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Anthribidae of Southeastern Polynesia¹² (Coleoptera)

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INTRODUCTION

SCOPE

This paper is founded on the collections made by me while on the Mangarevan Expedition to southeastern Polynesia in 1934. It treats of all the Anthribidae known from the islands south of Hawaii and east of the 160th meridian, or, roughly, east of Samoa. Twelve genera and fourteen species are included; of these, three genera and four species are described as new. The collection studied includes 532 specimens, 521 of which were procured by the Mangarevan Expedition, and 11 of which were from the general collection of Bernice P. Bishop Museum. Much new data on geographical distribution are recorded, and the ranges of most of the described species have been found to be greater than has heretofore been known. The types of the new species and the collection are stored in Bishop Museum.

I wish to express my sincere thanks to Dr. Karl Jordan of the Zoological Museum at Tring for his unfailing kindness and aid to me during the preparation of this paper. Without his help, it would be quite impossible for me to present this work as it now appears.

PREVIOUS WORK

The first paper reporting Anthribidae from southeastern Polynesia was that of Leon Fairmaire in Revue et Magazin de Zoologie for 1849. He described two new genera and three new species collected by Vesco on Tahiti. In 1866 Lacordaire considered Fairmaire's

¹ Rhynchophora of southeastern Polynesia publication 10. ² Mangarevan Expedition publication 28.

genera and species in volume 7 of his "Genera des Coléoptères" and placed his two genera, *Dinema* and *Rhinobrachys*, among the "genres incertae sedis." In the following 58 years nothing was written on the Anthribidae of southeastern Polynesia. In 1924, Dr. Karl Jordan redescribed *Dinema* Fairmaire (Novitates Zoologicae, vol. 31). In 1933, Dr. Jordan wrote his "Anthribidae from the Marquesas Islands" and "Anthribidae from the Society Islands" (B. P. Bishop Mus., Bulls. 114 and 113). In these two papers seven species were recorded, including one new genus, three new species, and a new subspecies.

ANALYSIS OF THE FAUNA

The eastern Pacific islands have a poorly developed anthribid fauna. The paucity of species is surprising, considering the great tracts of tropical forest on the many islands of the region. Little endemicity is shown among the species described here. Of the 14 species recorded from the region, eight are widespread, five are probably endemic, and one is doubtfully endemic. The following table will show the comparative developments of the known anthribid faunas of eastern Oceania:

			Fiji	Samoa	S. E. Polynesia	Hawaii
Number	of	genera	7	9	12	4
Number	of	species	9	14	14	6

This table does not indicate the true developments of the faunas, because it is based on described species only. In the collections before me there are enough new species from Fiji to indicate that the anthribid fauna of that region is much more complex than in any other eastern oceanic island group. It is probable, I believe, that the anthribid fauna of Fiji is larger than the corresponding faunas of all the islands to the east combined. In numbers and complexity, it is rivaled only by the Samoan fauna. Some endemic genera and several endemic species have been described from Samoa. With the exception of a few native *Araecerus*, no endemic Anthribidae are found in the Hawaiian islands.

With the possible exception of the monotypic genus *Cisanthribus*, the Anthribidae of southeastern Polynesia are Indo-Pacific in origin and affinities. *Cisanthribus* is, according to Dr. Karl Jordan, allied to a Central American genus. When more thorough collecting is done in the western Pacific, however, it may be found that genera more closely allied to *Cisanthribus* occur there. Of the remaining 11 genera, three are evidently endemic and eight are widespread in the Pacific. Of these eight genera, three are Oceanic, three are Indo-Pacific in distribution, one continues westward through the Old World tropics to the Ethiopean region, and one is tropicopolitan.

Such species as *Neseonos brunneus*, *Proscopus veitchi*, and species of *Araecerus* are admirably suited to artificial distribution by man from island to island. *Proscopus veitchi*, for example, inhabits dead coconut fronds and dead banana leaves and is readily attracted to coconut-frond baskets packed with dried banana leaves to protect food and other supplies for over-sea journeys. *Araecerus* are easily carried from place to place among seeds or dried plant materials. Most other anthribids of southeastern Polynesia are also suited to such agencies of distribution.

The two species of *Araecerus* are the only anthribids of the region which may cause damage and are of any economic importance, as far as I know. These two anthribids attack the seeds or pods of coffee, nutmeg, cotton, cocoa, *Hibiscus tiliaceus*, and other plants. *Araecerus fasciculatus* is a noted coffee pest, but it is not common in southeastern Polynesia.

CHECK LIST

- 1. Phloeobius gigas horeus Jordan.
 - Marquesas, Society, and Hawaiian islands.
 - Aethessa mumfordi Jordan.

2.

- Marquesas.
- 3. Aethessa adamsoni Jordan. Marquesas.
- 4. Notioxenus cylindricus Jordan.
- Society and Austral Islands, and Henderson Island. 5. Neseonos brunneus, new genus, new species.
- Henderson, Mangareva, Pitcairn, Rapa, and Fiji.
- 6. Dinema filicornis Fairmaire. Tahiti.
- 7. Proscopus veitchi Jordan.
- Mangareva, Rava, Austral, Society, Flint, Samoa, and Fiji islands. 3. Jordanthribus planifacietus, new genus, new species.
- Mangareva, Austral, Society, and Marianas Islands.
- 9. Mauia subnotatus (Boheman). Indo-Pacific.
- 10. Araecerus fasciculatus (De Geer). Almost cosmopolitan.
- 11. Araecerus vieillardi (Montrouzier). Oceania.
- 12. Melanopsacus rapaae, new species. Rapa.
- 13. Cisanthribus convexus, new genus, new species. Society Islands.
- 14. Rhinobrachys asperulus Fairmaire (status uncertain). Tahiti.

Some of the characters that I have used in the generic descriptions and key may possibly not hold good for other faunas but are here used for convenience in separating the genera found in southeastern Polynesia. The measurements of the length of the species exclude the head.

Key to the Genera

2	Dorsal pronotal carina antchasal	1.
9	Dorsal pronotal carina basal, that is contiguous with the basal margin of the elytra	
. 3	 Antennae inserted on the rostrum usually at or nearly at the sides, rarely on the front of the rostrum 	2(1).
:	Antennae inserted on the head, either on the inner sides of the eyes near their tops or at the lower margin of the eyes; with	
. 0	a distinct tuberculiform callosity above the scrobe	2(2)
223 4	2). Eyes very distinctly emarginate on the lower margin above the insertion of the antennae; length 7-10 mm	3(2).
: 225	3). Antennae inserted on the front of the rostrum, second segment less than half as long as the third; interscrobal area less than half as broad as the interocular area	4(3).
5	segment longer than third; interscrobal area at least three fourths as broad as the interocular area	
: 239	4). Prothorax with a conspicuous lateral carina extending from the base to slightly past the middle on the sides; length 2.5-3.5 mm. Mauia, p.	5(4).
228	Prothorax without a carina at the sides; length less than 2 mm. Notioxenus, p.	
233	2). Rostrum subcylindrical at the base, much longer than broad; eye reniform, the upper lobes approximate, the distance between them only about one fourth as broad as the narrowest part of the rostrum; lateral carina of the prothorax continued to the apex	6(2).
: [Rostrum flattened, never subcylindrical at the base, as broad as long or longer than broad; eye not deeply notched, almost or quite entire, not approximate dorsally, interocular area at least fully half as broad as the narrowest part of the rostrum; lateral	
7	 b). Eyes transverse and almost horizontally placed on the head; antennae inserted at the lower margin of the eyes at about their middle but terminating at about one third from the apex	7(6).
r 1	Eyes longitudinal, vertically placed on the head, or but slightly oblique never horizontal nor almost so; antennae inserted on	
. 8	the front at the dorsal margins of the eyes	8(7).
; 233	first antennal segment not more than half as long as two plus	
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Lateral prothoracic carina reaching only to about the middle; first antennal segment approximately as long as two plus three.....

