures not connected by lines, the distances between punctures on disc in row 4 equal to 3- to 4-times diameter of a puncture; pronotum and elytra coppery, lustrous 16
- 16 Species with inconspicuous keeles on elytral intervals (only discernable in oblique view). Frons narrower (Fig. II/26C). Prosternal apophysis narrow; apically with a somewhat raised median point. Antennae short in females, of medium length in males. Length/width ratio of elytra 1.77-1.90:1. Body length 7.1-8.7 mm (Borneo; Sumatra; Sulawesi) *A. blanchardi* BREMER
(This is a frequently occurring species on Borneo (mainly at high altitudes), and it is also found at higher altitudes on Sumatra, only one specimen already found on Sulawesi (occasionally introduced?))
- Elytral intervals without inconspicuous keels. Frons wider (Fig. II/27C). Prosternal apophysis with a blunt, median keel which is situated on a higher level than the lateral margins. Elytra very long (length/width ratio approximately 1.77:1). Antennae short. Upper side uniformly coppery, lustrous. Body length ≈ 8.9 mm *A. addictus* BREMER
(Only the female holotype currently known)
- 17 Elytra with subparallel side (Fig. 10A). Protarsomeres 1-3 of males very wide (see Fig. III/8A) and intersegmental membranes between sternites 3/4 and 4/5 strongly broadened. Elytra with slightly incised striae and small, round, narrowly set punctures; their distances on disc in row 4 are approximately 1 diameter of a puncture; elytral intervals on disc slightly convex, with minute, distinct punctures. Frons of medium width, in females wider than in males. Antennae of medium length, in males longer than in females. Pronotum on a green ground colour with intensive violet, yellow, blue iridescence; elytra on a reddish brown ground colour with intensive violet, yellow and blue iridescence; frons greenish blue, genae and clypeus black; legs dark brown to black. Body length: 8.12-8.44 mm *A. imitator* **sp. n.**
- Elytra with elongate oval sides (Fig. 10B). Protarsomeres 1-3 of males very wide (Fig. III/8A), and intersegmental membranes between sternites 3/4 and 4/5 strongly broadened 18
- 18 Smaller (body length 7.17-8.07 mm). Length/width of elytra 1.55-1.70. Fronto-clypeal suture moderately to distinctly incised in the middle; elytral striae slightly incised, therefore, the small stria punctures are well discernable; elytral intervals less convex than those of the following species. Antennae reaching to the mid of elytra, penultimate antennomeres display a length/width ratio >1.9 in males. Elytra markedly lustrous, usually uniformly purple and with green reflections, but also blue or other colourful reflections occur (Fig. III/9) *A. festivus* BREMER

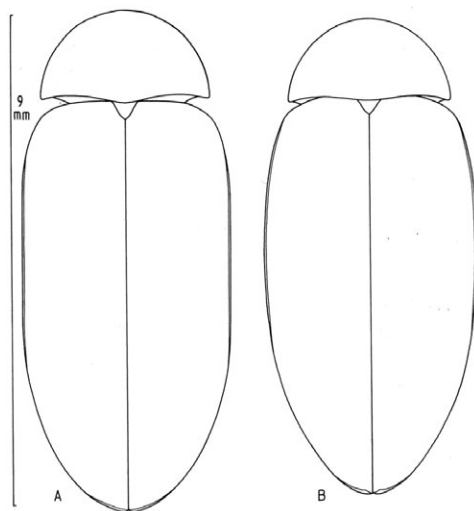


Fig. 10: **A** Outline of *Amarygmus* (*Amarygmus*) *imitator* **sp. n.** **B** Outline of *Amarygmus* (*Amarygmus*) *festivus* BREMER, 2004.

