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New Species and New Records of Elaterid Beetles
from the Pacific

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INTRODUCTION

This paper is based on a study of Pacific island elaterids from the collections of the British Museum (Natural History), Bernice P. Bishop Museum, the United States National Museum, and the Museum of Comparative Zoology of Harvard College; specimens also are included from the collection of the Experiment Station of the Hawaiian Sugar Planters' Association. Two genera and 28 species are here described as new. Unless otherwise stated, the type material is in the possession of the institution to whose collection the specimen is credited. The illustrations are by Mr. James T. Yamamoto of the Hawaiian Sugar Planters' Association Experiment Station.

New records of archipelagoes appear here in capital and small capital letters, those of individual islands, in italic. Too often museum material, particularly that collected in earlier days, bears only an archipelago, or group, name; such meager data make difficult the proper study of species distribution. At the least, individual island names should also be given. Island endemism may be of minor interest to some taxonomists, but it is often of major importance to Pacific faunal studies.

Lacon modestus (Boisduval).

New record: FIJI, *Viti Levu*, Korovou, Tailevu, Aug. 27, 1937, at light, J. M. Valentine (Bishop Museum).

The presence of this species in Fiji is to be expected, for it was

already known from the wide region between the Marquesas and Guam, and from New Caledonia to Hawaii.

Compsolacon glirinus (Candèze).

Edmond Fleutiaux records this Fijian species [Rev. franc. d'Ent. 5(3): 145, 1938] from the New Hebrides. A series from the British Museum supplies the following new records from the New Hebrides: *Espiritu Santo*, Aug. 1929, L. E. Cheesman; Hog Harbour, Aug. 1925, P. A. Buxton; *Tanna*, Sept. 1930, Cheesman; *Malekula*, Ounua, Feb.-Apr. 1929, Cheesman; *Efate*, Undine Bay, July 11, 1925, Buxton.

Compsolacon gracilentus (Schwarz).

Additional records from the Solomon Islands: *Bougainville*, Kieta, March 3-5, 1935, J. L. Froggatt (British Museum; C1123, C1133); *Malaita*, Auki, W. M. Mann (Museum Comparative Zoology); *Rubiana*, Mann (M.C.Z.); *Savo*, Tasmania¹, June 23, 1935, R. A. Lever (British Museum; 4727).

Compsolacon stricticollis (Fairmaire).

A new, specific island record from Fiji: *Viti Levu*, Nausori; Nandarivatu, Mann (M.C.Z.).

Alaus boreli Candèze.

First described from Java, this species was later recorded by Candèze from New Guinea. New record: BISMARCK ARCHIPELAGO, *New Britain*, Rabaul, Feb. 9, 1936, on *Zinnia* flowers, Froggatt (British Museum).

Alaus carinulatus, new species.

Male, about 18 mm. long; 5.5 mm. wide; female, 17-19 mm. long; 5.5-6.0 mm. wide. Brown, reddish on sides of pronotum, on base, and irregularly elsewhere, on elytra. Clothed with white to reddish-brown appressed scales obscuring color of integument, the lighter colors usually predominant on head, pronotum and basal declivity of elytra finely, indefinitely mottled by patches of darker scales or by denudation. Antennae and legs reddish brown. Under side similar to upper in coloration, vestiture uniformly whitish to fulvous except for heavy brush of specialized dark brown hairs on hind margin of 5th abdominal sternite of female.

Front widely concave anteriorly; punctation subumbilicate, fairly coarse. Antennae (male) attaining top of basal slope of pronotum, 2d segment subglobular, 3d about 1.5 times length of 2d and subequal to it in width; 4th broad, subtriangular, longer than 2d and 3d together; (female) shorter, barely ex-

¹This might be a locality name or intended for the magnoliaceous genus *Tasmania* (Drimys).

ceeding middle of prothorax; 3d segment twice length of 2d; 4th broadly triangular, slightly longer than 3d; in both sexes segments 4 to 10 are progressively shortened, about as long as wide; 11th longer than 10th, slightly narrowed at apex.

Prothorax longer than wide, even in female; anterior margin sinuate; sides (male) nearly straight and subparallel from base of hind angles to anterior one third, or (female) evenly arcuately rounded from base of hind angles to anterior margin. Pronotum moderately convex; punctation uneven, umbilicate on disk with fine punctulations intermixed, and on either side of middle a small area of closely set punctures slightly smaller than those on head; punctation toward sides obscured by vestiture but apparently similar to that on disk. Basal declivity abrupt (less so in male), its top marked by a distinct transverse carinula, sometimes reduced at middle, occupying one third to one half of pronotal width; punctation on declivity fine, mixed. Hind angles stout, divergent, strongly uncarinate. Mucro subhorizontal, strongly grooved between fore coxae, gently upcurved apically, without subapical tooth. Sides of mesosternal cavity weakly declivous.

Scutellum declivous in single plane; subpentagonal, elongate; flat or feebly convex.

Elytra at base as wide as hind prothoracic angles; sides (male) subparallel to beyond middle, or (female) widening slightly to about middle, thence arcuately narrowed backward; apex of each elytron lunately emarginate, with outer angle more prominent than the sutural. Elytra declivous at base; rather strongly convex, with disk flattened; striae punctures fine, lightly impressed; intervals flat with 3d feebly elevated near base (in male this elevation, although reduced posteriorly, is still apparent throughout nearly the entire length of the interval). Hind margin of 5th abdominal sternite entire, broadly rounded in male; in female, truncate, with heavy brush of apically widened and recurved coarse hairs.

Described from a holotype female, NEW HEBRIDES: *Anciteyum* [Aneityum], Nov. 1930, Cheesman (British Museum; 1931-127); an allotype male, FIJI, *Viti Levu*, Waiyanitu², Mann (M.C.Z.); and three paratype females: NEW HEBRIDES, *Malekula*, Ounua, Feb. 1929, Cheesman (British Museum; 1929-234); FIJI, *Viti Levu*, Korovou, Tailevu, at light, Sept. 15, 1937, Valentine (Bishop Museum), and a third, also in Bishop Museum, without locality label, taken by Valentine in Fiji, probably on Viti Levu. The allotype has the prothorax bent downward so that exact measurement of its length is difficult.

The females from Fiji are more rufous on the dorsal surface than those from the New Hebrides or than the male from Viti Levu. The holotype is in the British Museum the allotype in the Museum of Comparative Zoology, two of the paratypes in Bishop Museum, and the other in the Hawaiian Sugar Planters' Association collection.

² On the Navua River. This name is spelled Wainganitu on the labels throughout the Museum of Comparative Zoology collection, but the form used by Mann in his "Ants of the Fiji Islands" [Bull. Mus. Comp. Zool. 64 (5), 1921] is adopted here.

***Alaus cristatus* Candèze.**

A species hitherto known from Aneityum in the New Hebrides. A new record from the same archipelago: *Espiritu Santo*, July-Sept. 1929, Cheesman (British Museum; 1929-537).

An insect (female) in the Museum of Comparative Zoology, from Auki, Malaita in the Solomons is similar to the *Espiritu Santo* specimen (female), but shows the following differences: (1) the frontal margin is less prominent along the middle, (2) the hind prothoracic angles diverge more strongly, and (3) the prominent convergent carinae on the elytra are much finer. The specimen may be *A. humeralis* Heller, but I think it more likely an undescribed species.

***Alaus infumatus* Candèze.**

This species has been recorded from New Britain; the following is only to point out sexual differences. Two females from Rabaul, in the Hawaiian Sugar Planters' Association collection, have the maculations darker, and therefore more strongly contrasting with the general body color, than has a male from Laloki, Papua. The females have the tips of the elytra less deeply emarginate, with the sutural angle the sharper of the two, but less acute than the outer angle in the male. The male bears, on the prosternal lobe, a remarkable tuft (entirely absent in the female) of fine, long, brown hairs.

***Alaus inusitatus*, new species.**

19.5 mm. long; about 6.5 mm. wide. Stout; oblong; blackish to dull rufous; vestiture fine, ashy (base of pronotum) to yellowish brown, with blackish on small, round spot on either side of pronotal disk; elongate markings on basal two thirds of wingcovers forming two vague, transverse zigzag patterns. Under side more sparsely clothed than upper, with fine, yellowish-brown scales; epipleura, antennae and legs more or less reddish brown.

Front excavate. Antennae about .5 length of prothorax; 3d segment twice as long as 2d, longer than 4th and more slender; 11th rounded apically, only slightly longer than wide.

Prothorax slightly longer than wide; evenly convex transversely on dorsum; sides moderately, sinuately arcuate; slightly narrower across anterior angles than across base of hind angles. Pronotum (except disk) coarsely, closely punctate; no median carina, furrow, or basal tubercle; at top of basal declivity a short, sharp, transverse, forwardly oblique carina on either side of middle. Hind angles wide, diverging slightly beyond greatest width of prothorax; tips recurved; unicarinate. Under side coarsely, shallowly punctate; more closely and conspicuously on propleura than elsewhere. Sides of mesosternal cavity subhorizontal, sloping slightly forward from base. Mucro deeply grooved and horizontal between fore coxae; gently upcurved behind; without subapical tooth.

Scutellum declivous in single plane; elongate, subpentagonal; posteriorly concave.

Elytra at base not quite as wide as hind prothoracic angles; sides subparallel for about three fourths their length, thence conjointly narrowed to apex, which is evenly rounded without suggestion of truncation or emargination. Striae finely punctured, not impressed; intervals flat, except for brief, vague elevation of 3d near base; 7th and 8th striae somewhat closer together than other pairs.

Described from a holotype female in the British Museum: SOLOMON ISLANDS, *Guadalcanal*, Kovagombi, Jan. 5, 1936, Lever (5850).

The combination of entire elytral apex, transverse carina on pronotum, and 3d antennal segment longer than 4th, characterizes this species. The tuft of specialized hairs on the hind margin of the 5th sternite is well developed.

Alaus montraveli (Montrouzier).

A specimen in the British Museum (Fry coll.; 1805-100), Brazier, bears both New Caledonia and New Hebrides labels. The species has previously been recorded only from New Caledonia, so presumably the second label is in error.

Alaus schwarzi Fleutiaux.

New record from the Solomon Islands: *Ysabel*, Fulakora, C. Big-nell, 1917, per Mann (U.S.N.M.). This is *Alaus sulcicollis* Schwarz 1902, which is preoccupied by *A. sulcicollis* Gahan 1900 from the island of Sokotra. Comparison of the original descriptions suggests that *Alaus humeralis* Heller too may be a synonym; it was described from Bougainville in the Solomon Islands.

Alaus tavuvu Van Zwaluwenburg.

Originally described from Russell, and later recorded from Tulagi, the following is a third island record from the Solomon Islands: *Malaita*, Wailante, Oct. 9, 1935, Lever (British Museum). *Alaus tavuvu* and *A. velutinus* Candèze have equally fine vestiture, but the former has the tips of the elytra more deeply emarginate, and the basal tubercles of the elytra sharper, more prominent, and posteriorly more convergent than in *A. velutinus*.

Genus **CONOBAJULUS**, new genus

Head moderately inclined; front completely margined anteriorly; mandibles stout, bent laterad at nearly right angles from their short base, appar-

ently without tooth on inner margin; clypeus wide, low, anterior margin undulate.

Antennae strongly serrate from 4th segment; moderately short.

Prosternum moderately lobed anteriorly; pleurosternal sutures double, closed throughout; mucro subhorizontal; mesosternal cavity with sides perpendicular at base then gently declivous anteriorly, at its base a prominent, blunt cone arising from between the mesocoxae, projecting forward and downward to form, with the plane of the metasternum, an angle of about 25 degrees, the suture between mesosternum and metasternum visible anteriorly near the base of the cone.

Hind coxal plates gradually widened inward. Tarsi simple, stout; segments 1 to 4 diminishing in length; 1st segment of hind tarsi slightly shorter than the three following together; 2d shorter than following two; 5th subequal to 1st. Claws simple; each, at base, with three close-set, subequal bristles.

Genotype: *Conobajulus ugiensis*, new species.

The ventral conical process projecting forward between the middle coxae (fig. 1,*b*) is, I believe, unique among the Elateridae.

Conobajulus ugiensis, new species (fig. 1).

27.0 mm. long; 9.0 mm. wide. Robust; subnitid. Dark reddish brown, suffused and mottled with piceous, most prominently a blackish area on the side of either wingcover at about middle; antennae rufous. Pubescence short, generally fulvous, with irregular patches on pronotum, at basal one third of elytra, and smaller, vaguer areas elsewhere on elytra, ashy; pubescence sparsest on pronotal disk which is nitid; beneath, pubescence fulvous, heavier on outer margin of hind coxal plates, and on posterior angles of abdominal sternites 1 to 4.

Front deeply excavate anteriorly; anterior margin entire, slightly reflexed; punctation coarse, deep, uniform. Antennae exceeding fore coxae by about two segments; strongly serrate from 4th segment; 2d segment small, subglobular; 3d fully twice length of 2d; 4th subequal to 2d and 3d together; 5th to 10th each slightly shorter than 4th and progressively narrower; 11th longer than 10th, abruptly narrowed on apical one third. Punctation of antennal segments 1 to 3 comparatively coarse, sparse; of 4 to 11, finer, denser.

