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The Longhorn Beetles of the Philippines Part II

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- A. Key to Families and Subfamilies.
- B. Subfamilies Parandrinae, Philinae and Cerambycinae, Tribes Oemini - Callidiopini.

Abstract

The survey of the Longhorn Beetles of the Philippines, initiated with Part I, Subfamily *Prioninae*, in Ent. Arb. Mus. Frey 35/36, 1987:117-135, is continued with keys to families and subfamilies and with subfamilies *Parandrinae*, *Philinae* and *Cerambycinae*, tribes *Oemini* through *Callidiopini*. 12 species are described as new: *Philus philippensis* sp. nov., *Tetraommatus luzonicus* sp. nov., *Massicus philippensis* sp. nov., *Imbrius corrugatus* sp. nov., *Imbrius similis* sp. nov., *Dymasius lumawigi* sp. nov. with *rufipennis* ssp. nov., *Dymasius ysmaeli* sp. nov., *Lachnopterus elisabethae* sp. nov., *Zatrephus lumawigi* sp. nov., *Ceresium lumawigi* sp. nov., *Exammes lumawigi* sp. nov., *Exammes mindanaonis* sp. nov. Two species are considered as synonyms: *Lachnopterus antigueensis* HAYASHI, 1984, and

Lachnopterus sibuyanus HAYASHI, 1984, **syn. nov.** of *Lachnopterus auripennis* (NEWMAN, 1842).

Zusammenfassung

Die Übersicht über die Bockkäfer der Philippinen, begonnen mit Teil I, *Prioninae*, in Ent.Arb.Mus.Frey 35/36, 1987:117-135, wird fortgesetzt mit Bestimmungsschlüsseln für die Familien und Unterfamilien sowie mit den Unterfamilien *Parandrinae*, *Philinae* und *Cerambycinae*, Tribus *Oemini* bis *Callidiopini*. 12 Arten werden neu beschrieben: *Philus philippensis* sp. nov., *Tetraommatus luzonicus* sp. nov., *Massicus philippensis* sp. nov., *Imbrius corrugatus* sp. nov., *Imbrius similis* sp. nov., *Dymasius lumawigi* sp. nov. mit *rufipennis* ssp. nov., *Dymasius ysmaeli* sp. nov., *Lachnopterus elisabethae* sp. nov., *Zatrephus lumawigi* sp. nov., *Ceresium lumawigi* sp. nov., *Exammes lumawigi* sp. nov., *Exammes mindanaonis* sp. nov. Zwei Arten werden als Synonyme angesehen: *Lachnopterus antigueensis* HAYASHI, 1984, und *Lachnopterus sibuyanus* HAYASHI, 1984, **syn. nov.** von *Lachnopterus auripennis* (NEWMAN, 1842).

A. Families

According to LINSLEY (1962, Univ. Calif. Publ. Ent. 19:1), former tribe *Disteniini* has to be considered as a separate family:

- 1 Mandible scalpriform (arched and scoop-like); clypeus oblique to frons; wing lacking a spur in radio-median crossvein; larva with retracted ventral mouthparts with gula and hypostoma absent, and skin of prothorax attached directly to submentum..... *Disteniidae*
- Mandible normal, subtriangular; clypeus in same plane to frons; wing with a spur in radio-median crossvein; larva with protracted ventral mouthparts, gula and hypostoma present and skin of prothorax not attached to submentum..... *Cerambycidae*

Family *Disteniidae* will be treated at the end of this survey.

Family *Cerambycidae*

- 1 Tarsi distinctly pentamerous (5-segmented), third segment not dilated, not concealing minute fourth segment..... 2
- Tarsi pseudotetramerous (apparently 4-segmented), third segment dilated, concealing minute fourth segment..... 3
- 2 Prothorax with distinct lateral margin... *Parandrinae*
- Prothorax without lateral margin..... *Spondylinae**
- 3 Last maxillary palpal segment acute..... *Laminae*
- Last maxillary palpal segment obtuse or truncate at apex..... 4
- 4 Prothorax with lateral margin or partial lateral margin; fore coxae transverse..... 5
- Prothorax without lateral margin; fore coxae projecting, conical or rounded, rarely transverse..... 6
- 5 Prothorax with complete lateral margin..... *Prioninae*
- Prothorax with vague lateral margin in basal half. *Philinae*
- 6 Fore coxae conical; head narrowed behind the eyes and usually separated from neck by a distinct sulcus. *Lepturinae*
- Fore coxae rounded, rarely transverse or conical (in *Oemini*); head with sides straight or rounded, usually without sulcus separating from neck..... 7
- 7 Stridulatory plate of mesonotum divided by a glabrous median line..... *Aseminae**
- Stridulatory plate of mesonotum undivided..... *Cerambycinae*

* not recorded from the Philippines.

Faunistic remark:

The Palawan region fauna will not be included in this paper, because it is a fauna on his own, and more related to the Borneo fauna than to the Philippine fauna.

"During the late middle Pleistocene, eustatic sea level was 160-180 m lower than it is at present..... The channel between Borneo and Palawan is 145 m deep, a landbridge may have existed between Borneo and Palawan during the late middle Pleistocene (about 160 000 years

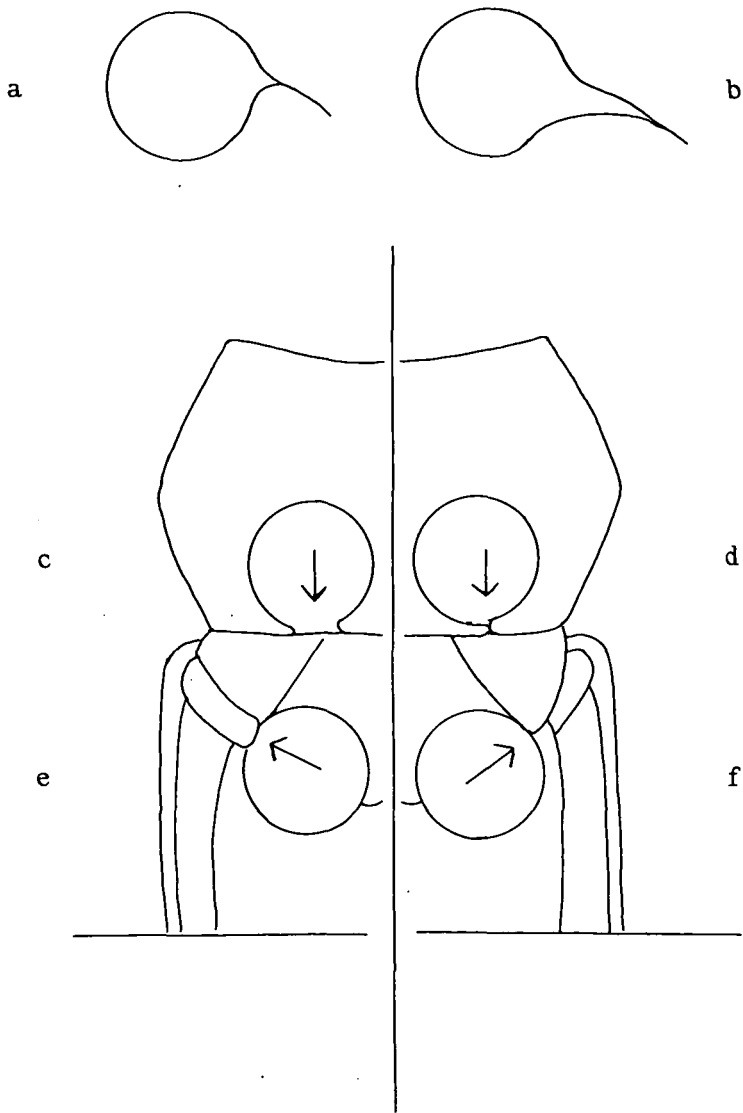


Fig.1: a) Fore coxal cavity rounded; b) Fore coxal cavity angulate; c) Fore coxal cavity open behind; d) Fore coxal cavity closed behind; e) Mid coxal cavity open to epimeron; f) Mid coxal cavity closed to epimeron.

ago), but nor more recently. Thus, the Palawan region fauna seen today occurred on a single large island during the late Pleistocene, and has been isolated from its source in Borneo since the middle Pleistocene." ¹⁾ On the other hand, "several channels over 200 m deep separate both the Sulu and Palawan chains from the main body of the Philippines" ²⁾, so that we cannot suppose any landbridge there during the Pleistocene. See map fig. 42 ³⁾. Study of the Palawan fauna should go along with that of the Borneo fauna, exceeding the possibilities of the present paper.

B.

Subfamily *Parandrinae*

Genus *Parandra* LATREILLE, 1804

Parandra LATREILLE, 1804, Hist. Nat. Crust. Ins.: 252.

Subgen. *Parandra* s. str.

Parandra janus BATES, 1875 (Fig. 2)

Parandra janus BATES, 1875, Ent. Month. Mag. 12:47.

Range: Japan, Taiwan, Java, Celebes, Moluccas, New Guinea. Philippines: Luzon, Benguet, Jaisan, Bagnio (Mc GREGOR), cit. SCHULTZE.

Subfamily *Philinae*

Genus *Philus* SAUNDERS, 1853

Philus SAUNDERS, 1853, Trans. Ent. Soc. Lond. (2), 2:110.

Philus lumawigi sp. nov. (Fig. 3)

Brown, pubescence yellow; surface, except antennae, shining.

♂: Frons with large, median, triangular excavation, very finely and densely punctate; genae short, obtuse; antennal supports punctate like frons, separated by nar-

¹⁾ L.R. HEANY, 1986, Biogeogr. of mammals in SE Asia; estimate of colonization, extinction, speciation, Biol. Journ. Linn. Soc., 28:135.

²⁾ l.c.: 141.

³⁾ l.c.: 137.

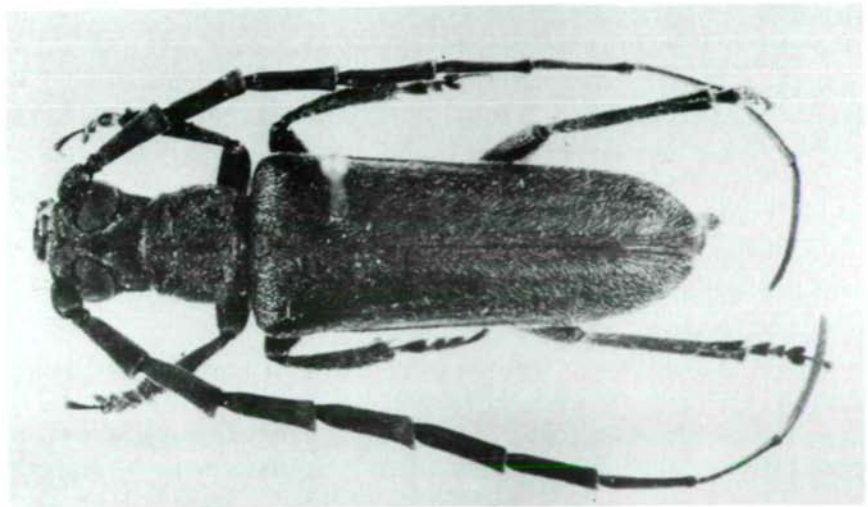
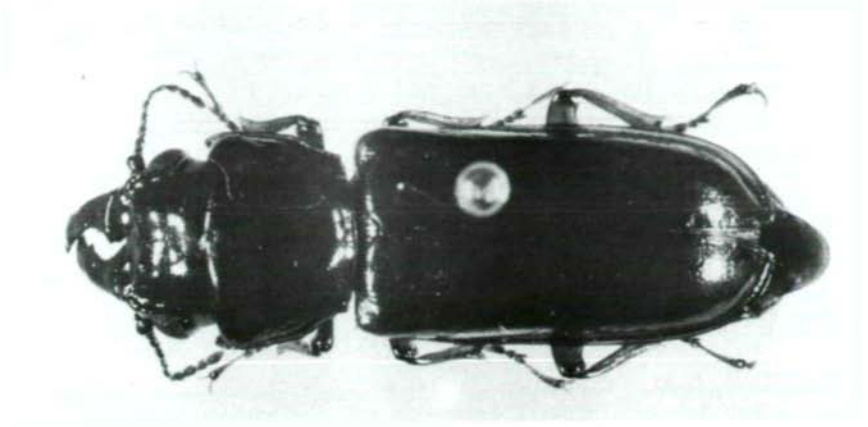


Fig.2 (above): *Parandra janus* BATES, ♂.

Fig.3 (below): *Philus lumawigi* sp.nov., Holotype ♂.

row sulcus running backwards between upper eye lobes; vertex finely and densely granulate. Eye big, shallowly emarginate, distance between upper eye lobes about half the diameter of one lobe. Antennae about one half longer than body; scape short, thick, roundish, finely and densely punctate; 3 as long as 4 or 5; 6-10 each somewhat longer, 11 about 1/2 longer than 10, not appendiculated; 3-10 ectoapically produced; 3-11 with micropunctation and very short pubescence, dull.

Pronotum wider than long (1,25 : 1), base weakly bisinuate, with very fine basal sulcus, posterior angle obtuse, sides rounded; apical margin strongly convex, apical sulcus distinct on both sides, obsolete medially; disc very finely and densely punctate, with a small, smooth area on each side in apical half; pubescence lying in different directions; lateral margin distinct at least in basal 2/3.

Scutellum small, apically rounded, very delicately punctate and pubescent. Elytra narrowed from base to end of first third, subparallel in median third, rounded in last third, sutural angle rounded; finely and densely punctate, with two rather indistinct costae on disc, each puncture with a semierect hair extending backwards over next or next two or three punctures.

Sterna very finely and densely punctate. Prosternal process on same level with anterior coxae, apically triangular and disappearing between coxae. Mesosternal process acutely triangular and disappearing between coxae. Metasternal episterna basally wide, strongly narrowed towards apex. Sternites shallowly punctate, abdomen constricted between third and fourth sternite, fifth with apical margin weakly emarginate. Legs finely and densely punctate, ventral face of femora with dense, erect pilosity. First segment of hind tarsi short, much shorter than second and third combined.

Holotype ♂, length 18,5 mm, width 5,2 mm, Philippines, Panay, VII.1988; 4 Paratypes ♂♂, length 14,5 - 19,7 mm, same data resp. Panay, Antique, XII.1988, coll. LUMAWIG, in author's collection.

Subfamily *Cerambycinae*

The following key is adapted from GRESSITT & RONDON 1970, *Cerambycides of Laos, Pacific Insects Monogr.* 24: 42-43.

- 1 Eye coarsely faceted (except in certain *Obrini* and genus *Lachnopterus* THOMSON of *Cerambycini*)..... 2
- Eye finely faceted..... 7
- 2 Mid coxal cavity open to epimeron externally (see Fig.1e)..... 3
- Mid coxal cavity closed to epimeron externally (see Fig.1f)..... 5
- 3 Intercoxal process of prosternum narrow, rarely broadened distally..... 4
- Intercoxal process of prosternum wide, broadened distally; pronotum usually more or less strongly ridged. *Cerambycini*
- 4 Fore coxae globose (if subconical, cavity closed behind)..... *Hesperophanini*
- Fore coxae prominent, conical or subconical, angulate externally, often broadly open behind..... *Oemini*
- 5 Antennal segments not spined..... 6
- Some of basal segments spined endoapically..... *Phorocanthini*
- 6 Abdominal segment 1 normal, not greatly enlarged. *Callidiopini*
- Abdominal segment 1 greatly enlarged, often as long as rest of segments combined; rest of segments transformed into an ovipository apparatus in female.... *Obrini*
- 7 Mid coxal cavity open to epimeron externally..... 8
- Mid coxal cavity closed to epimeron externally.... 19
- 8 Abdominal segment 1 normal, not greatly enlarged... 9
- Abdominal segment 1 greatly enlarged, often as long as remaining segments combined; remaining segments transformed into an ovipository apparatus in female. *Obrini*
- 9 Fore coxal cavity angulate externally (Fig.1b).... 10
- Fore coxal cavity rounded externally (Fig.1a).... 12
- 10 Fore coxae not projecting above intercoxal process, its cavity open posteriorly..... 11

- Fore coxae projecting above intercoxal process, more or less cylindrical; elytron usually abbreviated.
..... *Molorchini*
- 11 Eye oval; antenna inserted some distance from eye.
..... *Mythodini**
- Eye emarginate, reniform; antenna inserted in emargination of eye..... *Rosaliini**
- 12 Scutellum large, triangular, angulate posteriorly; metasternum with scent pore at posterior angle... 13
- Scutellum small, usually not angulate behind; metasternum without scent pore..... 14
- 13 Fore coxal cavity completely or nearly closed posteriorly (Fig.1d)..... *Callichromini*
- Fore coxal cavity widely open behind (Fig.1c)....
..... *Purpuricenini*
- 14 Fore coxal cavity open posteriorly..... 15
- Fore coxal cavity closed posteriorly..... 17
- 15 Elytra entire, not strongly dehiscent; pronotum rarely with strong swellings on disc..... 16
- Elytra dehiscent; Prothorax with a strong median swelling on disc and mid basal upraised area on each elytron..... *Thranini*
- 16 Metepimeron produced over angle of abdominal sternite 1, enclosing hind coxae externally; metepisternum wide..... *Clytini*
- Metepimeron not produced over angle of abdominal sternite 1; metepisternum narrow..... *Anaglyptini**
- 17 Legs long; hind femur usually exceeding abdominal apex..... 18
- Legs short; hind femur not reaching abdominal apex.
..... *Pyrestini**
- 18 Antennae usually longer than body in male, slender.
..... *Rhopalophorini**
- Antennae stout, shorter than body in male.....
..... *Prothemini*
- 19 Eye emarginate or divided; tarsal claws widely divergent or divaricate..... 20
- Eye entire, not emarginate; tarsal claws narrowly divergent..... *Tillomorphini*
- 20 Eyes large, close to each other on frons.. *Glaucyctini*
- Eye normal, not close to each other on frons..... 21

- 21 Antennae usually shorter than body, sometimes serrate..... *Cleomenini*
- Antennae longer than body, very slender.....
..... *Rhopalophorini**

* Not yet recorded from the Philippines.

