INSECTS OF MICRONESIA

Hemiptera: Tingidae

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This paper deals with the lacebugs, family Tingidae, of Micronesia. To the present writing, only five species representing five genera have been recorded in the literature for these islands. Herein are listed 11 species divided among eight genera and one subgenus of the subfamilies Cantacaderinae and Tinginae. The subfamily Serenthiinae is not represented in the collections. The absence of examples of the family Piesmidae indicates that piesmids may not inhabit the Micronesian Islands.

As is shown in table 1, the tingid fauna of Micronesia is smaller in number of species and in genera than that of the Fiji Islands. For comparative purposes and as a representative of a different, less isolated, and richer faunal realm, the tingid data of the small island of Amboina have been included in the table. And even though very little collecting has been done in the Moluccas, the tingid records of Amboina show much evidence of a richer hemipterous fauna than that of Micronesia.

Many genera and a large number of species of Tingidae have been described from the Philippines, Indonesia, and Melanesia. Taiwan is also well represented in the literature. And as is evidenced by the number of unrecorded and new species turning up year after year, there are still many unknown forms to be netted in the islands of the Pacific and Indian Oceans.

Of the Micronesian Tingidae enumerated in table 1, *Teleonemia scrupulosa* Stål (native of Mexico and Neotropical America) is the only exotic lacebug established in these islands. As this American tingid feeds and breeds on *Lantana* spp., it was first taken to Hawaii to be tested as a natural enemy for the control of the lantana weed. Thus, as the results of highly satisfactory tests, consignments of this tingid were sent from Hawaii to Viti Levu, Fiji, and later to Ponape. For the same purpose, many specimens of *T. scrupulosa* have been shipped during the past few decades to other islands of the Pacific and Indian Oceans, as well as to Australia and India.

Table 1.—Comparison of Micronesian, Fijian, Amboinan, and Samoan tingid Faunae

Genus		Number of species and subspecies				Comments on genera and species
		Micronesia	Fiji	Amboina	Samoa	
Cantacader		1				many species, Eastern Hemisphere
Phatnoma		1	1			many species, Eastern and Western Hemispheres
Teleonemia		1	1			many species, Americas: introduced
Cysteochila		1	1	1		many species, Eastern Hemisphere
Berotingis		3				known only from Micronesia
Ulonemia			1			many species, Eastern Hemisphere
Orotingis				1		monotypic genus, known only from Amboina
Eteoneus		1				many species; Asia, Africa, and islands of S. Pacific and Indian Oceans
Palauella		1				monotypic genus, known only from Micronesia
Diconocoris				1		monotypic genus, known only from Java and Amboina
Aulotingis			1			monotypic genus, known only from Fiji
Idiocysta			4		1	5 species described, Fiji and Samoa
Corthotingis			1			monotypic genus, known only from Fiji
Cottothucha				1		monotypic genus, known only from Amboina
Neocysta			1			monotypic genus, known only from Fiji
Nesocypselas			6			4 species and 2 subspecies, recorded only from Fiji
Holophydon			2			1 species and 1 subspecies, known only from Fiji
Stephanitis		2		2		many species, found in all continents
Total	genera	8	10	5	1	= 18 different genera + 1 subgenus
	species and subspecies	11	19	6	1	= 34 different species + 2 subspecies

Cantacader quinquecostatus (Fieber), originally described from India, is now known to occur in Ceylon, China, the Philippines, Sumatra, and Java. Thus its occurrence in western Micronesia appears to be within the natural dispersal range of the species. *Phatnoma veridica* Drake and Maa was quite recently described from specimens collected in both New Guinea and the Palau Islands. The two new genera *Berotingis* and *Palauella* and their respective components are known solely from Micronesia. Forty-four years ago, the subgenus and species *Omoplax disecta* Horvath (1912) of the genus *Stephanitis* Stål, 1873, were characterized from specimens taken in the Bonin Islands, and since then it has not been recorded elsewhere. *Eteoneus esakii* Drake (1939) has been netted only in the islands of Peleliu and Koror. Thus two out of seven genera (including subgenus) and eight out of 11 species of the Micronesian Tingidae are recorded from only these islands.