- 10(9). Mandibles toothed; second antennal segment distinctly shorter than the third; interscrobal area distinctly narrower than the interocular area; lateral prothoracic carina not passing the middle. Araecerus, p. 241
- 11(9). Lateral prothoracic carina not or hardly reaching the middle; hind coxae transverse, reaching the metepisterna....Melanopsacus, p. 245
 - Lateral prothoracic carina continuous and sharply defined from base to apex; hind coxae glabular, similar in shape with the mid coxae......Cisanthribus, p. 247

Genus PHLOEOBIUS Schönherr, 1826

Head and rostrum continuously convex; eyes very large, horizontally placed, strongly protuberant laterally beyond the sides of the head, reniform, the lower margins conspicuously emarginate at the middle, almost twice as broad as the narrowest part of the interocular area; interocular area sub-V-shaped, less than half as broad at the apex as at the base. Rostrum, excluding the mandibles, much shorter than the head, about half as long from the apex of the eyes to the apex of the labrum as the breadth between the subscrobal tubercles; apical margin rather deeply and roundly emarginate behind the labrum which is convex and strongly rounded distally; mandibles slightly sinuous internally and not toothed; antennae inserted on the sides at the base, the dorsal margin of the scrobe contiguous with the lateral lobe of the eye, the subscrobal tubercles large and conspicuous. Antennae extending only to the base of the elytra in the female, but slightly longer than the body in the male; segments as follows in the male: the first segment large, subconical, as broad at the base as long, as long as two, three somewhat less than four times as long as two and as long as four plus half of five, four slightly longer than five to eight inclusive, five to eight subequal in length, nine about four fifths as long as eight and about one fourth longer than ten, nine and ten somewhat flattened, eleven about as long as eight plus nine, styliform, slightly sinuous; segments as follows in the female: the first and second as in the male, third and fourth subequal in length, each twice as long as the second, four not quite as long as five plus six, five slightly longer than six, six and seven subequal in length, eight as long as seven plus half of six, somewhat flattened and distinctly broader than seven, not quite as long as nine and only half as broad, nine to eleven forming a distinct, flattened,

³ Mauia is placed in two parts of the key, because the prothorax is often bent downward in dead specimens, making the dorsal carina appear somewhat antebasal rather than basal.

asymmetrical club, the dorsal margin almost straight, the ventral margin serrate, nine about as broad as long at the apex, slightly longer than ten which is as broad as long, eleven slightly longer than nine and only about three fourths as broad. *Prothorax* convex, broader than long, dorsal carina antebasal, lateral carina forming an almost right angle with the basal carina and terminating slightly beyond the middle. *Scutellum* visible. *Elytra* subparellel-sided, slightly more than twice as long as the prothorax, serially punctate. *Legs* with the femora strongly clavate, edentate; tibiae rather slender; first tarsal segment slightly longer than the second, third half as long as the second and deeply immersed in the second, giving the tarsi a 3-segmented appearance, fourth segment as long as the first, claws with a slender tooth before the middle. *Sternum* with all the coxae separated, the hind coxae narrowly separated by the triangular intercoxal process, transverse and extending from close to the median line almost to the elytra. *Body* densely pilose above and below; marmorated with paler and darker patches above.

This genus has a wide distribution continuing westward from Polynesia through Australia, Papua, Java, Sumatra, southern China, India to Africa and Madagascar.

1. Phloeobius gigas horeus Jordan: B. P. Bishop Mus., Bull. 114: 33, 1933; (fig. 1, m).

This large subspecies (7-10 mm.) is the largest and most easily recognized of all of the Anthribidae of southeastern Polynesia. I have included specific characters in the generic description, and no difficulty should be encountered in identifying this subspecies.

Phloeobius gigas gigas Fabricius, 1775, is distributed through the Malayan and Papuan regions, and subspecies have been described from the Oriental region and Malagasy subregion. *Phloeobius gigas horeus* is very closely allied to *Phloeobius gigas cervinus* Klug, 1838, from the Malagasy region.

Marquesas Islands:

Tahuata (type locality) and Hivaoa. It probably inhabits most of the islands of the group.

Hawaiian islands:

Oahu; first collected in Honolulu in 1924.

Society Islands:

Tahiti, nine specimens collected by me at light near the seashore at Blue Lagoon, near Papeete, March 1, 1934, and one specimen taken by me off a partially dead *Inocarpus edulis* tree at Tiupi Bay, Papeari.

Raiatea, two specimens collected by J. W. Moore, 1926-1927.

This anthribid will undoubtedly be found on many islands of eastern Polynesia. Heretofore, it has been recorded only from the Marguesas and Hawaii.

Genus AETHESSA Jordan, 1933

Head and rostrum rather continuously convex; eyes strongly convex, almost round, but slightly longer than broad, longitudinally placed on the head, half as broad as the interocular area. Rostrum not quite as long as the head, distinctly broader than the length between the apex of the eye and the apex of the labrum; antennae inserted inside the inner lower edge of the eyes on the front of the rostrum, not at its sides, the shortest interscrobal breadth only half as broad as the interocular area, with a well-developed, rounded tubercle at the lower edge of the scrobe, the distance between the tubercle and the apex of the rostrum about as long as the breadth of the first antennal segment, the dorsal margin of the scrobe reaching the eye; mandibles with at least a subapical tooth. Antennae reaching or passing the middle of the elytra in the male, the segments in the male as follows: the first segment half as broad as long, not passing the lateral margin of the eye, one and one half to twice as long as the second, which is about one third as long as the third, three longer than four to eight inclusive, which are subequal in length, nine to eleven flattened, forming a loose, rather symmetrical club, nine as long as eight and distinctly longer than ten, ten subtriangular, eleven ovate. Prothorax broader than long; dorsal carina antebasal, but subbasal at the middle, lateral carina short, not reaching) the middle, lateral longitudinal carinula oblique, forming inwardly an obtuse angle with the dorsal carina and outwardly an acute angle with the lateral carina. Scutellum minute, but visible. Elytra subparallel-sided, about three times as long as the prothorax, base broadly and shallowly emarginate from the humeri to the suture; shallowly punctate-striate. Legs rather long and slender, femora not very strongly clavate, edentate; tibiae very slender, at most armed with a row of slender terminal spines; tarsi with the fourth segment free and distinct, not immersed in the second; claws bifid at the apex or with a small tooth near the apex. Sternum with the coxae narrowly separated, the fore coxae subcontiguous, the hind coxae very narrowly separated by the triangular intercoxal process, transverse and almost extending to the elytra. Body densely pilose above and below.

The mandibles on the types are so tightly closed that it is impossible to ascertain whether there are more teeth on the mandibles than the subapical one here recorded.

This genus was erected by Jordan for the reception of two Marquesan species of which only the unique male types, in Bishop Museum, are known. The genus has thus far been found only in the Marquesas, and I collected no specimens on the numerous islands I visited in southeastern Polynesia.

The species of this genus somewhat resemble elongate Araecerus or Mauia in the southeastern Polynesian fauna, but are not at all closely related to those genera. Jordan has placed this genus near Misthosimella Jordan, 1914, and Misthosima Pascoe, 1859. Misthosima is Indo-Australian, whereas Misthosimella is Ethiopian.

Key to the Species

2. Aethessa mumfordi Jordan: B. P. Bishop Mus., Bull. 114:35, fig. 1, 1933.

This species, the genotype, has the derm of the elytra mottled here and there with dark brown areas, making them distinctly darker than those of A. adamsoni; the pronotum is shallowly but conspicuously, longitudinally impressed on either side of the median line. These characters together with the longer antennae, convex head, and the prominent subbasal callosities on the elytra will readily separate this species from A. adamsoni. Length, 3.5 mm.; breadth, 1.4 mm.

Marquesas: Nukuhiva.

Aethessa adamsoni Jordan: B. P. Bishop Mus., Bull. 114:36, fig. 2, 1933; (fig. 1, a).

This species evidently lacks the conspicuous dark elytral, dermal markings as found on A. mumfordi and the color is paler; the pronotum is rather evenly convex and not conspicuously impressed longitudinally. Jordan was in error when he described the antennae as not reaching to the middle of the elytra. The type was poorly mounted with one antenna broken off and the other bent beneath the body and entwined among the legs when it was described. I have remounted it and straightened the antennae and find that they reach to the hind margin of the first ventrite, or to slightly beyond the middle of the elytra. Length, 3.3 mm.; breadth, 1.4 mm.

Marquesas: Hatutu.

The elevations at which the holotypes of the two species were collected were omitted from the original descriptions. They are as follows: for *A. mumfordi*, 3,485 feet; for *A. adamsoni*, 1,080 feet.



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FIGURE 1.—a, Aethessa adamsoni; b, Proscopus veitchi, male; c, Neseonos brunneus, female; d, Araecerus vieillardi; e, Mauia subnotatus; f, antenna of Cisanthribus convexus; g and h, antennal clubs of Araecerus vieillardi (g) and A. fasciculatus (h); i, Jordanthribus planifacietus, male; j, side view of prothorax of Neseonos brunneus; k, side view of prothorax of Notioxenus cylindricus; l, side view of head and prothorax of Jordanthribus planifacietus, male; m, Phloeobius gigas horeus, male; n, dorsal view of prothorax of Notioxenus cylindricus; o, Neseonos brunneus; p, Proscopus veitchi; q, Jordanthribus planifacietus; r, Melanopsacus rapaae; s, Cisanthribus convexus.

Genus NOTIOXENUS Wollaston, 1861

Head convex; eyes lateral, strongly convex, circular, entire, more than half as broad as the interocular area. Rostrum from the lower margins of the eyes to the base of the labrum somewhat shorter than the head, almost twice as broad as long; mandibles toothed; antennae inserted at the sides of the rostrum at the lower inner margin of the eyes, the scrobe contiguous with the lower margin of the eye; interscrobal area very slightly narrower or approximately the same breadth as the interocular area. Antennae reaching to or but slightly behind the base of the elytra; the segments as follows: segments one and two stout, subequal, or one longer than two, two longer and about twice as broad as three, three to eight successively slightly shorter and less slender, nine, ten, and eleven subequal in length, but with nine slightly longer, forming a loose, symmetrical club, the emarginations between the segments broad and subequal on either side, nine and ten subconical, eleven oval. Prothorax slightly transverse; dorsal carina antebasal, strongly arcuate, terminating on the sides above the fore coxae, without lateral carina or baso-lateral carinulae. Scutellum minute, but visible. Elytra twice as long as the prothorax (in our species). Legs with the femora not strongly clavate; tibiae shorter than the femora; second tarsal segment shorter than the next two together, the third segment broader than the second, not deeply immersed in the second, claws each with a long tooth, first fore tarsal segment about one fourth as long as the fore tibia. Sternum with all the coxae well separated, the fore pair by a distance equal to more than half the breadth of a fore coxa, hind coxae transverse, almost reaching the elytra; metasternum between the mid and hind coxae as broad as a hind coxa.