Tribe *Oemini*

- 1 Antennal scape toothed ectoapically.....
..... *Xystrocera* SERVILLE
- Antennal scape not toothed..... 2
- 2 Eye widely divided..... *Tetraommatus* PERROUD
- Eye not distinctly divided..... 3
- 3 Mid coxae contiguous..... *Noserius* PASCOE
- Mid coxae separated by mesosternal process..... 4
- 4 Fore coxal cavity closed behind; body length less than 20 mm..... *Comusia* THOMSON
- Fore coxal cavity open behind; body length more than 30 mm..... *Oplatocera* WHITE

Genus *Xystrocera* SERVILLE, 1834

Xystrocera SERVILLE, 1834, Ann.Soc.Fr. 3:69.

According to MARTINS and CARVALHO 1984, Pap.Avulsos Zool. 35(20):209-234, *Xystrocera* SERVILLE, 1834, and *Xystroceroideus* LEPESME, 1948, constitute a separate tribe, *Xystrocerini*. As the remaining genera of *Oemini* have not yet been revised, *Xystrocera* is here treated within the *Oemini* for practical reasons.

- 1 Areas of sexual punctuation of male prothorax restricted to side, not reaching pronotum; antennae reddish; usually a dorsal, dark green band on elytron, the lateral dark band narrow.. *globosa* (OLIVIER)
- Areas of sexual punctuation of male prothorax reaching pronotum; antennae dark brown to black; elytron reddish with margin largely dark.... *semperi* BREUNING

Xystrocera globosa (OLIVIER, 1795) (Fig.4)

Cerambyx globosus OLIVIER, 1795, Ent. 4:27, pl.12, fig.

81. *Xystrocera globosa* : SERVILLE, 1834, Ann.Soc.Ent.Fr. 3:69.

Range: S-SE-E-Asia, Australia, Madagascar, Mauritius,

Seychelles, Egypt. Philippines: Luzon, Mountain Prov., VI. & VII.1987; Negros occ., Valencia, VIII.1984; coll. LUMAWIG.

Xystrocera semperi BREUNING, 1957

Xystrocera semperi BREUNING, 1957, Bull.Inst.Fr.Afr.n. (A) 19(4):1253.

Described by BREUNING from a male from the Philippines, without exact locality. MARTINS, l.c., mentions one male from Mindanao in Zool. Mus. Humboldt-Univ. Berlin.

Genus *Tetraommatus* PERROUD, 1855

Tetraommatus PERROUD, 1855, Ann.Soc.Sci.Lyon 10:390.

Tetraommatus luzonicus sp.nov. (Fig.5)

Light brown, unicoloured; with upraising pilosity, very short on elytra, longer on body, antennae and legs.

♂: Head finely punctate-granulate, frons transverse, vertical, rounded to vertex. Lower eye lobes large, prominent; upper eye lobes close to one another (distance between them about the diameter of one); distance between lower and upper eye lobe about the diameter of the upper. Antennae $\frac{1}{3}$ longer than body; scape fusiform, coarsely granulate; segment 2 more than half as long as scape; 3 one and $\frac{3}{4}$ times as long as scape; following segments subsequently shorter.

Pronotum $\frac{1}{2}$ longer than wide, with deep, medially angled basal sulcus; sides in front of sulcus rounded until middle, then straightly narrowed to apex; finely granulate, with smooth median line, the latter with some punctures in apical third. Scutellum oblong, apically rounded. Elytra elongate ($3\frac{1}{2}$ times as long as wide together), parallel, narrowed in last fifth, apically somewhat dehiscent, separately rounded; punctuation fine and very close till apex. Anterior and median coxae contiguous. Sterna very finely granulate. Femora shortly pedunculate, curved after the peduncle and broadly compressed. Basal joint of hind tarsi as long as three following together.

Holotype ♂, length 7,0 mm, width 1,3 mm, Philippines, Luzon, Laguna, Los Banos, Oct.10, 1982 - March 12, 1983, J.A. JACKMAN coll., in Houston University Museum.

Belongs to the group without lateral tubercle on pro-

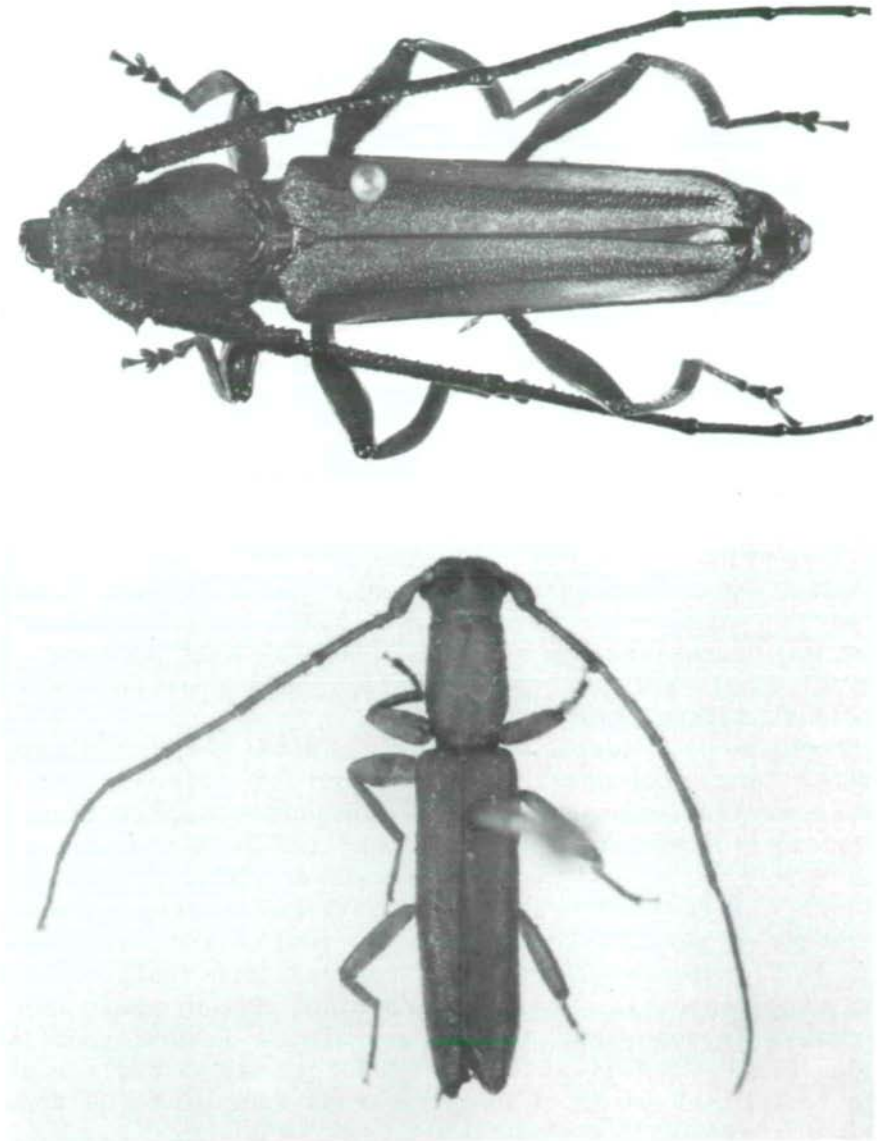


Fig.4 (above): *Xystrocera globosa* (OLIVIER), ♂.

Fig.5 (below): *Tetraommatus luzonicus* sp.nov., Holotype ♂.

notum (like *Tetraommatus ocularis* PASCOE, 1869).

Genus *Noserius* PASCOE, 1857

Noserius PASCOE, 1857, Trans. Ent. Soc. Lond. (2)4:95.

Noserius tibialis PASCOE, 1857 (Fig. 6)

Noserius tibialis PASCOE, 1857, l.c.

Range: Burma, Thailand, Laos, Vietnam, Malaysia, Java, Sumatra, Borneo. Philippines: 1 specimen, without further data, coll. LUMAWIG.

Genus *Comusia* THOMSON, 1864

Comusia THOMSON, 1864, Syst. Ceramb: 249. *Ciopera* PASCOE, 1866, Proc. Zool. Soc. Lond.: 510. *Chapaon* PIC, 1922, Mel. Exot. Ent. 36:24. *Ogasawara* GRESSITT, 1937, Kontyû 11 (4):320. *Oemospiloides* FISHER, 1940, Ind. For. Rec. (n.s.) Ent. 6:197.

Comusia obriumoides THOMSON, 1864

Comusia obriumoides THOMSON, l.c.: 250. *Comusia obriumoides* LACORDAIRE, 1869, Gen. Col. 8:225.

Range: Philippines: Mindanao, THOMSON l.c., Romblon, IX.1986, 1 specimen, coll. LUMAWIG.

Genus *Oplatocera* WHITE, 1853 (Fig. 7)

Oplatocera WHITE, 1853, Cat. Col. Brit. Mus. 8:121. *Hoplitocera* GEMMINGER & HAROLD, 1872, Cat. Col. 9:2795. *Epioplatocera* GRESSITT, 1951 Longicornia 2:131.

Oplatocera oberthuri GAHAN, 1906

Oplatocera oberthuri GAHAN, 1906, Faun. Brit. Ind. Col. 1:108, fig. 43.

Range: Sikkim, Thailand, W-China, Taiwan, Malaysia, Sumatra. Philippines: Negros, VI.1985, 1 male, coll. LUMAWIG.

Tribe *Cerambycini*

- 1 Eye coarsely faceted..... 2
- Eye finely faceted..... *Lachnopterus* THOMSON
- 2 Fore coxal cavity strongly angulated externally (Fig. 1b)..... 3
- Fore coxal cavity rounded or feebly angulated externally (Fig. 1a)..... 4
- 3 Prothorax strongly spined at middle of side.....
..... *Plocaederus* THOMSON

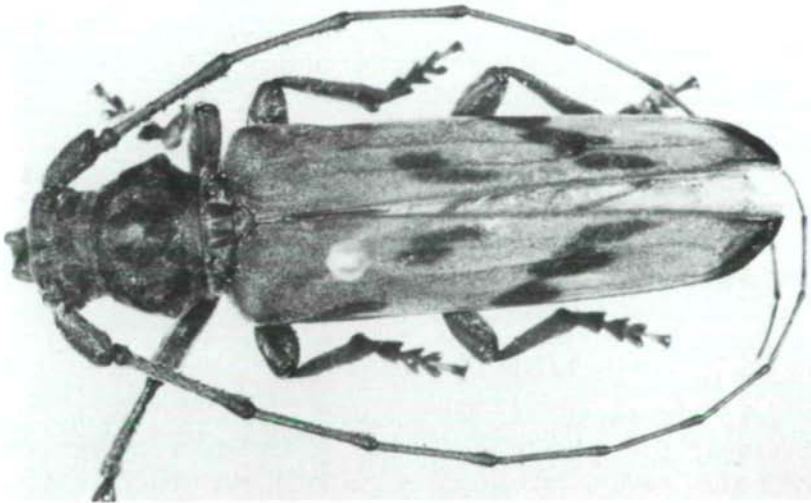
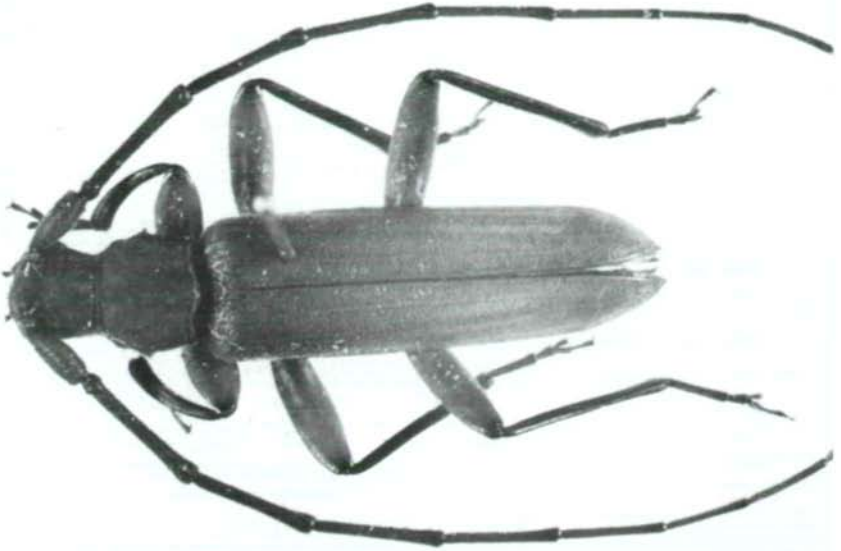


Fig.6 (above): *Noserius tibialis* PASCOE, ♂.

Fig.7 (below): *Oplatocera oberthuri* GAHAN, ♂.

- Prothorax not spined, bluntly tuberculate at middle of side..... *Neocerambyx* THOMSON
- 4 Antennae not short and stout, nor strongly compressed and dilated externally, usually much longer than body in male..... 5
- Antennae short and stout, or strongly compressed and dilated externally, often shorter than body in male. 16
- 5 Prothorax transverse..... 6
- Prothorax as long as wide, or longer than wide.... 11
- 6 Head with median carina between upper lobes of eyes; elytra with highly changing pattern of silky pubescence..... *Aeolesthes* GAHAN
- Head with usually a groove, never a carina between upper lobes of eyes..... 7
- 7 Some antennal segments spined apically..... 8
- Antennal segments not spined..... 10
- 8 Endoapical spines very small; mesosternal process with a deep, longitudinal groove..... *Trachylophus* GAHAN*
- Endo- and/or ectoapical spines very distinct; mesosternal process without deep longitudinal groove... 9
- 9 Prothorax spined at middle of side; neck short; elytra with highly changing patterns of silky pubescens. *Trirachys* HOPE
- Prothorax not spined; neck very long; elytra without changing patterns..... *Hoplocerambyx* THOMSON
- 10 Antennal supports acutely prominent on inner side; femora not carinate; body length over 35 mm..... *Massicus* PASCOE
- Antennal supports depressed; femora finely carinate on each side of hind edge; body length up to 25 mm. *Derolus* GAHAN
- 11 Femora finely carinate on each side of hind edge; elytra heavily punctate and pubescent..... *Calpazia* PASCOE*
- Femora not carinate..... 12
- 12 Neck very long; antennae of male densely fringed beneath with rather long hairs (at least in known philippine species)..... *Dialeges* PASCOE
- Neck normal; antennae of male not fringed with rather long hairs (if fringed, the hairs are few or very short..... 13

- 13 Prosternal process sloping, with or without a tubercle on its slope; pronotum very deeply corrugate. *Imbrius* PASCOE
- Prosternal process vertical, subvertical or prominent; pronotum not extremely deeply corrugate.... 14
- 14 Mesosternal process sloping; scape without cicatrix. 15
- Mesosternal process tuberculated; scape with distinct cicatrix..... *Zegriades* PASCOE*
- 15 Antennal segments 4 and 5, in male, with poriferous pit endobasally (the philippine species only)....
..... *Elydnus* PASCOE
- Antennal segments 4 and 5 normal... *Dymasius* THOMSON
- 16 Antennae compressed and dilated externally, longer than body in male..... 17
- Antennae short and stout, with segments 3-5 swollen, usually much shorter than body in both sexes..... 18
- 17 Elytra very finely and evenly punctate.....
..... *Trachylophus* GAHAN*
- Elytra coarsely and deeply punctate, at least in basal half..... *Xoanodera* PASCOE*
- 18 Mesosternal process tuberculate; elytron with irregular longitudinal depressions.. *Alodissus* SCHWARZER
- Mesosternal process sloping..... 19
- 19 Prosternal process sloping..... *Rhytidodera* WHITE*
- Prosternal process tuberculate..... *Zatrephus* PASCOE

* Not yet recorded from the Philippines.

