

SOME NEW ANOBIIDS (Coleoptera) FROM THE PAPUAN SUBREGION¹

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Abstract: Thirteen species of Anobiidae are reported from the Papuan Subregion. Two genera and 10 species are described as new. A key to the genera and species, illustrations, and distributional data are presented.

The 51 specimens treated in this paper represent 4 subfamilies. The Anobiinae is represented by *Gastrallus*, a nearly cosmopolitan genus; the Xyletininae by *Holcobius*, until now known only from Hawaii; the Dorcatominae by the cosmopolitan *Caenocara*, Indo-Malayan *Stagetomorphus*, *Cryptoramorphus*, and two new genera *Serianotus* and *Mysticephala*; and the Ptilininae by *Ptilinomorphus*. Due to the insects' small size and cryptic habits, and unspecialized collecting, it is suggested that the material studied in this treatment represents only a small portion of the anobiid fauna of the Papuan Subregion.

Most of the specimens and all new taxa are deposited in the B. P. Bishop Museum, Honolulu, Hawaii, and to this institution I am most indebted for the loan. Also, I wish to thank the staff of the Coleoptera Section, U. S. National Museum for help, especially Dr R. E. White for taxonomic assistance; Miss C. M. F. von Hayek, the British Museum (Nat. Hist.), London; Dr Z. Kaszab, the Hungarian National Museum, Budapest, for the loan of type material, and L. C. Daubert for the photographs.

KEY TO GENERA AND SPECIES OF ANOBIIDAE FOUND IN THE PAPUAN SUBREGION

1. Antennal segments 4-10 strongly flabellate in ♂, serrate in ♀; pronotum with large tubercle each side of disc ***Ptilinormorphus bituberculatus*** (Pic)
- Antennal segments 4-10 never flabellate, but club (segments 9-11) may be; ♀ serrate or not; disk without tubercles 2
- 2 (1). Head strongly deflexed and retracted, nearly or touching metasternum in repose; ventrites rarely connate at middle 3
- Head not touching metasternum in repose; ventrites 1-2 connate at middle 4
- 3 (2). Body not grooved for reception of middle and hind legs; metasternum not produced in front ***Holcobius orichalceus****
- Body grooved for reception of middle and hind legs; metasternum usually produced in front 6
- 4 (2). Pronotum with a transverse carina on disc near middle of front margin; hind angles evenly rounded; 3-4 mm ***Gastrallus notocarinus****
- Pronotum without transverse carina on disc; hind angles obtuse; 1.8-3 mm 5

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2. Plant Quarantine Division, Agricultural Research Service, U. S. Department of Agriculture, Baltimore, Maryland.

* Described as new.

- 5 (4). Eye wider than interocular space; antennal segments 8-9 triangular... **Gastrallus minimus***
 Eye as wide as interocular space; antennal segments 8-9 rounded inwardly
 **Gastrallus papuus***
- 6 (3). Antennal club pectinate; metasternum not produced in front
 **Stagetomorphus simbanganus** (Pic)
 Antennal club not pectinate, metasternum produced in front 7
- 7 (6). Eyes strongly incised or deeply emarginate; elytron with marginal striae 8
 Eyes not incised, but may be weakly emarginate; elytron without marginal striae ... 12
- 8 (7). Front of head with large bifoveolate pit; ocular incisions transverse
 **Mysticephala bifovea***
 Front of head without a pit, ocular incisions oblique 9
- 9 (8). Elytron with 2 marginal striae reaching apical 1/2 10
 Elytron with 1 marginal stria reaching apical 1/2 **Caenocara polypora***
- 10 (9). Elytron with 2 discal striae on basal 1/2 near suture **Caenocara hirsuta***
 Elytron without discal striae 11
- 11(10). Elytron with inner marginal stria shallowly impressed, becoming obsolete on declivity
 **Caenocara flavitarsa***
 Elytron with inner marginal stria deeply impressed and as long as outer stria
 **Caenocara kokurea***
- 12 (7). Elytral disc with prominent serial punctures; side margins of pronotum absent
 anteriorly **Serianotus lindoroides** Ford
 Elytral disc without serial punctures; side margins of pronotum present through-
 out 13
- 13(12). Pubescence in silvery, swirled patches **Cryptoramorphus lignicolus***
 Pubescence in silvery and dark brown, swirled patches
 **Cryptoramorphus lignicolus buloloensis***

Subfamily ANOBIINAE

Genus **Gastrallus** Duval

Gastrallus Duval, 1860: 245.

This genus is widely distributed in the Old World tropics (Africa, Europe, Japan, and Java). A single species has been reported from the United States. Undetermined species have been collected from Hong Kong, Thailand, and the Philippines.

Gastrallus notocarinus Ford, new species Fig. 3, 7, 8.

Body elongate, brown, entirely covered with short, fine golden pubescence not obscuring sculpture. *Head* moderately covered with shining granules separated by areas of fine rugosity; interocular space slightly wider than an eye; apical segments of palpi broadly expanded and truncate at apex. *Antenna*: Segment 1 as long as 2-7 combined; segments 8-10 each longer than 3-7 combined; segment 8 wider and shorter than 10; segment 9 wider than 10; slightly flattened and rounded at apex; 8 and 9 somewhat longitudinally trapezoidal from side view. *Thorax*: Little more than 1/3 as long as elytra; disc in profile evenly rounded and covered with granules separated by 1 to 3 diameters of a granule; front margin interrupted beneath between front coxae; side margins extending only halfway to front margin from evenly rounded hind angles; disc with prominent transverse, arcuate, carina near middle of front margin; pubescence in recumbent patches differently directed. *Scutellum* prominent, shield-like; as wide as long. *Elytron* with striae obscure near suture, more prominent laterally; pubescence similar

to pronotum but uniformly directed behind; sutural margin somewhat elevated; with shallow depression on basal third. *Ventral surfaces*: Metepisternum broadly exposed, widest in front; metasternum excavated in front to receive apical antennal segments, and with median longitudinal groove extending from base to apex; ventrites 1-2 connate, their sutures visible only at sides; ventrite 1 strongly produced between hind coxae, margin of this projection evenly rounded; ventrite 5 longer at middle than 3 or 4. *Legs* long with coxae widely separated; front leg with coxa more than 1/2 as long as femur; hind femur shorter than front and middle femora; trochanters apically attached to procoxae.