The Fiji Islands are the home of a number of peculiar genera and singular species of Tingidae not yet known to exist elsewhere. Of the 19 species (including two subspecies) and 10 genera listed in table 1, 15 species (including subspecies) and five genera are, insofar as known, confined entirely to these islands. However, to date, one species, *Idiocysta hackeri* China, 1930, is recorded from Samoa, in Polynesia. Although *I. hackeri* is still known only from the types, four other typical species of the genus *Idiocysta* China were described in 1943 from Fiji. Amboina, though only a small and non-isolated island, presents in some ways a rather similar faunal picture, for five species out of six and two genera out of five are not known to exist elsewhere. From the above summary and, especially, from data in table 1, it is quite evident that a considerable number of both genera and species of Micronesian Tingidae as well as tingids from other island groups tabulated have not been seen or recorded in the literature since the forms were given scientific names and described.

From the scattered, discontinuous, and scanty records accumulated for the four island groups, it seems unwise to draw many conclusions relative to the origin, pattern of distribution, and relationship of the tingid faunae. The dispersal paths are scarcely indicated, and, furthermore, the host plants of the species are largely unknown. Out of all the genera and species tabulated, only four of the genera and one of the species are recorded in the literature for the Asian mainland and continental islands. Generally speaking, the tingid faunae of the different island groups are quite dissimilar. As the Neotropical *Teleonemia scrupulosa* Stål has been purposely introduced into the islands within recent years by man, it is not included in the faunal comparisons.

An analysis of table 1 and the above discussion shows that both generic and specific endemism is very high, especially in the more remote oceanic islands, for a considerable number of the genera and many species are unknown elsewhere. Of the 18 genera and one subgenus and 32 species and two sub-

species enumerated in table 1, 10 genera and one subgenus and 27 species and two subspecies are known only from their respective island groups. The richer faunae of the Micronesian and Fiji Islands appears to be largely the result of more collecting.

Field research for this work was aided by a contract between the Office of Naval Research, Department of the Navy, and the National Academy of Sciences, NR 160-175.

I am also greatly indebted to Dr. J. L. Gressitt for the privilege of studying the small but very interesting and rich collection of Tingidae from Micronesia. The illustrations were made by Mrs. Richard Froeschner and Mrs. Ivan Rainwater.

The data for table 1 were obtained from the material used in this paper, my personal tingid collection, and the following publications: W. E. China, 1930, Insects of Samoa 2 (3): 141-143; C. J. Drake, 1953, Great Basin Naturalist **13** (3-4): 98-99; C. J. Drake and M. E. Poor, 1941, Pan-Pac. Ent. **27** (4): 160-165, and 1943, B. P. Bishop Mus., Occ. Papers **17** (15): 191-205;

Table 2.—Distribution of Micronesian Tingidae

	Micronesia Island Groups											Other Localities
				Caroline								
	Bonin	N. Mariana	S. Mariana	Palau	Yap	Caroline Atoll	Truk	Ponape	Kusaie	Marshall	Gilbert	
Cantacaderinae												
1. Cantacader quinquecostatus				×								S. Asia, Java, Philippines
2. Phatnoma veridica				×								New Guinea
Tinginae												
3. Teleonemia scrupulosa								×				Tropical Americas, Hawaii
4. Cysteochila idonea									×			Solomon Is.
5. Eteoneus esakii				×								
6. Palauella gressitti				×								
7. Berotingis yapensis					×							
8. B. rugiana			×									
9. B. guamensis			×									
10. Stephanitis (s. str.) subfasciata				×								China, Formosa, Java, Burma
11. S. (Omoplax) desecta	×											

C. J. Drake and M. E. Hurd [Poor], 1945, Hawaiian Ent. Soc., Proc. **12** (2): 287-289; and G. W. Kirkaldy, 1908, Linn. Soc. New South Wales, Proc. **33** (2): 363-366.