Genus *Neocerambyx* THOMSON, 1860

Neocerambyx THOMSON, 1860, Classif. Ceramb.: 194.

Neocerambyx paris WIEDEMANN *luzonicus* HÜDEPOHL, 1987 (Fig. 8)

Neocerambyx paris WIEDEMANN, 1821, in GERM., Mag. Ent. 4: 127. *Neocerambyx paris luzonicus* HÜDEPOHL, 1987, Entomofauna 8(8): 170, fig. 1 & 2.

Range: Luzon, Sorsogon, 1♂, 1♀; V. 1983, 1♀; coll. LU-MAWIG.

Genus *Massicus* PASCOE, 1867

Massicus PASCOE, 1867, Ann. Mag. Nat. Hist. (3) 19: 319. *Conothorax* THOMSON, 1864, Syst. Ceramb.: 320. *Mallambyx* BATES,

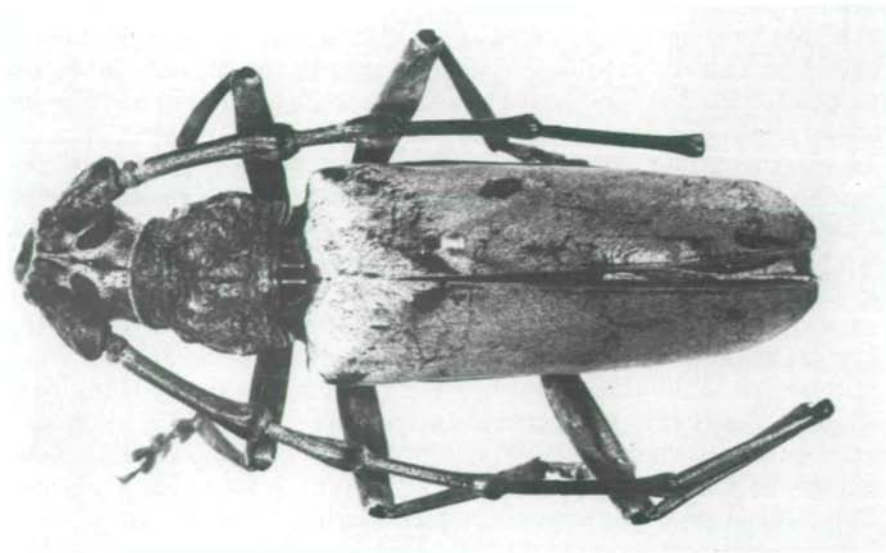
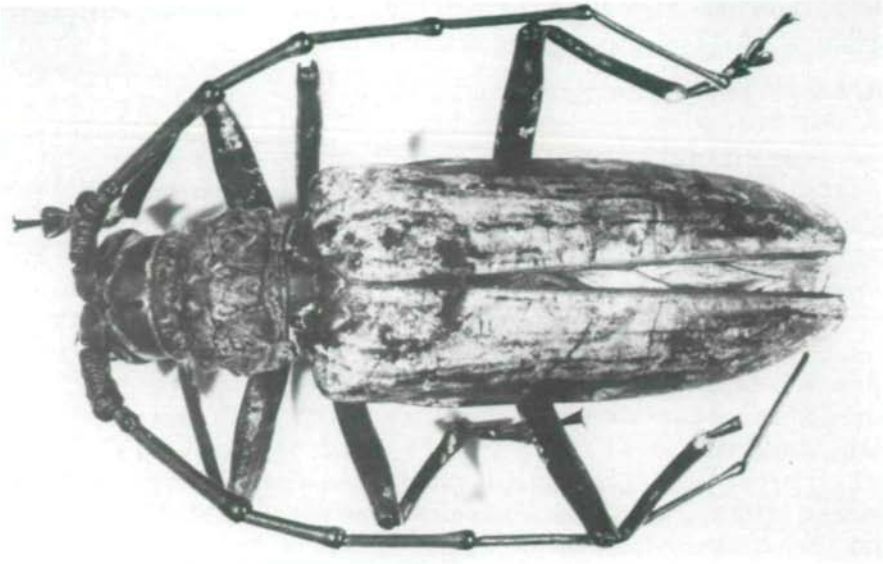


Fig.8 (above): *Neocerambyx paris* WIEDEMANN *luzonicus* HÜ-DEPOHL, Holotype ♂.

Fig.9 (below): *Massicus philippensis* sp.nov., Holotype ♂.

1873, Ann.Mag.Nat.Hist.(4)12:152. *Falsomassicus* PIC, 1946, Exchange 62:7.

Massicus philippensis sp.nov. (Fig.9)

Dark brown; pubescence yellowish, whitish on elytra.

♂: Head finely and densely pubescent, neck finely granulate; frons depressed towards middle, with two oblique grooves, running from middle towards antennal supports; latter with small, but prominent tops on inner side; between them two narrow and deep longitudinal sulcus ending at anterior margins of upper eye lobes; between these lobes a longitudinal groove. Antennae reaching apex of elytra at middle of segment 7 (that means, they should be about twice as long as body; left antenna missing segments 8-11, right 7-11); scape thick, cylindrical, rugose; 3, $3/4$ longer than 1; 4 as long as 1; 5 $1/2$ longer than 3; 6 and 7 each somewhat longer than 3; 3 and 4 thickened towards apex, 6 and following segments with external edge and slightly dilated apically; segments with micropuncture and scattered fine points. Pronotum little wider than long (1,1 : 1); base bisinuate, with rather broad posterior and deeper, medially curved anterior basal sulcus; sides slightly narrowed in front of base, rounded in basal half, straight from middle to sharp edge of apical constriction; anterior apical sulcus obsolete on disc, posterior disappearing in the irregular, transverse rugosity of disc; transverse ridges interrupted in basal half by two rather indistinct, short, longitudinal sulcus at both sides from middle; disc opaque, with moderately dense, short, adjacent pubescence, forming some small, denser spots, one of which very distinct on each side of apical constriction. Scutellum semicircular, with micropuncture and yellow pubescence. Elytra transversely convex, apically truncate with external angle obtuse, sutural acute; behind scutellum a triangular depression; with micropuncture and fine, shallow, scattered punctuation, distinct till apex; pubescence very short, dense, almost covering tegument, longer at base.

Prosternum transversely ridged, with shallow transverse sulcus before middle; prosternal process apically tuberculate and prominent. Mesosternum with shallow

transverse sulcus, finely and densely punctate, episterna and epimera with micropuncture, anterior margin of episterna smooth; mesosternal process basally rounded, apically enlarged and emarginated. Legs finely punctate and pubescent, femora subparallel.

Holotype ♂, length 44 mm, width 12,2 mm, Philippines, without further data, coll. LUMAWIG, in author's collection.

Genus *Aeolesthes* GAHAN, 1890

Aeolesthes GAHAN, 1890, Ann. Mag. Nat. Hist. (6)6:250.

- 1 Antennal segments 6-8 or more finely spined endoapically; pubescence golden brown; transverse sulcus on underside of head (between genae) strongly curved backwards..... *induta* (NEWMAN)
- Antennal segments not spined; pubescence golden yellow; transverse sulcus on underside of head straight.
..... *fulgens* SCHWARZER

Aeolesthes induta (NEWMAN, 1842) (Fig. 10)

Hamaticherus indutus NEWMAN, 1842, Entomol. 1:245. *Neocerambyx indutus*: PASCOE, 1869, Trans. Ent. Soc. Lond. (3)3:511. *Aeolesthes induta*: GAHAN, 1890, Ann. Mag. Nat. Hist. (6)6:253.

Range: Sri Lanka, Burma, S-China, Thailand, Laos, Malaysia, Sunda Is. Philippines: Mindanao, I.77, IV.79, IX.86; Luzon; Romblon; Sibuyan; LUMAWIG coll. many specimens; Negros, cit. SCHULTZE.

Aeolesthes fulgens SCHWARZER, 1926 (Fig. 11)

Aeolesthes fulgens SCHWARZER, 1926, Entom. Mitt. 15:7.

Range: Mindanao, coll. LUMAWIG, 7 specimens.

Genus *Trirachys* HOPE, 1841

Trirachys HOPE, 1841, Proc. Ent. Soc. Lond.:61.

Trirachys gloriosus AURIVILLIUS, 1924 (Fig. 12)

Trirachys gloriosus AURIVILLIUS, 1924, Ark. Zool. 15, 25:3.

Range: Philippines: Mindanao IV./V.1986, Surigao Tandang; Luzon, Mountain Province, V.1986; coll. LUMAWIG; 12 specimens.

Genus *Plocaederus* THOMSON, 1860

Plocaederus THOMSON, 1860, Class. Ceramb.:197.

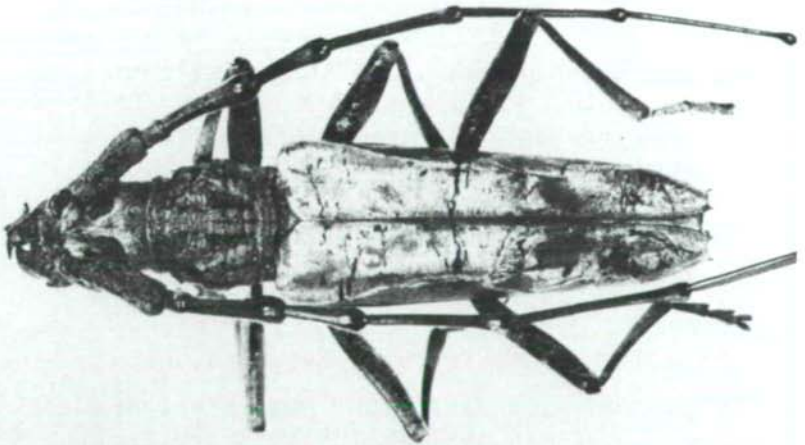
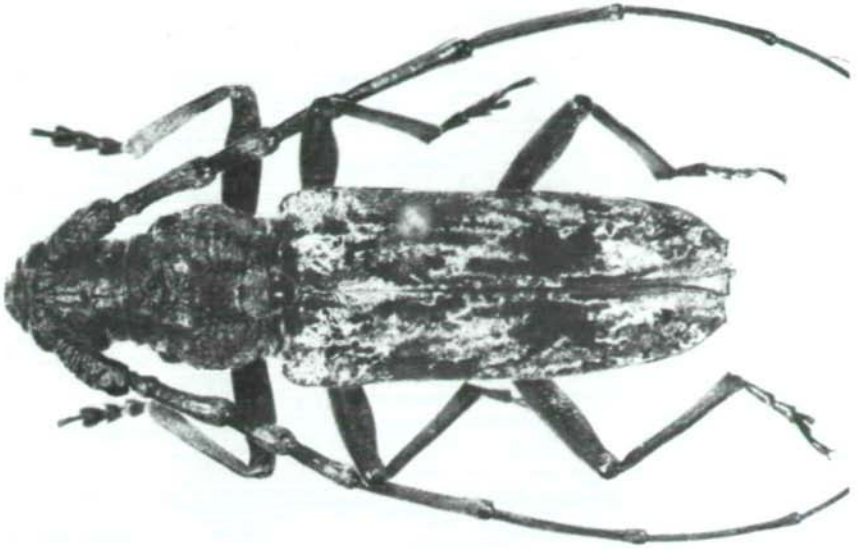


Fig.10 (above): *Aeolesthes induta* (NEWMAN), ♂.

Fig.11 (below): *Aeolesthes fulgens* SCHWARZER, ♂.

Plocaederus ruficornis (NEWMAN, 1842) (Fig. 13)

Cerambyx ruficornis NEWMAN, 1842, Entomol. 1:245. *Cerambyx fulvicornis* GUÉRIN, 1843, Icon. Règn. Anim.: 227. *Plocaederus pruinus* PASCOE, 1866, Proc. Zool. Soc. Lond.: 526. *Plocaederus fulvicornis*: AURIVILLIUS, 1912, Col. Cat. 39:50. *Plocaederus ruficornis*: AURIVILLIUS, l.c.

Range: Thailand, Laos, Malaysia, Sumatra. Philippines: Luzon, Manila, Tayabas; SCHULTZE cit.

Genus *Hoplocerambyx* THOMSON, 1864

Hoplocerambyx THOMSON, 1864, Syst. Ceramb.: 229.

Hoplocerambyx spinicornis (NEWMAN, 1842) (Fig. 14)

Hammaticherus spinicornis NEWMAN, 1842, Entomol. 1:245. *Hoplocerambyx spinicornis*: THOMSON, l.c. *Cerambyx ? morosus* PASCOE, 1857, Trans. Ent. Soc. Lond. (2) 4:92.

Range: Afghanistan, India, Burma, Thailand, Laos, Malaysia, Sunda Is. Philippines: Mindanao, coll. LUMAWIG, 60 specimens; Luzon, Benguet, Negros, SCHULTZE cit.

Genus *Derolus* GAHAN, 1891

Derolus GAHAN, 1891, Ann. Mag. Nat. Hist. (6), 7:26. *Capnocerambyx* REITTER, 1894, Ent. Nachr. 20:356.

Derolus volvulus (FABRICIUS, 1801) (Fig. 15)

Cerambyx volvulus FABRICIUS, 1801, Syst. Eleuth. 2:271. *Cerambyx demissus* PASCOE, 1859, Trans. Ent. Soc. Lond. (2), 5:21. *Pachdyssus (Derolus) demissus*: GAHAN, 1891, l.c.: 27, 30. *Cerambyx strigicollis* DALMAN, 1817, in Schönh. Syn. Ins. 1, 3. App.: 158. *Derolus volvulus*: AURIVILLIUS, 1912, Col. Cat. 39:58.

Range: Arabia, India, China, Hainan, Laos, Java. Philippines (AURIVILLIUS, l.c.) ?.

Genus *Imbrius* PASCOE, 1866

Imbrius PASCOE, 1866, Proc. Zool. Soc. Lond.: 528.

- 1 Pubescens on elytra moderately dense, not covering integument, adpressed longitudinally.....
..... *corrugatus* sp. nov.
- Pubescens on elytra dense, covering integument except three longitudinal lines on each elytron, adpressed obliquely or transversely..... *similis* sp. nov.

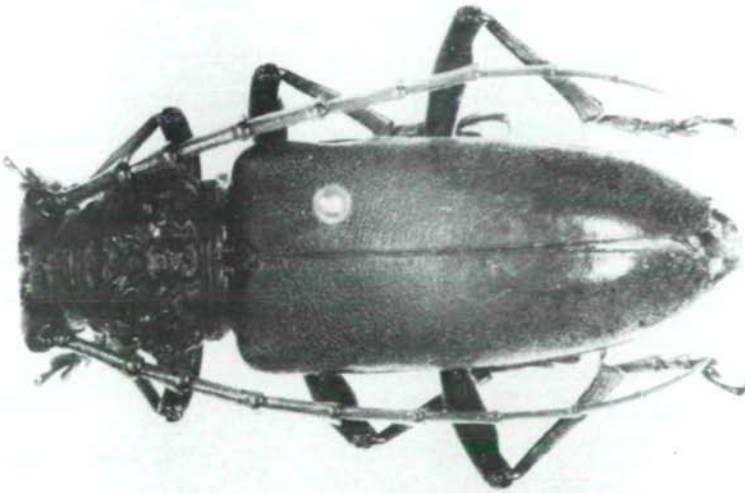
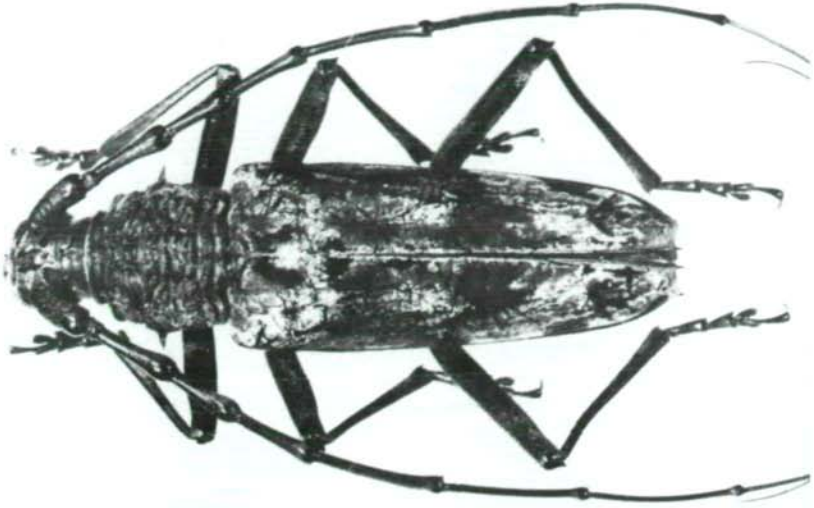


Fig.12 (above): *Trirachys gloriosus* AURIVILLIUS, ♂.
Fig.13 (below): *Plocaederus ruficornis* (NEWMAN), ♀.