Length 3.8 mm; breadth 1.5 mm.

Holotype ♀ (BISHOP 7012), NE New Guinea, Wum, Upper Jimmi Valley, 180 m, 16. VII. 1955, J. L. Gressitt. Allotype ♂, Finschhafen, IV. 1944, F. E. Skinner (Purdue Univ. Coll'n). 7 paratypes with same data as holotype, and 2: NW, New Guinea, Waris, S of Hollandia, 450-500 m, 1-18. VII. 1959, T. C. Maa.

Male differs from the ♀ in having larger and more elongate antennae. The apical segment of the ♂ is longer than segments 8 and 9, but in the ♀ segments 8 to 10 are equal in length.

Differs from other known species in bearing a prominent carina near the front margin of the pronotal disc.

***Gastrallus papuus* Ford, new species** Fig. 2.

Body small, elongate, brown covered with fine golden pubescence. *Head* granulate, moderately convex in front; eyes as wide as interocular space; palpi yellow, securiform, apically truncate. *Antenna* pubescent, reaching metasternum in repose; segments 1, 8, 9 each nearly equal in length to 3-7 combined; segment 10 longer and narrower than 8 or 9. *Thorax* little less than 1/3 length of elytra; disc evenly rounded in profile; covered with granules separated by 1-3 × diameter of a granule; sides of disc emarginate at middle in dorsal view; front margin thickened, shining and explanate at points where eyes are received when head is retracted; side margins nearly obsolete, appearing as interruption of extended hind margins; hind angles produced obtusely; front margin obsolete between procoxae; pubescence in patches of differently directed hairs. *Scutellum* prominent, shield-like. *Elytron* with striae obscure on disc; 1 marginal stria extending from base to declivity; pubescence directed backward except for a patch in shallow depression on basal 1/3 in which hairs are directed outward from suture. *Ventral surfaces*: Metepisternum 4 × wider in front than behind; metasternum excavated in front to receive apical antennal segments, and with medial, longitudinal furrow extending from anterior excavation to apex; abdomen with ventrites 1 and 2 subconnate; ventrite 1 strongly produced between metacoxae; ventrite 5 equal in length to 3 + 4 at middle. *Legs* moderately long; trochanters prominent; procoxae converging apically into hook-like processes under which pass antennae in repose; trochanters preapically attached to outer side of procoxae.

Length 2.7 mm; breadth 1 mm.

Holotype (sex ?) (BISHOP 7013), New Guinea, Papua, Aroa Estate, W of Redscar Bay, 29. IX. 1958, Gressitt. Paratype: Papua, Bisianumu, NE of Port Moresby, 500 m, T. C. Maa.

This species is distinct from *notocarinus* in lacking a carina on the pronotal disc. It is more closely allied to *minus* but larger and antennal segments 8 and 9 are inwardly rounded instead of triangular.

Gastrallus minimus Ford, new species

Body entirely brown, very small, elongate and covered with fine, recumbent, light golden pubescence.

Head finely rugose; interocular area $3/4$ width of an eye; palpi yellow, securiform and truncate apically. *Antenna* with segment 1 as long as 3-7 combined; segment 2 globose and $1/3$ as long as 1; 8-9 strongly produced inward, triangular, wider and shorter than 10. *Thorax* broader than long; widest at hind angles; discal profile arcuate with arch more strongly bent in anterior $1/2$; vaguely granulate dorsally, and reticulate-granulate on lateral concavities; front margin dilated, shining, explanate at point where eyes fit beneath when head is retracted; hind margin produced backward at hind angles; side margins obsolete. *Scutellum* small, nearly equilaterally triangular. *Elytron* finely rugose, indistinctly granulate; pubescence uniformly directed behind; dorsal striae obsolete; 2 marginal striae shallowly impressed on apical $1/2$; epipleuron widest at front angles, converging backward to middle of side margin, becoming obsolete on apical $1/2$. *Sternum*: Prosternum excavated for reception of antennae, front margin externally invisible between procoxae; mesosternum forming a large cavity under mesocoxae which receives antennae in repose; metasternum declivous in front and with a shallow, medial, longitudinal furrow. *Legs* with procoxae elongate, at least $1/2$ as long as femur, converging apically, widely separate basally; front legs subequal in length to middle and hind legs; femora widest at middle and grooved beneath for reception of tibiae. *Abdomen* connate between ventrites 1 and 2, suture between them obsolete; ventrites 3 + 4 equal in length to 5 at middle. Length 1.9 mm, breadth .7 mm.

Holotype (sex ?) (BISHOP 7014), New Britain, Gazelle Peninsula, Bainings, St. Pauls, 350 m, 7. IX. 1955, Gressitt.

Distinct from the preceding species as shown in the key. Also the side margins of the prothorax are completely lacking.

Subfamily XYLETININAE

Genus **Holcobius** Sharp

Holcobius Sharp, 1881: 522 [type-species: Here designated *Holcobius granulatus* Sharp; in British Museum, Nat. Hist.]

The 14 species of *Holcobius* found in Hawaii are with few exceptions remarkably distinct from each other, but apparently evolved from one or two early introductions which may well have been *Xyletinus*. *Xyletinus* is nearly cosmopolitan and separable from the Hawaiian *Holcobius* and *Xyletobius* only by the form of the antennae. In the Hawaiian genera the apical 3 segments are usually greatly elongate, but *Xyletinus* has these segments little or not at all elongate. These genera all now have species with and without palpi apically emarginate, even though the original description of *Holcobius* specifies securiform and distally emarginate.

Holcobius orichalceus Ford, new species Fig. 1.

Body brown, covered with short, golden recumbent pubescence tangential on pronotum and uniformly directed behind on elytra; striae of elytra set with longer suberect setae.