- Larger (body length 8.52-9.55 mm; body width 4.46-4.94 mm). Elytra with distinctly incised striae in which the stria punctures are not as well discernable as in the preceding species; elytral intervals more convex. Frons of medium width, as wide in both sexes. Fronto-clypeal suture only weakly incised in the middle. Antennae of medium length, reaching over one third of elytra in males; females have somewhat shorter antennae. Length/width ratio of elytra 1.52-1.67. Elytral interval 1 mostly green, intervals 2-6 mostly dark purple, intervals 7-8 again green, but also specimens with nearly uniformly dark purple elytra occur; pronotum green to dark purple; legs and antennae black (Fig. III/8) *A. effulgens* BREMER
- 19 Larger (body length 8.27-9.33 mm) 20
- Smaller (body length of 4.75-7.2 mm) 21
- 20 Elytra with purple and greenish stripes which are usually not very marked; one specimen uniformly black (another species?); elytra moderately lustrous. With a clear excavation in the mid of protibiae on inner side in males, this induces a bent apical part, but basal of this excavation without a clear pilose outward bulge; in females protibiae slightly and uniformly bent. Frontal side of profemora without hairs, but back of mesofemora with short hairs in males. Elytra with somewhat impressed rows of medium-sized, closely set punctures which partially are connected with faint lines; elytral length/width ratio 1.55-1.60:1. Body length 8.27-8.60 mm (Fig. I/10) *A. viridilineatus* GEBIEN
- Upper side dark green, lustrous, one specimen also with faintly purple elytral intervals 1+2. Elytra with rows of large, closely set punctures which in the first three rows may be somewhat impressed; elytral length/width ratio 1.69-1.77:1. With a clear excavation in the mid of pro- and mesotibiae on inner side in males, this induces a bent and broadened apical part, but basal of this excavation with a clear pilose outward bulge. Frontal side of profemora and back sides of meso- and metafemora with short hairs in males. Body length 9.20-9.35 mm (Fig.: BREMER 2005a, 199) (Sumba Island, Sulawesi) *sumbaensis* BREMER
(Only male specimens currently known)
- 21 Species with elytral rows of punctures 22
- Elytra with striae and with flat to slightly convex intervals on disc; length/width of elytra 1.67-1.78:1. Frons relatively narrow. Antennae of medium length. In males protibiae abruptly bent on inner side, anteriorly the protibiae are thickened; without short, projecting, closely set hairs on the frontal side of profemora and the back of meso- and metafemora. Very long metatarsomere 1. Elytra reddish brown, somewhat metallic, with a greenish interval 1; pronotum filthy green or dark blue, legs black. Body length: 4.75-5.97 mm *A. connatus* **sp. n.**
(A related species with elytral striae of this group is *A. longior* BREMER, 2005 from Java and Bali. In contrast to *A. connatus* **sp. n.** *A. longior* displays a uniformly black upper side. In males there are rows of short, projecting, closely set hairs on the frontal side of profemora and on the back on meso- and metafemora; moreover, *A. longior* is larger: body length 7.25-8.12 mm)
- 22 Elytra elongate with subparallel sides (length/width ratio \approx 1.65). Pronotum and elytra uniformly green, lustrous. Hind part of pronotum with moderately colourful iridescence. In the mid of inner side of protibiae with a clear excavation in males but without long hairs on frontal side of profemora in males. Frons of medium width; fronto-clypeal suture faintly incised only in its middle part. Body length \approx 6.4 mm (Fig. I/11) *A. wallacei* BREMER
- Elytra elongate oval 23
- 23 Body length \approx 6.1 mm. Elytra with rows of medium-sized punctures and flat intervals; length/width ratio of elytra \approx 1.60. Frons relatively wide. Antennae relatively short. Protibiae moderately bent, meso- and metatibiae markedly bent. Elytra mainly violet to brown reddish, but also green at different incidence of light, somewhat lustrous; pronotum and frons green, lustrous; femora dark brown, tibiae, tarsomeres black *A. ceucharis* **sp. n.**
(Only the female holotype is known)
- Body length > 6.5 mm. 24