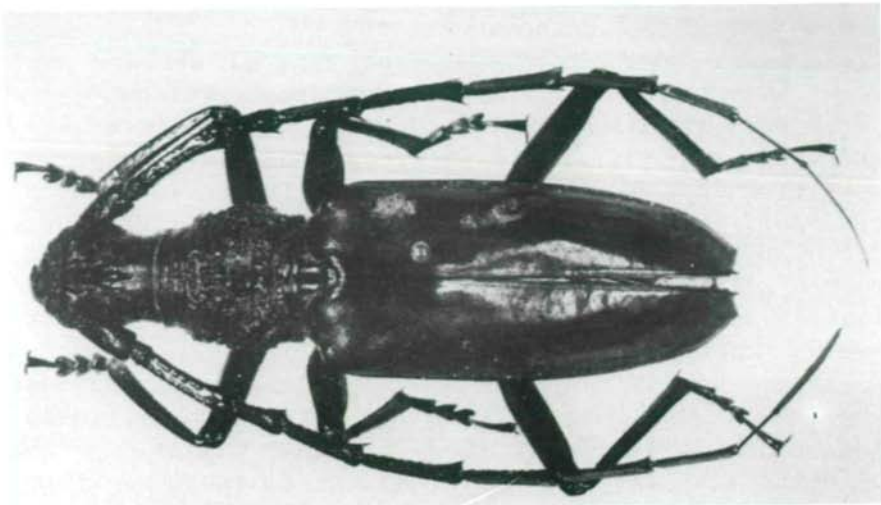


Fig.14 (above): *Hoplocerambyx spinicornis* (NEWMAN), ♂.
Fig.15 (below): *Derolus volvulus* (FABRICIUS), ♀.

Imbrius corrugatus sp.nov. (Fig.16)

Yellowish, head, prothorax and ventral surface dark brown; antennae apically brown; pubescence yellow.

♂: Frons with median rhomboid area, limited anteriorly by shallow grooves, posteriorly by broad, strongly deepened grooves; antennal supports longitudinally grooved, with small round tops, separated by a smooth ridge; deep groove between upper eye lobes; head finely punctate, clothed with thin, short, adpressed pubescence. Antennae slightly longer than body; scape short, arched, thickened towards apex, dorsally with longitudinal groove; 3-5 swollen; 3 hardly longer than 1, $1/5$ longer than 4; 5 as long as 4; 6 as long as 1; 7 $1/6$ longer than 6, following segments subequal; 11 $1/7$ longer than 10; 6 and following with external edge and apically acute. Pronotum slightly longer than broad, base weakly bisinuate; sides convex, moderately constricted basally, more strongly so apically; apical margin medially prominent; disc strongly and deeply corrugated, with four longitudinal ridges, more or less connected by oblique, transverse ridges, and converging into strongly concave, broad, posterior apical groove; disc smooth in front of that groove, smooth area with a small tubercle enclosed by circular pubescence; sides irregularly rugose; clothed with short, recumbent, moderately dense pubescence upon carinae, thin pubescence within the ridges. Scutellum small, rounded. Elytra subparallel, rounded at apex, with dense micropuncture and moderately dense, fine puncture; clothed with short pubescence, not covering integument.

Prosternum rugose, with shallow transverse sulcus medially; prosternal process longitudinally ridged, with minute tubercle on level of posterior margin of coxae, obliquely declined after it. Mesosternal process rounded basally, deeply emarginated apically. Meso-, Metasterna and Sternites punctate and clothed with short, recumbent pubescence; fifth sternite slightly emarginated. Legs finely punctate, very finely and thinly pubescent. First segment of hind tarsi much shorter than 2+3.

♀: Antennae hardly extending to apex of elytra; segment 3-5 weakly swollen. Prothorax distinctly longer

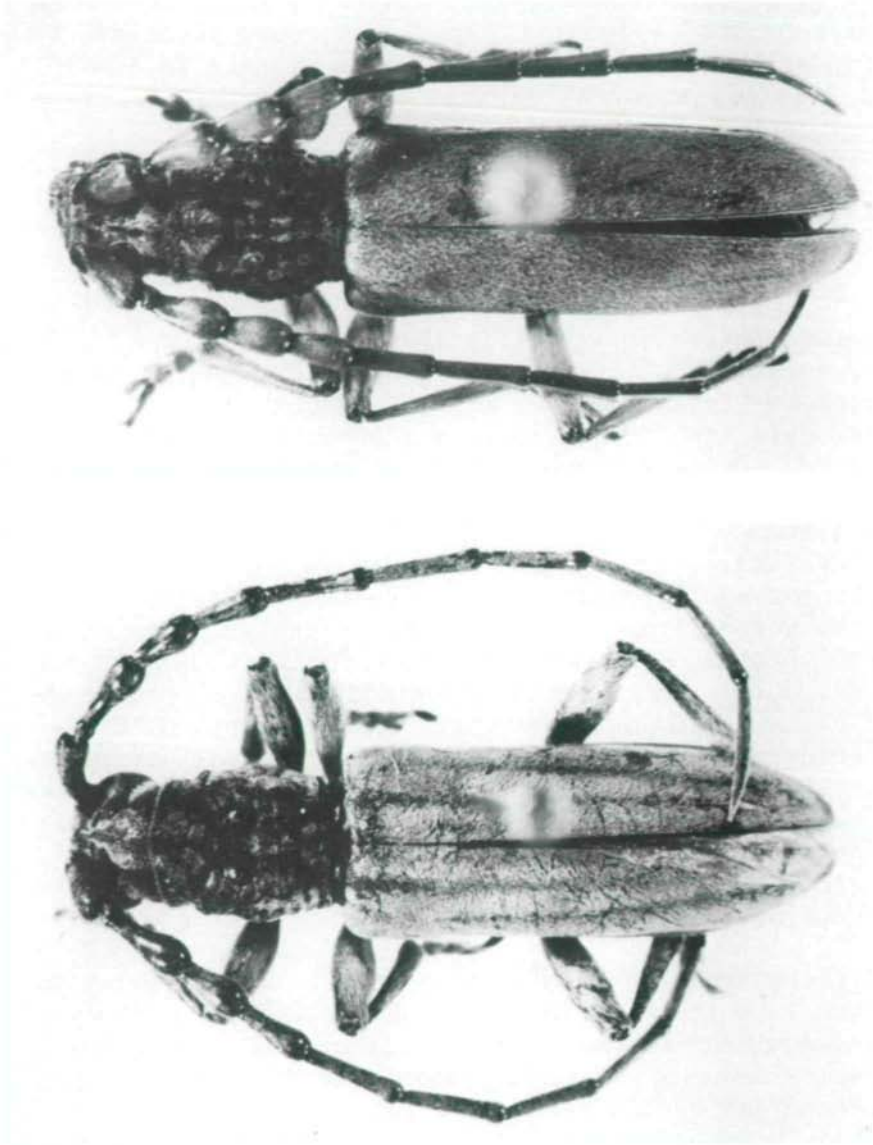


Fig.16 (above): *Imbrius corrugatus* sp.nov., Holotype ♂.
Fig.17 (below): *Imbrius similis* sp.nov., Holotype ♂.

than wide. Fifth sternite apically rounded.

Holotype ♂, length 13,5 mm, width 3,7 mm, Luzon, Mountain Province, V.1986; 1 Paratype ♀, same locality, VI. 1987, coll. LUMAWIG. 3 Paratypes ♀♀, length 16,5 - 17,8 mm, Romblon, Sibuyan, España, coll. LUMAWIG. All types in author's collection.

Differs from *epeheus* PASCOE, 1866 (Malaysia, Sunda Is.), in shorter prothorax (width : length of *corrugatus* = 1 : 1,05-1,1, of *epeheus* = 1 : 1,18-1,2); finer puncture of elytra; very small, almost obsolete tubercle on prosternal process.

Imbrius similis sp.nov. (Fig.17)

Description follows that of *Imbrius corrugatus* sp.nov. except for following:

Ferruginous; head, prothorax, antennal segments 6-11, base of tibiae and tarsi darker; pubescence yellowish, forming stripes on elytra.

♂: Frons with central area, separated posteriorly by concave sulcus from impunctate area on superior portion, at beginning of longitudinal ridge between antennal supports. Scape rugose without distinct groove. Segment 3-5 more slender at base. Pronotum somewhat longer than broad, sides less concave, pubescence of elytra longer and denser, obliquely or transversely disposed on disc, covering integument except three longitudinal stripes on each elytron. Elytra more opaque, finer and denser punctate. Transverse sulcus of prosternum very distinct. Fifth sternite apically ovals emarginated.

Holotype ♂, length 15,5 mm, width 3,9 mm, Philippines without further data, coll. LUMAWIG, in author's collection.

Differs from *Imbrius lineatus* PASCOE, 1866, (Malaysia, Sumatra) in its whitish-yellowish instead of golden-yellow pubescent elytra, the pubescence being more transversely disposed; more distinct tubercle on prosternal process; and considerably less corrugate pronotum.

Genus *Dymasius* THOMSON, 1864

Dymasius THOMSON, 1864, Syst. Ceramb.: 234.

- 1 Median portion of frons finely punctate; upper eye lobes with seven rows of ommatidia..... 2

- Median portion of frons coarsely punctate; upper eye lobes with five rows of ommatidia.... *ysmaeli* sp.nov.
- 2 Integument of elytra pitchy brown... *lumawigi* sp.nov.
- Integument of elytra red.....
..... *lumawigi rufipennis* ssp.nov.

Dymasius lumawigi sp.nov. (Fig.18)

Pitchy brown, tibiae and antennae reddish; clothed with very fine, golden yellow pubescence, being extremely fine on elytra; anterior portion of pronotum with four small spots of denser pubescence.

♂: Head finely and densely punctate; pubescence sparse, more concentrated between antennal supports and on vertex; center of frons with circular sulcus, more deeply depressed laterally and posteriorly; ridge between supports bifurcate before upper eye lobes; vertex, between upper eye lobes, even, behind them with longitudinal groove; upper eye lobes with seven rows of ommatidia. Antennae twice as long as body; segment 7 surpassing apex of elytra; scape little enlarged towards apex, slightly curved, finely and densely punctate with additional, scattered, big, shallow points; 3 more than 1/2 longer than 1; 4 as long as 1; 5 somewhat shorter than 3; 6 and 7 each slightly longer than 3, 8-10 slightly shorter; 11 somewhat longer than 6, not appendiculate; 6-10 externally flattened, apically slightly enlarged. Pronotum impunctate, opaque, base almost straight, anterior basal sulcus strongly concave in middle; sides evenly rounded, hardly constricted basally, strongly apically; posterior apical sulcus deep and slightly concave, anterior very fine; disc not very deeply, irregularly, transversely ridged, transverse ridges in basal half broken by two irregular, longitudinal grooves; on both sides of posterior apical sulcus, with spot of dense, golden yellow pubescence, another spot obliquely in front, near apical constriction. Elytra evenly narrowed towards apex, apically truncate with angles rounded, micropunctulate, with additional fine, somewhat scattered, almost obsolete points in apical half; pubescence extremely fine and short, denser and longer only at base and apical margin.

Prosternum rugose, with transverse median groove; pro-

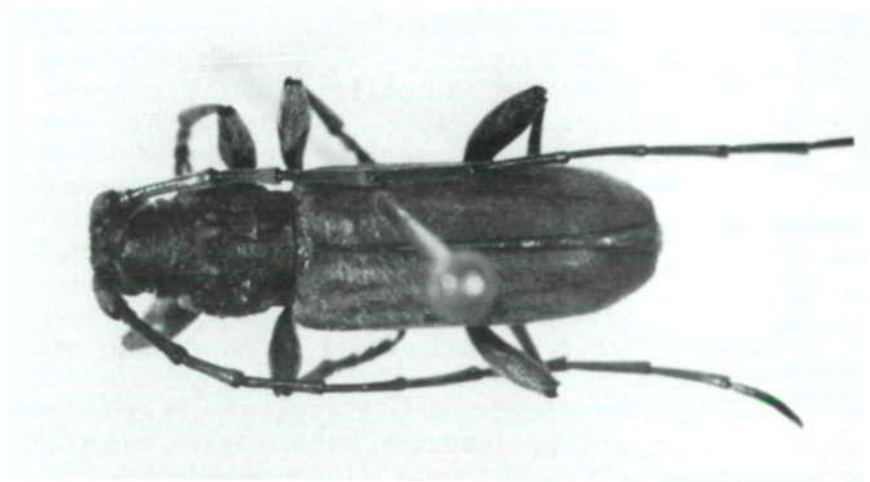
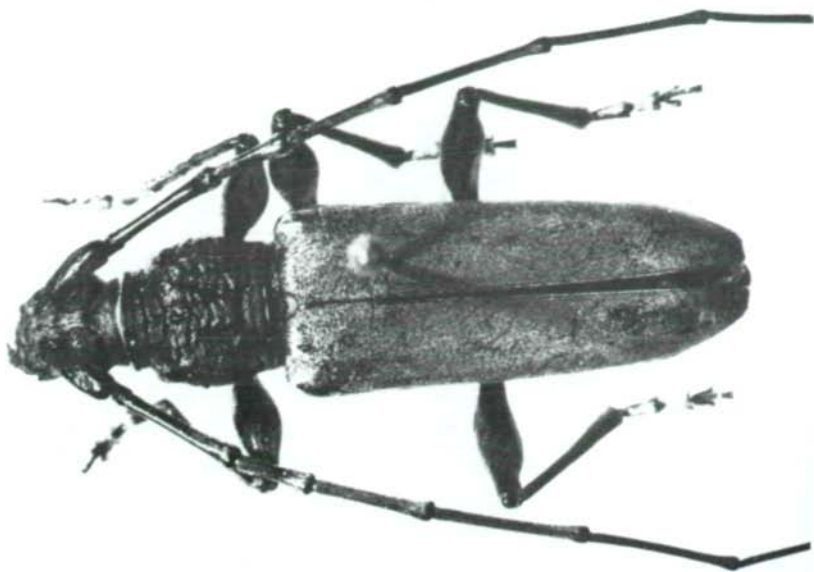


Fig.18 (above): *Dymasius lunawigi* sp.nov., Holotype ♂.
Fig.19 (below): *Dymasius ysmaeli* sp.nov., Holotype ♂.

cess vertical with small, round tubercle. Mesosternum micropunctulate, process basally slightly rounded, apically emarginate. Metasternum micropunctulate. Punctuation of sterna dense and stronger than that of sternites, fifth sternite apically truncate. Legs micropunctulate, thinly pubescent; femora strongly swollen, basally carinate on inner face. First segment of hind tarsi as long as second and third combined.

♀: Antennae little longer than body; 3 1/4 longer than 1; 4 distinctly shorter than 1; 5 somewhat shorter than 3; following segments subsequently shorter, 11 as long as 8, appendiculate. Fifth sternite apically rounded.

Holotype ♂, length 23mm, width 6mm, Romblon, VI.1985, Paratype ♀, length 18,7 mm, width 5 mm, Philippines without further data, coll.LUMAWIG; in author's collection.

Dymasius lumawigi rufipennis ssp.nov.

Integument of elytra red. Antennae of male only 2/3 longer than body. First segment of hind tarsi somewhat shorter than second and third combined.

Holotype ♂, length 22 mm, Luzon, Mountain Province, III.1987, Paratype ♀, length 15,5 mm, Mindanao, VI.1985, coll. LUMAWIG; in author's collection.

Dymasius lumawigi rufipennis ssp.nov. may be a separate species. More specimens and a better knowledge of geographical distribution of both forms is needed to resolve this problem.

Dymasius ysmaeli sp.nov. (Fig.19)

Reddish brown, head, prothorax, part of inferior face and femora somewhat darker. Pubescence of head, pronotum and scutellum golden yellow, otherwise whitish, on elytra forming rather indistinct longitudinal stripes.

