

A REPORT ON SOME INTERTIDAL STAPHYLINIDAE FROM SONORA, MEXICO WITH FOUR NEW GENERA (COLEOPTERA)

By **Ian Moore and E. F. Legner**¹

Abstract: The intertidal staphylinid fauna of the northern Gulf of California shows affinities with that of California, but the presence of several indigenous genera indicates a long period of isolation. New genera and species described here are *Rothium sonorensis*, *Salinamexus browni*, *Biophytosus reticulatus* and *Thinobiosus salinus*, all members of the tribe Bolitocharini of the subfamily Aleocharinae.

The Pacific Coast of North America supports a rich and varied fauna of seashore insects. The known fauna extends from Alaska to Point San Eugenio, Baja California, Mexico. It is suspected that this fauna is in part dependent on the wrack washed on the beach for its ultimate source of food (Moore & Legner 1974). The kelp beds from which the wrack derives are found only within the above stated range. The southern coasts of Baja California have not been collected. Recent collecting on the shores of Sonora, Mexico, in the northern Gulf of California indicates a strong relation of that fauna to the fauna of California. However, the presence of genera and species not found in California suggests that the northern Gulf of California has been isolated for a long time.

SUBFAMILY STAPHYLININAE

Cafius sulcicollis LeConte

This species is known from southern California and the Pacific Coast of Baja California, Mexico, where it is found in wrack on the sandy beaches. In southern California it is usually quite rare. It was recently reported from the Salton Sea, Imperial County, California (Moore & Legner 1973).

SPECIMENS EXAMINED: MEXICO: Sonora: 1, Puerto Peñasco, 1.VI.1974, W. Brown; 1, Puerto Peñasco, 23-24.IX.1974, V. Roth & Brown; 3, Punta Chueca, 29.00-112.05, 18.I.1974, light trap on beach, Roth; 44, Punta Chueca, 29.00-112.05, 24-25.IX.1974, crepuscular flight over intertidal zone, Roth & Brown; 2, Tepoca, 29.18-112.20, 22.III.1974, wrack on rocky beach, Roth & Brown; 108, (7 larvae), Punta Cirio, 29.53-112.40, 20.III.1974, wrack on sandy beach, Roth & Brown; 1, El Desemboque de los Seris, 1.VI.1974, Brown; 1, Puerto Libertad, 29.54-112.41, Roth & Brown.

SUBFAMILY PAEDERINAE

Scopaeus sp.

SPECIMENS EXAMINED: MEXICO: Sonora: 5, Puerto Peñasco, 9.VI.1974, wrack on

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sandy beach, W. Brown.

SUBFAMILY OXYTELINAE

Carpelimus sp.

A very small species, 1.5 mm.

SPECIMENS EXAMINED: MEXICO: Sonora: 40, Punta Cuevas, 29.42–112.35, 24–25. IX.1974, under boulders low tide, V. Roth & W. Brown; 1, N of San Carlos Bay, 22.II. 1974, under decaying seaweed, Brown.

SUBFAMILY ALEOCHARINAE

TRIBE BOLITOCCHARINI

Tabular key to the marine genera of the Bolitocharini. (The construction and use of tabular keys are explained by Newell 1970, 1972.)

STATEMENT OF CHARACTERS

1. Condition of middle coxae = MID COXAE
SEP = separate
CONT = contiguous
2. Anterior and middle tibiae = ANT MID TIBIAE
SPIN = with spines on outer edge dispersed through the pubescence
PUB = without spines on outer edge
3. Number of tergites impressed at base = TERG IMPR
4. Mandibles with a tooth at middle of inner edge = MAN MID TOOTH
R = on right mandible only
R+L = on each mandible
SEV = several teeth on each mandible
O = without teeth
5. Infraorbital ridge = INFRA RID
YES = present, normal
O = lacking
STRONG, FINE, FEEBLE, SOMETIMES = descriptions of ridge
6. Condition of ligula = LIG
SIMP = simple
BIF = bifid
7. Length of last segment of posterior tarsus = POST TARSI
2 = about as long as preceding two segments
3 = about as long as preceding three segments

Source = source of information

(Refer to facing page)