Key to genera and species of Micronesian Tingidae

1. Clavus large, clearly differentiated; head very longly produced in front of antennae, armed with five long spines in front of eyes, sometimes also with two additional spines behind eyes; rostrum extremely long, almost reaching to middle of venter 2

   Clavus not visible; head not or only slightly produced in front of antennae, unarmed or armed with one to five spines (three in front of, and two behind, eyes); rostrum much shorter, not reaching beyond apex of sternal sulcus 3

2(1). Pronotum quinquecarinate, with median and first lateral pair of carinae extending anteriorly on collar; pronotum almost rectangular, with outer margin nearly rectate; scutellum entirely concealed by obtusely angulately produced hind margin of pronotum; discoidal and subcostal areas without elevated adventitious veins ..... **Cantacader infuscata**

   Pronotum tricarinate, with only median carina present on collar; paranota much wider, angulately dilated; scutellum small, exposed, the posterior margin of pronotum truncate or slightly sinuate; subcostal and discoidal areas with very prominent adventitious veins ..... **Phatnoma veridica**

3(1). Elytra without trace of subcostal area; head a little produced in front of eyes; armed at apex of frons with three stout, inordinately long, anteriorly directed processes; paranota with anterior end strongly angulately produced anteriorly (fig. 6) ..... **Palauella gressitti**

   Subcostal area present, distinctly separated; head unarmed or armed with one to five dorsal spines; front margin of paranota not produced 4

4(3). Pronotum provided in front with a large, inflated, balloon-like hood which extends anteriorly between antennae as far as apex of head; reticulations distinctly lacey, the areolae large, veinlets thin 10

   Pronotum without balloon-like hood; collar not elevated at middle or at most tectiformly raised and then slightly produced anteriorly over basal part of head only; areolae small, the veinlets much thicker 5

5(4). Body oblong, parallel-sided; eyes moderately wide, the vertex wider than diameters of both eyes conjoined; pronotal carinae long 6

   Body more ovate; eyes large, the vertex not or scarcely wider than diameter of one eye; pronotum unicarinate or tricarinate with lateral carinae short and present only on hind process of pronotum 7

6(5). Paranota very wide, reflexed, covering lateral carinae on disc; antennae long, slender, shortly pubescent, the third segment and base of fourth testaceous ..... **Cysteochila indonea**

   Paranota much narrower, uniseriate, reflexed upright, the areolae moderately large; carinae exposed; antennae shorter, stouter, shortly pilose, infuscate; pronotum and discoidal area shortly pubescent ..... **Teleonemia scrupulosa**

7(5). Vertex scarcely wider than diameter of one eye; pronotum unicarinate, shortly pubescent; collar short, uniformly wide, sharply truncate in front; paranota narrow, carina-like, without areolae, feebly angulately produced at humeral angles ..... **Eteoneus esakii**

   Eyes very large, vertex less than diameter of an eye; collar wide, slightly wider at middle; tricarinate, the lateral carinae feebly indicated on hind pronotal process, sometimes entirely obliterated 8

8(7). Paranota very narrow, carina-like, without areolae.....**Berotingis yapensis**
Paranota distinctly wider, mostly uniseriate, wider and biseriate opposite humeral angles 9

9(8). Costal area of elytra biseriate through most of its entire length, triseriate in widest part.....**Berotingis guamensis**
Costal area mostly triseriate, quadriseriate in widest part.....**Berotingis rugiana**

10(4). Pronotum unicarinate, with median carina very low in front, attached at base of small hood; paranota very narrow in front, wider and semicircular opposite humeral angles, there with the radius composed of two areolae, the areolae small.....**Stephanitis (Omoplax) desecta**
Pronotum tricarinate, the median carina more elevated, arched above, attached to median vein of hood near middle of hind surface; paranota wide, uniformly expanded, reflexed obliquely upright, composed of three complete rows of large areolae.....**Stephanitis (Stephanitis) trifasciata**

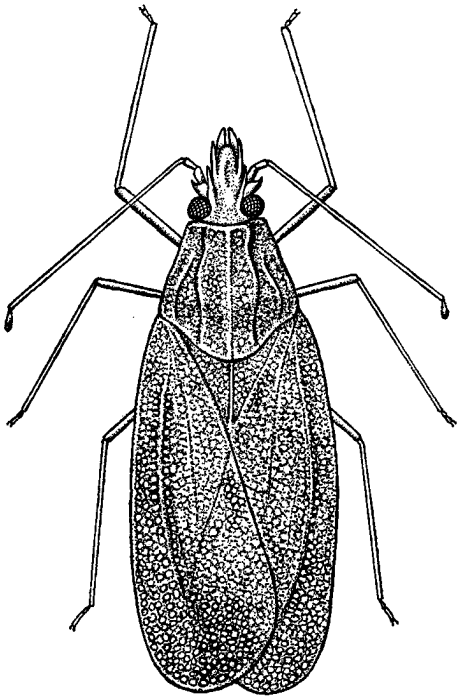

FIGURE 1.—*Cantacader quinquecostatus* (after Distant, Fauna of India, Rhynch. 2: fig. 88).