Head granulate, hirsute, longest hairs $1/4$ length of antennal segment 1; eyes setose, each $2/3$ as wide as interocular space, feebly emarginate at antennal insertions; palpi yellow, strongly

emarginate apically; mandibles piceus, bidentate. *Antenna* pubescent; segment 2 ovate, 3/4 as long as 3; 4-7 serrate, shorter and narrower than 8; 9, 2 × as long as 8, equal in length to 10; 11 longest, acuminate. *Thorax* transverse, 1.6-1.9 mm; granulate; front angles feebly acute; hind angles evenly rounded; side margins piceus, darker than disc, shining and prominent; disk shallowly impressed at sides. *Elytron* with shallow striae set with elongate punctures; striae more deeply impressed at side; striae 5 and 6 shorter than all others, not reaching declivity; interspaces finely rugose. *Ventral surfaces* with pubescence uniformly directed behind; abdominal ventrite 1 produced backward at middle and acutely forward between hind coxae; hind margin of ventrite 1 arcuate, and ventrites 2 to 4 straight and parallel; ventrites 1 and 2 each longer than 3 or 4. *Legs* with tibiae longer than femora; trochanters prominent, 2/3 as long as tarsal segment; hind coxae separated by distance equal to length of trochanter; tibiae externally carinate; femora widest at middle and shallowly grooved to receive tibiae.

Length 4.5 mm, breadth 1.9 mm.

Holotype ♀ (BISHOP 7015), SE New Guinea, Papua, Port Moresby, 6. VI. 1955, on mangrove, Gressitt. Three ♀♀ ? paratypes as follows: 1, Port Moresby, Papua, 18. V. 1955, light trap; 1, Papua, Aroa Estate, W of Redscar Bay, 29. IX. 1958, 1 m; New Britain, Gazelle Peninsula, Bainings, St. Paul, 350m, 4. IX. 1955, light trap; all collected by Gressitt.

The small size and notched palpi of *orichalceus* indicate a relationship to *H. diversus* Perkins but lacks the deeply notched pronotal sides of that species. The form of the pronotum is closer to *H. pikoensis* Perkins but differs from that species in having the palpi apically emarginate and the body less elongate.

Subfamily DORCATOMINAE

Preliminary observations on the genera of Dorcatominae found in the Papuan Subregion indicate that they are derived from early introductions from Indo-Malayan and Australian sources. *Serianotus*, new genus, and *Mysticephala*, new genus, are apparently derivatives of *Dorcatoma*-like species from Australia. The species placed in *Dorcatoma* Herbst by Lea are not congeneric with European and North American species of the genus and will probably be reassigned. *Serianotus* strongly resembles the Australian *Dicoelocephalus*, but differs from that genus by not having the head hollowed to receive the antennae. *Stagetomorphus* Pic, *Cryptoramorphus* White, and *Caenocara* Thomson probably arrived from Indo-Malayan sources. However, *Caenocara* appears to have species allied to both source areas. The Hawaiian *Mirosternus* Sharp are apparently allied to *Serianotus* described herein.

Genus *Cryptoramorphus* White

Cryptoramorphus White, 1966: 959 (type-species: *Cryptoramorphus floridanus* White).

Cryptoramorphus was described by White to accommodate a new species from Florida, USA. In this study two Micronesian species of *Mirosternus* Sharp were reassigned to *Cryptoramorphus*, (*M. gressitti* Ford, *M. boninensis* Ford). *C. floridanus* differs from the Micronesian species in lacking a deep longitudinal metasternal groove. However, *floridanus* has a fine longitudinal depression, and the metasternal groove of *gressitti* and *boninensis* does not approach the deep sulcus found in *Mirosternus*. The hind intercoxal process of the 1st ventrite (not mentioned by White) is also present in *floridanus* but

again less prominent than in Micronesian species. *Mirosternus* has this character strongly margined and elevated.

Cryptoramorphus is now known from the Seychelles, USA, Micronesia, and New Guinea. Also, I have undetermined species from Tahiti and Taiwan.

***Cryptoramorphus guamensis* (Blair), n. comb.**

Dorcatomiella guamensis Blair, 1942: 60.

Mirosternus guamensis: Ford, 1958: 80.

***Cryptoramorphus lignicolus* Ford, new species**

Body elongate, black; dorsum moderately, evenly punctate, covered with recumbent, white swirled pubescence.