GENUS **Rothium** Moore & Legner, new genus

Form parallel, moderately robust. *Head* large, orbicular, not constricted behind eyes, without a nuchal constriction. *Eyes* large but not interrupting contour of side margin of head. *Antenna* about as long as head and pronotum, somewhat incrassate, their fossae located on surface of head slightly forward of a line drawn through anterior margin of eyes. *Mandibles* stout, curved, hooked and pointed at apex, without internal teeth. *Labrum* wider than long, rounded in front with 2 shallow membranous lobes. *Maxillary*

TABULAR KEY

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | SOURCE | NAME |
|-------|--------|--------|-------|-----------|------|-------|-------------|----------------------------------|
| MID | ANT | TERG | MAND | INFRA | LIG | POST | | |
| COXAE | MID | IMPR | MID | RID | | TARSI | | |
| | TIBIAE | | TOOTH | | | | | |
| SEP | PUB | 4 | R | STRONG | SIMP | 3 | SPECIMEN | <i>Halmnaeus</i> Kiessengewetter |
| SEP | PUB | 3 | R | 0 | BIF | 3 | HOLOTYPE | <i>Thinobius</i> new genus |
| SEP | PUB | 0 | 0 | FINE | SIMP | | Fauvel 1878 | <i>Corallus</i> Fauvel |
| SEP | PUB | 0 | 0 | STRONG | SIMP | 3 | HOLOTYPE | <i>Rothium</i> , new genus |
| CONT | SPIN | 5 | R+L | FINE | SIMP | 3 | Moore 1956 | <i>Phytosus</i> Curtus |
| CONT | SPIN | 3 or 4 | R | 0 | BIF | 2 | SPECIMEN | <i>Thinusa</i> Casey |
| CONT | PUB | 0 | R+L | YES | SIMP | 3 | SPECIMEN | <i>Liparocephalus</i> Mäklin |
| CONT | PUB | 0 | SEV | YES | SIMP | 3 | Steel 1964 | <i>Baostethus</i> Broun |
| CONT | PUB | 5 | R+L | FEEBLE | SIMP | 2 | Moore 1956 | <i>Amblopusa</i> Casey |
| CONT | PUB | 0 | R+L | 0 | BIF | 2 | HOLOTYPE | <i>Biophytosus</i> , new genus |
| CONT | PUB | 5 | R+L | 0 | BIF | 3 | HOLOTYPE | <i>Salinamexus</i> , new genus |
| CONT | PUB | 4 | R | 0 | SIMP | 2 | SPECIMEN | <i>Bryobiota</i> Casey |
| CONT | PUB | 4 | R | FINE | SIMP | 2 | Fenyés 1920 | <i>Heterota</i> Mulsant & Rey |
| CONT | PUB | 3 | 0 | | BIF | 2 | Moore 1956 | <i>Cameronium</i> Koch |
| CONT | PUB | 3 | R+L | SOMETIMES | SIMP | 2 | SPECIMEN | <i>Dialota</i> Casey |

palpus 4-segmented; 1st segment short; 2nd segment narrow at base, gently arcuate and widened to apex, almost $3 \times$ as long as wide; 3rd segment a little longer and a little wider than 2nd, widest at apical $1/3$; 4th segment short, $1/3$ as wide as apex of 4th, more than $2 \times$ as long as wide, slightly narrowed at apex. Outer lobe of maxilla very narrow, gently arcuate, narrowed slightly to apex, without internal teeth or setae, with a delicate brush of a few hairs at apex. Inner lobe of maxilla about as long as outer lobe, $2 \times$ as wide, curved and pointed at apex, inner margin with a row of 4 or 5 elongate setae in basal $1/2$ and 7 distinct teeth in apical $1/2$. Labial palpus 2-segmented; 1st segment nearly parallel-sided, about $4 \times$ as long as wide, with a faint transverse to diagonal groove in basal $1/3$; 2nd segment less than $1/2$ as long as 1st and slightly narrower, 3rd segment minute. Ligula about $1/4$ as long as 1st segment of labial palpus, simple. Gular sutures well separated, most approximate in apical $1/3$, slightly divergent behind. Infraorbital carina complete, strong. *Thorax*. Pronotum subquadrate, a little narrowed behind. Prosternum with a weak longitudinal carina. Hypomera delimited by a carina, partly visible from side. Trochantin well developed. Prosternal epimera delimited by a carina but reflexed so as not to be visible except by lifting coxa. Mesosternum moderate, its process long and moderately broad, extending almost the entire distance between coxae, apex truncate. Metasternum long, its process a mere sinuation in anterior margin, meeting mesosternal process to separate middle coxae. Tibiae without external spines. Anterior and middle tarsi 4-segmented; 1st segment a little longer than the 2nd; 2nd and 3rd segments about equal; 4th segment a little longer than 1-3 combined. Posterior tarsi 5-segmented; 1st 4 segments subequal but decreasing slightly in length; 5th segment about as long as the 2nd-4th combined. Elytra not emarginate at outer apical angle. *Abdomen*. 1st 5 segments with paratergites; segments of about equal length. Tergites not impressed. Sternites not constricted.