There is but one known species representing this genus in Polynesia. The genus was originally described from St. Helena, where the majority of the species occur. It has, however, a discontinuous, predominantly tropicopolitan distribution. Its species have been described from Japan, Central America, and the West Indies besides St. Helena and southeastern Polynesia, and I have seen an undescribed Micronesian species. It is probable that the genus is well developed in western Oceania.

4. Notioxenus cylindricus Jordan: B. P. Bishop Mus., Bull. 113: 67-68, fig. 1, a-b, 1933; (fig. 1, k, n).

This small species can easily be recognized by the characters given in the key and the generic description without a detailed specific diagnosis. The derm is yellowish to reddish brown, with a rather conspicuous, roughly triangular, darker area on each elytron, the base of which is at the lateral margin of the elytron and is there continuous over the central half or third of the elytron, but it rapidly narrows dorsally to reach the suture just behind the middle forming a narrow, postmedian fascia with the same mark on the opposite elytron; the elytra are conjointly dark at the apex. The dorsal vestiture consists

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of slender, rather coarse, almost prostrate white or pale pile, often darker or less dense on the dark areas, rather scattered and not concealing the derm. The pronotum has small, dense, subconfluent or confluent, rather coarse punctures. The elytral striae are distinctly punctate and impressed throughout. Length, 1.25-1.5 mm.; breadth, 0.5-0.75 mm.

This species was described from Tahiti and has heretofore not been known from any other region. The following data, assembled by me in 1934 during the Mangarevan Expedition are new: Society Islands:

- Tahiti, one specimen taken from a pod of an undetermined legume in Fautaua Valley, March 7.
- Moorea, two specimens taken from dead pandanus leaves in Maramu Valley, elevation 800 feet, Sept. 26.
- Raiatea, eight specimens picked from dead pandanus leaves on Temehani Plateau, elevation 1,400-1,600 feet, Oct. 5.

Austral Islands:

- Raivavae, two specimens swept from grasses and low herbage, one near Ahueivi, elevation 5 feet, Aug. 8; one near Anatonu, elevation 5 feet, Aug. 13.
- Rurutu, one specimen beaten from Dryopteris fern on Mount Teape, elevation 1,000 feet, Sept. 2.
- Henderson Island: 42 specimens picked off dead leaves of pandanus on the north side near the seashore, June 16; two specimens from the northwest side, elevation 100 feet, June 17; six specimens beaten from shrubs on the northwest side, elevation 100 feet, three on June 19, the others on June 21.

This species is one of the smallest anthribids of southeastern Polynesia. It is quite different from some of the convex, shiny black species of its genus. It may be expected to occur on pandanus near the coast on most of the islands in southeastern Polynesia. Because of its small size and obscure coloration it may easily be overlooked by the collector. The sexes are quite similar. There is, however, a character on the males that has not heretofore been recorded: the anterior, ventral apex of the fore trochanter is produced into a sharp, conspicuous tooth.

Genus NESEONOS, new genus

Head with the eyes convex, coarsely faceted, lateral, reniform, the lower margin distinctly concave, oblique but almost horizontally placed on the head,

almost twice as broad as long, somewhat more than half as broad as the interocular area; antennae inserted on the sides of the head at about the middle of the lower margin of the eye, the actual point of articulation not farther from the lower margin of the eye than the narrowest part of the eye; the dorsal part of the scrobe contiguous with the lower median concavity of the eye, the inner dorsal margin of the scrobe produced into a prominent, strongly developed tuberculiform callosity, the distance between the lateral margins of these callosities, when viewed from the front, distinctly greater than the interocular area, the lateral margins almost in line with the middle of the eye. Rostrum conspicuously flattened, continuously flattened or concave with the head from the top of the eyes to the labrum, subparallel-sided from below the eyes to the mandibles, about twice as broad as the distance from the base of the scrobal callosity to the base of the labrum; with a vague dorso-lateral carina from the scrobal callosity to the apex, the sides of the rostrum forming an angle with the dorsum; the mandibles sinuous on the inner edges but not toothed. Antennae reaching to or slightly beyond the apex of the elytra in the female, about twice as long as the body in the male; the segments as follows in the male: first segment about twice as long as broad, stouter and somewhat longer than two, three about as long as one plus two, segments three to six inclusive similar and each successively slightly longer, seven shorter than six seven to nine each successively slightly shorter but similar in shape to segments three to six, segments ten and eleven subequal in length, together not longer than nine, not dilated, there being no distinct club; in the female segments three to seven inclusive are subequal in length, eight is shorter than seven, nine shorter than eight and slightly broadened distally, ten and eleven together longer than nine and forming with nine a vague club. Prothorax transverse, dorsal carina antebasal, lateral carina continuously curved with the dorsal carina and not forming a distinct angle with it, reaching past the middle of the side but not to the apex, without distinct baso-lateral carinulae. Scutellum visible. *Elytra* subparallel-sided, twice or more than twice as long as the prothorax, punctate-striate. Legs with the femora clavate, but not strongly so; tibiae slender, fore tibiae about as long as the fore femora; first tarsal segment about as long as two plus three, third segment broader than and about as long as the third and not immersed in it, each claw with a subbasal tooth. Sternum with the fore and mid coxae separated by somewhat less than half the breadth of a coxa, hind coxae separated by about the breadth of a metacoxa at the trochanter, transverse, almost reaching the elytra; metasternum between the mid and hind coxae distinctly longer than the breadth of a metacoxa. Venter with the first ventrite as long as two plus three which are subequal in length, four slightly shorter than three or five. Body rather sparsely clothed with short, coarse pubescence that does not completely conceal the derm.

Genotype: Neseonos brunneus, new species.

This genus is closely allied to *Proscopus* but can be distinguished as follows: On *Neseonos* the lateral pronotal carina does not extend to the apex, the eyes are almost horizontal, and the antennae are inserted below their middles, the interscrobal area is almost as broad as the greatest breadth of the rostrum, and the lateral facial carinae are vague. On *Proscopus* the lateral pronotal carina extends prominently to the apex, the eyes are almost vertical, the antennae are inserted very close to their inner dorsal apices, the interscrobal area is only about two thirds as broad as the greatest breadth of the rostrum, and the lateral facial carinae are sharply defined and strongly developed from the scrobal callosities to the apex.

5. Neseonos brunneus, new species (fig. 1, c, j, o).

Derm yellowish brown to dark reddish brown, the appendages paler than the dorsum; pubescence grayish or yellowish, not forming patterns.

Head with the frons and rostrum continuously concave when viewed from the side, usually with a small, irregular interocular prominence; densely, rather coarsely but shallowly and irregularly punctate; scrobal tubercle strongly developed, the distance between them approximately the same as the breadth of the rostrum at the base. Rostrum, excluding the mandibles, subquadrate when viewed from the front, rather sharply angulate at the sides, the lateral facial carina distinct from the scrobal tubercle to the apex but only slightly elevated, apex roundly emarginate behind the labrum; pubescence of the head and rostrum rather long and hairlike, comparatively fine, anteriorly inclined, longer than that on the elytra. Antennae with the first segment slightly more than twice as long as broad, subovoid excluding the basal peduncle, not quite twice as long as the second; the second subconical, one fourth narrower than the first, twice as long as broad, three as broad as one plus two. Prothorax one fifth broader than long, the sides and apex broadly and almost continuously rounded, dorsal carina separated from the scutellum for a distance equal to that of the apical diameter of the second antennal segment, continuously curved at the side with the lateral carina, which extends two thirds the distance from the dorsal carina to the apex of the side of the prothorax; the disk usually shallowly, transversally depressed just in front of the dorsal carina and at about the middle, densely and shallowly punctate. Elytra somewhat less than three fourths as broad as long (3:4.5), two and one fourth times as long as the prothorax; base shallowly and broadly emarginate from the sides to the suture; striae distinctly impressed throughout, the punctures conspicuous, contiguous or nearly so; pubescence of the elytra and pronotum variable in length, either very short and specklike or moderately long, that on the prothorax usually longer. Legs finely, rather densely pubescent; the first fore tarsal segment only about one fourth as long as a fore tibia. Sternum usually rather densely set with moderately coarse, rounded, well-impressed punctures, but the punctures variable, often but shallowly impressed on the metasternum; pubescence fine and rather dense throughout, often rather silky. Venter with the punctuation and vestiture similar to that of the metasternum; the fifth ventrite almost twice as long as the fourth in the female, approximately as long or but slightly longer than the fourth in the male. Pygidium convex, but slightly impressed down the middle, rather shallowly and irregularly punctate, pubescence similar or somewhat coarser than that of the venter, broadly rounded at the apex, one fourth broader than long in the male, about one fifth broader than long in the female. Length, 2.25-3.6 mm.; breadth, 1.0-1.5 mm.

