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NEW HAWAIIAN ORSILLINAE (Hemiptera-Heteroptera : Lygaeidae)¹

By Peter D. Ashlock

BERNICE P. BISHOP MUSEUM

Abstract : Eleven species of Orsillinae from the Hawaiian Islands are described: *Oceanides euphorbiae*, Maui, *O. gressitti*, Molokai, *O. yoshimotoi*, Oahu, *O. humeralis*, Kauai, *Glyptonysius amicola*, Molokai, *Neseis pallassatus*, Maui, *N. legnotus*, Molokai, *Metrarga elinguis*, Hawaii, *Nesoclimacias comis*, Molokai, *Nysius hardyi*, Kauai, *N. beardsleyi*, Maui and Hawaii. Each new species is figured and keyed, and a new key to Hawaiian genera of Orsillinae is provided. Additional records and notes are given for *Neseis pallidus*, *N. chinai*, *Nysius caledoniae*, *N. fucatus*, and *N. rubricatus*.

Usinger's (1942) monograph of the Hawaiian Orsillinae has been called "one of the finest pieces of work ever written on any group of Hawaiian insects" (Zimmerman 1948), an opinion with which I agree. However, no matter how exhaustive a treatment is made of a group, changes eventually will be needed.

Changes and additions to Usinger's original treatment of the Hawaiian orsilline fauna come under the headings: name changes, recent introductions, changes in higher classifications, and newly discovered fauna. Two name changes are needed because of misidentifications. Zimmerman (1951) found that *Oceanides parvulus* Usinger was a synonym of *O. arbicola* B. White; *O. arbicola* of Usinger was a new species, which he named *O. usingeri*. The second change was made by Usinger (1959), who showed that his *Nysius nigriscutellatus* was a synonym of *N. coenosulus* Stål, requiring the renaming of *N. coenosulus* of Usinger as *N. kinbergi*.

Two species of *Nysius* have recently been introduced into the Hawaiian Islands. One, *Nysius palor*, was first collected in 1961 by R. L. Usinger on Kure and Midway islands and was described as new and figured by myself (Ashlock 1963). This species' origin is uncertain. The Bishop Museum collection contains specimens of a very similar, if not identical, species from southeast Asia. The second newly introduced species, *Nysius cale-*

1. Partial results of a study supported by a National Science Foundation grant (GB-3105) under the project, "Evolutionary studies of Hawaiian Orsillinae (Heteroptera)" to P. D. Ashlock under the sponsorship of Bishop Museum.

doniae Distant, was first reported from Oahu in 1964 (Beardsley 1965) and then from the island of Hawaii, where it was doing extensive damage to vanda orchids (Yoshioka 1965). This species is figured in the present paper.

Some major changes in the higher classification of Hawaiian Orsillinae have been made since Usinger's monograph. Scudder (1957) treated the orsillines as a subfamily distinct from the Lygaeinae, and Usinger & Ashlock (1959) assigned three tribes to the subfamily: the Orsillini, the Metrargini, and the Robinsonocorini. In a revision of the genera of the Orsillinae of the world (MS), I made further changes in the higher classification of the subfamily which, because of a greatly expanded concept of the Metrargini, place most of the Hawaiian genera in this tribe. The Hawaiian Metrargini will contain, in addition to the three genera originally placed in it (*Metrarga*, *Nesoclimacias*, and *Nesocryptias*), three more Hawaiian genera (*Oceanides*, *Neseis*, and *Glyptonysius*). The genera *Nysius* and *Nesomartis* are placed in the tribe Nysiini. The tribe Orsillini under this new scheme does not occur in the Hawaiian Islands.

Two papers have added endemic forms to the list of Hawaiian Orsillinae. The first (Usinger 1945) added *Neseis (Icteronysius) ochriasis baldwini* Usinger from Maui. In the same paper *Neseis maculiceps* was reduced to a subspecies of *N. ochriasis*. The second, a revision of the three genera originally placed in the Metrargini (Usinger & Ashlock 1959), added two new species of *Metrarga* and three of *Nesocryptias*.

In recent years, more new forms have been accumulating at the Bishop Museum. Some were collected by Dr Usinger and me on a field trip to Maui in August, 1965, others by Dr J. W. Beardsley, Dr C. M. Yoshimoto, and myself on field trips to Kauai, Molokai, and Hawaii, and local trips on Oahu. The 11 new species proposed in this paper bring the Hawaiian fauna of Orsillinae, not including varieties, to a total of 105 forms (89 full species), over forty percent of the world's fauna of Orsillinae.

Because of extensive changes in the higher classification of the Orsillinae and the discovery of stridulatory mechanisms (Usinger & Ashlock 1959; Ashlock & Lattin 1963) that facilitate identification of Hawaiian forms, a new key to the genera of Hawaiian Orsillinae is provided.

The holotype of each new species is illustrated, and supplementary couplets to the keys of Usinger (1942) and Usinger & Ashlock (1959) are given. All measurements are in millimeters. Notes on several additional species of Hawaiian Orsillinae are also given.

It gives me great pleasure to acknowledge the help given me by R. L. Usinger, J. W. Beardsley, and C. M. Yoshimoto on field trips in the Hawaiian Islands. Dr Usinger has also discussed problems in Hawaiian Orsillinae at great length with me. Plants have been identified by R. L. Usinger, J. W. Beardsley, H. St. John, and P. E. Gehring.

KEY TO THE GENERA OF HAWAIIAN ORSILLINAE

1. Hemelytron with a distinct row of punctures on either side of claval suture; either with punctate buccula and acetabulum or with highly polished pronotum and hemelytron; never with erect pubescence on corium; conjunctiva of aedeagus often with distal paired lateral lobes, never with a dorsal apical lobe.....METRARGINI 2
- Hemelytron rarely with a complete row of punctures on either side of claval

- suture; buccula and acetabulum never punctate; if claval suture punctate then pronotum and hemelytron not polished or corium with erect hairs; conjunctiva of aedeagus never with distal paired lateral lobes, dorsal apical lobe always present.....NYSIINI..... 7
- 2 (1). Buccula and acetabulum impunctate.....3
 Buccula and acetabulum deeply punctate 5
- 3 (2). Costal margin of corium arcuate from base, with a lateral cross-striated stridulitrum..... **Oceanides**
 Costal margin of corium paralleling vein R+M for short distance before becoming arcuate (as in *Nysius*), without stridulitrum..... 4
- 4 (3). Propleuron with a tubercle behind eye; antenniferous tubercle laterally carinate **Glyptonysius**
 Propleuron without tubercle behind eye; antenniferous tubercle not carinate...**Neseis**
- 5 (2). Pronotum toothed or angulately produced anterolaterally; costal margin of corium arcuate from base, usually with stridulitrum consisting of fine striations extending short distance under expanded margin **Metrarga**
 Pronotum rounded or roundly lobed anterolaterally; costal margin paralleling vein R+M for short distance before becoming arcuate (as in *Nysius*), without stridulitrum..... 6
- 6 (5). Membrane complete, as wide as corium; hind wing fully developed...**Nesoclimacias**
 Membrane greatly reduced, about half as wide as corium; hind wing greatly reduced..... **Nesocryptias**
- 7 (1). Head width including eyes less than greatest width of pronotum **Nysius**
 Head width including eyes greater than greatest width of pronotum..... **Nesomartis**

Oceanides euphorbiae Ashlock, n. sp. Fig. 1a.

Head slightly elevated between eyes, shining, deeply punctate, densely clothed with appressed golden hairs, length 0.90, width 1.04, anteocular length 0.36, eye length 0.32, eye width 0.20, interocular space 0.61; buccula widest anteriorly, gradually narrowing posteriorly to a point just past level of anterior margin of eye; labium surpassing hind coxa and attaining middle of abdominal segment III (2nd visible), 1st segment just surpassing base of head, segment lengths from base 0.60, 0.58, 0.61, 0.54; antennal segment lengths from base 0.36, 0.66, 0.61, 0.61.

Pronotum nearly glabrous on disc but with moderately dense pubescence around edge of callosities and laterally on anterior lobe; disc moderately punctate, most densely punctate anterior to callosities, punctures contiguous to separated by one-half diameter of a puncture, less densely punctate behind callosities, punctures separated by .5-2.0× diameter of a puncture; sides slightly sinuate; length 0.80, width 1.43. Scutellum densely clothed with short appressed hairs basally and laterally; Y-shaped carina not much elevated, lateral arms partly obscured by punctures; laterally and basally with closely spaced punctures; length 0.54, width 0.77.

