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A Revision of the Hawaiian Species of Mecyclothorax (Coleoptera: Carabidae)

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INTRODUCTION

ORIGIN AND GEOGRAPHICAL DISTRIBUTION

The genera most closely related to *Mecyclothorax* are the following: *Celanida* (Australia), *Melisodera* (Australia), *Teraphis* (Australia and Tasmania), *Rhaebolestes* (Australia), *Pterogmus* (Tasmania), *Selenochilus* (New Zealand), *Molopsida* (New Zealand), *Tropidopterus* (New Zealand and Chile), and *Lissopogonus* (Assam, Sikkim, Kumaon, Laos).

These genera, together with *Mecyclothorax,* have been grouped by Van Emden (Ent. Blätt. **32**: 51, 1936) in the subtribe Melisoderina of the Nomiini. The known distribution of *Mecyclothorax* is as follows: Australia, 15 species; St. Paul and Amsterdam Islands, 1 species; Java, 3 species; New Caledonia, 1 species (*Phacothorax fleutiauxi* Jeannel, Rev. d'Ent. **10**: 84, 1944; Jeannel, La Genèse des faunes terrestres, 233, 358, 1943); New Zealand, 1 species; Hawaiian Islands, 85 species; and Tahiti, 4 species.

It is clear from the distribution of the related genera that the subtribe had its origin in the Australian part of Gondwanaland. In view of the absence of related genera (except *Lissopogonus*) in the northern half of Gondwana (Brazil, Africa, Madagascar, India to Indo-China), it is probable that the Melisoderina appeared after the first fracture of Gondwana which began in the lower Jurassic. The presence of *Lissopogonus* on the oriental side is, however, difficult to account for. It suggests a pre-Jurassic origin for the subtribe, but if

0. Although there is no certainty that the number of species known bears any relation to the number existing, the fact that almost half of the known species are restricted to Maui suggests that this island was the home of the original stock. The fact that Maui and Molokai have a considerably higher proportion of relatively primitive species than have Hawaii and Oahu supports this view that the *Mecyclothorax* stock radiated from the middle islands. For example, species with fully striate elytra and with the second stria impressed at the apex are obviously more primitive than those with reduced striae and with the second stria faint at the apex.

Percentage of Primitive Species on Each Island

Species	Hawaii	Maui	Molokai	Oahu
with striae complete	1/17, or 6%	12/40, or 30%	7/20, or 35%	1/6, or 17%
with 2d stria impressed at apex	4/17, or 24%	26/40, or 65%	14/20, or 70%	1/6, or 17%

Summary

All 85 species of *Mecyclothorax* known from the Hawaiian Islands are endemic and island specific. They have evolved from one original stock which reached Maui or Molokai from Australia by a remote chance. There is evidence of species formation both within individual islands and as the result of transference to and isolation on neighbouring islands.

SYNONYMY

Mecyclothorax Sharp 1903, Fauna Hawaiiensis **3**: 243, 1901-1910; Sloane, Linn. Soc. N. S. Wales, Proc. **28**: 585, 1903; **45**: 152, 1920; R. Jeannel, Croisière du Bougainville, 98, 1940.

Cyclothorax MacLeay, Ent. Soc. N. S. Wales, Trans. **2**: 104, 1873 (not of Frauenfeld 1867); Blackburn, Ent. Mo. Mag. **16**: 106, 1879; Sharp, Roy. Dublin Soc., Trans. II, **3**: 373, 1886; Sloane, Linn. Soc. N. S. Wales, Proc. II, **9**: 447, 1894; Linn. Soc. N. S. Wales, Proc. **23**: 470-471, 1898.

Thriscothorax Sharp, Fauna Hawaiiensis **3**: 243-257, 1903 (new synonym).

Atelothorax Sharp, Fauna Hawaiiensis **3**: 243-269, 1903 (new synonym).

Metrothorax Sharp, Fauna Hawaiiensis **3**: 243-269, 1903 (new synonym).

Antagonaspis Enderlein, Deutsche Südpolar Exped. X, **2,** Zool.: 488, 1909.

Cyclothorax punctipennis MacLeay, Ent. Soc. N. S. Wales, Trans. **2**: 104, 1873; Jeannel, Croisière du Bougainville, 98, 1940. (Genotype.)

The first Hawaiian Nomiini described were referred by Blackburn to *Cyclothorax.* Sharp in 1903 described a large number of new species, dividing them into four new genera, *Mecyclothorax, Thriscothorax, Atelothorax,* and *Metrothorax,* all of which were distinguished from the Australian *Cyclothorax* by their vestigial wings. The four Hawaiian genera were distinguished from each other solely on the number of seta-bearing punctures on the margins of the pronotum. It is not possible to maintain these genera for the following reasons: (1) there are no characters correlated with the number of pronotal setae; (2) in some cases there is a setiferous puncture on one side of the pronotum without a corresponding puncture on the opposite side; (3) Sharp (Fauna Hawaiiensis **3**: 185, 1903) admits that *Mecyclothorax robustus* Sharp and *Thriscothorax robustus* (Blackburn) differ only in the presence or absence of seta-bearing punctures at the hind angles of the pronotum and that they might really be forms of the same species. The choice of the same specific name is a tacit admission of this possibility. The case of *Mecyclothorax laetus* Sharp and *Thriscothorax laetus* (Blackburn) is similar. In the series of *Mecyclothorax konanus* in the Fauna Hawaiiensis material in the British Museum, the paratype lacks the setiferous punctures at the posterior angles which are present in the holotype. In spite of this difference Sharp did not refer the paratype to *Thriscothorax.* This inconsistency is further proof that the two specimens are identical except for the pronotal setae. The genus *Atelothorax,* based on the single species *A. optatus* Sharp, is distinguished by the presence of setiferous punctures at the hind angles of the pronotum only. The holotype of *A. optatus,* however, has both anterior and posterior punctures present on the right-hand side of the pronotum, and the posterior puncture only on the left. Again, the holotype of *Mecyclothorax cognatus* Sharp is identical with that of *Atelothorax optatus,* except that it has the full complement of pronotal setae. The three specimens differ in no other way and were taken together.

Even if, in the case of *Mecyclothorax laetus* and *Thriscothorax laetus,* the setal difference is considered to be of specific value, the two genera must be united, as it is not possible to differentiate both species and genera on the same character. The following new synonymy has therefore to be established:

Mecyclothorax laetus (Blackburn), 1880 = *Mecyclothorax laetus* Sharp, 1903.

Mecyclothorax robustus (Blackburn), 1881 = *Mecyclothorax robustus* Sharp, 1903.

Mecyclothorax cognatus Sharp, 1903 = *Atelothorax optatus* Sharp, 1903.

Mecyclothorax Sharp = *Thriscothorax* Sharp = *Atelothorax* Sharp = *Metrothorax* Sharp.

As the setal character is unreliable in the above cases, doubt is cast on its usefulness throughout the genus, for it is always possible that forms of other species with more or less setae than normal will occur. I have, therefore, used the pronotal setae as little as possible in the systematic arrangement which follows, and only when the character is supported by others.

It remains to discuss the relation between the Hawaiian *Mecyclothorax* and the Australian genus *Cyclothorax* MacLeay. *Mecyclothorax* was distinguished by Sharp by its vestigial wings. Sloane (1903) doubted the validity of this distinction and suspected that the Australian *C. lateralis* Castelnau and *C. fortis* Blackburn have their wings atrophied. I have verified this in *C. lateralis* where the wings are unfolded and only half as long as the elytra. The synonymy *Cyclothorax* MacLeay, 1871 (= *Mecyclothorax* Sharp, 1903) is, therefore, justified. However, the older name is preoccupied and *Mecyclothorax* takes precedence.

The union of generic names necessitates the replacement of six preoccupied specific names. I propose the following:

Mecyclothorax sharpi, new name, for *Metrothorax discedens* Sharp (not *Thriscothorax discedens* Sharp).

Mecyclothorax vitreus, new name, for *Metrothorax laticollis* Sharp (not *Mecyclothorax laticollis* Sloane, 1899).

Mecyclothorax incompositus, new name, for *Thriscothorax laticollis* Sharp (not *Mecyclothorax laticollis* Sloane, 1899).

Mecyclothorax sabulicola, new name, for *Thriscothorax minutus* Britton (not *Mecyclothorax minutus* Castelnau).

Mecyclothorax globosus, new name, for *Thriscothorax constrictus* Britton, 1938 (not *Mecyclothorax constrictus* Sharp, 1903).

Mecyclothorax ater, new name, for *Metrothorax blackburni* Sharp, 1903 (not *Mecyclothorax blackburni* Sloane, 1898).

TAXONOMY

Hawaiian Species of Mecyclothorax in Systematic Order

SCARITOIDES GROUP

molops (Sharp), Maui
macrops (Sharp), Maui
scaritoides (Blackburn), Maui
crassus (Sharp), Molokai
curtipes (Sharp), Molokai
debilis (Sharp), Molokai
rotundicollis (Sharp), Molokai
tantalus, new species, Oahu
bembidioides (Blackburn), Hawaii
paradoxus (Blackburn), Hawaii
perpolitus Perkins, Hawaii

MUNROI GROUP

munroi (Perkins), Hawaii

HALEAKALAE GROUP

haleakalae (Sharp), Maui
iteratus Sharp, Maui
oculatus, new species, Molokai

FLAVOMARGINATUS GROUP

flavomarginatus, new species, Oahu
sharpi, new name, Maui
terminalis Sharp, Hawaii
oahuensis (Blackburn), Oahu
carteri (Perkins), Oahu

MONTIVAGUS GROUP

micans (Blackburn), Maui
discedens (Sharp), Hawaii
variipes (Sharp), Hawaii
montivagus (Blackburn), Maui
pele (Blackburn), Hawaii

VITREUS GROUP

vitreus, new name, Maui
perkinsianus (Sharp), Maui
deverilli (Blackburn), Hawaii

PALUSTRIS GROUP

filipes (Sharp), Lanai
mundanus (Sharp), Lanai
subunctus (Perkins), Hawaii
vulcanus (Blackburn), Hawaii
parvus, new species, Hawaii
unctus (Blackburn), Maui
palustris (Sharp), Molokai

DUCALIS GROUP

ater, new name, Molokai
ducalis (Sharp), Maui
karschi (Blackburn), Hawaii
insolitus (Sharp), Maui
simiolus (Blackburn), Oahu

SOBRINUS GROUP

inaequalis (Blackburn), Maui
sobrinus Sharp, Maui
longulus Sharp, Maui

OVIPENNIS GROUP

molokiae (Sharp), Molokai
ovipennis Sharp, Maui
exilis, new species, Molokai
pusillus Sharp, Maui
subconstrictus (Sharp), Maui
occultus Sharp, Molokai
proximus, new species, Hawaii

cordaticollis (Blackburn), Maui
laetus (Blackburn), Maui
gracilis (Sharp), Hawaii
apicalis Sharp, Maui
nubicola (Blackburn), Maui
rusticus Sharp, Maui
konanus Sharp, Hawaii

ARGUTOR GROUP

platysminus (Sharp), Molokai
quadratus, new species, Molokai
argutor (Sharp), Molokai

MICROPS GROUP

minor, new species, Maui
angusticollis (Blackburn), Maui
microps Sharp, Molokai
lahainae, new species, Maui

BREVIS GROUP

brevis (Blackburn), Oahu

AMAROIDES GROUP

amaroides Sharp, Molokai

MULTIPUNCTATUS GROUP

multipunctatus (Blackburn), Maui

CONSTRICTUS GROUP

perkinsi (Sharp), Molokai
perstriatus Sharp, Maui
constrictus (Sharp), Molokai

OBSCURICORNIS GROUP

bicolor Sharp, Molokai
obscuricolor (Blackburn), Maui
daptinus Sharp, Maui
obscuricornis Sharp, Maui

INTERRUPTUS GROUP

irregularis, new species, Maui
incompositus, new name, Molokai
bradyderus Sharp, Molokai
bradycellinus Sharp, Molokai
interruptus Sharp, Maui
interruptus variety *integer* Sharp, Maui

ROBUSTUS GROUP

aeneus Sharp, Maui
cymindicus Sharp, Maui
cognatus Sharp, Maui
chalcosus (Sharp), Maui
bembidicus Sharp, Hawaii
robustus (Blackburn), Maui

SPECIES OF MECYCLOTHORAX IN THE VARIOUS ISLANDS

HAWAII

bembidioides (Blackburn)
paradoxus (Blackburn)
perpolitus Perkins
munroi (Perkins)
terminalis Sharp
discedens (Sharp)
variipes (Sharp)
pele (Blackburn)
deverilli (Blackburn)
subunctus (Perkins)
vulcanus (Blackburn)
parvus, new species
karschi (Blackburn)
proximus, new species
gracilis (Sharp)
konanus Sharp
bembidicus Sharp

MAUI

molops (Sharp)
macrops (Sharp)
scaritoides (Blackburn)
crassus (Sharp)
haleakalae (Sharp)
iteratus Sharp
sharpi, new name
micans (Blackburn)
montivagus (Blackburn)
vitreus, new name
perkinsianus (Sharp)
unctus (Blackburn)
ducalis (Sharp)
insolitus (Sharp)
inaequalis (Blackburn)
sobrinus Sharp
longulus Sharp
ovipennis Sharp

pusillus Sharp
subconstrictus (Sharp)
cordaticollis (Blackburn)
laetus (Blackburn)
apicalis Sharp
nubicola (Blackburn)
rusticus Sharp
minor, new species
angusticollis (Blackburn)
lahainae, new species
multipunctatus (Blackburn)
perstriatus Sharp
obscuricolor (Blackburn)
daptinus Sharp
obscuricornis Sharp
irregularis, new species
interruptus Sharp
interruptus variety *integer* Sharp
aeneus Sharp
cymindicus Sharp
cognatus Sharp
chalcosus (Sharp)
robustus (Blackburn)

MOLOKAI

curtipes (Sharp)
debilis (Sharp)
rotundicollis (Sharp)
oculatus, new species
palustris (Sharp)
ater, new name
molokiae (Sharp)
exilis, new species
occultus Sharp
platysminus (Sharp)
quadratus, new species
argutor (Sharp)
microps Sharp
amaroides Sharp
perkinsi (Sharp)
constrictus (Sharp)
bicolor Sharp
incompositus, new name
bradyderus Sharp
bradycellinus Sharp

LANAI

filipes (Sharp)
mundanus (Sharp)

OAHU

tantalus, new species
flavomarginatus, new species
oahuensis (Blackburn)
carteri (Perkins)
simiolus (Blackburn)
brevis (Blackburn)

REDESCRIPTIONS OF HAWAIIAN MECYCLOTHORAX

In the preparation of the following keys I have been able to examine the holotype of every species. The types of the species described by Sharp and Blackburn are all in the British Museum, but I am indebted to Dr. R. C. L. Perkins for the loan of the four species described by him. Pronotum ratio = ratio base width of pronotum: maximum width: apex width: length.