♂: Frons and antennal supports coarsely and partly confluent punctate; former with transverse sulcus on superior portion, strongly depressed on both sides; antennal supports separated by a deep sulcus, bifurcate at

anterior margin of upper eye lobes and enclosing a longitudinal elevation between them; vertex with longitudinal groove beginning at posterior margin of upper eye lobes; genae glossy with scattered, fine punctures; upper eye lobes with five rows of ommatidia.

Antennae less than $1/3$ longer than body; scape rather stout, apically rounded, rugose, with shallow longitudinal groove on upper face; 3 almost twice as long as 1; 4 $1/3$ longer than 1; 5 as long as 3; 6 and following segments somewhat longer than 3, 10 little shorter; 11 as long as 6, not appendiculate; 3 and 4 hardly thickened towards apex; 7 and following segments externally flattened; 6-8 slightly enlarged apically.

Pronotum as long as wide, impunctate, opaque, with small spots of golden yellow pubescence, four in apical half, and six in basal half, three on each side near lateral margin; base almost straight, with fine posterior sulcus and more strongly impressed, medially concave anterior sulcus; sides rounded, collared basally and apically; posterior apical sulcus concave in middle, anterior finely impressed, apical margin slightly convex; disc very irregularly, transversely ridged, ridges broken in basal half by two concave, longitudinal grooves. Elytra apically truncate, angles rounded, micropunctulate, with additional, rather scattered, larger, shallow points obsolete towards apex; base and suture, in basal half, clothed with denser and longer, whitish pubescence, disposed transversely from suture to margin, otherwise with very thin and short pubescence; three less densely pubescent stripes on each elytron.

Prosternum transversely rugose, with deep median, transverse sulcus; process rather wide, slightly swollen apically, obliquely declining. Mesosternum opaque with few shallow punctures; process basally slightly rounded, apically emarginate. Metasternum opaque. Sternites finely and densely punctate, fifth broadly truncate. Legs micropunctulate, thinly pubescent; femora strongly swollen, their inferior face finely carinate basally. First segment of hind tarsi shorter than second and third combined.

Holotype ♂, length 11 mm, width 3 mm, Philippines

without further data, coll. LUMAWIG, in author's collection.

Genus *Elydnus* PASCOE, 1869

Elydnus PASCOE, 1869, Trans. Ent. Soc. Lond. (3)3:516. *Dymasius* subgen. *Elydnus* GAHAN, 1891, Ann. Mag. Nat. Hist.:23. *Dymasius* subgen. *Elydnus*: AURIVILLIUS, 1912, Col. Cat. 39:60. *Dymasius (Elydnus)* GRESSITT, 1970, Pac. Ins. Mon. *Dymasius*: GAHAN, 1906, Fauna Brit. Ind. Col. 1:139.

PASCOE (1869) established the genus *Elydnus* for his species *Elydnus amictus* and *Elydnus sericatus*. GAHAN (1891) considered *Elydnus* "as a distinct section of *Dymasius*, characterized by the unspined apices of the elytra" (true only for *amictus*) "and the prothorax almost equally contracted at the base and apex". He could find "nothing in the characters of the antennae and the sternal processes by which it can be distinguished from *Dymasius*". He included, in this section, *Imbrius strigosus* PASCOE, 1866, the name of which he had to change into *pascoei* GAHAN, 1891, for homonymy with *Dymasius strigosus* THOMSON, 1864. In 1906, GAHAN put THOMSON's name in synonymy with *Dymasius macilentus* PASCOE, 1859, and designated the latter as the type species of the genus. AURIVILLIUS (1912) followed GAHAN's proposition of 1891 considering *Elydnus* a subgenus of *Dymasius*. GRESSITT & RONDON (1970) put their bigger new species with long antennae in *Dymasius* s.str. and placed the smaller ones with short antennae in the subgenus *Elydnus*, a procedure not at all justified by the original descriptions of both type species. Certainly not all species actually listed in *Dymasius* really fit in this genus, as f. e. *Dymasius bisulcatus* AURIVILLIUS, 1914, with carinate femora. A revision of *Dymasius* and related genera is needed to clear up the confusion, but this is not possible within this paper.

PASCOE's *Elydnus amictus*, 1869, shows a very peculiar character in the male antennae: there are poriferous pits at the bases of the fourth and fifth segments - something uncommon in *Cerambycidae* and not mentioned by PASCOE or GAHAN. Even if this character might be of importance on specific level only, it seems useful to maintain *Elydnus* as a genus till the situation is

cleared up.

Elydnus amictus PASCOE, 1869 (Fig. 20)

Elydnus amictus PASCOE, 1869, l. c. *Dymasius (Elydnus) amictus*: AURIVILLIUS, 1912, l. c.

Range: Singapore, Borneo (Sarawak). Philippines: Mindanao, 3 specimens, coll. LUMAWIG; Tawi Tawi, Tarawakan, north of Batu Batu, X.1961, Noona Dan Exp. 61-62 (Zool. Mus. København). Mindanao, Surigao del Sur, Bisliq, I. 1988, coll. G.U. SALISE Jr., 1 specimen.

Genus *Dialeges* PASCOE, 1856

Dialeges PASCOE, 1856, Trans. Ent. Soc. Lond. (2)4:46.

♂♂

- 1 Antennae fringed with hairs on ventral face of segments 7 and 8..... *egenus* PASCOE
- Antennae fringed with hairs on ventral face of segments 3-8..... *pauper* PASCOE

♀♀

- 1 Antennal segments 4 and 5 of equal length..... *egenus* PASCOE
- Antennal segment 4 distinctly shorter than 5..... *pauper* PASCOE

Dialeges egenus PASCOE, 1869 (Fig. 22)

Dialeges egenus PASCOE, 1869, Trans. Ent. Soc. Lond. (3)3:522.

Range: Buru I. Philippines: Luzon (Mountain Prov.), Mindanao, Leyte, Romblon; coll. LUMAWIG, 22 specimens.

Dialeges pauper PASCOE, 1856 (Fig. 23)

Dialeges pauper PASCOE, 1856, Trans. Ent. Soc. Lond. (2)4:47, pl. 16, fig. 7.

Range: Malaysia, India, Assam, Burma, Thailand, Vietnam, Laos, Sunda Is.; Philippines: ? - 1♀, without further data, coll. LUMAWIG (Palawan ?).

Genus *Lachnopterus* THOMSON, 1864

Lachnopterus THOMSON, 1864, Syst. Ceramb.: 231.

- 1 Pubescence of elytra yellow..... *auripennis* (NEWMAN)
- Pubescence of elytra red..... *socius* GAHAN
- Elytra black with spots of silvery white pubescence..... *elisabethae* sp. nov.

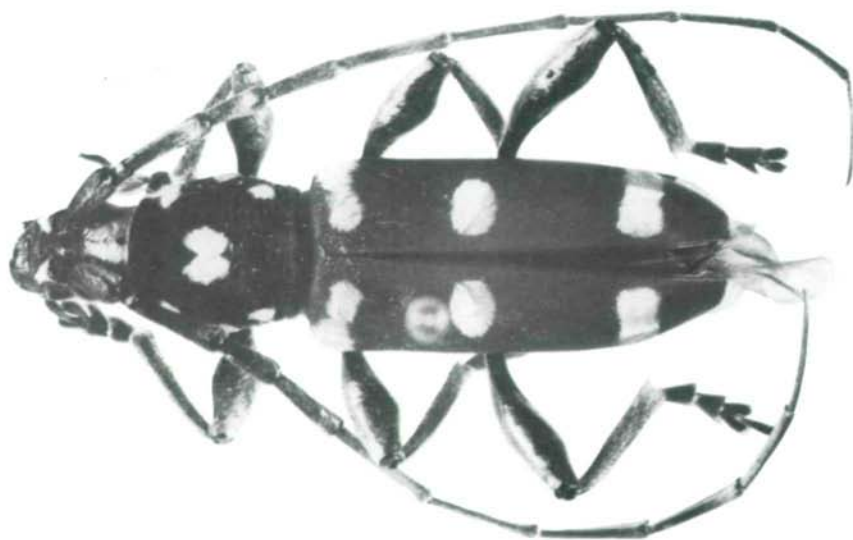


Fig.20 (above): *Elydnus amictus* PASCOE, ♂.

Fig.21 (below): *Lachnopterus elisabethae* sp.nov., Holo-type ♂.

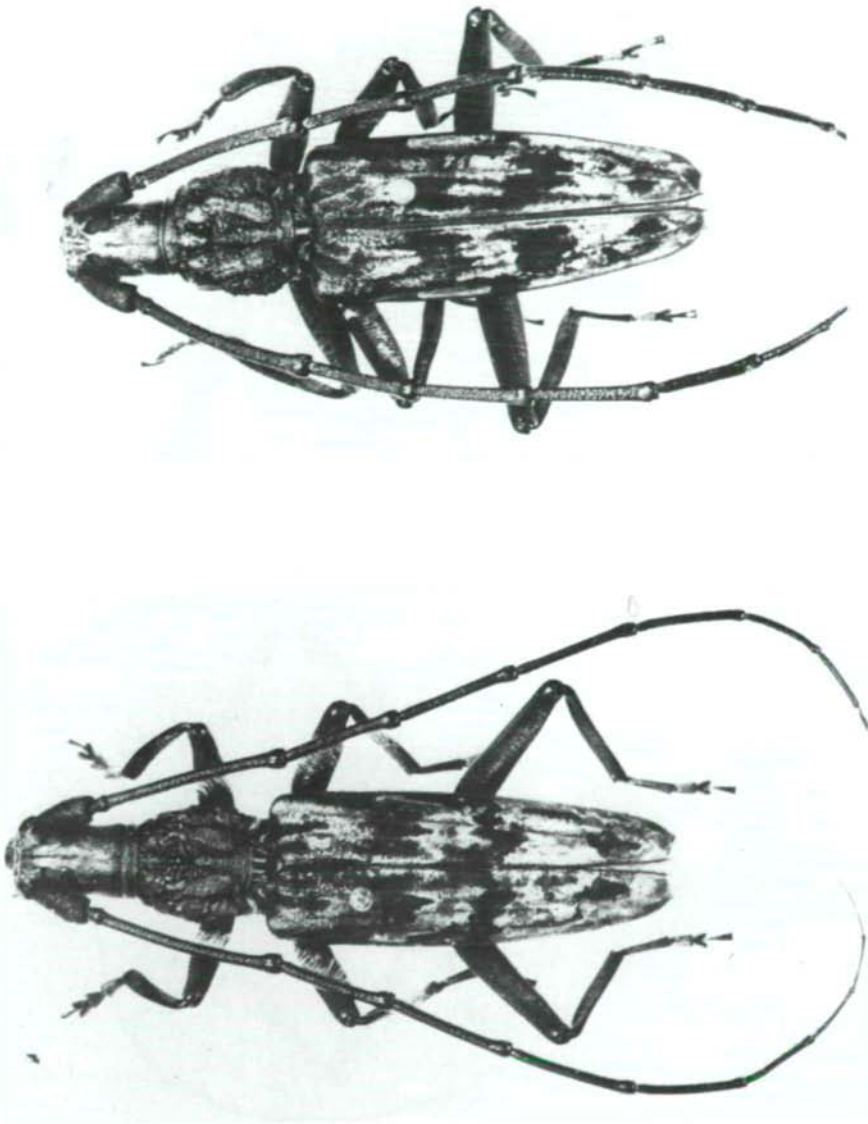


Fig.22 (above): *Dialeges egenus* PASCOE, ♂.
Fig.23 (below): *Dialeges pauper* PASCOE, ♂.

Lachnopterus auripennis (NEWMAN, 1842) (Fig. 24)

Hammaticherus auripennis NEWMAN, 1842, Entomol. 1: 245.
Lachnopterus auripennis: THOMSON, l. c. *Lachnopterus antiqueensis* HAYASHI, 1984, Ent. Rev. Japan, 39, 1: 86, pl. 3, fig. 1 & 2. - **Syn. nov.** *Lachnopterus sibuyanus* HAYASHI, l. c.: 87, pl. 3, fig. 3. - **Syn. nov.**

Range: Northern Moluccas. Philippines: Mindanao, Romblon, Samar, Sibuyan; 112 specimens, coll. LUMAWIG.

Lachnopterus socius GAHAN, 1891 (Fig. 25)

Lachnopterus socius GAHAN, 1891, Ann. Mag. Nat. Hist. 6, 7: 24.

Range: Philippines: Mindanao, coll. LUMAWIG, 260 specimens.

Lachnopterus elisabethae sp. nov. (Fig. 21)

Black, opaque, with silvery white spots, composed by rather long, adpressed hairs: frons with a triangular spot in front of each antennal support; minute spot in front of eye; vertex with large, posteriorly enlarged spot; pronotum with seven spots, the biggest one medial, one on each side before base, two lateral ones medially and two lateral ones before apical sulcus; elytron with three spots, one fascia from humerus towards suture (without reaching it), one round, premedian on disc, and one other fascia not reaching suture at apical fifth; prosternum with one spot on each side before apical sulcus; mesepisterna white; metasternum and metepisterna largely white; first and fifth sternites white in apical half; all coxae with small spot; upper face of legs and antennal segments 6-11 with silvery white pubescence.

♂: Frons rugose punctate, with deep, oblique grooves inferior to antennal supports, the latter low, with small, rounded tops, separated from each other by a wide, even, opaque space, which is deeply, longitudinally grooved, the groove enlarging towards vertex, where it ends before reaching the level of upper eye lobes; genae sparsely punctate, tempora smooth.

Antennae nearly $1/2$ longer than body; scape short, thickened towards apex, with flat sulcus on upper face, finely rugose; segment 3 $1/3$ longer than 1; 4 as long as 1; 5 somewhat shorter than 3; 6, 7 and 8 each $1/4$

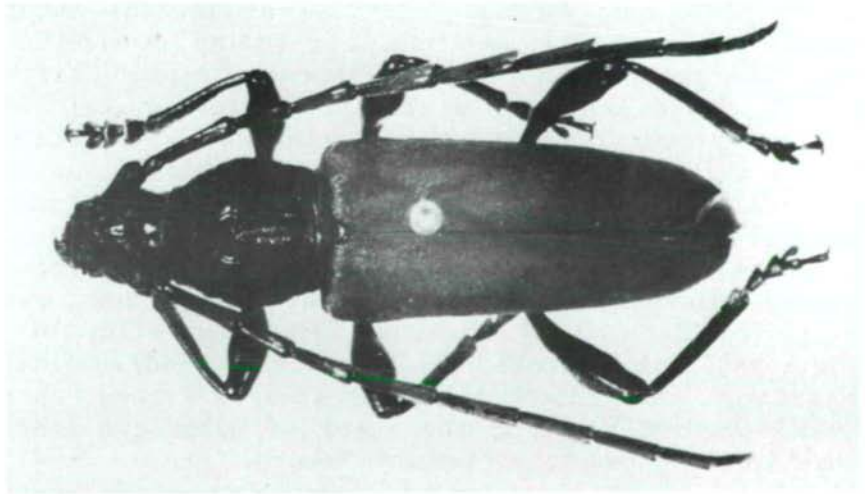
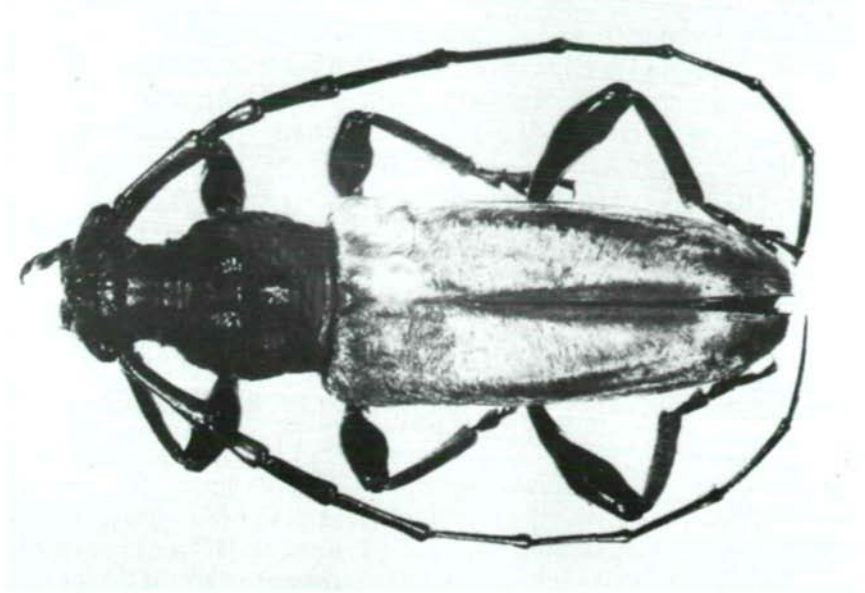


Fig.24 (above): *Lachnopterus auripennis* (NEWMAN), ♂.
Fig.25 (below): *Lachnopterus socius* GAHAN, ♂.

longer than 3; 9 somewhat shorter than 8; 10 as long as 3, 11 slightly longer than 8, not appendiculate; 6-10 ectoapically dentate. Pronotum micropunctate and covered with short, velvet-like, black tomentum, scarcely longer than wide; base weakly bisinuate, with two basal sulcus, the anterior concave, medially straight; sides weakly constricted at base, strongly so at apex, medially rounded; apical sulcus wide, medially concave; disc transversely, not deeply plicate (somewhat hidden by dense tomentum), with two feeble, oblique longitudinal grooves starting from the edges of the straight median part of anterior basal sulcus and including a smooth, median space (with silvery white spot). Scutellum small, semi-circular, micropunctate. Elytra somewhat narrowed towards apex, very weakly truncate, with irregular, flat punctuation, the punctures being very fine and sparse on disc near suture, denser and stronger laterally.