Type-species: *Rothium sonorensis* Moore & Legner, n. sp.

This genus is rather unusual in the almost entirely corneous outer lobe of the maxilla in which it is similar to members of Myllaeninae, particularly *Bryothinusa* and *Halorhadinus*. However, the apex of that organ is membranous and fimbriate with a few fine setae. In Myllaeninae the outer lobe is entirely corneous and lacks spines or setae. The only known species is as long as *Liparocephalus cordicollis* LeConte but not quite as robust.

This genus is named in honor of Vincent D. Roth, Managing Director of the Southwest Research Station of the American Museum of Natural History at Portal, Arizona, who discovered this and other new intertidal insects of the Gulf of California.

Rothium sonorensis Moore & Legner, new species FIG. 1-5

Color dark testaceous throughout. *Head* $2/3$ wider than long; orbicular, with clypeal area somewhat produced; surface evenly convex at sides, disc slightly flattened, very finely and densely punctured, with a very faint reticulation; pubescence short, dense, directed forward. Eyes not prominent, about as long as tempora. Tempora distinctly rounded, not constricted behind. Antennae moderately incrassate, 1st segment about as long as 2-3 combined; segments 2 and 3 subequal, each about $2 \times$ as long as wide, segments 4-10 of about equal length, each about $1/2$ as long as 3rd segment, becoming progressively wider so that 10th segment is almost $2 \times$ as wide as long; 11th segment ovoid, slightly longer than wide. *Thorax*. Pronotum quadrate, $1/4$ wider than long, widest at apical $1/5$, apex gently arcuate, apical angles narrowly rounded, sides arcuate in apical $2/3$ then nearly straight but convergent to broadly rounded basal angles; base gently arcuate, about $9/10$ as wide as apex; sculpture and pubescence similar to that of head except that the pubescence is largely directed outward from center of disc. Elytra conjointly about as wide and about as long as pronotum; humeral angles broadly rounded, apical angles narrowly rounded; sculpture as on head and pronotum with pubescence directed posteriorly. *Abdomen* parallel to 5th segment, then narrowed slightly to apex. Surface shining, sparsely pubescent. Apex of 6th tergite with 3 large irregular teeth.

Length 4.9 mm.

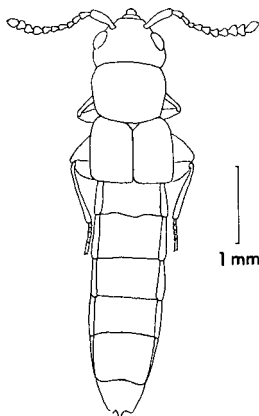


FIG. 1. *Rothium sonorensis*, habitus.

Holotype ♂, MEXICO: Sonora: Punta Cuevas, 29.42–111.35, 24–25.IX.1973, intertidal, algae covered pitted rhyolite, night, low tide, V. Roth & W. Brown, (in the American Museum of Natural History); allotype ♀, same data as holotype; similar to holotype but with the apex of the 6th tergite arcuate; paratypes: 9 ♂♂, 2 ♀♀, same data as holotype; 3 ♂♂, 2 ♀♀, MEXICO: Sonora: 29.49–112.40, 20.III.1974, tide pool, Roth & Brown.

NOTES. The color is constant throughout the entire series of 36 specimens. The size varies from 4.4 to 5.0 mm. A specimen with same data as the holotype is preserved on a slide.