Prothorax wider than long; sides subarcuately, undulately narrowed from base of hind angles. Pronotum depressed, disk slightly more convex than rest of upper surface; a nitid, raised median line, more acute anteriorly than behind, extends from top of basal declivity to anterior margin; punctation of disk umbilicate, shallow, sparse, that on sides and basal areas finer; basal declivity gentle, with slight median prominence. Hind angles wide, diverging slightly from outline of sides of prothorax, incurved apically, bluntly uncarinate. Punctation beneath, umbilicate, sparse on propleura and prosternum, and on lateral areas of rest of undersurface, with punctures progressively finer on abdominal sternites. Propleura concave along pleurosternal sutures. Mucro widely, deeply sulcate before fore coxae; subhorizontal. Mesosternal cavity with sides gently declivous; a prominent, blunt conic process arising from between mesocoxae, (fig. 1,*b*), extending forward and ventrad of mucral cavity, and making an angle of about 25 degrees with the plane of the metasternum. This process formed in greater part by the metasternum, the suture between it and the mesosternum

visible on the forward aspect of the process near its base. Tarsi simple, rather heavily haired beneath. Hind coxal plates gradually widened inward. Hind margin of apical sternite evenly rounded, moderately pubescent.

Scutellum moderately inclined; flat, subpentagonal.

Elytra at base as wide as hind prothoracic angles; sides arcuate, widening to about basal one third, thence conjointly narrowed to apex; elytra briefly divergent along suture; apex widely truncate, sutural angle sharper than the outer, but inconspicuous. Elytra strongly convex across base, depressed apically; lateral margin subexplanate on basal one half. Strial punctures of first five striae fine, lightly impressed; those of remaining outer striae deep, coarse, but basally evanescent and, on distal one half, weak. Intervals finely punctulate; convex only toward base; 3d with prominent raised ridge on basal slope.

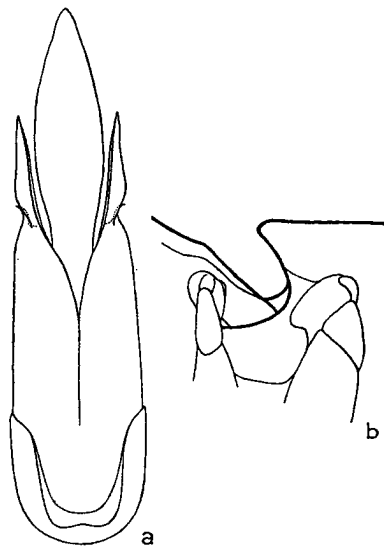


FIGURE 1.—*Conobajulus ugiensis*, new species: a, aedeagus, holotype male; b, lateral view of mucral cavity, showing metathoracic conical process.

Described from a holotype male in the Museum of Comparative Zoology: SOLOMON ISLANDS, *Ugi*, Mann.

The aedeagus (fig. 1, a) is remarkable; the lateral lobes bear elongate semi-membranous extensions beyond the end of the definitely chitinized part of the lobe. This species has the appearance of a broad, flattened *Alaus*, but the remarkable sternal process will distinguish it from that genus.

***Tetrigus fleutiauxi* Van Zwaluwenburg.**

Originally described from Ongea-ndriti, Lau Archipelago, Fiji. New records from Lau: *Ovalau*, Nov. 1927, H. W. S(immonds)

(British Museum; C358); *Kandavu*, Vunisea, Mann (M.C.Z.) The irregular spotting on the posterior part of the elytra, formed by the pubescence, is not apparent in the Ovalau specimen.

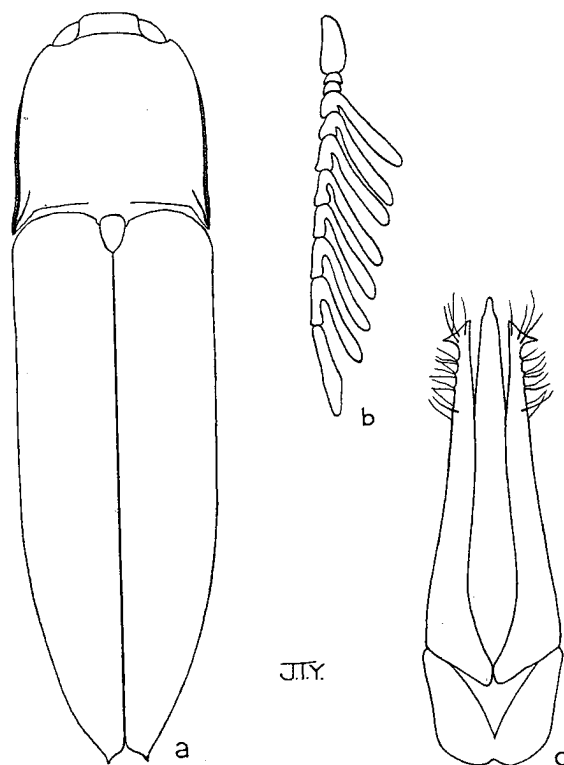


FIGURE 2.—*Tetrigus palauensis*, new species (holotype male): a, outline figure; b, antenna; c, aedeagus.

***Tetrigus palauensis*, new species (fig. 2).**

33 mm. long; 8.5 mm. wide (fig. 2,a). Elongate; piceous; pubescence fulvous, uniformly dense.

Front flat; anterior margin truncate, faintly depressed at middle; punctuation fine, dense, even. Antennae (fig. 2,b) nearly attaining base of prothorax, but not apex of hind angles; 2d and 3d segments small, subequal; 4th almost equal to 2d and 3d together; remaining segments progressively longer until 11th, which is much longer, being subequal to 9th and 10th together, and narrowed on apical one fourth to form a false segment. From base of 4th to 10th inclusive arises a stout lamella, those of segments 4 to 9 subequal in length (slightly longer than length of 11th), that of 10th distinctly shorter.

Prothorax strongly convex dorsally in transverse section, especially anteriorly; almost as long as wide; sides converging gently from hind angles to anterior one third. Hind angles divergent, continuing outline of sides of prothorax, strongly sinuate apically; strongly unicarinate. Punctuation of pronotum fine, uniform, with large and small punctures intermixed anteriorly toward sides; disk with ill-defined impunctate median line; base not channelled; anteriorly, on either side, equidistant from front and lateral margins, a small whorl formed by pubescence. Lateral margin of pronotum acute, with strongly impressed line along its dorsal side from base of hind angles to anterior one fifth. Margin of prosternal lobe undulate at sides, but without spine or process. Mucro excavate and horizontal between fore coxae. Sides of mesosternal cavity gently concave in lateral aspect.

Scutellum elongate, flat; narrowed strongly backward from base, rounded behind.

Elytra at base as wide as hind prothoracic angles; strongly transversely convex at base; sides subparallel to posterior one fourth, thence conjointly narrowed to divergent, mucronate tips. Strial punctures light, sparse; intervals flat, finely punctulate. Hind coxal plate wider at insertion of coxae than at outer edge, the hind margin between these two points concave; tarsi simple.

Described from a holotype male in Bishop Museum: PALAU, *Peleliu (Periryu-to)*, April 20, 1936, Y. Kondo.

This species resembles *Tetrigus flabellatus* (Germar), but differs by having the prothorax relatively broader in the male than in the same sex of that Indomalayan species, and by the strongly marked groove along the upper side of the lateral margin of the pronotum. Both species have similar aedeagi, but in *T. flabellatus* the inner margin of the lateral lobes curves laterad near the tip, while in *T. palauensis* it is straight (fig. 2,c). Also, in *T. palauensis* the outer margin of the lateral lobes is rugose.

***Tetrigus valentini*, new species (fig. 3).**

Males, 17.0-24.0 mm. long; 5.0-7.0 mm. wide; female, 17.5 mm. long; 5.3 mm. wide (fig. 3,a). Slender; piceous to dark brown; pubescence fulvous, short, dense, obscuring color of integument.

Front widely excavate in male on anterior two thirds; slightly less excavate in female; punctuation moderately fine, dense, uniform. Antennae (male) (fig. 3,b) attaining basal one fourth of prothorax; 3d segment small, subequal to 2d; 4th also small, slightly shorter than 2d and 3d together, and subequal to 5th; segments 6 to 10 progressively longer; 11th about as long as 5 to 10 together, over ten times longer than its basal width, abruptly narrowed on apical one fifth; segments 4 to 10 each with slender lamella arising from base, lamellae slightly longer than 11th segment, subequal in length, with that of 10th slightly shorter; (female) 2d and 3d segments small, subequal; 4th 1.5 times longer than 2d and 3d together; 5th to 10th progressively diminishing in length; 11th longer than 4th, elongate oval, entire; 4 to 10 each with short lamella rapidly decreasing in length as apex of antenna is approached, that of 4th nearly as long as segments 4 and 5 together, that of 10th barely exceeding tip of 10th segment.

Prothorax (male) distinctly longer than wide, or (female) as long as wide across tips of hind angles; sides narrowed in straight line or faintly arcuate from tips of hind angles to anterior one third. Hind angles bisected by a single, prominent, blunt carina. Pronotum rather strongly convex; punctation fine, fairly dense, coarser laterad; disk with impunctate, sometimes faintly elevated, median line for nearly its entire length (male); basal declivity abrupt, prominently subcarinately raised medianly. Lateral margin of pronotum with strongly impressed groove from tip of hind angle to anterior margin. Prosternal lobe undulate at sides anteriorly, but without spines. Mucro subhorizontal between fore coxae; ungrooved on ventral surface. Sides of mesosternal cavity briefly horizontal at base, with slight, subtuberculate prominence at anterior margin of horizontal plane; then sloping faintly anteriorly to assume another horizontal plane. Tarsi simple.

Scutellum strongly declivous; longer than wide; flat; thickly pubescent.

Elytra at base narrower than hind prothoracic angles; basal declivity abrupt; sides subparallel to middle (male) or beyond (female), thence conjointly narrowed to mucronate apex; sutural margins divergent apically; striae faintly impressed, obsolescent on disk; intervals flat. Hind coxal plate wider at insertion of coxa than at outer margin; hind margin broadly rounded at widest point.

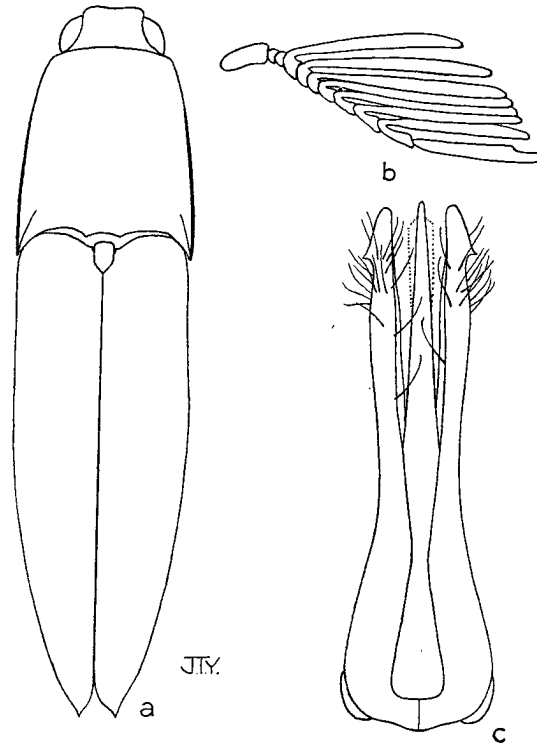


FIGURE 3.—*Tetrigus valentini*, new species (holotype male): a, outline figure; b, antenna; c, aedeagus.

Described from a holotype male in Bishop Museum: FIJI, *Viti Levu*, Korovou, between Naivithula and Tailevu, Sept. 24, 1937, Valentine; an allotype female in the Museum of Comparative Zoology: *Viti Levu*, Waiyanitu, Mann; and seven male paratypes, six with the same data as the allotype, and one from FIJI, *Kandavu*, Vunisea, Mann (M.C.Z.). One of the paratypes has been placed in the British Museum, and another in the Hawaiian Sugar Planters' Association collection.

The Kandavu specimen has the basal, median prominence on the pronotum less marked than in the Viti Levu series, and the tips of the elytra slightly less definitely mucronate. The male aedeagus (fig. 3,c) is very elongate, as are the expanded terminal portions of the lateral lobes, which are bluntly rounded at the apex, and briefly spined at the lateral angles.

The following key will aid in separating the three species of *Tetrigus* thus far known from Fiji.

KEY

- A. Sides of mesosternal cavity sharply declivous anterior of horizontal base (Ongea-ndriti; Ovalau; Kandavu)**T. fleutiauxi**³
 Sides of mesosternal cavity so slightly declivous anterior of horizontal base as to be subhorizontal throughout their length.....B
- B. Lateral margin of pronotum with deeply impressed groove along its entire length; prosternal lobe without lateral spines (Viti Levu; Kandavu)**T. valentini**
 Lateral margin of pronotum without impressed groove; prosternal lobe with short, blunt spine on either side (Viti Levu).....**T. silvaticus**⁴

Genus **DIOXYPTERUS** Fairmaire

An apparently trivial, yet seemingly useful, criterion for separating into groups the various species of this Melanesian genus, is the coloration of the first few basal segments of the antennae, first used by Heller (Arb. morph. tax. Ent., Berlin, 2:266, 1935). The 25 species now known may be separated on that basis as follows, those marked with an asterisk being listed solely on Heller's authority.

