PSELAPHIDAE OF OCEANIA, WITH SPECIAL REFERENCE TO THE FIJI ISLANDS

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INTRODUCTION

Some years ago, Bernice P. Bishop Museum asked me to undertake the study of their collection of pselaphid beetles from the Fiji Islands. Since the pselaphid fauna of Oceania as a whole is relatively small, this opportunity was taken to broaden the scope of the original study. To facilitate further investigation a key and checklist are included.

GENERAL OBSERVATIONS ON THE PSELAPHIDAE OF FIJI

In this preliminary study of the pselaphid beetle fauna of Oceania, it is fitting that special attention be given to the Fiji Islands. They are the best known with reference to these beetles. In terms of species, the Fiji Islands have 27; New Caledonia, 13; the New Hebrides, 2; the Loyalty Islands, 1; and the Santa Cruz Islands, 1.

Fiji comprises about 250 islands and islets, with a total area of about 7,083 square miles, of which the principal land areas are Viti Levu, the largest island; Vanua Levu; Taveuni; Kandavu; Koro; Gau; Ovalau; and Rotuma. They are volcanic in origin, many with fertile soil, and from a zoögeographic viewpoint, offer a fascinating opportunity to study oceanic isolation in a group of small, nocturnal, predaceous beetles.

Wallace (25)[1] considered these islands to be part of the "Polynesian" Subregion of the Australian Zoögeographic Region. This is a vast Pacific Ocean subregion of more than 5,000 miles from the Ladrones on the west to the Marquesas on the east. Wallace (25, p. 443) divided this subregion into four divisions: (1) Ladrone and Caroline Islands; (2) New Caledonia and the New Hebrides; (3) Fiji, Tonga, and Samoa; (4) the Society Islands and the Marquesas. Primarily on a study of the genera of birds then recognized, Wallace concluded that the typical "Polynesian" fauna reached its greatest development in the third of these divisions. From the tabulation above, it will be noted that too little is known concerning Oceanic pselaphids to discuss the broad aspects of the problem. These latter are reviewed by Mayr (9, 10) and Zimmerman (26), among others, and should be studied by the interested reader in order to evaluate the impact of increased information on theory since the time of Wallace.

[1] Numbers in parentheses refer to the Bibliography, page 58.

The larger subdivisions of the Australian Region are still under debate. Holdhaus (6, p. 656) considers this region to be divided into four subregions: (1) Austrotasmania; (2) New Zealand; (3) Melanesia: the Solomons to New Caledonia, Fiji, Samoa, and Tonga; (4) Polynesia: the islands north and east of Fiji, Samoa, and Tonga. Holdhaus places the Hawaiian Islands in a separate region. This is a very different organization from that of Wallace.

Buxton (3, p. 82) thinks that Holdhaus does not differentiate between high islands and low islands sufficiently. High islands—the Fijian, Samoan, and Tongan archipelagos, for instance—are usually volcanic in origin, fertile, and supplied with a dense flora and fauna, whereas low islands, the atolls and islets making up much of the Melanesian areas, usually are just above sea level, with brackish subsoil and an impoverished flora and fauna. Consequently, Buxton feels that Holdhaus might not be justified in separating the Melanesian from the Polynesian areas.

For the present, until much more data have accumulated, the pselaphids of Oceania are best treated in the earlier sense of Wallace's usage of this region. For example, there are no pselaphids known from Guam (Swezey, 24), from Samoa (Insects of Samoa, 7), or from Hawaii (Park, 13, p. 32).

It should be emphasized that this ignorance concerning Oceanic pselaphids bears upon the nature and scope of any conclusions that may be drawn. In demonstration of this lack of faunal information we may consider the contribution made by the present report. At considerable effort and expense, Bishop Museum accumulated in 1937, 1938, and 1941 some 150 specimens of Fijian pselaphids. This modest sample contained one species hitherto known to science, but from another island; this species is *Sunorfa caviceps* (Raffray) described from Vanikoro in the Santa Cruz Islands, some 750 miles northeast of Viti Levu. There were five specimens of this species from three Fijian islands (Ovalau, Lau, Viti Levu); the remaining 145 represented 19 new species distributed among seven new genera.

This high proportion of undescribed species suggests that further work in these islands would yield many additional species new to science, especially since only the larger islands are represented in the material as a rule. At the present time, the Fiji Islands are known to contain 27 species of pselaphids, divided among 13 genera and five tribes.[2] Thus the present report represents a gain of 73 percent for species and 53 percent for genera in the area under study. It is safe to conclude that the Fijian fauna is still very poorly known taxonomically, in contrast to such areas as Europe or Nearctic North America. From the viewpoint of insular distribution in detail, inter-island dispersal, and the ecology of species populations, almost nothing is known.

[2] This is a slightly smaller fauna than that recently reported by Ray (23) for the Mordellidae of the Fiji Islands. He gives 31 species divided among four genera.

To better obtain a synoptic view of the Fijian pselaphid fauna, the known species are listed as follows:

Euplectini
- Fijiastes zimmermani

Batrisini
- Batrifigia sulcata
- Batrifigia spinipalpa
- Batrifigia bispina
- Batrifigia bucki
- Batrivitis facialis
- Batrivitis clypeata
- Sulcifigia bishopae
- Korovodes femoralis
- Batrinanda foveata

Brachyglutini
- Eupifigia zimmermani
- Eupifigia valentinei
- Eupifigia laboriosa
- Eupifigia pacifica
- Eupifigia fijiensis
- Eupifigia plana
- Reichenbachia sexualis
- Rybaxis insularis
- Rybaxis fijiensis
- Rybaxis fijiensis nigra

Tychini
- Sunorfa caviceps

Clavigerini
- Fustiger cribratus
- Fustiger levuanus
- Fustiger raffrayi
- Fustiger vitiensis
- Fustiger wasmanni
- Kaisia oceanica
- Nadarimanu alewa

The Fijian pselaphid fauna is characterized by a high proportion of endemic units. Of 13 genera, nine, or 69 percent, are endemic; of the four remaining genera, one (*Sunorfa*) is known from Melanesia, New Guinea, Sumatra, Singapore, and the Seychelles, and the other three (*Reichenbachia, Rybaxis,* and *Fustiger*) are widely distributed. This latter situation will be discussed presently. Of 27 Fijian species, all except one (*Sunorfa caviceps*) are confined to the Fiji Islands.

Taxonomically, there are several interesting points to be made on the composition of this fauna. So far there are no macrosceline pselaphids in the islands, and but one, the peculiar tyrine *Anagonus fracticornis* of New Caledonia, is known from all of Oceania. Similarly, only one euplectine (*Fijiastes zimmermani*) is Fijian, and only two other euplectines (*Placodium remingtoni* of New Caledonia and *Thesiastes femoratus* of the New Hebrides) are known from Oceania. This paucity may be the consequence of insufficient collecting. Both the Tyrini and Euplectini are large tribes of global distribution, found in all of the zoögeographic regions, and well represented in the Oriental and Australian Regions (Park, 13).

By contrast, the present study has produced a relatively high proportion of batrisine genera and species: five and nine respectively, including the taxonomic complex of *Batrifigia* discussed on page 33. This is even more startling when it is realized that this is the first time that the tribe Batrisini has been reported from Oceania. It seems clear that much collecting remains to be done, and much material analyzed. However, even with limited data, an assay of faunal affinities of genera is not without interest.

1. *Fijiastes* is endemic, with one species in Fiji. It is most closely allied to *Thesiastes,* with four species in the Nearctic, two in the Neotropical, and four in the Oriental Region and four in the Australian Region. In the latter region, all four are known from New Guinea, so that the geographic axis of affinity would seem to be: Indo-Malay–Papua–Polynesia–Fiji. This genus is also allied to the southern *Euplectopsis* with at least 14 species in New Zealand.

2. *Reichenbachia* is the largest genus in Pselaphidae, with well over 300 species, and global in distribution, with the exception of the Australian mainland and New Zealand where it is absent. At least 26 species are confined to New Guinea, one to the New Hebrides, and one to Fiji. The affinity is Indo-Malay–Papua–New Hebrides–Fiji.

3. *Eupifigia* is endemic, with at least six species in Fiji. It is most closely allied to *Eupines* (five species in New Caledonia, and many species in New Zealand, Australia, and Tasmania); *Eupinopsis* (two species in Australia); *Eupinella* (one species in Australia); and *Eupinoda* (two species in Australia). This group of five genera is characteristically of the Australian Region. Of well over 100 species, only three or four are known from the Oriental Region, and one of these (*Eupines sphaerica*) ranges widely, for pselaphids, from India, Ceylon, Sumatra, Java, Borneo, the Celebes, and Siam, to New Guinea. If *E. sphaerica* really represents one species population, its study from a large series should prove of interest in an analysis of possible subspeciation. These eupinoids are so numerous in species that they may ecologically replace *Reichenbachia* in the Australian Region. The chief affinities of *Eupifigia* seem to be at variance with the pattern for most Fijian genera. Two axes appear to radiate from Australia: one to New Zealand, and one to Papua–New Caledonia–Fiji.

4. *Rybaxis* has two species in Fiji. This is a widely distributed genus of some 84 species: Nearctic, 10; Palearctic, 5; Ethiopian, 3; Oriental, 15; and Australian, 51. Of these last, almost all are from Australia and Tasmania. The center of dispersal may have been from the Dutch East Indies, and the stocks may have flourished in Australia; or the Australian mainland may have been the center, in which case the stocks dispersed in several directions from the mainland. The genus is unknown in the Neotropical Region, and is unreported from New Zealand.

5. *Batrifigia* is endemic, with four species in Fiji. It is allied to *Batrisiella,* known from one species in Ceylon; and to the very large and overwhelmingly Afro-Oriental genus *Batrisocenus,* with at least 15 species in New Guinea. Since no batrisine pselaphids have been described previously from any of Oceania, there is little to work with, save to suggest a spread eastward from Papuan areas to Fiji. Collecting in New Caledonia is greatly to be desired.

6. *Batrivitis* is endemic, with two species in Fiji. It is allied to *Batrifigia.*

7. *Sulcifigia* is endemic, with one species in Fiji. It is allied to *Batrifigia.*

8. *Korovodes* is endemic, with one species in Fiji. It is also allied to *Batrifigia.*

9. *Batrinanda* is endemic, with one species in Fiji. It has no close allies.

10. *Sunorfa* is an isolated genus of some 24 species: New Guinea, 16; Santa Cruz and Fiji, 1; Sumatra, 1; Singapore, 1; and the Seychelles, 5. Presumably the stocks spread westward and eastward from a Papuan center.

11. *Fustiger* is a widely distributed genus of some 32 species: Ethiopian, 3; Nearctic, 4; Neotropical, 19; Oriental, 1; and Australian, 5; with the preponderance of species in Brazilian forests (Park, 11). All of the Australian Region, as far as known, lacks this genus, except the Fiji Islands, where five species have been described by Mann (8). Absence from the rest of Oceania and the Australian mainland is difficult to understand unless westward colonization from a neotropical center is postulated. This latter possibility is not in accord with the general mass of information on Oceanic colonization by plants and animals, and it is not my view. Absence from other parts of Oceania and New Guinea may be the result of insufficient collecting; but this explanation would not hold for Australia, where a large pselaphid fauna is known, including many clavigerids.

It must be remembered that *Fustiger,* like the rest of clavigerine genera, is a symphilic genus, restricted to the complex society of ants, and so has its dispersal largely controlled by the dispersal of its hosts.

12. *Kaisia* is endemic, with one species in Fiji. This clavigerid genus is allied to *Fustiger.*

13. *Nadarimanu* is endemic, with one species in Fiji. It is another clavigerid genus, more distantly allied to *Fustiger.*

In summary, the Fijian pselaphid fauna is typically Oceanic, as far as the data go, highly endemic, and most closely allied with the New Hebrides, New Caledonia, and the Santa Cruz Islands, and more distantly, with the Papuan mainland.

Because of a lack of information concerning most of the Oceanic area and the especially insufficient material from New Caledonia, most of the interesting points raised by Buxton (2, 3), Mayr (9), and Zimmerman (26) cannot be discussed with reference to pselaphids.

Two of their suggestions can be tested, however. First, the material reported upon here and that reported upon by Mann (8), show a high proportion of species and individuals from the largest of the Fiji Islands, Viti Levu, which yielded 78 percent of the specimens taken. Unfortunately, the second largest island, Vanua Levu, was not represented. Second, uni-insular

endemicity is high. Out of 27 Fijian species, only five are known from more than one island:

Reichenbachia sexualis: Ovalau and Moala
Eupifigia plana: Ovalau and Viti Levu
Sunorfa caviceps: Ovalau, Lau, and Viti Levu
Batrivitis facialis: Ovalau and Viti Levu
Fustiger levuanus: Viti Levu and Koro Vatu

The scanty information on altitude is of great interest and will be of much more significance to those biologists who, unlike me, are familiar with the climatic and vegetational aspects of, say, Viti Levu at different altitudes. Of the 150 pselaphids studied by me, most of the specimens were accompanied by altitude data. From these we learn that about 23 percent were taken between sea level and 1,000 feet; 25 percent, between 2,000 and 3,000 feet; 52 percent, between 3,000 and 3,800 feet. This suggests that, if the same effort were expended at the several altitudes, the upper elevations would prove to be most heavily colonized by these beetles.

The habitat data are of especial interest. Pselaphidae have been collected over the world by a number of entomologists; and it has been thought that, as a general rule, these usually carnivorous beetles inhabit primarily the leaf and log mold debris of forest floors, and are to be found to a lesser extent beneath deeply embedded boulders, in prairie grasses, in the unstable mat of tamarack bogs, in caves, and in the societies of ants and of a few termites (Park, 11, 13, 14). Recently, they have been found in numbers in tree holes (Park, Auerbach, and Corley, 15) and in prairie sod (Park, Auerbach, and Wilson, 16). In such niches these beetles are predaceous, feeding on a variety of smaller organisms, especially mites (Park, 13).

Certain aspects follow the expected pattern. For example, of the 27 species of Fijian pselaphids, about 10 percent of the specimens (those reported by Mann, 8), or 25 percent of the species, are restricted to ant societies. These are the species of the three clavigerid genera (*Fustiger, Kaisia, Nadarimanu*). Furthermore, about 13 percent of the 150 specimens sent me for study had been collected at light at night. Pselaphids fly well to night lights (Park, 13) in various parts of the world, and their general nocturnalism is fairly well established.

Beyond these two expected items, the Fijian situation is far from normal. For example, 74 percent were collected by beating shrubbery. Mr. Henry Dybas of the Chicago Museum of Natural History was not surprised when I discussed this interesting situation with him. He informs me (personal communication) that the use of a beating net is strongly recommended for collecting in high islands. One specimen was taken in dead *Cyathea* fronds, one was

swept from grass, and one taken from rotting log mold. The preponderance from shrubbery is novel in my experience and suggests that there is either an almost new habitat being penetrated by Fijian pselaphids or that berleseing of floor debris was not undertaken on a large scale.

Investigation of other Oceanic pselaphids is under way, chiefly from Micronesia, accumulated from various sources as a direct or indirect result of World War II. This material will form the basis of another paper.

ACKNOWLEDGMENTS

As a result of many interruptions, this study has been delayed overly long. I wish to thank the late Dr. Peter H. Buck, Director of Bishop Museum, and Mr. Elwood C. Zimmerman, formerly Curator of Entomology at the Museum, for their patience. I am indebted also to Dr. J. Manson Valentine, of Highlands, North Carolina, for personal correspondence concerning the collecting of certain of the Fijian material reported here, and to the cartographic section of Rand McNally and Company for the preparation of a large scale map of the Fiji Islands that has been of service during this investigation.

The cost of preparing the illustrations was defrayed by a grant from the Graduate School of Northwestern University. The drawings were made by Miss Marie Wilson, a gifted artist of Pselaphidae, under my constant supervision.

KEY TO KNOWN SPECIES OF OCEANIC PSELAPHIDAE

1. Antennae of 11 segments 9
   Antennae of not more than four segments 2
2(1). Antennae of three segments (first segment very short so that antennae appear to be two-segmented from above) 3
   Antennae of four segments (first segment very short so that antennae appear to be three-segmented from above) ..... **Kaisia oceanica** Mann (Fiji)
3(2). Abdomen with strong lateral margins for entire length; a second, rounded margin at base of each side that bears an elongate brush of setae (male unknown) ..... **Nadarimanu alewa** Mann (Fiji)
   Abdomen with margins developed for first three visible tergites only, each side at base bearing a fasciculated inflation 4
4(3). Middle legs with femur armed with a spine on ventral face (males of *Fustiger*) 5
   Middle legs with femora unarmed (females of *Fustiger,* and insufficiently known for further discrimination).
5(4). Femoral spine broadened and subangulate at apical three-fourths ..... **Fustiger vitiensis** Mann (Fiji)
   Femoral spine not thicker at apical three-fourths 6
6(5). Femoral spine bisinuate, arcuate to tip, with tip recurved ..... **Fustiger raffrayi** Mann (Fiji)
   Femoral spine with tip not recurved 7
7(6). Head narrowed behind eyes into a neck, and wider at base than immediately behind eyes ..... **Fustiger wasmanni** Mann (Fiji)
   Head not narrower immediately behind eyes than at base 8

8(7). Head with coarse, foveolate punctures and stiff, suberect setae; antennae not longer than head.....**Fustiger levuanus** Mann (Fiji)
Head with fine, cribrate punctures and minute, recumbent setae; antennae twice as long as head.....**Fustiger cribratus** Mann (Fiji)

9(1). First antennal segment almost twice as long as head and pronotum united .....**Anagonus fracticornis** Fauvel (New Caledonia)
First antennal segment never this long, usually very short.....10

10(9). Pronotum with an arcuate or transverse antebasal sulcus.....24
Pronotum never with an entire arcuate or transverse antebasal sulcus.....11

11(10). Pronotum with three free antebasal foveae.....12
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12(11). Base of each elytron with three foveae.....13
Base of each elytron with two foveae.....14

13(12). Each elytron with a discal stria.....20
No trace of a discal elytral stria.....
.....**Baraxina francoisi** Raffray (New Caledonia)

14(12). Flank of each elytron with a longitudinal sulcus or sulcoid impression strongly or partially developed.....43
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15(14). Dorsal surface of head with three subequal foveae.....**Reichenbachia mallicolensis** Raffray (New Hebrides); female **Reichenbachia sexualis,** n.sp. (Fiji)
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.....male **Reichenbachia sexualis,** n.sp. (Fiji)

16(11). Front of head excavated or depressed between antennae; pronotum suboval to cordiform 17
Front of head slightly elevated between antennae; pronotum trapezoidal....
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17(16). A strong spine at posterior margin of each eye.....
.....**Eupines spinifera** Fauvel (New Caledonia)
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18(17). Antennal club formed by last segment only, this being suddenly much wider and longer than tenth antennal segment.....
.....**Eupines villosula** Raffray (New Caledonia)
Antennal club formed by the last two segments, the tenth being much larger than the ninth segment.....19

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.....**Eupines suturalis** Fauvel (New Caledonia)
Each elytron with sutural stria obsolete and vestigial.....
.....**Eupines caledonica** Raffray (New Caledonia)

20(13). Pronotum distinctly longer than wide.....21
Pronotum as wide or wider than long.....23

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Middle femora normally formed; metasternum simple to very lightly impressed (females of *Anasopsis,* and insufficiently known for further discrimination).

22(21). Last sternite deeply, transversely impressed at base.....
.....**Anasopsis adumbrata** (Raffray) (Loyalty Islands)
Last sternite slightly impressed....**Anasopsis savesi** (Raffray) (New Caledonia)

23(20). Basal abdominal carinae very approximate.....
.....**Anasopsis armipes** (Fauvel) (New Caledonia)
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First visible sternite simple, not as described above....45
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.....**Physoplectus homaliinus** (Fauvel) (New Caledonia)
Flank of each elytron with a longitudinal sulcoid impression for apical half of elytral length only; moderate eyes at middle of head, about twice their own length from posterior margin; median antebasal fovea of pronotum at base of a long, median, longitudinal sulcus that extends nearly to apical pronotal margin.....**Batrinanda foveata**, n.sp. (Fiji)
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52(51). Dorsal outline of head strongly subtriangular..... females of **Eupifigia valentinei**, n.sp. (Fiji) and **Eupifigia laboriosa**, n.sp.