Prosternum with short, median, transverse sulcus, process apically shortly rounded. Mesosternum with transverse sulcus and basally rounded process. First sternite strongly, following very densely and finely punctate, fifth apically truncate. Femora pedunculate, micropunctate as well as the straight tibiae. First segment of hind tarsi $1/3$ longer than second, much shorter than second and third combined.

♀: Antennae as long as body, fifth sternite apically rounded.

Holotype ♂, length 19 mm, width 5,3 mm, 4 Paratypi ♂♂ and 1 Paratype ♀, PHilippines, Bukidnon, I.1979, coll. LUMAWIG, in author's collection.

Genus *Allodissus* SCHWARZER, 1926

Allodissus SCHWARZER, 1926, Entom.Mitt.15, 1:7.

Allodissus sulcatipennis SCHWARZER, 1926 (Fig.26)

Allodissus sulcatipennis SCHWARZER, 1926, l.c.

Range: Philippines: Mindanao, Surigao (cit.SCHWARZER); South Luzon, coll. LUMAWIG, 1 specimen.

Genus *Zatrephus* PASCOE, 1857

Zatrephus PASCOE, 1857, Trans.Ent.Soc.Lond.(2)4:94.

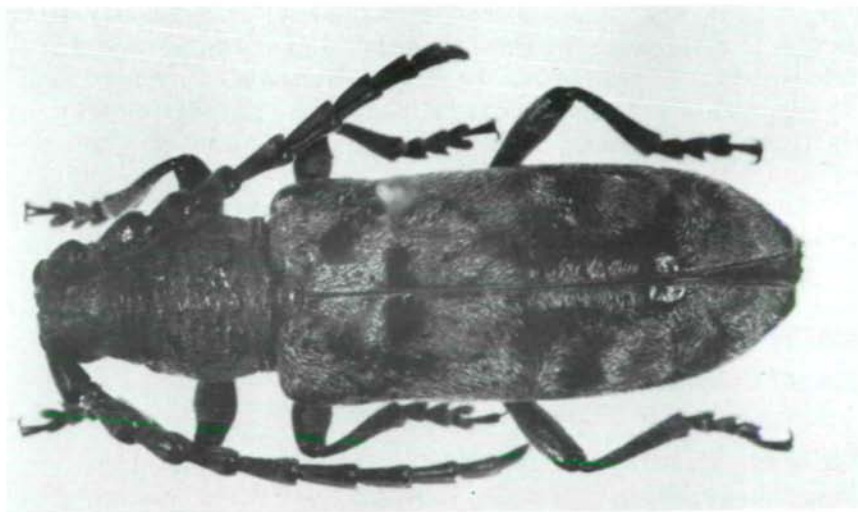
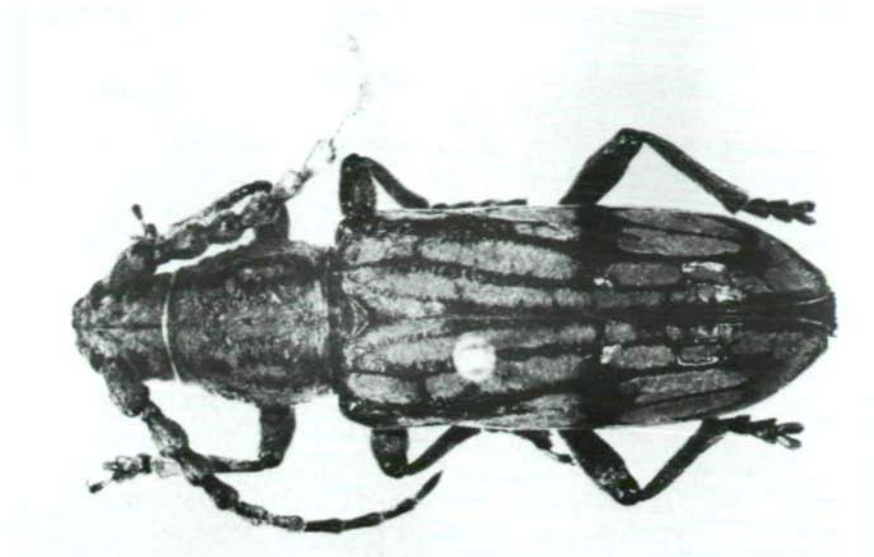


Fig.26 (above): *Allodissus sulcatipennis* SCHWARZER, ♂.
Fig.27 (below): *Zatrephus lumawigi* sp.nov., Holotype ♂.

Zatrephus lumawigi sp.nov. (Fig.27)

Pitchy brown; pubescence reddish ochraceous, on elytra whitish to reddish, on antennae whitish; roots of hairs coppery metallic.

♂: Head finely punctate, clothed with rather dense ochreous to coppery pubescence; frons below antennal supports with transverse groove, deeply depressed on both sides; distance between upper eye lobes nearly twice diameter of one lobe; vertex with short, longitudinal groove. Antennae extending to apical $4/5$ of elytra; scape short, stout, somewhat flattened, finely and densely punctate, finely rugose on exterior face; 3-5 swollen; 3 slightly shorter than 1, longer than 4 or 5, these two of equal length; 6 and following segments expanded and ectoapically acute; 6 and 7 slightly longer than 5, following segments slightly shorter. Pronotum transverse (width to length = 1,2 : 1), base bisinuate, apical margin convex; sides rounded, slightly constricted at base, strongly at apex; disc with not very deep, irregular, transverse rugosity, ridges finely punctate and with short, coppery pilosity. Scutellum transverse, depressed, medially smooth, on both sides with short, coppery pubescence. Elytra parallel, rounded in apical quarter, truncate, unspined; distinctly uneven, basal half with two common depressions, one behind other, apical with three lateral depressions and with rugosities along suture; elevated areas partially without pilosity; finely and densely micropunctate, pubescence quite long, recumbent, in basal half lying straight or obliquely, in apical half forming two large crowns with changing patterns, according to light.

Prosternum finely rugose, with dense, coppery ochreous pubescence and with broad, median, transverse sulcus; process vertically surpassing fore coxae, apically subvertical with blunt tubercle on top. Mesosternum with broad, transverse groove, finely punctate and densely pubescent, process basally slightly rounded, apically emarginate. Legs short, hind femora scarcely extending to third sternite. First segment of hind tarsi hardly longer than second. Metasternum and sternites finely punctate and clothed with rather dense, recumbent pubes-

cence; fifth sternite slightly emarginate.

♀: Antennae hardly surpassing middle of elytra. Fifth sternite apically rounded.

Holotype ♂, length 24,5 mm, width 7,2 mm, and Paratype ♀, length 30,5 mm, width 9 mm, Luzon, Mountain Province, VI.1986, coll. LUMAWIG, in author's collection.

Tribe *Hesperophanini*

- 1 Elytra without smooth, pale, contrasting callosities. 2
- Elytra with smooth, pale, contrasting callosities. *Gnatholea* THOMSON
- 2 Pronotum with two excavations..... *Nortia* THOMSON
- Pronotum without excavations..... *Stromatium* SERVILLE

Genus *Gnatholea* THOMSON, 1860

Gnatholea THOMSON, 1860, Classif. Ceramb.: 375.

Gnatholea stigmatipennis (WHITE, 1855) (Fig. 28)

Hesperophanes stigmatipennis WHITE, 1855, Col. Cat. Brit. Mus., Longic.: 303. *Gnatholea stigmatipennis*: PASCOE, 1869, Trans. Ent. Soc. Lond. (3) 3: 530.

Range: Philippines: Mindanao, VI. 1981, coll. LUMAWIG, 1 ♀; Calayan, Babuyan, cit. SCHULTZE.

Genus *Nortia* THOMSON, 1864

Nortia THOMSON, 1864, Syst. Ceramb.: 252.

Genus *Nortia* THOMSON, with strongly angulate fore coxal cavity, is transferred to *Hesperophanini* (from *Achrysonini*).

Nortia cavicollis THOMSON, 1864

Nortia cavicollis THOMSON, 1864, l.c.

Range: Philippines: Mindanao (THOMSON, l.c.).

Genus *Stromatium* SERVILLE, 1834

Stromatium SERVILLE, 1834, Ann. Soc. Ent. France, 3: 80. *Selenophorus* MULSANT, 1839, Col. Fr. Long. ed. 1: 65.

- 1 Pronotum coarsely granulate punctate, with five distinct tubercles on disc; elytra with scattered, big, glabrous, asperate punctures of equal size, offering a striking contrast with the dense pubescence.....
..... *longicorne* (NEWMAN)

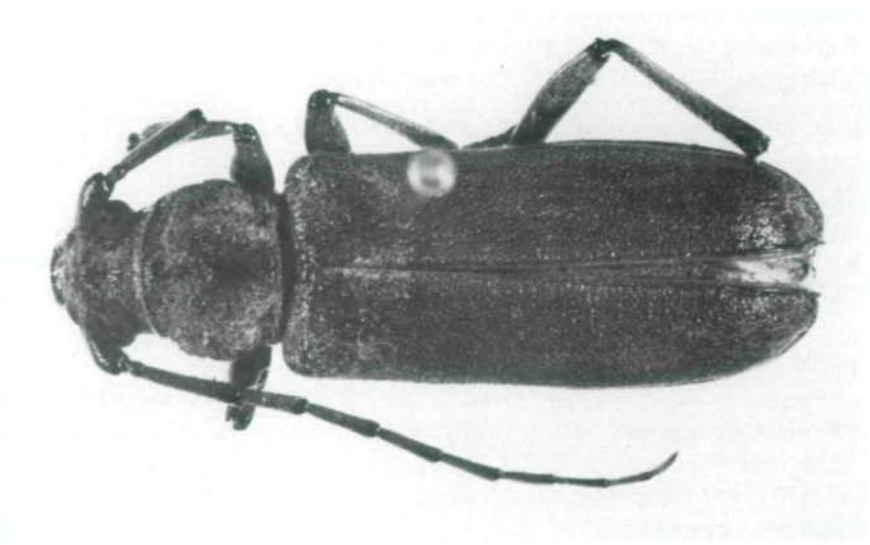
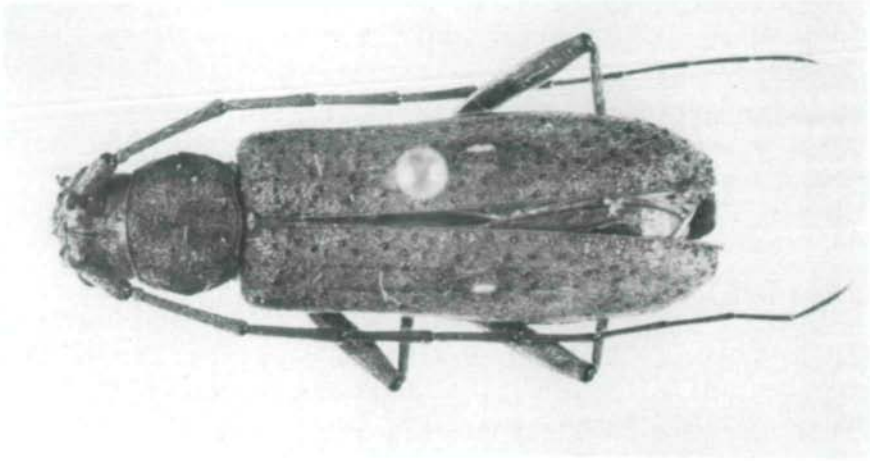


Fig.28 (above): *Gnatholea stigmatipennis* (WHITE), ♀.
Fig.29 (below): *Stromatium ambiguum* (NEWMAN), ♀.

- Pronotum finely granulate punctate, tubercles on disc indistinct; elytra with unequal, glabrous, asperate punctures, contrasting only slightly with the thin pubescence..... *ambiguum* (NEWMAN)

Stromatium ambiguum (NEWMAN,1842) (Fig.29)

Genus ? *ambiguum* NEWMAN,1842, Entomol.1:246. *Stromatium ambiguum* AURIVILLIUS,1912, Col.Cat.39:72. .

Range: Philippines: Luzon, Mountain Province, VII. 1986, coll. LUMAWIG, 1 ♀.

Stromatium longicorne (NEWMAN,1842) (Fig.30)

Arhopalus longicornis NEWMAN,1842,l.c. *Stromatium longicorne* GAHAN,1906, Fauna Brit.Ind.Col.1:115. *Stromatium asperulum* WHITE,1855, Cat.Col.Brit.Mus.Longic.:300.

Range: Assam, Burma, Thailand, Laos, Malaysia, S-China? Sunda Is., Taiwan, New Guinea; Philippines (GAHAN,l.c.).

Tribe *Phoracanthini*

Genus *Coptocercus* HOPE,1840

Coptocercus HOPE,1840 (1841), Proc.Zool.Soc.Lond.8:50. *Callirrhoe* NEWMAN,1842, Entomol.1:4.

Coptocercus quatuordecimsignatus. SCHWARZER,1926 (Fig.31)

Coptocercus quatuordecimsignatus SCHWARZER,1926, Entom. Mitt.15:8.

Range: Philippines: Luzon, Imugan, cit. SCHWARZER; Luzon, Mountain Province, VI.1987, IX.1987; Negros, VI. 1985; coll. LUMAWIG, 3 specimens.

Tribe *Callidiopini*

- 1 Pronotum much wider than long..... *Gelonaetha* THOMSON
- Pronotum generally longer than wide, or slightly wider than long..... 2
- 2 Femora fusiform..... *Salpinia* PASCOE
- Femora clavate..... 3
- 3 Antennal supports distinct, frons vertical, extremely short; elytra granulated in basal part.....
..... *Exammes* PASCOE
- Antennal supports obsolete, frons not vertical nor extremely short; elytra not granulated in basal part.
..... *Ceresium* NEWMAN

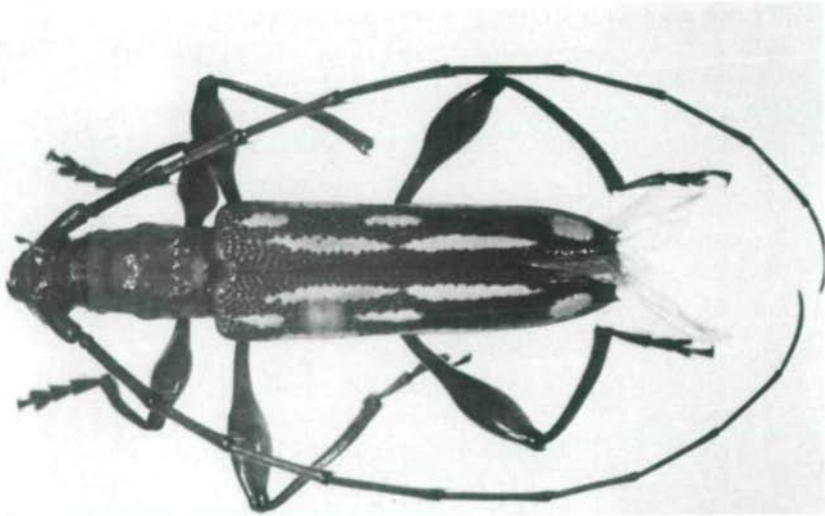
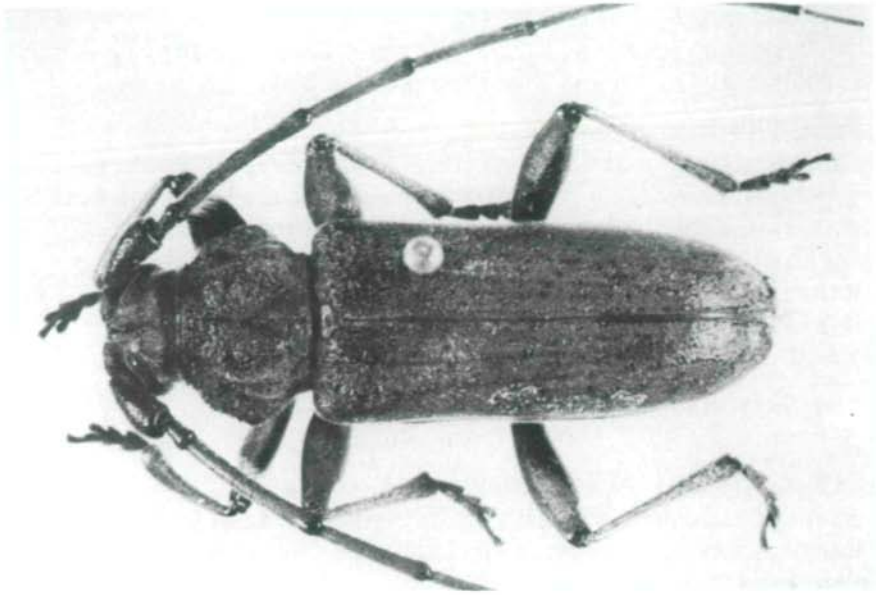


Fig.30 (above): *Stromatium longicorne* (NEWMAN), ♂.