Hemelytron exceeding abdomen, clavus and corium shining but not quite smooth, appearing glabrous but sparsely clothed with fine, pale, appressed hairs on surface and a few erect hairs projecting laterally at base of costal margin; claval suture punctate on both clavus and corium for nearly full length, missing 3 or 4 punctures on clavus apically;

corium with veins visible, punctate along vein R+M to level of middle of abdominal segment IV, costal margin evenly arcuate; laterally with stridulitrum beginning at level of anterior margin of hind coxa and ending at level of middle of abdominal segment V, length 1.24, with about 220 fine striations per mm; length of claval commissure 0.56; length of corium 2.38, extending to posterior margin of abdominal segment V; membrane not reduced, veins visible, basal length to level of corial apex 1.28, apical length from corial apex 0.75. *Hind femur* with plectrum consisting of a single carina.

Color: Head black, except clypeus, buccula, and apex of antenniferous tubercle pale yellowish to reddish brown; antennal segment I pale yellowish brown with a few darker brown spots, segments II-IV dark brown; labial segments I-III pale yellowish brown, segment IV brown. Prothorax pale yellowish brown, callosities and punctures reddish brown, pleura of anterior lobe black. Scutellum reddish brown, punctures black, median carina and apex pale yellowish brown. Mesothorax and metathorax with pleuron and sternum black; acetabulum, scent gland auricle and hind margin of metapleuron pale yellowish brown. Leg yellowish brown with darker brown spots on femur. Hemelytron semitransparent, pale yellow, punctures brown, with large spot at apex of clavus, a nearly square spot on apical margin between vein Cu and claval suture, a roughly triangular spot on apical margin between branches M and R, and a small spot on apical margin at corial apex, all dark brown.

Size: ♂, length 4.4 (4.2-4.5), width 1.6; ♀, length 4.5-4.7, width 1.8.

Holotype ♂ (BISHOP 6992), E. Maui, N. slope, Auwahi, 27.VIII.65, *Euphorbia*, probably *lorifolia* var. *gracilis* Rock., R. L. Usinger. Paratypes: 4♂♂, 3♀♀, same data as holotype.

KEY (ADDITION TO USINGER 1942: 20)

21. Clavus infuscated apically 21'
 Clavus immaculate apically 22
 21'. Callosity black; lateral margin of pronotum swollen lateral to callosity; Hawaii
 **O. bryani**
 Callosity reddish brown; lateral margin of pronotum nearly straight; Maui
 **O. euphorbiae**

This species is the Maui counterpart of *O. bryani* Usinger from the island of Hawaii. It was collected on a tree-like *Euphorbia* in a dry, open-wooded area, as was *O. bryani*. Dr Usinger predicted its occurrence and was able to collect it himself during his 1965 visit to Maui.

The color of the callosities is the most striking character separating the new species from *O. bryani*; in addition, the new species tends to be a little larger and the color pattern on the corium more pronounced.

Oceanides gressitti Ashlock, n. sp. Fig. 1b.

Head slightly elevated between eyes, shining, deeply rugose, sparsely clothed with appressed golden hairs, hairs becoming more dense near eye and on jugum, length 0.90, width 1.04, antocular length 0.36 (slightly longer than eye), eye length 0.34, eye width 0.22, interocular space 0.63; buccula widest anteriorly, gradually narrowing posteriorly to a point near level of middle of eye without abrupt changes in width; labium just surpass-

ing posterior coxa and attaining abdominal segment III (2nd visible), 1st segment just reaching base of head, segment lengths from base 0.58, 0.54, 0.51, 0.53; antennal segment lengths from base 0.36, 0.63, 0.60, 0.65.

Pronotum nearly glabrous, with fine appressed pale pubescence around edge of callosities

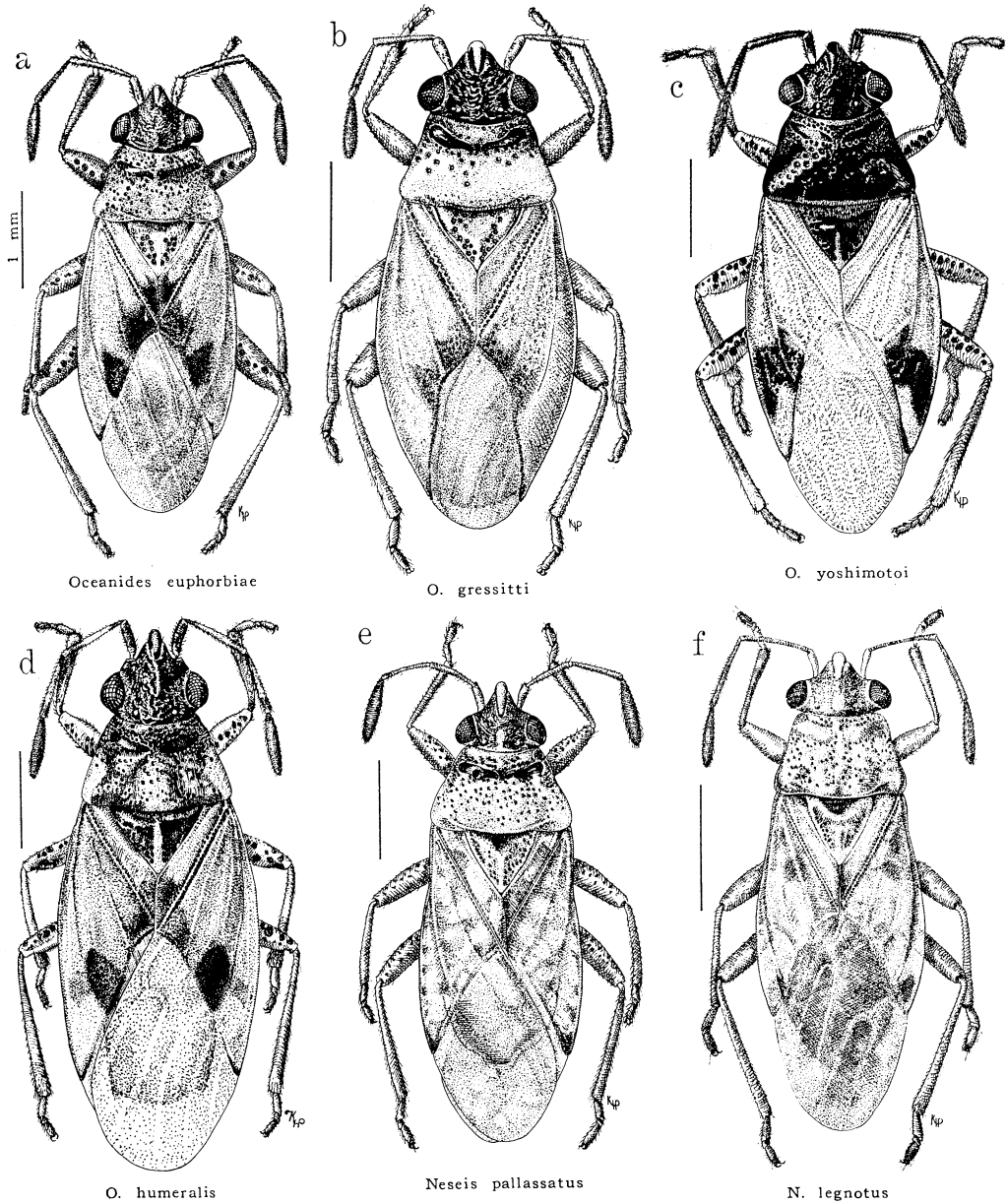


Fig. 1. Holotypes of the named species.

and laterally on anterior lobe; disc with a few large punctures, punctation most dense around callosities and separated by 1.5-3.0 \times diameter of a puncture; sides slightly sinuate; length 0.82, width 1.33. Scutellum with a few appressed, fine, pale hairs basally and laterally; Y-shaped carina not much elevated, arms partly obliterated by punctures; laterally with large punctures separated by less than one-half diameter of a puncture; length 0.53, width 0.68.