Key to Species Groups of Hawaiian Mecyclothorax

1. Outer elytral striae (except the 8th) less strongly impressed than those nearer suture, and usually fainter in apical half than towards base, often disappearing before reaching apex; one or

more of outer striae usually absent; 7th stria, when present, much less strongly impressed than 8th stria and striae on disk..... 2

All elytral striae equally or very nearly equally strongly impressed; each stria uniformly impressed, never fainter or absent near apex; 7th stria always present and as distinctly impressed as other striae 14

2(1). First elytral stria much more strongly impressed near apex than 2d stria 3

First and 2d elytral striae equally strongly impressed near apex.....10

3(2). Second elytral stria as strongly impressed (or punctured) as sutural stria, at least in basal half..... 4

Second elytral stria much less strongly impressed than sutural stria ..... **scaritoides** group

4(3). Length more than 6.5 mm.; elytra with strong isodiametric microsculpture; striae 1-6 visible, intervals strongly convex, pronotum as in fig. 2, *e* (Hawaii).....**munroi** group

Length less than 6.5 mm. 5

5(4). Eyes very prominent, almost hemispherical (fig. 3, *a, b*); microsculpture of the elytra isodiametric, even at the sides; elytra ovoid, with shoulders entirely absent (fig. 3, *a, b*); sides of the pronotum with a long sinuation before the posterior angles (fig. 3, *a, b*); elytra dark brown or black, with a metallic blue reflection (Maui, Molokai).....**haleakalae** group

Eyes normal or reduced, microsculpture of the elytra absent, or slightly to strongly transverse, especially at sides, elytra usually with distinct shoulders (figs. 4, *d*; 7, *c*); sides of pronotum usually with a short sinuation (figs. 4-8); elytra reddish to black, usually without metallic reflection..... 6

6(5). Eyes normal in size, strongly convex; total length more than 3.5 mm.; head usually shining, without microsculpture on frons (Maui, Molokai, Hawaii) 7

Eyes reduced, only slightly convex (fig. 4, *d*); lateral margins of pronotum explanate and reflexed (fig. 4 *a-e*); total length less than 3.5 mm.; head with distinct microsculpture on frons (Oahu, Maui).....**flavomarginatus** group

7(6). Sides of pronotum strongly curved outwards (fig. 5, *a-d*), posterior angles very obtuse or small and toothlike; elytral striae 1-5 strongly punctured in the basal half (Maui, Hawaii)..... **montivagus** group

Sides of pronotum less strongly curved, sinuate in front of the posterior angles which are distinct (figs. 6-8)..... 8

8(7). Elytra dark brown or black, with a bright metallic green or blue reflection, highly polished, without microsculpture; elytral intervals quite flat, striae not impressed; lateral margins of pronotum narrow, without setiferous punctures (Maui, Hawaii) (fig. 6, *a, b*).....**vitreus** group

Elytra dark brown or black, sometimes slightly aeneous, but without metallic green or blue reflection; lateral margins of pronotum often explanate and reflexed, usually with one setiferous puncture on each side; elytra often with distinct microsculpture, and often very convex, with steep sides..... 9

9(8). Elytra with distinct microsculpture; elytra moderately convex (Maui, Molokai, Lanai, Hawaii) ..... **palustris** group
Elytra shining, without microsculpture; elytra strongly convex, with steep sides (Maui, Molokai, Hawaii) ..... **ducalis** group

10(2). Setiferous punctures of 3d elytral interval set in obvious depressions which are as wide or wider than interval ..... **sobrinus** group
Setiferous punctures of 3d elytral interval set in small depressions which are never as wide as the interval 11

11(10). Eyes normal in size and convexity (fig. 10, *c, e*) 12
Eyes small, reduced in size and convexity (fig. 12, *b*) 13

12(11). Posterior angles of pronotum rounded off; stria 7 distinct, only slightly less strongly impressed than other striae (fig. 13, *e*) (Oahu) ..... **brevis** group
Posterior angles of pronotum obvious, more or less square; stria 7 absent or very faint ..... **ovipennis** group

13(11). Length more than 4.75 mm.; base of pronotum broader than apex, ratio width at base: width at apex = 1.10-1.20; posterior angles of pronotum sharp (fig. 12, *a, b*) (Molokai) ..... **argutor** group
Length less than 4.75 mm.; base of pronotum equal to or less than width at apex; posterior angles of pronotum usually rather obtuse (fig. 13, *a-d*) (Maui, Molokai) ..... **microps** group

14(1). Posterior angles of the pronotum rounded off; elytra ovoid, shoulders rounded off (fig. 13, *e*) (Oahu) ..... **brevis** group
Posterior angles of pronotum obvious, approximately square; elytra with distinct shoulders 15

15(14). Head unusually large, ratio greatest width of elytra: width of head across and including eyes = 1.75; total length more than 6 mm.; head, pronotum and elytra black (Molokai) ..... **amaroides** group
Head normal, ratio greatest width of elytra: width of head across the eyes more than 2.0; total length less than 5.5 mm.; head, pronotum and elytra reddish or dark brown 16

16(15). With setiferous punctures on elytral intervals 3 and 5; punctures set in relatively deep impressions which are wider than intervals and often extend across two or three intervals; elytra with an obvious depression at apices of intervals 6 and 7; striae strongly impressed, entirely unpunctured (Maui) ..... **multipunctatus** group
With setiferous punctures on 3d elytral interval only; punctures set in small depressions which are rarely as wide as interval; striae often faintly punctured 17

17(16). Pronotum strongly constricted at base, ratio greatest width: width at base more than 1.65 (fig. 14, *a-c*) ..... **constrictus** group
Pronotum more normally constricted at base, ratio greatest width: width at base less than 1.55 (fig. 15, *a, b*) 18

18(17). Small, length less than 3.9 mm ..... **obscuricornis** group
Large, length more than 4.1 mm 19

19(18). Pronotum unusually broad, ratio greatest width of elytra: greatest width of pronotum less than 1.40 (fig. 16, *a-d*) ..... **interruptus** group
Pronotum not unusually broad, ratio greatest width of elytra: greatest width of pronotum more than 1.45 (fig. 17, *a-e*) ..... **robustus** group

Key to scaritoides Group

1. Sides of pronotum slightly sinuate in front of posterior angles (fig. 1, *a-d*), lateral margins usually represented by a narrow raised line, rarely explanate and reflexed; posterior angles of pronotum distinct, fairly sharply pointed, though sometimes obtuse 2
   Sides of pronotum straight or curved outwards in front of posterior angles, not sinuate (figs. 1, *e*; 2, *a-d*), lateral margins usually distinctly explanate and reflexed, posterior angles very obtuse and rounded, sometimes completely absent 9

2(1). Length more than 6.0 mm. (Maui, Hawaii) 3
   Length less than 5.5 mm 4

3(2). Sides of pronotum slightly sinuate in front of posterior angles which are obtuse (fig. 1, *a*) (Maui) ..... **molops** (Sharp)
   Sides of pronotum strongly sinuate in front of posterior angles which are square (Maui) ..... **macrops** (Sharp)

4(2). Elytra with strong, uniform, isodiametric microsculpture; colour black, legs and antennae testaceous (Maui) ..... **scaritoides** (Blackburn)
   Elytra with microsculpture faint and transverse, or absent; colour reddish brown to dark brown, legs and antennae testaceous or reddish (Maui, Molokai) 5

5(4). Sutural striae unpunctured; length about 5.0 mm.; pronotum more transverse, ratio maximum width: length = 1.30 (fig. 1, *b*); microsculpture of elytra visible, transverse ..... **crassus** (Sharp)
   Sutural striae distinctly or faintly punctured in basal half; length usually less than 4.5 mm.; pronotum less transverse (fig. 1, *c, d*), ratio maximum width: length = 1.28 or less 6

6(5). Lateral margins of pronotum explanate and reflexed; posterior angles sharp and square, or even slightly acute (fig. 7, *c*) (Maui) ..... **unctus** (Blackburn)
   Lateral margins of pronotum narrow; posterior angles rather obtuse (fig. 1, *c, d*) (Molokai, Oahu) 7

7(6). Sides of pronotum strongly sinuate in front of posterior angles (Oahu) ..... **simiolus** (Blackburn)
   Sides of pronotum only slightly sinuate in front of posterior angles (fig. 1, *c, d*) (Molokai) 8

8(7). Pronotum as fig. 1, *c*, width at apex = width at base ..... **curtipes** (Sharp)
   Pronotum as fig. 1, *d*, width at apex = 1.1 × width at base ..... **debilis** (Blackburn)

9(1). Sides of pronotum uniformly curved out from apex to base (figs. 1, *e*; 2, *a*); lateral margins of pronotum narrow, without setiferous punctures 10
   Sides of pronotum not uniformly curved out from apex to base (fig. 2, *b, c*) but straight in front of posterior angles; lateral margins of pronotum distinctly explanate and reflexed, with anterior setiferous puncture present on each side 11

10(9). Pronotum more transverse (fig. 1, *e*), ratio maximum width: length = about 1.35; sutural stria unpunctured or with three or four faint punctures at base; elytra more elongate; ratio maximum width: length = 1.35-1.37, total length about 5.0 mm. (Molokai) ..... **rotundicollis** (Sharp)

Pronotum less transverse (fig. 2, *a*), ratio maximum width : length = about 1.27; sutural stria finely but distinctly punctured throughout its basal half, elytra more transverse, ratio maximum width : length = about 1.30; total length about 4.0 mm..... **tantalus,** new species

11(9). Length 3.5-4.0 mm.; colour shining black, apex of elytra yellowish; legs brown; antennae dark brown except for 1st and 3d segments which are testaceous; surface of elytra without microsculpture (Hawaii) (fig. 2, *b*)..... **bembidioides** (Blackburn)

Length 4.0-5.0 mm.; colour uniform pale reddish brown, or piceous with reddish-yellow margins; legs testaceous, antennae brown with the four basal segments paler, surface of elytra with reticulate microsculpture (Hawaii) (fig. 2, *c, d*)..... 12

12(11). Colour of head, pronotum and elytra uniform reddish brown (Hawaii) (fig. 2, *c*)..... **paradoxus** (Blackburn)

Colour of head reddish brown, pronotum and elytra piceous with fairly broad reddish-yellow lateral and apical margins (on pronotum the pale margin on each side is 0.10 width of pronotum) (Hawaii) (fig. 2, *d*)..... **perpolitus** Perkins

Mecyclothorax molops (Sharp) (fig. 1, *a*).

Metrothorax molops Sharp, Fauna Hawaiiensis 3 : 269, pl. 7, fig. 16, 1903.

Length: 7.2-7.8 mm. *Colour:* head and pronotum dark reddish brown; elytra black with extreme margins, apex and apical half of sutural interval reddish brown; epipleurae reddish brown; ventral surface dark brown; apex of abdomen testaceous; legs and antennae uniformly testaceous. *Pronotum:* strongly convex, margins represented by a thin raised line, not expanded or reflexed so that there are no marginal channels; setiferous punctures absent; base with a few obsolete punctures; anterior transverse groove very strongly impressed; median groove faint. *Elytra:* ovoid, shoulders completely absent; scutellar striole impressed; sutural stria not reaching base, strongly impressed as far as end of scutellar striole, indistinctly punctured from this point to base; stria 2 absent except for a trace near middle of disk; striae 3-7 absent. *Microsculpture:* absent from head and pronotum; that of elytra faint but strongly transverse.

Maui : Haleakala, alt. 5,000 ft., March 1894, holotype female, May 1896, paratype female (Perkins).

Mecyclothorax macrops (Sharp).

Metrothorax macrops Sharp, Fauna Hawaiiensis 3 : 270, 1903.

Length: 5.6-6.3 mm. *Colour:* head and pronotum reddish brown, anterior part of head, between eyes, usually piceous; elytra reddish brown, paler toward margins and along sutural stria; epipleurae and ventral surface of body reddish brown; antennae and legs entirely testaceous. *Pronotum:* similar to that of *M. molops,* except that disk is more convex and sides are more strongly sinuate in front of posterior angles, which are square. *Elytra:* only differing from those of *M. molops* in being less convex. *Microsculpture:* absent from head and pronotum, that on elytra distinctly transverse.

Maui: Haleakala, alt. 4,000-6,000 ft., March 1894, October 1896, holotype male and six paratypes (Perkins).

Mecyclothorax scaritoides (Blackburn).

Cyclothorax scaritoides Blackburn, Ent. Mo. Mag. **15**: 156, 1878; Blackburn and Sharp, Roy. Dublin Soc., Trans. II, **3**: 215, 276, pl. 4, fig. 6, 1885.

Metrothorax scaritoides, Sharp, Fauna Hawaiiensis **3**: 272, 1903.

Length: 4.6-5.4 mm. *Colour:* head, pronotum and elytra reddish brown to black, reflexed margins of elytra and sutural interval usually paler than disk; epipleurae dark reddish brown; ventral surface black in mature examples; legs and antennae uniformly testaceous or brown. *Pronotum:* moderately convex, lateral margins not explanate but represented by a thin raised line; sides without setiferous punctures, slightly sinuate in front of basal angles which are slightly obtuse but sharp; median line faint; base with about 12 strong, sharply defined punctures on each side. *Elytra:* strongly convex, falling away steeply at sides; shoulders not entirely rounded off; scutellar striole represented by three or four sharply defined punctures; sutural stria not, or only slightly impressed in basal half but distinctly punctured, punctures separated by about three times their own diameter; in the apical half the sutural stria is strongly impressed, but unpunctured; 2d stria absent at base, marked on disk by a row of faint punctures, faintly impressed and unpunctured beyond middle, disappearing entirely near apex; 3d stria similar to 2d but fainter; 4th stria sometimes represented by a few faint punctures on disk, otherwise striae 4-7 are absent. *Microsculpture:* absent from head and pronotum; that on elytra strong, isodiametric.