Mangareva, Henderson, Pitcairn, Rapa, and Fiji. Holotype male beaten by me from dead coconut fronds on the northeast side of Taravai Island, Mangareva Islands, June 1, 1934; allotype female beaten by me from dead *fei* leaves on the south side of Mount

Mokoto, Mangareva Island, Mangareva Islands, elevation 1,000 feet, June 2, and 142 paratypes, all but one collected by me, as follows: Mangareva Islands:

- Mangareva, 42 specimens with the same data as the allotype, five beaten from dead branches and leaves and two beaten from dead banana leaves, June 4; one specimen from the same locality and elevation, June 6; 19 specimens beaten from dead banana leaves at the same locality and elevation, June 7.
- Agakauitai, 23 specimens collected June 8, elevation 10 feet, one from dead pandanus leaves and 22 beaten from dead banana leaves and dead coconut fronds.
- Taravai, 30 specimens beaten from dead coconut fronds on the northeast side and two specimens swept from grasses and low herbage near Taravai village, June 1.
- Henderson Island: one specimen from dead pandanus leaves on the north side, June 16.
- Pitcairn Island: 12 specimens beaten from dead banana leaves on the south side, elevation 600 feet, June 14.
- Rapa Island: one specimen collected at Putu Point, elevation 12 feet, July 15 by F. R. Fosberg; one specimen collected near Area, elevation 10 feet, June 30; and three specimens beaten from dead banana leaves, one quarter mile east of Area, near the seashore, July 1.

This species resembles *Proscopus veitchi* Jordan, with which it might easily be confused. Generally, however, it is somewhat darker colored and lacks the condensed pubescent areas on the prothorax so characteristic of *Proscopus veitchi*.

It is rather strange that I found this species only in Mangareva, Henderson, Pitcairn, and Rapa—four of the most southeastern islands of Polynesia. It is most certainly an introduced species, and I should expect it to have a widespread distribution in the Pacific. Further collecting should show that it has a distribution rather similar to that of *Proscopus veitchi*. Although the species occur under identical environmental conditions and are frequently taken together on one host plant, I collected only *Proscopus* in the Society and Austral Islands, where it is logical to expect both to occur. Both species are insects of the lowlands, living among such introduced and widespread trees as banana, *fei*, coconut, and pandanus. I have seen one specimen collected at Sovu, Lau, Fiji, Sept. 27, 1924, by E. H. Bryan, Jr.; it further substantiates my belief that this genus and *Proscopus* have a similar distribution.

Genus DINEMA Fairmaire, 1849

I have seen no specimens of this monotypic genus which was redescribed by Jordan (Novitates Zool., **31**:256, 1924) as follows:

" δ Q. Rostrum and frons vertical, forming an angle with the occiput; the rostrum somewhat inclined backward, much longer than broad, subcylindrical at base, widest at apex, apical margin very feebly incurved in middle. Antenna long in both sexes, inserted in sinus of eye, the scrobe covered by a tuberculiform lobe on the inner (frontal) side, segment 1 long, claviform, 2 short, 3 to 8 thin, long, 9 slightly but distinctly widened apically, 10 and 11 each shorter and broader than 9. Eye reniform, deeply incurved, the upper lobes approaching each other, the interspace being one-fourth the width of the rostrum (the latter measured at its narrowest point). Prothorax very much broader than long; carina antebasal, extending forward to apex, angle rounded."

From the description it is obvious that Dinema belongs to the Proscopus-Neseonos-Jordanthribus complex. If it were not for the lateral prothoracic carina extending to the apex, it might be considered quite close to Jordanthribus. The structure of the head and rostrum readily separate it from Proscopus veitchi Jordan and Neseonos brunneus. But in the illustration it greatly resembles Proscopus. If it were not for the fact that Jordan has examined this species and is the author of Proscopus, I might include Proscopus veitchi in Dinema filicornis.

6. Dinema filicornis Fairmaire: Rev. Mag. Zool., 54 (or 502?), pl. 11, fig. 17, 1849.

The type of this species was collected by M. Vesco on the freshly squared trunks of *Spondias dulcis*. Jordan records a damaged female in his collection at the museum at Tring.

Society Islands: Tahiti.

Genus PROSCOPUS Jordan, 1924

Head with the eyes convex, coarsely faceted, lateral, their dorsal margins near the top of the head, almost vertically placed, but slightly oblique, about two thirds as broad as high, the lower breadth almost twice that of the top, the greatest breadth somewhat less than half as broad as the distance between the scrobal tubercles; antennae inserted on the front at the inner dorsal corner of the eyes, the scrobe making a slight indentation in the upper half of the eye, scrobal tubercles frontal, large and conspicuous, the outer margins of the tubercles extending but slightly more laterally than the inner edge of the eye, the interscrobal area only about two thirds as broad as the broadest part of

the rostrum. Rostrum conspicuously flattened, continuously longitudinally concave dorsally with the head from the top of the scrobal tubercles to the apex, about twice as broad at the base of the mandibles as the distance from its ventral angulation with the head to the base of the mandibles, this distance hardly as great as that between the ventral angulation and the lower margin of the eye, the rostrum appearing longer, however, because it is continuous with the front of the head and the eyes are situated so close to the top of the head; with a sharply defined, conspicuously raised, lateral, frontal carina running from the scrobal tubercle to the base of the mandible and diverging distally; mandibles not toothed. Antennae reaching to the apex of the elytra in the female, more than twice as long as the body in the male; the segments in the male as follows: one twice as long as two, subcylindrical, excluding the basal peduncle, two less than one third as long as three and not broader, three longer than one plus two, three to eight similar, very slender and successively somewhat longer, nine similar to but slightly shorter than eight, nine about as long as ten plus eleven which are not expanded and similar in diameter to nine, ten somewhat longer than eleven; in the female segments three to nine are subequal in length, nine is somewhat longer than ten which is slightly shorter than eleven, nine to eleven slightly expanded distally. Prothorax transverse, the dorsal carina antebasal, forming a continuous curve at the side with the lateral carina which is continuous to the apex; without baso-lateral carinulae. Scutellum visible. Elytra subparallel-sided, twice as long as the prothorax, distinctly striate-punctate. Legs rather slender, the femora simple and not strongly clavate; tibiae slender, subcylindrical; first tarsal segment about as long as two plus three, two broader than long, three much broader than two and not immersed in it, fourth about as long as one, the claws with a subbasal tooth. Sternum with the fore coxae separated by about one fourth of the breadth of a fore coxa, mid and hind coxae more widely separated, for about the diameter of the apex of the tibiae; hind coxae transverse, almost reaching the elytra; metasternum between the mid and hind coxae longer than a metacoxa at the trochanter.

The genotype is the only known species in this genus. *Proscopus* is closely allied to *Neseonos* but the lateral pronotal carina, extending all the way to the apex, enables one to separate this genus from *Neseonos* offhand.

Proscopus veitchi Jordan: Novitates Zool., 31:256, 1924; Insects of Samoa, 4 (2): 164, figs. 2, 3, 1928; (fig. 1, b, p).

Derm pale yellowish brown, rarely dark yellowish brown; pubescence pale yellowish or grayish, condensed on either side of the pronotal disk to form a somewhat oblique, pale area beginning in front of elytral interval four or five and continued to or past the middle, often with the pubescence somewhat similarly condensed along the median line, the areas between the longitudinal condensed lines of pubescence sparsely pubscent and therefore appearing as dark areas, the condensed pubescent lines and the dark median areas distinctly visible to the unaided eye; elytra with the pubescence comparatively dense and with dark spots here and there, often with small but distinct dark spots on the alternate intervals visible to the unaided eye, the sutural region and sides usually darker brown. Length, 1.8-3.25 mm.; breadth, 0.8-1.3 mm. These characters together with those of the generic description will serve to distinguish this species. It is somewhat variable in dermal coloration, color pattern, and size. On an average basis it is smaller and paler than *Neseonos brunneus*.

This species was originally described from Fiji and later reported from Samoa and from the Marquesas. Since this paper was written, I have found the species in Honolulu. The Mangarevan Expedition procured 117 specimens in southeastern Polynesia in 1934 from which the following new host and distributional data are recorded. Unless otherwise stated, all the specimens were collected by me. Society Islands:

Tahiti, two specimens from Tiupi Bay, Papeari, one from *Ino-carpus edulis*, March 31 and one April 28; one specimen from Fautaua Valley, elevation 300 feet, March 3.

Raiatea: one specimen collected in 1926-1927 by J. W. Moore.

Flint Island: two specimens swept from grasses and low herbage, elevation 10 feet, Oct. 16.