Hemelytron convex, slightly exceeding abdomen; clavus and corium shining but not quite smooth, appearing glabrous but with a few fine, pale, appressed hairs on surface and a few erect hairs projecting laterally at base of costal margin; claval suture punctate on both clavus and corium for nearly full length, missing about 3 or 4 punctures on clavus apically; corium punctate along vein R+M to level of apex of abdominal segment IV, costal margin evenly arcuate; laterally with stridulitrum beginning at level of posterior margin of metathoracic scent gland auricle and ending at level of apex of abdominal segment IV, length 1.28, with about 170 fine striations per mm; veins, except R+M basally, nearly obscure; length of claval commissure 0.56; length of corium 2.60, extending to or slightly beyond abdominal segment VII; membrane much reduced, veins barely perceptible, basal length to level of corial apex 1.55, apical length from corial apex 0.22. *Hind femur* with a plectrum consisting of 3 carinae.

Color: Head black, except clypeus, buccula, and apex of antenniferous tubercle pale yellowish brown; antennal segment I pale yellowish brown with a few darker brown spots, segments II-IV yellowish brown; labial segments I-III yellowish brown, segment IV brown. Prothorax black on callosities, pleuron of anterior lobe, and sternum, pale yellowish brown along anterior margin dorsally and ventrally, on posterior lobe dorsally, acetabula, and posterior margin of pleurae; areas between black and pale areas and punctures dark reddish brown. Scutellum pale yellowish brown, punctures and basal area dark reddish brown. Mesothorax and metathorax with pleurae and sterna black; acetabula, apical lobe of scent gland auricle, and hind margin of metapleuron pale yellowish brown. Leg yellowish brown with darker spots on femur. Hemelytron semitransparent, pale yellow, punctures brown, lateral edge of corium narrowly brown, apical margin of corium narrowly brown and with a large brown spot at inner angle and another between veins R and M.

Size: ♂, length 4.1 (3.8-4.1), width 1.7; ♀, length 4.0-4.4, width 1.8.

Holotype ♂ (BISHOP 6993), Molokai, above Waikolu V., 1400 m, 1.III.1954, on *Coprosma pubens* var. *sessibiflora*, J. L. Gressitt. Paratypes: 2♂♂, 1♀, same data as holotype; 1♂, same data but no host; 1♂, same data but on *Metrosideros*; 1♀, same data but on *Pipturus*, E. G. Ford, Jr.; 1♂, 2♀♀, same data but 28.IV.55, no host; 1♂, same data but 30.IV.55, on *Coprosma pubens*; 4♂♂, 5♀♀, Molokai, near edge of Waikolu V., 3.VI.43, N. L. H. Krauss; 6♂♂, 10♀♀, Molokai, Kamoku Flats, 19.III.1966, *Coprosma molokaiensis*, P. D. Ashlock; 2♀♀, same data, J. W. Beardsley.

KEY (ADDITION TO USINGER 1942: 19)

12. Head densely clothed with long, appressed, pale hairs; pronotal disc with numerous fine punctures; lateral margins sparsely punctate; Maui. **O. bimaculatus**
 Head only sparsely clothed with short, appressed, pale pubescence; pronotal disc with only a few coarse punctures; lateral margins distinctly sinuate and swol-

- len lateral to callosities.....12'
- 12' Corium slightly embrowned along entire apical margin, with a small indistinct spot at middle of apical margin, basal part of membrane to level of apex of corium less than 3× length of apical part; Oahu.....**O. sinuatus**
- Corium with a distinct brown spot on apical margin between veins R and M and another between vein Cu and claval suture; basal part of membrane to level of apex of corium more than 5× length of apical part; Molokai.. ... **O. gressitti**

O. gressitti is closely related to *O. sinuatus* Usinger from Oahu, but has a more pronounced color pattern on the corium; it differs from all other species of *Oceanides* in the greater degree of elongation of the corium, and reduction of the membrane. A peculiarity of this kind is usually found in flightless lygaeid species whose hind wings are much reduced. However, the hind wings in this species reach abdominal segment VII.

This species is named for J. L. Gressitt, who collected much of the type series, and who has done so much for entomology in Hawaii and the Pacific area.

***Oceanides yoshimotoi* Ashlock, n. sp.** Fig. 1c.

Head elevated between eyes, shining, deeply rugose, nearly devoid of hairs, length 0.94, width 1.19, anteocular length 0.34, eye length 0.37, eye width 0.24, interocular space 0.73; buccula widest anteriorly, gradually narrowing posteriorly to near base of head; labium surpassing hind coxa and attaining basal third of abdominal segment III (2nd visible), 1st segment just surpassing base of head, segment lengths from base 0.65, 0.66, 0.58, 0.61; antennal segment lengths from base 0.36, 0.73, 0.68, 0.75.

Pronotum nearly glabrous, with a few hairs on margins and lateral to callosities; disc moderately punctate, most densely punctate anterior to callosities, punctures contiguous to separated by one-half diameter of a puncture, less densely punctate behind callosities, punctures separated by about one-half diameter of a puncture, impunctate along posterior margin; sides nearly straight, slightly swollen lateral to callosities; length 0.90, width 1.67. Scutellum nearly glabrous, with a few appressed hairs basally and in lateral angles and a few punctures laterally on apical half; Y-shaped carina not much elevated, not well defined; length 0.65, width 0.94.

Hemelytron exceeding abdomen, clavus and corium shining, but not quite smooth, glabrous but with a few erect hairs projecting laterally at base of costal margin; claval suture punctate on both clavus and corium for nearly full length, missing 3 or 4 punctures on clavus apically; corium with veins visible, punctate along vein R+M to level of apex of abdominal segment III, costal margin evenly and strongly arcuate; laterally with a stridulitrum beginning at level of middle of hind coxa and ending at level of middle of abdominal segment V, length 1.28, with about 178 fine striations per mm; length of claval commissure 0.54; length of corium 2.79, extending just past posterior margin of abdominal segment VI; membrane not reduced, veins barely visible, basal length to level of corial apex 1.53, apical length from corial apex 0.77. *Hind femur* with plectrum consisting of 2 long and 1 short carinae.

Color: Head black, except narrow margin of eye, apex of antenniferous tubercle, narrow border of buccula anteriorly pale yellow; antennal segment I pale yellow basally, apically and segments II-IV dark brown, pale yellow at joints; labial segment I pale

yellow, segments II and III light brown, segment IV dark brown. Prothorax black, except narrow anterior margin medially and narrow hind margin laterally pale yellowish brown; beneath thorax black, with narrow anterior margin of prosternum, all acetabula, posterior margin of propleuron, metathoracic scent gland auricle, posterior lobe of metapleuron laterally pale yellow to pale yellowish brown. Leg pale yellow with brown spots on femur. Hemelytron semitransparent, pale yellow with an irregular brown spot nearly filling area between veins R and M and extending to costal margin nearly to apex of corium, apical margin narrowly dark brown from spot to apex of corium.

Size: ♀, length 5.0 (5.0-5.4), width 2.1; ♂, length 4.6, width 1.9.

Holotype ♀ (BISHOP 6994), Oahu, Mt Kaala, summit, 14. IV. 1966, C. M. Yoshimoto. Paratypes: 1♂, 1♀, same data as holotype but J. W. Beardsley, collector.

KEY (ADDITION TO USINGER 1942: 19)

10. Pronotum relatively densely punctate, the punctures coarse and much less than 1 puncture apart except posteriorly, with 4 or 5 rows of closely approximated punctures in front of callosities; clavus and corium uniformly brown with an inconspicuous darker brown spot at middle of apical margin of corium; membrane uniformly, lightly infuscated; insect very large and dilated posteriorly, length 5.7-6.2 mm, width 2.3-2.5 mm; Maui..... **O. dilatipennis**
- Pronotum less densely and usually more finely punctate, with not more than 3 rows of punctures in front of callosities; hemelytron paler with more conspicuous spots; insect usually much smaller, never exceeding length 5.5, width 2.3...10'
- 10'. Prothorax black, at most narrowly pale along anterior and posterior margins; scutellum predominantly black with median carina pale, sometimes brown in lateral angles; Oahu..... **O. yoshimotoi**
- Prothorax pale, at most with callosities black, and sometimes with 2 large brown spots on posterior lobe 11

The single male has a smaller spot than has the holotype on the apical margin of the corium. This spot is, in the male, limited to the cell formed by branches R and M. The combination of a black head and prothorax and a single black spot on the apical margin of the corium is found in no other Hawaiian orsilline. It gives me great pleasure to dedicate this species to Dr Carl Yoshimoto of the Bishop Museum, who collected the holotype, and who has been helpful in many ways.