Fig.31 (below): *Coptocercus quatuordecimsignatus* SCHWARZER, ♂.

Genus *Gelonaetha* THOMSON, 1878

Gelonaetha THOMSON, 1878, Rev. Mag. Zool. (3)6:12. *Astrimus* SHARP, 1878, Trans. Ent. Soc. Lond.:204.

Gelonaetha hirta (FAIRMAIRE, 1850)

Stromatium hirtum FAIRMAIRE, 1850, Rev. Mag. Zool. (2)2:60. *Gelonaetha curtipes* THOMSON, l.c. *Astrimus obscurus* SHARP, l.c. *Gelonaetha hirta*: GAHAN, 1906, Fauna Brit. Ind. Col. 1: 155, fig. 62.

Range: India, Thailand, Laos, Taiwan, Micronesia, Polynesia, W. Indies. Philippines (AURIVILLIUS 1912, Col. Cat. 39:126).

Genus *Salpinia* PASCOE, 1869

Salpinia PASCOE, 1869, Trans. Ent. Soc. Lond. (3)3:546.

Salpinia diluta PASCOE, 1869 (Fig. 32)

Salpinia diluta PASCOE, l.c., pl. 20, fig. 5.

Range: Java, Borneo. Philippines: 1 specimen without further data, coll. LUMAWIG.

Genus *Examnes* PASCOE, 1869

Examnes PASCOE, 1869, l.c.:540.

- 1 Pronotum with dense, whitish pubescence on margins of disc..... *philippensis* (NEWMAN)
- Pronotum without such pubescence..... 2
- 2 Pronotum with spots of yellow pubescence..... 3
- Pronotum without spots of yellow pubescence.....
..... *lumawigi* sp. nov.
- 3 Elytra finely punctate, punctures mostly smaller than distances between them; opaque.... *longicornis* PASCOE
- Elytra strongly punctate, punctures bigger than distances between them; glossy..... *mindanaonis* sp. nov.

Examnes lumawigi sp. nov. (Fig. 33)

Reddish-brown, legs yellowish, pubescence yellow.

♂: Head with dense, shallow, indistinct punctuation and sparse, adjacent pubescence. Length of antennae about twice length of body (segment 1-11 lacking); scape subcylindrical, finely punctate; segment 3 $\frac{2}{5}$ longer than 1; 4 somewhat longer than 1; 5-7 each somewhat longer than 3; 8 as long as 3; 3-5 with long hairs on ventral face. Pronotum distinctly longer than wide; base weakly bisinuate; sides weakly rounded, basally little,

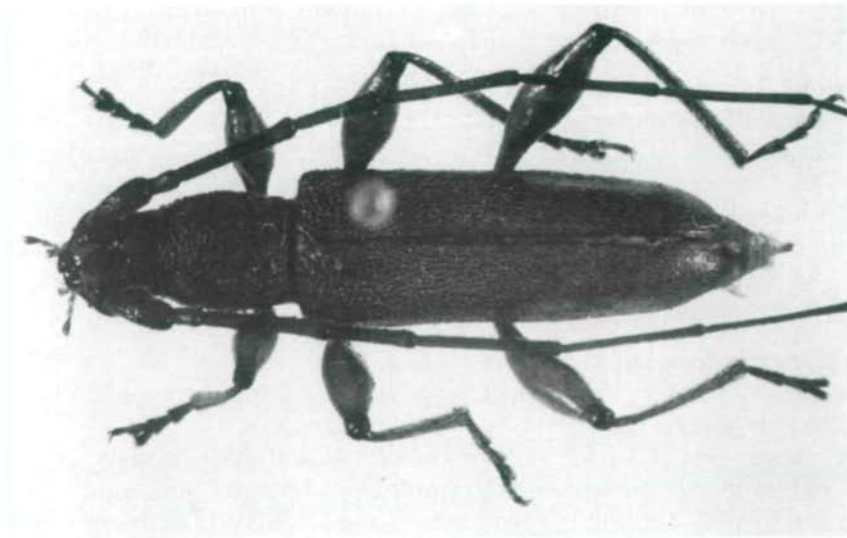
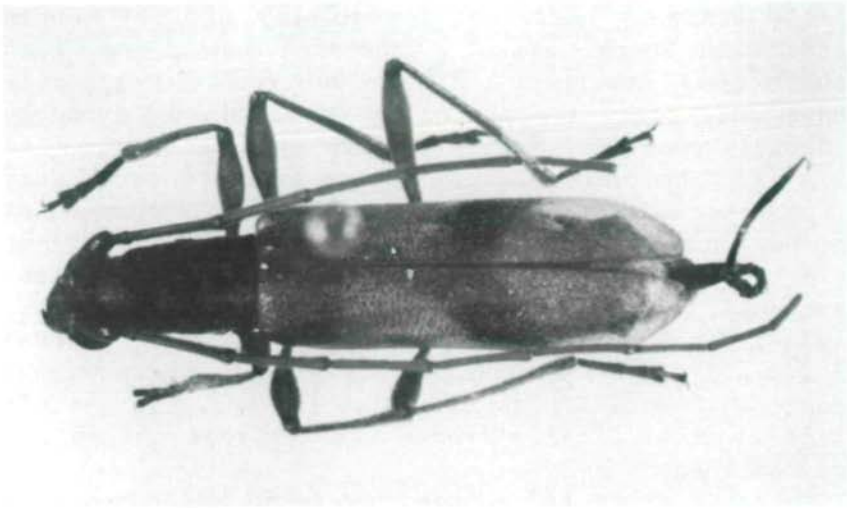


Fig.32 (above): *Salpinia diluta* PASCOE, ♀.

Fig.33 (below): *Examnes lunawigi* sp.nov., Holotype ♂.

apically scarcely narrowed; irregularly and not deeply rugose, with short, sparse, appressed pubescence. Scutellum finely pubescent. Elytra subparallel, apically rounded, distinctly granulated in basal third, strongly and densely punctate, finely towards apex, each puncture with a short hair. Prosternum rugose like pronotum, apical constriction smooth, prosternal process sloping. Mesosternum shallowly and indistinctly punctate, process sloping, episterna and epimera with micropunctuation. Metasternum punctate like mesosternum. Sternites shallowly, finely punctate, fifth apically truncate; ventral face scarcely pubescent. Legs very finely punctate, pubescence on femora appressed, on tibiae semierect; first segment of hind tarsi slightly shorter than second and third combined.

♀: Antennae about $1/2$ longer than body, scape and following segments distinctly more slender than in male, femoral clubs also; fifth sternite apically rounded.

Holotype ♂, length 14,8 mm, width 3,5 mm, Luzon, Mountain Province, VI.1985, coll. LUMAWIG; Paratype ♀, length 12,8 mm, width 3,2 mm, Sibuyan, Espana, coll. LUMAWIG; both in author's collection.

Examnes longicornis PASCOE, 1869 (Fig. 34)

Examnes longicornis PASCOE, 1869, l.c.:540, pl.20, fig. 3 - reval. AURIVILLIUS, 1912, Col.Cat.39:125, considered *Examnes longicornis* PASCOE, 1869, a synonym of *Examnes philippensis* (NEWMAN, 1842). Comparison of types of both species (British Museum) clearly proved that *longicornis* is a separate species.

Range: Buru; Philippines: Mindanao, coll. LUMAWIG, 2♂♂.

Examnes mindanaonis sp.nov. (Fig. 35).

Reddish brown, somewhat glossy; pubescence whitish, yellowish where spots more concentrated.

♂: Head shallowly, indistinctly punctate; dense, yellow pubescence on antennal supports, around antennal insertions and around upper eye lobes. Antennae more than twice as long as body; scape subcylindrical, finely punctate; 3 twice as long as 1, $1/2$ longer than 4; 5-9 each as long as 3; 10 somewhat shorter, 11 somewhat longer than 3, not appendiculate; 3-5 on ventral face with

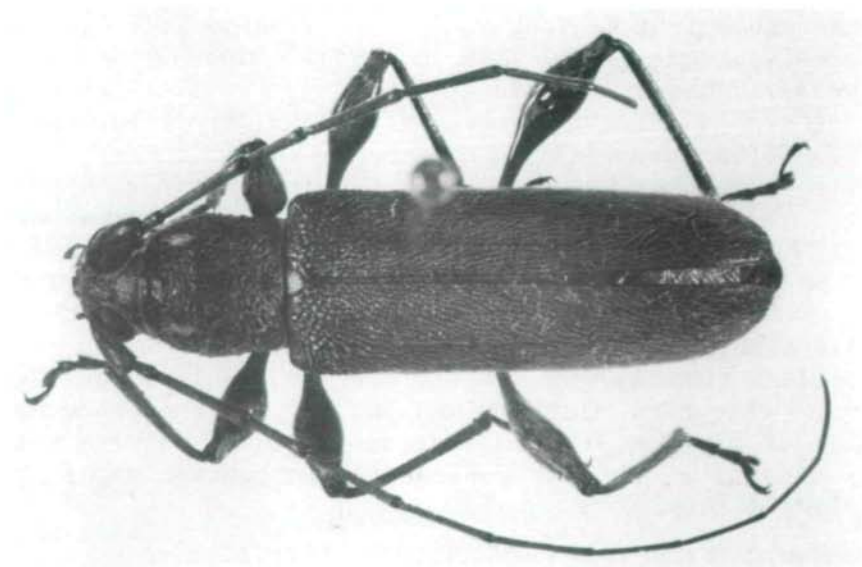
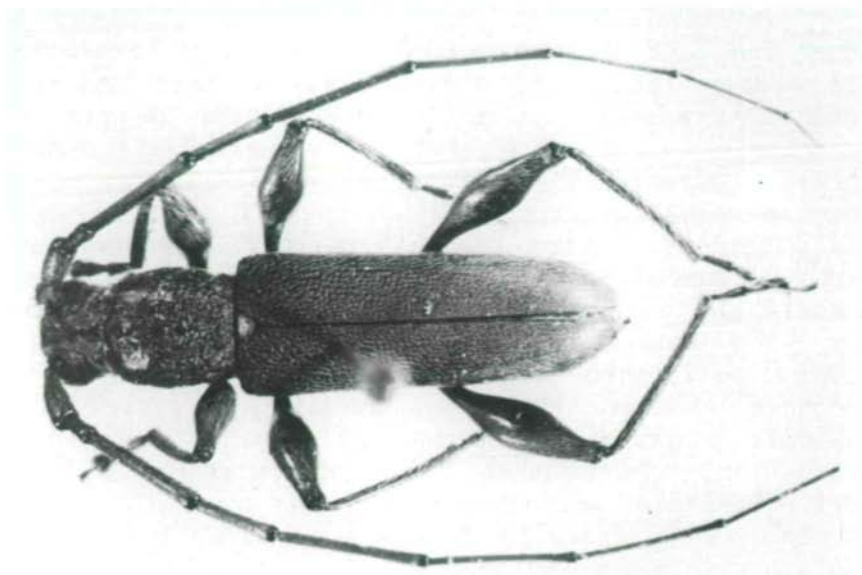


Fig.34 (above): *Exarnes longicornis* PASCOE, ♂.

Fig.35 (below): *Exarnes mindanaonis* sp.nov., Paratype ♀.

rather long and dense hairs. Pronotum longer than wide, base weakly bisinuate, sides weakly rounded; basally distinctly, apically slightly constricted; impunctate, irregularly rugose, with scarce, laterally less dense, appressed pubescence, with two spots of yellow pubescence in apical quarter of disc. Scutellum finely, densely pubescent. Elytra somewhat narrowed towards apex, apically rounded, distinctly granulated in basal third, strongly and densely punctate, punctures finer towards apex, each puncture with a short hair. Prosternum rugose, apical constriction smooth, prosternal and mesosternal processes sloping. Meso- and metasternum densely and shallowly punctate, episterna and epimera with micro-punctuation, with rather dense appressed and scarce erect pubescence. Sternites very finely punctate and pubescent, fifth apically truncate. Femora very finely punctate with appressed hairs, tibiae with semierect pubescence; first segment of hind tarsi shorter than second and third combined.

♀: Antennae slightly longer than body, segment 3 $2/5$ longer than 1; 4 as long as 1; 5 as long as 3; following segments subsequently shorter. fifth sternite apically rounded. Pronotum as wide as long.

Holotype ♂, length 16 mm, width 4 mm, Mindanao, Sapa-moro, Curuan district, XII.1961, Paratype ♂, same data, coll. Noona Dan Ex. 61/62, in Zoologisk Museum København; Paratype ♂ and Paratype ♀, Mindanao, Surigao del Sur, Bisliq, Pinus Caribaea plantation, I.1988, coll. R.D.BRAZA, in Research Branch, Agriculture Canada, Ottawa; Paratype ♀, coll. LUMAWIG, Mindanao, in author's collection.

Differs from *Examnes longicornis* PASCOE, 1869, besides by the characters mentioned in the key, by the pronotum, which is not longer than wide in the male and with traces of coarse, shallow punctuation within the rugosity, in *longicornis*.

Examnes philippensis (NEWMAN, 1842) (Fig. 41)

Oemona philippensis NEWMAN, 1842, Entomol. 1:247. *Examnes philippensis*: GAHAN, 1900, Christmas Isl.:122. *Examnes idoneus* PASCOE, 1869, Trans.Ent.Soc.Lond.(2)3:540.

Range: New Guinea, Waigiu, Buru. Philippines: Bokol,

VI.1984, LUMAWIG coll.

Genus *Ceresium* NEWMAN, 1842

Ceresium NEWMAN, 1842, Entomol. 1: 322. *Diatomocephala* BLANCHARD, 1953, Voy. Pole Sud 4: 266. *Pneumida* THOMSON, 1864, Syst.Ceram.:191. *Raphidera* PERRAUD, 1855, Ann.Soc. Linn.Lyon (2)2:336. *Rhaphidodera* GEMMINGER & HAROLD, 1873, Cat.Col.9:2831.

- 1 Body black..... 2
- Body reddish brown or dark brown..... 4
- 2 Femora dark red..... *femoratum* AURIVILLIUS
- Femora black..... 3
- 3 Disc of pronotum with scattered, coarse punctures, with three longitudinal, smooth areas in basal half; pubescence erect..... *aethiops* NEWMAN
- Pronotum with coarse and dense punctuation, without smooth areas, pubescence adjacent... *lumawigi* sp.nov.
- 4 Body dark brown..... 5
- Body reddish brown..... 6
- 5 Antennal segment 3 $\frac{1}{3}$ shorter than 1, as long as 4; disc of pronotum with smooth median area, coarsely punctate on both sides of it..... *vestigiale* PASCOE
- Antennal segment 3 as long as 1, $\frac{1}{4}$ longer than 4; pronotum coarsely, shallowly, densely punctate, without smooth median area..... *raripilum* NEWMAN
- 6 Pronotum with dense, whitish pubescence around a large, dark, sparsely pubescent median spot.....
- *zeylanicum* PASCOE
- Pronotum not as in above..... 7
- 7 Pronotum without small tubercles on and/or at margin of disc; legs totally yellow... *flavipes* (FABRICIUS)
- Pronotum with small tubercles on and/or at margin of disc..... 8
- 8 Disc of pronotum finely, densely, shallowly punctate, with three parallel, shining lines from base to middle and two small, glossy tubercles in front of them; laterally sparsely granulate and with two small, glossy tubercles, one behind the other, in apical half..... *innite* (NEWMAN)
- Disc of pronotum shining, coarsely, shallowly, confluent punctate; a narrow median line and a small

area in front of base on both sides, smooth; laterally basally and apically with a small tubercle; knees dark..... *ambiguum* (NEWMAN)

Ceresium femoratum AURIVILLIUS, 1927 (Fig. 36)

Ceresium femoratum AURIVILLIUS, 1927, Arkiv Zool. 19 A, 17: 5.