Austral Islands:

- Rimatara, one specimen swept from grasses and low herbage at Maraitere, elevation 25 feet, Sept. 5.
- Raivavae, two specimens collected by C. M. Cooke, Jr., and D. Anderson near Unurai, elevation 100-200 feet, Aug. 3; one specimen swept from grasses and low herbage near Ahuoivi Point, elevation 5 feet, Aug. 9; one specimen swept from shrubs on Motu Tehau Islet, elevation 5 feet, Aug. 11.
- Tubuai, five specimens swept from grasses and low herbage at Murivahi, elevation 10 feet, Aug. 16; one specimen swept from grasses and low herbage on Tapapatuai Islet, elevation 5 feet, Aug. 19; and one specimen collected on Rautaro Islet, elevation 5 feet, Aug. 19.
- Rapa Island: nine specimens beaten from dead banana leaves one quarter mile east of Area, July 1; one specimen collected by C. M. Cooke, Jr., near Ahurei, elevation 100 feet, July 29; two specimens beaten from dead branches at Maitua, elevation 700-800 feet, July 2 and 10; one specimen collected at Morongota, elevation 700-800 feet, July 11; two specimens collected at Mangaeae, July 16; one specimen from dead pandanus leaves near Narioa Point, sea level, July 5; and one

specimen beaten from *Fitchia* on Karapo Rahi Islet, elevation 100-300 feet, July 18.

Mangareva Islands:

- Mangareva, seven specimens beaten from dead branches and leaves near Rikitea, elevation 50 feet, June 4; one specimen collected near Rikitea, elevation 100 feet, June 9; two specimens beaten from dead branches and leaves on the south slope of Mount Duff, elevation 300-700 feet, June 4.
- Agakauitai, one specimen swept from grasses and low herbage and 31 specimens beaten from dead banana leaves and dead coconut fronds, elevation 10 feet, June 8.
- Taravai, 37 specimens beaten from dead coconut fronds on the northeast side, June 1; Akamaru, one specimen swept from grasses and low herbage at Koiovau, May 29; Aukena, one specimen swept from grasses and low herbage at Koiovau, May 29; and two specimens swept from grasses and low herbage on the northwest side, elevation 25 feet, May 25. This series is the largest ever assembled.

Genus JORDANTHRIBUS, new genus

Head with the eyes elongate, about twice or almost three times as long as broad, not strongly convex, lateral, vertical, the dorsal apices almost reaching the top of the head, arcuate externally, sinuate internally, about half as broad as the distance between the tops of the eyes, the interocular area one third to about two times broader between the lower edges of the eyes than between the tops of the eyes, almost as broad as the lower margins of the eyes at the greatest breadth of the rostrum; antennae inserted on the front at the inner dorsal apex of the eye, the outer edge of the scrobe forming a distinct concavity near the dorsal apex of the eye, the inner edge of the scrobe produced into a distinct tubercle, the distance between the lateral margins of the tubercles somewhat greater than the distance between the dorsal corners of the eyes; the frons flattened and forming a rounded or rather sharp angle with the vertex. Rostrum from the ventral angulation with the head to the apex of the mandibles, three fourths to almost as long as the head, conspicuously flattened and continuous in dorsal outline with the frons, somewhat sexually dimorphic, flatter and somewhat longer on the male than female, usually conspicuously inclined ventro-caudad. laterally constricted on the sides and rather suddenly expanded on the sides at the apex, the dorsum, at least in the male, forming a distinct angle with the sides; mandibles sharply pointed and not toothed. Antennae reaching only to about the middle of the elytra in the female and almost or quite to the apex in the male; the segments in the male as follows: segment one slender, somewhat longer than the eye, as long as segments two plus three, arcuate or sinuous, not straight, two to seven inclusive slender, subequal in length, eight similar in shape to seven but shorter, eight to eleven subequal in length, nine to eleven but slightly broader than eight, not expanded, eleven sharply pointed; the female

with segments nine, ten, and eleven somewhat flattened and expanded, nine longer and fully twice as broad as eight. Prothorax transverse, the dorsal carina antebasal, continuously curved latero-anteriorly to form a lateral carina that does not reach past the middle of the side, without conspicuous or complete baso-lateral carinulae. Scutellum visible. Elytra twice or more than twice as long as the prothorax, subparallel-sided before the declivity; punctate-striate. Legs with the femora moderately strongly clavate; tibiae slender, subcylindrical, as long as the femora; tarsi with the first segment as long or longer than two plus three, two as long as broad or transverse, three free and broader than two, claws each with a sharp, submedian tooth. Sternum with the coxae distinctly and subequally separated, the fore coxae separated for about half the breadth of a fore coxa, hind coxae transverse, reaching about to the elytra; metasternum as broad between the mid and hind coxae as a hind coxa at the trochanter. Venter with the first ventrite slightly shorter behind the metacoxa at the trochanter than the second ventrite, segments two, three, and four successively very slightly shorter along the median line, five as long or somewhat longer than four.

Genotype: Jordanthribus planifacietus, new species.

This genus is allied to *Proscopus* and *Neseonos* but has the rostrum longer than either of those genera. From *Proscopus* it may be readily distinguished by the lateral prothoracic carina which does not extend beyond the middle, by the absence of prominent facial carinae, much shorter antennae and longer first antennal segment. The shorter antennae, longer first antennal segment, differently shaped eyes, different conformation of the head and rostrum, and shorter, lateral prothoracic carina will serve to separate this genus from *Neseonos*.

Only one species is described here, but I have another new species from Micronesia which will be described in a forthcoming paper.

This genus is obviously a recent introduction into southeastern Polynesia. I found the genotype in three archipelagos in Polynesia and I have specimens from Guam at the western border of Micronesia. This widespread, discontinuous distribution is not conducive to accurately placing the original home of the genus, but I believe that it will be found well developed in the Austro-Malayan subregion.

I take pleasure in combining Dr. Karl Jordan's name with *Anthribus* to form the name of this genus, as a token of appreciation to him who has done more than any other person in laying a sound foundation for the study of the Anthribidae and for the aid he has given me.

8. Jordanthribus planifacietus, new species (fig. 1, i, l, q).

Derm yellow, shiny, eyes black and sharply contrasted with the pale head, elytra occasionally with a dark area on the sides and more rarely at the suture near the middle; pubescence whitish or yellowish.

Head finely punctate and setose, the male with the crown horizontal from the base to the scrobal tubercles, the front there forming a sharp, acute angle with the crown, the line between the tubercles concave when viewed from above

and bearing six or seven very conspicuous, long, tapered setae, the outer ones each curved inward distally to meet the central ones at their apices; front very flat and forming a perfectly flat surface with the rostrum from the vertex to the rostral apex, the sides forming an angle with the dorsum, and concave below the eyes; the female with the crown rounded, and forming a rounded, obtuse angle with the front, without a conspicuous line of demarcation between the crown and front at the scrobal tubercles and without long setae there, the front continuously longitudinally concave with rostrum, slightly convex transversally. Rostrum with punctures and setae as on head, as long from ventral angulation with head to apex of mandibles as head in male, three fourths as long in female, very flat in male and with a fine carina dividing sides from dorsum running from inner margins of eyes almost to apex and with fine, erect, rather dense, hairlike setae along the carina, when viewed from front rather sinuously narrowing on the sides from base of eyes on head to near apex and thence suddenly flared out, the narrowest breadth somewhat more than half the greatest apical breadth; slightly transversally convex in female and without distinct lateral carinae and without a row of long setae at sides. Prothorax slightly broader than long (7:6), slightly transversally depressed before the base and middle; densely and minutely punctate; pubescence hairlike, anteriorly inclined, not forming condensed patches and not concealing derm, lateral carina forming broad and continuous curve with dorsal carina and extending half the distance between dorsal carina and side at lower margin of eye. Elytra three fourths as broad as long, twice as long as prothorax, subparallel-sided from the subtruncate base to apical declivity, shallowly punctate-striate, very slightly transversally depressed before middle; pubescence fine and hairlike, two or three rows to each interval, rather steeply inclined, not concealing the derm and not forming condensed areas. Legs finely, shortly, sparsely pubescent; first fore tarsal segment one third as long as a fore tibia. Sternum finely and shallowly punctate, shortly and sparsely setose. Venter minutely and inconspicuously punctate and setose. Pygidium slightly medianly grooved at base only, minutely punctate, sparsely setose, one third broader than long in both sexes. Length, 1.75-2.25 mm.; breadth, 0.8-1.0 mm.

Society, Austral, Mangareva, and Marianas Islands. Unless otherwise stated, all the following specimens were collected by me. Mangareva Islands:

Agakauitai, holotype male and one male paratype beaten from dead banana leaves and dead coconut fronds, elevation 10 feet, June 8, 1934.

Taravai, allotype female beaten from dead coconut fronds on northeastern side, June 1.

Austral Islands:

- Tubuai, one female paratype swept from grasses and low herbage on Tapapatauai Islet, elevation 5 feet, Aug. 19.
- Maria, one female paratype from northeast islet, elevation 5 feet, Sept. 6.

Society Islands:

Tahiti, one male paratype from Arihiri, Pare, March 15, and one

female paratype collected at light at the same locality, March 14; one female paratype swept from grasses and low herbage at Tiupi Bay, Papeari, May 5.

Moorea, one female paratype from Afareaitu, elevation 10 feet, Sept. 28.

Marianas Islands:

Guam, three male paratypes and four female paratypes collected by R. L. Usinger at Machanao, June 5, 1936, two of the males and three females from dead leaves of a fallen tree, the other male and female beaten from the dried leaves of fallen branches.

The widespread distribution of this species indicates that it has been carried by man to many parts of the Pacific. The extremes in localities, Mangareva and Guam, are about 6,000 statute miles apart. It is probable that more collecting will result in the finding of this species on many more islands in Oceania.