³ Stylops 2(8): 176-177, 2 figs., 1933.

⁴ Ann. Mag. Nat. Hist. 14(10): 262-263, 1934.

ANTENNAE ENTIRELY BLACK	1ST ANTENNAL SEG- MENT ALONE REDDISH; REMAINDER BLACK	1ST AND 2D, AND SOME- TIMES PART OF 3D, SEG- MENTS, REDDISH, RE- MAINDER BLACK
* <i>D. basalis</i> Schwarz	<i>D. binostriatus</i> , new species	<i>D. bennigseni</i> Schwarz
<i>D. laruei</i> Fleutiaux	<i>D. leveri</i> Van Zwalu- wenburg	<i>D. fasciatus</i> , new species
<i>D. makirensis</i> Mon- trouzier	<i>D. pulcher</i> , new species	<i>D. flexuosus</i> Fairmaire
<i>D. malcheri</i> Heller		<i>D. guttatus</i> Fairmaire
<i>D. nigrotransversus</i> Fairmaire		<i>D. marshalli</i> , new species
<i>D. venustus</i> Van Zwaluwenburg		<i>D. montanus</i> Van Zwalu- wenburg
		<i>D. montrouzieri</i> Fleutiaux
		<i>D. muiri</i> Van Zwaluwenburg
		* <i>D. ottonis</i> Schwarz
		<i>D. ovalauensis</i> Van Zwalu- wenburg
		<i>D. risbeci</i> Fleutiaux
		<i>D. tavenui</i> Van Zwaluwen- burg
		* <i>D. undulatus</i> Schwarz
		<i>D. vagepictus</i> Fairmaire
		<i>D. vitticollis</i> Heller
		<i>D. wakayensis</i> Van Zwalu- wenburg

Heller (loc. cit.) lists *D. vagepictus* as having the antennae entirely black; Fairmaire's description reads: ". . . antennis nigris, articulis 3 primis flavis. . ." Again, despite Fairmaire's description of *D. nigrotransversus* (" . . . antennis totis nigris . . ."), Heller lists that species as having the first, second and sometimes also the third, segments reddish yellow. It seems probable that *D. nigrotransversus* and *D. vagepictus* were accidentally interchanged in Heller's list.

***Dioxypterus bennigseni* Schwarz.**

New record: BISMARCK ARCHIPELAGO, *New Ireland*, April, C. E. Pemberton (H.S.P.A.). The reddish markings are not so bright as in typical forms, but otherwise the specimen agrees perfectly with New Britain material.

***Dioxypterus binostriatus*, new species (fig. 4,a).**

14 mm. long; 4.5 mm. wide (fig. 4,a). Subfusiform, shining; head fuscous, more or less rufous anteriorly on either side of middle; eyes black. Antennae entirely black save for 1st segment which is rufous. Pronotum black on anter-

ior, lateral, and hind margins; darkly rufous on disk. Scutellum rufous, with basal margin and apex blackish. Elytra generally luteous (ochraceous at base) with black areas on humerus extending backward to join black stripe on 5-6 stria interval; black stripe on interval between suture and 1st stria extending from scutellum for about one third elytral length to form a wider, longitudinal black band along the intervals between striae 1-2 and 3-4; a similar band on interval 5-6 joins the humeral maculation; the three bands become attenuated behind the middle, and disappear apically. Body beneath generally rufous to flavous; propleura dusky with outer margins black; mesosternal episternum dusky; legs flavous with tibiae and tarsi blackish. Pubescence golden brown; less dense, or denuded, on disk of elytra.

Front convex, feebly impressed either side of middle; transverse, unmarginated anteriorly; punctation fine, uniform. Antennae failing to attain tips of hind prothoracic angles by about length of last segment; 2d segment globular; 3d twice length of 2d, the two together subequal to 4th.

Prothorax about as long as wide (hind angles excepted), conical; sides converging evenly from tips of hind angles to anterior margin, faintly arcuate before base of hind angles. Pronotum flat, with sharp, brief median impression near, but not attaining, base; punctation on disk finer than on head, slightly finer basally, coarser and denser laterad. Hind angles elongate, blunt apically; acutely bicarinate. Punctation on propleura and prosternum coarser than on upper surface. Mucro subhorizontal. Sides of mesosternal cavity prominent, distinctly more sloping than plane of posterior part of metasternum.

Scutellum declivous; convex, subnitid.

Elytra at base as wide as hind prothoracic angles; basal declivity (basal one fourth) strongly convex; sides subparallel to beyond middle, thence abruptly narrowed to apex; sharply divergent apically, each wingcover ending in a single acute spine. Striae paired, intervals between 1-2, 3-4, 5-6, and 7-8 narrower than between 2-3, 4-5, and 6-7; punctures forming striae strongly impressed basally, weak apically. Intervals between paired striae convex (3d prominent at base), the others flat; all intervals very finely punctulate. Striae 7 and 8 marked with black, but the interval between them luteous; basally these two striae coalesce. Abdomen finely, densely punctulate. Fifth abdominal sternite emarginate on hind margin.

Described from a holotype female in the British Museum; NEW HEBRIDES, *Espiritu Santo*, Tatarii (western division of island), 4,000 feet, Oct. 31, 1933, J. R. Baker (Oxford Univ. Exped.; 1934-141).

The pairing of the striae will readily distinguish this species from any previously described.

Dioxypterus fasciatus, new species.

13 mm. long; 4.1 mm. wide. Fusiform. Head, pronotum and base of elytra, olive brown; rest of elytra dark wood brown, with conspicuous, narrow, undulating fascia of ashy pubescence at posterior one third, extending from 9th interval to about 3d, then forward across 2d and 1st to attain suture, along which it extends forward to join the less evident undulating hind margin of the basal one third, which is uniformly clothed with fulvous pubescence; apical one fourth of elytra with fulvous pubescence, this area, as well as the anterior luteous area, being separated from the conspicuous ashy fascia by a band of black pubescence.

Antennae piceous to black, with first two, and part of 3d, segments reddish yellow; hind angles of prothorax and tips of elytra, black. Under side more or less uniformly reddish yellow with pleurosternal sutures, and hind margin of pleura, blackish. Legs reddish yellow, tarsi duskier. Pubescence uniformly fulvous above and beneath, except as noted.

Front gently convex medianly, well-impressed on either side; punctation fine, uniform. Antennae loosely serrate; tips barely exceeding hind margin of prothorax; 2d segment small, subglobular; 3d twice length of 2d; 2d and 3d together subequal to 4th; 5th and following subequal in length but progressively narrower; 11th oval.

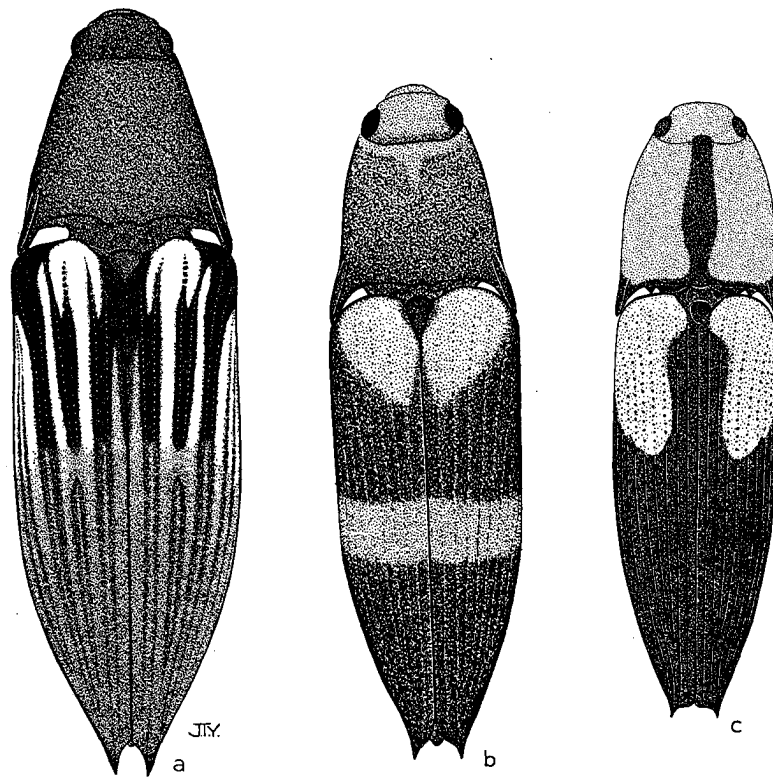


FIGURE 4.—a, *Dioxypterus binostriatus*, new species; b, *Dioxypterus marshalli*, new species; c, *Dioxypterus pulcher*, new species.

Prothorax about as long as wide (median measurements; length less than width across hind angles); sides convergent and nearly straight from base of hind angles to anterior one fourth, thence narrowed strongly to anterior margin. Pronotum flattened; vaguely impressed medianly at base; punctation on disk fine, only slightly less so laterad. Hind angles elongate, acute, flaring slightly from outline of sides; acutely bicarinate. Mucro convex in lateral aspect.

Sides of mesosternal cavity more prominent than plane of metasternum; perpendicular anteriorly.

Scutellum elongate, narrowed from base to apex; moderately convex.

Elytra at base as wide as prothorax across tips of hind angles; strongly convex on basal one third; sides straight and widening slightly to middle, strongly narrowed on apical one fourth; apex of each wingcover obliquely acuminate. Striae lightly impressed; intervals flat on disk, strongly convex toward base and apex; 3d interval at base most strongly convex of all.

Described from a holotype male in the Museum of Comparative Zoology. According to its label, it was taken by Mann in the SOLOMON ISLANDS, *San Cristobal*, Wainoni, but the specimen has the facies of certain Fijian *Dioxypterus*, and I suspect it is really from Fiji, not from the Solomon Islands.

The species is separable from *D. flexuosus* Fairmaire, by the color and pattern of the elytral markings, and by having the sides of the front more strongly impressed; the male aedeagus of *D. fasciatus* has the lateral lobes shorter and blunter than in *D. flexuosus*.

***Dioxypterus flexuosus* Fairmaire.**

New record for this Fijian species: Fiji, *Kambara*, Mann (M.C.Z.).

***Dioxypterus makirensis* Montrouzier.**

Two specimens are in the British Museum material, both from Kirakira on San Cristobal (the type locality), in the Solomon Islands May 5, 1935, R. A. Lever. A new island record from the same group: *Ugi*, Pawa, Mann (M.C.Z.).

***Dioxypterus marshalli*, new species (fig. 4,b).**

12 mm. long; 3.8 mm. wide (fig. 4,b). Robust; head reddish yellow, fuscous at base. Antennae with first two segments reddish, the rest black. Pronotum generally fuscous; anterior margin reddish yellow, base black; pubescence on head and pronotum fulvous. Elytra black with base yellowish between 1st and 5th intervals, the yellow color produced backward farthest (for about one fourth elytral length) along 2d interval, thence obliquely forward to base of 5th; suture narrowly black; behind middle a transverse band of fulvous pubescence; otherwise the elytral pubescence is black on black areas, fulvous on the yellow. Beneath, generally black with rufous patches on prosternal lobe, on pleurosternal sutures, on mesoepisternum and on epipleura; abdomen yellowish on apical one half; legs flavous, tarsi dusker.

Front generally convex; anteriorly truncate, unmarginated; punctation fine. Antennae almost attaining tips of hind prothoracic angles; 3d segment twice as long as globular 2d, narrower than 4th; 4th subequal to 2d and 3d together.

Prothorax trapezoidal, sides faintly arcuate before hind angles, which flare from outline of sides. Pronotum flattened; finely, closely punctate; a brief, smooth, median ridge at base. Hind angles acute, incurved apically; sharply

bicarinate. Mucro subhorizontal with apex gently upcurved. Sides of mesosternal cavity more prominent than plane of metasternum, forming with it an angle of some 30 degrees.

Scutellum black; convex, subnitid.

Elytra at base slightly wider than prothorax; moderately inclined at base; sides parallel to beyond middle, thence narrowed to apex; sutural margins abruptly divergent apically, each wingcover ending in a single acute spine. Striae with well-impressed punctures; intervals extremely finely punctulate, convex apically and toward base, 3d more prominent than the others.

Described from a holotype male which bears no locality label, but only the numbers 201 and 55-69. It was received from the British Museum with material from the New Hebrides, and may be from that archipelago. Sir Guy Marshall, after consulting the British Museum records, finds that this insect was collected by Macgillivray on the voyage of H.M.S. *Herald* in 1854, from the New Hebrides, Fiji, or the Solomons. The sides of the mesosternal cavity are more prominent than in *D. pulcher*, new species, resembling in that respect *D. binostriatus*, and the Fijian *D. flexuosus* and *D. guttulatus* Fairmaire. The species is dedicated to Sir Guy A. K. Marshall, Director of the Imperial Institute of Entomology.