- 24 Elytra also elongate oval (length width ratio of elytra ≈ 1.60), but elytra are more oval than those of the following species; more lustrous and with more intensively colourful reflections than in the following species; pronotum and head bluish green, elytra display green intervals 1 to 2, the following intervals are dark purple, the more lateral ones show a mixture of golden, greenish and bluish colours. Protibiae bent in both sexes and no cut on inner sides in males; on the frontal side of profemora with long hairs in males. Differs also from the following species by distinctly larger and more impressed punctures of the elytral rows. Body length 6.73-7.13 mm (Fig. I/12) *A. conspectus* BREMER
- Similar to preceding species; also of medium size; elongate, slightly oval. Elytra dark coppery, slightly lustrous and with coloured reflections; pronotum more lustrous and greenish, and with more intensive colourful reflections than on elytra; legs and antennae black. Frons of the same width as frons of preceding species. All tibiae uniformly bent (but only the female holotype known). Elytra with small to medium-sized, relatively closely set punctures which partly are connected by faint lines, but punctures of elytral rows are distinctly smaller and less impressed than those of preceding species; elytral intervals flat on disc. Length/width of elytra 1.60:1. Antennae short. Body length: 7.88 mm (Fig. III/7) *A. vitiosus* **sp. n.**
(Only the female holotype known)
- 25 Elytra short and widely oval, markedly convex transversely and longitudinally; with rows of medium-sized punctures which may be connected by faint lines; intervals with tiny punctures. Pronotum relatively flat, wide. Colouration of upper side striking: pronotum reddish brown; elytra dark blue with a short yellow apex; head dark brown; antennomeres 5-11 black, antennomere 11 uniformly yellow. Body length 5.67-7.40 mm (Fig. II/22) (beside on Sulawesi also known from Sumba Is.) *A. bipartitus* BREMER
- Pronotum not reddish brown, elytra not dark blue and not possessing a short yellowish apex 26
- 26 Elytra with striae 27
- Elytra with rows of punctures 37
- 27 Elytral striae distinctly incised, and elytral intervals markedly convex 28
- Elytral striae not distinctly incised, and elytral intervals not markedly convex 29
- 28 The striae punctures are small and not easily discernable. In males the forelegs are of normal length and not much longer than in females; in males all tibiae with long, closely set, very tender hairs on the inner sides within apical half (if specimens had been in contact with glue these hairs may adhere to tibiae, and then they are not easily discernable); protarsomeres 1-3 in males widened, additionally there is a distinct median pilosity on metasternum and on sternites 1+2 in males. Prosternal apophysis with subparallel sides. Frons of medium width and antennae of medium length. Elytra reflecting light in form of reddish, golden or greenish stripes. Body length 8.67-10.0 mm (Fig. II/20) *A. charbonnelae* BREMER
- The striae punctures are small, but well discernable. In males the forelegs are markedly prolonged, and the protarsomeres 1-3 are prolonged and widened and with long, laterally projecting hairs. Prosternal apophysis wide, laterally rounded, its apex somewhat pointed in the middle. In males without a close pilosity in the median area of metasternum and sternites. Elytra with distinctly incised striae and small, not notching, striae punctures, elytral intervals convex. Frons of medium width (width somewhat narrower than length of antennomere 4). Antennae long and thin. Elytra lustrous, with strong, colourful reflections; pronotum bluish green. Body length: 7.09-7.72 mm (Fig. II/33) *A. longimanus* BREMER
- 29 Frons relatively narrow, nearly as wide as the length of antennomere 2 (Figs. I/5A) 30
- Frons distinctly wider, mostly as wide or wider than the length of antennomere 4 36
- 30 Metatibiae markedly bent in males and with long, closely set hairs on inner sides. Elytra with different colours (usually colourful, lustrous and with red, green or blue reflections according to incidence of light), but occasionally also uniformly blue specimens occur. Elytra with slightly incised striae and with well discernable, closely set punctures of medium size. Body length 10.4-12.1 mm (Fig.: BREMER 2002b, 296-297) *A. gebieni* PIC