Oceanides humeralis Ashlock, n. sp. Fig. 1d.

Head elevated between eyes, shining, deeply rugose, nearly devoid of hairs, length 1.02, width 1.22, anteocular length 0.48, eye length 0.39, eye width 0.26, interocular space 0.70; buccula widest anteriorly, gradually narrowing posteriorly to level of antenniferous tubercle; labium nearly attaining posterior margin of abdominal segment IV (3rd visible), 1st segment just attaining base of head, segment lengths from base 0.82, 0.83, 0.85, 0.85; antennal segment lengths from base 0.43, 0.87, 0.71, 0.70.

Pronotum nearly glabrous on disc, with a few hairs laterally on anterior lobe; disc

moderately punctate, punctures contiguous to separated by $1.5\times$ diameter of a puncture, impunctate at humerus and hind margin; sides nearly straight, slightly swollen lateral to callosities; length 0.94, width 1.65. Scutellum with a few hairs basally and laterally; Y-shaped carina moderately elevated; laterally and basally with closely spaced punctures; length 0.75, width 0.94.

Hemelytron exceeding abdomen; clavus and corium shining but not quite smooth, glabrous; claval suture punctate on both clavus and corium for nearly full length, missing about 2 punctures on clavus apically; corium with veins visibly punctate along vein R+M to level of just past base of abdominal segment IV, costal margin evenly arcuate; laterally with stridulitrum beginning at level of anterior margin of hind coxa and ending just past base of abdominal segment V, length 1.36, with about 197 fine striations per mm; length of claval commissure 0.61; length of corium 3.06, extending to middle of abdominal segment VII; membrane not reduced, veins barely visible, basal length to level of corial apex 1.58, apical length from corial apex 1.02. *Hind femur* with plectrum consisting of 2 long and 1 short carinae.

Color: Head black, except medially on clypeus, apex of antenniferous tubercle, narrow margin of buccula anteriorly pale yellowish brown; antennal segments I and IV brown, with basal third and narrow apex of segment I pale yellowish brown, segments II and III pale yellowish brown with a brown ring basally and apically; labial segments I, II, and III pale yellowish brown, segment IV brown. Prothorax brown, with humerus and large medial spot on hind lobe and narrow anterior margin pale yellowish brown, beneath black with narrow anterior margin of prosternum, all acetabula, metathoracic scent gland auricle, and hind margin of metapleuron pale yellowish brown. Scutellum dark brown to black, punctures black, pale on stem of Y-shaped carina. Leg pale yellowish brown with brown spots on femur. Hemelytron semitransparent, pale yellowish brown, punctures brown, with brown spots at apex of clavus, on corium at inner angle, and between veins R and M extending laterally nearly to costal margin.

Size: ♀, length 5.4, width 2.2.

Holotype ♀ (BISHOP 6995), Kauai, Kalalau, 1200 m, 4.XI.1960, J. W. Beardsley.

KEY (ADDITION TO Usinger 1942: 20)

19. Rostrum very long, reaching well onto or exceeding abdominal segment IV (3rd visible)..... 19'
 Rostrum not exceeding abdominal segment III (2nd visible) 20
- 19'. Apical part of membrane from level of apex of corium a little over one-half basal part (22 : 40); pronotum pale behind callosities, with a few brown punctures; Oahu **O. incognitus**
 Apical part of membrane from level of apex of corium about two-thirds length of basal part (30 : 48); pronotum predominantly dark behind callosities, with humeri and large median spot pale; Kauai..... **O. humeralis**

The long labium will separate this species and *O. incognitus* from all others of the genus. Not only the key characters, but its darker scutellum and more punctate prothorax separate *O. humeralis* from *O. incognitus*.

Glyptonysius amicola Ashlock, n. sp. Figs. 2a, 3c.

Head flattened medially, depressed between ocellus and eye, shining, deeply rugose, sparsely clothed with appressed golden hairs, hairs becoming more dense on clypeus, jugum, and antenniferous tubercle, length 0.90, width 1.04, anteocular length 0.43, eye length 0.34, eye width 0.24, interocular space 0.58; buccula widest anteriorly, gradually narrowing to a point near level of middle of eye without abrupt change in width; labium extending to between middle coxa, 1st segment not reaching base of head, segment lengths from base 0.37, 0.53, 0.41, 0.34; antennal segment lengths from base 0.34, 0.49, 0.48, 0.61.

Pronotum nearly glabrous, with fine short semi-appressed golden pubescence laterally; disc moderately punctate, punctures contiguous to separated by $3\times$ diameter of a puncture; sides nearly straight, a little more swollen opposite callosities than *G. hylaeus*, less swollen than *G. laevigatus*; callosities swollen; length 0.92, width 1.29. Scutellum nearly glabrous; Y-shaped carina distinct; densely punctate laterally; length 0.54, width 0.73.

Hemelytron exceeding abdomen, clavus and corium shining but not quite smooth, nearly glabrous but with a few erect hairs projecting laterally at base of costal margin; claval suture with row of punctures on both clavus and corium, missing about 5 punctures apically on clavus; corium punctate along vein R+M to middle of abdominal segment IV (3rd visible), all veins visible; length of claval commissure 0.44; length of corium 1.90, extending to basal third of abdominal segment VI; membrane normal, veins barely visible, basal length to level of corial apex 0.87, apical length from corial apex 0.78.

Color: Head light reddish brown, light yellowish brown on clypeus, midline of vertex, antenniferous tubercle, and buccula; antennal segment I light yellowish brown with scattered brown spots, remaining segments brown, apices of segments II and III pale; labial segments light brown. Prothorax light yellowish brown, medial two-thirds of callosities, punctures posterior to this area, and small humeral spot black, lateral third of posterior lobe white. All pleura light reddish brown with punctures darker, anterior propleural projection, narrow anterior margin of prosternum, all acetabula, metathoracic scent gland auricle pale yellowish brown. Scutellum pale yellowish brown, base and punctures black to dark brown. Leg pale yellowish brown, femur with brown spots. Hemelytron smoky hyaline, with irregular black spots, veins, especially R+M, white with dark brown spots, membrane hyaline, with irregular brown blotches.

Size: ♂, length 4.1 (4.0-4.3), width 1.5 (1.5-1.6); ♀, length 4.5-4.9, width 1.8-2.0.

Holotype ♂ (BISHOP 6996), Molokai, Kamoku Flats, 19.III.1966, *Pipturus*, P. D. Ashlock. Paratypes: 1♀, same data as holotype; 2♂♂, 1♀, Kawela Gulch, 1150 m, 21.III.1966, J. W. Beardsley; 1♀, same data but 22.III.1966, C. M. Yoshimoto; 1♂, Molokai, near edge of Waikolu V., 3.IV.1943; 1♀, above Waikolu Valley, 1400 m, 1.V.1955, *Metrosideros*, J. L. Gressitt.

KEY TO THE SPECIES OF GLYPTONYSIUS

1. Greatest width of prothorax more than 2 eye widths greater than head; lateral margin of prothorax distinctly swollen lateral to callosity; Oahu..... **G. laevigatus**
 Greatest width of prothorax about 1 eye width greater than head; lateral margin of prothorax only slightly swollen lateral to callosity..... 2
2. Kauai form; callosities not swollen; corium never with black maculations...**G. hylaeus**
 Molokai form; callosities swollen; corium usually with black maculations...**G. amicola**

G. laevigatus Usinger from Oahu is a very distinctive species, as Usinger stated when he described it. *G. amicola* from Molokai, however, is very similar to *G. hylaeus* from Kauai. The key characters will separate most specimens, but a few will be difficult to place without reference to locality. The spermatheca (fig. 3) is dissimilar in the 3 species, but it must be used with care in species discrimination. Neither the exact pattern of duct folding nor the shape of the terminal bulb is particularly important; but the relative length of the duct, the abruptness and number of turns it makes, and the size of the basal pigmented area are significant.

Neseis (Trachynysius) pallassatus Ashlock, n. sp. Fig. 1e.