Maui: Haleakala, holotype female and five examples (Blackburn); alt. 4,000-5,000 ft., March, April 1894, October 1896, 31 examples (Perkins).

In the series in the British Museum there is one specimen labeled "Molokai Mts." This is referred to by Sharp as having the elytral sculpture almost as well developed as in *M. blackburni.* This is, in fact, an example of *M. ater* (*blackburni* Sharp). The distribution of *M. scaritoides,* therefore, does not include Molokai. In addition there are two typical examples labeled "Koholuamano, Kaui." This is probably an error.

Mecyclothorax crassus (Sharp) (fig. 1, *b*).

Metrothorax crassus Sharp, Fauna Hawaiiensis **3**: 274, 1903.

Length: 4.8 mm. *Colour:* as in *M. molops. Pronotum:* as in *M. molops,* except in shape, which is shown in figure 1, *b. Elytra:* as in *M. molops,* but scutellar and sutural striae are unpunctured. Head and pronotum without microsculpture, that on elytra strongly transverse.

Maui: Iao Valley, West Maui, March 1894, holotype female (Perkins).

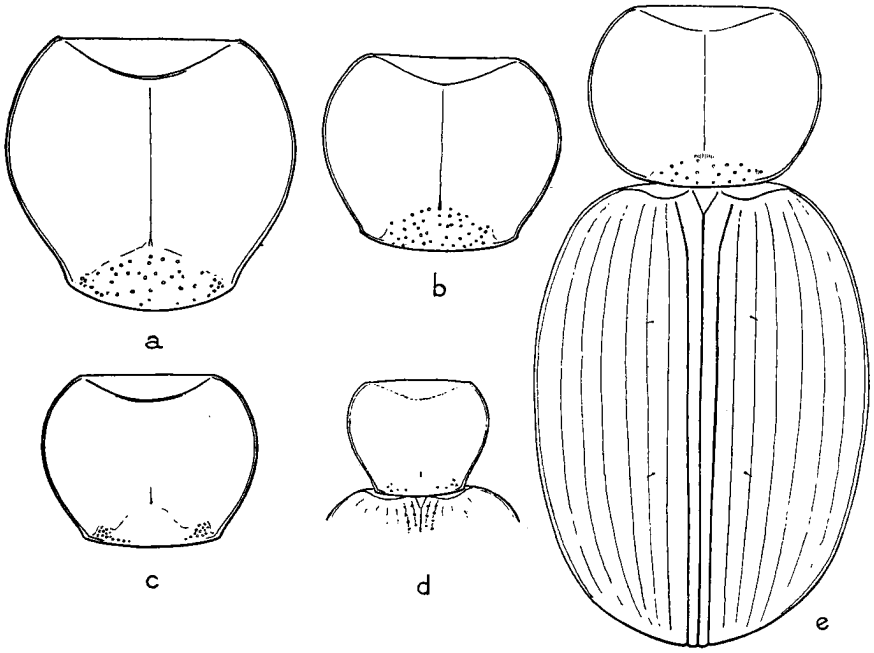

FIGURE 1.—**a,** *Mecyclothorax molops;* **b,** *M. crassus;* **c,** *M. curtipes;* **d,** *M. debilis;* **e,** *M. rotundicollis.*

Mecyclothorax curtipes (Sharp) (fig. 1, *c*).

Metrothorax curtipes Sharp, Fauna Hawaiiensis **3**: 273, 1903.

Length: 4.0-4.8 mm. *Colour:* head, pronotum and elytra piceous or dark brown; labrum, apical half of sutural interval, and extreme margins and apex of elytra reddish brown. Epipleurae reddish brown; ventral surface of body dark brown. Legs and antennae uniformly testaceous. *Pronotum:* as in *M. molops,* except shape, and anterior transverse groove, which is not strongly impressed; ratio 1.0 : 1.60 : 1.0 : 1.25, median line faint or absent. *Elytra:* with scutellar striole usually faintly impressed; sutural stria strongly impressed, faintly but closely punctured in basal half, which reaches base. Striae 1-5 represented by faint traces of impressions. Surface shining, without microsculpture.

Molokai: mountains, alt. 3,000-4,000 ft., June and July 1893, holotype female and 35 paratypes (Perkins).

Mecyclothorax debilis (Sharp) (fig. 1, *d*).

Metrothorax debilis Sharp, Fauna Hawaiiensis **3**: 275, 1903.

Length: 4.0-4.3 mm. *Colour:* head, pronotum, and elytra dark brown; disk of elytra piceous and apex testaceous; legs and antennae testaceous; epipleurae testaceous; ventral surface piceous with sides of abdominal sternites testaceous.

Pronotum: ratio 1.0 : 1.73 : 1.12 : 1.36; base with a few widely separated punctures, almost completely obliterated in the holotype; sides only slightly sinuate just before posterior angles, which are rather obtuse; setiferous punctures absent; longitudinal groove absent in holotype, faint in paratype. *Elytra:* with shoulders rounded off, convex, with steep sides; scutellar striole slightly impressed with three or four punctures; sutural stria strongly impressed, less so near base, faintly punctured in basal half; stria 2 faintly impressed and faintly punctured; striae 3-5 faint. *Microsculpture:* absent from head and pronotum, that on elytra faint, transverse.

Molokai: Kalawao, alt. 4,000 ft., August 1893, holotype male (Perkins); mountains, alt. 6,000 ft., June 22, 1893, paratype (Perkins).

Mecyclothorax rotundicollis (Sharp) (fig. 1, *e*).

Metrothorax rotundicollis Sharp, Fauna Hawaiiensis 3 : 273, pl. 7, fig. 17, 1903.

Length: 4.4-5.1 mm. *Colour:* head, pronotum, and elytra dark reddish brown or piceous, usually darkest on disk; sutural intervals and extreme margins of elytra reddish; epipleurae reddish yellow; ventral surface dark brown with apex of each abdominal sternite yellowish. Legs and antennae pale testaceous. *Pronotum:* strongly transverse (fig. 1, *e*), the lateral margins not explanate; anterior transverse, and median lines scarcely visible; base smooth, with a few small punctures. *Elytra:* with scutellar striole lightly impressed, with a few faint punctures; sutural stria strongly impressed, with a few faint punctures in the basal half, becoming very faint in the region of the scutellary striole; 2d stria faintly visible throughout its length; 3d and 4th striae faintly visible near middle of disk. Surface shining, without microsculpture.

Molokai: mountains, alt. 3,000 ft., May 1893, holotype and four paratypes (Perkins).

Mecyclothorax tantalus, new species (fig. 2, *a*).

Length: 4.3 mm. *Colour:* head, pronotum, and elytra piceous, elytra with reflexed margins, apical two-thirds of sutural interval, and epipleurae reddish brown; ventral surface piceous. Legs, antennae and palpi unicolorous, testaceous. *Head:* eyes rather small. *Pronotum:* with sides curved outwards from apex to base, not sinuate, posterior angles completely rounded off; lateral margins scarcely explanate and not reflexed, base irregularly but distinctly punctured; ratio of greatest width of pronotum : length = 1.27; without setiferous punctures on sides of pronotum. *Elytra:* convex, rather short and transverse, ratio length : maximum width = 1.30; sutural stria strongly impressed; finely punctured in its basal half; the 2d stria faintly impressed for about 0.75 of its length from base, and faintly punctured in its basal half; remainder of striae absent or represented by the faintest traces; 3d interval bears two small setiferous punctures. Surface of head, pronotum, and elytra polished and shining, without microsculpture.

Oahu: on the summit of Mt. Tantalus, October 1906, holotype female. This species was identified by Dr. Perkins in Honolulu, where

the types were not available, as *M. rotundicollis* Sharp, a Molokai species (Ent. Mo. Mag. **53**: 250, 1917).

M. tantalus is most closely related to *M. rotundicollis* from which it differs by its less transverse pronotum, by the distinct puncturation of basal half of sutural stria, by the more transverse elytra, and by distinctly less prominent eyes.

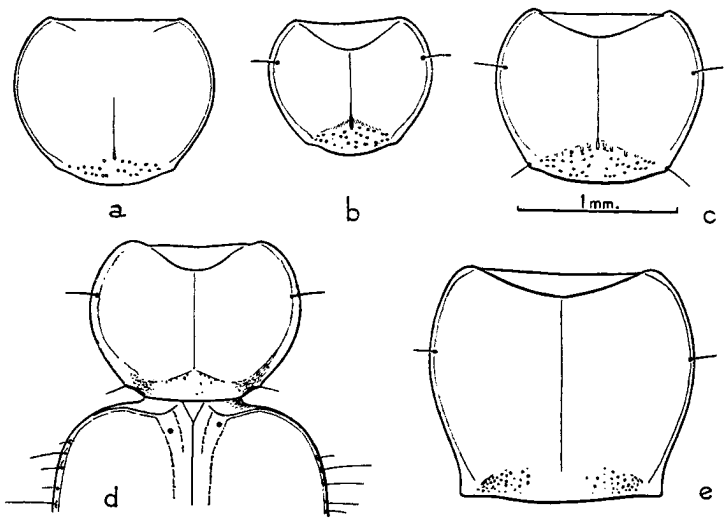

FIGURE 2.—**a**, *Mecyclothorax tantalus;* **b**, *M. bembidioides;* **c**, *M. paradoxus;* **d**, *M. perpolitus;* **e**, *M. munroi.*

Mecyclothorax bembidioides (Blackburn) (fig. 2, *b*).

Cyclothorax bembidioides Blackburn, Ent. Mo. Mag. **16**: 107, 1879.

Thriscothorax bembidioides, Sharp, Fauna Hawaiiensis **3**: 262, 1903.

Length: 3.7 mm. *Colour:* head and pronotum piceous; elytra shining black with reflexed margins and epipleurae reddish; apices of elytra reddish yellow; antennae brown, with 1st and 3d segments testaceous; legs testaceous or brown, tibiae usually slightly darker than femora. *Pronotum:* base sparsely but distinctly punctured on each side; the lateral margins are strongly reflexed and basal angles in the two known examples are without setiferous punctures. *Elytra:* with scutellar striole impressed, with two or three punctures; sutural stria marked by strong punctures which are separated from each other by three or four times their own diameter, extending from near middle of elytra to a point opposite

apical end of scutellar striole; sutural stria strongly impressed in apical half; elytral striae 2-7 entirely absent. Entire surface of head, pronotum, and elytra shining, without trace of microsculpture.

Hawaii: Mauna Loa, at about 4,000 ft., February 1879, under a stone, holotype female (Blackburn); Kilauea, September 1896, one female (Perkins).

Mecyclothorax paradoxus (Blackburn) (fig. 2, *c*).

Cyclothorax paradoxus Blackburn, Ent. Mo. Mag. **16**: 108, 1879.
Thriscothorax paradoxus, Sharp, Fauna Hawaiiensis **3**: 263, 1903.

Length: 4.3-5.0 mm. *Colour:* head, pronotum, and elytra uniform reddish brown; legs, antennae, and ventral surface of body uniformly testaceous. *Pronotum:* with lateral margins quite strongly reflexed, without basal setiferous punctures; base moderately strongly and densely punctured. *Elytra:* with scutellar striole impressed, with three or four faint punctures; sutural stria impressed and rather faintly punctured in basal half; striae 2-7 absent, or 2 and 3 represented by traces of a few punctures about the middle. When examined by transmitted light, elytra, which are without pigment, are seen to have striae 1-7 "punctured" throughout their length, but only in the case of the 1st and sometimes the middle of the 2d and 3d striae are these punctures visible on the surface, by reflected light. Head and pronotum shining, without microsculpture; elytra with distinct, rather transverse microsculpture.

Hawaii: Mauna Kea, alt. 3,000 ft., February 1879, under the bark of a tree, holotype male (Blackburn); Kilauea, September 1896, one female, 1902, two males, July 1903, one female (Perkins).

Mecyclothorax perpolitus Perkins, Ent. Mo. Mag. **53**: 249, 1917 (fig. 2, *d*).

Length: 4.4 mm. *Colour:* head brown; pronotum and elytra piceous, labrum and clypeus, and head around eyes reddish yellow; pronotum broadly margined at sides and base with reddish yellow; elytra with apex of sutural interval and lateral margins (including 7th interval) reddish yellow; epipleurae yellow; ventral surface of body testaceous; antennae dark brown, with 3.5 basal segments testaceous; legs pale yellow. *Pronotum:* with lateral margins distinctly reflexed, each side with two setiferous punctures, base smooth, with few punctures. *Elytra:* with scutellar striole impressed, with a few punctures; sutural stria distinctly punctured in basal half and deeply impressed apically; 2d stria faintly impressed in apical half and faintly punctured near middle; striae 3-7 absent. Surface of head, pronotum, and elytra with faint transverse microsculpture (strongest on elytra).

Hawaii: Kilauea, holotype male (Perkins) in the collection of R. C. L. Perkins.

MUNROI GROUP

Mecyclothorax munroi (Perkins) (fig. 2, *e*).

Thriscothorax munroi Perkins, Ent. Mo. Mag. **73**: 125, 1937.