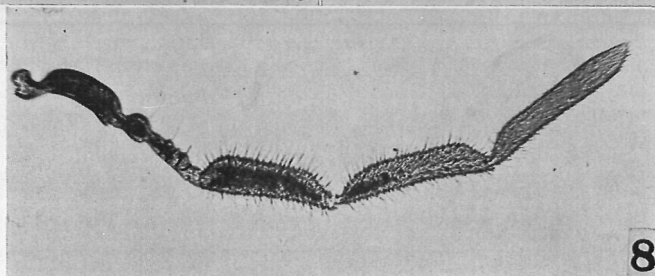
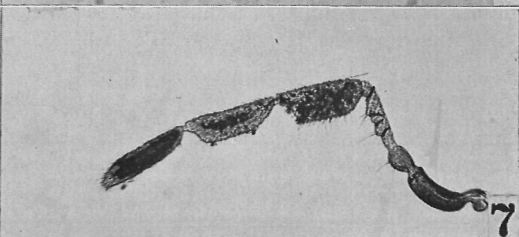
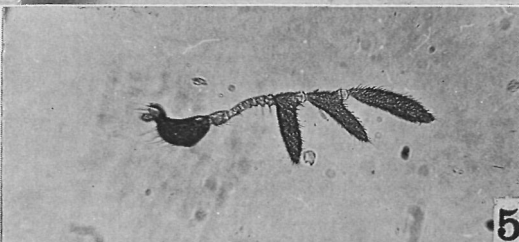
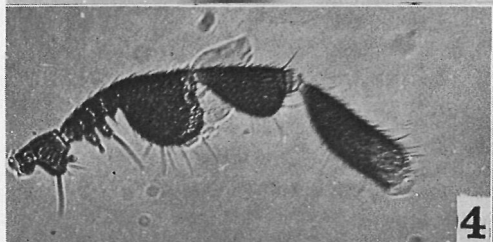
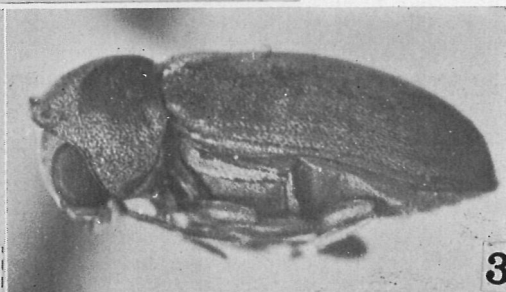
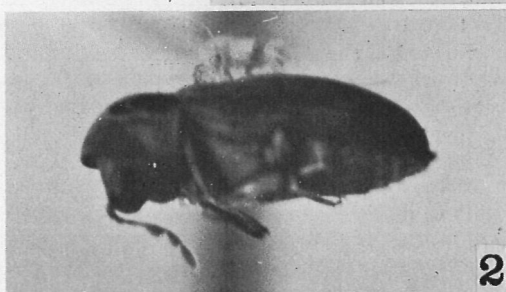
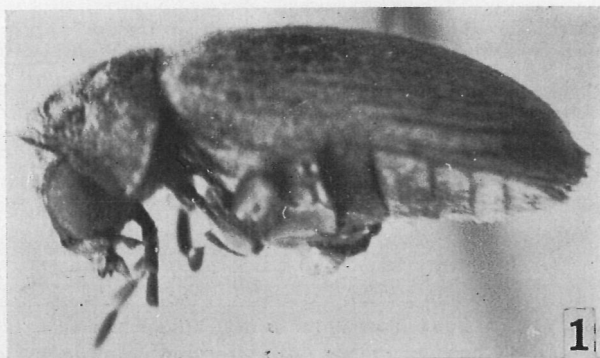
Head with hairs somewhat swirled but generally directed orad; eyes evenly convex with few erect setae little longer than diameter of an eye facet; palpi yellow, apically emarginate. *Antenna* reddish yellow, with fine recumbent pubescence and inner side with few longer erect setae; 1 as long as 11; 1 strongly arched and sclerotized, adapted to fit hollow under eye, externally clothed similar to front of head; 2 globose, 1/4 as long as 1; 5 and 7 produced inward more so than 3, 4, 6, or 8; inner erect setae of 3 to 8, 2× as long as segment to which attached; 9 slightly wider than 10 or 11; 10 shorter than 9 or 11. *Pronotum* feebly shining, margins raised and glabrous; pubescence on anterior 1/2 of disc directed forward at middle, and toward front and hind angles at sides. *Scutellum* subcircular, setose, punctures finer than adjacent elytral punctures. *Elytron* without striae or serial punctures; pubescence feebly aenescent, swirled in patch outward from suture behind middle of disc; swirled toward suture in front of middle and posteriorly at sides and declivity giving maculate effect depending upon direction of light reflected therefrom. *Ventral surfaces*: Prosternum somewhat produced forward at sides surpassing pronotal front angles indicating possible development of post-ocular lobes; metepisternum narrowly exposed behind, covered by sides of elytron anteriorly; metasternum evenly-punctate, broadly, arcuately produced in front, deeply grooved for reception of middle legs, medial, longitudinal sulcus subobsolete, represented by smooth line with small depression near hind margin; ventrite 1 with hind margin straight, hind margins of 2 to 4 evenly arched forward at middle, ventrite 2 longer at middle than 3, 4, or 5; intercoxal plate between hind coxae large, nearly as wide as long, sides subparallel. *Legs* reddish brown, tarsi yellow; outer edge of tibiae carinate and setose.

Length 2.4 mm; breadth 1.3 mm.

Holotype (sex ?) (BISHOP 7021), NW New Guinea, Waris, S. of Hollandia, 450-500 m, 17. VIII. 1959, sweeping, T. C. Maa.

Allied to the Micronesian species with swirled pubescence but differing in the color and arrangement. Also distinctive of this species are the slightly arched ventrites 2 to 5, and the feebly produced prosternal sides suggesting the development of post-ocular lobes.

Fig. 1-8. 1, *Holcobius orichalceus* Ford; 2, *Gastrallus papuus* Ford; 3, *G. notocarinus* Ford; 4, *Mysticephala bifovea* Ford, antenna without basal segment; 5, *Stagetomorphus simbanganus* (Pic), antenna; 6, *Caenocara kokurea* Ford, antenna; 7, *Gastrallus notocarinus* Ford, antenna ♀; 8, *G. notocarinus*, antenna ♂.



Cryptoramorphus lignicolus buloloensis Ford, new subspecies

Same size and structure as the preceding species but differs in the patches of silvery pubescence being interrupted by large patches of dark brown pubescence.

Holotype (sex ?) (BISHOP 8949), NE New Guinea, Bulolo, 1020 m, 22. VIII. 1956, Ford.

Genus **Serianotus** Ford, new genus

Body pubescent, elongate-ovate. Antenna with 11 segments, 9 to 11 feebly, roundly produced inward forming a distinct club. Maxillary palpus broadly expanded and truncate at apex. Pronotum with side margins incomplete, not reaching front margin. Prosternum produced at front angles forming postocular lobes partly concealing eyes when head is retracted; strongly hollowed internally to receive head in repose. Mesosternum more or less perpendicular, internally compressed and hollowed for reception of antennal club. Metasternum broadly produced in front; deeply, transversely grooved for reception of middle legs; with a medial, longitudinal sulcus extending from base little past middle. Elytron without striae, but with discal rows of serial punctures. First ventrite with raised, margined, subquadrate in tercoxal plate. Ventrites 2 to 5 separated by straight sutures; 3 and 4 subequal in length at middle to 2.

Type-species: *Serianotus lindoroides* (Ford), n. comb.

Serianotus lindoroides (Ford), n. comb. Fig. 12.