Dorsal outline of head oblong to rounded trapezoidal.....53

53(52). Head distinctly longer than wide in a ratio of 3 to 2 (length from apical clypeal margin to occiput, and width the distance between mesial eye margins).....females of **Eupifigia pacifica**, n.sp. (Fiji)

Head about as wide as long, in a ratio of from 4.3 to 4, to 4 to 4.....54

54(53). Elytra with exceedingly minute punctures..... .....females of **Eupifigia fijiensis**, n.sp. (Fiji)

Elytra with punctation consisting of rather obvious, shallow and rather crowded punctures.....females of **Eupifigia plana**, n.sp. (Fiji)

DESCRIPTIONS OF NEW GENERA AND NEW SPECIES

Genus **Fijiastes**, new genus

Euplectini in which the head bears a pair of perforate, nude vertexal foveae connected by an entire interfoveal sulcus; genal setae capitulate; maxillary palpi four-segmented, of which the fourth segment is much larger than the third; antennae 11-segmented, simple, the club formed of the last three segments, and without an antennal tubercle on the front; pronotum with three antebasal, nude foveae connected by a tenuous transverse sulcus, and each fovea at base of a longitudinal tenuous impression, the median of which crosses pronotal disk to apical fourth; prosternum simple, not medianly longitudinally carinate; each elytron with three nude antebasal foveae, of which the inner fovea is at base of an entire sutural stria, and outer fovea is at base of a short discal impression; elytral flank with a deep subhumeral fovea and an entire, arcuate subhumeral sulcus; mesocoxae contiguous; abdomen of five visible tergites and seven visible sternites in the male sex; last tergite declivous; first, second, and fourth tergites subequal in length; third tergite slightly longer than others; second visible sternite not longer than all other sternites; seventh sternite of male sex in the form of an elongate-oval, uncarinated plate; three-segmented euplectine tarsi, with a single tarsal claw.

Genotype: *Fijiastes zimmermani*, new species.

Fijiastes zimmermani, new species (figs. 1, *a-c*; 2).

Type male. Uniform reddish brown with short, appressed and cream-colored pubescence; integuments finely punctulate.

Length 1.5 mm.; greatest width, 0.25 mm.

Head, not including eyes, rounded triangular; eyes moderately prominent, of about 44 facets; tempora about as long as eyes, with rounded posterior angles; occiput arcuate; cervicum with a broad, deep, arcuate, transverse sulcus; vertex medianly convex, bearing a pair of nude, perforate foveae connected by an entire, V-shaped interfoveal sulcus, each fovea equidistant from the adjacent eye and fellow fovea; frontoclypeus simple and declivous to broad labrum; distal labral margin concave; left mandible crossed dorsal to right;

ventral surface of head provided with about 30 erect, minutely capitulate genal setae, in addition to one long, aciculate guard seta on each side; maxillary palpi four-segmented, first minute, second strongly pedunculate, third short and rounded-triangular, fourth elongate, longer than second and slightly wider than third, bearing a minute palpal cone at obtuse apex.

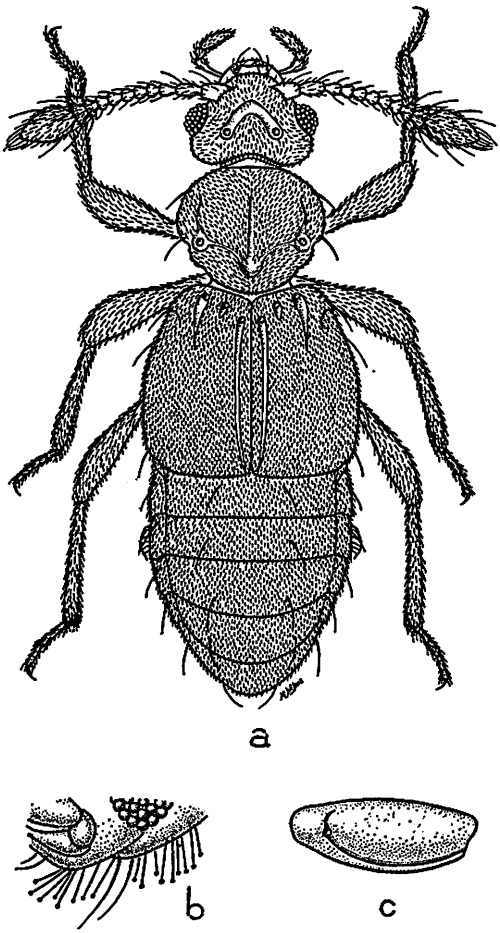

FIGURE 1.—*Fijiastes zimmermani:* a, dorsal aspect; b, left lateral aspect of ventral surface of head to show capitulate setae; c, flank of left elytron.

Pronotum with lateral margins sinuate just behind middle; three antebasal foveae, a lateral on each side and a median; lateral foveae, opposite marginal sinuation, are rather small but appear larger as each is set in a deep depression from which a tenuous, biarcuate impression extends apically to about apical fourth; median fovea at base of a median, longitudinal impression that crosses pronotal disk to about apical fourth; all three foveae connected by a narrow, tenuous transverse sulcus; each lateral margin with a pair of prominent aciculate guard setae.

Each elytron with three antebasal, nude foveae; sutural fovea at base of entire sutural stria; outer fovea at base of a short impression that extends to basal third; discal fovea at base of a minute impression; flank with a deep subhumeral fovea in the arcuate apical portion of a deep subhumeral sulcus; margin with three prominent, aciculate guard setae.

Abdomen with five visible tergites and seven visible sternites; first, second, and fourth tergites subequal in length and slightly shorter than third tergite; last tergite declivous; each tergite with a transverse row of four prominent, aciculate guard setae; first four tergites with well-developed lateral margins; basal median abdominal carinae apparently not present. Second sternite with a subcircular depression each side in lateral fifth of width, this depression foveoid mesially and partially covered by a fringe of setae from apical margin of first sternite. Third sternite strongly modified: an oval depression near margin on each side; mesial margin of depression suddenly erected into a translucent, triangular lamina; margin of this lamina bears a fringe of six setae, the first of which is elongate and arches over the other five, along their free ends, to end free over the depression. This peculiar organization suggests, but does not prove, that the depression, lamina, and setae form a sensory organ, possibly tactile in nature. This setoid fringe is slightly visible from above, in which case it appears to arise from the margin of the second tergite on casual inspection. (Since the males of many species of euplectines—certain *Trimioplectus, Actium* among others—have this area of this sternite modified in diverse ways, it is possible that all of these modifications are analogous, if not homologous, and subserve mating.) Sixth sternite medianly as long as fourth and fifth united, broadly impressed in median half and investing the seventh sternite; seventh sternite elongate-oval, uncarinated as in the male sex of *Actium, Melba,* and *Trimiomelba* among others.

Prosternum not medianly, longitudinally carinate.

Metasternum medianly, longitudinally impressed.

Legs without special modifications, except that each metatrochanter bears a short but prominent tooth obliquely near basal margin of ventral face; mesocoxae contiguous; tarsi three-segmented, of euplectine proportions and bearing a single, large, acute tarsal claw.

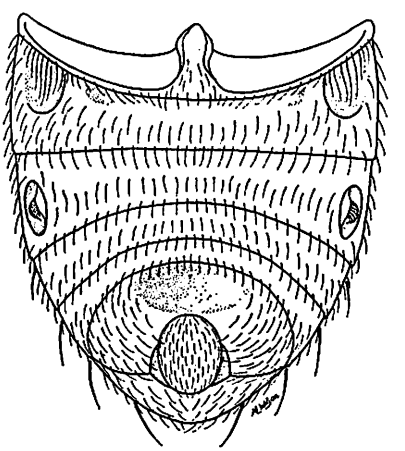

FIGURE 2.—*Fijiastes zimmermani,* venter of male.

This interesting species is described on a single specimen, the male type, deposited in Bishop Museum. It was collected on September 2, 1938 by E. C. Zimmerman, after whom it is named, in dead *Cyathea* fronds, at the summit (3,800 feet) of the Navai-Nasonga Trail on Viti Levu, Fiji.

Fijiastes is allied to two genera in the Raffrayan system (Raffray, 20). It is allied to *Euplectopsis* of Raffray, which is known only from New Zealand, by 14 species; but the latter genus has the prosternum bisected by a median carina, and each elytron has four basal foveae. It is allied to *Thesiastes* of Casey, of which there are several species known from New Guinea; but the latter genus has a strongly marked antennal club and the first three tergites are subequal in length.

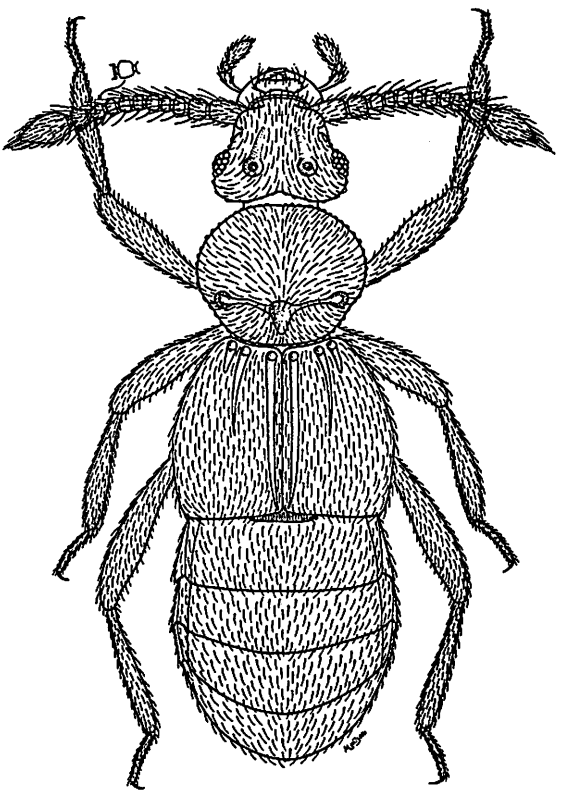

FIGURE 3.—*Placodium remingtoni,* dorsal aspect.

Genus **Placodium** Broun, 1893

Placodium remingtoni, new species (fig. 3).

Type male. Head and pronotum reddish brown, with flavous elytra and abdomen; pubescence golden, sparse, and rather coarse; the integuments shining, sparsely punctulate.

Length, 1.8 mm.; greatest width, 0.6 mm.

Head, not including eyes, trapezoidal; eyes small, consisting of about 24 facets; tempora subparallel, slightly shorter than eyes and rounded into the medianly arcuate occiput; vertex convex between the two vertexal foveae; vertexal foveae perforate, moderately hirsute, and each in a circumfoveal depression; vertexal foveae not connected by an inter-

foveal sulcus, but each fovea as base of a broad impression that ends near an antennal tubercular swelling; postantennal incisures well-developed; frontoclypeus simply declivous, with a strong clypeal bead; labrum broad, with arcuate apical margin; left mandible crossed dorsal to right; ventral surface of head with simple aciculate setae; maxillary palpi as described for *Fijiastes;* antennae widely separated, heavy-bodied, 11-segmented, with proportions as illustrated; ninth antennal segment trapezoidal from a dorsal view and nearly quadrate from a lateral view.

Pronotum with three deep antebasal foveae, connected by a deep transverse sulcus; disk simply convex; lateral foveae hirsute and median glabrous.

Each elytron with three deep antebasal foveae, of which the discal and humeral are relatively near each other; sutural fovea at origin of an entire, deep sutural stria; discal fovea at origin of a deep discal stria that extends through basal half of elytral length; humeral fovea at base of a short impression; flank of elytron with a smaller subhumeral fovea, the ventral margin of which is continued posteriorly as a well-developed longitudinal carina.

Abdomen with five visible tergites and seven visible sternites; fifth tergite declivous; first tergite bears a median pubescent depression that is short but occupies median third of width and is bounded each side by an inconspicuous basal abdominal carina; abdominal margins strong on first three segments; the sternites simple, with seventh in form of a flat, circular plate.

Prosternum not medianly, longitudinally carinate.

Metasternum slightly convex, not medianly impressed.

Legs short and thick, with tarsi of normal euplectine proportions and bearing a single tarsal claw.

This species is described on a single specimen, the male type, in my collection. It was collected by C. L. Remington, after whom it is named, seven miles southeast of Lafoa, New Caledonia, under the bark of a tree, on April 19, 1945.

This species is placed provisionally in *Placodium,* as it agrees rather well with Broun's generic description (1, p. 1431). The only other species, the genotype, *Placodium zenarthrum* Broun, is from New Zealand. The two species are readily separated. The male *P. zenarthrum* has the head dull, closely and rather rugosely punctate, with the head almost as large as the pronotum, and fine body pubescence. *P. remingtoni* has a shining and sparsely punctulate head that is much smaller than the pronotum, and the body pubescence is coarse.

Genus **Reichenbachia** Leach, 1826

Reichenbachia sexualis, new species (fig. 4, *a-c*).

Holotype male. Shining uniform reddish brown, with very short and appressed golden pubescence; integuments sparsely and minutely punctulate, except on pronotum where punctation is obviously stronger.

Length, 1.5 mm.; greatest width, 0.67 mm.

Head with prominent eyes, composed of about 36 large facets; tempora rounded behind eyes and about half as long as eyes; vertex with a pair of large, deep, lightly pubescent and widely separated vertexal foveae; median frontal fovea, so common in this genus, is absent and there is a large shallow depression over most of the vertex; floor of this

depression is minutely granulate-punctulate, but this is difficult to discern as the pubescence in the depression is dense, short, and erect, with the setal tips curved to form a mat of setae; frontoclypeus simple; labrum simple; mandibles simple, left crossed dorsal to right; ventral surface of head with the usual prominent median longitudinal carina of the genus; maxillary palpi simple and as in genus; antennae simple, 11-segmented, with proportions as illustrated.

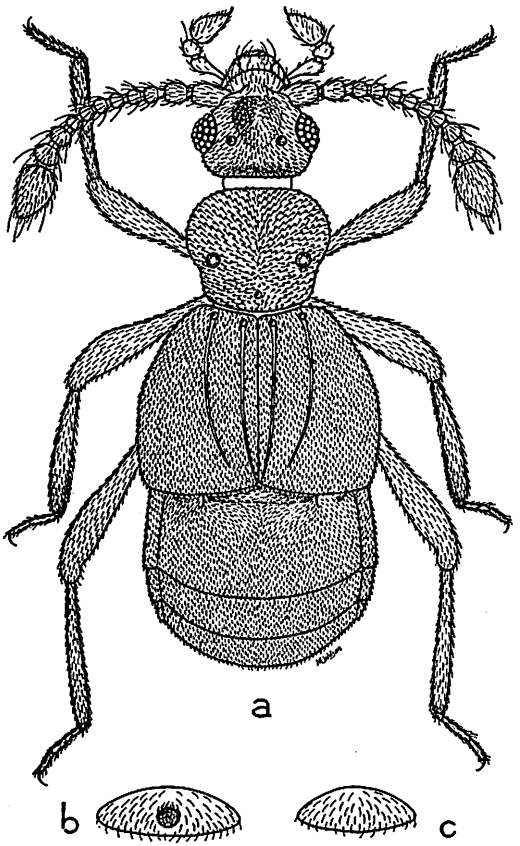

FIGURE 4.—*Reichenbachia sexualis:* a, dorsal aspect of male; b, fifth sternite of male; c, fifth sternite of female.

Pronotum with a pair of large, hirsute, lateral foveae and a small glabrous median fovea; disk strongly convex and obviously punctate.

Each elytron with two glabrous antebasal foveae, the sutural at origin of an entire sutural stria and the discal at origin of a long arcuate discal stria that extends six-sevenths of the elytral length; elytral flank simple.

Abdomen with five visible tergites and sternites as usual; last two tergites vertical; lateral margins strong; first tergite large, longer than next two united, with a pair of strong, short basal abdominal carinae that are about one-seventh of the tergite length and are separated by slightly more than half of segmental width; sternites simple, except that fifth bears a deep, densely pubescent, circular fossa.

Prosternum simple, not medianly bisected by a carina.
Metasternum with the usual median longitudinal impression.
Legs typically brachyglutine, simple, proportions as illustrated.

Allotype female. As in holotype, with the following exceptions: (1) median vertexal fovea present, slightly hirsute, lying in a median depression that is shallow, inconspicuously punctulate and sparsely pubescent; (2) fifth sternite simple, evenly convex.

This species is described from four specimens. The holotype, allotype, and paratype male were collected by E. C. Zimmerman on July 11, 1938, while beating shrubs near Wainiloka at 200 feet altitude, on Ovalau, Fiji. One paratype male was collected by Zimmerman on August 23, 1938, while beating shrubs at 100 feet altitude near Vunuka [Vunuku], Moala, Fiji, about 80 miles southeast of Ovalau.

The holotype, allotype, and one paratype are deposited in Bishop Museum, and one paratype is in my collection. The two male paratypes are conspecific with the description of the holotype, except that they are very slightly smaller.

The absence of the frontal fovea in the male of *R. sexualis* and its presence in the female are notable, as this is the first time I have examined a species of *Reichenbachia* in which this situation exists. The great majority of species in this genus have three cephalic foveae, one frontal and two vertexals, equally developed in both sexes. Certain species lack the frontal fovea in both sexes, and it is not uncommon to have this fovea abnormally modified in the male sex. It is possible, in those species of *Reichenbachia* described on one sex, that when both sexes are known the situation in *R. sexualis* may be duplicated.

One case is known (Park, 12, pp. 345-346) where the frontal fovea may be present or absent in the same sex, that is, the variation is infraspecific; but in this case the presence or absence is associated with subspeciation. Thus, *Reichenbachia dampfi dampfi* from Oaxaca has three foveae, with the frontal very abnormal; *R. dampfi obsoleta* from Chiapas lacks the frontal fovea.

In *R. sexualis* the extensive vertexal impression of the male, with its granulation and peculiar pubescence, may be the homologue of the weak, simple vertexal impression of the female or the homologue of the frontal fovea of the female *per se*. Loss of vertexal foveae in one sex only is known in other genera of pselaphids, especially where these foveae become vestigial in the other sex, as in certain species of Mexican *Anchylarthron*. Furthermore, this foveal variation is paralleled by variation in the eyes in other pselaphids. For example, *Autoplectus,* confined to Madagascar, and *Eutyphlus,* confined to Nearctic America, have species in which the eyes are normal in males and vestigial to absent in females.

R. sexualis is most closely associated with *R. mallicolensis* from the New Hebrides. In these two species the females are not readily separated from each other, but the male *R. mallicolensis* has three subequal cephalic foveae, as in the female.

Genus **Eupifigia,** new genus

Brachyglutini in which the head bears a pair of deep, circular, pubescent vertexal foveae that are free, the interfoveal sulcus wholly absent; ventral surface of head with a median longitudinal carinoid ridge; simple, four-segmented maxillary palpi; antennal 11-segmented in both sexes; pronotum with a deep, pubescent lateral antebasal fovea on each side, these two foveae connected by a deep arcuate antebasal sulcus; prosternum not medianly bisected by a carina, but medianly concave and bearing a pair of large, pubescent lateral foveae, one fovea apical of each procoxa; each elytron with two antebasal foveae that are usually distinct and transversely ovate but may be reduced to a pair of foveal pits; no trace of a discal elytral stria; no trace of a subhumeral stria, sulcus or subhumeral fovea on elytral flank; mesothoracic wings present; abdomen with distinct lateral margins on first three tergites; five visible tergites (the true first tergite membranous and invisible beneath elytra), and six visible sternites (the true first sternite membranous and invisible beneath the metasternum throughout the body width); mesocoxae and metacoxae not contiguous, the former distinctly separated, the latter distant; tarsi three-segmented, of brachyglutine proportions and bearing a single tarsal claw.