- Metatibiae not markedly bent and in males without long, closely set hairs on inner sides. Several of the following four species are very similar, and partially only be separable by aedeagus and sexual dimorphisms on profemora in males 31
- 31 Apical part of aedeagus uniformly converging and with a pointed tip. Elytra usually greenish or dark reddish or with violet iridescence 32
- Apical part of aedeagus somewhat projecting and behind tip with subparallel sides, tip of aedeagus rounded (Fig. I/2G,H); elytra green or coppery, but with violet or rarely with purple reflections. Elytra somewhat elongate oval with slightly incised striae and somewhat convex intervals. Frontal side of profemora without a small area of short hairs in males. Body length 8.13-10.0 mm (Fig. I/2) *A. toliensis* PIC
(It is a frequently occurring species all over Sulawesi; the colour of upper side differs somewhat dependent on area, but the colour is usually constant within one area)
- 32 Elytra and pronotum uniformly blue, in some specimens with a slightly violet tinge; femora reddish brown. Elytra with striae and with slightly convex elytral intervals; elytral striae with small, numerous, elongate punctures. Hind part or metasternum with long, closely set hairs in males. Body length 8.68+8.84 mm (Fig. I/5) *A. vetustus* BREMER
- Elytra and pronotum not uniformly blue 33
- 33 Frontal side of profemora with an inconspicuous area of short, recumbent hairs in males. Apex of aedeagus somewhat bent ventrad; the middle part of aedeagus not narrowed. on average pronotum somewhat narrower than that of the following species (width/length ratio 1.76-1.84:1); clypeus not very convex transversely and longitudinally. Fronto-clypeus suture only incised in the middle. Elytral intervals less closely punctured than intervals of the following species. Body length 7.40-8.53 mm (Fig. I/4) *A. wiedemanni* BREMER
- Frontal side of profemora without an inconspicuous area of short, recumbent hairs in males 34
- 34 Parameres distinctly narrowed in their middle part; apex of aedeagus not bent ventrad. Pronotum on average somewhat wider than that of the preceding species (width/length ratio 1.84-1.89:1). Fronto-clypeal suture widely impressed; clypeus distinctly convex transversely and longitudinally. Front side of profemora without an area of short, recumbent hairs in males (the shape of aedeagus is the best indicator for separating *A. wiedemanni* and *A. andoi*). Body length 7.80-8.27 mm (Fig. I/3) *A. andoi* BREMER
- Parameres not narrowed in their middle part 35
- 35 Body length 9.7-11.9 mm; elongate oval and little convex (elytral length/width 1.45-1.56:1). Upper side markedly lustrous: elytra with a strong iridescence which is usually aligned longitudinally; pronotum also markedly iridescent. Frons narrow, slightly wider than length of antennomere 2; pronotum with small, relatively closely set punctures; elytra with somewhat impressed striae which are formed by small, closely set punctures; intervals slightly convex, with minute, closely set punctures (redescription and illustration: BREMER 2005, 54-57) *A. cuprarius cuprarius* (WEBER)
(Frequently occurring species with a wide distribution; from Nepal to Japan (Ishigaki Islands), Taiwan, and over nearly the whole Oriental region)
- Frons somewhat wider than frons of preceding species. Elytral striae with a reddish reflection, elytral intervals coppery, lustrous, in some specimens also with faint reddish stripes; without a close punctation on elytral intervals and without colourful elytral stripes. Apex of aedeagus slightly bent ventrad. Pronotum and frons lustrous, with small, closely set punctures. Elytra longitudinally and transversely markedly convex. Frons somewhat wider than frons of the preceding species, without a close punctation on elytral intervals, and without colourful elytral stripes. Antennae short, overlapping only slightly the elytral base. Without long hairs on the inner sides of pro- and mesotibiae and on ventral side of femora. Body length 8.43-9.55 mm. (Fig. I/7) *A. segnis* BREMER
(By habitus and colouration similar to *A. toliensis* PIC, but with a different aedeagus)
- 36 Upper side uniformly black (with a slightly bluish tinge). Elytra widely oval, less convex than following species. Pronotum wide. Frons of medium width. Antennae long but not explicitly tender. Legs with striking

sexual dimorphisms in males with angularly bent pro- and metatibiae; in females pro- and mesotibiae uniformly and strongly bent. Body length 5.73-6.60 mm. (Fig. II/22) *A. barclayi* BREMER
(Concerning body shape and sexual dimorphisms *A. barclayi* is related to *A. bipartitus* BREMER, 2004, but pronotum and elytra show different colours in *A. bipartitus*)