Mirosternus lindoroides Ford, 1956: 36, type-locality: Fiji (BISHOP 2500).

1 specimen: Solomon Islands, Guadalcanal, Roroni, 35 km E. of Honiara, 10 m, 15. V. 1964, R. Straatman.

This genus appears to be derived from an early introduction of an Australian *Dorcatoma*-like species such as *Dorcatoma punctilatera* Lea from Lord Howe Island. Species described by Ford, 1956 from Samoa and Fiji are also partly assignable to *Serianotus*. However, a revision of the Australian *Dorcatominae* should precede any reassignments of those South Pacific Island species which apparently have Australian ancestry. The species of *Dorcatoma* described by Lea appear to belong to one or two distinct genera which are probably peculiar to Australia as many of the other fauna found there.

Genus **Stagetomorphus** Pic

Stagetomorphus Pic, 1914: 7 (type-species: *Stagetomorphus indicus* Pic; India).

Aulacnobium Lea, 1924: 48 (type-species: *Dorcatoma lanigerum* Olliff; Australia).

Synonymy by F. Español, 1966: 559.

Also, I have before me single examples (probably undescribed) from Viet Nam and Thailand. The species of *Stagetomorphus* are easily recognized by their unusual 11-segmented antennae with a greatly developed pectinate club which is received in a cavity on the underside of the head when retracted, and by the deeply striated elytra which are notched at the sides to receive the hind knees in repose.

Stagetomorphus simbanganus (Pic) Fig. 5, 9.

Theca simbangana Pic, 1956: 78.

Stagetomorphus simbangana: Español, 1966: 559.

I have examined the holotype of this species, and 3 additional specimens, and include a detailed description based on these. Pic's description is very brief and not illustrated.

Body subovate-elongate, castaneus, hirsute, cuticle shining beneath yellowish hairs.

Head minutely punctate with long sparse hairs as long as 1/3 diameter of an eye; antennal insertion with carina above extending diagonally to middle of inner margin of eye; mandibles protruding, nearly as broad as long, hairs denser and shorter than on frons; interocular space at least 3× as wide as an eye; eyes setose, feebly emarginate; under surface greatly excavated to receive entire antennae in repose. Palpi obliquely truncate at apex. *Antenna* with segments 2-11 yellow, pubescent; segment 1 castaneus, 3× as wide as 2, and as long as 2-7 combined, robust, roughly C-shaped, outer face with setae disposed similar to front of mandibles; segment 2 ovate, wider than 3 but equally long; 4-7 nearly equal in length, feebly produced inward; 9 and 10 pectinate, as wide as 2-8 combined; 11 tapering at ends, as long as 2-9 combined. *Thorax* transverse, widest basally; sub-erect setae of pronotal disc mostly directed forward; pronotum concave behind front angles; concavities more coarsely punctate than disc; margins raised, piceus; hind angles broadly rounded; front angles more sharply rounded, slightly obtuse; prosternum greatly compressed to receive head in repose. *Scutellum* roundly triangular, little wider than base of 1st interval. *Elytron* strongly rounded and declivous behind; setae sparser than on pronotum, tangential, arising from prominent, punctate striae; interspaces glabrous; humerus protuberant; side margin interrupted, emarginate at middle for reception of hind knees in repose. *Ventral surfaces*: Mesosternum compressed below level of metasternum forming a hollow to receive middle legs; metepisterna hidden by inflexed side of elytron; metasternum swollen, with deep median, longitudinal sulcus; ventrite 1 hollowed at sides to receive hind legs, and produced at middle between hind coxae; ventrites 2-5 subequal in length at middle, and bearing row of large punctures on basal margin. Legs brown with tarsi yellow; pro- and mesocoxae contiguous, strongly compressed below level of metasternum; metacoxae separated by width of femur at middle; hind coxae partly surrounded by deep groove which receives hind tarsi in repose.

Length 1.5 mm; breadth 1 mm.

SOLOMON ISLANDS: 1, New Georgia, Kolombangara, Sandfly Harbor, 2 m, 9. VII.1964, Malaise trap, J. & M. Sedlacek; 1, Malaita, Dala, 50 m, 6-13. VI.1964, Malaise trap, J. & M. Sedlacek; 1, Vella Lavella, Pisisama, 18. XI.1963, P. Shanahan.

Genus *Mysticephala* Ford, new genus

Body covered with moderately long tangential setae; elongate-ovate. Antenna with segment wider and longer than any other segment; segment 2 subequal to combined lengths of 3 to 6; 4 and 5 with finger-like projections inwardly; 3 to 6 compacted to 7; 7 wider than all but segment 1; 8 and 9 loosely joined; 9 longer than all segments but 1. Head in front with large, deep, bifoveolate pit; eyes angulate, deeply transversely incised below, without eye facets visible below incision in front view, setose, and inwardly margined by deep groove; maxillary palpi obliquely truncate at apex. Elytron with 1 marginal stria reaching declivity; 2 discal striae feebly impressed on basal 1/2. Abdominal sutures 2-4 connate on middle 1/3. Metasternum with a median longitudinal groove.

Type-species: *Mysticephala bifovea* Ford, n. sp.

Apparently this genus is an offshoot of *Caenocara* to which it is most closely related. It differs in

the following characters: eyes strongly angulate and transversely incised below middle; greatly developed 1st antennal segment; a single marginal elytral stria reaching declivity; discal elytral striae, and connate abdominal sutures. *Caenocara* has the eyes diagonally, acutely incised to middle; 1st antennal segment less developed; usually 2 marginal striae reaching declivity; and abdominal sutures not strongly connate. The deep bifoveolate pit in front of the head of *Mysticephala* may be a case of sexual dimorphism. However, no species of *Caenocara* with this peculiar characteristic have been encountered.

***Mysticephala bifovea* Ford, new species** Fig. 4, 10, 13.

Body elongate-ovate, moderately punctate, covered with sub-erect, yellowish, tangential hairs.