The rather spectacular flat "face" and long rostrum of the male and the pale color of the derm make this species easily recognized among the Anthribidae of southeastern Polynesia.

Genus MAUIA Blackburn, 1885

Head convex; eyes lateral, convex, almost circular, but the lower margin slightly flattened, less than half as broad as the interocular area. Rostrum from the lower margins of the eyes to the apex of the labrum about two thirds as long as the head, about four fifths as broad as long, the longitudinal dorsal outline slightly concave below the eyes; mandibles concave internally and not toothed: antennae inserted at the sides of the base of the rostrum close to the lower, inner margin of the eye, the scrobe contiguous with the lower margin of the eye and with a rather short, elongate, tuberculiform, longitudinal ridge just below the inner margin of the eye. Antennae extending behind the base of the elytra in both sexes, but not past middle, with first segment stout, slightly shorter than second, second stouter at apex than third but very slightly longer, segments three to eight inclusive successively slightly shorter, nine somewhat longer than eight and subequal or slightly longer than ten, ten slightly shorter than eleven, nine and ten not triangular, eleven elliptical, nine to eleven forming a very loose, asymmetrical club, the emarginations at the sutures between the segments equally formed from either side. Prothorax distinctly transverse, dorsal carina basal or nearly so, but usually appearing subbasal owing to the tilting forward of the prothorax at death, lateral carina extending almost or quite to two thirds the distance from base to apex, forming a broad, slightly rounded, very obtuse angle with the dorsal carina, longitudinal lateral carinula forming a distinct acute angle internally with dorsal carina and a very obtuse angle with lateral carina. Scutellum distinct. Elytra subparallel-sided, base slightly and broadly emarginate from humeri to suture, somewhat more than twice as long as prothorax. Legs with the femora rather strongly clavate;

tibiae slender, fore pair about as long as the fore femora; first fore tarsal segment less than a third as long as a fore tibia, first tarsal segment slightly longer than segments two plus three, second segment slightly longer than three which is broader than two and not immersed in it, fourth segment about as long or slightly longer than two plus three, claws with a sharp subbasal tooth. *Sternum* with the fore coxae closely approximated, less than half as widely separated as the meso- and metacoxa which are subequally separated, hind coxae transverse, almost reaching the elytra; metasternum between the mid and hind coxae broader than a metacoxa.

The one species of this genus found in eastern Polynesia superficially resembles species of *Aethessa* or elongate *Araecerus* but is easily distinguished from those two genera. From the dorsal view it might easily be mistaken for *Proscopus* or *Neseonos* if it were not for the position of the dorsal prothoracic carina. Three species of this genus have been described. The species listed here is the genotype; the other species are from New Guinea and the Malay Peninsula.

9. Mauia subnotatus (Boheman).

Araecerus subnotatus Boheman: Eugenies Resa, 116, 1859. Mauia satelles Blackburn: Roy. Soc. Dublin, Trans., 3:195, 1885. Contexta murina Jordan: Deutsche Ent. Zeitsch., 78, 1902.

The characters summed up in the key and generic description obviate the necessity of a specific description of this widespread species. The color varies from testaceous through reddish brown to piceous. The elytral striae are distinctly impressed and the squamules on the intervals are rather coarse. The whole of the elytra is usually tessellated with patches of pale and dark squamules. Length, 2.5-3.5 mm.; breadth, 1.0-1.5 mm.

This species has been previously recorded in southeastern Polynesia only from Eiao in the Marquesas and Moorea in the Society Islands. It has not been recorded in Hawaii since a unique specimen was taken by Rev. Thomas Blackburn previous to 1885 on the island of Maui (hence the generic name). However, I have seen specimens collected since 1917 from localities on Hawaii, Oahu, and Kauai. It is a species with a wide distribution in both the Pacific and the Old World tropics.

During the course of the Mangarevan Expedition, I collected 32 specimens as follows:

Society Islands:

Tahiti, one specimen collected near Papeete, March 23.

Moorea, one specimen from Faatoai Valley, elevation 200 feet, Sept. 23.

Tuamotu Archipelago:

South Marutea, one specimen from the northwest islet, May 22. Mangareva Islands:

Mangareva, 17 specimens beaten from dead leaves and dead branches near Rikitea, elevation 50 feet, June 4; six specimens from Rikitea, 100 feet, June 9; three specimens beaten from dead branches and dead leaves on the south slope of Mount Duff, elevation 300-700 feet, June 4.

Pitcairn Island: two specimens beaten from dead banana leaves on the south side, elevation 600 feet, June 14.

Austral Islands:

Maria, one specimen beaten from a dead pandanus cone, on the northeast islet, elevation 5 feet, Sept. 6.

Genus ARAECERUS Schönherr, 1826

Head continuously convex in dorsal outline with the rostrum; eyes rather large, lateral, entire, round or oval, strongly convex, laterally protuberant, half or more than half as broad as the interocular area; antennae inserted at the inner lower margins of the eyes, upper margin of scrobes contiguous with eye, inner margins of scrobes not conspicuously elevated, not tuberculiform, the interscrobal distance distinctly narrower than the interocular area. Rostrum from scrobes to base of labrum less than half as long as head and there less than half as long as broad, dorsally convex, rather thick; mandibles with an acute antemedian tooth. Antennae not or hardly reaching past the base of the prothorax; first segment arcuate, stouter and slightly longer than two, two shorter and somewhat stouter than three, three to eight similar in shape but each successively shorter, nine, ten, and eleven expanded and flattened to form a loose club, these segments subequal in length, eight and nine subequal in length. Prothorax transverse, convex, dorsal carina basal, lateral carina short, not reaching the middle of the side and forming either an oblique or obtuse angle with the dorsal carina, baso-lateral carinulae indistinct. Scutellum visible. Elytra subparallel-sided before the declivity, punctate-striate, about twice as long as the prothorax. Legs rather slender, tibiae subcylindrical, as long as femora; first tarsal segment longer than two plus three, two longer than broad, longer than three, three rather small, not or hardly broader than two, claws each with a sharp subbasal tooth. Sternum with fore coxae larger and more prominent than mesocoxae, very narrowly separated, mid and hind coxae distinctly and subequally separated, hind coxae transverse, almost reaching the elytra; metasternum between mid and hind coxae broader than a metacoxa at the trochanter.

Because of its basal dorsal prothoracic carina in combination with its densely public body, this genus can be confused only with

Mauia in the eastern Polynesian fauna. Its stouter form, shorter antennae, shorter prothoracic carina, toothed mandibles and shorter second antennal segment will separate *Araecerus* from *Mauia*.

Araecerus is predominently an Indo-Australian genus. Some species, such as the two discussed here, are of some economic importance. The individuals of the species jump rapidly and excitedly when disturbed. Although the number of described species is not great, much taxonomic difficulty is encountered in studying them. The two species found in our fauna are very closely allied and can be separated only after careful study and comparison. They may be distinguished by the following key:

The important differences between the two species are given in the key, therefore I shall not give a detailed description of each species.

10. Araecerus fasciculatus (De Geer) (fig. 1, h).

Curculio fasciculatus De Geer: Mem. Ins., 5:276, tab. 16, fig. 2, 1775.

See Coleopterorum Catalogus for detailed synonymy.

This species has become almost cosmopolitan. It is an important pest of coffee, cocoa, nutmeg and similar products. This species is known in southeastern Polynesia only from Tahiti, where I collected one specimen from a legume pod in Fautaua Valley, March 7, 1934, and swept two specimens from a legume at Arue, elevation 50 feet, March 6. The legume was probably a *Crotalaria*. It is evident that this species has not become well established, because only three of the 143 specimens of *Araecerus* collected by the Expedition belong to *A. fasciculatus*.

11. Araecerus vieillardi (Montrouzier) (fig. 1, d, g).

Urodon vieillardi Montrouzier: Ann. Ent. Soc. France, 873, 1860. This variable species is very common and widespread in the Pacific, reaching westward into the Philippines and eastward to Hawaii and the Mangareva Islands. The small teeth on the inner sides of the fore tibiae are often obsolete in small males. The length ranges from 2 to 4 mm.

This species has heretofore been recorded only from the Society and Marquesas Islands in southeastern Polynesia. The Mangarevan Expedition procured 143 specimens of this species as follows. Unless otherwise stated all specimens were collected by me.

Society Islands:

- Tahiti, 47 specimens beaten from dead leaves and seed capsules of *Hibiscus tiliaceus*, 1.5 miles northeast of Papeete, elevation 25 feet, March 1, 1934; two specimens taken at the same time and place by sweeping; three specimens swept from grasses at Pirae, Pare, March 12; three specimens swept from a legume at Arue, elevation 50 feet, March 6; one specimen from Arihiri, Pare, March 17; one specimen taken from the pod of a legume in Fautaua Valley, March 7; and one specimen taken at Tiupi Bay, Papeari, April 11.
- Moorea, two specimens swept from grasses and low herbage at Tehau Point, elevation 10 feet, Sept. 24; one specimen from Faatoai Valley, elevation 200 feet, Sept. 23; one specimen from Orufara Valley, elevation 200-400 feet, Sept. 22.
- Huahine, one specimen collected by Y. Kondo on the north slope of Mount Taiahi, elevation 600-700 feet, Oct. 1.
- Raiatea, two specimens swept from grasses and low herbage on the northwest side of Faaroa Bay, elevation 25 feet, Oct. 6; three specimens collected at the same place and date by Y. Kondo, elevation 300-500 feet; one specimen collected by C. M. Cooke, Jr., and Y. Kondo in the valley east of Mount Orotaia, Oct. 5.
- Borabora, one specimen from the west slope of the mountain north of Mount Pahio, elevation 600-800 feet, and two specimens collected by Y. Kondo on the west slope of Mount Pahio, elevation 300 feet, Oct. 13.