- Pronotum and frons brilliantly green, blue or reflecting in different colours (at different incidence of light). Elytra distinctly lustrous, dark, markedly iridescent, with transversely aligned reflections and on lateral parts of elytra mostly violet or blue. Elytra slightly elongate oval, maximum of width and height slightly in front of middle, with distinctly incised striae and with somewhat notching strial punctures of medium size; elytral intervals convex. Frons of medium width (width equals to length of antennomere 4). Prosternal apophysis wide, laterally and apically rounded. Antennae of medium length. Inner sides of mesotibiae with obliquely projecting hairs within apical half in males. Body length 6.10-7.00 mm (Fig. II/23) *A. delectus* BREMER
- 37 Frons very narrow, width equals to diameter of 2 ocelli of eyes 38
- Frons distinctly wider; width at least equals to length of penultimate antennomere 39
- 38 Relatively small and ovate. Body length 6.07-6.67 mm. Pronotum blue; elytra greenish, with marked reddish golden to blue reflections. Elytra relatively short (ratio of length/width 1.22-1.37); elytral intervals closely punctured. Prosternal apophysis flat, posterior to procoxae alike a semi-circle. Back of meso- and metafemora with short hairs in males which easily may be overlooked (Fig. II/30)
. *A. formosus* BREMER
- Somewhat larger, widely oval. Body length 7.07-7.80 mm. Pronotum brownish golden; elytra coppery, with greenish reflections on shoulders. Prosternal apophysis displays a somewhat grooved median sulcus along procoxae, posterior to procoxae the lateral margins are shortly subparallel, apex rounded. The punctures of the elytral rows are situated somewhat narrower than those of the preceding species; punctures of elytral intervals distinct. Length/width ratio of elytra 1.28-1.30. Back of meso- and metafemora without short hairs in males, but the inner sides of mesotibiae are suddenly thickened within the apical $\frac{3}{4}$ in males (outer sides straight) (Fig. II/29) *A. sulawesiensis* BREMER
- 39 Somewhat smaller than the following species: body length 6.40-6.41 mm. Pronotum blue, lustrous, elytra coppery, lustrous. Maximum of elytral width and height at the end of first third. Elytra with rows of medium-sized, closely set, distinctly impressed punctures, their distances on disc in row 4 are narrower than the diameter of a puncture. Front corners of pronotum rectangular in lateral view. Fronto-clypeal suture deeply incised only in its middle part (Fig. II/31) *A. palapoensis* BREMER
- Somewhat larger: body length 6.73-7.40 mm. Maximum of elytral width and height approximately in the middle. Elytra with rows of medium-sized punctures; their distances on disc in row 4 are 1- to 1½-time diameter of a puncture. Pronotum dark blue, with a slight golden shimmer, elytra dark with inconspicuous, colourful stripes. Front corners of pronotum with an angle of about 100° in lateral view. Fronto-clypeal suture distinctly incised across head and arched (Fig. II/32) *A. gentilis* BREMER
- 40 Elytra with more or less distinct striae 41
- Elytra with rows of punctures which either are not linked by lines or are inconstantly linked by very faint lines 43
- 41 Small, narrow species with distinctly incised striae and with narrow strial punctures which are not notching. Frons narrower than frons of the following species. Punctuation of pronotum indistinct and punctures widely separated. The lateral borders of pronotum invisible in the anterior part in dorsal view. Antennae markedly longer than antennae of the following species. Upper side uniformly dark blue, lustrous. Legs and antennae yellowish brown. Body length 3.40-3.83 mm (Fig. I/15)
. *A. humilis* BREMER
- Species wider, with less incised, faint striae, and with medium-sized, somewhat notching strial punctures 42