Length: 6.9 mm. *Colour:* head and pronotum uniformly piceous; mandibles, clypeus, and labrum reddish brown; elytra black, sutural interval and extreme margins dark reddish brown; epipleurae dark reddish brown; ventral surface black; antennae uniform reddish brown; legs dark reddish brown. *Pronotum:* rather elongate, ratio greatest width: length = 1.23; sides not strongly curved out; a long shallow sinuation on each side before basal angle which is square and somewhat blunt at apex; lateral margins narrowly explanate and reflexed, each bearing a single setiferous puncture; base with a group of punctures on each side, smooth in middle; width at base: width at apex = 1.17; median line faint; anterior transverse groove impressed. *Elytra:* with scutellar striole impressed, with two or three faint punctures; the sutural (1st) stria strongly impressed throughout its length, faintly and finely punctured in basal third; the 2d stria as strongly impressed as sutural stria except near apex where it becomes faint; strongly punctured towards base; striae 3-6 strongly impressed and punctured in basal half, becoming fainter in apical half and disappearing before reaching apex; 7th stria represented by a faint trace of an impression; intervals 1-6 strongly convex in basal half. Head and pronotum with faint isodiametric microsculpture; that on elytra strong, isodiametric.

Hawaii: Kohala Mountains, about 4,000 ft., February 1937, holotype male (G. C. Munro) in the collection of R. C. L. Perkins.

Key to haleakalae Group

1. Pronotum with anterior transverse groove marked by longitudinal punctures or strigae; sinuations of sides very long (fig. 3, *b*), the posterior angles slightly acute; each side of the pronotum with 2 setiferous punctures; head with 2 supraorbital setiferous punctures on each side 2

   Pronotum with anterior transverse groove smooth, unpunctured; sinuations of sides shorter (fig. 3, *a*); posterior angles square; sides without setiferous punctures; head with only one supraorbital setiferous puncture on each side (Maui) ..... **haleakalae** (Sharp)

2(1). Sutural stria and striole marked by faint punctures, not impressed (except at apex); femora testaceous with distal ends dark; tibiae and tarsi brown (Maui) ..... **iteratus** Sharp

   Sutural stria and striole distinctly impressed and faintly punctured; femora testaceous, distal ends dark; tibiae and tarsi brown, possibly immature (Molokai) (fig. 3, *b*) ..... **oculatus,** new species

Mecyclothorax haleakalae (Sharp) (fig. 3, *a*).

Metrothorax haleakalae Sharp, Fauna Hawaiiensis **3**: 271, 1903.

Length: 4.9-5.9 mm. *Colour:* head, pronotum, and elytra shining bluish or greenish black; the reflexed margins of the elytra usually dark reddish brown; epipleurae dark reddish brown; ventral surface brown with sides of abdominal

sternites yellowish; legs testaceous, sometimes with tibiae and tarsi noticeably darker; antennae dark brown with basal 3.5 segments testaceous. *Head:* with only one supraorbital seta on each side. *Pronotum:* only moderately convex, lateral margin slightly explanate and reflexed, forming a narrow marginal channel; sides without setiferous punctures, strongly sinuate in front of basal angles, which are square and sharp; median line very faint; base with numerous, strong, sharply defined punctures. *Elytra:* ovoid and moderately convex, shoulders absent; scutellar striole faint, unpunctured; sutural stria faintly impressed and very faintly punctured in basal half, becoming strongly impressed and unpunctured apically; striae 2-5 faintly impressed and faintly punctured in the basal half, disappearing apically. Microsculpture absent from head and pronotum; that on elytra faint and isodiametric.

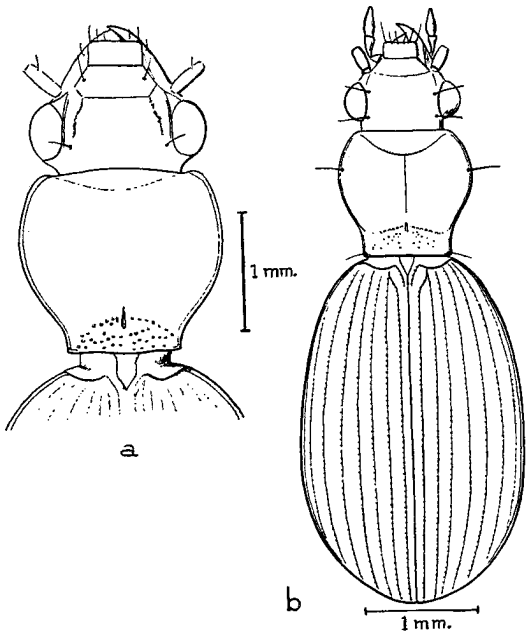

FIGURE 3.—**a,** *Mecyclothorax haleakalae;* **b,** *M. oculatus.*

Maui: Haleakala, alt. 5,000 ft., March, April 1894; October 1896, holotype male and six paratypes (Perkins).

Mecyclothorax iteratus Sharp, Fauna Hawaiiensis 3: 250, 1903.

Length: 5.0-5.5 mm. *Colour:* head, pronotum and elytra black, with a bluish-green metallic lustre; legs testaceous with tibiae usually slightly darker than femora. *Pronotum:* base rugose with a few widely separated punctures near middle; lateral margins narrow, anterior transverse groove marked by longitu-

dinal punctures; shape similar to that of *M. oculatus* (fig. 3, *b*); two setiferous punctures on each side. *Elytra:* with scutellar striole faintly impressed and marked by four punctures; striae faintly impressed and faintly punctured except sutural stria which is deeply impressed at apex; intervals flat, interval between striae 6 and 8 rather concave near apex so that there is a distinct ridge adjacent to 6th stria. *Microsculpture:* absent from disk of pronotum; distinct, isodiametric on elytra.

Maui: Haleakala, alt. 4,500-6,000 ft., March 1894, October 1896, holotype female and eight paratypes (Perkins).

Mecyclothorax oculatus, new species (fig. 3, *b*).

Length: 5.0 mm. *Colour:* dark aeneous brown, shining; apex, base, and lateral margins of pronotum testaceous; margins and apex of elytra and apical half of sutural interval testaceous; epipleurae and ventral surface testaceous; antennae brown with 3.5 basal segments testaceous; legs testaceous with apices of femora and middle third of tibiae darker. *Head:* eyes abnormally large, hemispherical. *Pronotum:* sides narrowly explanate and reflexed, two setiferous punctures on each side; anterior transverse groove well impressed and marked by longitudinal strigae; base smooth in the middle, a number of fine punctures on each side; median longitudinal groove fine, slightly impressed; ratio 1.0: 1.60: 1.10: 1.40. *Elytra:* widest (2.15 mm.) behind middle; shoulders completely absent; scutellar striole impressed, marked by two punctures; sutural stria distinctly impressed in apical half; remaining striae not, or faintly, impressed, except the 2d which is strongly impressed near apex; striae 1-7 regularly marked by fine punctures, becoming fainter towards stria 7 which is only just visible, and towards apex; intervals flat. *Microsculpture:* absent from head and pronotum, which are shining; strong, isodiametric on the elytra.

Molokai: holotype male only (Perkins).

Key to flavomarginatus Group

1. Pronotum strongly transverse, ratio maximum width: length = 1.30-1.37; pronotum and elytra black, broadly margined with yellow; elytra with intervals 1, 7, 8, and 9 yellow (Oahu) (fig. 4, *a*)..... **flavomarginatus,** new species

   Pronotum less transverse, ratio maximum width: length = 1.23-1.30; pronotum and elytra dark reddish brown or piceous, narrowly margined with red; elytra at most with intervals 1, 8, and 9 reddish in colour..... 2

2(1). Pronotum more transverse, ratio maximum width: length = 1.30 (fig. 4, *b, c*) (Maui, Hawaii)..... 3

   Pronotum less transverse, ratio maximum width: length = 1.23-1.26 (Oahu) (fig. 4, *d, e*)..... 4

3(2). Pronotum slightly wider at base than at apex (17: 16), or base = apex; sides of pronotum slightly sinuate in front of posterior angles which are relatively prominent; elytra narrowly margined with reddish yellow at apex (Maui) (fig. 4, *b*)..... **sharpi,** new name

Pronotum distinctly narrower at the base than at apex (14:16); sides of pronotum straight immediately in front of posterior angles which are obtuse and blunt; elytra broadly margined with reddish yellow at apex (Hawaii) (fig. 4, *c*) ..... **terminalis** Sharp

4(2). First four elytral striae distinctly punctured in basal half; surface of elytra without microsculpture (Oahu) (fig. 4, *e*) ..... **oahuensis** (Blackburn)

Elytral striae unpunctured; surface of elytra with quite strong transverse microsculpture (Oahu) (fig. 4, *d*) ..... **carteri** (Perkins)

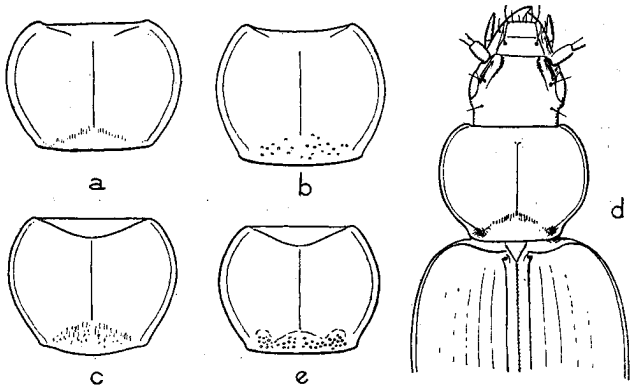

FIGURE 4.—**a,** *Mecyclothorax flavomarginatus;* **b,** *M. sharpi;* **c,** *M. terminalis;* **d,** *M. carteri;* **e,** *M. oahuensis.*

Mecyclothorax flavomarginatus, new species (fig. 4, *a*).

Length: 3.5-3.7 mm. *Colour:* head and disk of pronotum piceous; disk of elytra black; base of pronotum reddish brown, lateral margins testaceous, about 0.7 maximum width of pronotum; elytra with sutural interval reddish brown, testaceous towards apex; sides and apices of elytra with broad testaceous margins, these covering intervals 7, 8, and 9, and bases and apices of other intervals; epipleurae testaceous; ventral surface dark brown with apices of posterior abdominal sternites yellow; antennae reddish brown, with basal segment testaceous; legs entirely testaceous. *Head:* with eyes rather small and only slightly convex. *Pronotum:* as in fig. 4, *b,* with lateral margins strongly explanate and reflexed, without setiferous punctures; basal angles obtuse and blunt; base with a few obsolete punctures and longitudinal strigae. *Elytra:* with shoulders prominent, scutellar striole strongly impressed and unpunctured; sutural stria strongly impressed and unpunctured throughout its length; striae 2-7 becoming fainter in order; all striae fainter apically; intervals distinctly convex. *Microsculpture:* strong, isodiametric on head; faint, transverse, on pronotum and elytra. *M. flavomarginatus* is easily distinguished from the related species—*M. sharpi, M. terminalis, M. oahuensis,* and *M. carteri*—by the broad yellowish margins of the pronotum and elytra, and by the more transverse shape of the pronotum.

Oahu: Honolulu, alt. 2,000 ft., July 1907, holotype female (Perkins); on the road around Tantalus, October 1906, allotype male, 2 female paratypes (Perkins).

The allotype and paratypes will go to Bishop Museum. These three specimens are those referred by Perkins (Ent. Mo. Mag. **53**: 250, 1917) to *M. oahuensis,* when the type of that species was not available.

Mecyclothorax sharpi, new name for *Metrothorax discedens* Sharp, Fauna Hawaiiensis **3**: 275, 1903 (not *Thriscothorax discedens* Sharp, Fauna Hawaiiensis **3**: 263, 1903) (fig. 4, *b*).

Length: 3.6 mm. *Colour:* head, pronotum, and elytra piceous or dark brown; reflexed margins of pronotum and elytra reddish brown; apical half of sutural interval, 9th interval and shoulders of elytra also reddish brown; epipleurae reddish brown; ventral surface of body piceous; antennae and legs entirely testaceous. *Head:* with eyes small and only slightly convex. *Pronotum:* as in fig. 4, *b,* with lateral margins quite strongly explanate and reflexed, about 10 faint punctures on each side of base. Elytra similar in shape to those of *M. flavomarginatus,* that is, widest in the basal half, with prominent shoulders, tapering posteriorly, but less convex; scutellar striole and sutural stria strongly impressed and unpunctured, or with the faintest possible suggestion of punctures when viewed by oblique light; striae 2-7 becoming fainter in that order, and fainter or absent apically; intervals slightly convex on the disk. *Microsculpture:* of surface of head moderately strong, isodiametric or irregular; of pronotum fainter but distinctly transverse, except at base, between punctures, where it is isodiametric; of elytra transverse and faint.

Maui: Mt. Lahaina, alt. 3,000 ft., January 1897, holotype male (Perkins).

Mecyclothorax terminalis Sharp, Fauna Hawaiiensis **3**: 263, 1903 (fig. 4, *c*).

Length: 3.6 mm. *Colour:* head, disk of pronotum and of elytra piceous; pronotum with reflexed margins and base reddish brown; elytra with reflexed margins and 9th interval reddish, sutural interval reddish, apices of elytra yellow; epipleurae yellow; ventral surface piceous, except apex of abdomen which is yellow; antennae and legs testaceous. *Pronotum:* as in fig. 4, *c,* strongly narrowed towards base, lateral margins distinctly explanate and reflexed, without setiferous punctures, base with a few obsolete punctures on each side. *Elytra:* with scutellar striole impressed, with about three faint punctures; sutural stria impressed throughout its length and faintly punctured in the basal half; striae 2-5 impressed on disk, faintly or distinctly punctured in basal half, disappearing in humeral region, and becoming faint near apex; striae 6 and 7 faint; intervals 1-6 distinctly convex. *Microsculpture:* of head, pronotum and elytra indistinct, but apparently transverse.

Hawaii: Olaa, holotype female (Perkins).

Mecyclothorax carteri (Perkins) (fig. 4, *d*).

Metrothorax carteri Perkins, Ent. Mo. Mag. **53**: 249, 1917.

Length: 3.3 mm. *Colour:* head piceous, clypeus and labrum reddish brown; pronotum piceous with base and reflexed margins dark reddish brown; elytra piceous with sutural interval dark reddish brown, base, lateral margins, and apex reddish brown; epipleurae testaceous; ventral surface piceous; legs entirely testaceous; antennae dark brown with segments 1-3 testaceous. Structure of head, pronotum, and elytra as in *M. oahuensis,* but elytral striae entirely unpunctured. The sutural stria is strongly impressed throughout its length, while striae 2-7 are progressively fainter, stria 7 being reduced to a mere trace; the first four intervals very slightly convex. Punctures of base of pronotum are obsolete. *Microsculpture:* absent from pronotum; that of head indistinct, while on elytra it is transverse and obvious even at magnification × 20.