GENUS *Salinamexus* Moore & Legner, new genus

Form parallel, slender. *Head* orbicular, not constricted behind eyes, without a nuchal constriction. Eyes moderate, hardly interrupting contour of side of head. Antennae longer than head and pronotum, not incrassate, their fossae located on surface of head slightly forward of a line drawn through anterior margin of eyes. Mandibles stout, curved, hooked and pointed at apex, each with a minute tooth about in middle of inner edge. Labrum transverse, truncate, with narrow membranous margin. Maxillary palpus 4-segmented; 1st segment short; 2nd segment $3 \times$ as long as wide, widest at apex; 3rd segment slightly longer and slightly wider than 2nd, widest near apex; 4th segment about $1/3$ as wide as apex of 3rd and only slightly longer than apex of 3rd. Outer lobe of maxilla slender, curved, the apical $1/5$ composed of a dense brush of compound hairs. Inner lobe longer than outer lobe, hooked and pointed at apex, inner edge with a row of 9 or 10 stout curved setae interspersed with fine setae which are densest near base. Labial palpus 2-segmented, 1st segment about $3 \times$ as long as wide; 2nd segment about $1/2$ as wide as 1st and slightly more than $1/2$ as long as 1st. Ligula less than $1/2$ as long as 1st segment of labial palpus, bifid for most of its length. Gulae sutures separate, slightly convergent posteriorly. Infraorbital carina lacking. *Thorax*. Pronotum subquadrate, somewhat narrowed behind. Hypomera delimited by a carina, entirely visible from side. Trochantin well developed. Prosternal epimera not delimited by a carina. Mesosternum moderate, its process short and acute, not produced between coxae. Middle coxae contiguous. Metasternum moderate, its process short and blunt. Tibiae without spines on outer edge. Anterior and middle tarsi 4-segmented, 1st 3 segments short and subequal, the 4th segment about as long as 1–3 combined. Posterior tarsus 5-segmented, 1st segment slightly more than $2 \times$ as long as wide, slightly shorter than

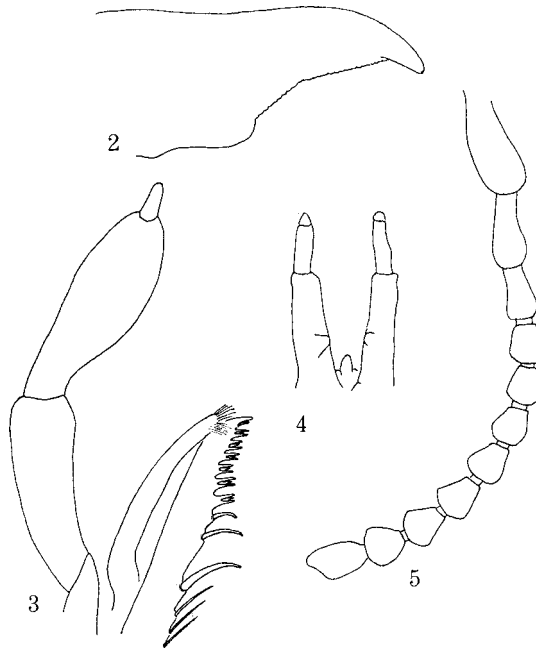


FIG. 2-5, *Rothium sonorensis*: 2, mandible; 3, maxilla; 4, labium; 5, antenna.

2nd-4th combined; 2nd through 4th segments short, subequal; 5th segment about as long as 1st. *Abdomen*. 1st 5 visible segments with paratergites. 1st 4 tergites about equal in length, 5th 1/4 longer than 4th. Five tergites impressed at base, 5th less strongly than 4th. Sternites not constricted at base.

Type-species: *Salinamexus browni* Moore & Legner, new species

NOTES. The outer lobe of the maxilla is unusual for this tribe, somewhat resembling that of *Rothium*, but with a dense brush of compound hairs at apex.

This genus has many characters in common with *Amblopusa*. It differs in the much larger eyes, the elongate antennal segments, the almost simple mandibles each with 1 minute tooth on the inner edge and in the bifid ligula.