Range: Philippines: Sibuyan (AURIV., l.c.); Romblon, Mindanao; Negros or., V. 1985, coll. LUMAWIG, 3 specimens.

Ceresium aethiops NEWMAN, 1842

Ceresium aethiops NEWMAN, l.c.: 247, 322.

Range: Philippines (NEWMAN, l.c.).

Ceresium lumawigi sp. nov. (Fig. 37)

Black, with sparse, short, recumbent white pubescence. ♀: Head coarsely punctate, confluent on frons. Antennae surpassing apex of elytra with ninth segment; scape slender, very finely punctate; 3 somewhat longer than 1, 1/3 longer than 4; 5-7 each 1/4 longer than 3; 8 and 9 as long as 3; 10 somewhat shorter, 11 lacking. Pronotum slightly longer than wide, base bisinuate, sides evenly rounded; basally distinctly, apically scarcely constricted; coarsely and very densely punctate, at base and on both sides in front of it with denser, spotty pubescence. Scutellum finely and densely pubescent. Elytra subparallel, apically rounded, strongly and very densely punctate, more finely in apical half, each puncture with an appressed hair, which mostly reaches middle of next point. Prosternum punctate like pronotum, apical constriction smooth, prosternal process obliquely sloping. Mesosternum coarsely and densely punctate, process sloping, epimera and episterna with micropunctuation. Punctuation of metasternum coarse, medially dense, laterally more scattered; episterna micropunctate. Sternites shining, with fine and scattered punctuation, fifth apically rounded. Legs very finely punctate, clubs of femora moderately swollen; first segment of hind tarsi as long as second and third combined.

Holotype ♀, length 14,6 mm, width 4 mm, Negros, VI. 1985, coll. LUMAWIG, in author's collection.

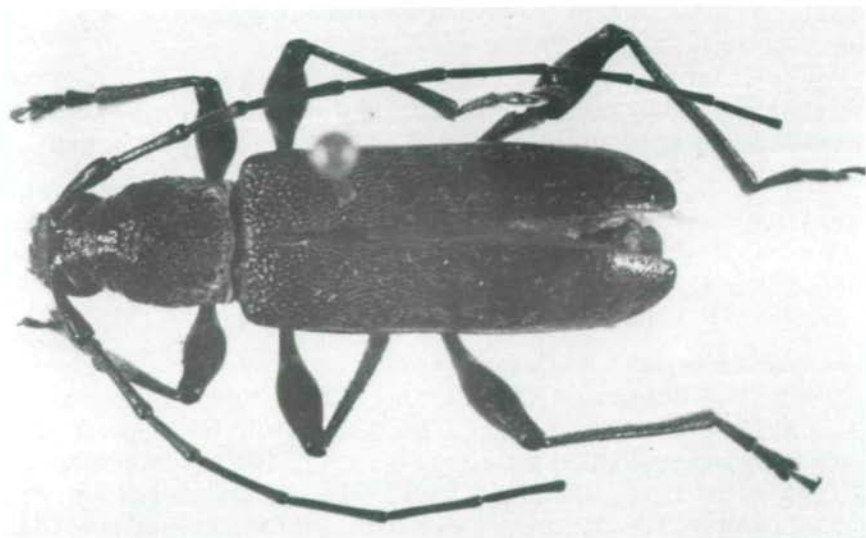
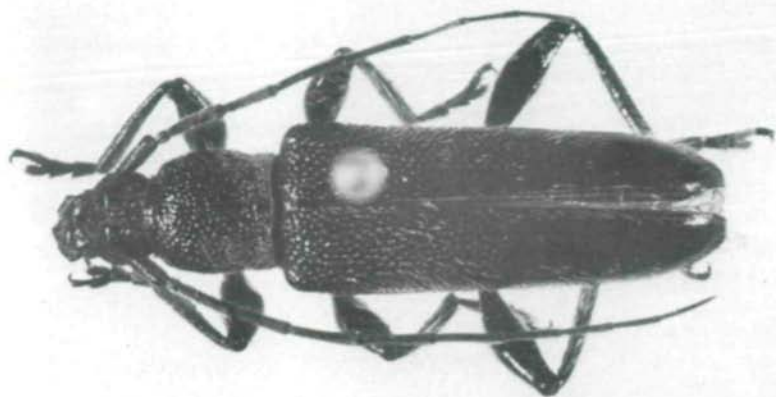


Fig.36 (above): *Ceresium femoratum* AURIVILLIUS, ♀.

Fig.37 (below): *Ceresium lumawigi* sp.nov., Holotype ♀.

Ceresium raripilum NEWMAN, 1842

Ceresium raripilum NEWMAN, 1842, Entomol. 1: 322.

Range: Singapore (PASCOE 1869, Trans. Ent. Soc. Lond., (3) 3: 537). Philippines (NEWMAN, l.c.).

Ceresium zeylanicum WHITE, 1855 (Fig. 38)

Ceresium zeylanicum WHITE, 1855, Cat. Col. Brit. Mus. Longic.: 246.

Range: Sri Lanka, India, Assam, Burma, Thailand, Laos, Vietnam, Sunda Is.; Philippines: Mindanao, VII. 1981, coll. LUMAWIG, 1 specimen.

Ceresium vestigiale PASCOE, 1866 (Fig. 39)

Ceresium vestigiale PASCOE, 1866, Proc. Zool. Soc. Lond.: 532.

Range: Penang (PASCOE, l.c.). Philippines: Mindanao, Negros or., coll. LUMAWIG, 7 specimens.

Ceresium flavipes (FABRICIUS, 1792) (Fig. 40)

Callidium flavipes FABRICIUS, 1792, Ent. Syst. 1, 2: 327. *Stenochorus simplex* GYLLENHAL, 1817, in SCHÖNHERR, Syn. Ins. 1, 3: 178. *Ceresium flavipes*: AURIVILLIUS, 1912, Col. Cat. 39: 123.

Range: India, China, Taiwan, Sunda Is., New Guinea, Mauritius, Madagascar. Philippines: Sulu Is., Tawi Tawi, Tarawakan, north of Batu Batu, X. 1961, Noona Dan Exp. 61/62, 2 specimens.

Ceresium immite (NEWMAN, 1842)

Obrium immite NEWMAN, 1842, Entomol. 1: 247. *Ceresium immite* NEWMAN, l.c.: 322.

Range: Philippines (NEWMAN, l.c.).

Ceresium ambiguum (NEWMAN, 1842)

Arhopalus ambiguus NEWMAN, l.c.: 246. *Arhopalus ambiguus*: GAHAN, 1906, Fauna Brit. Ind. Col. 1: 162 (= syn. of *Ceresium simplex* (GYLLENHAL, 1817, l.c.)). *Ceresium ambiguum*: AURIVILLIUS, 1912, Col. Cat. 39: 123 (= syn. of *Ceresium flavipes* (FABRICIUS, 1792)). *Ceresium ambiguum* (NEWMAN, 1842, l.c.), reval.

Range: Philippines (NEWMAN, l.c.).

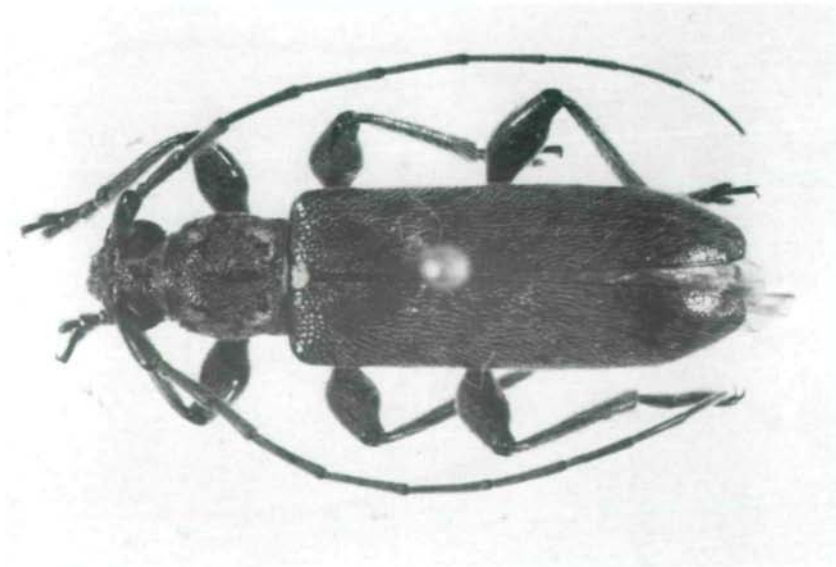
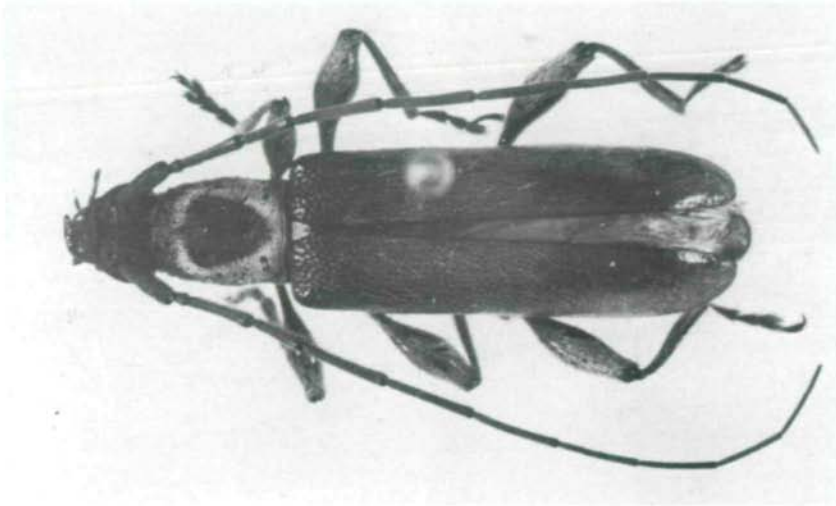


Fig.38 (above): *Ceresium zeylanicum* White, ♂.
Fig.39 (below): *Ceresium vestigiale* PASCOE, ♀.

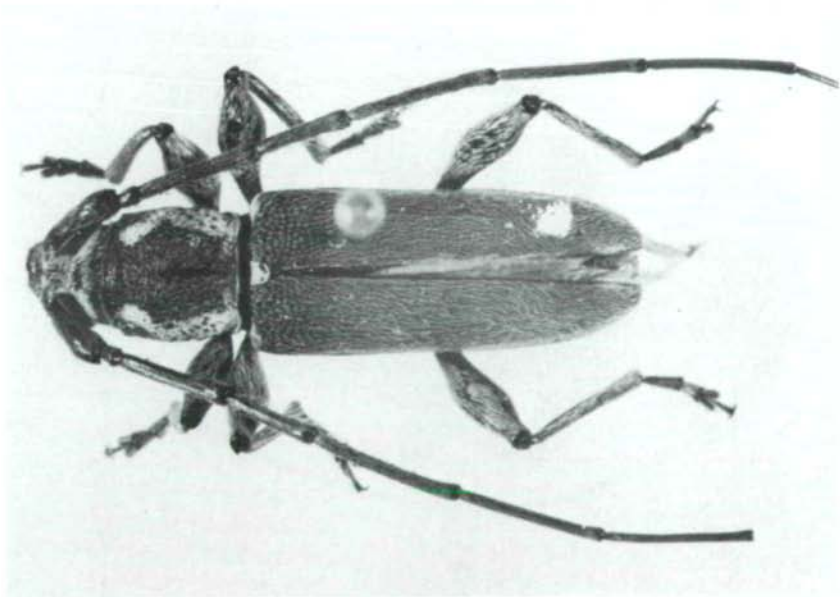
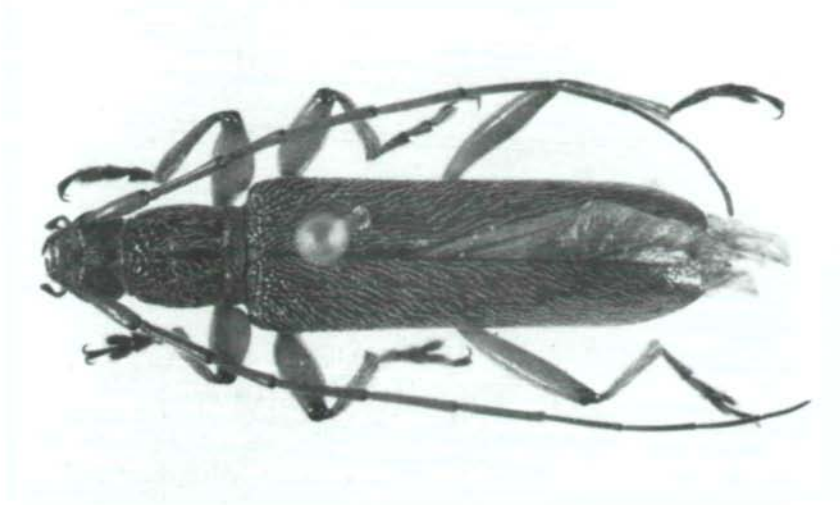


Fig.40 (above): *Ceresium flavipes* (FABRICIUS), ♀.
Fig.41 (below): *Exammes philippensis* (NEWMAN), ♂.

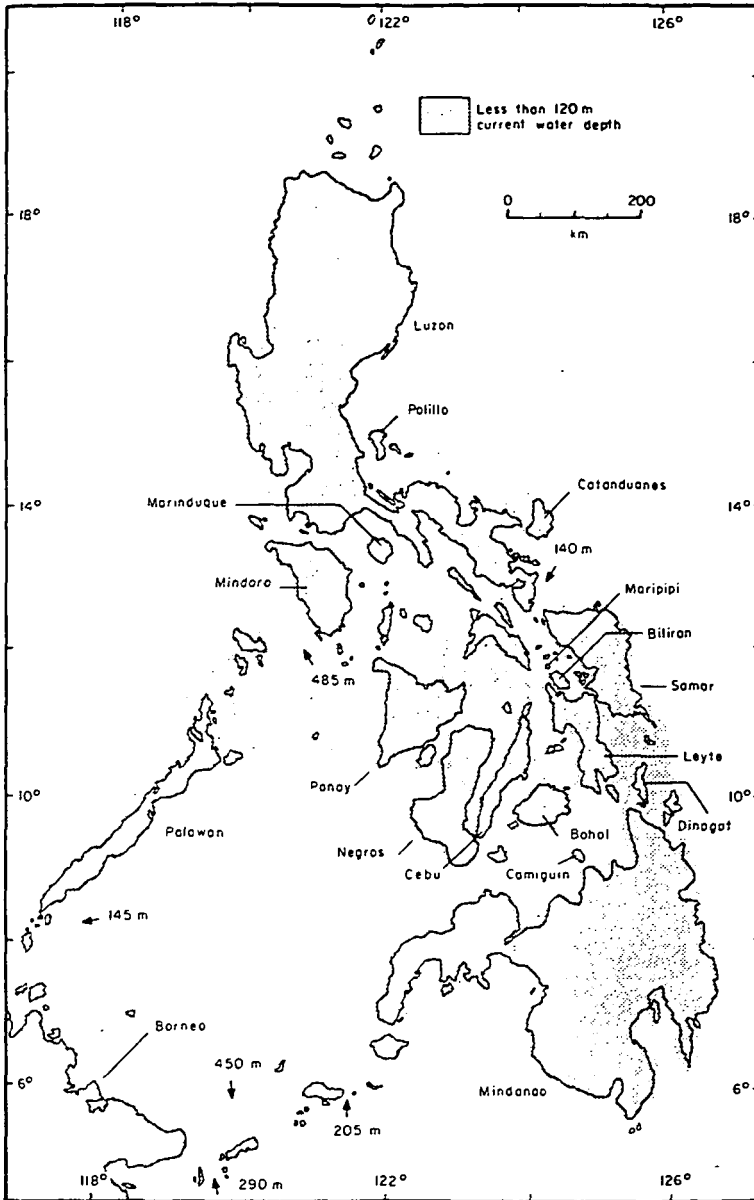


Fig.42: Map of the Philippines showing the extent of late Pleistocene islands, based on the current 120m bathymetric line; from HEANEY (1985 a, b).

Acknowledgments

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