Genotype: *Eupifigia zimmermani,* new species.

Before describing the rather numerous new species in this genus, a few general points are pertinent. In the first place, *Eupifigia* is restricted, so far as known, to the Fiji Islands; but it is a typical member of the Australian Region as it belongs to the group of genera that center around *Eupines*: *Eupines,* with about 100 species, largely in Australia and New Zealand but with species in New Guinea and New Caledonia; *Eupinopsis,* with species in Australia; *Eupinella,* with a species in Australia; and *Eupinoda,* with species in Australia. From all of these allied aggregates, *Eupifigia* is distinct in the possession of strong lateral pronotal foveae connected by a strong antebasal sulcus.

In the second place, *Eupifigia* appears to be a taxonomic complex, and its study has been difficult and fascinating. All of the populations represented in the material available have the same indefinable habit of relationship, and the male sex has a variety of qualitative structural features, found in the first antennal segment, distal tarsal segment of anterior tarsi, and venter. These and other features occur in different combinations in different populations so that it is very difficult to separate the several population fragments available as species without direct genetic data. Much larger series, from the Fiji Islands as a whole, are desirable if the limits of variation are to be known more fully. The present organization of the genus is the best I could do with the material available.

Key to Known Species of Fijian Eupifigia

1. Mesial face of first antennal segment produced as a dentoid process (fig. 5) ..... male **E. zimmermani**
   First antennal segment otherwise 2

2(1). Clypeal margin with a pair of median teeth (fig. 6).....male **E. valentinei**
Clypeal margin not bidentate..... 3
3(2). Distal protarsal segment with ventral face produced into a thin lamina.....male **E. laboriosa**
Distal protarsal segment simple..... 4
4(3). Metasternum with a laminoid crest on each side.....male **E. fijiensis**
Metasternum lacking such crests..... 5
5(4). Mesofemur conspicuously spined at basal third.....male **E. pacifica**
Mesofemur not so spined..... 6
6(5). First two sternites separated medianly by a simple excavation.....male **E. plana**
Venter not transversely excavated..... 7
7(6). Venter concave from a lateral view, as in males.....female **E. zimmermani**
Venter convex from a lateral view..... 8
8(7). Head subtriangular.....females **E. valentinei** and **E. laboriosa**
Head oblong to rounded trapezoidal..... 9
9(8). Head distinctly longer than wide.....female **E. pacifica**
Head quadrate 10
10(9). Elytra with very minute punctures.....female **E. fijiensis**
Elytra with shallow but crowded, obvious punctures.....female **E. plana**

Eupifigia zimmermani, new species (fig. 5, *a, b*).

Holotype male. Mahogany brown with maxillary palpi, and first and last two antennal segments light brown; pubescence short, flavous and prostrate; integuments shining, almost impunctate.

Length, 2.34 mm.; greatest width, 0.84 mm.

Head trapezoidal; eyes small, composed of about 36 facets, placed behind middle; tempora short, not as long as eyes; a pair of free, densely pubescent, vertexal foveae on a level with anterior half of eyes, lying in a shallow transverse depression in center of vertex; front medianly produced as an overhanging frontal margin; clypeus broadly triangular from a direct facial view, provided with long, arcuate, golden setae; front deeply excavated between antennal cavities, as in many males of *Batrisodes;* labrum broad, apically slightly arcuate; left mandible crossed dorsal to right; ventral surface of head with a low, median, carinoid elevation; maxillary palpi simple, four-segmented, first segment minute, second elongate-pedunculate; third as long as wide and one-third as long as second; fourth segment elongate-fusiform, with a minute palpal cone; antennae elongate, slender, 11-segmented, all segments longer than wide, as illustrated, with first segment having the mesial face medianly produced into a dentoid process.

Pronotum gibbous, with a pair of large, heavily pubescent lateral foveae that are connected by a deep, narrow, arcuate antebasal sulcus.

Each elytron with two shallow, transversely ovate basal foveae; no sutural stria and no discal stria; elytral flank simple. The mesothoracic wings well-developed.

Abdomen with five visible tergites and six visible sternites; narrow abdominal margins distinct; basal abdominal carinae absent; first and fifth sternites long, about as long as each other and each as long as second, third, and fourth united; sixth sternite a broad, short, coarsely punctate plate that is triangular in outline; venter concave longitudinally from a lateral view.

Prosternum as described for genus; metasternum broadly medianly impressed with the lateral walls posteriorly subtuberculate.

Legs typically brachyglutine; protrochanters subdentoid at mesial angle of ventral face; profemora with a small oval impression at center of ventral face; mesotrochanters with a strong tooth at mesial angle of ventral face; mesofemora with a strong spine at apical fifth of ventroposterior face; metatrochanters with an obtuse, modestly setose elevation at mesial angle of ventral face.

Allotype female. Slightly larger than holotype, 2.5 mm. long and 0.9 mm. wide, similar to holotype with the following exceptions: (1) first antennal segment not produced mesially, but elongate-subcylindrical; (2) second antennal segment distinctly shorter than third, whereas in the holotype these segments are subequal; (3) fifth antennal segment longer than fourth or sixth, but relatively not as long as in holotype; (4) venter with five visible sternites; (5) fifth sternite about as long as preceding four united; (6) trochanters and femora simple. Uncommonly, lateral outline of venter is longitudinally concave, as in the male holotype; (7) face not transversely excavated between antennal cavities, and frontoclypeus generally simple and declivous. (This allotype designation is assumed on the close structural congruity of the specimens; with but one female available, direct dissection was not undertaken.)

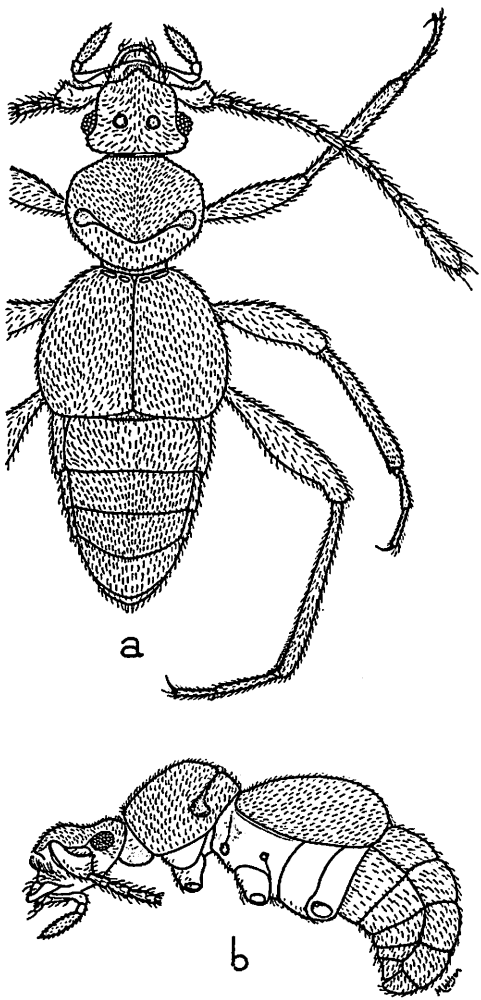

FIGURE 5.—*Eupifigia zimmermani:* a, dorsal aspect; b, left lateral aspect.

This species is described from three specimens collected near Nandarivatu, Viti Levu, Fiji. The holotype was collected by Zimmerman, in whose honor the genotype is named, on September 7, 1938, at 2,700 feet altitude, while beating shrubbery. The allotype was collected by Valentine on October 13, 1937. The paratype male was collected by Zimmerman, beating shrubbery on September 6, 1938, at 3,600 feet altitude.

The holotype and the allotype are in the collections of Bishop Museum; the paratype, in my collection.

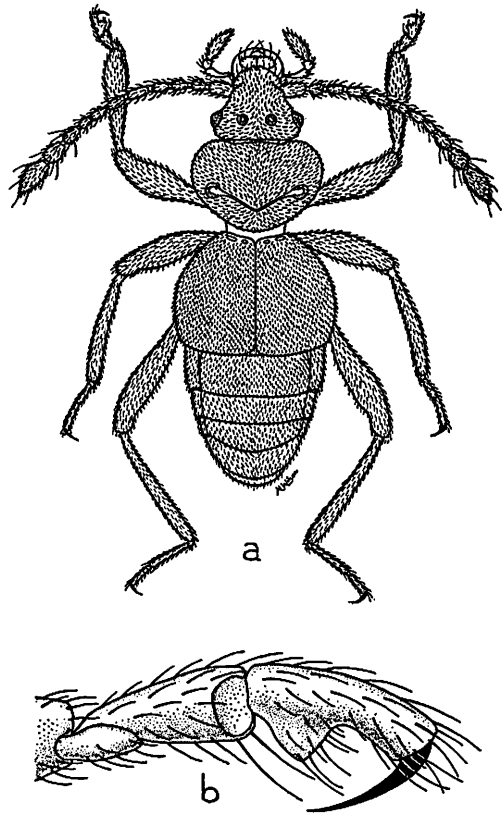

FIGURE 6.—*Eupifigia valentinei:* a, dorsal aspect; b, anterior tarsus of male.

Eupifigia valentinei, new species (fig. 6, *a, b*).

Type male. Color, integument and pubescence as in *E. zimmermani.*

Length, 2.14 mm.; greatest width, 0.87 mm.

Head subtriangular; eyes, tempora, and vertexal foveae as in *zimmermani;* frontoclypeus medianly produced beyond the antennal articulation line and then suddenly declivous and at the bottom of this declivity the overhanging clypeal margin is medianly produced into two apically directed teeth; labrum medianly produced in an erect tubercle that has its apex opposite the deep clypeal notch formed between the clypeal teeth; deep

transverse excavation of face not pubescent; and whereas in *zimmermani* this excavation extends from one antennal cavity to the other, in *valentinei* the abruptly declivous frontoclypeus extends far below the antennal cavities so that the facial excavation is between the frontoclypeus and the labrum; mandibles with left crossed dorsal to right and with secondary teeth of inner ramus large and distinct; maxillary palpi and antennal with proportions as illustrated; ninth antennal segment with ventral face produced at anterior angle so that mesial outline is very asymmetrical.

Pronotum rounded-cordate in outline, with gibbous disk; lateral foveae and connecting sulcus as in *zimmermani;* elytra as in *zimmermani.*

Tergites as in *zimmermani.* Venter very complex. Six visible sternites; first sternite medianly bearing a translucent, glabrous, triangular area, the apex of which is apically directed; this area discriminated with difficulty, under the best of conditions, and on casual inspection this translucent area appears as a deep median notch in the first sternite. This illusion is due to the first sternite being normally opaque and pubescent on either side of this translucent triangle. Second sternite medianly deeply excavated, the excavation extending for the basal three-fourths of the segmental length and extending apically far beneath the first sternite; posterior margin of excavation medianly produced in a complicated obtrapezoidal tumulus, and on either side of elevation the margin is secondarily produced, so that posterior margin as a whole appears to be deeply trilobed. Third to sixth sternites as in *zimmermani.*

Prosternum and metasternum as in *zimmermani.*

Prothoracic legs notable; protrochanters with a small tooth at center of ventral face; protibiae relatively massive, widest in distal fourth and compressed latero-mesially; protarsi with third segment compressed latero-mesially in basal half, and the ventral face strongly produced in a translucent, subtriangular lamina (fig. 6, *b*). This protarsal lamina, in conjunction with the exceptionally heavy tarsal claw, reminds one of the tarsi of the human louse. Mesotrochanters with an even larger tooth at center of ventral face. Metatrochanters simple.

This species is described from six males, the type and five paratypes. The type and two paratypes were collected by Zimmerman on September 16, 1938 by beating shrubbery on the western slope of Mount Victoria, Tholo North, Viti Levu, at 3,000 feet altitude. One paratype was taken by Valentine on October 25, 1937, at 3,000 feet on Mount Nanggaranambuluti, Viti Levu. Two paratypes were taken by Zimmerman on September 8, 1938 by beating shrubbery between 2,600 and 3,000 feet on a ridge west of Vatuthere, Nandarivatu, Viti Levu.

The species is named in honor of J. M. Valentine. The type and three paratypes are deposited in Bishop Museum; two paratypes, in my collection.

Eupifigia laboriosa, new species.

Type male. Mahogany brown with lighter brown appendages; pubescence and integument as in *E. zimmermani.*

Length, 1.9 mm.; greatest width, 0.80 mm.

Head as in *zimmermani* except that (1) tempora are still shorter, being slightly less than half as long as eyes; (2) the two pubescent vertexal foveae lie in a much more obvious transverse depression; (3) frontoclypeus simply and lengthily declivous and lacking a defined frontal margin and frontal teeth of any kind; labrum, ventral surface of head and maxillary palpi as in *zimmermani;* antennae slender, 11-segmented, first segment elongate and subcylindrical and as long as next two united, second suboval, third slightly obconical, fourth obconical and about as long as third, fifth and sixth subcylindrical with sixth about as long as fourth, fifth slightly longer than either fourth or

sixth, seventh subcylindrical and slightly shorter than sixth, eighth shortest segment and subcylindrical, club consisting of last three segments, ninth slightly obconical and slightly longer and wider than eighth, tenth distinctly longer and wider than ninth and obconical, eleventh longest segment and basally truncate and apically subacute; in a lateral view, ninth segment is asymmetrically obtrapezoidal with apical angle of ventral face produced.

Pronotum as in *valentinei.*

Each elytron with a pair of evanescent basal pits when strong illumination and high magnification are used, but under ordinary methods without foveae, discal stria, or sutural stria; and elytral flank simple and unmodified. Mesothoracic wings present but poorly developed.

Abdomen with five visible tergites and six visible sternites; abdominal margins narrow but well-developed; no basal abdominal carinae. Venter complex. First visible sternite medianly and deeply triangularly incised, with a long, suberect, slender spine depending from apical margin on each side of triangular incision. (It is worthy of note that this spined triangular incision of *laboriosa* occupies the same area of the first sternite as the triangular, glabrous "window" in *valentinei.*) Second sternite with its excavation as described for *valentinei.* Third and fourth sternites very short and medianly subequal. Fifth sternite about a third longer than preceding two sternites united. Sixth sternite so minute as to be difficult to discern, in the form of a transverse penial plate three times wider than long.

Prosternum and metasternum as in *zimmermani.*

Prothoracic legs with the remarkable tarsi as described for *valentinei* (fig. 6, *b*), but with normally slender tibiae, trochanters simple. Mesothoracic legs with a strong, blunt tooth at center of ventral face of trochanter, and femora with a short, strong spine at basal third of ventral face.

This species is described from five males, the type and four paratypes. The type and three paratypes were collected by Zimmerman, while beating shrubbery at 3,700 feet, September 10, 1938, at Nandarivatu, Viti Levu. One paratype was collected by Zimmerman on the west slope of Mount Victoria, Tholo North, Viti Levu, on September 16, 1938.

The type and two paratypes are in Bishop Museum; two paratypes, in my collection.

Of the six species recognized in *Eupifigia,* the males and females have been isolated, with the exception of *E. valentinei* and *E. laboriosa.* In these two, the males are strikingly different in the venter structure, among other differences; but I have not been able to determine the females. There are available 39 females from Viti Levu that belong to either or both of these two species. Some 13 separate features have been used in an abortive attempt to separate this series of specimens; and a few statistical efforts were made, as well, with indifferent results. One criterion is that of size, *E. laboriosa* being slightly smaller in length and width; but this is too uncertain for species separation, as the size variation in the population in nature is not known.

Eupifigia pacifica, new species.

Type male. Reddish brown with paler antennae and tarsi; pubescence short, flavous, and semiappressed; integuments shining and very lightly punctulate.

Length, 1.87 mm.; greatest width, 0.80 mm.

Head distinctly longer than wide, with the sides posterior to antennal sinuations almost parallel; prominent eyes of about 28 large facets; tempora long, as long as eyes, with well-defined posterior angles; a pair of pubescent vertexal foveae on a line through eye centers; vertexal foveae much smaller than in preceding three species of *Eupifigia,* not connected by an interfoveal sulcus and not lying in a transverse depression, but instead isolated with the vertex convex between them; frontoclypeus regularly declivous, convex and unmodified; labrum, mandibles, ventral surface of head, and maxillary palpi as in *zimmermani.* Antennae slender, 11-segmented, with all segments longer than wide; third to ninth subequal in width; fifth distinctly longer than fourth or sixth; club formed of last two segments, the tenth obtrapezoidal, wider than ninth but only slightly longer, eleventh segment wider than tenth and nearly as long as preceding two united, with the usual truncate base and acute apex.

Pronotum rounded-hexagonal, with apical margin about half as wide as basal margin, widest just apical of middle, with posterior two-thirds of lateral margins oblique to base; disk simple, gibbous, with a pair of large, pubescent antebasal foveae, one on each side at basal third, and connected by a deep, narrow, medianly angulated sulcus.

Each elytron with two transversely ovate basal foveae, a weakly developed sutural stria, but no discal stria; flank simple; humeral angle sloped evenly, not acute; four short, erect guard setae.

Abdomen with five visible tergites and six visible sternites; first four tergites with a transverse row of four guard setae; the lateral abdominal margins narrow but very well-developed; basal abdominal carinae absent; first tergite with an oblique depression near base, and on median fifth of this depression a short pubescent patch, and a pubescent patch on each side near lateral angle. Venter bears a complicated excavation between first and second sternites. First sternite with a pair of median triangular teeth that have their long axes parallel with the long axis of sternite; at each side of these median teeth is a much shorter tooth; just lateral to this small tooth is a transversely ovate depression which has its margin fringed by short setae and which bears a deep foveoid pit at its laterobasal angle; from this foveoid pit about a dozen long, arcuate setae arise near its apical margin and extend over the base of the second sternite. Second sternite excavated in basal half of length; this excavation almost bisected medianly by a setose process that arises from apical margin of excavation; on each side of median setose process is an erect, triangular tooth; base of this tooth is extended laterally each side as a short, laminoid ridge; this ridge is extended to bound the excavation, hence parallels the transversely ovate depression of the first sternite. Third to sixth sternites as in *laboriosa.*

Prosternum as in *zimmermani.* Metasternum broadly and slightly depressed medianly, with posterior margin between metacoxae thin and truncate; no spines or crests on metasternum.

Legs with unarmed trochanters; profemora with an erect, acute spine at basal third of ventral face; mesofemora with a stronger, oblique spine at basal third of ventral face; tibiae slender; tarsi simple, as in *zimmermani.*

Female paratypes. Nine females are associated with the type male. They all agree with the described anatomy of the type, including the peculiar elongate head, the shape of which is unique in *Eupifigia.* These females have heads longer than wide in the ratio of 3:2, the length being measured from apical clypeal margin to occiput, and width taken between mesial eye margins. Females differ from male in (1) antennal segments relatively slightly more slender and fifth segment only slightly longer than fourth or sixth, (2) venter typical of female sex, with a convex lateral outline and unarmed and unexcavated, (3) legs unarmed.

This species is described from 10 specimens, the male type, and nine female paratypes, all from Viti Levu, Fiji. The type was taken by Zimmerman, September 16, 1938, while beating shrubbery at 3,000 feet altitude on the west slope of Mount Victoria, Tholo North; the two paratypes were collected by

Zimmerman on the same slope, while beating shrubbery between 3,000 and 4,000 feet altitude; and the five additional paratypes were also collected by Zimmerman, while beating shrubbery, on September 6, 1938, at Nandarivatu. The two paratypes from Nandarivatu were collected by Valentine in October 1937.

The type and the six paraytpes are deposited in Bishop Museum; the three paratypes, in my collection.

Eupifigia fijiensis, new species.

Type male. Uniform mahogany brown; short, flavous, appressed pubescence; integuments shining and lightly punctulate.

Length, 1.4 mm.; greatest width, 0.53 mm.