SUBFAMILY CANTACADERINAE STÅL, 1874

1. Cantacader quinquecostatus (Fieber). (Figure 1.)

Taprostethus quinquecostatus Fieber, 1844, Ent. Monographien, 41, pl. 3, figs. 18-22.

Monanthia subovata Motschulsky, 1863, Soc. Nat. Moscou, Bull. 36 (3): 91.

Cantacader quinquecostatus Stål, 1873, Enumeratio Hemipterorum **3**: 117.—Distant, 1904, Fauna of India, Rhynch. 2: 123-124, fig. 88.—Drake and Poor, 1937, Philippine Jour. Sci. **62** (1): 1.—Drake, 1950, Arthropoda **1** (2-4): 164.

DISTRIBUTION: India, Ceylon (Peradeniya), Philippines (Luzon and Occidental Negros), Java (Buitenzorg and Bandoeng), Penang Is., and Palau.

PALAU. BABELTHUAP: Ngiwal, alt. 1 m., one specimen, Dec. 1952, Gressitt. KOROR: Feb., June, July, Sept. 1953, all taken at light, Beardsley. Seven specimens.

2. **Phatnoma veridica** Drake and Maa (fig. 2).

Phatnoma veridica Drake and Maa, 1955, Taiwan Mus., Quart. Jour. **8** (1): 2.

DISTRIBUTION: New Guinea, western Caroline Is.

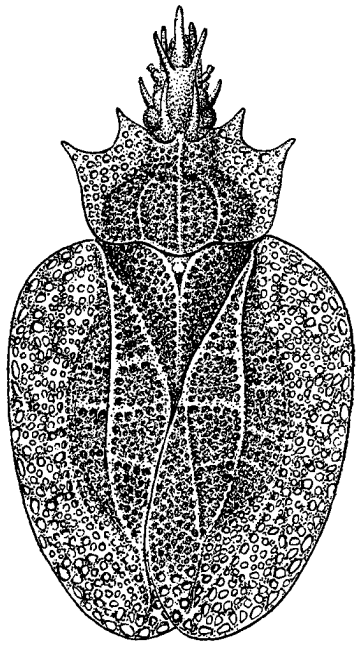

FIGURE 2.—*Phatnoma veridica.*

PALAU. BABELTHUAP: Four, southwest of Ulimang, Dec. 1947, beating vegetation on wooded peak, Dybas. KOROR: One, Nov. 1947, and one, Limestone Ridge, south of inlet, Jan. 1948, Dybas; three, Apr. 1952, on bark on *Glochidion,* Beardsley. ULEBSEHEL (Aurapushekaru): One, Jan. 1948, Dybas.

NGARMALK (Auluptagel): One, Dec. 1952, one May 1953, Beardsley. PELELIU: Northeast coast, Jan. 1948, Dybas. NGIRAMAOUS: One, Nov. 1947, Dybas.

SUBFAMILY TINGINAE STÅL, 1874

3. **Teleonemia scrupulosa** Stål (fig. 3).

Teleonemia scrupulosa Stål, 1873, Enumeratio Hemipterorum **3**: 132 (Bogota, Colombia; Rio de Janeiro, Brazil).—Champion, 1898, Biol. Cent.-Am., Rhynch. **2**: 40-41, pl. 2, 2 figs.—Van Duzee, 1917, Cat. Hemipt. 222.—Drake and Frick, 1939, Hawaiian Ent. Soc., Proc. **10** (2): 199-202, 1 fig.

Teleonemia bifasciata Kirkaldy (*nec* Champion), 1898, Soc. Ent. France, Bull. **15**: 216.

Teleonemia lantanae Distant, 1907, Entomologist **40**: 60-61 (Honolulu).—Kirkaldy, 1907, Hawaiian Ent. Soc., Proc. **1** (4): 140, 154; 1908, Hawaiian Ent. Soc., Proc. **1**: 190.—Perkins and Swezey, 1924, Hawaiian Sugar Planters' Assoc. Exper. Sta., Ent. Bull. **16**: 75-76.—Simmonds, 1928, Agric. Jour. Fiji **1**: 10, 16-21; 1929, Agric. Jour., Fiji **2**: 36-39, 4 figs.