***Dioxypterus pulcher*, new species (fig. 4,c).**

10.5 mm. long; 2.9 mm. wide (fig. 4,c). Head and pronotum orange red with these exceptions: eyes, median basal mark on head, fusiform median line, hind angles and hind margin of pronotum, black. Antennae entirely black except 1st segment which is orange red. Scutellum black. Elytra black, with basal yellowish area occupying about one third length of each wingcover; this area margined with black at base, and only just behind the humeral callus extending onto the inflexed lateral part of the elytra; on disk, the yellow areas of each wingcover are separated by a forward prolongation of the black area which covers the major part of the elytra; this separating black band covers 1st interval at base, widens farther back to extend over 2.5 intervals, and posteriorly again narrows to cover 2 intervals. Beneath, orange red on prosternum and posterior part of mesosternum; elsewhere black. Legs reddish to yellow; tarsi duskier.

Pubescence very fine; reddish yellow on pronotum (except on median band where it is black), reddish yellow on yellow parts of elytra, black on black areas. Beneath, pubescence more or less concolorous with integument from which it arises, with bands of cinereous on side margins of abdominal sternites.

Front flat; moderately punctate. Antennae attaining base of prothorax; 2d segment small, subglobular; 3d about twice length of 2d; 2d and 3d together slightly shorter than 4th.

Prothorax a little wider than long; sides subparallel on basal one half, thence moderately narrowed to anterior margin. Pronotum moderately convex; punctuation of disk finer than on head. Hind angles broad, divergent, tips incurved; strongly bicarinate. Sides of mesosternal cavity in same plane as metasternum.

Scutellum inclined, oval; convex, subnitid.

Elytra at base narrower than hind prothoracic angles; sides subparallel to about middle, thence conjointly narrowed to apex; tip of each wingcover roundly emarginate, the outer angle prominently spined, the inner blunt, inconspicuous. Striae with lightly impressed punctures; intervals nearly flat, finely punctulate.

Described from a probable female holotype in the British Museum: BISMARCK ARCHIPELAGO, *Makada* (Duke of York Islands off north-east tip of Gazelle Peninsula, New Britain), F. H. Taylor (British Museum; 1933-603).

Fleutiaux has seen this specimen and places it near his *D. montrouzieri*, from which it differs by having only the first segment, instead of the first two or three, reddish. The present species might be mistaken for a variety of *D. leverii* in which the limits between the two yellowish patches on the elytra have disappeared to form a single yellow area. However, in *D. pulcher* the sides of the mesosternal cavity, although prominent, are in the plane of the metasternum, whereas in *D. leverii* they form a distinct angle with that plane. In *D. pulcher* the metasternum and abdomen are predominantly black, while in *D. leverii* they are rufo-testaceous for the most part.

***Dioxypterus risbeci* Fleutiaux.**

A series of New Hebrides specimens of this species shows certain color differences upon comparison with a specimen from Ambrym Island in the same archipelago. These differences are: (1) the Ambrym specimen has the pronotum entirely, and the head almost entirely, blackish, with only the frontal margin rufous; in the others there is a median longitudinal rufous marking of varying expanse on the pronotum, and the head is predominantly rufous; (2) the blackish marking so prominent along the outer margin of the elytra of the Ambrym specimen, present in but two of the others, is much reduced.

A character not mentioned in the original description of *D. risbeci* is that the first two antennal segments, and part of the third, are rufous; the remainder are black. In *D. laruei* Fleutiaux all the segments are black.

The type locality of *D. risbeci* is the New Hebrides. New, more definite records, all from the same archipelago are: *Ambrym*, Mount Marum, E. Aubert de La Rue (Paris Museum); *Efate*, Port Vila, Dec. 4, 1925, W. H. Ford (Bishop Museum); *Malekula*, Ounua,

March-April 1929, Cheesman (British Museum); *Espiritu Santo*, Hog Harbour, July 1925, Buxton (British Museum).

***Symphostethus malaita*, new species.**

13.5-14.5 mm. long; 4-4.4 mm. wide. Elongate; subparallel. Black; pronotum reddish yellow with a triangular spot based on anterior margin, and hind angles and margin, black; antennae and mouthparts black. Propleura reddish yellow with hind margin and pleurosternal sutures black; prosternum, including mucro, reddish yellow; metasternum medianly reddish yellow. Otherwise all of under side black. Legs reddish yellow with tarsi and greater or lesser part of distal end of tibiae, blackish. Pubescence fine; above, black on black areas (except sometimes reddish yellow on anterior part of front, and on either side of distal one fourth of the elytra a short, forwardly oblique, narrow fascia of yellowish pubescence which fails to attain side margin and extends forward to about the fourth interval), yellowish on the yellow; pubescence beneath, grayish, forming a heavy band medianly and along either side of the abdominal sternites.

Front gently convex, anteriorly flattened; frontal margin absent on middle, but prominent at sides. Punctuation fine, close; coarser anteriorly. Antennae broadly serrate; failing to attain tips of hind angles by about 3 segments; 2d segment very small; 3d equal to 4th in length and width; following segments subequal; 11th slightly longer than 10th, broadly rounded at apex.

Prothorax slightly wider than long; sides anteriorly convergent and nearly straight (slightly sinuate at base) from base of hind angles to anterior one third, thence arcuately narrowed to anterior margin. Pronotum moderately convex, basal declivity gentle; more or less carinulate medianly toward base; punctuation on disk about as on base of head, posteriorly much finer. Hind angles stout, flaring slightly from outline of sides; acutely bicarinate. Mucro subhorizontal. Sides of mesosternal cavity subparallel, horizontal at base, then perpendicular.

Scutellum longer than wide, bluntly rounded at apex; tumid; subnitid.

Elytra at base as wide as hind prothoracic angles; sides straight, subparallel to posterior one third, thence conjointly narrowed to apex; sutural margins divergent apically; apex of elytra truncate at sutural angle, prolonged into acute spine on outer angle. Strial punctures shallowly impressed; intervals very finely punctulate, convex, the 3d most prominent basally.

Described from a holotype female and a paratype female from the Museum of Comparative Zoology: SOLOMON ISLANDS, *Malaita*, Auki, Mann. The paratype is in Bishop Museum.

This species has the elytra proportionally longer than any of the other species known to me. It is most readily distinguished by the short, oblique, yellowish fascia on the apical quarter of the elytra. Like all the other species of the genus which I have seen, the third and fourth striae coalesce anteriorly at some distance from their base.

***Symphostethus manni*, new species.**

12.5-13 mm. long; 3.6-4 mm. wide. Subparallel. Black; pronotum reddish yellow with following black; (1) median maculation, slender, subparallel

on posterior one half, widening anteriorly; (2) mark on each lateral margin, sometimes confluent with anterior part of median marking, and occupying nearly one half the length of the side, but not attaining the anterior margin; (3) hind angles more or less black. Under side black; propleura reddish yellow with more or less diagonal black mark continuing the lateral marking of the pronotum; prosternum (except mucro) and metasternum medianly, reddish yellow; mouthparts, antennae and legs, black. Pubescence fine; black on black areas (except on anterior part of front where it is sometimes yellowish), reddish yellow on yellowish parts; beneath, pubescence grayish, thicker on lateral abdominal margins.

Front gently convex, anteriorly flattened; punctation fine, close. Antennae broadly serrate; just failing to attain tips of hind angles in male, slightly shorter in female; 2d segment very small, 3d equal to 4th in length and width; following subequal; 11th slightly longer than 10th.

Prothorax a little wider than long, even in male; sides subarcuately narrowed from base of hind angles to anterior margin. Pronotum moderately convex, finely subcarinate medianly on basal one half; punctation of disk as on base of head, coarser, closer, confluent laterad, very fine at base. Hind angles stout, blunt; arcuate from outline of sides, acutely bicarinate. Punctation of prosternum and propleura coarse, shallow, sparse; elsewhere on under side fine, close. Mucro subhorizontal. Sides of mesosternal cavity anteriorly divergent; horizontal at base, then perpendicular.

Scutellum tumid; subnitid.

Elytra at base as wide as hind prothoracic angles; sides subparallel to posterior one fourth in male, to posterior one third in female, thence conjointly narrowed to apex; sutural margins apically divergent; tips of elytra truncate at sutural angle, prolonged into acute spine on outer angle. Punctation of striae coarse, deep, distinct; intervals convex, the 3d the most prominent at base; punctulation very fine.

Described from a holotype female and an allotype male from the Museum of Comparative Zoology; both are from the SOLOMON ISLANDS, *New Georgia*, Marovo Lagoon, Mann. The specimens bear the additional (incorrect) label: Fiji; the Marovo Lagoon is in the Solomons. The allotype has been placed in Bishop Museum.

This species appears closest to *S. pacificus* Fleutiaux, but that has the legs entirely flavous instead of black, and the aedeagus of the male has the lateral lobes terminating in a blunt knob, whereas in the present species they are acutely angulate externally near their apex.

***Symphostethus pacificus* Fleutiaux.**

New records from the Solomon Islands: *Florida*, Maliali, Mann (M.C.Z.); *Tulagi* Mann (M.C.Z.).

***Propsephus compactus* Van Zwaluwenburg.**

New records from the Solomon Islands, all by Mann and in the Museum of Comparative Zoology: *Bio*; *Ugi*, Pawa; *Florida*, Maliali.

Propsephus nigripilis, new species (fig. 5,a).

12 mm. long; 4 mm. wide. Stout; shining. Black; antennae and legs reddish brown; under side obscurely rufous. Moderately clothed above with fine, semi-erect, black pubescence; beneath, with finer, recumbent brownish hairs.

Front gently convex; frontal margin broadly, evenly rounded; punctuation moderately coarse, well spaced, uniform. Antennae failing by about three segments to attain tips of hind angles; 3d segment half as long again as 2d; 2d and 3d together slightly shorter than 4th; 4 to 10 serrate, broad; 11th attenuate on apical one third.

Prothorax a little wider than long; sides arcuately narrowed from base of hind angles to anterior margin. Pronotum strongly convex; punctuation as on head with a few smaller punctures intermixed; more closely, umbilicately punctate laterad; basal half more finely punctate than disk. Hind angles directed straight backward, sinuate at base and strongly so at apex; acutely uncarinate. Basal declivity precipitous; basal median impression strong; basal sulci short. Propleura coarsely, umbilicately punctate, with impunctate, shiny area toward base. Mucro slightly upcurved behind fore coxae; subapical tooth heavy. Sides of mesosternal cavity flat edged, strongly declivous. Hind coxal plates plainly but briefly angulate near middle of hind margin; tarsal lobes well developed.

Described from a holotype female in the British Museum: SOLOMON ISLANDS, *Guadalcanal*, 100 feet, Aug. 25, 1935, W. Tate, per R. A. Lever (5308). A male, lacking head and thorax, but apparently the same species, has the following data: SOLOMON ISLANDS, *Tulagi*, Feb. 23, 1936, Lever, jungle leaf (British Museum; 5592). (Aedeagus is illustrated in figure 5,a.)

Propsephus obesus, new species.

Male, 11.5 mm. long; 3.8 mm. wide; females, 11-11.6 mm. long; 3.5-3.9 mm. wide. Stout; rectangular, narrowed front and rear; subnitid. Dark reddish or blackish brown with elytra slightly lighter than head and prothorax; antennae and legs light brown. Pubescence fulvous, short, fine.

Front gently convex, sharply declivous, usually faintly impressed anteriorly; punctuation rather coarse, uniform. Antennae short, in male attaining about basal margin of prothorax, in female somewhat shorter; 2d antennal segment small, subglobular; 3d 1.5 times length of 2d, and subequal in width; 4th triangular, slightly longer than 2d and 3d together; 5th shorter than 4th; 5 to 10 weakly triangular, subequal in length; 11th attenuate on apical one third, acutely so in female.

Prothorax wider than long (median measurements) in both sexes; sides in male subparallel from base of hind angles to middle, thence narrowed forward, in female arcuately narrowed from base of hind angles to anterior one third, thence more sharply to anterior margin. Pronotum rather strongly convex in both dimensions; punctuation of disk subumbilicate, slightly coarser than on head, toward sides coarser and plainly umbilicate, toward base finer; basal declivity rather abrupt, well impressed medianly. Hind angles flaring from outline of sides, sinuate; tips acute, outcurved; sharply uncarinate. Basal sulci short. Propleura coarsely punctate, a shiny, impunctate area on basal one third. Mucro sinuate between fore coxae, subhorizontal behind; subapical tooth well marked

but not acute. Sides of mesosternal cavity flat-edged, divergent and moderately declivous basally, more sharply, subperpendicular anteriorly.

Scutellum flat or shallowly concave; coarsely punctate; subpentagonal.