Austral Islands:

- Maria, one specimen collected on the northeast islet, elevation 5 feet, Sept. 6.
- Rimatara, four specimens swept from grasses and low herbage on Oromana Hills, elevation 25 feet, Sept. 4.

- Rurutu, two specimens from the southwest slope of Mount Manureva, elevation 1,000 feet, Aug. 25; four specimens from Uopepe Valley, elevation 100 feet, Aug. 27; one specimen swept from grasses and low herbage on Mount Manureva, elevation 1,000 feet, Aug. 28; two specimens swept from *Crotalaria* on the south slope of Mount Teape, elevation 800 feet, Sept. 2; one specimen from fallen fruit of *Inocarpus edulis* at Moerai, elevation 50 feet, Aug. 26.
- Tubuai, four specimens from Murivahi, elevation 10 feet, one swept from grasses and low herbage, Aug. 16; two specimens swept from grasses and low herbage on Tapapatauai Islet, elevation 5 feet, Aug. 19; one specimen from the southeast ridge of Mount Taita, elevation 1,200 feet, Aug. 20; one specimen from the southeast slope of Mount Turivao, elevation 1,200 feet, Aug. 23.
- Raivavae, four specimens beaten from dead leaves and branches on the south slope of Pic Rouge, elevation 200-400 feet, Aug. 5; two specimens swept from grasses and low herbage at Raiurua, elevation 5 feet, Aug. 5; one specimen from near Arepua, elevation 100 feet, Aug. 6; one specimen beaten from *Metrosideros* on the southwest slope of Mount Hiro, elevation 1,200-1,300 feet, Aug. 10; five specimens swept from shrubs on Motu Tehau Islet, elevation 5 feet, Aug. 11; three specimens swept from grasses and low herbage near Anatonu, elevation 5 feet, Aug. 12; one specimen collected by D. Anderson and me from dead, rotten leaves of *Hibiscus tiliaceus* near Ahuoivi Point, elevation 5 feet, Aug. 9, and one specimen with the same data swept from grasses and low herbage.
- Rapa Island: eight specimens beaten from dead branches of *Homo-lanthus* at Maitua, elevation 700-800 feet, July 2; five specimens beaten from *Hibiscus tiliaceus* near Area, elevation 10 feet, July 1, and two with the same data taken on July 30; one specimen beaten from ferns in the southeast valley of Mount Ororangi, elevation 600-700 feet, July 3; and one specimen collected by D. Anderson near Area, elevation 400 feet, July 30.

Tuamotu Archipelago:

Tepoto, one specimen swept from grasses and low herbage near the middle of the island, May 16. Mangareva Islands:

- Mangareva, one specimen from the northeast slope of Mount Duff, elevation 100-500 feet, May 23; seven specimens swept from grasses and low herbage near the convent, elevation 300 feet, May 24; 12 specimens swept from grasses and low herbage, May 25, six of these from near the chapel on Teonekura Point, elevation 300 feet, five from near Roruu at the same elevation, and one from near Atifuiti; 12 specimens beaten from dead branches and leaves on the south slope of Mount Duff, elevation 300-700 feet, June 4, and one specimen with the same data collected at an elevation of 50 feet near Rikitea; two specimens from *Asplenium nidus* on the south side of Mount Mokoto, elevation 1,000 feet, June 6; and one specimen collected by D. Anderson at the same locality, June 7.
- Taravai, 11 specimens swept from grasses and low herbage near Taravai Village, June 1, and one specimen beaten from a dead coconut frond on the northeast side, June 1.
- Aukena, eight specimens swept from grasses and low herbage on the northwest side, elevation 5-20 feet, May 25, and two specimens swept from grasses and low herbage at Koiovao, May 29.
- Akamaru, three specimens swept from grasses and low herbage on the north side, May 29.
- Agakauitai, 15 specimens swept from grasses and low herbage, elevation 10 feet, June 8.

Oeno Island: seven specimens taken from low herbage, June 23.

- Pitcairn Island: seven specimens swept from grasses and low herbage, on the north side, June 13; two specimens beaten from *Metrosideros* on south side, elevation 500 feet; five specimens swept from grasses and low herbage, elevation 700-900 feet, June 14.
- Henderson Island: 11 specimens collected on the northeast side at 100 feet elevation as follows: seven beaten from shrubs June 19, one taken June 21, and three beaten from shrubs one quarter mile inland, June 19.

I have also seen specimens from Makatea in the Tuamotu Archipelago and from Rarotonga in the Cook Islands.

Genus MELANOPSACUS Jordan, 1924

Head concealed from above by the prothorax; eyes rather large, slightly convex, situated on the sides of the front, entire, posterior margins close to or contiguous with anterior margin of pronotum, about as long as interocular

area; antennae inserted just above the inner lower corner of the eyes, scrobes foveaform, their upper margins contiguous with eyes, without enlarged tubercles. Rostrum continuous in dorsal outline with the frons, much shorter than head, hardly as long or but slightly longer from the ventral angulation with the head to apex of mandibles than the distance from ventral angulation to eyes, fully twice as broad as long; mandibles not toothed. Antennae not or hardly reaching past posterior margin of prothorax, segment one about as long as or but slightly longer than two, two longer than three, segments three to eight each successively shorter, nine, ten, and eleven subequal, each about as broad as long, conspicuously flattened, nine fully twice as broad as eight. Prothorax large, transverse, dorsal carina basal, lateral carina not extending past the middle, forming a sharp, acute angle with dorsal carina, without visible baso-lateral carinulae. Scutellum invisible. Elytra convex, about as broad as long, only about one and a half times as long as prothorax. Legs with femora rather stout, tibia somewhat expanded distally, as long as femora; first tarsal segment longer than second which is about as long as broad, three free, broader than two, four longer than three, claws each sharply toothed. Sternum with fore coxae narrowly separated, the fore and mid coxae closely approximate, mid and hind coxae distinctly and subequally separated; hind coxae transverse, reaching metepisterna; metasternum between the mid and hind coxae narrower than breadth of a metacoxa at the trochanter.

The only genus that *Melanopsacus* might be confused with in our fauna is *Cisanthribus*, but on that genus the lateral prothoracic carina extends all the way to the apex, instead of not passing the middle as on *Melanopsacus*. The species of both these genera in our fauna are very small, strongly convex, highly polished, black insects.

This is predominantly an Indo-Austro-Malayan genus. Several species have been described from Samoa and Fiji; the following new species is the first recorded from eastern Polynesia.

12. Melanopsacus rapaae, new species (fig. 1, r).

Derm shiny black, appendages diluted with red; pubescence white or gray, not forming patterns.

Head finely, densely, subconfluently, reticulately punctate, pubescence fine and inconspicuous; eyes vertical, oval, somewhat flattened on inner side; scrobes with inner margins slightly raised. Rostrum continuously punctate and pubescent with head. Antennae with first segment elongate oval, slightly longer than the rather similarly shaped second segment, second segment fully twice as broad as third and about as long as three plus half of four; club rather symmetrical, the terminal segment broadly oval. Prothorax one sixth broader than long, base subtruncate, arcuate on sides and slightly convergent distally to broadly rounded apex; very densely, minutely but rather coarsely, reticulately punctate giving a shagreened appearance; pubescence evidently somewhat denser than on the elytra, hairlike, prostrate; lateral carina forming a sharp angle internally and externally with dorsal carina, the point produced slightly backward and downward. Elytra almost as broad as long, about two sevenths longer than prothorax, strongly convex dorsally and laterally; minutely and confusedly punctate throughout, not striate nor serially punctate; pubescence rather inconspicuous, very fine, prostrate, and scattered. Legs with first fore

tarsal segment one third as long as a fore tibia. Sternum with fore coxae almost contiguous, the prosternum before coxae as long as first three ventrites along median line, convex, densely punctate; mid coxae not separated from fore coxae by more than half the diameter of coxa; metasternum between mid and hind coxae less than half as broad as a metacoxa at the trochanter. Venter finely and densely punctate throughout, finely and inconspicuously pilose. Pygidium three fourths as long as broad, the apex broadly and evenly rounded; finely and densely punctate; pile very fine and inconspicuous. Length, 1.5 mm.; breadth, 0.8 mm.

Rapa Island: Holotype female (?) beaten by me from dead branches of *Sclerotheca* on the east ridge of Mount Perahu, elevation 1,400-1,500 feet, July 28, 1934.

Dr. Jordan, who has kindly examined this specimen, states that it is nearest to *Melanopsacus stibbus* Jordan, 1937; but the shagreened, densely punctate pronotum, confusedly punctate elytra and the shape of the angle between the dorsal and lateral carinae will serve to separate the species.