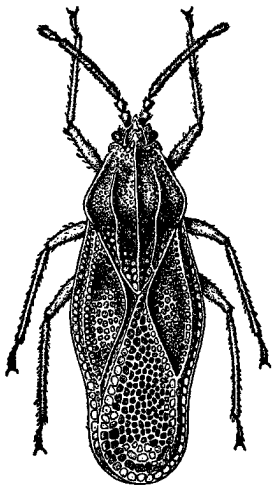

FIGURE 3.—*Teleonemia scrupulosa.*

DISTRIBUTION: The lantana lacebug, *Teleonemia scrupulosa* Stål, is native to and common in the tropical and subtropical Americas. It ranges from Texas and Florida south across Mexico, Central America, the West Indies, Colombia, Venezuela, the Guianas, Paraguay, Brazil, and Peru. Introduced to many islands of the Pacific and Indian Oceans and to Australia and India.

PONAPE. Jan. 1949, Ross (Honolulu Quarantine collection). Sokehs, eight, Mt. Peipalap, June-Sept. 1950, Adams; Colonia, June-Sept. 1950, Adams; Nanpohnmal, 50 m., Jan. 1953, Gressitt; Mt. Temwetemwensekir, 180 m., Jan. 1953, Gressitt; Madolenihm (Matalanim) Plantation, Sept. 1950, Adams, and Nov. 1953, on *Lantana,* Beardsley; Airfield, June-Sept. 1950, Adams.

HOST: *Lantana.*

4. Cysteochila idonea Drake, n. sp. (fig. 4).

Oblong, moderately long, testaceous with brown and fuscous markings as described in structures. Head dark fuscous, armed with five short, semierect, pale testaceous spines;

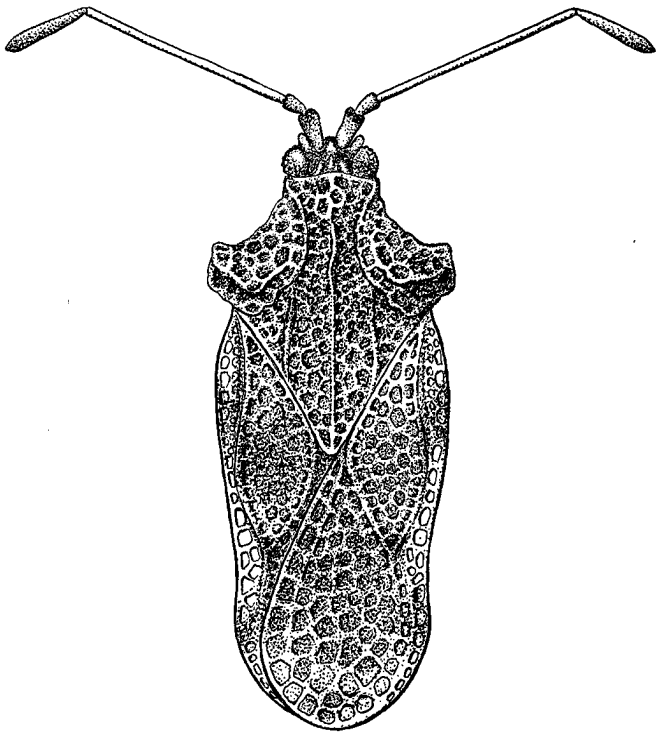

FIGURE 4.—*Cysteochila idonea.*

eyes moderately large, reddish fuscous; bucculae broad, reticulate, closed in front. Rostrum testaceous with apex darkened, extending to base of mesosternum; laminae whitish testaceous, composed of one row of large areolae, cordate on metasternum, closed at apex. Antennae testaceous with apex of segment I, all of II and most of III fuscous; measurements: I, 14; II, 11; III, 90; IV, 31. Osteolar channel long, narrow, testaceous. Hypocostal laminae composed of one row of areolae. Legs testaceous, the femora broadly banded at the middle with fuscous.