Elytra behind humeri slightly wider than hind prothoracic angles; sides, in male, subparallel to about middle, thence conjointly narrowed backward; in female, sides widening slightly to beyond middle, thence conjointly narrowed;

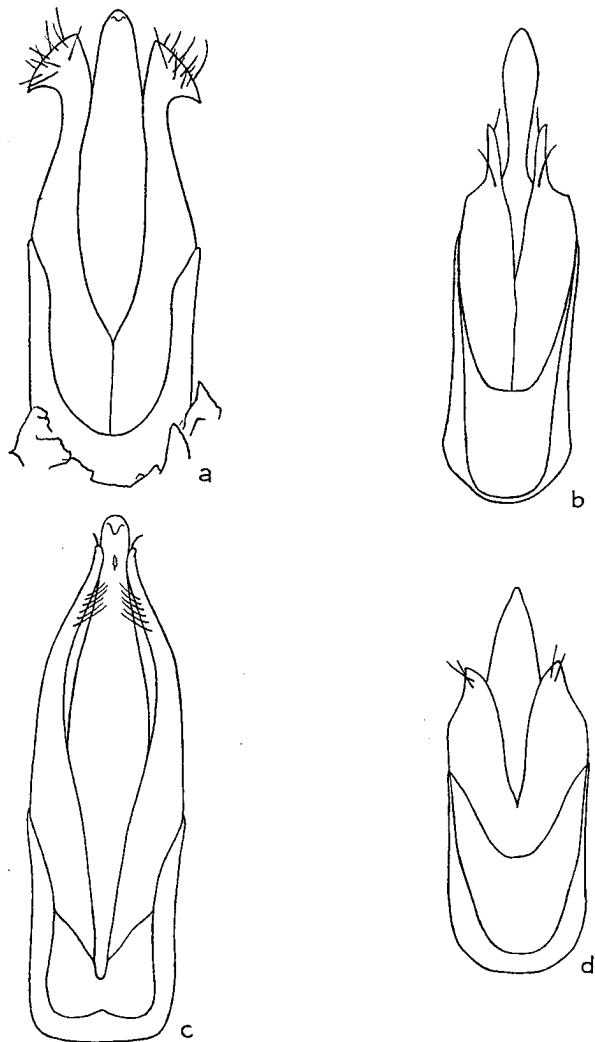


FIGURE 5.—Aedeagus: a, *Propsephus nigripilis*, new species; b, holotype male, *Simodactylus bryani*, new species; c, allotype male, *Simodactylus hesperius*, new species; d, *Simodactylus nigerrimus* Fleutiaux.

apex rounded. Striae with fairly well-impressed lines of punctures, weaker apically; intervals convex and subrugose except on disk and apically; finely punctulate. Hind coxal plates feebly angulate near middle of hind margin.

Described from a holotype female: SOLOMON ISLANDS, *Malaita*, Auki, Mann; an allotype male from the same locality; and two paratype females, one from the same locality as the holotype, the other from: SOLOMON ISLANDS, *Malaupaina* (Three Sisters group), Mann. The holotype and one paratype are in the Museum of Comparative Zoology; the allotype is in Bishop Museum, and one paratype in the Hawaiian Sugar Planters' Association collection.

This species very closely resembles *P. compactus*, but has the prothorax more transverse, sex for sex, and the hind prothoracic angles sinuate, widening the outline of the sides of the prothorax, and out-curved apically. The male aedeagus is similar to that of *P. compactus*, but the outline of the expanded terminal blade of the lateral lobe is more regularly semicircular than in *P. compactus*. Males of *P. compactus* before me measure 10 mm. in length and females measure 10.5 mm., but even these largest specimens are shorter than the smallest *P. obesus*.

***Propsephus vitiensis*, new species.**

9.25-10.5 mm. long; 2.75-3 mm. wide. Stout; moderately shining. Castaneous to piceous; antennae and legs lighter brown. Pubescence erect, fine, brownish.

Front flat or shallowly impressed; punctuation fairly coarse, dense. Antennae of male exceeding tips of hind prothoracic angles by about two segments; somewhat shorter in female; 3d segment subequal to 4th and of about same width; segments feebly serrate; 11th slender.

Prothorax strongly transverse in both sexes; sides strongly arcuate from base of hind angles to anterior margin (more rounded in female). Pronotum in cross section more convex in female than in male; punctuation dense on disk, about as fine as on head, coarser laterad; basal declivity shallowly, widely impressed medianly. Hind angles strongly sinuate apically; apex acute; uncarinate. Basal sulci fairly deep. Lateral carina acutely overhanging margin of propleura; punctuation of propleura sparse, denser anteriorly, almost or quite impunctate on basal half. Mucro moderately strongly upcurved behind fore coxae. Sides of mesosternal cavity sharply declivous.

Scutellum subpentagonal; flat; coarsely punctate.

Elytra at base not as wide as hind prothoracic angles; sides subparallel to about middle (male), or beyond (female), thence conjointly narrowed to rounded apex. Striae with well-impressed punctures; intervals convex, subrugose basally. Hind coxal plates briefly but distinctly angulate.

Described from four specimens, all from FIJI: a holotype female, *Taveuni*, Qilai, 2,300 feet, at lamp in forest, Dec. 1933, R. W. Paine

(British Museum; C458); an allotype male, *Viti Levu*, Korovou, between Naivithula and Tailevu, Nov. 1937, Valentine (Bishop Museum); a paratype female with the same data as the allotype, and a paratype male, *Viti Levu*, Suva, Oct. 6, 1938, Lever (British Museum; C799). Both paratypes have been deposited in the Hawaiian Sugar Planters' Association collection.

The aedeagus is relatively slender. This species differs from certain others of the genus in the following particulars: it is much smaller than *P. major* (Candèze); it has the striae more strongly impressed than in *P. euaënsis* (Schwarz) and the intervals subrugose; the prothorax is more strongly transverse than in *P. tongaensis* (Candèze). In *P. papuensis* (Candèze) and *P. chatanayi* (Candèze) the mucro is subhorizontal, while in *P. euaënsis* and *P. rufipes* (Schwarz) it is somewhat more abruptly upcurved than in the present species. In the two last-named insects the angle on the rear margin of the hind coxal plate is more prominent than in *P. vitiensis*.

***Simodactylus bryani*, new species (fig. 5,b).**

11 mm. long; 2.8 mm. wide. Slender; strongly attenuate; castaneous to fuscous; moderately shining; pubescence fulvous, short, moderately fine. Beneath, light brown on outer margins of propleura; abdomen piceous; legs light brown.

Front flat or slightly convex; anterior margin broadly, evenly rounded; punctation close, fine, uniform. Antennae feebly serrate; exceeding hind prothoracic angles by less than length of last segment; 3d segment twice length of 2d, the two together slightly longer than 4th; median longitudinal carina on outer face feebly suggested on 4th and three or four following; 11th bluntly rounded at apex.

Prothorax longer than wide; sides narrowed gently from base of hind angles to anterior one third, sometimes faintly arcuate. Pronotum moderately convex; wide median impression at base; punctation on disk similar to that on head, but sparser, denser toward sides. Hind angles slender, acute; diverging from outline of sides, incurving faintly at apex; feebly bicarinate. Mucro subhorizontal, sides margined between fore coxae; subapical tooth small, acute. Sides of mesosternal cavity sharply declivous. Propleura nearly flat, faintly channelled anteriorly; punctation as on pronotum.

Scutellum elongate, broadly rounded at apex; flat except at base.

Elytra at base wider than hind prothoracic angles; sides parallel to about middle, thence narrowed sharply to apex; briefly divergent apically along suture; obliquely, shallowly emarginate at tip, both angles briefly mucronate, the outer longer, more prominent. Striae with lightly impressed punctures; intervals finely punctulate, flat.

Described from specimens in Bishop Museum: holotype male, FIJI, *Viti Levu*, Colo-i-Suva, June 29, 1924, E. H. Bryan, Jr.; and

two paratype males, *Viti Levu*, Tholo North, Nandarivatu, Navai Mill, Oct. 28, 1937, Valentine, and *Viti Levu*, Nandarivatu, dead branches, Oct. 20, 1937, Valentine. A paratype has been deposited in the Hawaiian Sugar Planters' Association collection.

The aedeagus (fig. 5,b) has the lateral lobes abruptly narrowed apically to form elongate, spiculate blades.

Simodactylus buxtoni (Van Zwaluwenburg).

Four specimens in the British Museum collection of what appear to be this species, provide the following new records: NEW HEBRIDES, *Malekula*; *Pakea* (Banks Islands); *Espiritu Santo*. SOLOMON ISLANDS, *Guadalcanal*.

Despite minor differences and wide discontinuity of known distribution, I consider these to be *S. buxtoni*. The aedeagi are indistinguishable from those of paratype males from Upolu, Samoa. The most striking differences are that the paratypes have the subapical tooth of the mucro blunt instead of acute, and in the New Hebrides and Solomon Islands specimens the elytral intervals are subrugose toward the base, instead of flat.

Simodactylus hesperius, new species (fig. 5,c).

15-20 mm. long; 3.75-5 mm. wide. Robust; moderately shining. Reddish brown; frontal margin of head, anterior margin and disk of pronotum, and elytra along sutural and lateral margins, blackish; antennae and legs reddish brown to castaneous. Beneath, dark brown to blackish, with propleura flavous to reddish. Pubescence fulvous, very short, fine.

Front gently convex; anterior margin emphasized by narrow concavity behind periphery; punctation fine, dense, uniform. Antennae slender, feebly serrate; almost attaining apex of hind angles (male) or shorter (female); 3d segment as long as 4th; from 5th on decreasing in length; 10th and 11th subequal; 11th twice as long as wide, attenuate on apical one third.

Prothorax longer than wide in both sexes; sides straight, convergent to anterior margin (male), or to anterior one fourth (female). Hind angles acute, continuing outline of sides (male), or diverging backward (female), incurved apically; distinctly bicarinate. Pronotum flattened on disk; base sharply declivous; punctation fine, dense, uniform. Lateral margin sharply defined in entire length, forming, with anterior margin a brief, subdenticulate ridge more prominent than rest of carina. Punctation of propleura fine as on disk, less dense, and posteriorly even sparser. Mucro subhorizontal; widely, shallowly excavate between fore coxae; subapical tooth blunt, not prominent. Sides of mesosternal cavity widely divergent at base, gently declivous, shallowly concave in lateral aspect.

Scutellum more or less pentagonal, posteriorly acute; transversely convex anteriorly, flattened or concave behind.

Elytra at base as wide as hind prothoracic angles; sides narrowed to about middle (male), thence more abruptly to apex; in female the sides narrow less

rapidly than in male to behind middle; each wingcover very briefly emarginate at apex, the sutural margins briefly divergent; sutural angle with more or less sharp spinule, the outer rounded but the more prominent of the two. Striae with very lightly impressed punctures which become very faint toward apex; intervals very finely punctulate. Hind coxal plates strongly but briefly dentate at widest point.

Described from the western Pacific: holotype female, PALAU, *Palao (Palau, Pelew)*, April 8, 1936, Z. Ono (Bishop Museum); allotype male, CAROLINE ISLANDS, *Dublon (Natsushima)*, (Truk Islands), Dec. 22, 1935, Ono (Bishop Museum); and three paratype females, CAROLINE ISLANDS, *Dublon*, Dec. 22, 1935 to Jan. 5, 1936, Ono (Bishop Museum). A paratype male and a paratype female have been deposited in the Hawaiian Sugar Planters' Association collection.

The series varies considerably in the extent and definiteness of the blackish markings on the dorsum. The aedeagus is illustrated in figure 5,c. In the males the hind margin of the 5th abdominal sternite is squarely truncate or faintly concave; in the female this margin is strongly concave. The coarsening of the lateral carina of the pronotum at its anterior end is similar to that in *S. palauensis*, new species. In general appearance *S. hesperius* suggests *S. luzonicus*, but in the latter the colors are more vivid, and the sides of the mesosternal cavity are horizontal on their basal one third before inclining forward.

Simodactylus nigerrimus Fleutiaux (fig. 5,d).

This species was recently described (Rev. franc. d'Ent. 5(3): 148, 1938) from Pentecost and Tanna Islands in the New Hebrides. New records, all from the New Hebrides are: *Malekula*, Ounua, Feb. 1929, Cheesman (British Museum; 1929-234); same locality, April-May 1929, Cheesman (British Museum; 1929-371); *Espiritu Santo*, Aug.-Sept. 1929, Cheesman (British Museum; 1929-537).

The pubescence on head, pronotum and basal two thirds of the elytra in these specimens is brownish, as described, but at some angles appears jet black; the more evident pubescence toward the tip of the elytra is brownish at all angles. The aedeagus of the *Espiritu Santo* male is shown in figure 5,d. This species is remarkably similar in appearance to the Fijian *Megapenthes madidus* Candèze.

Simodactylus obscurus, new species (fig. 6,a).

9.5-12 mm. long; 2.75-3 mm. wide. Robust; moderately shining. Dark castaneous to fuscous; anterior margin and hind angles of pronotum somewhat lighter; antennae and legs castaneous; under side generally mottled blackish,

abdomen mottled castaneous to fuscous. Pubescence fulvous, fine, moderately dense.