- 42 Ovale; length/width ratio of elytra ≈ 1.37 . Femora, tibiae and antennae yellowish brown. Elytra markedly convex transversely, moderately convex longitudinally, with slightly incised striae with medium-sized stria punctures; elytral intervals on disc flat, without very tender, irregularly aligned structures. Pronotum with small, distinct, moderately closely set punctures. Frons relatively wide. Antennae of medium length. Upperside dark green, very lustrous. Body length: 3.93 mm *A. reliquus* **sp. n.**
(Only the female holotype known)
- Body oval. Pronotum with distinct, closely set punctures; lateral pronotal borders in dorsal view invisible in the anterior part. Upperside of elytra not smooth but with very tender, irregularly aligned structures which look alike chagreened. Head and pronotum usually bluish green, but in some specimens also blue with a purple tinge; elytra usually dark blue, but with reddish and golden reflections; legs and antennae black. The tip of aedeagus without a ventral flection in lateral view. Body length 3.30–4.80 mm (Fig. I/13) *A. discretus* BREMER
- 43 Fronto-clypeal suture extremely deeply and broadly incised with frons and genae forming a mutual border towards the suture. Frons of medium width. Antennae of medium length. Legs short. Elytra with rows of medium-sized punctures and flat intervals; length/width ratio of elytra 1.28+1.31:1. Elytra dark blue, lustrous, in view from the front with a slightly green to purple iridescence. pronotum blue, lustrous; femora and tibiae dark brown. Body length: 3.66+3.81 mm (Fig. III/6) *A. sulciceps* **sp. n.**
- Without an outstandingly deep incision between frons and clypeus 44
- 44 Elytra with rows of punctures which are inconstantly linked by faint lines. Pronotum with coarse punctures. Elytra green, pronotum with a blue colour; upper side not really lustrous; in some specimens with faint, non-directional lines on elytral intervals which induces an uneven surface; legs brown. Frontal side of profemora and back side of meso- and metafemora not pilose in males. Body length 3.11–3.40 mm (Fig. I/14) *A. minusculus* BREMER
(This species is very similar to *A. discretus*, but has a somewhat narrower frons and is, on average, smaller)
- Upper side either uniformly black with a somewhat metallic shine and a marked lustre or with a green or a coppery colouration 45
- 45 Upper side uniformly black with a somewhat metallic shine, and a marked lustre. Oval. Frons with a medium width (Fig. I/9C). Antennae short. Elytra with rows of punctures, elytral intervals flat, without punctures on disc. Sexual dimorphisms in males: frontal side of profemora and back sides of meso- and metafemora with not very closely set hairs of medium length, additionally mesotibiae with a special shape in males (Fig. I/9A). Aedeagus with an unusual shape (Fig. I/9). Body length ≈ 4.2 mm *A. aemulus* BREMER
- Elytra greenish blue with a slight iridescence, pronotum also greenish blue, but the blue colour is more intense, pronotum and elytra somewhat lustrous; femora and tibiae dark brown. Elytra short, markedly convex, with rows of medium-sized punctures and flat, finely but distinctly punctured intervals. Meso- and metatibiae distinctly bent. Frons wide. Body length 3.77–3.81 mm (Fig. III/4) *A. laetus* **sp. n.**
(Only female specimens known)
- 46 Small species (body length 5.10–5.33 mm). Elytra markedly convex transversely and longitudinally; lateral margins of elytra distinctly bent; maximum elytral width at the end of first third; elytra with impressed striae and with small, elongate stria punctures; elytral intervals flat, closely punctured. The contrast between the dark, lustrous upper side and the yellowish brown legs is striking. Antennomeres 10+11 or only antennomere 11 are brighter than the preceding antennomeres (Fig. I/16) *A. caelebs* BREMER
- Species clearly larger (>6.9 mm.) 47
- 47 Elytra with incised striae, and elytral intervals markedly convex; elytral intervals opaque, but bottom of striae lustrous. Apices of elytra somewhat mucro-like projecting. Pronotum opaque, with indistinct and closely set punctures; maximum of pronotal width in the middle. Body length 7.0–8.2 mm (Fig. I/17). *A. insolens* BREMER

- Elytral intervals flat or slightly convex; upper side not really opaque, but slightly or markedly lustrous. Apices of elytra not mucro-like projecting 48

- 48 Antennomeres 1+2 and 11 uniformly brightened and reddish brown, the rest of antennomeres black. Femora and protarsi reddish brown, tibiae dark brown to black. Elytra with distinctly incised striae and with elongate, not well discernable stria punctures; elytral intervals somewhat convex, covered with tiny, indistinct, relatively closely set punctures; maximum of elytral width and height at the end of first third. Pronotum and elytra only slightly microreticulated, therefore, they are more lustrous than the pronotal and elytral lustre of the following species. Fronto-clypeal suture arched, slightly incised. Frons with small, indistinct, closely set punctures, there is a smooth, impunctate area in the middle in front of fronto-clypeal suture; clypeus more distinctly punctured than frons, but punctures similarly large, tiny hairs originate from the clypeal punctures. Body length 6.9-7.4 mm (Fig. I/18) *A. praecipuus* BREMER

- All antennomeres black. Femora dark brown, tibiae still darker. Elytra with striae and within striae with small, closely set stria punctures; elytral intervals with minute, well visible, widely separated punctures; maximum of elytral width and height just in front of middle. Pronotum and elytra distinctly microreticulated. Fronto-clypeal suture only sketched out; frons and clypeus nearly flat, covered with tiny, superficial punctures, tiny hairs originate from only a few clypeal punctures. Body length 7.33-8.40 mm (Fig. I/19) *A. subditus* BREMER

Acknowledgement

I have to thank Dr. K. ANDO, Osaka, Mr. M. V. L. BARCLAY, London, Prof. Dr. K. MASUMOTO, Tokyo and Mr. A. SKALE, Hof/Saale for their permission to evaluate the material which they collected or which is under their supervision. My particular thanks are due to Mr. B. BÜCHE, Berlin who entrusted me with the evaluation of material which mainly was collected by canopy fogging of trees in cacao plantations. He also earns a lot of gratitude for donating this material to the Zoologische Staatssammlung, Munich.