Head with large bifoveolate pit between eyes subequal to width of an eye from front view; finely, sparsely punctate; eyes setose, deeply incised below middle, angulate, and inwardly surrounded by a deep groove; without eye facets visible below incision in frontal aspect; ocular incision parallel sided and eye hollowed beneath it to receive 1st antennal segment in repose; mandible prominent, outer margin carinate; palpi yellow, securiform, obliquely truncate apically. *Antenna* yellow with basal segment dark brown; robust, strongly chitinized; 7-9 each longer than 3-6 combined. *Pronotum* strongly transverse, widest basally; margins piceus, shining; hind margin arcuately produced backward at middle; hind angles evenly rounded, obtuse; front angles strongly bent down and inward, acute; disc finely punctate dorsally; laterally rugosely punctate. *Elytron* with 3 marginal striae, 1st stria reaching declivity; 2nd stria 2/3 length of elytron, and 3rd stria 1/2 as long as elytron; 2 sutural striae shallowly impressed on basal 1/2; remaining strial area evident only by glabrous areas with intervals punctate and bearing criss-cross arrangement of sub-erect setae; humeri impunctate and somewhat raised. *Ventral surfaces* with setae mostly directed backward; prosternum with lamina between procoxae; antenna in repose lies between lamina and procoxa; mesosternum compressed below level of metasternum, hollowed to receive antennal club; metasternum strongly produced in front and grooved for reception of mesotarsi; sparsely, shallowly punctate with a longitudinal, medial sulcus on posterior 1/2; metepisternum narrowly exposed and parallel sided; abdomen swollen, with punctures somewhat finer and more dense than on metasternum; ventrite 1 deeply excavated to receive hind legs, strongly margined behind and forming a process between hind coxae. *Legs* unicolorous with body except for yellowish tarsi; femora grooved to receive tibiae; roughly sculptured and setose externally.

Length 1.9 mm; breadth 1.2 mm.

Holotype (sex ?) (BISHOP 7018), SE New Guinea, Papua, W. District, Oriomo Government Station, 27. X. 1960, Malaise trap, Gressitt. 1 Paratype, Australia, N. Queensland, Kuranda, 200 m, Gressitt.

This species is closely related to *Caenocara polypora* Ford which also may eventually be given generic or subgeneric rank as it differs in certain particulars from typical *Caenocara* and represents a stepping stone in the transition from *Caenocara* to *Mysticephala*. *M. bifovea* is elongate-oval, the eyes are incised below the middle, antennal segment 7 is rounded inwardly, and the abdominal sutures are obsolete on the middle third. *C. polypora* is oval, the eyes diagonally incised toward the middle, antennal segment 7 is more triangular, and the ventral abdominal sutures sub-obsolete.

Genus ***Caenocara*** Thomson

Caenocara Thomson, 1859: 90.

Tylistus LeConte, 1861: 203.

Enneatoma Mulsant & Rey, 1864: 328; 14: 328, 367.

This cosmopolitan genus has apparently evolved into more diverse forms and a greater number of species in the South Pacific Islands than in any other part of the world. I have seen undetermined material from Fiji, Samoa, Philippines, and Borneo. The genus has been reported also from Micronesia, but so far it has not been found east of Samoa.

***Caenocara flavitarsa* Ford, new species**

Body small, globose, black, with tangential, sub-erect, white setae.

Head with frons finely punctate and setose; eyes acutely obliquely incised beyond middle, and inwardly margined by a deep groove; mandible prominent with external face little larger than external face of antennal segment 1; maxillary palpi yellow, apical segment triangular, outer margin obliquely truncate. *Antenna*: segment 1 robust, piceus, external face carinate, longer than 2-6 combined; 7 acutely triangular, shorter than 8 or 9, wider than any other segment; 8 cupuliform, apically emarginate; 9 longest, tapering at both ends; funicle yellow; club pubescent, black, but yellow at joints and apex. *Pronotum* finely punctate; punctures deeper and more numerous near front angles; side and front margins elevated, glabrous; hind margin overlapped by base of elytra, arched backward at middle and indented for reception of scutellum; hind angles evenly, obtusely rounded; front angles acute, about 35°. *Elytron* with punctures denser and larger than on pronotum; humerus reddish, glabrous, prominent; 2 marginal striae, 2nd stria shorter, but both reaching declivity; 3rd inner marginal stria subobsolete; discal striae 1 and 2 obsolete, evident only by longitudinal, glabrous areas on basal 1/3; side feebly explanate between side margin and 1st inner marginal stria. *Ventral surfaces* with hairs mostly directed behind; prosternum and mesosternum compressed below level of metasternum, externally invisible when appendages are retracted; metepisternum visible from base to apex, widest at middle; metasternum swollen, broadly produced in front, with large deep punctures at middle becoming progressively smaller laterally; ventrite 1 more than half hollowed to receive hind legs; ventrite 2 arched forward at middle; ventrites 3 and 4 as long as 5 at middle; abdominal sutures 2-4 obsolescent on middle 1/3. *Legs* brown; tarsi yellow; externally, longitudinally carinate on parts exposed when legs retracted; all coxae widely separated; front tibia as large as front femur, concealing femur when retracted.

Length 1.3 mm; breadth 1.2 mm.

Holotype ♂ (BISHOP 7020), NW New Guinea, Hollandia, W. Sentani, Cyclops Mtns., 150-250 m, 19. VI. 1959, Gressitt. 1 paratype with head and thorax missing apparently this species: NW New Guinea, Nabire, S. Geelvink Bay, 5 m, 8. VII. 1962, malaise trap, Gressitt & J. Sedlacek.

The dark color, and short 2nd inner marginal stria relate this species closer to *C. clarkei* Ford than any other described Pacific species I have seen. Distinguished from *C. clarkei* by its smaller size, white unswirled and shorter pubescence, and shorter, acutely triangular antennal segment 7. *Clarkei* has patches of swirled golden pubescence creating a maculate appearance, and antennal segment 7 nearly early equilaterally triangular.

***Caenocara hirsuta* Ford, new species** Fig. 14.

Body very small, black, punctate, globose with silvery swirled pubescence.