Head slightly elevated between eyes, shining, moderately rugose, sparsely clothed with appressed golden hairs becoming more dense near eyes and laterally on jugum, length 0.78, width 0.95, anteocular length 0.34, eye length 0.31, eye width 0.19, interocular space 0.53; buccula widest anteriorly, gradually narrowing posteriorly to a point near level of middle of eye without abrupt change in width; labium extending well onto abdominal segment IV (3rd visible), 1st segment surpassing anterior margin of prothorax, segment lengths from base 0.75, 0.75, 0.75, 0.58; antennal segment lengths from base 0.27, 0.53, 0.51, 0.71.

Pronotum nearly glabrous, with fine appressed golden pubescence anterior and lateral to callosities; disc moderately punctate, punctures separated by 0.5–2.0× diameter of a puncture; sides slightly sinuate; length 0.88, width 1.51. Scutellum with a few appressed fine pale hairs basally and laterally; Y-shaped carina somewhat obscured by punctures, elevated medially; slightly more densely punctate than disc of pronotum; length 0.64, width 0.80.

Hemelytron exceeding abdomen, clavus and corium shining but not quite smooth, nearly glabrous but with a few fine pale hairs appressed on surface and a few erect hairs projecting laterally at base of costal margin; claval suture with row of punctures on both clavus and corium for full length; corium punctate along vein R+M to just short of level of apex of scutellum, vein R+M apparent, branches R and M and vein Cu obscure; length of claval commissure 0.60; length of corium 2.38, extending to or slightly beyond posterior margin of abdominal segment VI; membrane normal, veins transparent, basal length to level of corial apex 1.28, apical length from corial apex 0.74.

Color: Head black, except clypeus, longitudinal spot, posterior margin of vertex, narrow margin around eyes, antenniferous tubercle, and buccula pale yellowish brown. Antennal segment I brown, remaining segments dark brown, apices of segments I–III paler; labial segments I–III yellowish brown, segment IV black. Prothorax pale yellowish brown dorsally, callosities and area lateral to callosities black, punctures brown; all thoracic pleurae and sterna black, pale on anterior margin of prosternum, all acetabula, posterior margins of propleuron and metapleuron and metathoracic scent gland auricle. Scutellum pale yellowish brown, basally and on medial tumosity black. Leg pale yellowish brown, femur with dark brown spots. Hemelytron semitransparent, pale yellow, clavus, corium, and membrane sprinkled with asymmetrical light brown maculations.

Size: ♂, length 4.7 (4.5–4.7), width 1.8; ♀, length 4.9–5.9, width 2.2.

Holotype ♂ (BISHOP 6997), Maui, Waikamoi Stream, 24.VIII.65, on *Trematolobellia macros-tachys* (H. & A.) Zahlbr., P. D. Ashlock. *Paratypes*: 1♂, 2♀♀, same data as holotype; 2♀♀, Maui, Haleakala, E. slope Kuiki, 2000 m, 28.VIII.45, A. L. Mitchell & H. St. John.

KEY (ADDITION TO USINGER 1942: 48)

- 12'. Clavus and corium hyaline and covered with small asymmetrical pale brown spots; Maui..... N. (Tr.) **pallassatus**
 Clavus and corium, if spotted, symmetrically so 12

This species clearly belongs to the subgenus *Trachynysius* of the genus *Neseis*, but appears to have no close relatives within the group. More than any other Hawaiian orsilline, it resembles *Oceanides montivagus* (Kirkaldy) or *O. vulvan* (B. White) because of the irregular overall spotting on the hemelytra. The new species has paler spotting than the two *Oceanides* species, and, of course, differs in morphological features.

Neseis (*Trachynysius*) **legnotus** Ashlock, n. sp. Fig. 1f.

Head with vertex depressed but slightly elevated medially, shining, moderately covered with shallow punctures, sparsely clothed with appressed golden hairs, length 0.68, width 0.90, antecular length 0.24 (less than length of eye), eye length 0.32, eye width 0.20, interocular space 0.48; buccula widest anteriorly, gradually narrowing to a point near level of middle of eye without abrupt change in width; labium just attaining base of abdomen, 1st segment just surpassing base of head, segment lengths from base 0.44, 0.46, 0.46, 0.34; antennal segment lengths from base 0.24, 0.58, 0.54, 0.56.

Pronotum nearly glabrous, with fine appressed pale pubescence around edge of callosities and laterally on anterior lobe; disc moderately punctate, punctation most dense anterior of callosities, contiguous to separated by one-half diameter of a puncture, less dense on posterior lobe, separated by from 0.5-2.0 \times diameter of a puncture; sides slightly sinuate; length 0.71, width 1.17. Scutellum with a few sparse appressed fine pale hairs laterally and basally; Y-shaped carina obscure, appearing like a medial tumosity; laterally punctate, with punctures from contiguous to separated by diameter of a puncture; length 0.49, width 0.65.

Hemelytron exceeding abdomen; clavus and corium shining but not quite smooth, appearing glabrous but with a few fine, pale, appressed hairs on surface and a few erect hairs projecting laterally at base of costal margin; claval suture punctate on both clavus and corium for full length; corium punctate along vein R+M to level of middle of abdominal segment IV, costal margin paralleling vein R+M to level just short of apex of scutellum, vein R+M visible, vein Cu obscure; length of claval commissure 0.46; length of corium 1.89, extending to posterior margin of abdominal segment VI; membrane complete, veins visible, basal length to level of corial apex 0.85, apical length from corial apex 0.93.

Color: Head black, except clypeus, medial elongate spot on vertex, margin around eye, buccula, venter except between bucculae, and antenniferous tubercle pale yellowish brown; antennal segment I pale yellowish brown with a few darker brown spots, segments II-IV brown, apices of II and III pale; labial segments pale yellowish brown, apical half of segment IV black. Prothorax pale yellowish brown, callosities slightly darker, punctures, humeral angles, spot on disc near humeral angles, and 3 spots on posterior margin dark brown; small patch above anterior acetabulum, mesopleuron except posterior margin, lateral half of metapleuron except hind lobe, and all sterna dark brown to black. Acetabula nearly white. Leg yellowish brown with obscure darker spots on femur. Hemelytron semitransparent, pale yellow, punctures, apex of clavus along commissure, clavus along

costal margin, diffuse spot at level of commissure, vein R+M, and diffuse spot within apical angle of corium dark brown; apical margin of corium red.

Size: ♂, length 3.9, width 1.4; ♀, length 4.0-4.6, width 1.6.

Holotype ♂ (BISHOP 6998), Molokai, above Waikolu V., 1400 m, 1.V.55, on *Pipturus*, E. J. Ford, Jr. Paratypes: 5♀♀, same data as holotype; 1♀, same data but J. L. Gressitt; 1♀, same data but 29.IV.55, no host; 10♂♂, 4♀♀, Molokai, Kawela Gulch, 1000 m, 21. III.1966, *Pipturus*, P. D. Ashlock; 1♂, 4♀♀, same data but 23.III.1966.

KEY (ADDITION TO USINGER 1942: 49)

27. Body form short and broad (35 to 38% as broad across hemelytra as long), appearing robust throughout: costal margin distinctly arcuate behind level of apex of scutellum, or more slender with the costal margin more gradually arcuate throughout..... 28
 Body more slender (31 to 33% as broad across hemelytra as long), sides subparallel; costal margin of corium only feebly arcuate beyond apex of scutellum; *Neseis hiloensis* subspecies..... 30
28. Costal margin scarcely sinuate subbasally and at level of apex of scutellum, otherwise moderately evenly arcuate; upper surface of head predominantly light brown; Molokai *N. cryptus*
 Costal margin distinctly dilated beyond level of apex of scutellum; upper surface of head predominantly black 29
29. Size large, length 4.7-5.3 mm, pronotum, scutellum, clavus, and corium distinctly tinged with reddish, the clavus brown only narrowly on commissure, corium brown only near outer apical angle; Molokai *N. swezeyi*
 Size smaller, length 3.9-4.6 mm, dorsal surfaces without an overall reddish tinge, pronotum and corium with distinct brown spots.....29'
- 29' Corium posteriorly with large brown spots, narrow thickened apical margin not contrasting in color, disc anteriorly without spots; Molokai *N. chinai*
 Corium with several small brown spots both anteriorly and posteriorly, narrow thickened apical margin bright red, strongly contrasting with remainder of corium; Molokai.....*N. legnotus*

This is the fifth species of *Neseis* (*Trachynysius*) to be found on *Pipturus*, and the fourth such form from Molokai. Of the *Pipturus* species, it is, like *N. fulgidus* Usinger from Oahu and *N. swezeyi* Usinger from Molokai, a single-island form. It is not related to the two species—*N. nitidus* (B. White) and *N. hiloensis* (Perkins)—that do break up into subspecies on the various islands of the archipelago. The new species seems more closely related to *N. swezeyi* among the *Pipturus* forms, but differs in not having the entire clavus, corium, and pronotum tinged with reddish, and in having distinct spots in these areas. It is perhaps more closely related to *N. chinai* Usinger from Molokai. *N. chinai*, however, has much more extensive dark spots on the clavus and corium, a more completely black head, and lacks the red apical margin of the corium that distinguishes *N. legnotus*.