Pronotum moderately convex, coarsely punctate, dark fuscous, tricarinate; triangular process areolate, brownish testaceous; median carina uniseriate on disc, much lower and

non-areolate on hind projection; lateral carinae lower than median, without distinct areolae, concealed on disc by reflexed paranota, a little constricted back of disc, slightly concave within on hind process; hood very small, elevated, composed of few cells, the hood and collar testaceous, areolate. Paranota quite large, reflexed, widest at humeral angles, there with exterior margin extended (before being reflexed) roundly laterally beyond sides of pronotum, then on top raised and compressed antero-posteriorly across humeral angles so as to form a sharp transverse ridge, the reflexed exterior margin resting on pronotal surface about half way between median and lateral carinae from center of disc anteriorly. Elytra slightly constricted beyond middle, with apices jointly rounded, testaceous with submedian and subapical bands, a spot on apex and a spot at middle of both outer and inner marginal veins of discoidal area dark fuscous, the central part of discoidal and most of sutural area fuscous or brown; costal area moderately wide, uniseriate or uniseriate plus an extra short row of small cells in side of basal half, the areolae clear (save in bands); subcostal area biseriate, the areolae a little smaller than in costal area; discoidal area acutely angulate at base and apex, widest beyond middle, there five areolae deep. Wings brownish, almost as long as elytra. Body beneath brownish testaceous.

Length, 3.25 mm.; width, 1.10 mm.

Type, male (US 63148),[1] and allotype, female (US), Kusaie, Mt. Matante, March 10, 1953, J. F. G. Clarke. Paratypes: Three specimens, same data as for type; one specimen, Mt. Kusaie, March 23, 1953, alt. 265 m.; one specimen, Mt. Kusaie, April 13, 1953; and one specimen (US), Three Sisters, Solomon Is., W. M. Mann. The latter specimen is pale with color markings barely indicated.

This species belongs to the *Bredenbachius* group of species, and may be separated from them by the paranota (shape and form at humeral angles) and lateral carinae. The width of pronotum across humeral angles is greater than that at the base of the elytra. The transverse dorsal pronotal ridge is very prominent, as is the laterally extended basal part of the paranota. This species is most closely related to *C. picta* (Distant) of India.

5. Eteoneus esakii Drake (fig. 5).

Eteoneus esakii Drake, 1939, Mushi **12** (2) : 102-103.

Eteoneus esaki Takeya, 1951, Kurume Univ. Jour. (Nat. Sci.) **4** (1) : 17.

DISTRIBUTION: Western Caroline Is.

PALAU. KOROR: Three, Sept. 1952, Krauss; seven, Mar. 1954, on *Premna;* one, Mar. 1954, sweeping vegetation; three, May 1954, at light, Beardsley; one, Nov. 1947, Dybas. PELELIU: Type taken by Esaki.

Genus **Palauella** Drake, new genus

Head rather short, produced in front of eyes a little more than length of an eye, flattened above, armed at apex of front with three extremely long, horizontally directed, subcylindrical processes (instead of anterior spines; no posterior spines), their apices surpassing tips of second antennal segment (fig. 6), the median projection slenderer and shorter than the outer pair. Eyes rather small, transverse. Antennae slender, moderately

[1] Symbols used in collection data are US for United States National Museum and BISHOP for B. P. Bishop Museum.

long, pubescent; segments I and II short, moderately stout, the latter slender and slightly enlarged apically; III long, slenderest; IV short, very little swollen. Rostrum very long; channel rather narrow, not constricted on mesosternum, the laminae low, uniseriate. Bucculae narrow, closed in front. Orifice present. Legs moderately long, the second tarsal segment moderately swollen, hairy beneath. Hypocostal laminae narrow, uniseriate. Pronotum areolate, moderately narrowed in front of humeri, slightly convex (nearly flat), tricarinate; paranota moderately wide, long, scarcely reflexed, strongly produced in front with apex attaining tips of first antennal segment. Elytra not wider than pronotum and paranota together, nearly parallel-sided; elytra longer and wider than abdomen, with costal, discoidal, and sutural areas distinct but without evidence of subcostal areas; discoidal area with inner and apical boundaries barely distinct, extending beyond middle of elytra.