Head shining; sparsely, finely punctate with hairs as long as diameter of 4 eye facets combined arising from each puncture; interocular space $2 \times$ as wide as vertical diameter of an eye; eyes feebly angulate laterally; setose; obliquely, roundly incised almost to the middle; eye facets visible in front between ocular incision and retracted antennal segment 1; maxillary palpi brownish yellow, securiform, as wide as length of antennal segment 7. *Antenna* in side view longer than length of pronotum at middle; segment 1 externally angulate, piceus, with setae disposed similar to those of mandible and front of head, longer than 2-6 combined, shorter but wider than 9; segment 2 globose, wider than 3-6, as long as 3-5 combined; 7 wider than any other segment, subequal in length to 8, but shorter than 9. *Pronotum* as in preceding species but hairs recumbent, hirsute, mostly directed toward sides. *Elytron* moderately, uniformly punctate; punctures separated by $2-3 \times$ diameter of a puncture; 1st marginal stria nearly reaching apex of suture; 2nd marginal stria $3/4$ as long as 1st; inner 3rd marginal stria subobsolete; 2 sutural striae shallowly impressed on basal $1/2$; middle of disc with patch of pubescence swirled outward from suture. *Ventral surfaces* castaneus, pubescence shorter and mostly directed behind; metasternum at middle with large, uneven punctures which become progressively smaller toward side, and obsolete near lateral extremities; venter dilated and surrounded by prominent, raised margin laterally and basally; sutures deeply impressed at sides, subconnate at middle; ventrite 2 produced forward into transverse intercoxal piece. *Legs* roughly sculptured and angulate externally; inner edges glabrous; tarsi yellowish.

Length 1.3 mm; breadth 1.2 mm.

Holotype ♀ (genitalia lost in mounting) (BISHOP 7019), New Britain, Gazelle Pen., Bainings, St. Pauls, 7. IX. 1955, Gressitt. 3 paratypes collected as follows: NW New Guinea, Nabire, S. Geelvink Bay, 5 m, 8. VII. 1962, Gressitt and J. Sedlacek; SE New Guinea, Papua, Kokoda, 28. III. 1956, Gressitt; Solomon Islands, Malaita, Dala, 50 m, 10. VI. 1964, Malaise trap, J. & M. Sedlacek.

Separated from *C. flavitarsa* n. sp. as noted in the key, also by the recumbent, shaggy disposition of the dorsal clothing, which is suberect and tangential in *flavitarsa*. Similar in general appearance to *C. mariana* Ford from Guam, Marianas Islands, but distinct from that species in lacking a medial, longitudinal line interrupted by deep foveae on the metasternum. I have examined a syntype of *C. subplana* Scott (Seychelles) which has larger but fewer punctures and the humeri more pronounced.

Caenocara polypora Ford, new species

Fig. 11.

Body dark brown, somewhat elongate, clothed in suberect, yellowish setae.

Head with outer face of mandibles and front setose; eyes setose and incised almost horizontally $1/3$ vertical diameter of an eye, deeply grooved along inner margin; knob-like process above antennal insertions; clypeus $3 \times$ broader than long, tapering at sides. *Antenna* with basal segment externally roughened and setae disposed as on front of head; 2nd segment globose, $1/4$ as long as 1, $1/3$ as wide as 1, and long as 3-6 combined; 3 wider apically, as long as 4-5 combined; 7 shorter than 8 or 9; wider than any other segment, acutely triangular inwardly; segment 8 emarginate apically and $3/4$ as wide as 7; 9 filiform, apically testaceous, longer than any other segment. *Thorax* evenly punctate on pronotum; hind angles rather sharply, obtusely rounded; front angles sharply acute; side margins glabrous, feebly raised. *Scutellum* small, finely punctured, shield-shaped, bearing erect setae. *Elytron* with single inner marginal stria extending from a point before middle apically to declivity; punctures on disc large, unequal; becoming progressively smaller laterally and apically; striae replaced by longitudinal, glabrous lines; interspaces bearing rows of yellow, overlapping, tangential pubescence; humerus bare, not prominent.