Metrarga elinguis Ashlock, n. sp. Fig. 2b.

Head elevated nearly height of eye above eye, sparsely clothed with short appressed hairs,

length 1.24, width 1.39, anteocular length 0.31, eye length 0.33, eye width 0.26, interocular space 0.85; buccula widest anteriorly, gradually narrowing posteriorly to about level of midpoint of eye without abrupt changes in width, densely punctate; labium extending to base of abdominal segment IV (3rd visible), 1st segment just surpassing anterior margin of prothorax, segment lengths from base 1.07, 1.05, 0.92, 0.73; antennal segment lengths from base 0.77, 1.29, 1.05, 0.90.

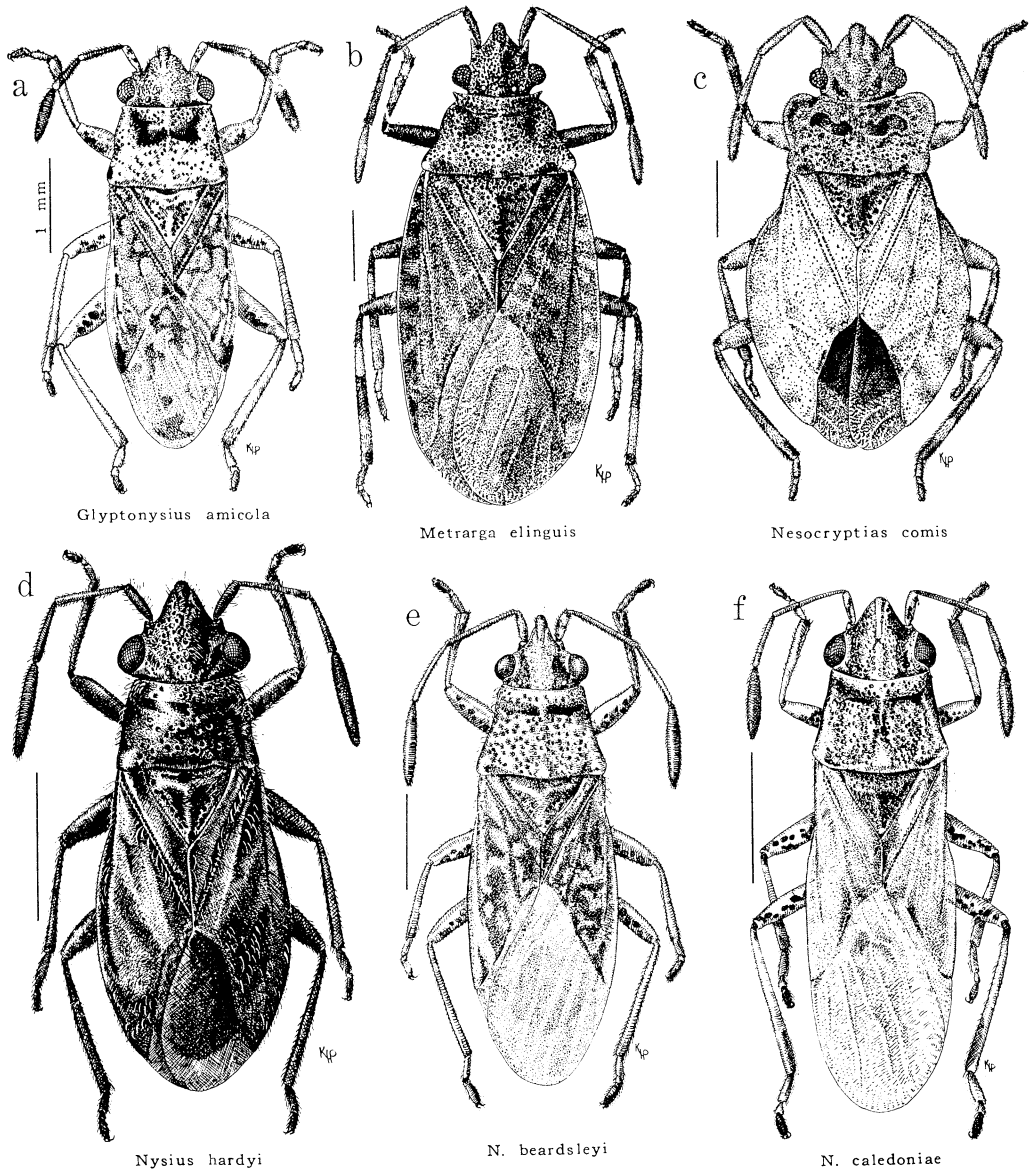


Fig. 2. Holotypes of the named species, a-e; Specimen of *Nysius caledoniae* from Kapoho, Hawaii, f.

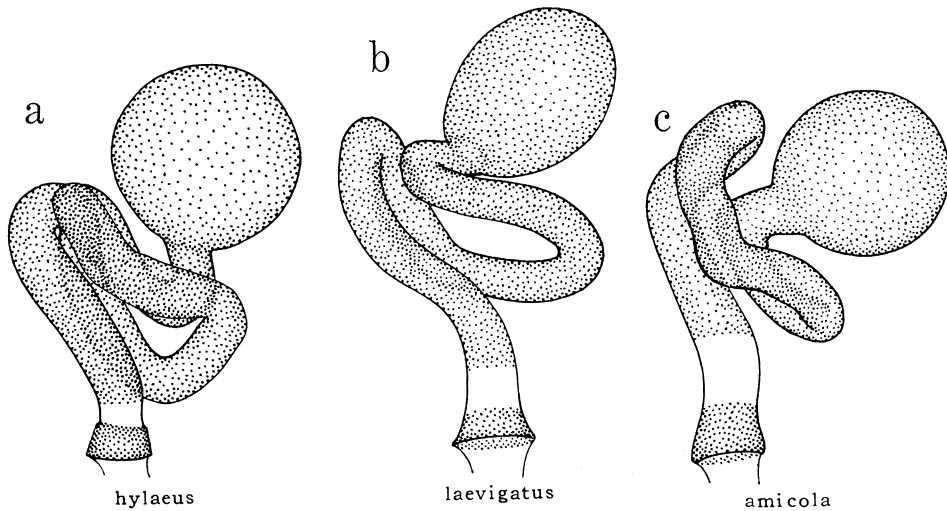


Fig. 3. Spermatheca of the named species of *Glyptonysius*.

Pronotum nearly glabrous, with sparse appressed short pubescence laterally and around callosities, densely punctate, punctures small, contiguous to separated by width of 1 puncture; anterior lobe with sides very arcuate, spines acute, conical, short, distance across spines 1.36 (less than width across eyes); length 1.19, width 2.14. Scutellum nearly glabrous, punctures larger and more widely spaced than on pronotum, tumid, carina not distinct; length 1.12, width 1.21.

Hemelytron exceeding abdomen, clavus and corium dull, evenly clothed with very short, subappressed pubescence, corium punctate along vein R+M to level of middle of abdominal segment III, with all veins, including Sc, visible; stridulitrum poorly developed, covered with short pubescence; length of claval commissure 0.73; length of corium 3.55, apex attaining level of middle of abdominal segment VII; membrane with veins well developed, basal length to level of corial apex 1.85, apical length from corial apex 0.71. *Hind femur* with fewer plectral tubercles than normal for genus.