Oahu: Waianae Mountains, alt. 2,000 ft., holotype female (Perkins) in the collection of R. C. L. Perkins; one other example, the paratype of *M. oahuensis.*

Mecyclothorax oahuensis (Blackburn) (fig. 4, *e*).

Cyclothorax oahuensis Blackburn, Ent. Mo. Mag. **15**: 123, 1878.

Metrothorax oahuensis, Sharp, Fauna Hawaiiensis **3**: 274, 1903.

Length: 3.1-3.4 mm. *Colour:* head and pronotum uniformly dark brown; elytra piceous, sutural interval, apex and margins reddish yellow; epipleurae testaceous; ventral surface brown; legs entirely testaceous; antennae brown, with segments 1 and 3 paler than the others. Eyes small and only slightly convex; pronotum with lateral margins quite distinctly explanate and reflexed; sides slightly sinuate just before basal angles which are obtuse and blunt (fig. 4, *e*); base with a few distinct punctures on each side. Elytra with scutellar striole faintly impressed; sutural stria strongly impressed throughout its length, closely and distinctly punctured in basal half; striae 2-4 punctured in basal half, faintly impressed in apical half; striae 5-7 faint; all striae, except the first, becoming fainter or disappearing towards apex; first five intervals slightly convex. *Microsculpture:* indistinct on head, and absent from pronotum and elytra.

Oahu: in the mountains, holotype male (Blackburn). The paratype is not conspecific with the holotype, but is an example of *M. carteri* Perkins.

Key to montivagus Group

1. Small species, length 3.5-4.0 mm 2
   Larger species, length 4.75-6.5 mm 3

2(1). Posterior angles of the pronotum sharp and toothlike, bearing a setiferous puncture; microsculpture of surface of elytra absent or faint, isodiametric (Maui) (fig. 5, *a*) ..... **micans** (Blackburn)
   Posterior angles of pronotum obtuse and blunt, without setiferous punctures; elytra with faint transverse microsculpture (Hawaii) ..... **discedens** (Sharp)

3(1). Elytra with parts of striae 1-4 or 1-5 visible; middle parts of tibiae dark brown, remainder of legs testaceous; pronotum without setiferous punctures at posterior angles (Hawaii) (fig. 5, *b*) ..... **variipes** (Sharp)

Elytra with parts of striae 1-6 visible, tibiae unicolorous, testaceous or reddish, pronotum with a setiferous puncture at each posterior angle 4

4(3). Pronotum with lateral margins explanate and distinctly reflexed; ratio maximum width of pronotum : length = 1.30-1.33; surface of the elytra usually with very distinct microsculpture (Maui) (fig. 5, *c*) ..... **montivagus** (Blackburn)

Pronotum with the side margins scarcely explanate, the disk more convex; ratio maximum width of pronotum : length = 1.23-1.27, i.e. pronotum slightly less transverse; surface of the elytra with microsculpture faint or absent (fig. 5, *d*) (Hawaii) ..... **pele** (Blackburn)

Mecyclothorax micans (Blackburn) (fig. 5, *a*).

Cyclothorax micans Blackburn, Ent. Mo. Mag. **15**: 122, 1878.

Mecyclothorax micans, Sharp, Fauna Hawaiiensis 3 : 244, 1903.

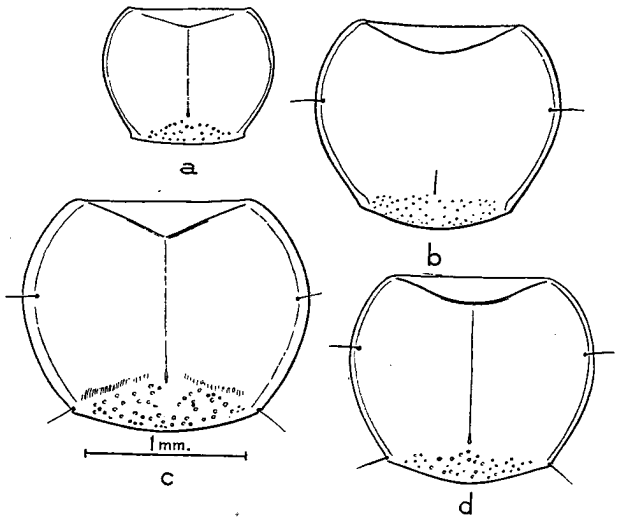

FIGURE 5.—**a,** *Mecyclothorax micans;* **b,** *M. variipes;* **c,** *M. montivagus;* **d,** *M. pele.*

Length: 3.4-3.8 mm. *Colour:* head dark brown; pronotum and elytra piceous or black, with extreme margins and sutural interval reddish; epipleurae reddish yellow; ventral surface black; legs and antennae testaceous. *Pronotum:* with lateral margins narrowly but distinctly explanate and reflexed; each side with two setiferous punctures; sides strongly curved outwards from apex almost to

base (fig. 5, *a*), where there is a sharp sinuation before posterior angles which are toothlike and obtuse; base with a few sharply defined punctures. *Elytra:* rather flattened, shoulders distinct; scutellar striole marked by 4 or 5 sharply defined punctures; striae 1-5 scarcely impressed, but marked by strong punctures in their basal halves, sutural stria only reaching base, and strongly impressed in its apical half; the 2d stria very faintly impressed in apical half; striae 3, 4, and 5 disappearing in the apical half. *Microsculpture:* absent from head and pronotum; that on the elytra faint and isodiametric on disk, transverse at sides.

Maui: Haleakala, alt. 9,000 ft., February 1878, holotype female (Blackburn); Haleakala, alt. 9,500-10,000 ft., April 1894, 30 individuals (Perkins).

Mecyclothorax discedens (Sharp).

Thriscothorax discedens Sharp, Fauna Hawaiiensis **3**: 263, 1903.

Length: 4.0 mm. *Colour:* dark brown or piceous; epipleurae dark reddish brown; ventral surface piceous; antennae reddish brown, legs reddish with middle parts of tibiae and bases of femora dark brown. *Pronotum:* with one setiferous puncture on each side near the middle, the lateral margins quite broadly explanate and reflexed, the base with a few minute punctures; ratio 1.0: 1.75: 1.15: 1.30. *Elytra:* with scutellar striole faintly impressed; sutural stria impressed throughout its length, faintly punctured in basal half; 2d and 3d striae similar to 1st, but disappearing near base; 4th and 5th striae represented by traces of impressions. The first three intervals are slightly convex. *Microsculpture:* faint, transverse, on both pronotum and elytra.

Hawaii: Kilauea, holotype female, allotype male (Perkins).

Mecyclothorax variipes (Sharp) (fig. 5, *b*).

Thriscothorax variipes Sharp, Fauna Hawaiiensis **3**: 265, 1903.

Metrothorax extimus Sharp, Fauna Hawaiiensis **3**: 273, 1903, new synonymy.

Length: 4.6-5.9 mm. *Colour:* head reddish brown, pronotum and elytra piceous or black, extreme margins, apex and apical half of sutural interval reddish; epipleurae reddish yellow; ventral surface brown; antennae brown with 3.5 basal segments testaceous, legs testaceous with femora at their bases and the middle parts of the tibiae dark brown. *Pronotum:* with lateral margins slightly explanate and reflexed, one or two setiferous punctures on each side; anterior transverse groove quite strongly impressed, median line faint; base with a number of small, widely spaced, but distinct punctures. *Elytra:* convex, with scutellar striole marked by 4 or 5 punctures. Sutural stria indicated in basal half by sharply defined punctures, each puncture separated from the next by about twice its own diameter, becoming faint near base, opposite scutellar striole; apical half of sutural stria strongly impressed, unpunctured. Second stria marked by a similar row of punctures which are rather more widely spaced (about 3 diameters), this stria represented by a mere trace in apical third, and absent near base; striae 3, 4, and 5 similarly punctured but each shorter than preceding stria, restricted to disk, absent at base and apex. The 5th stria is entirely absent in the holotype. Surface shining, without microsculpture.

Hawaii: Kilauea, August 1896, holotype female and two females (Perkins); Kona, alt. 3,000 ft., August 1894, holotype female of *M. extimus* (Perkins).

The type of *M. extimus* Sharp is identical with that of *M. variipes* Sharp in shape, colour, and sculpture, and differs only in its small size (4.6 mm. long). Sharp placed *extimus* in *Metrothorax,* as having no setiferous punctures on the pronotum, but the anterior punctures are, in fact, present in the unique type.

Mecyclothorax montivagus (Blackburn) (fig. 5, *c*).

Cyclothorax montivagus Blackburn, Ent. Mo. Mag. **15**: 122, 1878. Sharp, Fauna Hawaiiensis **3**: 253, 1903.

Olisthopus insularis Karsch (not Motschulsky), Berlin. Ent. Zeitung **25**: 1, 1881.

Length: 5.0-6.5 mm. *Colour:* head, pronotum, and elytra piceous or black, extreme margins of pronotum and elytra dark reddish brown; epipleurae reddish yellow; ventral surface dark brown; legs testaceous with femora dark brown in basal half; antennae brown, basal 3.5 segments testaceous. *Pronotum:* with lateral margins quite strongly explanate and reflexed, each with two setiferous punctures; each side strongly but evenly curved outwards from apex to base; posterior angles obtuse and blunt; base of pronotum fairly closely punctured on each side. *Elytra:* broad and rather depressed; scutellar striole represented by 4 or 5 punctures, striae 1-6 slightly impressed, strongly and evenly punctured in their basal halves, each puncture separated from those adjacent by its own diameter; striae 2-6 do not reach base; sutural stria is strongly impressed but unpunctured in apical half; stria 2 is moderately impressed and unpunctured in apical third; striae 3-6 are faint or absent in the apical third; elytral intervals flat; a setiferous puncture at apex of 2d interval. Surface of head and pronotum without microsculpture, that of elytra with strong, slightly transverse microsculpture.

Maui: Haleakala, alt. 4,000-10,000 ft., holotype male and three paratypes (Blackburn); 52 examples (Perkins).

M. montivagus is remarkably similar to the Australian *M. ambiguus* Erichson and *M. insularis* Motschulsky from New Zealand which differ from *M. montivagus* only in their smaller size, the longer, more parallel-sided form of the elytra, the less deeply impressed punctures of the striae, and the more broadly explanate margins of the pronotum. The ratio of the length to greatest breadth of the elytra of *M. montivagus* = about 1.38. The corresponding ratio in *M. ambiguus* and *M. insularis* is 1.43-1.63, and the shoulders in the latter two species are more prominent in correlation with the presence of fully developed

hind wings. The aedeagus in *M. montivagus* is almost indistinguishable from that of *M. insularis.*

Mecyclothorax pele (Blackburn) (fig. 5, *d*).

Cyclothorax pele Blackburn, Ent. Mo. Mag. **16**: 107, 1879.
Mecyclothorax pele, Sharp, Fauna Hawaiiensis 3: 254, 1903.

Length: 5.0-6.5 mm. Similar to *M. montivagus* except in the following characters: pronotum less transverse than in *M. montivagus,* sides less strongly curved out from apex to base; lateral margins only narrowly explanate and reflexed; disk of elytra more strongly convex; microsculpture faint or absent. Apex of aedeagus is not hooked as in *M. montivagus.*

Hawaii: Kilauea, holotype female and four examples (Blackburn); August 1896, 10 examples (Perkins).

Key to vitreus Group

1. Pronotum strongly transverse; ratio maximum width of pronotum: length, not less than 1.25; head, pronotum, and elytra dark metallic greenish black, apex of elytra reddish brown (Hawaii) ..... **vitreus,** new name

   Pronotum less strongly transverse; ratio maximum width: length not more than 1.15; elytra aeneous black, often with the sutural interval reddish, apex of elytra yellow (Maui, Hawaii) 2

2(1). Sides of pronotum slightly less strongly sinuate (fig. 6, *a*) (Maui) ..... **perkinsianus** (Sharp)

   Sides of pronotum more strongly sinuate (fig. 6, *b*) (Hawaii) ..... **deverilli** (Blackburn)

Mecyclothorax vitreus, new name for *Metrothorax laticollis* Sharp, Fauna Hawaiiensis 3: 271, 1903 (not *Mecyclothorax laticollis* Sloane 1899).

Length: 4.5-5.0 mm. *Colour:* head, pronotum, and elytra shining, aeneous or metallic greenish black; apical half of sutural interval, apex of elytra, and epipleurae dark brown; ventral surface piceous with abdominal sternites paler at sides; antennae dark brown with first segment testaceous and segments 2-4.5 brown; legs with femora testaceous and tibiae and tarsi brown. *Pronotum:* strongly constricted at base; ratio 1.0: 1.75: 1.20: 1.40; base with a number of punctures, sharply defined but irregular in size and distribution; anterior transverse groove of pronotum obliterated, longitudinal groove faint. *Elytra:* scutellar striole marked by three faint punctures; sutural stria impressed only in apical quarter; remainder of sutural stria marked only by faint punctures; striae 2-8 absent, or indicated by a few faint punctures visible only in oblique light. *Microsculpture:* head, pronotum, and elytra shining, microsculpture absent.

Maui: Haleakala, alt. 4,000-6,000 ft., holotype male and three male paratypes (Perkins).

Mecyclothorax perkinsianus (Sharp) (fig. 6, *a*).

Metrothorax perkinsianus Sharp, Fauna Hawaiiensis **3**: 270, 1903.

Length: 4.75-5.25 mm. *Colour:* head and pronotum piceous; disk of pronotum metallic blue black (when mature); elytra shining metallic blue black with the sutural interval and margins of elytra brown, paler towards apex; epipleurae testaceous; ventral surface piceous or black with sides of abdominal sternites paler; antennae piceous with basal 3.5 segments testaceous; legs testaceous, tibiae and tarsi darker when mature. *Pronotum:* strongly constricted towards base; ratio 1.0: 1.65: 1.10: 1.45; sides less strongly sinuate than in *M. vitreus*. Base of pronotum with a number of widely separated, well-defined punctures of irregular size. *Elytra:* scutellar striole marked by three longitudinal punctures which may unite to form an impressed line; sutural stria slightly impressed in basal half and regularly marked by small punctures, deeply impressed and unpunctured towards apex; striae 2-5 marked by a few extremely faint punctures in apical half. Remainder of striae absent. *Microsculpture:* absent, surface shining.