Front flat or anteriorly slightly concave; anterior margin often slightly reflexed at sides; punctation fine, dense, uniform. Antennae feebly serrate; barely exceeding tips of hind angles (male), or failing by a fraction of a segment

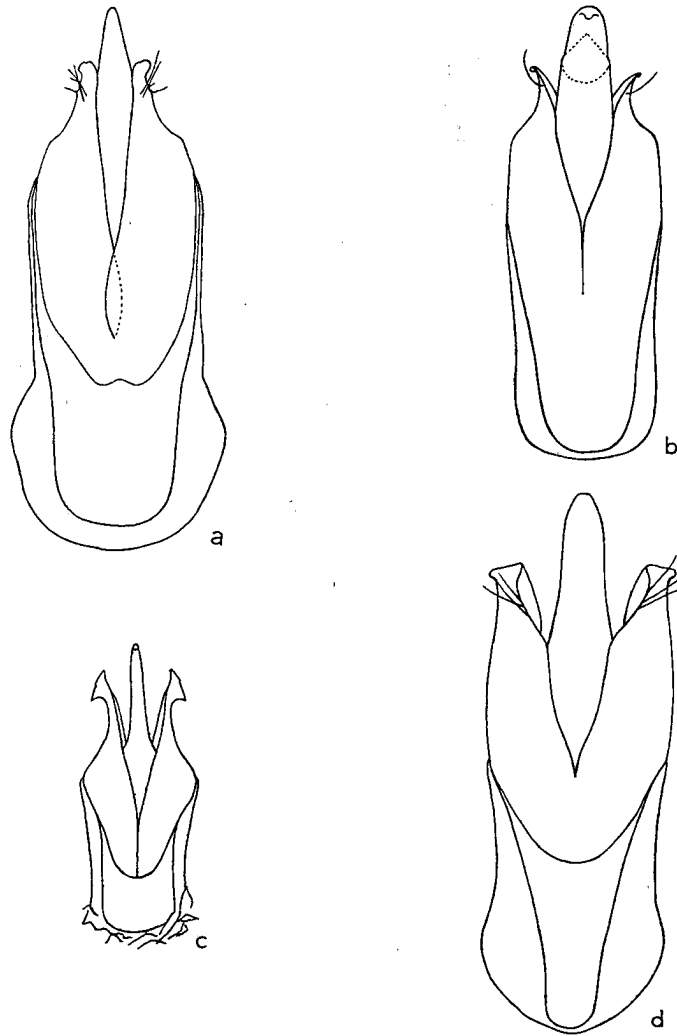


FIGURE 6.—Aedeagus: a, allotype male, *Simodactylus obscurus*, new species; b, holotype male, *Simodactylus prominens*, new species; c, holotype male, *Anchastus cheesmanae*, new species; d, metatype male, *Simodactylus risbeci* Fleutiaux.

(female); 2d segment small, subglobular; 3d more than twice length of 2d, subequal to 4th.

Prothorax about as long as wide; sides subarcuately narrowed from base of hind angles to anterior one third. Pronotum strongly convex transversely; punctation of disk fine, dense, uniform, denser laterad and finer posteriorly; well-marked median groove at base, often extending onto disk. Hind angles faintly sinuate, diverging from outline of sides; elongate; bicarinate. Punctation of propleura coarser laterad than along inner suture. Mucro subhorizontal, margined on either side as far as acute subapical tooth. Sides of mesosternal cavity rather abruptly inclined.

Scutellum subpentagonal; declivous; anteriorly convex.

Elytra at base slightly wider than prothorax; sides subparallel to middle (male), or beyond (female), thence conjointly narrowed to apex; tips briefly but definitely emarginate; sutural angle briefly mucronate. Striae with lightly impressed punctures; intervals subrugosely punctulate, convex toward base. Hind coxal plates rounded, not angulate, on hind margin.

Described from the following specimens, all from FIJI: holotype female, *Ovalau*, Wainiloka, Valentine; an allotype male: *Viti Levu*, Korovou, between Naivithula and Tailevu, Valentine; ten paratype males, all from *Viti Levu*, as follows: four from between Naivithula and Tailevu, Korovou, Sept. 24, 1937, Valentine; two from Korovou, Tailevu, July 23, 1937, Valentine; Korovou, Tailevu, Aug. 1937, at light, Valentine; Waito, Tailevu, Sept. 4, 1937, beating, Valentine; Singatoka, Nandronga, Oct. 28, 1937, at light, Valentine; Rewa, F. Muir; and nine paratype females, all from *Viti Levu*: four from between Naivithula and Tailevu, Korovou, Sept. 24, 1937, Valentine; Waito, Tailevu, Sept. 23, 1937, at light, Valentine; three from Korovou, Tailevu, Sept. 26, 1937, Valentine; Tamauva, April 22, 1927, H. W. S(immonds) (British Museum; C160). The type material is in Bishop Museum, with the exception of a paratype male and paratype female deposited in each of the following: U. S. National Museum, British Museum, and Hawaiian Sugar Planters' Association collection.

A male from Totoya Island in Fiji, may also belong here; it differs from typical *S. obscurus* in having the hind prothoracic angles definitely more flaring from the outline of the sides of the prothorax, and in possible minor differences in the aedeagus.

This species is somewhat more robust than *S. acutus* and *S. bryani*. The aedeagus of *S. obscurus* (fig. 6,a) is briefly knobbed at the outer tips of the lateral lobes; in *S. acutus* the tips are subacute, and the terminal emargination of the elytra is deeper.

Simodactylus pallidus Fleutiaux.

The type locality is the Marianas Islands. New record: CAROLINE ISLANDS, *Moën (Harushima)* (Truk Islands), Dec. 27, 1935, Ono (Bishop Museum).

Simodactylus palauensis, new species.

19.5 mm. long; 5 mm. wide. Robust; moderately shining. Castaneous to piceous; disk of front, lateral areas on pronotum, basal slope of elytra, the legs, antennae and ill-defined areas on propleura, reddish brown. Pubescence fulvous, short, fine.

Front flat; punctation moderately fine, uniform. Antennae just attaining tips of hind angles; slender, loosely serrate; 2d segment very small, about one fourth length of 3d; 3d slightly longer than 4th; 11th at least three times longer than wide.

Prothorax slightly wider across middle than long; sides moderately arcuate at middle, narrowed on anterior one third to apex. Hind angles divergent, wider across tips than middle width of prothorax; incurved apically; elongate; bicarinate, the outer carina the shorter and less prominent. Pronotum with punctation moderately fine, denser laterad than on disk; basal declivity short, rather abrupt, shallowly impressed at middle. Lateral carina evanescent toward anterior end, prominently acute near junction with anterior margin. Mucro convex in side view, shallowly impressed between fore coxae; subapical tooth acute, prominent. Sides of mesosternal cavity narrowly divergent at base; in lateral aspect definitely declivous and, anteriorly, horizontal.

Scutellum declivous, flat.

Elytra at base as wide as hind angles of prothorax; sides subparallel to beyond middle, thence conjointly narrowed to apex; tips briefly emarginate and divergent for short space along sutural line which ends in a minute spinule less prominent than the outer angles of the emargination. Striae consisting of lightly impressed punctures; punctulate intervals nearly flat except toward base. Hind margin of rear coxal plates strongly but briefly dentate at widest point; hind margin of 5th abdominal sternite truncate. Expansion of 3d and 4th tarsal segments well developed.

Described from a holotype female: PALAU, *Palao (Palau)*, April 8, 1936, Ono (Bishop Museum).

Closely allied to *S. hesperius*, but differing from it as follows: *S. palauensis* has (1) the prothorax almost as long as wide, instead of plainly elongate; (2) the pubescence is slightly more apparent; (3) the punctation in general, and on the elytra in particular, is coarser; (4) the sides of the mesosternal cavity are more precipitous, and at the base less strongly divergent than in *S. hesperius*.

Simodactylus prominens, new species (fig. 6,b).

9.75 mm. long; 2.75 mm. wide. Moderately shining; castaneous; anterior margin of pronotum dully rufous, base of elytra rufoflavous; beneath, generally rufocastaneous; propleura and ill-defined areas on metasternum and abdomen,

darker; antennae rufous; legs yellowish. Pubescence tawny, short, rather coarse.

Front flat; punctation coarse. Antennae feebly serrate; failing to attain tips of hind angles by about half the length of the last segment; 2d segment small; 3d subequal to 4th; 2d and 3d together slightly longer than 4th; no trace of longitudinal carina on outer face of any segment.

Prothorax as long as wide, sides straight, feebly convergent on middle to anterior one third, then more strongly narrowed. Hind angles acute; slightly more divergent than outline of sides; feebly bicarinate. Pronotum moderately convex; coarsely punctate, more finely toward rear; feebly impressed medianly along entire length. Punctation of propleura and prosternum moderately coarse. Mucro only slightly upcurved behind fore coxae; subapical tooth blunt. Mesosternal cavity wide; sides at base rounded and prominent, then almost perpendicularly inclined.

Scutellum moderately declivous; sides narrowed rapidly backward; subnitid.

Elytra strongly convex transversely, flattened only on disk; at base as wide as prothorax; sides subparallel to about middle, thence conjointly narrowed to apex; divergent apically along suture, each wingcover ending in a short, acute point. Striae consisting of well-impressed punctures; intervals finely, subrugosely punctulate, more or less convex, the 3d slightly more prominent at base than the others. Third and 4th tarsal segments moderately dilated.

Described from a holotype male from: BISMARCK ARCHIPELAGO, *Manus* (Admiralty Islands), N. E. H. Caldwell, 1932 (British Museum; 427; C.A. 57).

The lateral lobes of the aedeagus (fig. 6,b) end in slender, strongly divergent blades. This species is remarkable for the prominence of the sides of the mesosternal cavity at the base, and for their nearly perpendicular slope. This latter character is possibly of generic value.

***Simodactylus risbeci* Fleutiaux (fig. 6,d).**

To Monsieur Fleutiaux, who sends me metatypes of this species, I am indebted for the following new island records: NEW HEBRIDES, *Ambrym*, E. Aubert de La Rue (Paris Museum); *Pentecost*, E. Aubert de La Rue (Paris Museum). The type localities are the New Hebrides, Solomon Islands, Loyalty Islands, and New Caledonia, without more exact locality. The aedeagus (fig. 6,d) is similar to that of *S. tastui* (Le Guillou) from Samoa, but more slender, with the emarginate apex of the lateral lobes narrower.

***Simodactylus spinifer*, new species.**

13.5 mm. long; 3.9 mm. wide. Elongate; moderately shining. Generally castaneous to reddish brown; head rufous anteriorly; base of elytra flavous; antennae reddish brown; propleura fuscous, prosternum castaneous, abdominal sternites reddish brown, with darker markings laterad; legs reddish brown. Pubescence fulvous, fine, short.

Front flat, margin not recurved; punctation moderately fine, uniform, dense. Antennae feebly serrate; short, failing to attain tips of hind prothoracic angles by about three segments; outer face of segments without trace of carina; 3d segment twice as long as 2d, subequal to 4th, but more slender.

Prothorax longer than wide; flattened on disk, but very convex laterad, the lateral carina not visible from above; sides subparallel from before hind angles to anterior one third; basal declivity abrupt, a vague impression on either side of middle. Hind angles robust, diverging slightly from outline of sides; strongly bicarinate. Punctuation of pronotum similar on disk to that on head, coarser and closer toward sides. Mucro horizontal; flat between fore coxae; subapical tooth small, acute. Sides of mesosternal cavity moderately declivous. Dilation of 4th tarsal segment moderate.

Scutellum inclined, convex, elongate, subparallel to beyond middle.

Elytra at base not quite as wide as hind prothoracic angles; base moderately inclined; disk flat, sides strongly convex; sides subparallel to beyond middle, thence more strongly narrowed to apex; strongly divergent apically along suture, each wingcover ending in an elongate spine. Striae with moderately impressed punctures; intervals more or less convex, finely, subrugosely punctulate.

Described from a holotype female from: SOLOMON ISLANDS, *Ysabel*, Fulakora, Bignell, per Mann (U.S.N.M.).

This species has a clumsy appearance due to the heavy, oblong prothorax.

***Simodactylus tasmani* Candèze.**

Originally described from Fiji, with later, specific records from the islands of Viti Levu and Naitamba. New records from the same group: *Kambara*, Mann (M.C.Z.); *Kandavu*, Vunisea, Mann (M.C.Z.); *Munia*, Mann (M.C.Z.); *Nathula* (Yasawa group), Mann (M.C.Z.); *Ovalau*, Wainiloka, Sept. 28, 1937, Valentine (Bishop Museum); *Taveuni*, Somo Somo, Mann (M.C.Z.), Qacabula, Nov. 12, 1937, Valentine (Bishop Museum); *Vanna Levu*, Lambasa, Mann (M.C.Z.). Another locality among the Mann specimens is "Sava Kas", presumably in Fiji, but one which I am unable to identify.

***Simodactylus trivittatus* Schwarz.**

New records from the Solomon Islands: *Guadalcanal*, 1920, J. A. Kusche; *Malaita*, Auki, Mann (M.C.Z.); *Rendova*, Mann (M.C.Z.); *Ysabel*, Fulakora, Bignell (U.S.N.M.). This species was previously recorded from Tulagi in the Solomon Islands, and from Manus in the Admiralty Islands. Its type locality is Shortland, probably the island in the Solomon group, but possibly the tiny islet of that name off the southeast coast of New Guinea.