Color: Head, thoracic venter, abdomen dark brown; buccula, labium, antenna brown. Pronotum brown, callosities dark brown, small spots at humeral angles and midpoints of anterior and posterior margins pale, hind lobe light brown on disc. Scutellum dark brown, obscurely mottled with pale, apex pale. Hemelytron with clavus and corium dark brown, obscurely mottled with pale, vein R+M at base of clavus and apical angle of corium pale; membrane dark hyaline, with diffuse pale spot behind claval suture and posterolaterally. Ventral margins of acetabula, terminal lobe of scent gland auricle, part of hind margin of metapleura, trochanters and tarsi pale, femora and tibiae dark brown, femora with subapical, tibiae with subapical and subbasal pale rings.

Size: ♂, length 6.6 (6.6-7.0), width 2.9 (2.9-3.2); ♀, length 7.6-8.0, width 3.5-3.7.

Holotype ♂ (BISHOP 6999), Hawaii, Puu Hualalei, Kahaluu Forest Reserve, 760 m, 28. VI.1966, *Freycinetia*, P. D. Ashlock. Paratypes: 9♂♂, 4♀♀, same data as holotype.

KEY (ADDITION TO USINGER & Ashlock 1959: 102)

1. Labium long, exceeding hind coxa; color including femora dark brown 1'
 Labium short, not exceeding hind coxa; color including femora brownish ferruginous to pale ochraceous.. 2
- 1'. Pronotal spines long and slender, width across spines greater than width across eyes; basal part of membrane to level of corial apices about twice length of apical part; Molokai **M. molokaiensis**
 Pronotal spines shorter, width across spines less than width across eyes; basal part of membrane to level of corial apices much longer than apical part (55 : 22); Hawaii..... **M. elinguis**

The dark color and long labium of this species relate it to *M. molokaiensis*. In other features it is rather similar to *M. obscura*, but differs from all other species in the genus in two characters. One of these is a lengthening of the corium, which is expressed as a ratio of the basal to apical parts of the membrane in the key. The other character involves a reduction of the stridulatory apparatus that is a characteristic feature of all members of the genus. The crenulations on the edge of the corium do not extend inwardly on the under surface as is the case in other species, and this surface is covered with short subappressed hairs to the very edge of the corium. Apparently the stridulatory structures are not functional in this species and are being lost. The plectral tubercles on the hind femur are reduced in number also.

Nesocryptias comis Ashlock, n. sp. Fig. 2c.

Head elevated nearly height of eye above eye, dull, clothed with short appressed and erect hairs obscured by encrustation, length 1.22, width 1.34, anteocular length 0.63, eye length 0.27, eye width 0.20, interocular space 0.94; buccula widest anteriorly, gradually narrowing posteriorly about to midpoint between levels of antenniferous tubercle and eye without abrupt change in width, punctures obscured by encrustation; labium extending to base of abdominal segment IV (3rd visible), first segment just surpassing anterior margin of prothorax, segment lengths from base 0.92, 0.85, 0.78, 0.65; antennal segment lengths from base 0.65, 0.85, 0.80, 0.78.

Pronotum clothed with short appressed pubescence, hairs especially dense around callosities, obscured by encrustation, callosities without hairs or encrustation but with many small punctures separated by 0.5-2.0× diameter of a puncture; anterior lobe with sides greatly expanded, slightly broader than posterior lobe; length 1.00, width 2.06. Scutellum with pubescence and encrustation as on head and pronotum; Y-shaped carina very distinct; punctures slightly larger than those on prothorax; length 0.95, width 1.12.

Hemelytron exceeding abdomen, clavus and corium dull, lightly encrusted laterally, nearly glabrous; claval suture absent but position marked by two complete rows of punctures; corium punctate along vein R+M to level of middle of abdominal segment IV, veins Cu and R+M visible, lateral margin paralleling vein R+M to level of middle of scutellum, then sharply angling outward and arcuate to apex; length of claval commissure 0.92; length of corium 3.50, exceeding abdomen; membrane reduced, veins reduced, basal length to level of corial apex 1.55, apical length from corial apex 0.17.

Color: Head, prothoracic callosities, thoracic pleura, scutellum dark reddish brown,

posterior lobe of prothorax and scutellum laterally on apical half light reddish brown, all obscured by dirty, yellowish-brown encrustation. Antenna brown, femur and tibia each with 2 pale yellowish bands. Hemelytron yellowish brown, punctures brown, veins light spotted with brown, lateral margin light marked with light brown spots; membrane dark smoky hyaline.

Size: ♀, length 5.7, width 3.0.

Holotype ♀ (BISHOP 7000), Molokai, Kamoku Flats, 23.III.1966, Berlese, moss or lichen, J. W. Beardsley and C. Yoshimoto.

KEY (ADDITION TO USINGER & ASHLOCK 1959: 111)

1. Width across anterior lobe of prothorax equal to or greater than width across posterior lobe..... 1'
- Width across anterior lobe of prothorax less than width across posterior lobe..... 2
- 1'. Prothorax constricted between anterior and posterior lobes; costal margin not sharply deflected outwardly where vein R+M curves away from margin; Oahu..... *N. oahuensis*
- Prothorax not constricted between anterior and posterior lobes; costal margin sharply deflected outwardly where vein R+M curves away from margin; Molokai.. *N. comis*

N. comis has the shortest prothorax relative to its width of any member of the genus. It will key to *N. oahuensis* in Usinger & Ashlock's key (1959), but the costal margin of that species does not abruptly bend at the point where vein R+M no longer parallels the margin. In this respect, *N. comis* is more like *N. adamsoni*, but *adamsoni* is shinier and has a longer prothorax with a more prominent hind angle. *N. comis* is the first species of *Nesocryptias* found on Molokai.

Nysius hardyi Ashlock, n. sp. Fig. 2d.

Head slightly elevated between eyes, densely punctate, clothed with appressed golden hairs, length 0.78, width 0.90, anteocular length 0.41 (much longer than eye), eye length 0.29, eye width 0.20, interocular space 0.53; buccula widest anteriorly, gradually narrowing posteriorly to a point near level of middle of eye without abrupt change in width; labium reaching apex of hind coxa, 1st segment not reaching base of head, segment lengths from base 0.53, 0.53, 0.44, 0.43; antennal segment lengths from base 0.31, 0.49, 0.43, 0.73.

Pronotum densely clothed with fine pale appressed pubescence and sparsely with pale erect hairs; disc moderately punctate, punctures large, separated by more or less than width of a puncture; sides slightly sinuate; length 0.88, width 1.51. Scutellum with appressed pale hairs; Y-shaped carina becoming tumid medially; with a few punctures laterally; length 0.53, width 0.61.

Hemelytron convex, slightly exceeding abdomen, clavus and corium shining but not quite smooth, densely clothed dorsally with pale erect hairs and with additional erect hairs projecting laterally along base of costal margin and ventrally along entire length of costal margin; clavus punctate along claval suture for entire length; corium punctate along claval suture to level of apical three-quarters of scutellum, and along vein R+M nearly to level of apex of claval commissure, costal margins divergent basally but paralleling

vein R+M to just short of level of apex of scutellum, then becoming slightly more divergent and arcuate to apex of corium, veins except R+M basally not evident; length of claval commissure 0.62; length of corium 2.04; membrane much reduced, without evident veins, basal length to level of corial apex 0.90, apical length from corial apex 0.26. Hind wing reduced, reaching only 4th abdominal tergite.

Color: Black, with clypeus, narrow margin around eye, spot medially at base of head, narrow edge of buccula, spot at each pronotal humeral angle, labium, and leg dark castaneous. All acetabula pale castaneous. Femur obscurely with typical orsilline black spots.

Size: ♂, length 3.5 (3.3-3.5), width 1.4; ♀, length 3.7-3.9, width 1.6.

Holotype ♂ (BISHOP 7001), Kauai, Alakai swamp, 1200 m, VIII.1963, D. E. Hardy. Paratypes: 3♂♂, 6♀♀, 2 nymphs, same data as holotype; 1♀, Kauai, Alakai swamp trail, third bog, 16.IX.65, J. W. Beardsley.