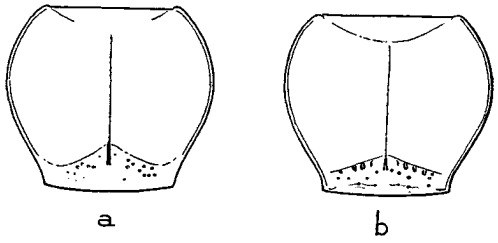

FIGURE 6.—**a**, *Mecyclothorax perkinsianus;* **b**, *M. deverilli.*

Maui: Haleakala, 1902, holotype male and two male paratypes (Perkins).

Mecyclothorax deverilli (Blackburn) (fig. 6, *b*).

Cyclothorax deverilli Blackburn, Ent. Mo. Mag. **16**: 108, 1879.

Metrothorax deverilli, Sharp, Fauna Hawaiiensis **3**: 270, 1903.

Length: 4.5-5.5 mm. *Colour:* head and pronotum shining black, elytra metallic greenish black, with sutural interval and margins of elytra brown, paler towards apex; antennae, legs and ventral surface as in *M. perkinsianus. Pronotum:* strongly constricted at base but sides not strongly sinuate; ratio 1.0: 1.65: 1.10: 1.45; punctures at base well defined. *Elytra:* as in *M. perkinsianus. Microsculpture:* absent.

Hawaii: alt. about 3,000 ft., under bark, holotype female and three male paratypes (Blackburn); Kilauea, July 1895, August and September 1896, seven examples (Perkins).

M. deverilli and *M. perkinsianus* are very similar. When larger series are examined it may prove impossible to separate them.

Key to palustris Group

1. Microsculpture of elytra isodiametric on disk, slightly transverse at sides; elytral striae 2-7 faintly impressed, unpunctured; sutural stria sometimes faintly punctured at base (Lanai) ..... **filipes** (Sharp)
   Microsculpture of elytra distinctly transverse, especially at sides; elytral striae 1 and 2 always and striae 3-5 sometimes punctured (Molokai, Maui, Lanai, Hawaii) 2
2(1). Elytra ovoid, shoulders completely rounded away; colour pale brown (possibly immature) with margins of the pronotum and elytra and the sutural interval yellow (Lanai) ..... **mundanus** (Sharp)
   Elytra more quadrate, with shoulders more or less distinct, not completely rounded away; colour reddish brown to black, with margins and suture reddish (Molokai, Maui, Hawaii) 3
3(2). Elytral stria 2 represented by a few distinct punctures only in the basal half; striae 3-7 absent; pronotum with the anterior setiferous puncture alone on each side; pronotum ratio maximum width : length = 1.20 (Hawaii) (fig. 7, *a*) ..... **subunctus** (Perkins)
   Elytral striae 1-3 and sometimes striae 4 and 5 distinctly punctured in basal half 4
4(3). Pronotum with 2 setiferous punctures on each side; pronotum ratio maximum width : length = 1.15 (Hawaii) ..... **vulcanus** (Blackburn)
   Pronotum with anterior setiferous puncture only on each side; pronotum ratio maximum width : length = more than 1.20 5
5(4). Length less than 4.0 mm.; pronotum transverse, ratio maximum width : length about 1.30; lateral margins narrow (fig. 7, *b*); interval 2 of elytra distinctly convex (Hawaii) .. **parvus,** new species
   Length more than 4.0 mm.; pronotum less transverse, ratio maximum width : length = 1.27 or less; lateral margins of pronotum explanate and reflexed (fig. 7, *c, d*); interval 2 of elytra flat 6
6(5). Pronotum more transverse, ratio maximum width : length = 1.21-1.28 (fig. 7, *c*); elytra usually with only first two striae distinctly punctured in basal half (Maui) ..... **unctus** (Blackburn)
   Pronotum less transverse, ratio maximum width : length = 1.20-1.23; elytra usually with first four striae distinctly punctured in basal half (Molokai) (fig. 7, *d*) ..... **palustris** (Sharp)

Mecyclothorax filipes (Sharp).

Thriscothorax filipes Sharp, Fauna Hawaiiensis 3 : 257, 1903.

Length: 4.5-5.0 mm. *Colour:* head and pronotum piceous; elytra black with a bluish-green metallic lustre; marginal channels of pronotum and elytra dark reddish brown, legs and antennae testaceous. *Pronotum:* more transverse than in *M. iteratus,* similar to *M. unctus* Blackburn (fig. 7, *c*); anterior transverse groove deeply impressed and punctured; base with strong punctures, irregularly scattered; sides with distinct marginal channels; anterior setiferous puncture only present on each side. *Elytra:* scutellar striole impressed with four faint

punctures; sutural stria strongly impressed in basal quarter, with faint punctures, and strongly impressed in apical half; striae 2-7 faint, elytral intervals flat. *Microsculpture:* absent from head and pronotum; distinct, isodiametric on elytra.

Lanai: Halepaakai, July 1894; Koele Mts., February 1894, holotype male and 16 paratypes (Perkins).

Mecyclothorax mundanus (Sharp).

Thriscothorax mundanus Sharp, Fauna Hawaiiensis **3**: 261, 1903.

Length: 4.0-4.5 mm. *Colour:* the holotype and single paratype have brown immature colouring. It is most probable that the mature colouring is similar to that of *M. filipes. Pronotum:* similar in shape to that in *M. filipes* and *M. unctus* but with more pronounced marginal channels; anterior transverse groove strongly impressed but unpunctured; base with a few strongly impressed punctures; anterior setiferous punctures alone are present. *Elytra:* scutellar striole strongly impressed; sutural stria strongly impressed throughout its length and faintly punctured in its basal quarter; striae 2-7 progressively fainter, all faintly punctured; intervals flat. *Microsculpture:* isodiametric on head, pronotum and disk of elytra; transverse at sides of elytra.

Lanai: Lanaihale, summit, July 1894, holotype and paratype (Perkins).

Mecyclothorax subunctus (Perkins) (fig. 7, *a*).

Thriscothorax subunctus Perkins, Ent. Mo. Mag. **53**: 249, 1917.

Length: 4.25 mm. *Colour:* head, pronotum, and elytra dark brown; legs and antennae testaceous. *Pronotum:* as in fig. 7, *a*, ratio greatest width: length = 1.21; anterior setiferous punctures alone are present; anterior transverse groove deeply impressed; basal punctures few. *Elytra:* scutellar striole and sutural striae strongly punctured; stria 2 marked by a few punctures in basal half.

Hawaii: Kilauea, under bark, July 1903 (Perkins). In the collection of R. C. L. Perkins.

Mecyclothorax vulcanus (Blackburn).

Cyclothorax vulcanus Blackburn, Ent. Mo. Mag. **16**: 108, 1879.

Mecyclothorax vulcanus, Sharp, Fauna Hawaiiensis **3**: 249, 1903.

Length: 4.0-4.5 mm. *Colour:* head and pronotum piceous, margins and base of pronotum reddish brown; elytra black with bluish-green metallic lustre; reflexed margin reddish; antennae dark brown, the 3.5 basal segments reddish yellow; legs testaceous. *Pronotum:* like that of *M. unctus* (fig. 7, *c*); ratio maximum width: length = 1.15; both setiferous punctures are present on each side. *Elytra:* striae 1-5 punctured in basal half; striae 6 and 7 absent. *Microsculpture:* on head and pronotum faint; distinct, moderately transverse on elytra.

Hawaii: Mauna Loa, under bark near the mouth of Kilauea crater, holotype (Blackburn); Kilauea, August 1895, 1896, two examples

(Perkins); Kona, alt. 4,000 ft., Sept. 1892, one example (Perkins); "Hawaii," two examples (Blackburn).

Mecyclothorax parvus, new species (fig. 7, *b*).

Length: 4.1 mm. *Colour:* head, pronotum, and elytra uniform dark reddish brown; antennae dark brown with basal 3.5 segments reddish; legs with femora and tarsi testaceous, tibiae brown; ventral surface dark brown, epipleurae paler. *Pronotum:* ratio 1.0:1.60:1.05:1.25; base smooth, unpunctured; median and anterior transverse grooves faintly impressed. *Elytra:* widest just behind middle; scutellar striole and sutural stria strongly impressed with faint punctures near base; striae 2-4 moderately impressed and distinctly punctured on disk, not reaching apex or base; striae 5-7 faint. *Microsculpture:* faint on head and pronotum; faint, transverse on elytra.

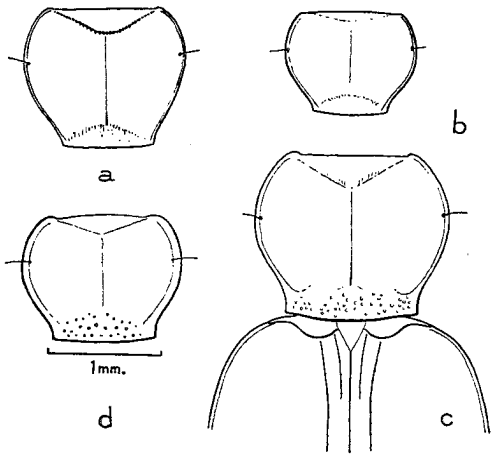

FIGURE 7.—**a,** *Mecyclothorax subunctus;* **b,** *M. parvus;* **c,** *M. unctus;* **d,** *M. palustris.*

Hawaii: Kilauea, holotype only (Perkins).

This example was included as a paratype of *M.* (*Thriscothorax*) *discedens* Sharp. It is clearly distinguishable from *M. discedens* Sharp by the shape of the pronotum.

Mecyclothorax unctus (Blackburn) (fig. 7, *c*).

Cyclothorax unctus Blackburn, Ent. Mo. Mag. **17**: 227, 1881.

Thriscothorax unctus, Sharp, Fauna Hawaiiensis **3**: 257, 1903.

Length: 4.0-4.5 mm. *Colour:* head and pronotum piceous; elytra black; margins of pronotum and elytra, and epipleurae testaceous or reddish; antennae and legs testaceous. *Pronotum:* base with distinct punctures separated by about twice their own diameter in middle of pronotum, closer near sides; margins dis-

tinctly reflexed; anterior setiferous puncture alone present; ratio 1.0 : 1.55 : 1.0 : 1.25. *Elytra:* scutellar striole marked by three or four distinct punctures; stria 1 strongly impressed and faintly punctured; stria 2 only faintly impressed, marked in the basal half by distinct punctures separated by two or three times their own diameter; stria 3 faintly and irregularly punctured in apical half; striae 4-7 absent or represented by mere traces. *Microsculpture:* distinct, transverse on elytra; absent from head and pronotum.

Maui: Haleakala, holotype female and two paratypes (Blackburn); Haleakala, alt. 4,000-6,000 ft., March, May, June 1894; May, October 1896, 34 examples.

Mecyclothorax palustris (Sharp) (fig. 7, *d*).

Thriscothorax palustris Sharp, Fauna Hawaiiensis 3 : 258, pl. 7, fig. 3, 1903.

Length: 4.0-4.5 mm. *Colour:* head, pronotum, and elytra dark brown, the disk of elytra usually darker than the rest; margins reddish; legs and antennae testaceous, proximal ends of femora dark. *Pronotum:* base with strong longitudinal punctures anteriorly, and a few circular punctures, separated by three diameters posteriorly; punctures in lateral depressions smaller and closely placed; ratio 1.0 : 1.50 : 1.0 : 1.25. *Elytra:* scutellar striole and striae 1-5 marked by distinct punctures separated by about three diameters; striae 2-5 obvious only in their basal halves and obliterated near base; intervals flat. *Microsculpture:* transverse on elytra, absent from head and pronotum.

Molokai: Molokai mountains, May 22, 1893, holotype male and 10 paratypes (Perkins); Molokai mountains, alt. 3,500 ft., June 1893, seven examples; April 1894, one example; alt. 4,000 ft., June 1896, eight examples (Perkins).

Key to ducalis Group

1. Length more than 5.0 mm.; colour shining black 2
   Length less than 4.5 mm.; colour brown, sometimes with paler margins and apex 4
2(1). Pronotum with one setiferous puncture on each side just in front of middle; lateral margins of pronotum distinctly explanate and reflexed, forming a shallow marginal channel (Maui, Hawaii) 3
   Pronotum without setiferous punctures; lateral margins of pronotum narrowly reflexed (Molokai) (fig. 8, *a*) ..... **ater,** new name
3(2). Pronotum strongly contracted at base; ratio maximum width : length at base = 1.45; tibiae dark brown (Maui) (fig. 8, *b*) .. **ducalis** (Sharp)
   Pronotum much less strongly contracted at base; ratio maximum width : width at base = 1.10; tibiae pale reddish (Hawaii) (fig. 8, *c*) ..... **karschi** (Blackburn)
4(1). Colour dark brown, slightly aeneous, sides and apex of elytra broadly reddish yellow; pronotum less transverse, ratio maximum width : length = about 1.20 (Maui) ..... **insolitus** (Sharp)

Colour piceous, not aeneous; margins and elytra at most very narrowly reddish; pronotum more transverse, ratio maximum width: length = about 1.30 (Oahu) ..... **simiolus** (Blackburn)

Mecyclothorax ater, new name for *Metrothorax blackburni* Sharp, Fauna Hawaiiensis **3**: 272, 1903; not *Mecyclothorax blackburni* Sloane, Linn. Soc. N. S. Wales, Proc. **23**: 472, 1898 (fig. 8, *a*).