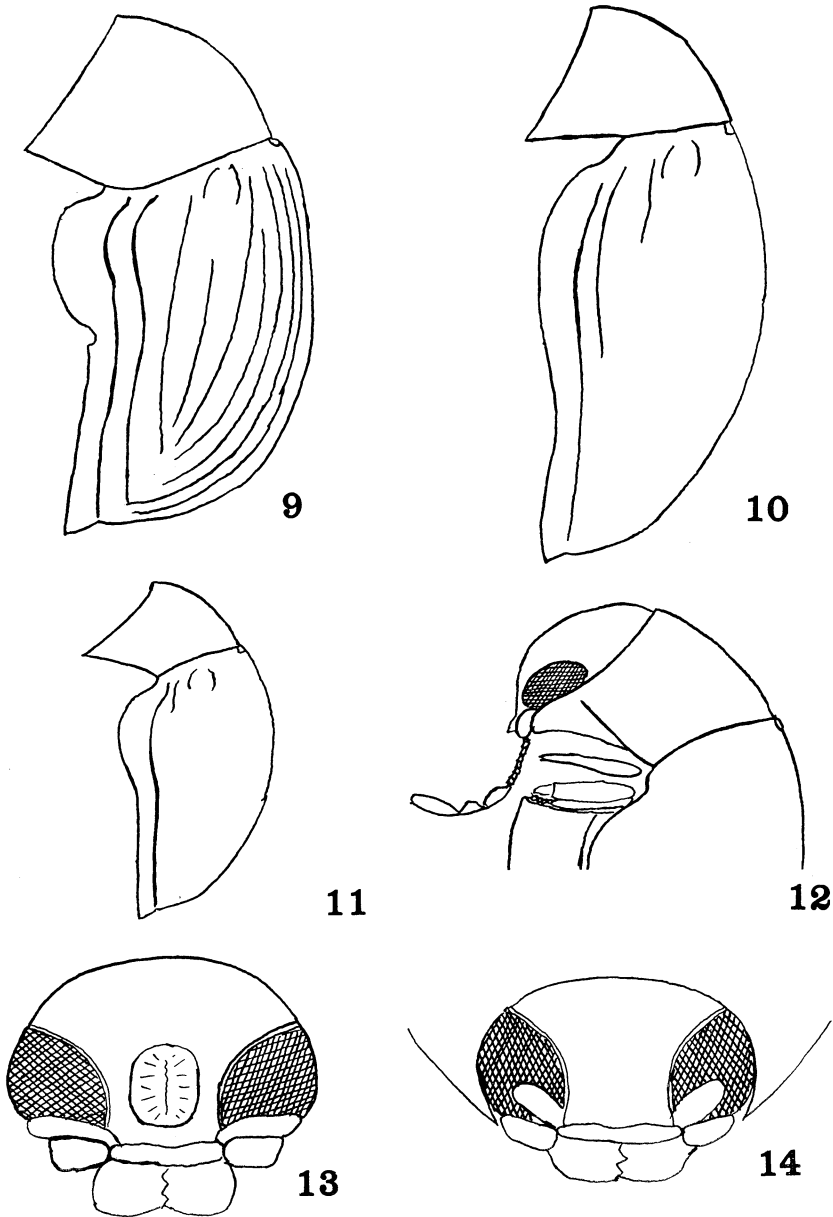


Fig. 9-14. 9, *Stagetomorphus simbanganus* (Pic), profile of elytron & pronotum; 10, *Mysticephala bifovea* Ford, profile of elytron & pronotum; 11, *Caenocara polypora* Ford, profile of elytron & pronotum; 12, *Serianotus lindoroides* (Ford), profile of anterior body; 13, *Mysticephala bifovea* Ford, front of head; 14, *Caenocara hirsuta* Ford, front of head.

Ventral surfaces: Metasternum with large punctures at middle, bearing a median longitudinal furrow extending from apex $2/3$ distance to base, anterior end with a small, deep fovea; metepisternum widest at middle and $3 \times$ wider than base; abdomen evenly punctate and setose, sutures straight, impressed deeply at sides but feebly at middle. *Legs* with all coxae widely separated; middle and hind trochanters externally visible when legs retracted.

Length 2 mm; breadth 1.6 mm.

Holotype ♂ (BISHOP 7016), Solomon Islands, Bougainville, Kokure, nr Crown Prince Range, 900 m, in bracket fungi, 8. VI. 1956, Ford. Allotype and 13 paratypes same data. No external feature found to separate sexes.

This species is worthy of subgeneric rank but is best left in *Caenocara* until more extensive material is collected from the Papuan Subregion. It is readily distinguished by the single, partial, inner marginal stria of the elytra and the sculpture of the metasternum. This and the following species were taken in cohabitation from the same fungus.

***Caenocara kokurea* Ford, new species** Fig. 6.

Body brown, punctate, moderately covered with tangential, aeneous pubescence on elytral discs, and uniformly directed silvery pubescence on pronotum and elytral sides.

Head finely punctate and pubescent; upper margin of antennal insertions hardly protruding; mandible subquadrate, setose, as wide as vertical diameter of an eye; eyes with erect setae as long as diameters of 2 or 3 eye facets combined, inwardly margined by deep grooves, laterally angulate, incisions apically rounded almost to middle of an eye. *Antenna* brownish yellow, pubescent; segment 1 castaneus, robust, externally setose and bicarinate; 2-6 little longer than 7 but shorter than 8; 7 acutely triangular, wider than any other segment; 8 concave apically; 9 filiform and longer than any other segment. *Pronotum* strongly transverse; finely punctured; punctures progressively nearer each other laterally; front and side margins glabrous, little raised at front angles; hind angles evenly, obtusely rounded; hind margin arched backward at middle. *Elytron* with punctures coarser on basal $1/2$ of disc, uneven in size and distribution; 2 prominent inner marginal striae, with outer one somewhat longer than inner one; striae vaguely represented by longitudinal smooth areas; setae suberect, tangential, arising from interspaces.

Length 1.6 mm; breadth .9 mm.

Holotype (sex?) (BISHOP 7022), Solomon Islands, Bougainville, Kokure, near Crown Prince Range, 11. VI. 1956, in bracket fungus, Ford; 2 paratypes same data.

This species is similar in form to *C. polypora*, but easily separated by the smaller size and 2 nearly complete marginal striae. *C. kokurea* is even more closely allied to *Dorcatoma insulana* Scott. The marginal striae in *kokurea* are deeply impressed, nearly equal in length, and parallel on the declivity. *D. insulana* has these features in opposition.

Named *kokurea* in honor of the people of the village of Kokure who were most helpful during my 3 weeks collecting there.

***Caenocara insulana* (Scott), n. comb. (Seychelles)**

Dorcatoma insulana Scott, 1924: 376.

I have examined 4 syntypes of this species and find that they are more appropriately placed in *Caenocara*. *Dorcatoma* Herbst is characterized by 2 fork-like processes on the prosternum and 10-segmented antennae. The species of *Caenocara* lack such processes and the antennae are 9-segmented. I hereby designate as lectotype of *C. insulana* the specimen in the British Museum (Nat. Hist.) bearing Scott's identification label and the word "type" and another label with "figured specimen."

Subfamily PTILININAE

Genus *Ptilinomorphus* Espanol

Ptilinomorphus Espanol, 1965: 50 (type-species: *Ptilinomorphus senegalensis* (Pic)).

This genus is also found in Africa and tropical America.

Ptilinomorphus bituberculatus (Pic)

Ptilinus bituberculatus Pic, 1956: 78 (In Hungarian National Museum, Budapest).

Ptilinomorphus bituberculatus: Espanol, 1965: 54.

NEW GUINEA: Friedrich Wilh.-hafen, 1901, Biro.

I have 1 other specimen which appears identical to the holotype of *P. bituberculatus* from the Subic Bay, Luzon, Philippine Islands, collected by Dr J. C. Thompson from the collection of the California Academy of Science. The illegible date may be V-1907.

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