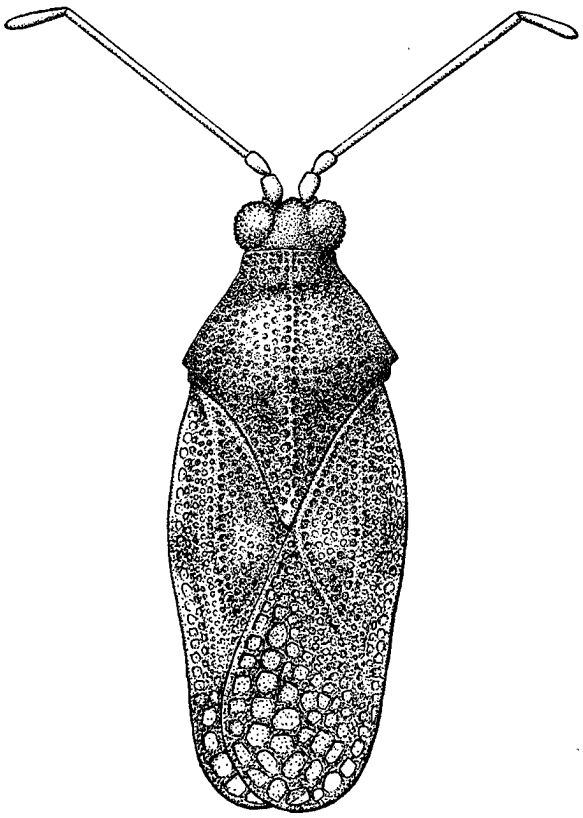

FIGURE 5.—*Eteoneus esakii.*

Genotype: *Palauella gressitti* Drake, new species; subfamily Tinginae.

Palauella is allied to genus *Platychila* Drake, but it is readily distinguished by the complete absence of a subcostal area in the elytra, by the broader and subquadrate head (which is armed at the apex with three extremely long, horizontal, frontal projections; fig. 6), and by the much smaller form. In

Platychila the head is shorter and narrower and armed with five dorsal spines; the antennae are clothed with long bristly hairs; the orifice is indistinct; and the rostral channel is formed by low, widely separated laminae, without a longitudinal sternal sulcus.

6. Palauella gressitti Drake, n. sp. (fig. 6).

Small, almost rectangular in form, testaceous with pronotum brownish testaceous. Head brown, flattened above, nearly quadrate in outline, with a longitudinal furrow placed on each side of the flat median area so as to leave a convex ridge on each side adjacent to each eye; median area slightly rugulose, less than twice as wide as a lateral ridge. Antennae testaceous with last segment (not base) black; measurements: I, 12; II, 10; III, 55; IV, 18. Rostrum long, reaching to venter, whitish testaceous with apex black; sulcus rather deep, not constricted on mesosternum, the laminae low, uniseriate, brownish testaceous. Bucculae brown, mostly biseriate. Legs pale testaceous, the tarsi tinged with brown, the second segment slightly swollen and hairy beneath. Body beneath brown with venter yellowish brown.

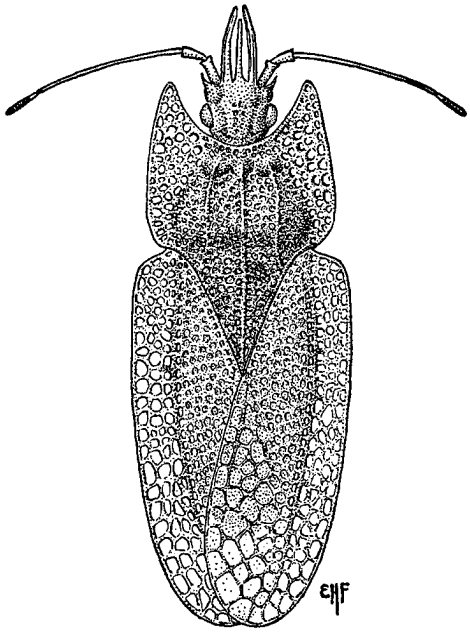

FIGURE 6.—*Palauella gressitti.*

Pronotum slightly convex, with areolae on disc almost as large as on hind triangular process, paranota long, moderately wide, produced anteriorly (fig. 6), with outer margin nearly straight, widest opposite calli, there four or five areolae deep, projecting anteriorly as far as base of antennae; median carina very distinct, without areolae, terminating anteriorly at base of collar; lateral carinae slightly raised, fairly distinct, slightly sinuate (nearly straight); collar slightly raised anteriorly, biseriate, the collar in front and inner margin of paranota jointly concavely excavated, semicircular in outline. Elytra slowly narrowed posteriorly; costal area wide, irregularly quadriseriate (in a few places near

middle triseriate), the areolae clear; subcostal area entirely wanting; discoidal area widest in front of middle, there five areolae deep, reaching beyond middle of elytra; sutural area with veinlets largely fuscous, the boundary vein separating costal area from discoidal and sutural areas costate and brownish.