Head, not including eyes, with sides slightly oblique to temporal angles; prominent eyes, composed of about 32 large facets; tempora as long as eyes, rounded by well-marked posterior angles; vertexal foveae, frontoclypeus, labrum, mandibles, maxillary palpi, and ventral surface of head as in *pacifica.* Antennae shorter and thicker than in *pacifica,* 11-segmented; first segment elongate, slightly arcuate; second half as long as first, suboval; third slightly longer than second, obconical; fourth to seventh segments subequal in width to third; fourth and fifth subequal in length to third; sixth slightly longer than fifth; seventh slightly shorter than fifth; eighth shortest, slightly obconical; club of last three segments, ninth and tenth obconical, progressively larger, the eleventh segment largest with truncated base and a sinuate, acute apex.

Pronotum as in *pacifica,* except that it is widest at middle.

Elytra as in *pacifica,* with minute and indistinct punctures. The mesothoracic wings are present.

Abdomen with five visible tergites and six visible sternites. Tergites as described for *pacifica.* In both *pacifica* and *fijiensis,* the male sixth sternite is in the form of a penial plate that is so minute that it can be overlooked very easily, so that for practical purposes five sternites are visible. The venter is complex, showing the same general kind of modification but differing greatly in details. The first sternite is very deeply excavated at center for the entire segmental length; this excavation is bounded on each side by a transversely oval and granulated depression that partially accommodates the metatrochanter and may be a homologue of the transversely ovate depression of the same sternite in *pacifica.* Second sternite with the median third of its basal margin triangularly extended to form the posterior wall of the excavation of the first sternite; at the apex of this angulation the wall is produced into a pair of sinuate, divergent, laminoid processes that extends almost across the excavation; on each side of these divergent processes, the wall bears two minute teeth; posterior to this complicated wall, the second sternite bears a triangular fossa from near its apical margin to near the basal third of segmental length, this fossa deeper laterally than at center. Third to sixth sternites as in *pacifica.*

Prosternum as in *zimmermani.* Metasternum radically different from *pacifica;* it is broadly impressed medianly, with a very polished center, and the walls of the depression rise steeply on each side into a conspicuous spinoid tubercle; apical margin of metasternum, between the metacoxae, is extended into a pair of large, glabrous, converging spines that extend apically and so partially overlap the paired divergent processes of the second sternite just described.

All trochanters and the profemora unarmed; mesofemora with a short erect spine at basal third of ventral face; tibiae slender, and tarsi as in *zimmermani.*

Male paratypes. Eight males, in agreement with the description as given for the type within minor limits of variation.

Female paratypes. Associated with these nine males are nine females, which are in agreement with the description of the type, with the following exceptions: (1) venter is

simple, and convex in lateral outline, (2) metasternum is convex and unarmed, and (3) mesofemora are unarmed.

This species is described from 18 specimens, the male type, eight male paratypes, and nine female paratypes, all collected on Viti Levu, by Zimmerman. The type and eight paratypes were taken by beating shrubbery at between 800 and 1,300 feet altitude, August 1, 1938, on Mount Korombamba; five paratypes, by beating vegetation between 2,600 and 3,000 feet, September 8, 1938, on a ridge west of Vatuthere, near Nandarivatu; three paratypes, by beating vegetation, September 16, 1938, on the west slope of Mount Victoria, Tholo North, at 3,000 feet; one paratype, by beating shrubbery at 3,700 feet, September 10, 1938, at Nandarivatu.

The type and nine paratypes are deposited in Bishop Museum; eight paratypes, in my collection.

Eupifigia plana, new species.

Type male. Uniform mahogany brown; pubescence short, flavous and appressed; integuments lightly punctulate, except the elytra, which are sparingly and roughly punctate, the punctures at times scarified.

Length, 1.44 mm.; greatest width, 0.53 mm.

Head rounded-hexagonal; prominent eyes, composed of about 25 coarse facets; tempora as long as eyes, with rounded posterior angles; vertexal foveae, frontoclypeus, labrum, mandibles, maxillary palpi, and ventral surface of head as in *pacifica;* vertex depressed between antennal tubercles. Antennae short and stout, as in *fijiensis,* 11-segmented and simple; first segment cylindrical; second elongate-oval, two-thirds as long as first and nearly as wide; third to eighth subequal in width; third and fourth subequal in length and each shorter than second, obconical; fifth longer than sixth or fourth; sixth subequal in length to fourth; seventh slightly shorter than sixth; eighth distinctly shorter than sixth; ninth slightly wider than eighth, obconical; club of last two segments, the tenth longer and wider than ninth, obtrapezoidal; eleventh the largest segment, with truncated base and a sinuate, acute apex.

Pronotum as in *fijiensis.*

Each elytron with two transversely oval, poorly defined basal foveae; very different from other members of the genus in that punctures are shallow but distinct and often scarified; sutural stria entire; no discal stria; flank simple. Mesothoracic wings present.

Abdomen with five visible tergites and six visible sternites; lateral margins narrow but well-developed on first three tergites; the basal pubescent patches of first tergite and the abdominal guard setae so obvious in *pacifica* and *fijiensis* are not apparent in *plana.* Venter relatively very simple; first sternite with a poorly defined, flattened triangular area at center; second sternite three-fourths as long as first and medianly depressed at base, so that first two sternites are medianly separated by a simple, transverse excavation; third sternite half as long as second, simple; fourth and fifth sternites short and not as long as third when taken together; fifth sternite relatively long, as long as first, with apical margin broadly triangular and bearing a minute sixth sternite, or penial plate, at apex.

Prosternum and metasternum as in *pacifica.*

Legs simple, except for a minute tooth at center of ventral face of mesofemur, and a just discernible tooth at center of posterior face of metatrochanter; tarsi simple, as for other members of genus, with a single claw.

Male paratypes. Five male paratypes agree with structure as described for type.

Female paratypes. Five female paratypes agree with described anatomy of type, except that (1) venter is simple, with a convex lateral outline, and (2) legs are unarmed.

This species is described from 11 specimens. The male type and five male and four female paratypes were collected by Zimmerman on September 10, 1938 by beating shrubbery at 3,700 feet altitude at Nandarivatu, Viti Levu. One female paratype was taken by Zimmerman at 600-800 feet, while sweeping grasses on July 8, 1938 on Draiba Trail, Ovalau.

The type and six paratypes are in Bishop Museum; four paratypes, in my collection.

Two matters deserve further note. *E. plana* is a relatively undifferentiated species in contrast to the other members of the genus. The only discernible secondary sex characters are those described for the first two sternites and the minute teeth on the legs of the male sex. In view of these poorly defined characters, it was felt that direct dissection was desirable to establish the sex of the type. Such dissection revealed the usual large pselaphid aedeagus. The medial aedeagal lobe is elongate-pyriform and quite large, being 0.28 mm. long by 0.13 mm. wide across the base. By way of contrast, the abdomen measures only 0.46 mm. in length.

The female sex of *E. plana* and *E. fijiensis* is not easily determined. The most feasible basis of separation is the type of elytral punctation. The female *E. fijiensis* has a smooth elytral integument, with evanescent punctulation, whereas the female *E. plana* has the elytra covered with shallow, rather crowded, often scarified punctures. This differential is subject to some variation.

Genus **Rybaxis** Saulcy, 1874

Rybaxis insularis, new species.

Holotype male. Dark reddish brown with paler appendages; pubescence moderately short, semiappressed, rather sparse, and reddish gold in color.

Length, 1.84 mm.; greatest width, 0.84 mm.

Head trapezoidal, with prominent eyes, composed of about 32 coarse facets, the eyes in basal half of head; tempora short, not as long as eyes, rather wide and curving abruptly into cervicum; vertex medianly convex, with a pair of conspicuous, pubescent vertexal foveae on a line through eye centers, these foveae nearer adjacent eye than to each other; dorsal surface of head broadly depressed between antennal tubercles; frontoclypeus declivous, simple, with apical margin an arcuate bead; labrum transverse, with slightly concave apical outline; strong mandibles, right crossed dorsal to left, with two strong teeth on inner ramus; ventral surface of head with the usual broad, low, longitudinal ridge bisecting the area; maxillary palpi four-segmented, first minute, second arcuate-pedunculate with swollen distal end, third relatively large, being as wide as last segment, and oboval in outline, fourth, or last, segment longer than second with a relatively blunt apex bearing a distinct, oblique palpal cone. Antennae 11-segmented, with a distinct antennal club formed of the last two segments; fifth segment cylindrical, longer than either fourth or sixth; from a ventral view, club of antennae is three-segmented, with ventral faces of ninth and tenth segments apically produced.

Pronotum rounded-hexagonal; basal margin with a strong bead; disk simple and strongly convex; a large, pubescent, antebasal fovea each side, these lateral foveae connected by a deep biarcuate sulcus typical of the genus.

Each elytron with two deep, nude, antebasal foveae; sutural fovea at base of an entire sutural stria; discal fovea at base of a discal stria that extends nearly to center of elytral length; flank with the typical nude subhumeral fovea, from which extends a longitudinal sulcus to about middle of elytral length.

Abdomen with five visible tergites and six visible sternites; lateral margins well-developed on first three tergites; first tergite with a median and a pair of lateral pubescent areas beneath overhanging elytra, but with basal abdominal carinae not evident. Venter strongly concave in lateral outline, the sternites simple; sixth sternite longitudinally divided into a right and left subtriangular pair of penial plates, typical of male sex.

Metasternum elevated each side of median depression, to form a prominent, laminoid, triangular spine in apical half of metasternal length.

Protrochanters with a spine at base of ventral face; profemora relatively swollen. Mesotrochanters with a spine at center of ventral face and swollen mesofemora. Metatrochanters with a spine at center of ventral face and normal femora. Tibiae and tarsi simple, brachyglutine, as for genus, with a single tarsal claw.

Allotype female. As in holotype, with following exceptions: (1) eyes have smaller facets, so that the eyes are relatively smaller and tempora relatively longer; (2) vertexal foveae are as near to each other as each is from an adjacent eye; (3) left mandible is crossed dorsal to right; (4) maxillary palpi are relatively smaller, with third segment not as conspicuously developed; (5) antennae have a gradually formed club of last two segments, fifth segment not obviously longer than fourth or sixth, and ventral faces of ninth and tenth segments not produced; (6) only five visible sternites, as typical of this sex in the genus, and venter typically convex in lateral outline; (7) trochanters unarmed and legs not swollen.

This species is described from three specimens. The holotype, allotype, and a paratype female were collected by E. C. Zimmerman on Viti Levu, the holotype on September 13, 1938 by beating shrubbery on Mount Victoria, Tholo North; the allotype, on September 12, 1938 at summit (3,400 feet) of the Navai-Nasonga Trail, also by beating shrubbery; and the paratype, on September 15, 1938 at 2,300 feet, near Nandarivatu.

The holotype and allotype are in Bishop Museum; the paratype, in my collection.

Rybaxis fijiensis, new species.

Type male. Shining dark reddish brown, with face, antennae, femora, and distal portions of tibiae and tarsi flavous; pubescence as in *insularis;* integuments polished and subimpunctate.

Length, 1.74 mm.; greatest width, 0.67 mm.

Head rounded-hexagonal in dorsal outline, with large and prominent eyes, composed of about 38 coarse facets, the eyes slightly behind middle with their mesial margins notching head outline; tempora nearly as long as eyes, subparallel, with rounded posterior angles; vertex flattened, with a pair of large, pubescent vertexal foveae on a line through eye centers, with each fovea as near an adjacent eye as to each other; frontoclypeus, ventral surface of head and maxillary palpi as in *insularis;* labrum with apical outline subtruncate. Antennae 11-segmented and abnormal; fifth segment oval, very large, swollen, nearly three times as long and twice as wide as fourth segment and nearly three times as long and three times as wide as sixth segment, with dorsal face flattened and coarsely punctate and ventral face glabrous and tumid; club of last three segments, ninth about as long as eighth but obtrapezoidal and distinctly wider, tenth distinctly larger than ninth and rounded-obtrapezoidal, eleventh about as long and wide as fifth segment with the usual truncate base and sinuate acute apex.

Pronotum as in *insularis*. Each elytron with two distinct, nude antebasal foveae; sutural fovea at base of entire sutural stria; discal fovea at base of a broad, indistinct discal stria that hardly extends through basal fourth of elytral length; flank with usual subhumeral fovea and a short subhumeral sulcus to center of elytral length. Mesothoracic wings present.

Abdomen with tergites as in *insularis*. The venter is very complex, composed of six visible sternites. First sternite long, and medianly concave with the lateral margin of concavity on each side abruptly elevated into a long, laminoid, and triangular ridge, the apical part of which is densely setose; apical margin of first sternite, between lateral ridges, is produced as a thin, translucent, triangular plate that extends apically across second sternite, to touch apical margin of third sternite. Second sternite medianly depressed, beneath triangular plate of first sternite; on each side of triangular plate of first sternite, second sternite is strongly elevated in a wide lobe; each of these lobes lengthened medianly to end abruptly opposite the long laminoid ridge of first sternite. Laterally, there is a transverse excavation between first and second sternites on each side. Third sternite short and medianly oblique. Fourth sternite visible laterally, but so short as to be barely discernible medianly. Fifth sternite elongate and simple, about half as long as first. Sixth sternite in the form of a minute, asymmetrically divided pair of penial plates.

Metasternum medianly concave, but lacking the distinctive spines of *insularis*.

Legs with trochanters unarmed, femora normally formed and with simple mesotibiae and metatibiae. The protibiae are abnormal; each in the shape of an Indian club, that is, swelling gradually from a pedunculate base to become very tumid at apical three-fourths.

This species is described from three males, the type and two paratypes, all of which were taken by Zimmerman by beating shrubbery at Nandarivatu, Viti Levu, the type and a paratype on September 10, 1938 at 3,700 feet, the other paratype on the same date at 3,600 feet.

The type and one paratype are in Bishop Museum; one paratype, in my collection.

Rybaxis fijiensis nigra, new variety.

This is an interesting variation in the *fijiensis* population. The general body tone is a deeper brown, and the elytral humeri slope more evidently. The fifth antennal segment is as long as the typical *fijiensis* just described, but is subcylindrical and only slightly wider than the fourth or the sixth segments. In other respects, as in *fijiensis*, having the very complicated venter and remarkable protibiae of the latter.

This variety is described from one specimen, the varietal type, which is a male collected on September 7, 1938 by Zimmerman, while beating shrubbery at 2,700 feet at Nandarivatu, Viti Levu. It is deposited in the collection of Bishop Museum.

The two species of *Rybaxis* described above have all of the generic features of the genus as outlined by Raffray (20, p. 246), but they depart from the genus as a whole in two features of the elytra. The discal stria of the elytra, and the subhumeral sulcus of the elytral flanks are shorter than is usual in the genus and may warrant subgeneric separation when the Polynesian fauna is better known. The zoögeographic affinities of the Fijian *Rybaxis* are with Australia, where the genus is very well-developed.

Sunorfa caviceps (Raffray) (figs. 7; 8, *a-d*).

Redescription of male. Light chestnut brown, with antennae, palpi, and legs flavous; pubescence rather sparse, bristling and long; integuments shining and nearly impunctate, except on elytra; elytra conspicuously punctured, the punctures deep, very large but not crowded, and each puncture bears a seta. Length, 1.35 mm.

Head with relatively small but prominent eyes, consisting of about 36 facets; tempora rounded, as long as eyes; occiput medianly incised, with incisure occupied by a short, thick,

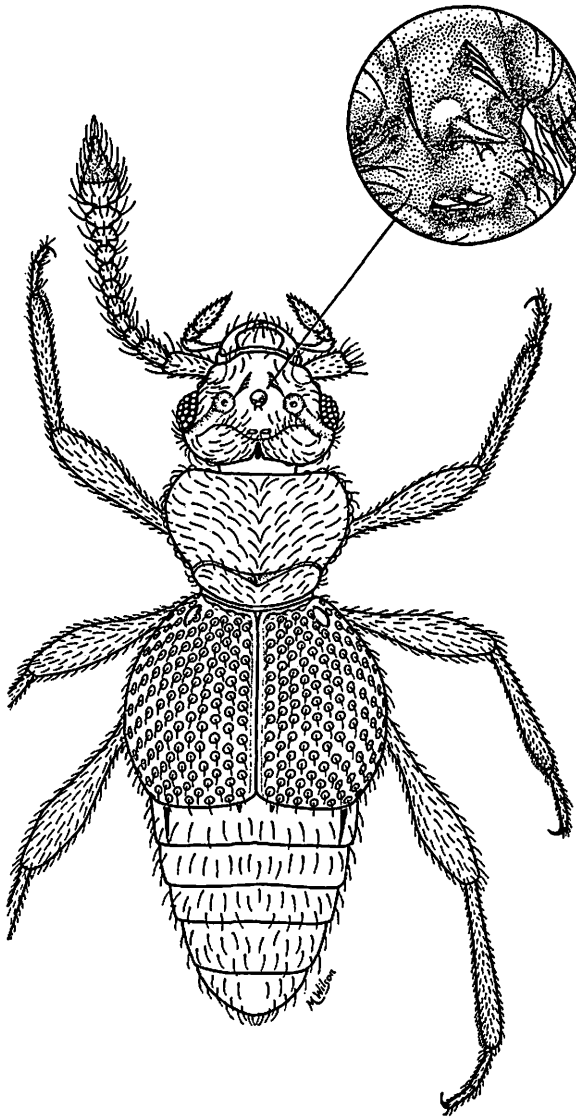

FIGURE 7.—*Sunorfa caviceps,* dorsal aspect of male, with inset showing vertexal detail.

longitudinal cervical carina. Vertex complex and subject to variation in the males. In general, posterior portion of vertex, just apical of occiput, is abruptly and strongly elevated. Transverse elevation varies from a condition in which its anterior wall is gently declivous and strongly arcuate in median half to a condition in which anterior wall is steeply declivous and almost truncate (figs. 7; 8, *a*). Medianly, just in front of this elevation, vertex bears two laminoid teeth. These vertexal teeth may be strictly parallel, looking like the tops of a picket fence, or they may form an obtuse angle with each other so that their mesial ends form the apex of an apically directed triangle. Just apical of these vertexal teeth, vertex bears a long conical spine which is as high as the occipito-vertexal elevation noted above. This vertexal spine may bear on its posterior face a delicate, hyaline, and just discernible flap, which is composed apparently of closely placed and partially agglutinated setae; or spine may bear a small bundle of setae on each side (figs. 7; 8, *a*). On each side of this vertexal spine is a vestigial vertexal fovea; these foveae range among males from shallow but obvious pits to almost imperceptible depressions; each fovea lies at base of a broad and oblique sulcoid impression that extends posteriorly between eye and lateral margin of occipito-vertexal elevation. In other words, instead of the traditional pair of well-developed vertexal foveae connected by an apically directed interfoveal sulcus, the present species has males with vestigial vertexal foveae and each fovea has an oblique posteriorly directed sulcus. Frontoclypeus and ventral surface of head simple. Maxillary palpi and antennae with proportions as illustrated (fig. 7).

Pronotum, as illustrated in figure 7, with a deep, strong, arcuate antebasal sulcus that is wider and deeper medianly and laterally; these three deeper and wider portions are probably homologous to the usual three antebasal foveae of many pselaphids; these three areas are nude, and the two lateral areas are far down on the flank and not visible from above.

Elytra conspicuously punctured as described above and as illustrated in figure 7; three weak ovate impressions near base of each elytron, corresponding to antebasal foveae of many species of pselaphids; humeri obtusely elevated; sutural stria vestigial; discal stria absent; elytral flank with a longitudinal carinoid elevation that parallels the margin, with the contained space impunctate; at base of this carinoid ridge there is a weak foveoid impression, but it is not clear whether this impression is a vestigial subhumeral fovea or is one of the large elytral punctures.