The following key is to the *pulcherrimus* group of *Simodactylus*, in which the tips of the elytra diverge apically from the suture, and terminate in a spine; their antennal segments are without trace of a longitudinal carina on their outer face. So far as I know, all of the species excluded from this key have the apex of the elytra entire, truncate or more or less emarginate; if sometimes spined at the external angle, it is always in combination with a definite emargination as distinguished from simple divergence of the tips; furthermore, all have some or most of the antennal segments (the basal one excepted) longitudinally carinate on their outer face. In this latter group is to be included *S. mucronatus* Fleutiaux, because its elytra, although spined, are "echancrés au sommet."

KEY

- A. Sides of mesosternal cavity prominent at base, nearly perpendicular (Admiralty Islands) **S. prominens**, new species.
Sides of mesosternal cavity not prominent; declivous.....B
- B. Prothorax plainly longer than wide (Samoa; New Hebrides; Solomons) **S. buxtoni**.
Prothorax not longer than wide.....C
- C. Elytra castaneous or flavous, unspotted; 14-18 mm. long.....D
Elytra black with 6 flavous spots; smaller insects : 10 mm. (Luzon).....
..... **S. pulcherrimus** Candèze
- D. Castaneous; pronotum strongly convex; head and prothorax one half as long as elytra (Solomons) **S. spinifer**, new species.
Flavous speciesE
- E. Pronotum channelled at base; medianly maculate; elytra uniformly rufo-flavous (Luzon) **S. luzonicus** Fleutiaux
Pronotum not impressed at base; entirely yellow; elytral suture black on posterior one third (Mindanao)..... **S. philippinensis** Fleutiaux.

Conoderus froggatti, new species.

4.75 mm. long; about 1.7 mm. wide. Broad. Blackish, with tips of hind prothoracic angles and lateral edges darkly rufous; antennae and legs flavous; under side similar in color to upper. Pubescence pale, fulvous, fine.

Front gently convex; anterior margin broadly rounded; punctuation simple, moderately coarse, uniform. Antennae feebly serrate; failing to attain hind margin of prothorax; 2d and 3d segments subequal, similar in shape, the 2d the wider; 4th subequal to 2d and 3d together; 5th to 10th decreasing slightly in length; 11th somewhat narrowed in apical one third.

Prothorax slightly wider than long; sides subparallel to anterior one third, thence arcuately narrowed to anterior margin. Hind angles robust, continuing outline of sides; strongly unicarinate. Pronotum strongly declivous on sides, more or less flattened on disk; basal declivity gradual, faintly impressed medianly; punctuation simple, well spaced, uniform, similar to that on head, not much if any coarser even on sides. Mucro bent upward

behind fore coxae, subhorizontal from there on to apex. Sides of mesosternal cavity declivous. Hind coxal plates suddenly widened inward, rounded at widest point. Fourth tarsal segment with elongate, slender lobe.

Scutellum convex, wider than long, sides subparallel, apex subacuminate.

Elytra at base not quite as wide as hind prothoracic angles; sides narrowed in straight line to beyond middle, thence arcuately narrowed to apex; apex entire. Striae strongly impressed, the lines rather coarsely punctate; intervals convex, rugosely punctulate on basal half.

Described from a holotype of undetermined sex, but thought to be a male: NEW GUINEA, Huon Gulf, Morobe District, May 22-June 19, 1937, Froggatt (British Museum; C1433).

The small size of this insect will separate it from any of its congeners hitherto recorded from New Guinea. The punctuation of the pronotum is simple, but under high magnification approaches umbilicate; the fourth tarsal segments are lamellate, not cordiform.

Conoderus pallipes (Eschscholtz).

New records: Fiji, *Kambara*, Mann (M.C.Z.): *Munia* (Lau Archipelago), Mann (M.C.Z.); *Ongea Lau*, Mann (M.C.Z.); *Ono Ilau*, Mann (M.C.Z.); *Vanuavatu*, Nov. 13, H. W. S(immonds) (British Museum). New Hebrides: *Ambrym*, 1934, E. Aubert de La Rue (Paris Museum); *Aneiteyum* [Aneityum], Nov. 1930, Cheesman (British Museum; 1931-127); *Malekula*, Ounua, Malua Bay and Atchin Island, Feb.-June, 1929, Cheesman (British Museum). Solomon Islands: *Bougainville*, Kieta, Sept.-Oct. 1937, Froggatt (British Museum; C1834). BISMARCK ARCHIPELAGO, *New Ireland*, Namanatai, Nov. 1934, Froggatt (British Museum; C1074). MANGAREVA, *Aukena*, May 25, 1934, swept from grass or low herbage, Zimmerman (Bishop Museum). Tuamotu: *Temoe* (northern islets), June 25, 1934, Zimmerman (Bishop Museum).

Recent reference to this species occurring in the Hawaiian islands [Rev. franc. d'Ent., 5(3):149, 1938] I believe to be incorrect; certainly this insect has not been collected by any of the local entomologists.

Megapenthes brunniventris Candèze.

New record: BISMARCK ARCHIPELAGO, *New Ireland*, April 1937, Pemberton (H.S.P.A.). The specimen differs from Port Moresby, Papua, specimens only in lacking the dusky sutural margins.

Megapenthes madidus Candèze.

This species varies from piceous, as described, to the more usual

jet black; the anterior angles of the prothorax are sometimes more or less flavescent, with the lighter coloration extending onto the epipleura. J. M. Valentine took a long series in various localities on Viti Levu for Bishop Museum, and W. M. Mann another at Waiyanitu on the same island.

Melanoxanthus melanocephalus (Fabricius).

New record: MARIANAS, *Guam*, Piti, Sept. 9, 1936, in house, O. H. Swezey (H.S.P.A.).

Melanoxanthus tulagi Van Zwaluwenburg.

Described from Tulagi Island (St. George) in the Solomon Islands, and later recorded from Malaupaina in the Three Sisters group of the same archipelago. A new Solomon Islands record: *Russell (Tavuvu or Pavuvu)*, Pepesala, Dec. 22, 1935, Lever (British Museum; 5407).

Genus **ANCHASTUS** LeConte

It is doubtful whether certain of the Pacific islands species now assigned to *Anchastus* really belong there. Adults of *A. swezeyi* Van Zwaluwenburg from Hawaii, *A. vitiensis* Van Zwaluwenburg from the Solomon Islands, *A. nitidulus* Candèze from New Guinea, at least four of the twelve recorded Philippine species, and the three described here from the Caroline Islands and New Hebrides, all differ from the North American *A. sericans* Candèze, *A. cinereipennis* (Eschscholtz), *A. asper* LeConte, *A. bicolor* LeConte, and *A. bicarinatus* (LeConte) in having the first tarsal segment of the hind leg as long as, and usually longer than, the four following segments together. In the American species named, the first tarsal segment of the hind legs is markedly shorter than the four following.

Examination of larvae of *A. swezeyi* from the island of Maui and *A. sericans* from Arizona reveals a profound difference in the structure of the ninth abdominal segment, a difference so great as to make it impossible that the two are congeneric. In *A. sericans* this segment is heavily and complexly armored in a way suggestive of *Simodactylus* larvae, whereas in *A. swezeyi* the segment is smooth, unarmored and regularly elliptical at the apex.

In my opinion, therefore, *A. swezeyi* certainly, and probably the other Pacific islands species named above, comprise a genus distinct

from the American *Anchastus*. The adult tarsal differences together with the striking larval differences appear to be generic in value. But until the same larval differences are shown to exist in the other Pacific species of so-called *Anchastus*, the writer prefers to withhold a new generic name for the Pacific forms.

***Anchastus cheesmanae*, new species (fig. 6,c).**

6.25-6.75 mm. long; 1.8-1.9 mm. wide. Moderately robust; reddish brown to piceous, anterior margin of front, hind angles of prothorax, and basal parts of elytra, lighter brown to flavous. Antennae of general body color; legs entirely flavous, or with femora yellowish, and tibiae and tarsi duskier; under side more or less concolorous with upper; epipleura yellowish, outlined with dark brown along outer edge. Pubescence yellowish brown; fine, semierect.

Front faintly convex; anterior margin evenly rounded; punctation fine, dense, uniform. Antennae elongate, attaining about middle of body, exceeding hind prothoracic angles by more than three segments in the male; 2d segment very small, less than half length of 3d; 3d as long as 4th or but slightly shorter, and of same shape and width; segments slender, from 6th on, fully three times as long as wide; 11th attenuate at apex.

Prothorax slightly longer than wide (male), or as long as wide (female); sides parallel on basal one third, thence narrowed to anterior margin (male), or slightly convergent to basal half, thence narrowed anteriorly (female). Pronotum slightly flattened at base, without trace of median groove; sulci short, distinct; punctation coarse as on head but less dense, more widely spaced and finer on basal declivity. Hind angles subparallel in male, diverging backward slightly in female; broad, rather short; strongly unicarinate. Propleura without impression such as characterizes the subgenus *Candezella* Szombathy.

Scutellum flat, oblong, broadly rounded behind.

Elytra at base as wide as hind prothoracic angles; sides subparallel on basal one third (male), or on basal one half (female), thence conjointly narrowed to apex; tip entire, sometimes faintly acuminate at sutural angle; striae with lightly impressed punctures; intervals nearly flat, subrugose.

Described from a holotype male: NEW HEBRIDES, *Espiritu Santo*, Cheesman, Aug.-Sept. 1929 (British Museum; S125; 1929-537); an allotype female, same data; and a paratype male, *Malekula*, Ounua, Cheesman, April-May 1929 (British Museum; 1929-371). Holotype and allotype are in the British Museum, the paratype in the Hawaiian Sugar Planters' Association collection.

The aedeagus (fig. 6,c) is robust basally, and the lateral lobes are acutely angled on their outer margin near the tip.

This may be *A. laruei* Fleutiaux, described from Ambrym and Epi in the New Hebrides, although none of the type specimens of *A. cheesmanae* shows the base of the antennae testaceous, as in that species. The present species agrees closely with the description of *A. longicornis* Candèze, from western New Guinea; however, in

A. cheesmanae the pubescence is brownish instead of cinereous, the pronotal punctation is only subumbilicate toward the sides, and the sides of the prothorax are not at all arcuate. *A. insulsus* Candèze, another New Guinea species, has the prothorax arcuately narrowed from the base. From *A. elegans*, new species, the present species may be distinguished by the shorter relative length of the antennae (which in *A. elegans* exceeds the hind angles by more than four segments) and by the strongly barbed lateral lobes of the aedeagus.

***Anchastus elegans*, new species.**

6-7 mm. long; 1.6-1.8 mm. wide. Slender; dark reddish brown; front, anterior margin and hind angles of prothorax, lighter brown; or with elytra castaneous, and pronotum dark reddish brown with anterior margins and hind angles lighter; antennae reddish brown; legs yellowish, tibiae and tarsi somewhat dusker; under side more or less concolorous with upper. Pubescence tawny; fine; semierect on pronotum.

Front flat or feebly convex; anterior margin evenly rounded; punctation fine, dense, uniform. Antennae very elongate, exceeding middle of body, and exceeding hind prothoracic angles by fully 4.5 segments; 2d segment small, subglobular; 3d more than twice as long as 2d, slightly shorter than 4th, but of similar width and shape; from 4th on, segments slender, fully three times longer than wide.

Prothorax about as long as wide; sides arcuate from base of hind angles to about middle, thence straight, convergent to anterior margin. Pronotum flattened at base, median groove faint; basal sulci very small; punctation on disk as on head, subumbilicate laterad. Hind angles elongate, definitely divergent (somewhat less so in paratype); briefly, feebly unicarinate.

Scutellum flat, elongate, broadly rounded behind.

Elytra at base slightly wider than hind prothoracic angles; sides subparallel to basal one third, thence convergent to the rounded apex; sutural angle not acuminate; striae with fine, lightly impressed punctures; intervals flat, subrugosely punctulate.

Described from the NEW HEBRIDES: a holotype male, *Tanna*, Oct. 1930, Cheesman (British Museum; T86; 1931-30); and a paratype male, *Aneityum*, Oct. 1930, Cheesman (British Museum; An. 33; 1931-127). The paratype is in the Hawaiian Sugar Planters' Association collection.

The color of the pubescence and the finer punctation separates this species from *A. longicornis*. The aedeagus is slender, the dilated apical part of the lateral lobes smaller than in *A. cheesmanae*, and with its outer angle not so acutely produced.

***Anchastus malaita* Van Zwaluwenburg.**

New record from the Solomon Islands: *Malauipaina* (Three Sisters group), Mann (M.C.Z.).

Anchastus trukensis, new species.

7.5 mm. long; 2.3 mm. wide. Robust. Flavous; eyes and anterior margin of pronotum, black; hind prothoracic margin outlined in brown; head and disk of pronotum suffused with blackish; under side testaceous to reddish brown. Pubescence yellowish, fine.