Salinamexus browni Moore & Legner, new species FIG. 6-10

Color. Head and pronotum very dark ferruginous, elytra pale ferruginous with scutellar region clouded, abdomen piceous, legs, antennae and trophi dark testaceous. *Head* ovoid, 1/5 wider than long; surface evenly rounded at sides with the disc somewhat flattened. Eyes not prominent, about 1/2 length of tempora. Tempora distinctly and evenly rounded. Sculpture very densely reticulate with a fine short pubescence. Antennae filiform; segments 1 and 2 each more than 2 × as long as wide; segments 3 through 10 progressively shorter, 10th segment longer than wide; 11th segment almost 2 × as long as 10th. *Thorax*. Pronotum quadrate, as wide as and about as long as head; apex nearly straight, apical angles just perceptibly rounded, sides arcuate and slightly convergent to base; basal angles broadly rounded into the rounded base; base about 4/5 as wide as apex. Sculpture and pubescence as on head. Elytra a little wider and longer than pronotum, conjointly as long as wide; humeral angles broadly rounded, sides nearly straight, slightly diverging to very narrowly rounded outer apical angles, apices nearly

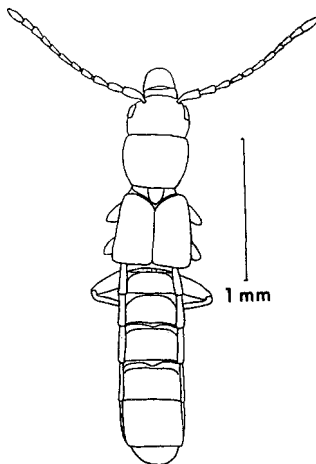


FIG. 6. *Salinamexus browni*, habitus.

straight, inner apical angles almost rectangular. *Abdomen* slightly widened to apex. Surface not as distinctly reticulate as foreparts. Pubescence fine and sparser than on foreparts. Sixth segment unmodified.

Length 3.2 mm.

Holotype, sex unknown, MEXICO: Sonora: Punta Cuevas, 29.42–112.35, 19–20.I. 1974, intertidal, under boulders at low tide, V. Roth (in the American Museum of Natural History); paratypes: 25, same data as holotype, no sexual differences observed.

NOTES. This species is named in honor of Wynne Brown who has collected many intertidal insects from the Sonoran coast. The size of the paratypes varies from 2.2 to 3.5 mm. In some specimens 1/2 of the 5th and all of the 6th abdominal segments are pale ferruginous. A specimen with the same data as the holotype is preserved on a slide. This species superficially resembles *Bryobiota bicolor* Casey but has longer elytra.

GENUS *Biophysotus* Moore & Legner, new genus

Form small, parallel, slender; integuments densely sculptured and pubescent. *Head* orbicular; without a nuchal constriction. *Eyes* small, hardly interrupting side margin of head. *Antennae* not incrassate, their fossae located on surface of head just ahead of a line drawn through anterior margin of eyes. *Mandibles* stout, hooked and pointed at apex, each with a small tooth in middle of inner margin. *Labrum* arcuate at apical margin. *Maxillary palpus* 4-segmented, 1st segment small; 2nd slightly curved, about 2 × as long as wide, widest in the middle; 3rd slightly longer and about 2 × as wide at apex as 2nd; 4th much narrower than 3rd, about as long as apex of 3rd, about 3 × as long as wide, parallel-sided. *Outer lobe of maxilla* as long as inner lobe, slender, curved, with a tuft of setae at apex. *Inner lobe of maxilla* slightly wider than outer lobe, curved, hooked at apex, inner margin with 6 spines in apical 1/2 and a tuft of setae just basal to them, the basal 1/3 with only 2 setae. *Labial palpus* 2-segmented, 1st segment about 3 × as long as wide, 2nd segment about 1/2 as wide and 2/3 as long as 1st, both segments parallel-sided. *Ligula* about 2/3 as long as 1st segment of labial palpus, bifid for 1/2 its length, the 2 lobes some-

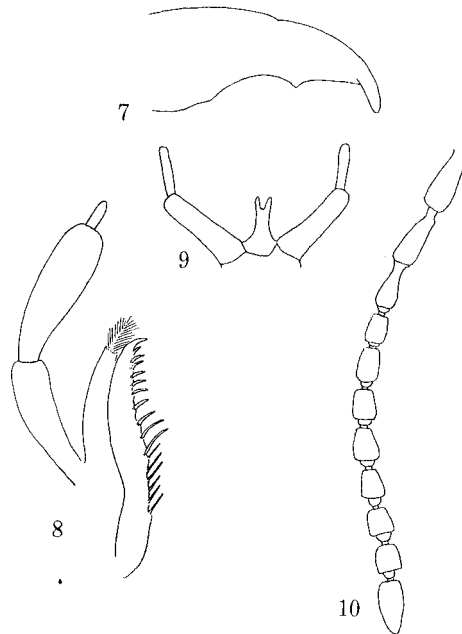


FIG. 7-10, *Salinamexus browni*: 7, mandible; 8, maxilla; 9, labium; 10, antenna.