Abdomen with five visible tergites and six visible sternites. Abdominal margins lacking, *per se,* their places being taken by a long cuneiform carina on each side for nearly whole length of first tergite; first tergite with a pair of very short basal abdominal carinae, each one-fifth the segmental length and separated by about one-sixth of the total segmental width; fourth tergite longer than others. First sternite long and clearly visible behind metacoxae, as typical of tychine pselaphids; sixth sternite medianly produced apically and bearing a weak median depression in basal half and a prominent, conical tubercle at center (fig. 8, *c*).

Prosternum simple; metasternum slightly tumid laterally, with a median depression near apex.

Legs as illustrated (fig. 7); mesotrochanters with mesial angle of ventral face dentoid.

Female. In general as for male except that: (1) Vertex is radically different (fig. 8, *b*), the prominent transverse occipital elevation of male is normally convex in female, paired vertexal teeth, median vertexal spine, and oblique posteriorly directed sulci of male are absent in female, and instead vertexal foveae are more obvious and deeper in female and from each of these foveae extends an anteriorly directed sulcoid impression to interantennal line. These sulcoid impressions vary within the female sex; they may remain separate or they may coalesce to form a tenuous interfoveal sulcus. It is notable that the female has the traditional pselaphid vertex, that is, it is more conservative in this respect than the male. It will be remembered that the female of *Reichenbachia sexualis* has three normal cephalic foveae, whereas the male has but two vertexal foveae. (2) Sixth sternite is simple (fig. 8, *d*). (3) Mesotrochanters unarmed.

The above description is based on two males and three females. Two specimens from Wainiloka, Ovalau, were taken by Zimmerman on July 11, 1938, while beating shrubbery; one, from Kambara, Lau, was collected by E. H. Bryan, Jr., on August 24, 1924; and two from Vunindawa, Viti Levu, were collected by N. L. H. Krauss on May 2, 1941. One pair is retained by me, the others are in Bishop Museum.

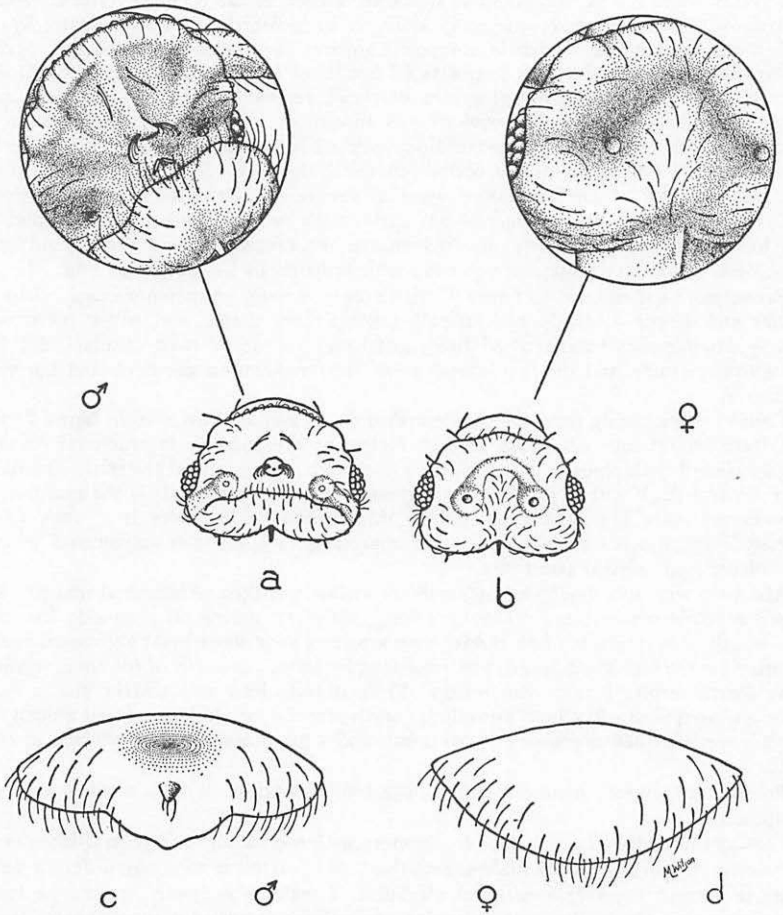

FIGURE 8.—*Sunorfa caviceps:* **a,** dorsal aspect of head of male and inset of vertexal detail to show range of variation; **b,** dorsal aspect of head of female, with inset showing vertexal detail; **c,** apical sternite of male; **d,** apical sternite of female.

This species was described by Raffray (18) as *Bythinomorpha caviceps* and was subsequently reallocated to *Sunorfa* by Raffray (20). The original description was based on two specimens from Vanikoro, Santa Cruz Islands. I have not seen the type specimen of *S. caviceps,* and it is possible that the

Fijian material represents another undescribed species in the genus. This is not my position, however, as the Fijian sample fits the original description very well as far as it goes. The original description is inadequate by modern standards, and I have used the Fijian material to redescribe this plastic, and apparently widely distributed, species.

Genus **Batrifigia,** new genus

Batrisini in which head is subquadrate to slightly transverse, with prominent, coarsely faceted eyes in basal half of head; tempora very short and not conspicuous; vertex with a pair of deep, nude, perforate vertexal foveae, from each of which extends an oblique sulcus; these sulci approach each other and at the interantennal line of the front are approximate but are not united; a strong median carina extends from cervicum, bisects occiput and continues over basal half of vertex; face complex and deeply, transversely excavated between antennae in male sex, but simply declivous in female sex; maxillary palpi four-segmented, with fourth segment regularly fusiform; antennae 11-segmented; prosternum not bisected medianly by a carina; pronotum with four nude basal foveae and three larger nude antebasal foveae, these latter connected by a biarcuate transverse pronotal sulcus; each lateral antebasal fovea at origin of a lateral longitudinal sulcus that extends apically to notch the lateral pronotal outline; each elytron with unarmed humeral angle, and with two nude antebasal foveae of which the sutural is at origin of an entire sutural stria and discal at origin of a discal stria that extends to about middle of elytral length; elytral flank lacks a subhumeral fovea but has a well-formed longitudinal sulcus that parallels the margin from basal fourth to apex; abdomen without lateral margins and without any marginal carinae; metacoxae not approximate, but separated by at least the length of first sternite; body elongate-cylindrical; typically batrisine tarsi, with a pair of unequally developed tarsal claws.

Genotype: *Batrifigia sulcata,* new species.

Key to Known Species of Fijian Batrifigia

1. Front and clypeus simple, face not excavated; venter convex from a lateral point of view.....females of **Batrifigia**
   Front or clypeus usually modified; face always deeply excavated between antennae beneath overhanging frontal margin; venter concave from a lateral point of view (males)..... 2
2(1). Distal segment of maxillary palpus bearing a long, setiform spine near apex of ventral face.....**B. spinipalpa**
   Distal segment of maxillary palpi not spined..... 3
3(2). First visible sternite bearing either a broad tumulus or a median erect lamina..... 4
   First visible sternite not modified as above.....**B. bucki**
4(3). First sternite bearing a large, transverse, saddle-shaped tumulus.....**B. sulcata**
   First sternite bearing a median, longitudinal, laminoid ridge or dentoid process .....**B. bispina**

Thus far, the genus *Batrifigia,* as constituted here, is known only from the Fiji Islands. As in *Eupifigia,* the male sex offers a variety of apparently species-specific combinations of secondary sex characters, whereas the female does not. This is an unfortunate but by no means uncommon feature in the Pselaphidae, and the modern taxonomy is largely based on such a system,

for example, *Euplectus, Reichenbachia,* and *Batrisodes,* to name a very few large genera where the keys are based primarily on male morphology.

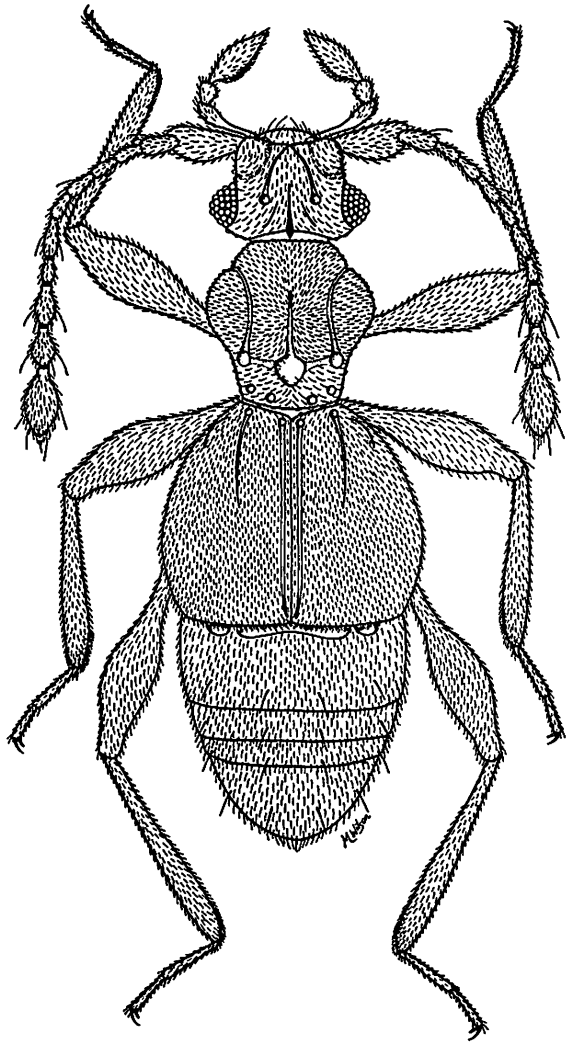

FIGURE 9.—*Batrifigia sulcata,* dorsal aspect of male.

Batrifigia has no close allies, with the exception of the genus *Batrisiella* (Raffray, 19, p. 180; 20, p. 178). The latter genus contains a single species, *B. caviventris* (Raffray, 17, p. 452), known from Ceylon. *Batrisiella* has a marginal carina at the base of the first visible tergite, whereas *Batrifigia* has no marginal carinae. Both *Batrisiella* and *Batrifigia* are allied to the large and

primarily Indo-Malayan genus *Batrisocenus,* but in the latter genus the metatrochanters are approximate, with the metasternum rounded or pointed between them (Raffray, 20, pp. 170-174).

Batrifigia sulcata, new species (figs. 9; 10, *a, b*).

Type male. Body shining, elongate-cylindrical, rich chocolate brown with top of head and appendages yellowish brown; pubescence moderately long, sparse and semiappressed; integuments shining, sparsely but distinctly punctulate on elytra and abdomen.

Length, 1.7 mm.; greatest width, 0.56 mm.

Head, not including eyes, subquadrate but much wider than long, including eyes; eyes very prominent, in basal half of head, composed of about 52 very coarse facets; the eyes hirsute, with about a dozen short ocular setae distributed between the facets of each eye; tempora very short, as long as two ocular facets, sloped into the cervicum; vertex rather flattened with a pair of nude, perforate vertexal foveae on a line through eye centers; a long, arcuate sulcus extends apically from each vertexal fovea to cross interantennal line of front, these two sulci in juxtaposition but not united; vertex bisected in basal half by a strong carina; a long guard seta behind each vertexal fovea. Face complex; the front and clypeus separated by a very deep excavation between antennal cavities; overhanging frontal margin medianly incised to form a pair of conspicuous declivous processes; on frontal declivity, a pair of conspicuous guard setae that arch above each declivous frontal process; clypeus lengthily sloped from facial excavation to labrum, heavily setose, the setae erected in fringes that almost touch declivous frontal processes; labrum short, transverse, with a concave apical margin; mandibles strong, left crossed dorsal to right; maxillary palpi and antennae as illustrated (fig. 9). First antennal segment nearly as long as next three segments united, nearly as wide as eleventh segment, with ventro-mesial face flattened and densely granulate-setose.

Pronotum as illustrated (fig. 9); a row of four basal nude foveae above basal bead; a row of three large, nude antebasal foveae at basal third, of which the median is much larger, all three connected by a shallow transverse sulcus; each antebasal fovea at base of a longitudinal sulcus, the median extending over disk to within a third of apical margin, the laterals at the base of lateral sulci that extend over pronotum to nitch the latero-apical outline.

Elytra as illustrated (fig. 9); humeri sloped and unarmed; each elytron with two nude basal foveae, the sutural fovea as base of entire sutural stria, the discal at base of a discal stria that extends nearly to center of elytral disk; flank with subhumeral fovea absent, but with a well-formed longitudinal sulcus that parallels elytral margin from basal fourth to apex.

Abdomen with five visible tergites and five visible sternites; abdominal margins absent, with no trace of lateral carinae; base of first tergite with three short depressions, a wide median one that occupies about half the total segmental width and a small semicircular depression each side; fifth tergite vertical; first four tergites each with a transverse row of four guard setae, and fifth with two guard setae. First sternite with a pair of deep foveae between metacoxae, as illustrated (fig. 10, *b*), and a lateral foveoid depression mesially bounded by a heavy cuneiform carina on each side; medianly this sternite bears a large and conspicuous transverse saddle-shaped tumulus, the lateral walls of which are erected as spinoid crests, this tumulus occupying about one-third of total segmental width; fifth sternite highest medianly, with a vague impression each side of median line.

Prosternum not medianly bisected by a carina; mesosternum conspicuously elongate, as long as metasternum, with confluent mesocoxal cavities; metasternum tumid laterally and sulcate medianly.

Legs with proportions as illustrated (fig. 9); coxae unarmed; mesotrochanters each with a prominent spine near base of ventral face, other trochanters unarmed.

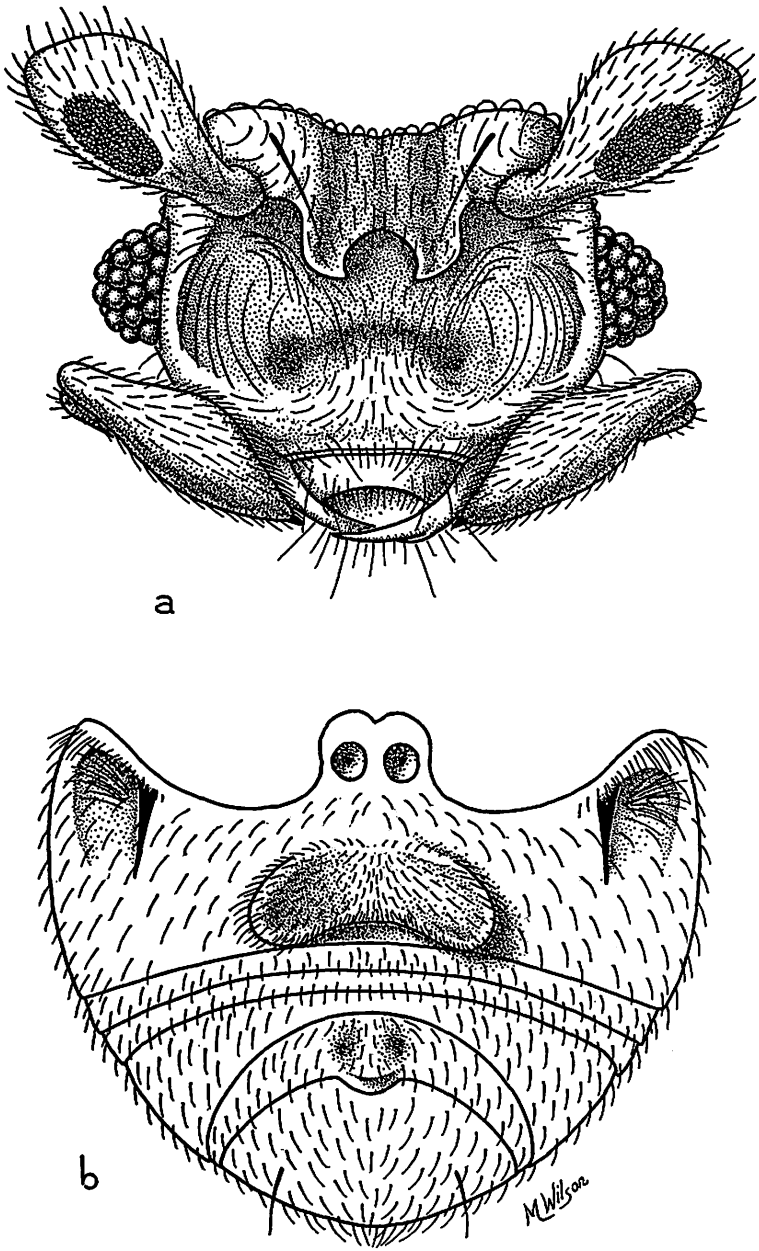

FIGURE 10.—*Batrifigia sulcata:* a, face of male; b, venter of male.

The species is described from six males collected by Zimmerman on Viti Levu; the type on September 2, 1938, while beating shrubbery at 3,000 feet at Nandarivatu; one paratype September 16, 1938, while beating vegetation at 3,000 feet on the west slope of Mount Victoria, Tholo North; and four paratypes on September 7, 1938, while beating shrubbery at 2,700 feet at Nandarivatu.

The type and three paratypes are in the collection of Bishop Museum; two paratypes, in my collection.

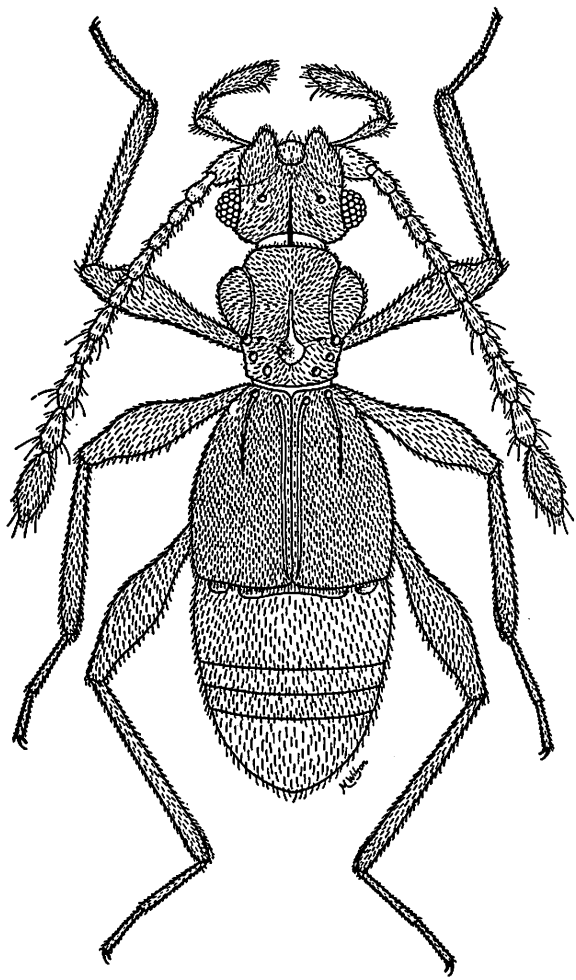

FIGURE 11.—*Batrifigia spinipalpa,* dorsal aspect of male.

Batrifigia spinipalpa, new species (figs. 11, 12).

Type male. Color, pubescence, integument, and size range as in *sulcata.*

Head shape and eyes as in *sulcata,* except that the number of ocular facets is lower, about 46; tempora and vertexal foveae as in *sulcata,* except that apical terminations of vertexal sulci are not as approximate. Face very complex (fig. 12); front extended each side as a thick, rounded-triangular lobe, these lobes with their long axes parallel to flattened vertex; front between these lobes deeply incised; from a direct facial view, frontal lobes are seen to be excavated on ventro-lateral face; the face is deeply excavated between antennae beneath frontal margin and is steeply declivous, on frontal declivity above excavation, front is bisected by a carina that is apically bifurcated; below this carina, frontal margin is produced in a pair of short and rounded lobes; clypeus gently declivous and center elevated in a rounded-trapezoidal tumulus, the lateral edges of which are sharply erected; labrum and mandibles as in *sulcata.* Maxillary palpi with fourth segment (figs. 11, 12) bearing a long, arcuate, setiform spine near apex of ventral face; this spine is conspicuous when palpus is extended, but is apt to be overlooked on casual inspection or if a specimen is examined with the palpus contracted. Antennae as illustrated in figure 11; first antennal segment with ventro-lateral face bearing a longitudinal impression.