The fifth ventrite is distinctly longer than the fourth and, together with the convexity of the abdomen, leads me to believe that the holotype is a female.

Genus CISANTHRIBUS, new genus

Head concealed from above by prothorax; eyes protuberant, strongly convex, coarsely faceted, situated on the sides of the head at base of rostrum, slightly transverse, entire; interocular area about one and a half times as broad as eye; antennae inserted at inner edge of eye; scrobe foveaform, its dorsal margin contiguous with inner edge of eye, its inner margin cariniform and with a small tubercle; interscrobal distance much narrower than interocular area. Rostrum very short, distance between scrobes and the base of the labrum but slightly more than half the length of head, more than twice as broad as long, excluding mandibles which have a minute antemedian tooth and a pair of minute basal denticles and are longer than rostrum. Antennae not or hardly reaching past posterior prothoracic margin; the segments as follows: one about as long as two, three and four together, two as long or slightly longer than three plus four, at least twice as broad as three, four to eight rather similar in shape and subequal, nine, ten, and eleven forming a compact, asymmetrical club, the inner side almost straight, the outer side deeply serrate, nine and ten subangular, about as broad as long, ten subtruncate at apex. Prothorax strongly convex, strongly transverse; the dorsal carina basal and contiguous with the base of the elytra, fine, the lateral carina forming nearly a right angle with dorsal carina but joining the true basal carina behind dorsal carina and extending anteriorly to apex. Scutellum invisible. Elytra strongly convex, about as broad as long, more than twice as long as prothorax, very tightly joined to and slightly overlapping the extreme base of the prothorax. Legs with femora stout but not clavate; tibiae slightly shorter than femora, subcylindrical and evenly expanded distally; tarsi with first segment shorter than next two combined, second transverse, third broader than two, free and transverse, claws subbasally toothed. Sternum with fore coxae very narrowly separated, mid

and hind coxae distinctly and subequally separated, the fore coxae separated from mid coxae by a distance somewhat less than the diameter of a fore coxa; metasternum between mid and hind coxae extremely narrow, hind coxae globular, as broad as long, subequal in size with mid coxae. *Venter* with segments appearing somewhat telescoped beneath, narrower at the middle than on the sides. *Pygidium* strongly inclined ventro-anteriorly.

Genotype: Cisanthribus convexus, new species.

In eastern Polynesia, this genus most closely resembles *Melan-opsacus* but is not closely allied to that genus. The complete lateral prothoracic carina and the globular hind coxae will alone separate *Cisanthribus* from *Melanopsacus*.

This genus is the only member of the anthribid fauna of eastern Polynesia in which the hind coxae are globular and similar to the mesocoxae instead of being transverse and extending laterally almost to the elytra. The single species in our fauna so closely resembles some convex members of the Ciidae that a careful examination is necessary to ascertain the correct family of the species.

Cisanthribus is evidently most closely allied to the Central American genus *Acarominus* Jordan (Biol. Centr. Amer., 1907), but may be distinguished from that genus by its lateral prothoracic carina which extends straight to the anterior margin; in *Acarominus* it passes a little beyond the middle and is then upturned.

13. Cisanthribus convexus, new species (fig. 1, f, s).

Derm shiny black with appendages reddish, without vestiture.

Head convex, minutely punctate, without setae; eyes slightly broader than long, horizontally placed, only about half as broad as the interocular area; interscrobal area slightly more than half as broad as the interocular area. Rostrum minutely punctate like head, slightly sinuous but subtruncate at apex: with some long setae at apex and on labrum. Antennae with first segment arcuate, evenly expanded from base to apex, as long as two plus three plus four, two as long as three plus four, subtruncate at apex, about as broad as the length of three, three slightly longer than four, four to eight subequal in length, nine as long as seven plus eight and slightly longer than ten, as broad at apex as long, ten distinctly transverse, as broad at apex as nine, eleven slightly longer than ten, somewhat subquadrate but roundly emarginate at apex. Prothorax two fifths broader than long, almost hemispherical in lateral outline; very minutely punctate; dorsal carina very fine and inconspicuous, the lateral carina well defined and sharply dividing the pleurae from dorsum, forming a slightly obtuse angle with dorsal carina; pleurae forming an angle with dorsum at carina. Elytra but slightly longer than broad, two and two thirds as long as prothorax, strongly convex, subcontinuously convex in longitudinal dorsal outline with pronotum, base subtruncate, strongly rounded on sides from base to apex, conspicuously carinately margined on sides; minutely and confusedly punctate, not striate nor serially punctate. Legs with first fore tarsal segment hardly as long as apical breadth of fore tibia, hardly longer than second segment which is transverse and shorter than third. Sternum with fore coxae separated by only about one third the breadth of a coxa; mesosternum produced into a tuberculiform process between anterior part of mesocoxae; metasternum between mid and hind coxae only about one sixth as long as a metacoxa. Venter sparsely and minutely punctate. Pygidium convex, smooth and shiny, truncate at apex in female and one fourth broader than long, somewhat longer and with apex rounded in male, apex on a line perpendicular with apical margin of third ventrite at elytra. Length, 1.25-1.30 mm.; breadth, 0.75-0.90 mm.

Society Islands:

- Tahiti, holotype male found among dead leaves on the ground 6 kilometers from the sea, elevation 300 meters, Nov. 7, 1928; allotype female with the same data but from dead wood of *Inocarpus edulis*; both collections by A. M. Adamson.
- Moorea, two paratypes from dead banana leaves, 3 miles from the sea in Faaroa Valley, elevation 1,000 feet, Dec. 4, 1928; collected by A. M. Adamson.

This tiny, glabrous, shiny black species can easily be recognized among the Anthribidae of eastern Polynesia. Its resemblance to such Ciidae as the Hawaiian *Apterocis ephistemoides* (Sharp) is quite remarkable.

Species of Uncertain Status

The following two species were described by Fairmaire from Tahiti in 1849. Neither Dr. Jordan nor I know of any specimens that have been identified as these species. Dr. Jordan has tried to locate the types in the collections of the National Museum at Paris and that of René Oberthür but has failed. It is most probable that the types of these two species have been lost or destroyed together with many other Fairmairean types.

14. Rhinobrachys asperulus Fairmaire: Rev. Mag. Zool., 55 (or 503?), 1849.

A free translation of the generic description reads as follows:

Rhinobrachys, n.g.—Rostrum flat, short, slightly depressed at the middle, nearly rounded at the apex. Head rather large, eyes small. Antennae inserted nearly at the apex of the rostrum, slightly on the upper side, without scrobes, a little longer than half the body. First segment large, swollen; the second smaller, but large and swollen; the following, to the ninth, nearly alike, filiform, very elongate triangular; the tenth and eleventh larger and thicker; all the segments are pilose. Prothorax a little longer than broad, strongly rounded on the sides at the middle, a little more narrowed in front than behind. Elytra hardly longer than the prothorax and rostrum together, a little broader than the prothorax, straight on the sides, slightly convex, truncate, shorter than the abdomen. Legs short, robust, femora swollen, especially the fore ones.

The specific description, exclusive of the Latin diagnosis, is as follows:

Length 2 1/3 mm. Pale brown, head and prothorax covered with fine asperities, all of the body covered with a very short, slightly dense pubescence. Elytra slightly convex, nearly straight on the sides, lined with rather large punctures.—Tahiti.—Taken a single time in a flower of *Crataeva religiosa* (Capparidaceae) in December.—M. Vesco.—This insect recalls slightly the form of *Platyrhinus*, but one cannot see a scrobe on either side of the rostrum, and the elytra do not all extend to the extremity of the abdomen.

The mode of insertion of the antennae and the asperate head and prothorax are characters not displayed on any species known to me. I had at first considered that this species might be *Mauia subnotatus* (Boheman), but upon examination it was found that Fairmaire's insect must have been quite different.

Tropideres lutatus Fairmaire: Rev. Mag. Zool., 56 (or 504?), 1849.

From the description, I have concluded that this species is most probably a synonym of the common *Araecerus vieillardi* (Montrouzier), and until I have been otherwise convinced, I shall consider it such. A free translation of Fairmaire's original description is as follows:

Length 3 mm. Dark reddish brown, covered with very dense yellowish gray pile, condensed in spots in places; nearly cylindrical in form; elytra punctate, striate, invisible under the pile. Antennae slender, slightly surpassing the prothorax, ferrugineous, the last three segments swollen. Under side of the body blackish brown, the gray pile short, slightly dense; legs reddish, the anterior ones longer than the others, the first segment of the tarsi as long as the others together. On freshly squared trunks of *Spondias dulcis*. Tahiti, M. Vesco.

The only members of the anthribid fauna of Tahiti that fit into a group of densely pilose, spotted, 3 mm. long species with the antennae but slightly passing the posterior margin of the prothorax are Mauia subnotatus (Boheman) and the two species of Araecerus. The first tarsal segment of Mauia is shorter than the following segments, and hence this character excludes Mauia. The first tarsal segment is as long as the following segments in Araecerus. Fairmaire's type was taken in the lowlands from the introduced tree, Spondias dulcis, in which habitat Araecerus vieillardi abounds. Although possible, it is highly improbable, because of the rareness of A. fasciculatus and the common occurrence of A. vieillardi, that this species is a synonym of A. fasciculatus.