what divergent. Gular sutures well separated, slightly divergent to base. Infraorbital carina lacking. *Thorax*. Pronotum subquadrate, somewhat narrowed behind, about as wide as and about as long as head. Prosternum moderate, longitudinally carinate. Hypomera delimited by a carina, fully visible from side. Trochantin small. Prosternal epimeron not delimited by a carina. Elytra not emarginate at outer apical angle. Mesosternum short, its process acute, extending a very short distance between the coxae. Metasternum long, its process acute, extending a short distance between coxae. Middle coxae contiguous. Tibiae without spines on outer edge. Anterior and middle tarsi 4-segmented, 1st segment slightly longer than wide, 2nd-3rd not longer than wide, 4th not quite as long as the 2 preceding. Posterior tarsi 5-segmented, 1st segment slightly longer than wide, 2-4 segments not longer than wide, 5th segment not quite as long as 2 preceding. *Abdomen*. Sides nearly parallel but slightly divergent to 5th segment. First 5 segments with paratergites. Fifth visible tergite a little longer than 4th. First 5 tergites impressed at base, 5th more faintly than others. First 4 sternites faintly constricted at base.

Type-species: *Biophytosus reticulatus* Moore & Legner, n. sp.

NOTES. This genus is unusual in this group in its short compact tarsi. It resembles *Bryothinusa* in facies, but the outer lobe of the maxilla is membranous and setose at apex whereas in *Bryothinusa* it is entirely corneous and glabrous. Among the marine Bolitocharini it shares the bifid ligula with *Thinusa* which has spines on the outer edge of the anterior and middle tibiae, *Cameronium* which has only 3 tergites impressed at base, and *Salinamexus* in which the last segment of the posterior tarsus is as long as the three preceding together.

Biophytosus reticulatus Moore & Legner, new species

FIG. 11-15

Color. Head and pronotum very dark ferruginous. Elytra largely very dark ferruginous with a mutual

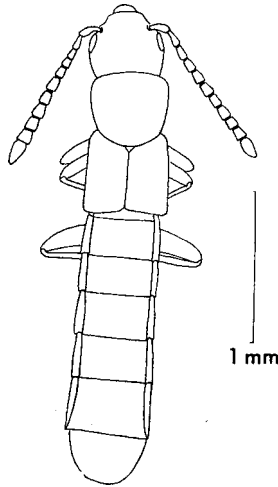


FIG. 11. *Biophytosus reticulatus*, habitus.

paler discal area. Abdomen piceous with 6th visible tergite dark ferruginous. Legs piceous with knees and tarsi paler. Antennae and trophi pale ferruginous. Head orbicular, almost as wide as long; surface concave (probably due to method of preparation), very finely densely reticulate throughout, pubescence very short and fine. Eyes a little more than $1/2$ length of the tempora. Antennae slender; 1st segment $2 \times$ as long as wide, 2nd slightly shorter and slightly narrower than 1st; 3rd little more than $1/2$ as long as 2nd; 4th–10th each slightly longer and slightly wider than 3rd; 10th segment about as long as wide; 11th segment about $1.5 \times$ as long as wide, gradually narrowed from middle to pointed apex. Pronotum quadrate, about as wide as head, $1/3$ wider than long, base gently arcuate; apical angles very narrowly rounded; sides gently arcuate, somewhat converging to rounded basal angles; base arcuate, a little narrower than apex; surface sculpture and pubescence as on head; surface concave in center of disc (probably due to method of preparation). Elytra conjointly a little wider than pronotum, about as long as wide, humeral angles narrowly rounded, sides almost straight and parallel, outer and inner apical angles very narrowly rounded, almost rectangular, apices straight. Sculpture and pubescence as on head. Abdomen with reticulation not as dense as that of foreparts. Pubescence about the same as on foreparts. Sexual differences not apparent.

Length 3.1 mm.

Holotype, sex unknown, MEXICO: Sonora: Puerto Peñasco, 9.VI.1974, wrack on sandy beach, W. Brown (in the American Museum of Natural History); paratypes: 12, same data as holotype.