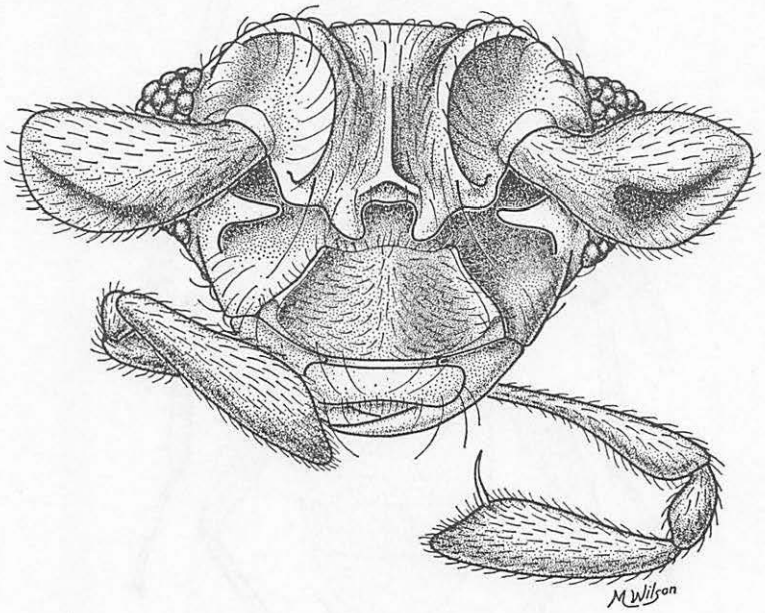

FIGURE 12.—*Batrifigia spinipalpa,* face and maxillary palpi of male.

Pronotum and elytra as in *sulcata,* except that basal pronotal foveae are in two oblique pairs, and elytral humeri slightly more elevated.

Metathoracic wings well-developed, with membrane iridescent, alutaceous, and covered with very minute and dense setae, whereas wing margin is fringed with long, hyaline setae. These wings can be better appreciated when their relative size is considered. A paratype with fully extended wings was found to have elytra 0.55 mm. long, whereas the wings were more than three times the elytral length, being 1.83 mm. long, or longer than the beetle.

Abdomen as illustrated in figure 11 and substantially as in *sulcata*, except that guard setae are not evident and venter is simple, with an unmodified first sternite. As in all males of the genus, lateral outline of venter is concave.

Sterna as in *sulcata*. Legs simple, with proportions as illustrated in figure 11.

This species is described from three males collected at Nandarivatu, Viti Levu: the type by Zimmerman, September 8, 1938, while beating shrubbery at 3,700 feet; a paratype also taken by Zimmerman on the night of September 8, 1938, at light, at 2,700 feet; and a paratype taken by Valentine in October 1937.

The type and paratype are in Bishop Museum; one paratype, in my collection.

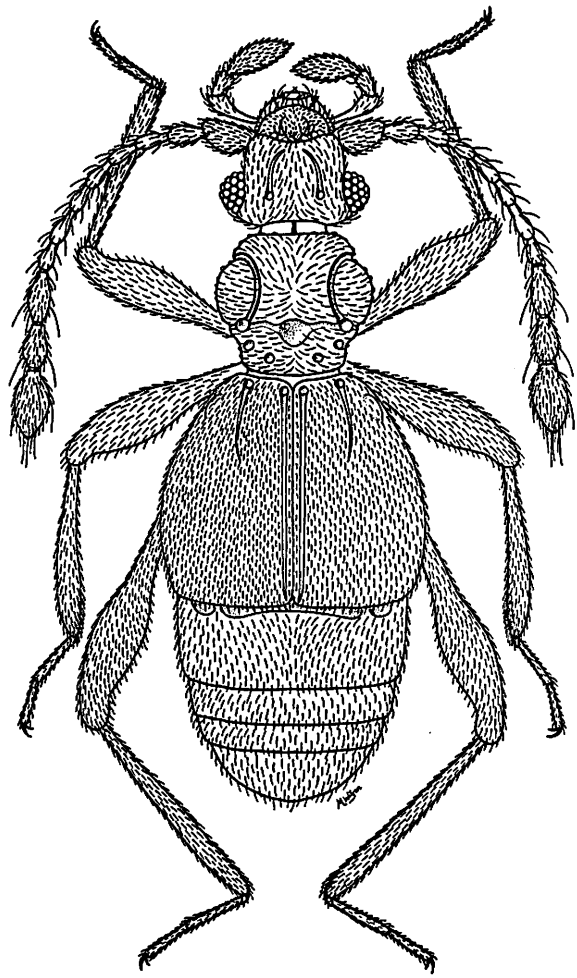

FIGURE 13.—*Batrifigia bispina*, dorsal aspect of male.

Batrifigia bispina, new species (figs. 13; 14, *a, b*).

Type male. Shining mahogany brown with slightly paler appendages; pubescence both sparser and coarser than in *sulcata;* punctulation as in *sulcata.*

Length, 1.8 mm.; greatest width, 0.67 mm.

Head with prominent eyes, composed of about 36 very coarse facets; vertex as in *sulcata* except that vertexal sulci are slightly shorter and are not as approximate apically, and median carina bisects cervicum but does not extend on vertex. Face complex (fig. 14, *a*), as characteristic of males of the genus, with frontal margin bearing a pair of median conical spines; there is a pair of subsidiary spinules at base of each frontal spine, so that frontal margin really bears a pair of trispinose, apically setose processes; face deeply transversely excavated beneath frontal margin; clypeus laterally setose and carinated and medianly erected in a densely setose tubercle; labrum and mandibles as in *sulcata;* maxillary palpi simple (fig. 14, *a*); antennae as illustrated in figure 13, simple, with ventral face of first segment irregularly tumid but not secondarily modified as in *sulcata* and *spinipalpa.*

Pronotum (fig. 13) with lateral sulci much deeper and wider than in *sulcata* (fig. 9), and in the type of *bispina* median sulcus is absent so that pronotal disk is simple.

Elytra as in *sulcata.* Abdomen (fig. 13) substantially as in *sulcata,* with a relatively wider median depression of first tergite. Venter is distinctive (fig. 14, *b*), the first visible sternite bearing a strong, erect, laminoid and setose longitudinal ridge that almost bisects the segment. Sterna as in *sulcata.* Legs (fig. 13) simple, except that mesotrochanters each bear a cylindrical spine at apex of ventral face.

There is considerable variation in *bispina* males. One paratype differs from the above description in five particulars: (1) Median cephalic carina extends from cervicum across vertex to a point anterior to vertexal foveae. (2) Ventral face of first antennal segment is longitudinally foveoid and basally setose. (3) Median pronotal sulcus is present, extending from median antebasal fovea across pronotal disk to apical third. A second paratype has an evanescent median pronotal sulcus, so that it is intermediate in this regard. (It was for this reason that the key to the Polynesian pselaphid fauna was organized to take into account this variability in *bispina* pronotal sculpture. These first three items tend to bridge the gap between *bispina,* as described from the type, and other members of the genus.) (4) Diagnostic median laminoid process of first sternite is present in all paratypes of *bispina,* but in one paratype is shorter, in the form of a triangular and subglabrous tubercle. (5) In one paratype, fifth sternite has apical third erected into a granulate-setose, saddle-shaped, transverse process, oddly similar to the much larger tumulus on first sternite of *sulcata.*

This species is described from three males collected near Nandarivatu, Viti Levu. The type was taken from shrubbery by Zimmerman on September 3, 1938, on a ridge west of Vatuthere between 2,600 and 3,000 feet; one paratype was taken by Zimmerman on September 6, 1938, at 3,600 feet; and one paratype was collected in October 1937 by Valentine.

The type and one paratype are in Bishop Museum; one paratype, in my collection.

Batrifigia bucki, new species.

Type male. Shining, rich chocolate brown with yellowish brown appendages; moderately long, sparse, semiappressed pubescence; integuments sparsely but distinctly punctulate on elytra and abdomen, much more finely so on head and pronotum.

Length, 1.5 mm.; greatest width, 0.6 mm.

Head, exclusive of eyes, slightly transverse; eyes prominent, located in basal half of head, composed of about 26 very coarse facets, with about 12 short setae dispersed

between facets; tempora short, about as long as two ocular facets and sloping evenly into cervicum; a pair of nude, perforate vertexal foveae on a line anterior to eye centers, each fovea nearer adjacent eye than each other, each fovea at origin of a deep, arcuate sulcus, these two foveal sulci approaching each other on frontal margin, but not united; frontal margin concave in outline between antennal bases, the front vertical to form a sharply defined and overhanging frontal margin; frontal margin medianly produced into a pair of conical spines; face deeply excavated beneath frontal margin, from one antennal cavity to the other, floor of excavation formed by clypeus, which is laterally carinate and setose and medianly elevated in a long setose tuberculoid swelling; labrum short, transverse, with concave apical outline; mandibles with left crossed dorsal to right; maxillary palpi simple, four-segmented, first minute, second elongate-pedunculate, third obconical, fourth acute-fusiform, with a small palpal cone, as illustrated for *bispina* (fig. 14); antennae 11-segmented, slender, normal, save that first segment has the ventral face longitudinally foveoid; vertex bisected by a strong carina that extends from a point opposite anterior eye margins basally over cervicum.

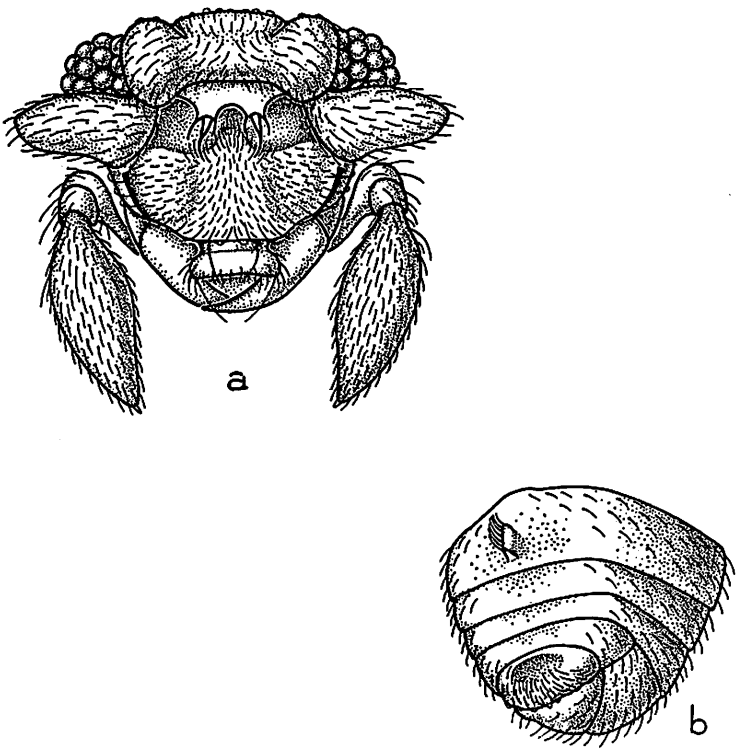

FIGURE 14.—*Batrifigia bispina:* a, face and maxillary palpi of male; b, three-quarter aspect of venter of male.

Pronotum and elytra as illustrated for *sulcata* (fig. 9).

Abdomen with abdominal margins and carinae absent and tergite guard setae not evident; five visible tergites in a length ratio of 3/1/1/3/3, the fifth is invisible from above and subvertical; base of first tergite with three short depressions, a median that occupies slightly more than half of total segmental width and a small semicircular depression each

side; five visible sternites in a length ratio of 2/0.5/0.5/0.7/1 with venter concave in lateral outline and relatively simple for the genus; first sternite with a small triangular depression at center of apical margin, and fifth sternite simply inclined.

Prosternum simple, not medianly bisected by a carina; mesosternum elongate, as long as metasternum; mesocoxal cavities confluent; metasternum tumid laterally and sulcoid medianly.

Mesotrochanters with a small tooth at apical third of ventral face; legs otherwise simple, with tarsi bearing a pair of very unequal claws.

This species described from one specimen, the male type, deposited in Bishop Museum, collected by beating shrubbery at 2,600 to 3,000 feet on a ridge west of Vatuthere, Viti Levu, by Zimmerman, on September 8, 1938. The species is named in honor of the late Dr. Peter H. Buck, Director of Bishop Museum.

Genus **Batrivitis,** new genus

Batrisini in which the head is subquadrate to subpentangular, with prominent, coarsely faceted eyes in basal half of head; tempora short and inconspicuous; vertex with a pair of nude foveae on a line through eye centers; face deeply and transversely excavated between antennae in male sex, with an overhanging frontal margin, but face simply declivous in female sex; maxillary palpi four-segmented, with fourth segment regularly fusiform; antennae 11-segmented; prosternum not bisected medianly by a carina; pronotum with four nude basal foveae and three larger nude antebasal foveae; antebasal pronotal foveae connected by a transverse sulcus that ranges between the species from an evanescent impression to a definite sulcus; median antebasal pronotal fovea may be at base of an apically narrowing sulcoid impression that crosses basal half of pronotal disk, or no median sulcus may be present, in which case the pronotal disk is simple; lateral antebasal pronotal foveae each at origin of a longitudinal sulcus that extends apically to notch the lateral pronotal outline; each elytron as described for *Batrifigia,* except that elytral flank bears a subhumeral fovea which is recessed under the short vertical arm of an entire longitudinal sulcus which parallels elytral flank, and elytral humeri may be minutely denticulate; abdomen without lateral margins and without any marginal carinae; metacoxae not approximate, but separated by a transverse distance that is at least as long as length of first sternite; body is elongate-cylindrical; typically batrisine tarsi, with a pair of unequally developed tarsal claws.

Genotype: *Batrivitis facialis,* new species.

Batrivitis is closely allied to *Batrifigia,* but it differs in an essential structural feature of the elytra. The elytral flank in *Batrifigia* does not bear a subhumeral fovea, whereas in *Batrivitis,* there is a well-formed subhumeral fovea, as illustrated for the genotype (fig. 16, *a*).

Batrivitis facialis, new species (figs. 15; 16, *a, b*).

Holotype male. Reddish brown with antennal tubercles, face and appendages paler; pubescence moderately long, sparse, semiappressed and flavous; integuments sparsely punctate with punctures coarse on elytra, especially so in female sex.

Length, 1.44 mm.; greatest width, 0.60 mm.

Head pentangular, if eyes are not included; eyes prominent, in basal half of head, consisting of about 40 very coarse facets; tempora short, wide, evenly rounded into cervicum; cervicum bisected by a carina that does not extend on vertex; vertex with a

vague pyriform depression at center, from which extends apically a just discernible carinoid elevation; vertexal foveae small, deep, located on a line through eye centers; each vertexal fovea about as large as an ocular facet, and each at base of a deep, narrow, arcuate sulcus which extends obliquely to front. Face very complex (fig. 16, *a*); front medianly and deeply excavated between antennae, so that each antennal tubercle so formed appears set off as a rounded lobe; mesio-apical face of each tubercle obliquely excavated and bearing dorsally a triangular bundle of setae; front extended as an overhanging frontal margin; beneath this margin, face is transversely excavated between antennal cavities; clypeus medianly elevated in a pair of long, sinuate horns which arise vertically to rest against frontal margin; each of these clypeal horns apically bifid; under high magnification each bifurcated ramus appears to be composed of agglutinated setae; from base of swelling that bears the two clypeal horns, clypeus is elevated in a carinoid ridge which broadens in a triangular swelling at clypeal margin; labrum transverse and articulated more vertically than is usual in pselaphids, with a concave margin; mandibles prominent, left crossed dorsal to right; maxillary palpi four-segmented, first segment

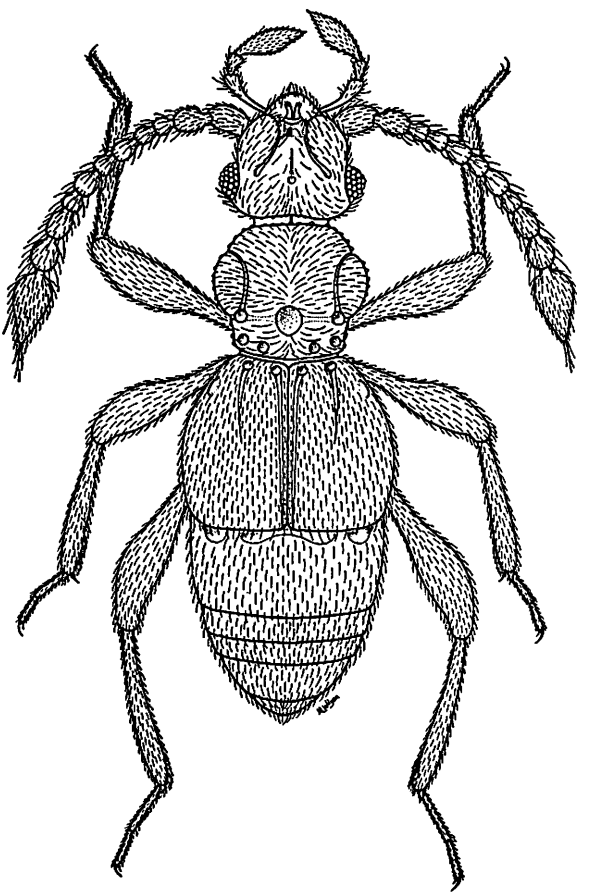

FIGURE 15.—*Batrivitis facialis*, dorsal aspect of male.

minute, second arcuate-pedunculate and apically swollen, third elongate-triangular, fourth subfusiform with a minute and oblique palpal cone at apex. Antennae 11-segmented, with proportions as illustrated in figure 15; second segment peculiar, oval, slightly shorter than first, with mesial face excavated to form a shallow but extensive oval depression. Ventral surface of head transversely tumid, with a well-defined median longitudinal carina that ends in the usual gular fovea. Ventral aspect of cervicum as in *Batrinanda foveata.*

Pronotum with a row of four nude, paired basal foveae; three nude antebasal foveae; transverse sulcus that connects these antebasal foveae is vestigial and so evanescent that its limits are not easily seen; an arcuate lateral sulcus extends from each lateral antebasal fovea to apical margin; median antebasal fovea larger than laterals, with no sulcus extending apically, so that pronotal disk is simple and convex.

Elytra with obvious but unarmed humeri; each elytron with two nude basal foveae, the sutural at origin of entire sutural stria, the discal at origin of discal stria that extends to center of elytral disk; flank of elytron with a well-formed subhumeral fovea which is recessed beneath the short vertical arm of a long sulcus that parallels elytral margin (fig. 16, *b*).

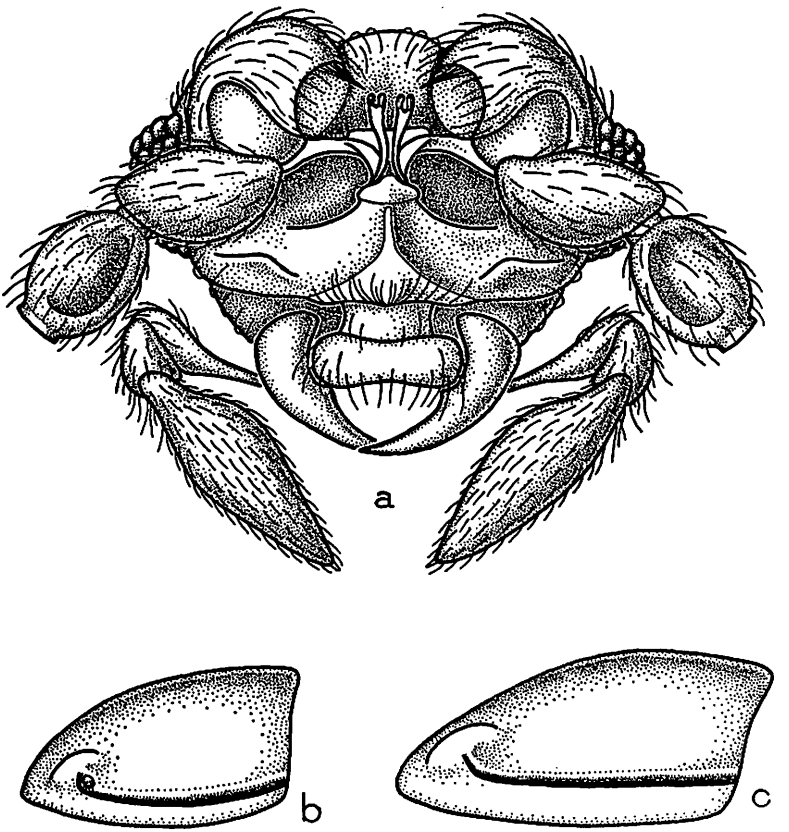

FIGURE 16.—a, b, *Batrivitis facialis: a,* face of male; *b,* flank of left elytron. c, *Korovodes femoralis,* flank of left elytron.