Zusammenfassung

Durch diese Publikation wird die Revision der Arten der Gattung *Amarygmus* DALMAN, 1823 aus Sulawesi fortgesetzt, von denen die Teile I und II bereits erschienen sind. Sie enthält neue Fangdaten bereits beschriebener Arten, die Beschreibung von sieben neuen Arten und einen neuen Bestimmungsschlüssel der *Amarygmus*-Arten, die auf Sulawesi vorkommen.

Folgende neue Arten aus Sulawesi werden beschrieben und abgebildet: *Amarygmus* (*Amarygmus*) *ceucharis* **sp. n.**, *Amarygmus* (*Amarygmus*) *connatus* **sp. n.**, *Amarygmus* (*Amarygmus*) *imitator* **sp. n.**, *Amarygmus* (*Amarygmus*) *laetus* **sp. n.**, *Amarygmus* (*Amarygmus*) *reliquus* **sp. n.**, *Amarygmus* (*Amarygmus*) *sulciceps* **sp. n.** und *Amarygmus* (*Amarygmus*) *vitiosus* **sp. n.**

Neu auf Sulawesi nachgewiesen wurden *Amarygmus* (*Amarygmus*) *baluensis* PIC, 1951 und *Amarygmus* (*Amarygmus*) *sumbaensis* BREMER, 2005. *Amarygmus* (*Amarygmus*) *bipartitus* BREMER, 2004 kommt außer auf Sulawesi auch auf Sumba Island (Kleine Sunda-Inseln) vor.

References

- BLAIR, K. G., 1929, Some new species of myrmecophilous Tenebrionidae (Col.). – Zoologischer Anzeiger. Wasmann Festband: 238-247
- BREMER, H. J. 2001: Revision der Gattung *Amarygmus* DALMAN, 1823 sowie verwandter Gattungen. V. Mit *Amarygmus metallicus* PERTY, 1831 verwandte Taxa (Coleoptera: Tenebrionidae; Amarygmini). – Coleoptera **5**: 163-172
- BREMER, H. J., 2002, Revision der Gattung *Amarygmus* DALMAN, 1823 sowie verwandter Gattungen. XI. Eine neue Art aus der Artengruppe *Amarygmus ceramensis* GEBIEN, 1920 (Coleoptera: Tenebrionidae; Amarygmini). – Entomofauna **23**: 289-300