NOTES. Four specimens from MEXICO: Sonora: Punta Cirio, 29.53–112.40, 20. III.1974, wrack on sandy beach, Roth & Brown, are referred tentatively to this species. Their heads and pronota are uniformly slightly convex, probably the normal condition for the genus. The specimens are somewhat paler, particularly the pronota, elytra and abdominal apex and the antennal segments appear to be slightly more elongate. A specimen with the same data as the holotype is preserved on slides.

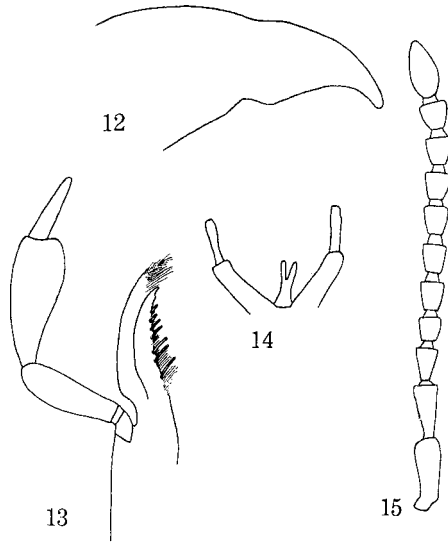


FIG. 12-15, *Biophytosus reticulatus*: 12, mandible; 13, maxilla; 14, labium; 15, antenna.

GENUS **Thinobiosus** Moore & Legner, new genus

FIG. 16-20

Form small, subparallel, integuments very finely sculptured, shining. *Head* orbicular, without a nuchal constriction. Eyes moderate, somewhat prominent, slightly interrupting side margin of head. Antennae slightly incrassate, their fossae located on a line drawn through anterior margins of eyes. Mandibles short, stout, hooked and pointed at apex, right mandible with a small tooth in middle of inner edge, left mandible simple on inner edge. Labrum transverse, apex shallowly bi-emarginate. Maxillary palpus 4-segmented; 1st segment small; 2nd segment about $2 \times$ as long as wide, widest at apical $2/3$; 3rd segment slightly longer and slightly wider than 2nd, widest at about middle; 4th segment parallel-sided, about $3 \times$ as long as wide, about $1/2$ as wide as apex of 3rd segment. Inner lobe of maxilla slightly longer than outer lobe, apical $1/3$ membranous with dense pubescence at apex. Inner lobe of maxilla hooked at apex, with 4 widely separated coarse spines on inner margin. Labial palpus 2-segmented; 1st segment about $2 \times$ as long as wide, widest at base, tapered to apex; 2nd segment slightly narrower than apex of 1st, about $3 \times$ as long as wide, nearly parallel-sided but slightly widened to truncate apex. Ligula entirely membranous, about $3/4$ as long as 1st segment of labial palpus, bifid to about middle, lobes tapered. Gular sutures well separated, very slightly divergent at base. Infraorbital carina lacking. *Thorax*. Pronotum subquadrate. Hypomera delimited by a carina, entirely visible from side. Trochantin small. Prosternal epimera delimited by a carina, but strongly inflexed so that it is not visible without lifting coxae, narrowly rounded at apex. Metasternum long, its process extending about halfway between coxae, on a more dorsal plane than process of mesosternum so that they do not actually meet. Middle coxae separate. Scutellum very small. Elytra very slightly emarginate at outer apical angles. Tibiae without spines on outer margin. Anterior and middle tarsi 4-segmented, 1st 3 segments short and subequal, last segment about as long as the 3 preceding combined. Posterior tarsus 5-segmented, 1st 4 segments short and subequal, 5th segment as long as 2nd-4th combined. *Abdomen* gradually widened to 3rd segment, then narrowed to apex. First 5 segments with paratergites. First 3 tergites impressed at base. Fourth segment longer than 3rd or 5th segments. Sternites not constricted at base.

Type-species: *Thinobiosus salinus* Moore & Legner, n. sp.

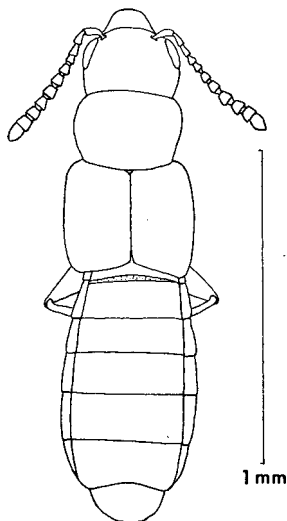


FIG. 16. *Thinobiosus salinus*, habitus.