Abdomen with five visible tergites with proportions as illustrated (fig. 15); base of first tergite with the usual three depressions, as in *Batrifigia,* and lacking lateral margins of any kind; venter relatively simple, first sternite longer than succeeding three united, these latter short and subequal; fifth sternite obliquely elevated and about as long as preceding three segments united. Venter concave in lateral outline.

Prosternum not bisected by a carina but setose over most of its surface; metasternum longitudinally impressed.

Legs relatively simple and unarmed; tarsi bearing the usual pair of unequally developed tarsal claws.

Allotype female and one *paratype female* agree with above description, except that (1) the face is simply declivous and (2) the venter is evenly convex in lateral outline.

This species is described from three specimens: the holotype, collected by Valentine in October 1937 at Nandarivatu, Viti Levu; the allotype and the paratype, taken by Valentine on September 30, 1937, at Wainiloka, Ovalau.

Holotype and allotype deposited in the collection of Bishop Museum; the paratype, in my collection.

Batrivitis clypeata, new species.

Type male. Shining reddish brown; pubescence sparse, flavous and inclined; integument with sparse, shallow but large punctures, except on pronotal disk, which is nearly glabrous, and head, which has the punctures coarse laterally.

Length, 1.6 mm.; greatest width, 0.53 mm.

Head subquadrate, with prominent eyes, composed of about 32 coarse facets, in basal half; tempora very short, about one-third as long as eyes and inconspicuous; occiput bisected by a stout carina that extends from cervicum to a point through posterior third of eyes; vertex with a pair of nude vertexal foveae on a line through eye centers, each fovea nearer adjacent eye than the other fovea; these vertexal foveae, although deep, are rendered inconspicuous by the peculiar vertexal sulci; a vertexal sulcus arises near the temporal angle, extends obliquely apically, enveloping vertexal fovea, and becomes broader and deeper to end free at frontal margin, so that head is trisected; frontal margin medianly concave; face deeply, transversely excavated between antennal cavities beneath frontal margin; clypeus with a high, transversely laminoid and heavily setose cone; labrum, mandibles and maxillary palpi as in *facialis;* ventral surface of head transversely gibbous and bearing a gular fovea at base, but with bisecting carinoid ridge not evident. Antennae simple and 11-segmented; first segment arcuate; second subovate, narrower than first; third to eighth subequal in width and elongate-obconical; fifth distinctly longer than either fourth or sixth; seventh distinctly longer than either sixth or eighth; distinct club of last three segments; ninth and tenth subequal in length, and as long as seventh and eighth united in each case; ninth fusiform; tenth wider, subovate; eleventh nearly as long as preceding two united, slightly wider and fusiform.

Pronotum with four nude basal foveae arranged in two pairs just above basal bead; three nude antebasal foveae, of which the median is very large and pyriform with apical end extended as a rapidly narrowing impression to cross basal half of pronotal disk; lateral foveae each extended apically in a lateral sulcus that notches apical outline; all three antebasal foveae are connected by a transverse sulcus.

Elytra with humeri minutely denticulate; otherwise as in *facialis.*

Abdomen as in *facialis;* five tergites in proportional length ratio of 3.5/1/1/2/2.3 and five sternites in proportional length ratio of 2/0.3/0.3/0.4/1 without sternite abnormalities.

Prosternum and metasternum as in *facialis;* legs simple, except that each mesotrochanter and metatrochanter is armed with a distinct tooth at center of ventral face; metacoxal separation and tarsi as in *facialis.*

This species is described from one male, the type, deposited in Bishop Museum, and collected at Nandarivatu, Viti Levu, by Zimmerman on September 11, 1938, at light at night.

Genus **Sulcifigia**, new genus

Batrisini with prominent, coarsely faceted eyes in basal half of head; tempora short and rounded; a pair of densely pubescent vertexal foveae united by an entire interfoveal sulcus apically and with a Y-shaped interfoveal sulcus basally, stem of Y bisecting occiput; maxillary palpi four-segmented, with fourth segment fusiform; antennae 11-segmented; prosternum not bisected by a median carina; pronotum with four nude basal foveae and three antebasal foveae; three antebasal foveae united by a deep transverse sulcus; median antebasal fovea extended over pronotal disk as a deep sulcus; lateral antebasal foveae extended apically as exceptionally deep and very pubescent lateral sulci; elytra with rounded, unarmed humeri; each elytron with two basal foveae, the sutural fovea at base of a weak sutural stria; no discal stria or impression, the elytral disk convex; elytral flank with a subhumeral fovea at origin of an entire subhumeral sulcus; abdomen without lateral margins and lacking marginal carinae, of five visible tergites and sternites; metacoxae separated by a distance that is nearly equal to length of first sternite; body elongate-cylindrical; typically batrisine tarsi, with a pair of heavy, unequally divided tarsal claws.

Genotype: *Sulcifigia bishopae*, new species.

Sulcifigia bishopae, new species (fig. 17).

Type. Reddish brown with front, antennae, palpi, apical portions of femora, and tarsi paler; pubescence reddish brown, moderately long and semiappressed; integuments polished and subimpunctate except that elytra are dull and subalutaceous and abdomen is sparsely but distinctly punctate.

Length, 1.6 mm.; greatest width, 0.60 mm.

Head rounded trapezoidal; eyes, composed of about 28 small facets, in basal portion of head; tempora shorter than eyes, wide, with prominent rounded angles. Vertex very complex; a pair of large, obliquely ovate vertexal foveae; each fovea as wide as an eye and heavily pubescent, these setae long, flavous, and extending obliquely mesiad to vertex so that foveae are inconspicuous; vertexal foveae connected apically by a deep, ogival interfoveal sulcus, and also connected by lateral arms of a deep Y-shaped sulcus, posterior stem of which bisects occiput; a short cervical carina lies in posterior stem of this Y-shaped sulcus; in center of vertexal island, that is bounded by the two interfoveal sulci, the area is bisected by a median, vertexal carina; frontoclypeus simple; interantennal portion of front medianly concave; clypeal portion of face unmodified, steeply declivous to a strong beaded clypeal margin; labrum transverse, with a concave apical outline; mandibles powerful; ventral surface of head as in *Batrinanda;* maxillary palpi four-segmented, first segment minute; second elongate and slightly swollen apically; third elongate-subcylindrical, slightly narrower than second and one-fourth as long as fourth; fourth palpus segment subfusiform with ventral face slightly swollen, and a small apical palpal cone. Antennae simple, 11-segmented, with a three-segmented club, as illustrated in figure 17.

Pronotum with four large, nude, basal foveae; the usual three antebasal foveae are inconspicuous as a consequence of the strong longitudinal sulci; the median sulcus extends from apical fifth, bisects pronotal disk, and extends nearly to basal bead; on each side a very deep, arcuate and heavily setose lateral longitudinal sulcus; as in many batrisine genera, these lateral sulci are in reality circular and continuous, extending

ventrally and basally on pronotal flank to rejoin lateral fovea so that pronotum is dorsally trisected; these three longitudinal sulci united by a deep transverse antebasal sulcus.

Elytra with round humeri; each elytron with two large, nude, basal foveae; sutural stria weak; no trace of a discal stria; elytral flank bearing a deep subhumeral fovea at base of a long subhumeral sulcus that parallels elytral margin.

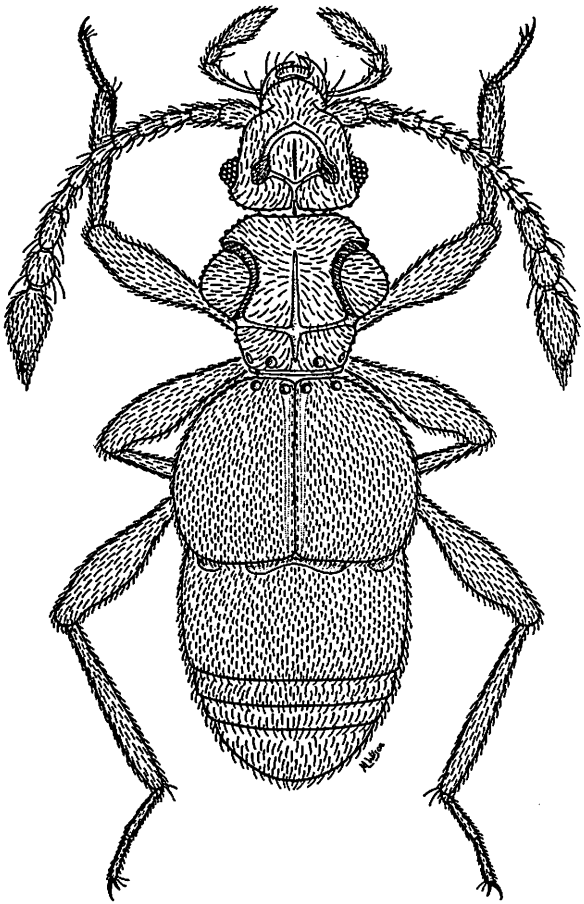

FIGURE 17.—*Sulcifigia bishopae,* dorsal aspect of male.

Abdomen with five visible tergites and five visible sternites; lateral margins lacking, lateral carinae lacking; tergites with proportions as illustrated in figure 17, and base of first tergite with usual three depressions; venter simple, with first and fifth sternites subequal in length and intermediate three sternites short. Venter with an evenly convex lateral outline.

Prosternum not bisected by a carina; densely setose. Metasternum just discernibly impressed medianly.

Legs simple and unarmed; metacoxae separated by a transverse distance that nearly equals length of first sternite; batrisine tarsi, with a pair of unequally developed tarsal claws.

The species is described from a single specimen, probably female, collected by Valentine in October 1937 at Nandarivatu, Viti Levu, and deposited in Bishop Museum.

The species is named in honor of Bernice Pauahi Bishop.

Genus **Korovodes,** new genus

Batrisini with prominent, coarsely faceted eyes in basal half of head; tempora short and rounded; a pair of small, deep, nude vertexal foveae connected by a deep, entire, U-shaped interfoveal sulcus; frontoclypeus simply declivous and face not excavated in either sex; maxillary palpi four-segmented, with fourth segment subfusiform; antennae 11-segmented; prosternum not bisected by a median carina; pronotum with four nude basal foveae and three nude antebasal foveae; antebasal foveae connected by a transverse sulcoid impression; pronotal disk simple; a narrow lateral longitudinal sulcus each side from lateral antebasal foveae; elytron with humeri denticulate, two nude basal foveae, a feeble sutural stria, a short and feeble discal impression from discal fovea; elytral flank with roughly impressed punctures and bearing a long and deep longitudinal sulcus, the outer wall of which is carinoid; subhumeral fovea absent from elytral flank; abdomen without margins of any kind and marginal carinae absent; five tergites and five sternites in both sexes; metacoxae distant; body elongate-cylindrical; typically batrisine tarsi; tarsal claws unequally developed.

Genotype: *Korovodes femoralis,* new species.

Korovodes is allied to *Batrifigia;* but it is distinct in that the former has denticulate humeri, lacks a median pronotal sulcus, the face is simply declivous in both sexes, and the outline of the venter is convex in both sexes. The male sex of *Korovodes* is characterized by very abnormal metafemora and specialized areas on the third tergite.

Korovodes femoralis, new species (figs. 16, *c*; 18).

Holotype male. Shining reddish brown with paler appendages; pubescence moderately long, semiappressed and flavous; the integuments sparsely punctulate except for elytra, which are coarsely punctate toward flanks.

Length, 1.8 mm.; greatest width, 0.60 mm.

Head, excluding eyes, longer than wide; prominent eyes, composed of about 32 very coarse facets, in basal half of head; short tempora, one-third as long as eyes; cervicum and occiput bisected by a median carina that extends apically to vertexal foveae; a pair of deep, nude vertexal foveae, about the diameter of an ocular facet, and connected by a deep, entire, U-shaped, interfoveal sulcus; frontoclypeus simple and declivous to sharp clypeal margin bead; mandibles strong, left crossed dorsal to right; maxillary palpi and antennae simple, with proportions as illustrated in figure 18; ventral surface of head transversely tumid, with a median longitudinal carina in apical half and a deep gular fovea at base; ventral surface of cervicum with three narrow sulci in basal half, consisting of a longitudinal median sulcus and a pair of converging lateral sulci that unite apically. The triangular area enclosed by these lateral cervical sulci is transversely microstriate, and since this striated area bears against the prosternal margin, it is possible that this is a stridulatory organ.

Pronotum with four nude, basal foveae; three larger, nude, antebasal foveae; antebasal foveae connected by a shallow transverse sulcus; median antebasal fovea large and not extended apically as a median sulcus, so that pronotal disk is simply convex; lateral

pronotal sulci narrow but well-formed, one extending from each lateral antebasal fovea; each of these lateral sulci passes apically to cross pronotal margin at apical sixth, then ends abruptly on pronotal flank in a foveoid depression, not a circular sulcus as in *Sulcifigia.*

Each elytron with a short, stout tooth at humeral angle; two nude basal foveae; sutural fovea at base of a feeble but entire sutural stria; discal fovea at base of a feeble discal stria that extends through about basal third; elytral flank roughly set with shallow punctures and bearing a deep sulcus that parallels the elytral margin for four-fifths of length, then curves dorsad just below humeral tooth (fig. 16, *c*); no subhumeral fovea.

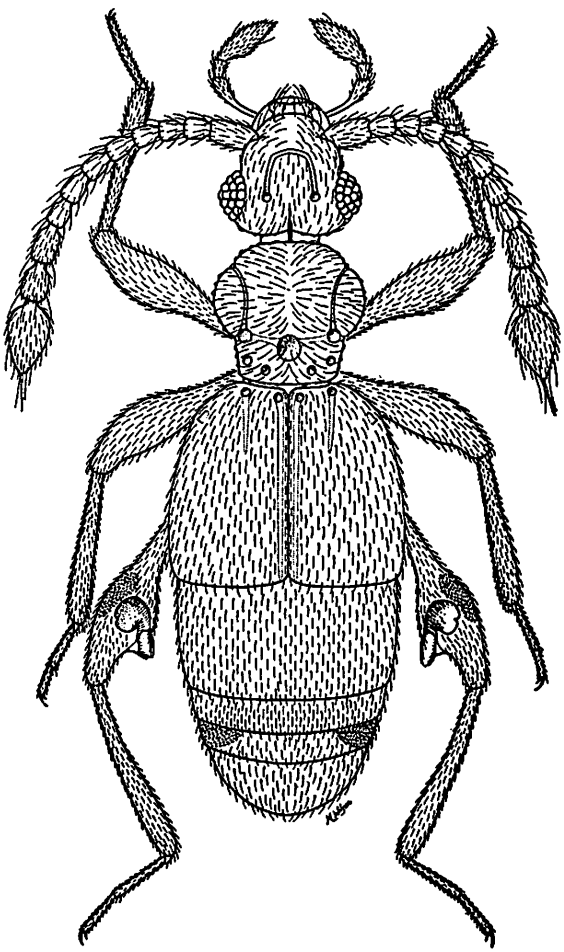

FIGURE 18.—*Korovodes femoralis,* dorsal aspect of male.

Abdomen of five visible tergites and five visible sternites; no lateral margins and no lateral carinae; first tergite with basal depressions or basal carinae not evident; first four tergites with proportions as illustrated in figure 18; third tergite abnormal, bearing a dense patch of short setae in a depression at each lateral fourth; fifth tergite invisible

from above, set obliquely ventral in position. Setose areas of third tergite may represent glandular areas; they are confined to male sex, and the setae appear to be flattened. Venter simple; first sternite longer than next three united, and these first four are convex in lateral outline, a condition not usually associated with the male sex; fifth sternite slightly longer than preceding two united and bearing medianly a few coarse punctures.

Prosternum not medianly bisected by a carina; metasternum slightly tumid laterally and medianly weakly impressed.

Legs simple, except for metafemora, which are remarkable in their modification. Each metafemur (fig. 18) is tumid in median third of length; external face of swollen area bears an oval patch of dense, short, flattened setae, as described for third tergite; dorsal and mesial faces of swollen area are deeply excavated in a large oblique fossa that reminds one of the excavation of the mesofemora of many male *Decarthron* of the tropical American fauna; excavation is much more extensive than illustrated, as it extends basally beneath overhanging basal margin, and carinoid edges are fringed with long setae. Tarsi batrisine, bearing the usual very unequal tarsal claws.

Male paratypes agree with above description.

Allotype female and *female paratypes* agree with above description, except that (1) third tergite is simple and lacks the lateral scaloid patches, and (2) metafemora are simple and unmodified.

This description is based on 10 specimens: the holotype male, the allotype female, and five male and three female paratypes. They were all taken at light at night by Valentine at Korovou, Tailevu, eight during August 1937 and the remaining two paratypes on the night of November 10, 1937.

The holotype, allotype, and five paratypes are in the collection of Bishop Museum; three paratypes, in my collection.

Genus **Batrinanda,** new genus

Batrisini with transverse head; eyes set at middle of head length, composed of numerous small facets; tempora longer than eyes; vertex with a pair of vertexal foveae connected by an entire interfoveal sulcus; maxillary palpi four-segmented, fourth segment arcuate-pedunculate; antennae 11-segmented, with submoniliform segments, except for first and last; prosternum not medianly bisected by a carina; pronotum with four basal foveae and three antebasal foveae; antebasal foveae free, not connected by a transverse sulcus; pronotal disk bisected by a median sulcus; a strong lateral longitudinal ridge on each side, these ridges bisecting lateral foveae; a short spine just mesiad of each lateral antebasal fovea; elytral humeri not armed; each elytron with two nude basal foveae, a feeble sutural stria, but no discal stria present; elytral flank with a sulcoid impression in apical half, but lacking a subhumeral fovea; abdomen with five visible tergites and five visible sternites; first tergite with a pair of strong lateral carinae on each side, second tergite with a single marginal carina each side; metacoxae approximate, separated by a transverse distance that equals length of fifth sternite; body elongate-cylindrical; batrisine tarsi, with unequally developed tarsal claws.

Genotype: *Batrinanda foveata,* new species.

This genus has no close allies in the Polynesian fauna, so far as is known; but since the genotype is based on what appears to be the female sex, more data are desirable before a considered opinion can be stated.

Batrinanda foveata, new species (fig. 19).

Type. Shining reddish brown with head, tip of abdomen, and appendages paler; pubescence long, sparse, coarse, and semiappressed; integuments polished and sparsely but distinctly punctulate.

Length, 2.5 mm.; greatest width, 0.87 mm.