KEY (ADDITION TO USINGER 1942: 85)

- 4'. Beetle-like and flightless; clavus deeply punctate along claval suture nearly to apex, clavus and corium with long erect hairs; Kauai..... **N. hardyi**
 Never beetle-like and flightless; punctures along claval suture shallow, rarely extending nearly to apex of clavus, if so then clavus and corium with only appressed hairs 4

This unusual *Nysius* recalls such odd species as *Nysius huttoni* B. White from New Zealand, which has a brachypterous form, and *Oreonysius rugosus* Usinger, which was described from a unique brachypterous specimen from Mount Kilimanjaro, Tanganyika. The species does not fit well into Usinger's 1942 key to the genera of Hawaiian Orsillinae, and I have had to account specifically for it in my key to the tribes and genera of the Orsillinae of the world. Without a careful study of the genitalia of the entire Hawaiian *Nysius* fauna, it is impossible to relate this species to any other Hawaiian form. It does somewhat resemble an undescribed species of *Nysius* from the Peruvian Andes. There should be no difficulty in identifying this species from the key, description, and figure presented here, but the specimens have twice been taken for saldids. The species is named for Dr D. Elmo Hardy, University of Hawaii, who first collected the species.

Nysius beardsleyi Ashlock, n. sp. Fig. 2e.

Head slightly elevated between eyes, densely punctate, sparsely clothed with appressed pale hairs, length 1.14, width 1.07, anteocular length 0.46 (much longer than eye), eye length 0.32, eye width 0.20, interocular space 0.63; buccula widest anteriorly, gradually narrowing posteriorly to a point near level of middle of eye without abrupt change in width; labium slightly surpassing hind coxa and just attaining abdominal segment III (2nd visible), 1st segment not reaching base of head, segment lengths from base 0.61, 0.68, 0.78, 0.51; antennal segment lengths from base 0.34, 0.82, 0.65, 0.88.

Pronotum moderately clothed with fine, pale, appressed and erect pubescence; disc densely punctate, punctures slightly smaller than ocellus, separated by 0.5-1.0× diameter of a puncture; sides nearly straight; length 1.00, width 1.41. Scutellum with appressed and erect pale hairs; Y-shaped carina tumid, not distinctly delimited; with several punctures laterally; length 0.70, width 0.82.

Hemelytron exceeding abdomen, clavus and corium with surface dull, moderately clothed dorsally with appressed and erect hairs and with additional erect hairs projecting laterally along base of costal margin; clavus punctate along claval suture for about one-half its length; corium with a few punctures basally along claval suture and vein R+M, costal margins subparallel and paralleling vein R+M to level of apical two-thirds of scutellum, then becoming strongly divergent and arcuate to apex of corium, veins evident but not prominent; length of claval commissure 0.58; length of corium 2.36; membrane normal with veins evident, basal length to level of corial apex 1.02, apical length from corial apex 1.09. Hind wing normal, exceeding abdomen.

Color: Head light reddish brown with longitudinal, anteriorly diverging stripes through each ocellus; ventrally black except antenniferous tubercle and buccula pale; antenna dark reddish brown, basal segment pale with scattered brown spots; labium very dark, basal segment a little paler, apical segment black. Prothorax light brown, punctures reddish brown, callosities black, hind margin with 3 pale spots at humeral angles and midline. Scutellum reddish brown, basally black, apex pale. Hemelytron with clavus and corium grayish white, with anastomosing dark brown spots on clavus, which become more pronounced apically, and on corium between claval suture and vein R+M, vein Cu brown, membrane hyaline smoky brown, with veins white. Venter black, except ventral collar, posterior lobes of propleuron and metapleuron, acetabula, scent gland auricle, and lateral margins of abdominal segments IV through VII pale. Leg pale yellow, femur with black spots, tibia with longitudinal knee stripes.

Size: ♂, length 5.0 (4.7-5.1), width 1.6; ♀, length 5.2-6.2, width 2.1.

Holotype ♂ (BISHOP 7002), Maui, Mt. Haleakala, 2500 m, 23.VIII.65, on *Dodonia* sp., P. D. Ashlock. Paratypes: 1♂, 3♀♀, same data as holotype; 2♂♂, Maui, Auwahi, 27.VIII.65, on *Dodonia*, P. D. Ashlock; 1♀, Maui, Haleakala, Kolekole peak, 3000 m, 23.VII.64, taken on observation dome during mass flight of *Nysius*, mostly *N. coenosulus*, R. T. Hanson; 2♂♂, 3♀♀, Maui, Haleakala, road to Polipoli Spring, 1800 m, 29.VII.64, J. W. Beard-sley; 9♂♂, 17♀♀, Hawaii, Kilawea Kau, 1220 m, 22.VI.66, on *Dodonia*, P. D. Ashlock; 5♀♀, same data but P. E. Gehring; 3♂♂, 5♀♀, Hawaii, Puu Hualalei, Kahaluu Forest Reserve, 28.VI.66, on *Dodonia*, P. E. Gehring.

KEY (ADDITION TO USINGER 1942; 85)

- 3'. Clavus and corium with erect as well as appressed hairs; veins of membrane paler than disc **N. beardsleyi**
 Clavus and corium with only appressed hairs; veins of membrane concolorous with disc 3

This species is very difficult to work into Usinger's 1942 key. Since the labium distinctly surpasses the coxa and attains the base of abdominal segment III (2nd visible), one might be led through couplet 2 to couplet 3, where the membranous color characters of neither *N. communis* nor *N. mixtus* fit this species. If, on the other hand, one considers the labium to be "scarcely surpassing posterior coxae", then the long head (length-to-width ratio 19 : 22) and the erect hairs on the corium will lead one to conflicting conclusions in couplet 4. If the length of the head is considered more important, one is led through couplet 5 to couplet 6. Here the incomplete row of punctures on either side of the claval

suture excludes *N. sublittoralis*, while the posterior location of the eyes excludes *N. longicollis*. However, if in couplet 4 the erect vestiger is considered more important, then one reaches couplet 8 through 7. Here the nature of the costal margin would lead one to couplet 9 and the color pattern on the femur to couplet 10. Neither species in couplet 9 fits the coloration of the new species. In couplet 10 the antennal character is that of *N. blackburni*, but the size and color pattern of the new species are unlike those of *N. blackburni*.

This species is named for Dr J. W. Beardsley, University of Hawaii, who collected the first specimens of the species and recognized it as new.

Neseis (Leionysius) pallidus Usinger

Dr Usinger collected a series of 6♂♂, 9♀♀, at Waikamoi Stream on Maui, August 24, 1965, on *Cyanea aculeatiflora* as well as several immatures in various instars. Although the unique type specimen of the species was collected on *Styphelia*, this is probably just a sitting record.

Neseis (Trachynysius) chinai Usinger

This species was described from two ♀♀, and no host plant could be given. On March 19, 1966, I collected a large series on *Coprosma* in company with *Oceanides gressitti*.

Usinger's females have extensive black markings along the posterior margin of the corium, as do those I collected. However, all the males I collected have at most three black spots in the same area, and on one specimen the black markings are reduced to a single black spot at the apical angle of the corium; the species is apparently sexually dimorphic in color pattern.

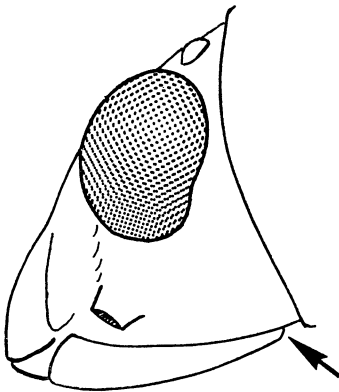


Fig. 4. Head of *Nysius caledoniae*, to show truncate buccula.

Nysius caledoniae Distant Fig. 2f, 4.

This species, already recorded from Oahu (Beardsley 1965) and Hawaii (Yoshioka 1965), was recently collected by Dr Yoshimoto from Lanai, Lanaihale, on March 25, 1966. The species is very easy to recognize, for it is the only orsilline in Hawaii with an abruptly terminating buccula (fig. 4).

KEY (ADDITION TO USINGER 1942: 85)

- 1'. Buccula somewhat tapering posteriorly, but ending abruptly before base of head... **N. caledoniae**
- Buccula tapering posteriorly, gradually disappearing into underside of head, not ending abruptly 1

Nysius fucatus Usinger

I collected a series of 3♂♂, 2♀♀ of this species on Maui, Auwahi, on August 27, 1965, on a rosaceous plant. Usinger (1942) described the species from three specimens from Oahu, so this is a new island record.

Nysius rubescens B. White

On August 26, 1965, I collected a single female of this species from Koolau Gap, Mt. Haleakala, Maui, on *Vaccinium berberidifolium*. The species was known only from the island of Hawaii heretofore.

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