- BREMER, H. J. 2004a: Revision der Gattung *Amarygmus* DALMAN, 1823 sowie verwandter Gattungen. XXIV. Die Arten der Gattungen *Amarygmus* DALMAN und *Cerysia* BREMER aus Sulawesi. Part I. (Coleoptera: Tenebrionidae: Amarygmini). – The Entomological Review of Japan **59** (1): 5-60
- BREMER, H. J. 2004b: Revision der Gattung *Amarygmus* DALMAN, 1823 und verwandter Gattungen. Part XXX. Die *Amarygmus*- und *Cerysia*-Arten aus Sulawesi; Part II. (Coleoptera: Tenebrionidae: Amarygmini). – The Entomological Review of Japan **59** (2): 177-231
- BREMER, H. J. 2004c: Revision der Gattung *Amarygmus* DALMAN, 1823 sowie verwandter Gattungen. XXI. Nachbeschreibungen, Neubeschreibungen und Illustrationen von *Amarygmus*-Arten der orientalischen Region (Coleoptera: Tenebrionidae: Amarygmini). – Acta Coleopterologica **20** (1): 7-86
- BREMER, H. J. 2005a: Revision der Gattung *Amarygmus* DALMAN, 1823 sowie verwandter Gattungen. XXXVIII. Neue Arten überwiegend affine *Amarygmus acutestriatus* (FAIRMAIRE, 1896) und *Amarygmus viridilineatus* GEBIEN, 1935 (Coleoptera, Tenebrionidae, Amarygmini). – Entomologica Basiliensis et Collectionis Frey **27**: 181-208
- BREMER, H. J., 2005b: Revision der Gattung *Amarygmus* DALMAN, 1823 sowie verwandter Gattungen. XXVIII. Angaben zu *Amarygmus*-Arten, die von FABRICIUS, WEBER, WIEDEMANN, HOPE und PASCOE beschrieben wurden (Insecta, Coleoptera, Tenebrionidae, Amarygmini). – Spixiana **28** (1): 41-89
- BREMER, H. J. 2007: Revision der Gattung *Amarygmus* DALMAN, 1823 sowie verwandter Gattungen (Coleoptera: Tenebrionidae: Amarygmini). XLV. Neu- und Nachbeschreibungen von *Amarygmus*-Arten der orientalischen Region. – Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie) Nr. **707**: 1-48
- BREMER, H. J. 2009: Revision der Gattung *Amarygmus* DALMAN, 1823 sowie verwandter Gattungen (Coleoptera: Tenebrionidae: Amarygmini). LI. Die Amarygmini der Philippinen. – Stuttgarter Beiträge zur Naturkunde A. Neue Serie **2**: 241-346
- BREMER, H. J. 2010: Revision of the genus *Amarygmus* DALMAN, 1823 and related genera. LVI. The Amarygmini of Borneo (Coleoptera: Tenebrionidae), part I. – Stuttgarter Beiträge zur Naturkunde A, Neue Serie **3**: 139-256
- GEBIEN, H. 1920: Résultats de l'expédition scientifique néerlandaise à la Nouvelle-Guinée en 1912 et 1913 sous les auspices de A. Franssen Herderschee. Coleoptera, Tenebrionidae. – Nova Guinea. Vol. **XIII**; Zoologie. 213-500, Tafeln IX-XI.
- GEBIEN, H. 1935: Extrait des Résultats Scientifiques du Voyage aux Indes Orientales Néerlandaises de LL. AA. RR. le Prince et la Princesse Léopold de Belgique. Tenebrionidae. – Mémoires du Musée Royal d'Histoire Naturelle de Belgique; Hors Série 4, fasc. **11** (3): 53-77 (1 pl.)
- GEMMINGER, M. & B. DE HAROLD 1870: Catalogus Coleopterorum hucusque descriptorum synonymicus et systematicus **7**: 2023-2025
- MASUMOTO, K. 1988: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 1). – Kontyû, Tokyo **56**: 78-101
- MASUMOTO, K. 1988: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 2). – Kontyû, Tokyo **56**: 766-788
- MASUMOTO, K. 1989: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 3). – The Japanese Journal of Entomology **57**: 96-121
- MASUMOTO, K. 1989: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 4). – The Japanese Journal of Entomology **57**: 295-317
- MASUMOTO, K. 1989: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 5). – The Japanese Journal of Entomology **57**: 536-564
- MASUMOTO, K. 1989: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 6). – The Japanese Journal of Entomology **57**: 742-767
- MASUMOTO, K. 1990: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 7). – The Japanese Journal of Entomology **58**: 35-64
- MASUMOTO, K. 1990: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 8). – The Japanese Journal of Entomology **58**: 243-274

- MASUMOTO, K. 1990: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 9). – The Japanese Journal of Entomology **58**: 475-505
- MASUMOTO, K. 1990: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 10). – The Japanese Journal of Entomology **58**: 693-724
- MASUMOTO, K. 1991: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 11). – The Japanese Journal of Entomology **59**: 1-36
- MASUMOTO, K. 1991: *Plesiophthalmus* and its Allied Genera (Coleoptera, Tenebrionidae; Amarygmini) (Part 12). – The Japanese Journal of Entomology **59**: 235-255
- PIC, M. 1951: Coléoptères du globe. – L'Échange, Revue Linnéenne **67**: 9-16

Author's address:

Prof. (emer) Dr. H. J. BREMER
Diakonie-Wohnstift am Westerberg
Bergstr. 35B
49076 Osnabrück
Germany

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Mitteilungen der Münchner Entomologischen Gesellschaft](#)

Jahr/Year: 2012

Band/Volume: [102](#)

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

Artikel/Article: [Revision of the genus Amarygmus DALMAN, 1823 and related genera \(LXIV\). The species of the genera Amarygmus DALMAN and Cerysia BREMER of Sulawesi. Part III \(Coleoptera: Tenebrionidae: Amarygmini\). 5-34](#)