Head very transverse if eyes are included; eyes set at center of lateral margins, prominent, composed of about 64 small facets; tempora long, distinctly longer than eyes, very broadly arcuate to cervicum; head with a strong median carina that bisects cervicum and occiput and extends across vertex to a point through eye centers; a pair of deep, nude, perforate vertexal foveae on a line through posterior eye margins; vertexal foveae connected by a deep, polished, entire, interfoveal sulcus; front conspicuous, its margin produced apically between antennae in a triangular process, the edge of which is thin and black; apex of blackened margin then becomes declivous to apical margin of clypeus, so that face is not transversely excavated; clypeal margin with a prominent bead; labrum very transverse with concave apical outline; mandibles powerful, left crossed dorsal to right; ventral surface of head transversely tumid, a bisecting carina in apical half and a deep gular fossa at base; ventral surface of cervicum with a transversely microstriate, triangular area bounded by oblique and converging striae. Maxillary palpi four-segmented; first segment minute; second elongate, pedunculate, apically swollen; third small, subtriangular, not as wide as second, and with an unusually long articular peduncle into second; fourth slightly arcuate at base, then subfusiform, with a small, apical palpal cone. Antennae simple, rather heavy-bodied, 11-segmented, with proportions as shown in figure 19; second to tenth segments, inclusive, oval to spherical, so that organs appear submoniliform.

Pronotum strongly sculptured (fig. 19); a row of four large, nude, basal foveae; a row of three large, nude, antebasal foveae; median antebasal fovea smaller than laterals and at base of a median longitudinal sulcus that deeply bisects pronotal disk and extends nearly to apical margin, this sulcus slightly dilated medianly; each lateral antebasal fovea bisected by a strong longitudinal lateral ridge, the latter carinoid, blackened in reflected light, and arises as an arcuate carina just mesial of a lateral basal fovea, to extend apically to curve sharply over pronotal flank; each lateral antebasal fovea is secondarily foveate on each side of bisecting ridge; a short, hooked spine just mesiad of each lateral antebasal fovea, near bisecting lateral ridge; lateral margins of pronotum carinoid and blackened in apical third of length.

Elytra with unarmed humeri; each elytron with two large, nude, perforate basal foveae, the sutural fovea at origin of an entire but feeble sutural stria; sutural margin strongly beaded; no discal stria; flank lacking a subhumeral fovea, but with apical half bearing a carinoid ridge that parallels elytral margin, this carina forming the lateral wall of a longitudinal sulcoid impression.

Abdomen with five visible tergites and five visible sternites; first tergite with a basal row of three subequal, deep, sublunate impressions; the two intermediate areas between these basal impressions consequently elevated, giving the impression of a pair of very heavy basal abdominal tubercles; tergites with proportions as illustrated in figure 19; first tergite with a pair of lateral marginal carinae each side, the internal carina straight and slightly oblique, the external carina arcuate, to converge with internal at apical three-fourths; second tergite with margin formed by a single internal, straight carina each side. Venter simple, the sternites convex in lateral outline; first sternite as long as next three united; second, third, and fourth sternites short and subequal; fifth as long as preceding two united.

Prosternum simple, not medianly bisected by a carina. Metasternum tumid on each side of a median longitudinal sulcus; this sulcus ends before metacoxae, and at this point metasternum is medianly elevated and longitudinally cleft between metacoxae.

Legs unarmed, heavy-bodied, with thick and laterally compressed tibiae; tibiae longi-

tudinally microstriate for apical half of ventral face; apically hooked femora are medianly tumid; tarsi typical of tribe, three-segmented, first segment minute, second longer than third, third bearing two strong, unequal tarsal claws. Metacoxae are more approximate than in other batrisine genera reported from the Fiji Islands, but are not conspicuously close to each other, being separated by a distance equal to length of fifth sternite.

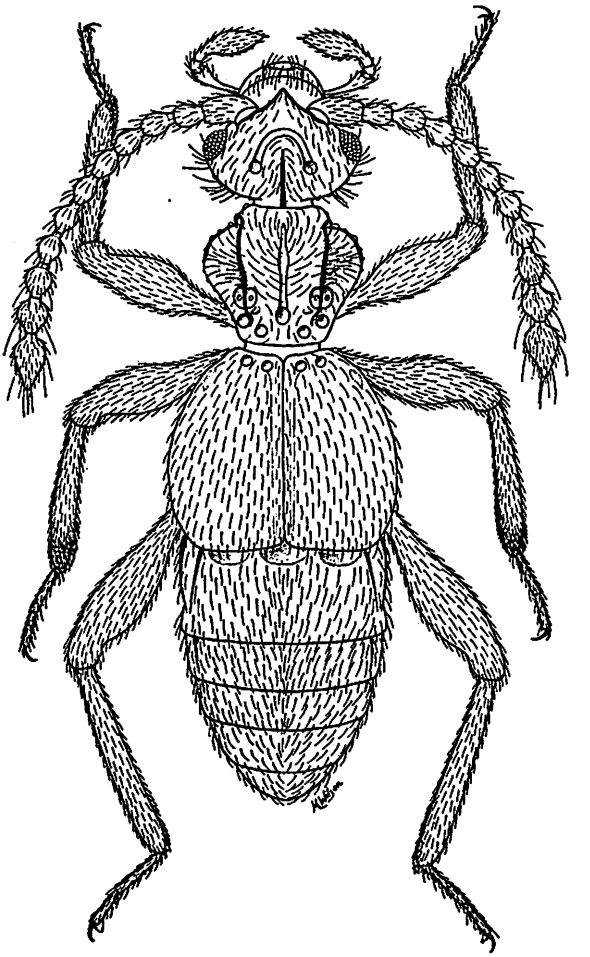

FIGURE 19.—*Batrinanda foveata,* dorsal aspect of male.

Described from one specimen, the type, deposited in Bishop Museum, which was collected in rotten log mold on October 7, 1937 by Valentine at Tholo North, Nandarivatu, Viti Levu.

This species is characterized by a profusion of carinae, sulci and foveae; these features are probably those of the species population rather than of a

particular sex. It was not feasible to dissect the unique type to demonstrate the sex described. The non-excavated face, simple antennae, unarmed legs, and convex venter suggest that it is a female. Proof of this must await more material.

CHECKLIST OF KNOWN OCEANIC PSELAPHID FAUNA

PSELAPHIDAE

PSELAPHINAE

BRACHYSCELINA

I. EUPLECTINI

1. **Placodium**
   1. **remingtoni**, new species.
      Type locality: New Caledonia, 7 miles southeast of Lafoa.
2. **Thesiastes**
   2. **femoratus** (Raffray).
      Euplectus femoratus Raffray, Soc. ent. France, Bull. 1:299-303, 1896.
      Thesiastes femoratus Raffray, Junk's Coleopt. Cat. 7 (27):36, 1911.
      Range: New Hebrides, Mallicolo, and New Guinea.
      Type locality: New Guinea, Port Dorei.
3. **Fijiastes**, new genus.
   3. **zimmermani**, new species (genotype).
      Type locality: Fiji, Viti Levu, Navai-Nasonga Trail, 3,800 ft.

II. BATRISINI

4. **Batrifigia**, new genus.
   4. **sulcata**, new species (genotype).
      Type locality: Fiji, Viti Levu, Nandarivatu, 3,000 ft.
   5. **spinipalpa**, new species.
      Type locality: Fiji, Viti Levu, Nandarivatu, 2,700-3,000 ft.
   6. **bispina**, new species.
      Type locality: Fiji, Viti Levu, Nandarivatu, 2,600-3,600 ft.
   7. **bucki**, new species.
      Type locality: Fiji, Viti Levu, ridge west of Vatuthere, 2,600-3,000 ft.
5. **Batrivitis**, new genus.
   8. **facialis**, new species (genotype).
      Type locality: Fiji, Viti Levu, Nandarivatu; Ovalau.
   9. **clypeata**, new species.
      Type locality: Fiji, Viti Levu, Nandarivatu.
6. **Sulcifigia**, new genus.
   10. **bishopae**, new species (genotype).
      Type locality: Fiji, Viti Levu, Nandarivatu.
7. **Korovodes**, new genus.
   11. **femoralis**, new species (genotype).
      Type locality: Fiji, Tailevu, Korovou.
8. **Batrinanda**, new genus.
   12. **foveata**, new species (genotype).
      Type locality: Fiji, Viti Levu, Tholo North, Nandarivatu.

III. BRACHYGLUTINI

9. Anasopsis

13. **adumbrata** (Raffray).

Anasis adumbrata Raffray, Soc. ent. France, Bull. 1:300, 1896. Fauvel, Rev. d'Ent. 22:281, 1903. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2 (12):242, 1916.

Anasopsis adumbrata Raffray, Soc. ent. France, Ann. 73:245, 1904; Gen. Ins., Fasc. 64:244, 1908; Junk's Coleopt. Cat. 7 (27):105, 1911.

Range: New Caledonia, Mt. Kogui (var. Mt. Koghi, Kogué, Kogé, Cogi); Loyalty Islands.

Type locality: Loyalty Islands, Maré.

14. **armipes** (Fauvel).

Anasis armipes Fauvel, Rev. d'Ent. 22:281, 1903. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2 (12):242, 1916.

Anasopsis armipes Raffray, Soc. ent. France, Ann. 73:245, 1904; Gen. Ins., Fasc. 64:244, 1908; Junk's Coleopt. Cat. 7 (27):105, 1911.

Type locality: New Caledonia, Mt. Kogui.

15. **distans** (Fauvel).

Anasis distans Fauvel, Rev. d'Ent. 22:282, 1903. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2 (12):242, 1916.

Anasopsis distans Raffray, Soc. ent. France, Ann. 73:245, 1904; Gen. Ins., Fasc. 64:244, 1908; Junk's Coleopt. Cat. 7 (27):105, 1911.

Type locality: New Caledonia, Mt. Kogui and Tonghoue.

16. **savesi** (Raffray) (genotype).

Tychus aubei Mont., Soc. Linn. Lyon, Ann., 92, 1864 (Fauvel, Rev. d'Ent. 22:242, 1916, examined type of *aubei*, found it to be female and identical with type of *savesi*, but could not apply priority of *aubei* because of inadequate published description).

Anasis savesi Raffray (Fauvel *in litt.*), Soc. ent. France, Bull. 1:300, 1896. Fauvel, Rev. d'Ent. 22:281, 1903. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2(12):242, 1916.

Anasopsis savesi Raffray, Soc. ent. France, Ann. 73:245, 1904; Gen. Ins., Fasc. 64:244, 1908; Junk's Coleopt. Cat. 7: (27):105, 1911.

Range: New Caledonia, Kanala (var. Canala) and Mt. Kogui.

Type locality: New Caledonia, Mt. Kogui.

10. Baraxina

17. **francoisi** Raffray (genotype).

Raffray, Soc. ent. France, Bull. 1:301, 1896. Fauvel, Rev. d'Ent. 22:282, 1903. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2 (12):242, 1916. Raffray, Gen. Ins., Fasc. 64:244, 1908; Junk's Coleopt. Cat. 7 (27):105, 1911.

Type locality: New Caledonia, Noumea.

11. Eupines

18. **caledonica** Raffray.

Raffray, Soc. ent. France, Bull. 1:302, 1896; Soc. ent. France, Ann. 73:202, 1904; Gen. Ins., Fasc. 64:206, 1908; Junk's Coleopt. Cat. 7 (27):81, 1911. Fauvel, Rev. d'Ent. 22:283, 1903. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2 (12):242, 1916.

Type locality: New Caledonia, Noumea.

19. **spinifera** Fauvel.

Fauvel, Rev. d'Ent. 22:283, 1903. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2 (12):242, 1916. Raffray, Soc. ent. France, Ann. 73:

206, 1904; Gen. Ins., Fasc. 64:206, 1908; Junk's Coleopt. Cat. 7 (27):82, 1911.

Type locality: New Caledonia, Noumea.

20. **suturalis** Fauvel.

Fauvel, Rev. d'Ent. 22:284, 1903. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2 (12):242, 1916. Raffray, Soc. ent. France, Ann. 73: 207, 1904; Gen. Ins., Fasc. 64:206, 1908; Junk's Coleopt. Cat. 7 (27):82, 1911.

Type locality: New Caledonia, Tonghoue (var. Tongoue).

21. **trapezus** Fauvel.

Fauvel, Rev. d'Ent. 22:284, 1903. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2 (12):242, 1916. Raffray, Soc. ent. France, Ann. 73: 207, 1904; Gen. Ins., Fasc. 64:206, 1908; Junk's Coleopt. Cat. 7 (27):82, 1911.

Type locality: New Caledonia, Noumea.

22. **villosula** Raffray.

Raffray, Soc. ent. France, Bull. 1:302, 1896; Soc. ent. France, Ann. 73:202, 1904; Gen. Ins., Fasc. 64:206, 1908; Junk's Coleopt. Cat. 7 (27):80, 1911. Fauvel, Rev. d'Ent. 22:283, 1903. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2 (12):242, 1916.

Type locality: New Caledonia, Noumea.

12. **Eupifigia**, new genus.

23. **zimmermani**, new species (genotype).

Type locality: Fiji, Viti Levu, Nandarivatu, 2,700-3,600 ft.

24. **valentinei**, new species.

Type locality: Fiji, Viti Levu, Tholo North, Mt. Victoria, 3,000 ft.; Mt. Nanggaranambuluti; Nandarivatu, Vatuthere, 2,600-3,000 ft.

25. **laboriosa**, new species.

Type locality: Fiji, Viti Levu, Nandarivatu, 3,700 ft.; Mt. Victoria.

26. **pacifica**, new species.

Type locality: Fiji, Viti Levu, Tholo North, Mt. Victoria, 3,000 ft.; Nandarivatu.

27. **fijiensis**, new species.

Type locality: Fiji, Viti Levu, Mt. Korombamba, 800-1,300 ft.; Vatuthere, 2,600-3,000 ft.; Mt. Victoria, 3,700 ft.

28. **plana**, new species.

Type locality: Fiji, Viti Levu, Nandarivatu, 3,700 ft.; Ovalau, on Draiba Trail, 600-800 ft.

13. **Reichenbachia**

29. **mallicolensis** Raffray.

Raffray, Soc. ent. France, Bull. 1:299, 1896; Soc. ent. France, Ann. 73:235, 1904; Gen. Ins., Fasc. 64:238, 1908; Junk's Coleopt. Cat. 7 (27):100, 1911.

Type locality: New Hebrides, Mallicolo (var. Mallicollo).

30. **sexualis**, new species.

Type locality: Fiji, Ovalau, Wainiloka, 200 ft.; Moala, Vunuku, 100 ft.

14. **Rybaxis**

31. **insularis**, new species.

Type locality: Fiji, Viti Levu, Tholo North, Mt. Victoria; Navai-Nasonga Trail, 3,400 ft.; Nandarivatu.

32. **fijiensis**, new species.

Type locality: Fiji, Viti Levu, Nandarivatu, 3,600-3,700 ft.

33. **fijiensis nigra,** new variety.
Type locality: Fiji, Viti Levu, Nandarivatu, 2,700 ft.

IV. TYCHINI

15. Physoplectus

34. **homaliinus** (Fauvel).
Amauronyx homaliinus Fauvel, Rev. d'Ent. 22: 280, 1903. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2 (12): 242, 1916.
Physoplectus homaliinus Raffray, Gen. Ins., Fasc. 64: 263, 1908.
Type locality: New Caledonia, Noumea.

16. Sunorfa

35. **caviceps** (Raffray).
Bythinomorpha caviceps Raffray, Soc. ent. France, Bull. 1: 302, 1896.
Sunorfa caviceps Raffray, Gen. Ins., Fasc. 64: 264, 1908.
Range: Santa Cruz, Vanikoro; Fiji, Ovalau, Wainiloka; Fiji, Lau, Kambara; Fiji, Viti Levu, Vunindawa.
Type locality: Santa Cruz, Vanikoro.

MACROSCELINA

V. TYRINI

17. Anagonus

36. **fracticornis** Fauvel (genotype).
Fauvel, Rev. d'Ent. 22: 285, 1903. Raffray, Soc. ent. France, Ann. 73: 202, 1904; Gen. Ins., Fasc. 64: 360, 1908; Junk's Coleopt. Cat. 7 (27): 152, 1911. Heller, IN Sarasin and Roux, Nova Caled., A. Zool. 2(12): 242, 1916.
Type locality: New Caledonia, Yahoue.

CLAVIGERINAE

VI. CLAVIGERINI

18. Fustiger

37. **cribratus** Mann.
Mann, Ent. Soc. Am., Ann. 13 (1): 64, fig. 4, 1920. Park, Northwestern Univ. Stud. Biol. and Med. 1: 358, 1942.
Host ant: *Iridomyrmex sororis.*
Type locality: Fiji, Viti Levu, Nandarivatu.

38. **levuanus** Mann.
Mann, Ent. Soc. Am., Ann. 13(1): 65, figs. 2c, 5, 1920. Park, Northwestern Univ. Stud. Biol. and Med. 1: 358, 1942.
Host ant: *Prenolepis bengalensis.*
Type locality: Fiji, Viti Levu, and Korovatu.

39. **raffrayi** Mann.
Mann, Ent. Soc. Am., Ann. 13(1): 63, 1920. Park, Northwestern Univ. Stud. Biol. and Med. 1: 358, 1942.
Host ant: *Pheidole knowlesi extensus.*
Type locality: Fiji, Kandavu, Vunisea.

40. **vitiensis** Mann.
    Mann, Ent. Soc. Am., Ann. 13(1):63, figs. 2a, 3, 1920. Park, Northwestern Univ. Stud. Biol. and Med. 1:358, 1942.
    Type locality: Fiji, Viti Levu, Nandarivatu.
41. **wasmanni** Mann.
    Mann, Ent. Soc. Am., Ann. 13 (1):66, figs. 2d, 7, 1920. Park, Northwestern Univ. Stud. Biol. and Med. 1:358, 1942.
    Host ant: *Pheidole knowlesi extensus.*
    Type locality: Fiji, Viti Levu, Nandarivatu.

19. **Kaisia**
    42. **oceanica** Mann (genotype).
        Mann, Ent. Soc. Am., Ann. 13 (1):67, figs. 2e, 8, 1920.
        Host ant: *Prenolepis bengalensis.*
        Type locality: Fiji, Viti Levu, Tailevu coast.

20. **Nadarimanu**
    43. **alewa** Mann (genotype).
        Mann, Ent. Soc. Am., Ann. 13 (1):65, fig. 6, 1920.
        Host ant: *Pheidole knowlesi extensus.*
        Type locality: Fiji, Viti Levu, Mt. Victoria.

In addition to the above 43 Polynesian species, there is a record that is open to question: *Cercocerus flavitarsis* Schaufuss [Tijdschr. Ent., 29:283, 1886; Raffray, Rev. d'Ent., 9:14, 1890; Soc. ent. France, Ann. 73:435, 1904; Coleopt. Cat. 7(27):165, 1911]. Raffray found *C. flavitarsis* Schaufuss, recorded from Samoa, to be identical with *C. batrisoides* LeConte of Nearctic North America, and he believed that the locality record of *C. flavitarsis* was incorrect. I concur in this view.

SUMMARY

In the foregoing study of the known species of Oceanic pselaphid beetles, a checklist to the fauna and a key to genera and species are provided.

The following new genera, species, and variety are described. From New Caledonia: *Placodium remingtoni,* new species. From the Fiji Islands, the following new genera: *Fijiastes, Batrifigia, Batrivitis, Sulcifigia, Korovodes, Batrinanda,* and *Eupifigia;* and the following new species: *Fijiastes zimmermani, Batrifigia sulcata, B. spinipalpa, B. bispina, B. bucki, Batrivitis facialis, B. clypeata, Sulcifigia bishopae, Korovodes femoralis, Batrinanda foveata, Eupifigia zimmermani, E. valentinei, E. laboriosa, E. pacifica, E. fijiensis, E. plana, Reichenbachia sexualis, Rybaxis insularis, R. fijiensis,* and *R. fijiensis nigra,* new variety.

The Fijian pselaphid fauna is discussed with respect to faunal affinities; and it is concluded that this fauna is of Papuan origin in general, but with a high endemicity and a high degree of uni-insular endemicity, and that it needs a great deal of additional study. Distribution of Fijian pselaphids with reference to altitude is discussed; and the ecology of the fauna, in particular the habitat distribution, is considered briefly.

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BOLD-FACED TYPE INDICATES MOST IMPORTANT REFERENCES.