Length: 5.0 mm. *Colour:* head and pronotum shining black; elytra shining black with margins, epipleurae and apex testaceous or brown; antennae and legs uniform testaceous; ventral surface black. *Pronotum:* base uniformly punctured, punctures separated by about one diameter; margins narrow. *Elytra:* convex with steep sides; shoulders completely rounded off; scutellar striole deeply impressed and marked by five small punctures; sutural stria deeply impressed throughout and marked by small punctures separated by their own diameter; striae 2-5 visible, becoming fainter towards the outside and apex; striae 2-5 are punctured in basal half like stria 1; all striae disappear just before reaching base; striae 6-8 completely absent or faint, so that sides of elytra are smooth and shining; elytral intervals slightly convex. *Microsculpture:* absent; surface of head, pronotum, and elytra shining.

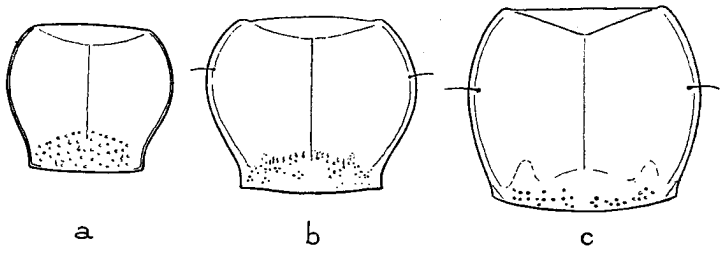

FIGURE 8.—**a,** *Mecyclothorax ater;* **b,** *M. ducalis;* **c,** *M. karschi.*

Molokai: mountains, June 1896, holotype female (Perkins); alt. 4,000-4,500 ft., June 15, 1893, two paratypes, one female and one example from *M. scaritoides* series (Perkins).

Mecyclothorax ducalis (Sharp) (fig. 8, *b*).

Thriscothorax ducalis Sharp, Fauna Hawaiiensis **3**: 266, pl. 7, fig. 14, 1903.

Length: 5.6-6.5 mm. *Colour:* head, pronotum, and elytra shining black, antennae with the first 3.5 segments testaceous, remainder dark brown; legs testaceous with tibiae darker brown; epipleurae and ventral surface black. *Pronotum:* base with numerous well-defined punctures separated by about one diameter. *Elytra:* scutellar striole impressed and marked with four faint punctures; sutural stria impressed and marked in basal half with small punctures separated by about four diameters, more deeply impressed and punctured in apical half; striae 2-4

like sutural stria in basal half, faintly impressed and unpunctured in apical half; stria 5 faintly impressed throughout its length and faintly and irregularly punctured in basal half; striae 6 and 7 faintly impressed and unpunctured; intervals flat or slightly convex; shoulders prominent. *Microsculpture:* absent; head, pronotum, and elytra shining.

Maui: Haleakala, alt. 4,000-5,000 ft., holotype and two paratypes (Perkins).

Mecyclothorax karschi (Blackburn) (fig. 8, *c*).

Cyclothorax karschi Blackburn, Ent. Mo. Mag. **19**: 62, 1882.
Thriscothorax karschi, Sharp, Fauna Hawaiiensis **3**: 266, 1903.

Length: 5.2-5.4 mm. *Colour:* piceous, sutural interval and extreme margins of elytra reddish; epipleurae dark reddish brown; ventral surface black with apices and sides of the four apical abdominal sternites yellow; antennae and legs reddish yellow, middle parts of tibiae darker brown. *Pronotum:* similar to that of *M. munroi,* but more transverse; ratio greatest width: length = 1.14; width at base: width at apex = 1.1-1.2, the posterior angles rather obtuse. *Elytra:* similar to those of *M. munroi,* but sutural stria is strongly punctured in basal half, as are striae 2-6; sutural stria strongly impressed to apex; other striae disappearing in apical half; intervals 1-6 convex. There is a setiferous puncture at apex of 2d interval. The whole surface shining, entirely without microsculpture.

Hawaii: Mauna Loa, among loose stones, alt. 6,000 ft., holotype female (Blackburn); Kona, Mauna Loa, alt. 4,000 ft., July, September 1892, two examples (Perkins).

Mecyclothorax insolitus (Sharp).

Thriscothorax insolitus Sharp, Fauna Hawaiiensis **3**: 261, pl. 7, fig. 10, 1903.

Length: 4.25 mm. *Colour:* head black, pronotum piceous, disk of elytra aeneous black; margins, apical quarter of elytra and intervals 7 and 8 testaceous; antennae and legs testaceous. *Pronotum:* base with a few distinct punctures at sides; margins narrow; anterior setiferous punctures alone are present. *Elytra:* scutellar striole represented by three or four distinct punctures; striae 1-4 punctured in basal half, the sutural stria strongly impressed throughout its length; other striae faint in apical half; shoulders absent, completely rounded off; intervals flat; elytra very convex and steep-sided. *Microsculpture:* absent; head, pronotum, and elytra shining.

Maui: Haleakala, alt. 3,000 ft., holotype female (Perkins).

Mecyclothorax simiolus (Blackburn).

Cyclothorax simiolus Blackburn, Ent. Mo. Mag. **15**: 156, 1878.
Metrothorax simiolus, Sharp, Fauna Hawaiiensis **3**: 274, 1903.

Length: 4.1-5.5 mm. *Colour:* head, pronotum, and elytra dark brown, slightly aeneous; margins of pronotum and elytra usually paler, apical half of sutural

interval reddish; antennae and legs testaceous; ventral surface dark brown, epipleurae testaceous. *Pronotum:* ratio 1.0 : 1.55 : 1.05 : 1.20; lateral margins narrowly reflexed; setiferous punctures absent; anterior transverse groove faint or absent, median line faintly impressed; base punctured, punctures separated by about one diameter; sides strongly sinuate in front on posterior angles which are slightly obtuse and sharp. *Elytra:* strongly convex, steep-sided; shoulders not quite obsolete; scutellar striole slightly impressed, with three or four distinct punctures; sutural stria strongly impressed in apical half and distinctly punctured in basal half except near base opposite scutellar striole; stria 2 faintly impressed and punctured on disk, disappearing towards apex and base; outer stria absent or represented by faint traces on disk. *Microsculpture:* absent; head, pronotum, and elytra shining.

Oahu: mountains, holotype and two examples (Blackburn); Honolulu, alt. 2,000-3,000 ft., 10 examples (Perkins).

Key to sobrinus Group

1. With setiferous punctures on intervals 3, 5, and 7 (4, 5, and 3 punctures on intervals 3, 5, and 7 respectively); head, pronotum, and elytra with very strong isodiametric microsculpture so that the whole surface is sericeous; base of pronotum unpunctured; colour dark aeneous brown, margins and sutural interval of elytra reddish; elytra not depressed at apices of intervals 6 and 7 (Maui) ..... **inaequalis** (Blackburn)

   With setiferous punctures on 3d elytral interval only (two or three punctures); microsculpture sometimes faint on head and pronotum; surface of elytra rather dull, but not sericeous; base of pronotum punctured; colour dark aeneous brown, margins reddish; elytra depressed at apices of intervals 6 and 7 2

2(1). Length 5-6 mm.; pronotum transverse, ratio maximum width : length = about 1.30; sides of pronotum sharply sinuate immediately in front of posterior angles which are acute (fig. 9, *a*); 4th elytral interval more or less constant in width, not narrowed towards base (Maui) ..... **sobrinus** Sharp

   Length 4-5 mm.; pronotum more transverse; ratio maximum width : length = about 1.40; sides of pronotum not sinuate in front of posterior angles which are each marked by a small blunt tooth (fig. 9, *b*); 4th elytral interval narrowed near base to half of its width near middle (Maui) ..... **longulus** Sharp

Mecyclothorax inaequalis (Blackburn).

Cyclothorax inaequalis Blackburn, Ent. Mo. Mag. **15**: 157, 1878.
Mecyclothorax inaequalis, Sharp, Fauna Hawaiiensis **3**: 249, 1903.

Length: 3.25-4.0 mm. *Colour:* head, pronotum, and elytra aeneous brown, sericeous, margins of pronotum and elytra brown; antennae dark brown, 3.5 basal segments testaceous; legs testaceous, tarsi and distal ends of tibiae slightly darker; epipleurae testaceous; ventral surface piceous. *Head:* eyes less prominent than is usual in the genus. *Pronotum:* ratio 1.0 : 1.55 : 1.0 : 1.20; base with a few almost obliterated punctures. *Elytra:* shoulders quite prominent; all striae

moderately impressed, unpunctured, intervals irregular in width and distinctly convex. *Microsculpture:* isodiametric and strong, giving the whole surface a sericeous appearance.

Maui: holotype male and two paratypes (Blackburn); Haleakala, alt. 4,000-5,000 ft., March, April 1894, May 1896, seven examples (Perkins).

Mecyclothorax sobrinus Sharp, Fauna Hawaiiensis 3: 253, 1903 (fig. 9, *a*).

Length: 5.0-6.0 mm. *Colour:* head, pronotum, and elytra aeneous brown; margins of pronotum and elytra reddish brown; antennae brown with basal 3.5 segments testaceous; femora testaceous, tibiae and tarsi brown; epipleurae testaceous; ventral surface piceous. *Pronotum:* depressed, ratio 1.0: 1.35: 0.9: 1.05; base with a few obsolete longitudinal striations and punctures. *Elytra:* depressed; all striae distinctly impressed, unpunctured; intervals flat or slightly convex, becoming distinctly convex at apex: setiferous punctures of 3d interval placed in shallow depressions; shoulders prominent. *Microsculpture:* whole body including appendages covered with coarse isodiametric microsculpture giving a dull, sericeous appearance. The anterior femora in the male are swollen.

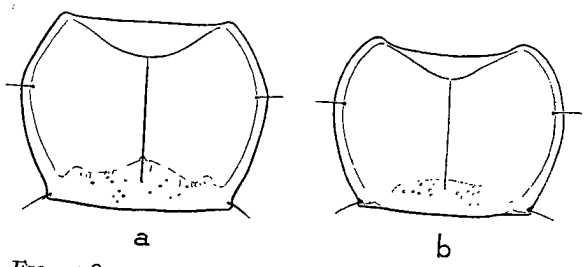

FIGURE 9.—**a**, *Mecyclothorax sobrinus;* **b**, *M. longulus.*

Maui: Haleakala, alt. 5,000 ft., March, April 1894, holotype and allotype (Perkins).

Mecyclothorax longulus Sharp, Fauna Hawaiiensis 3: 251, 1903 (fig. 9, *b*).

Length: 4.25 mm. *Colour:* head and disk of pronotum dark brown; elytra brown; margins of pronotum and elytra reddish brown; antennae brown with 4 basal segments testaceous. *Pronotum:* depressed, ratio 1.0: 1.37: 0.90: 0.95; base with a few obsolescent punctures. *Elytra:* depressed and parallel-sided; striae 1-6 distinctly impressed, more strongly so towards the apex; stria 7 faint in the basal half; striae unpunctured, intervals flat on disk becoming convex towards the apex; setiferous punctures set in shallow depressions. *Microsculpture:* coarse, isodiametric, covering whole body. Anterior femora swollen as in *M. sobrinus.*

Maui: Haleakala, alt. 5,000 ft., April 6, 1894, holotype male (Perkins).

Key to ovipennis Group

1. Pronotum strongly constricted at base; ratio maximum width: width at base = greater than 1.65; each side of pronotum with a long sinuation before posterior angle (fig. 10, *a-c*); shoulders of elytra completely rounded away; elytral striae usually unpunctured 2

   Pronotum more normally cordiform, ratio maximum width: width at base = less than 1.65; each side of pronotum with a short sinuation before posterior angle (figs. 10, *d-f*; 11, *a-f*); shoulders not entirely absent; elytral striae usually punctured 4

2(1). Microsculpture faint, transverse on elytra, absent from pronotum; elytral intervals 1-7 quite strongly convex, striae faintly punctured near base; small, length less than 3.75 mm.; pronotum as fig. 10, *a* (Molokai) ..... **molokiae** (Sharp)

   Microsculpture of both pronotum and elytra strong; intervals slightly convex; striae unpunctured, length more than 3.75 mm. (Maui, Molokai) 3

3(2). Elytra elliptical in outline, widest in the middle; pronotum as in fig. 10, *b* (Maui) ..... **ovipennis** Sharp

   Elytra widest behind the middle (fig. 10, *c*) (Molokai) ..... **exilis,** new species

4(1). Disk of elytra shining black, without microsculpture; posterior angles of pronotum rather obtuse (fig. 10, *d, e*); elytral striae 1-5 punctured in basal half (Maui) 5

   Disk of elytra brown or dark brown, with distinct microsculpture; posterior angles of pronotum square or even slightly acute 6

5(4). Length less than 3.6 mm.; ratio width of elytra: width of pronotum = about 1.40 (fig. 10, *d*) ..... **pusillus** Sharp

   Length more than 3.6 mm.; ratio width of elytra: width of pronotum = about 1.60 (fig. 10, *e*) ..... **subconstrictus** Sharp

6(4). Length more than 4.5 mm.; greatest width of pronotum more than 1.2 mm. 7

   Length less than 4.5 mm.; greatest width of pronotum less than 1.1 mm. 8

7(6). Length about 5.5 mm.; disk of pronotum with distinct microsculpture (Molokai) ..... **occultus** Sharp

   Length about 4.6 mm.; disk of pronotum shining, without microsculpture (Hawaii) (fig. 10, *f*) ..... **proximus,** new species

8(6). Elytral striae unpunctured, or at most with faint irregular punctures on striae 1-4 in basal half 9

   Elytral striae 1-5 or 1-6 distinctly and regularly punctured in basal half 12

9(8). Microsculpture of elytra strongly transverse (Maui) ..... **cordaticollis** (Blackburn)

   Microsculpture of elytra isodiametric 10

10(9). Pronotum with two setiferous punctures on each side of pronotum; posterior angles of pronotum rectangular (fig. 11, *a*); ratio greatest width: length of pronotum = 1.17-1.22 (Maui) ..... **laetus** Sharp

Pronotum with one setiferous puncture (anterior) on each side of pronotum; posterior angles of pronotum sometimes slightly acute, recurved (Maui, Hawaii) 11

11(10). Length 4.25-4.50 mm.; pronotum ratio greatest width : length = 1.17-1.20; inner elytral striae usually faintly punctured; posterior angles of pronotum usually slightly recurved and acute (fig. 11, *b*) (Hawaii) ..... **gracilis** (Sharp)

Length 3.5-4.1 mm.; pronotum ratio greatest width : length = 1.26-1.28; elytral striae unpunctured; posterior angles of pronotum square (Maui) (fig. 11, *c*) ..... **apicalis** Sharp

12(8). Elytra with distinct shoulders, rather parallel-sided, ratio length of elytra : maximum width more than 1.50 (fig. 10, *d*) (Maui) 13

Elytra with shoulders less distinct (fig. 11, *f*); sides not noticeably parallel, ratio length of elytra : maximum width less than 1.45 (Maui, Hawaii) 14

13(12). Length less than 3.7 mm.; elytra three times as long as pronotum; pronotum ratio 1.0 : 1.40 : 0.95 : 1.25 (fig. 11, *d*) ..... **nubicola** (Blackburn)

Length over 4.0 mm.; elytra at most 2.7 times length of pronotum; pronotum ratio 1.0 : 1.50 : 1.0 : 1.25 (fig. 10, *d*) ..... **pusillus** Sharp

14(12). Pronotum more transverse, ratio maximum width : length = about 1.30; elytral intervals flat or slightly convex; sides of pronotum with a short sinuation before posterior angles (fig. 11, *e*) (Maui) ..... **rusticus** Sharp

Pronotum less transverse, ratio maximum width : length = about 1.25; elytral intervals 1-5 distinctly convex in basal half; sides of pronotum with a longer sinuation before posterior angles (fig. 11, *f*) (Hawaii) ..... **konanus** Sharp

Mecyclothorax molokiae (Sharp) (fig. 10, *a*).