Length, 2.50 mm. (apex of head to end of elytra); width, 1.00 mm.

Type, female (US 63150), Ulimang, Babelthuap, Palau Islands, Dec. 16, 1947, taken by H. S. Dybas. The type is illustrated in figure 6.

Genus **Berotingis** Drake, new genus

Head very short, not produced in front of eyes; spines reduced or absent; eyes very large, transverse, in contact behind with pronotal collar; vertex narrow, not raised, scarcely as wide as width of an eye; bucculae areolate, with apices contiguous, not extending beyond apex of head; rostrum long; laminae foliaceous, areolate, open behind. Antennae rather slender, moderately long, shortly pilose; segments I and II short, moderately swollen; III longest, slender; IV short, a little swollen. Orifice prominent, with long, nearly straight, upright channel. Hypocostal laminae uniseriate. Pronotum broad, considerably convex, coarsely punctate, areolate behind; calli small, transverse; median carina long, terminating anteriorly at base of collar; lateral carinae fairly distinct on hind triangular process, scarcely distinct or entirely obsolete on disc; paranota narrow, long, areolate, feebly reflexed; collar distinct, rather long, areolate, truncate in front. Elytra much wider and longer than abdomen, divided into the usual areas, the discoidal area large, extending beyond middle of elytra.

Genotype: *Berotingis rugiana,* new species.

This genus is separated from the genus *Tingis* Fabricius by the very large eyes, the very narrow vertex, the narrow and scarcely reflected paranota, the absence of a pronotal hood, and the short or poorly defined lateral carinae.

7. Berotingis yapensis (Drake), n. comb. (fig. 7, *a*).

Eteoneus yapensis Drake, 1945, Mushi **17** (6): 27-28.

Eteoneus yapensis Takeya, 1951, Kurume Univ. Jour. (Nat. Sci.) **4** (1): 18.

DISTRIBUTION: Caroline Is. (Yap, type locality).

YAP. YAP: One specimen, Mar. 28, 1954, J. W. Beardsley.

8. Berotingis rugiana Drake, n. sp. (fig. 7, *b*).

Moderately large, testaceous with a few scattered small marks on elytral veins. Head brownish and pronotal disc brownish or blackish fuscous. Head unarmed, slightly brownish, with eyes very large, blackish fuscous; vertex narrow, not quite as wide as width of an eye. Antenniferous tubercles small, short, blunt, curved inwardly. Antennae testaceous with last segment brownish or fuscous; measurements: I, 12; II, 10; III, 90; IV, 29. Rostrum testaceous, reaching to end of channel; laminae wide, whitish testaceous, widely separated, slowly divergent posteriorly, open behind, composed of one row of large areolae. Bucculae biseriate, testaceous. Orifice whitish testaceous, with channel running upright to the hypocostal laminae. Body beneath brownish, the sides of thorax areolate, whitish testaceous. Legs whitish testaceous, the second tarsal segment slightly swollen, brownish.

Pronotum broad, rather strongly convex, strongly narrowed in front of humeri, rugulosely punctate (reticulated), median length greater than width across humeral angles; median carina more elevated on and in front of disc, there uniseriate, back of disc lower

Subgenus **Omoplax** Horvath, 1912

11. Stephanitis (Omoplax) desecta Horvath (fig. 8).

Stephanitis desecta Horvath, 1912, Mus. Nat. Hungarici, Ann. **10** (1) : 323, 337, 1 fig.—Drake, 1948, Notes Ent. Chinoise **12** (6) : 55.—Takeya, 1951, Kurume Univ. Jour. (Nat. Sci.) **4** (1) : 14.—Drake and Maa, 1953, Taiwan Mus., Quart. Jour. **6** (2) : 100.

DISTRIBUTION: Bonin Is. (Ogasawara), type locality.

BONIN IS. CHICHI JIMA: Thirteen, Miyanohama, July 1949; five, June 1945, Kondo, Mead, and Savory.