Front gently convex; closely, evenly, rather coarsely punctate. Antennae exceeding hind prothoracic angles by slightly more than length of two segments; 2d segment small; 3d as long and as wide as 4th.

Prothorax wider than long, widest at about basal one-fourth; gently arcuate from hind angles to about middle, thence strongly narrowed to anterior margin. Pronotum moderately convex, without trace of median impression at base; punctation on disk as on head, but less dense, and toward the sides subumbilicate; basal sulci very small. Hind angles broad; subparallel, incurved at tips; unicarinate. Mucro almost perpendicularly upcurved behind fore coxae. Sides of mesosternal cavity moderately declivous.

Scutellum flat; sharply narrowed behind middle.

Elytra at base as wide as hind prothoracic angles; sides subparallel to beyond middle, thence conjointly narrowed to rounded apex; striae with fine, distinctly impressed punctures; intervals convex at base, subrugosely punctulate. Hind legs with 1st tarsal segment longer than the remaining four together. Hind coxal plate prolonged to form conspicuous angle at widest point, between which and median line of body the hind margin is widely excavate.

Described from a probable female holotype from: CAROLINE ISLANDS, *Dublon (Natsushima)*, (Truk Islands), Dec. 26, 1935, Z. Ono (Bishop Museum).

From *A. swezeyi*, *A. vitiensis*, *A. elegans*, and *A. cheesmanae*, this species can readily be separated by the more strongly produced and more nearly acute prolongation of the hind margin of the hind coxal plate.

Anchastus vitiensis Van Zwaluwenburg.

The type locality is Viti Levu. New records from Fiji: *Ovalau*, Wainiloka, Sept. 28, 1937, Valentine (Bishop Museum); *Taveuni*, Qacabula, Nov. 12, 1937, Valentine (Bishop Museum). An occasional specimen is almost black, with the anterior margin of the pronotum bordered with flavous.

Neodiploconus exilis, new species.

9.5 mm. long; 2.5 mm. wide. Nitid. Head and pronotum piceous, hind angles of prothorax dark rufous; elytra dark rufous; antennae rufocastaneous; legs reddish; under side uniformly dark rufous. Pubescence tawny; short, fine, inconspicuous.

Front flat; anterior margin not prominent, slightly depressed at middle; punctation moderately coarse, uniform. Antennae failing to attain tips of hind prothoracic angles by length of about half a segment; 3d segment slightly longer than 2d, the two together subequal to 4th; 4 to 10 triangular, strongly serrate;

a well-marked longitudinal carina on outer face of 4th and following, evident, though weaker, even on terminal segment.

Prothorax longer than wide; sides straight (faintly undulating at middle), converging gradually from base of hind angles to anterior one third. Pronotum strongly convex anteriorly; median impression well marked at base, continuing onto disk for about half the length of the pronotum; punctation simple, uniform, fine on disk, finer toward base, coarse laterad but not, even there, confluent. Hind angles slender, acute, slightly divergent, prolonging outline of sides; strongly bicarinate, the outer carina the longer. Propleura nitid, with coarse, well-spaced punctations; longitudinally channelled for about one third length backward from point where pleurosternal sutures separate anteriorly. Mucro subhorizontal, gently upcurved behind; nearly flat between fore coxae; subapical tooth small, acute. Sides of mesosternal cavity prominent, subhorizontal at base, sharply declivous anteriorly.

Scutellum nitid; flat; more or less oblong, slightly wider at apex than elsewhere.

Elytra at base as wide as hind prothoracic angles; sides narrowing gradually to posterior two thirds, thence more sharply to the barely emarginate apex. Strial punctures impressed, moderately fine; intervals flat except toward base. Angle of hind margin of hind coxal plate short, rather blunt.

Described from a holotype male: PALAU, *Palao*, Melekeiok, April 11, 1936, Ono (Bishop Museum). Melekeiok is a village on the east coast of Palau (formerly Babelthuap), the principal island in the group of that name.

A more slender insect than *N. erythropus* (Candèze) having the hind prothoracic angles continuing the outline of the sides rather than diverging beyond the outline. Viewed from beneath, the tips of the hind angles in the present species are more acute. The pronotum is more convex transversely and more finely punctate, and the tips of the elytra are less strongly emarginate than in *N. erythropus*; in *N. exilis* the head and prothorax are relatively shorter in comparison with the elytra.

***Neodiploconus leveri*, new species.**

9.5 mm. long; 2.5 mm. wide. Slender; piceous; antennae and legs reddish brown; under side concolorous with upper, except for rufous abdomen. Pubescence fulvous, fine.

Front excavate medianly; anterior margin prominent, subacutely rounded; punctation umbilicate, dense. Antennae slender, loosely serrate; one half of body length, exceeding hind prothoracic angles by about 2.5 segments; 3d segment subequal to 2d; the two together about one half as long as 4th; 7 to 11 very elongate.

Prothorax longer than wide; sides subparallel on basal one third, thence moderately convergent to anterior margin. Pronotum moderately convex anteriorly, flatter behind; punctation umbilicate, dense on sides and anterior half of disk, becoming simple, finer, sparser on posterior half of disk; shallowly impressed at base. Hind angles slender, elongate, strongly divergent;

finely unicarinate. Propleura impunctate at base; elsewhere densely, coarsely punctate. Mucro strongly upcurved behind fore coxae. Declivity of sides of mesosternal cavity in two planes: slight on basal half, more precipitous anteriorly, being subangulate near middle.

Scutellum flat; rounded behind.

Elytra at base wider than hind prothoracic angles; sides subparallel to about middle, thence conjointly narrowed to rounded apex; sutural angles without mucro. Striae with fine, lightly impressed punctures; intervals flat, except at base, rather coarsely punctulate.

Described from a holotype male: SOLOMON ISLANDS, *Guadalcanal*, Kaukau, Aug. 22, 1934, Lever (British Museum; 2236).

The aedeagus of the type is partially extruded; its lateral lobes are acutely angulate on the outer side near the tip, the lateral angle measuring almost exactly 90 degrees. The elongate antennae, and the subangulate slope of the sides of the mesosternal cavity should serve to characterize this species.

***Neodiploconus nigrifrons* (Schwarz).**

New records, all from the Solomon Islands, from specimens in the Museum of Comparative Zoology collected by Mann: *Rendova*; *Rubiana* (*New Georgia*).

***Neodiploconus rubriventris*, new species.**

9 mm. long; 2.2 mm. wide. Nitid; slender; posteriorly attenuate. Generally red and black: head dark rufous, pronotum sanguineous with anterior margin, and lateral and hind margins more narrowly, blackish. Antennae dark rufous, with first three segments lighter red; elytra black. Beneath, sanguineous; mucro and epipleura black; prosternal lobe, pleurosternal sutures, hind angles of propleura and mucral cavity, blackish. Pubescence fine; brown on head, flavous on sanguineous areas, black on the black; semi-erect on pronotum, erect on elytra.

Front faintly convex, a vague concavity on either side anteriorly; frontal margin broadly rounded, moderately porrect; punctuation simple, rather coarse, dense. Antennae failing, by one segment or less, to attain tip of hind prothoracic angles; 3d segment slightly longer than 2d, and of equal width; 4th triangular, subequal in length to 2d and 3d together.

Prothorax longer than wide; sides gently convergent to anterior one third, thence arcuately narrowed to anterior margin. Pronotum moderately convex, strongly sulcate at base; punctuation anteriorly about as on head, finer, sparser behind. Hind angles rather slender and acute, strongly divergent, but at apex more nearly parallel; strongly bicarinate. Punctuation of prosternum coarse, dense; equally coarse on propleura, but sparser. Mucro subhorizontal. Sides of mesosternal cavity sharply declivous.

Scutellum elongate, sides subparallel; faintly convex; punctuation coarse.

Elytra at base almost as wide as hind prothoracic angles; sides conjointly narrowed to about middle, thence more strongly to the vaguely truncate apex; sutural angles briefly mucronate. Striae finely, shallowly punctate; intervals flat except toward base, punctuation coarse basally.

Described from the SOLOMON ISLANDS: a holotype male, *Ysabel*, July 1935, Lever (British Museum; 4852); a paratype male, *Ysabel*, Pele, 700 feet, July 10, 1935, Lever (British Museum; 4889); and a probable male paratype, *Ysabel*, Fulakora, Mann (M.C.Z.). One paratype is in the Hawaiian Sugar Planters' Association collection.

This species has heavier pronotal punctation than *N. ruficollis* (Schwarz), and the abdomen and prosternum bright red instead of black. It is more slender than *N. erythronotus* (Candèze), and further differs from that species in having the tips of the elytra less obviously truncate, and the underbody brighter red than the dull rufous of that Philippine and Moluccan species. In *N. rubriventris* the elytra are barely twice as long as the head and prothorax, being proportionally shorter than the elytra in *N. erythronotus*, *N. haddeni* Fleutiaux and *N. nigripes* Fleutiaux from the Philippines.

Melanotus guambatae Van Zwaluwenburg.

Described from Guadalcanal in the Solomon Islands. New record from that archipelago: *Bougainville*, Kieta, Aug. 18, 1938, Froggatt (British Museum; C1955). Also: BISMARCK ARCHIPELAGO, *New Britain*, Rabaul, June 15, 1938, Froggatt (British Museum; C1939).

Photophorus bakewelli Candèze.

This species has long been known from the New Hebrides. New, specific records from that group: *Malekula*, Ounua, Feb.-Apr. 1929, Cheesman (British Museum); *Espiritu Santo*, Hog Harbour, Aug. 1925, Buxton (British Museum).

Hapatesus hirtellus Candèze.

The first record of this species outside of the island of New Guinea: BISMARCK ARCHIPELAGO, *New Britain*, Rabaul April 1937, Pemberton (H.S.P.A.).

Genus **MALEKULA**, new genus

Head moderately inclined; front unmarginated, truncate at middle; mandibles stoutly toothed on inner margin at about distal one third; clypeus shallowly notched on middle of anterior margin.

Antennal fossae shallow; antennae feebly serrate.

Prosternum weakly lobed anteriorly; pleurosternal sutures double, closed throughout their entire length; mucro slightly upcurved behind fore coxae; sides of mesosternal cavity moderately, evenly, inclined.

Hind coxal plates suddenly widened inward; very narrow externally, but entire.

First hind tarsal segment slightly longer than segments 2 to 4 inclusive; 2d segment feebly, 3d more strongly, dilated; 4th short. Claws simple.

Genotype: *Malekula piceus*, new species. The generic name is that of the New Hebrides island which is the type locality.

The notched clypeus, the double pleurosternal sutures and the suddenly widened hind coxal plates separate this genus from all others so far included in the subfamily Hemicrepidinae.

Malekula piceus, new species.

12.5 mm. long; 3.6 mm. wide. Moderately robust; subnitid. Piceous; antennae and legs uniformly dark reddish brown; prosternum and abdominal sternites dark rufous. Pubescence fulvous, sparse, fine.

Front flattened anteriorly and at rear, a gentle curve connecting the upper and lower flat areas; margin incomplete in middle; frontal margin carinate above insertion of antennae, obliquely convergent on sides, and truncate at middle; punctation moderately coarse, uniform. Antennae exceeding tips of hind prothoracic angles by about one segment; loosely serrate; 2d segment about one half length of 3d; 3d intermediate between 2d and 4th; 4th subequal to 2d and 3d together; 11th acutely oval, subequal to 10th.

Prothorax wider than long; sides evenly convergent from tips of hind angles almost to anterior margin, faintly arcuate along middle. Pronotum moderately convex in transverse section; punctation shallow, coarser than on head, well spaced on disk, denser laterad; basal declivity gentle, shallowly impressed at middle; basal sulci absent. Hind angles continuing outline of sides; slender, strongly incurved at apex; unicarinate. Punctation of propleura coarse, deep; base impunctate; punctation of prosternum slightly less coarse than on propleura. Mucro slightly convex between fore coxae in side view, gently up-curved behind; subapical tooth small. Sides of mesosternal cavity wide; gently declivous. 2d tarsal segment of fore legs nearly as strongly dilated as 3d, but on middle and hind pairs more feebly; on fore legs the 1st tarsal segment is shorter than segments 2 to 4 inclusive, but on the other two pairs subequal to three following segments together; 4th tarsal segment shorter than 3d, and although rather stout, not expanded. Hind coxal plates entire, although very narrow externally; suddenly widened on inner half.

Scutellum moderately inclined; concave on base, flat behind; longer than wide; widest behind middle, broadly rounded at apex.

Elytra strongly depressed; at base not quite as wide as hind prothoracic angles; sides widening slightly to anterior one third, thence conjointly narrowed backward and rounded at apex; tips entire. Striae with lightly impressed lines of punctures scarcely coarser than punctation of intervals; only the outermost stria well marked, deeply impressed on basal one third; intervals flat, coarsely punctulate.

Described from a holotype male: NEW HEBRIDES, *Malekula*, Ounua, Feb. 1929, Cheesman (British Museum; 1929-234; 7.ii.29.96).

Superficially similar to certain North American *Hemicrepidius*, this species is distinct by reason of its notched clypeus, double pleurosternal sutures, and suddenly widened hind coxal plates.