NOTES. Among the marine Bolitocharini, *Thinobiosus* shares the separate middle coxae with *Halmaeusa*, *Corallis* and *Rothium*. It differs from these 3 genera by the lack of an infraorbital ridge and in the bifid ligula. Among these 3 genera it shares only with *Halmaeusa* the character of the central tooth on the right mandible, but differs from that genus in having the 4th tergite without a longitudinal impression at the base.

***Thinobiosus salinus* Moore & Legner, new species**

Color. Head and abdomen very dark ferruginous, pronotum and elytra pale ferruginous, legs and trophi pale ferruginous, antennae pale ferruginous with outer segments progressively darker. Head about 1/4 wider than long. Tempora arcuate, about as long as eyes. Surface shallowly but coarsely punctured, punctures separated by about their diameters, surface between punctures finely and densely reticulate, pubescence fine and sparse. Antenna longer than head and pronotum, 1st segment more than $2 \times$ as long as wide, 2nd segment slightly narrower and slightly shorter than 1st, 3rd segment slightly more than 1/2 as long as 2nd, 4th–10th segments of about equal length but progressively wider, 10th segment about as wide as long, 11th segment nearly $2 \times$ as long as wide, narrowed to rounded apex. Pronotum about 1/5 wider than long, widest near apical 4th, apex straight, apical angles narrowly rounded, sides arcuate in apical 1/2, then straight to broadly rounded basal angles, base arcuate, somewhat narrower than apex. Surface convex, densely finely reticulate, pubescence fine and sparse. Punctures not evident. Elytra conjointly a little wider than pronotum, about 1/5 wider than long, humeral angles broadly rounded, sides gently arcuate, outer and inner apical angles nearly rectangular, apices almost straight. Sculpture and pubescence as on pronotum. Abdomen more finely and sparsely reticulate and pubescent than elytra, shining, punctures extremely fine and sparse. No sexual modifications observed.

Length 1.6 mm.

Holotype, sex unknown, MEXICO: Sonora: Tide Pool Beach (Coloraditos), 28.49–112.40, 20.III.1974, wrack on sandy beach, V. Roth & W. Brown, (in American Museum of Natural History); paratypes: 4, same data as holotype.

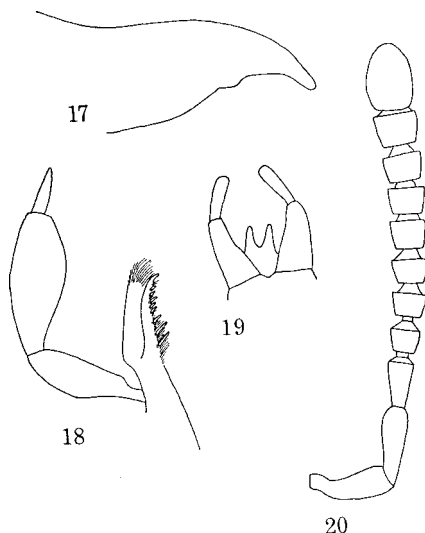


FIG. 17-20, *Thinobiosus salinus*: 17, mandible; 18, maxilla; 19, labium; 20, antenna.

NOTES. Two other specimens with the same data are dissected and preserved on slides.

TRIBE MYRMEDONIINI

Genus undetermined, allied to *Atheta* and *Tarphiota*.

SPECIMENS EXAMINED: MEXICO: Sonora: 55, Punta Chueca, 29.00-112.05, 18.I.1974, light trap on beach, V. Roth; 71, Punta Cirio, 29.53-112.40, 20.III.1974, wrack on sandy beach, Roth.

TRIBE ALEOCHARINI

Aleochara arenaria Casey

Members of this genus are known to be parasitic in the larval stage on pupae of flies within the puparium. This species occurs on the Pacific coast of North America from British Columbia, Canada, to the Pacific coast of Baja California, Mexico.

SPECIMENS EXAMINED: MEXICO: Sonora: 37, Punta Chueca, 29.00-112.05, 18.I.1974, under rotting clams and seaweed on beach, V. Roth; Punta Cirio, 29.53-112.40, 20.III.1974, wrack on sandy beach, Roth.

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