Thriscothorax molokiae Sharp, Fauna Hawaiiensis 3 : 260, 1903.

Length: 3.25-3.50 mm. *Colour:* head, pronotum, and elytra dark brown, sometimes aeneous; margins of pronotum and elytra, apical half of sutural interval, and apices of elytra reddish brown to testaceous; antennae brown, 3.5 basal segments testaceous; legs testaceous; epipleurae reddish brown or testaceous, ventral surface dark brown. *Pronotum:* a few obsolescent punctures at base; ratio 1.0 : 1.70 : 1.10 : 1.45. *Elytra:* unusually convex, with striae 1-6 quite strongly impressed and faintly punctured; stria 7 fainter; striae 2-7 faint at base; intervals distinctly convex. *Microsculpture:* faint, transverse, on head and elytra; absent from pronotum.

Molokai: alt. 4,000 ft., June 15, 1893, May 1896, holotype female and two paratypes, three other examples (Perkins).

Mecyclothorax ovipennis Sharp, Fauna Hawaiiensis 3 : 250, pl. 7, fig. 6, 1903 (fig. 10, *b*).

Length: 3.6-4.6 mm. *Colour:* head, disk of pronotum, and elytra dark brown or black; elytra sometimes with a metallic aeneous or greenish reflection; all margins of pronotum reddish or testaceous like margins and apices of elytra;

ventral surface dark brown; antennae dark brown with 3.5 basal segments testaceous; legs testaceous. *Pronotum:* as in *M. oculatus;* ratio 1.0 : 1.60 : 1.10 : 1.40; posterior angles sharp, slightly acute. *Elytra:* elliptical, widest in middle; scutellar striole and striae 1 and 2 distinctly impressed, more strongly so towards apex; striae 3-7 impressed but fainter towards the outside and apex; stria 7 is very faint; all striae unpunctured. *Microsculpture:* faint, isodiametric on head and pronotum; distinct, isodiametric on elytra.

Maui: Haleakala, alt. 4,000-6,000 ft., March 1894, holotype female and 43 paratypes (Perkins).

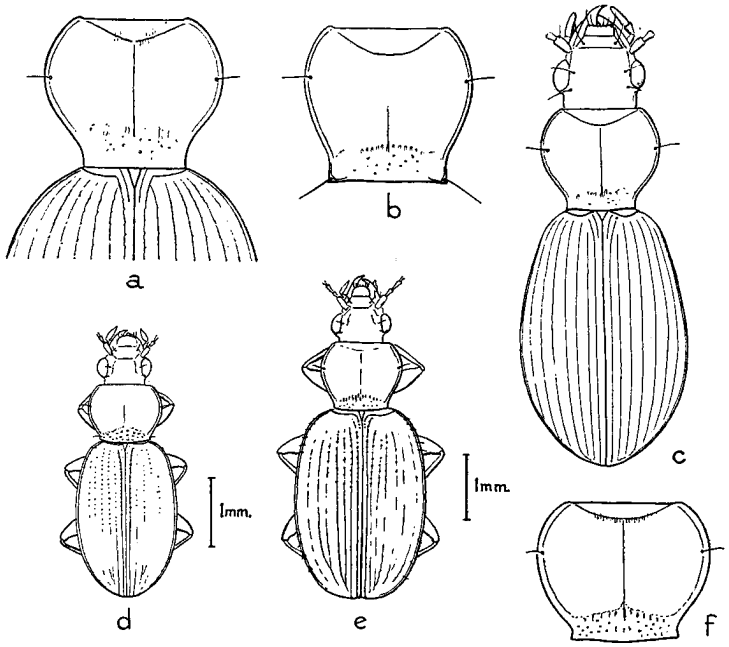

FIGURE 10.—**a,** *Mecyclothorax molokiae;* **b,** *M. ovipennis;* **c,** *M. exilis;* **d,** *M. pusillus;* **e,** *M. subconstrictus;* **f,** *M. proximus.*

Mecyclothorax exilis, new species (fig. 10, *c*).

Length: 4.0 mm. *Colour:* head and pronotum dark brown, elytra black, slightly aeneous, margins of pronotum and elytra reddish yellow, becoming yellow at apex of elytra; apical half of sutural interval reddish to yellow; epipleurae testaceous; ventral surface dark brown, sides of abdominal sternites yellowish; legs testaceous; antennae brown with 3.5 basal segments testaceous. *Head:* normal. *Pronotum:* strongly constricted towards base; ratio 1.0 : 1.70 : 1.15 : 1.45; lateral margins distinctly explanate and reflexed; anterior setiferous punctures alone are present; base with a few faint punctures and longitudinal strigae. *Elytra:* as in fig. 10, *c,* widest behind middle, shoulders rounded off; striae distinctly impressed, becoming fainter towards the outside and apex; striae quite

unpunctured except scutellar striole which has three or four punctures; intervals distinctly convex. *Microsculpture:* distinct, isodiametric on head and elytra; moderately transverse on disk of pronotum, isodiametric at margins.

Molokai: Molokai mountains, alt. 4,500 ft., Sept. 11, 1893, holotype male only (Perkins).

M. exilis is closely related to *M. ovipennis* and *M. molokiae.* It differs from both species in having the elytra ovoid in outline, that is, widest behind the middle; the elytra in *M. exilis* are also much less convex.

Mecyclothorax pusillus Sharp, Fauna Hawaiiensis 3: 243, pl. 7, fig. 4, 1903. (See figure 10, *d.*)

Length: 3.5-3.6 mm. *Colour:* dark brown, usually black on disk of elytra; margins and apices of elytra paler; legs and antennae testaceous. *Pronotum:* with lateral margins narrowly reflexed, posterior angles sharp but slightly obtuse, base with a few fine punctures and with or without longitudinal strigae; ratio 1.0: 1.50: 1.05: 1.25. *Elytra:* as in *M. nubicolæ* but shorter, less than 2.6 times as long as pronotum. *Microsculpture:* faint, obsolescent.

Maui: Haleakala, alt. 9,500-10,000 ft., April 1894, holotype male and 13 examples (Perkins).

Mecyclothorax subconstrictus (Sharp) (fig. 10, *e*).

Thriscothorax subconstrictus Sharp, Fauna Hawaiiensis 3: 259, 1903.

Length: 3.6-4.3 mm. *Colour:* head, pronotum, and elytra dark brown to black; extreme lateral and apical margins of elytra reddish brown; epipleurae reddish brown; ventral surface black; antennae and legs uniform testaceous. *Pronotum:* with lateral margins distinctly explanate and reflexed; ratio 1.0: 1.65: 1.05: 1.40; posterior angles sharp and slightly obtuse; base marked by a few punctures. *Elytra:* striae slightly impressed and distinctly punctured on disk; striae 1-4 and 7 more strongly impressed near apex; stria 7 otherwise faint, like striae 5 and 6; only stria 1 reaches base; intervals quite flat. *Microsculpture:* absent; surface shining.

Maui: Haleakala, alt. 9,500-10,000 ft., April 1894, holotype male and 39 paratypes (Perkins).

Mecyclothorax occultus Sharp, Fauna Hawaiiensis 3: 256, 1903.

Length: 5.5 mm. *Colour:* head, pronotum, and elytra brown with a marked purplish sheen, margins and apices of elytra brown; epipleurae testaceous; ventral surface dark brown with sides of abdominal sternites testaceous; antennae brown with three basal segments paler; legs testaceous. *Pronotum:* depressed; base with a few obsolete punctures connected by longitudinal strigae; no punctures on the outsides of lateral depressions; ratio 1.0: 1.55: 1.0: 1.20. *Elytra:* depressed; striae 1-7 distinctly impressed and faintly punctured; striae 5 and 6

becoming faint at apex and base; stria 7 fainter throughout than striae 1-6; intervals flat, becoming moderately convex near apex. Anterior femora swollen. *Microsculpture:* strong, isodiametric on sides of pronotum and on elytra; faint on disk of pronotum and absent from the head.

Molokai: alt. 4,500 ft., June 18, 1893, holotype male only (Perkins).

Mecyclothorax proximus, new species (fig. 10, *f*).

Length: 4.6 mm. *Colour:* dark reddish brown with margins of elytra slightly paler; antennae and legs testaceous. *Pronotum:* ratio 1.0 : 1.60 : 1.05 : 1.35; posterior angles sharp and acute without setiferous punctures, margins reflexed; anterior setiferous punctures present; median groove fine, scarcely impressed; anterior transverse groove moderately impressed and marked by longitudinal strigae; base with fine punctures and longitudinal strigae. *Elytra:* rather quadrate and depressed, shoulders distinct; striae 1-5 distinctly impressed on disk, more strongly impressed towards apex; striae 1-5 faintly punctured in basal half; striae 2 and 3 faint near base; striae 6 and 7 faint but stria 7 clearly impressed at extreme apex of elytra. *Microsculpture:* absent from disk of pronotum which is smooth and shining; base between punctures with strong microsculpture; distinct, isodiametric on elytra.

Hawaii: Kona, alt. 4,000 ft., September 1892, holotype male only (Perkins).

This example was in the series identified as *M. gracilis* in the British Museum. It resembles *M. gracilis* in colour and sculpture and in the acute posterior angles of the pronotum, but differs in being more transverse and in having the pronotum more strongly constricted at the base. It is also more closely allied to *M. laetus* which, however, has the posterior angles of the pronotum square and in the shape of the pronotum.

Mecyclothorax cordaticollis (Blackburn).

Cyclothorax cordaticollis Blackburn, Ent. Mo. Mag. **15**: 156, 1878.
Thriscothorax cordaticollis, Sharp, Fauna Hawaiiensis **3**: 259, 1903.
Acupalpus biseriatus Karsch, Berlin. Ent. Zeitschr. **25**: 2, pl. 1, fig. 1, 1881.
Thriscothorax modestus Sharp, Fauna Hawaiiensis **3**: 259, 1903, new synonymy.

Length: 4.0 mm. *Colour:* head, pronotum, and elytra dark brown to black, with margins of pronotum and elytra reddish brown; sutural intervals reddish; epipleurae testaceous; ventral surface dark brown; antennae brown with 3.5 basal segments testaceous; legs testaceous. *Pronotum:* with marked sinuation before

posterior angles, which are square and sharp; base with a number of small distinct punctures which are irregularly distributed; ratio 1.0:1.55:1.0:1.25. *Elytra:* convex with steep sides; shoulders not completely rounded off; scutellar striole and striae 1-6 quite strongly impressed; stria 1 with a few faint punctures near base; striae 2-6 faint near base; stria 7 faint throughout; intervals convex. *Microsculpture:* faint, isodiametric on head; absent from pronotum; distinct, slightly transverse on elytra.

Maui: Haleakala, holotype female and five examples (Blackburn); Haleakala, alt. 4,000-5,000 ft., March and April 1894, three examples (holotype and two paratypes of *M. modestus*) (Perkins).

Sharp observes that the pronotum of *M. modestus* is less constricted at the base than that of *M. cordaticollis*. Measurement of types shows that the ratio of greatest width: base width in the former is 1.58 and in the latter 1.55. This difference is within the limits of variation. The ratio for the paratype of *M. modestus* is 1.56.

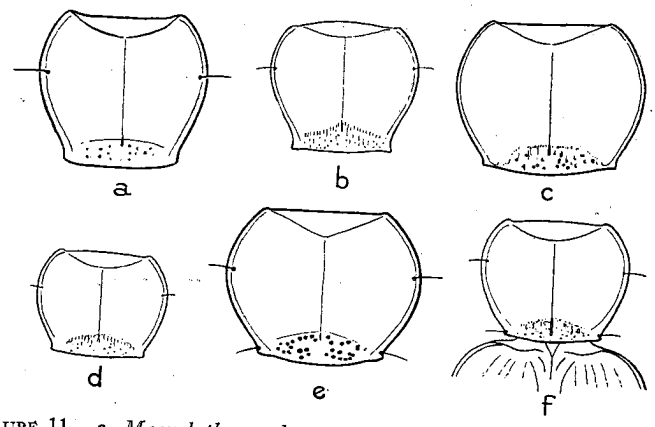

FIGURE 11.—**a**, *Mecyclothorax laetus;* **b**, *M. gracilis;* **c**, *M. apicalis;* **d**, *M. nubicola;* **e**, *M. rusticus;* **f**, *M. konanus.*

Mecyclothorax laetus (Blackburn) (fig. 11, *a*).

Cyclothorax laetus Blackburn, Ent. Mo. Mag. **17**: 228, 1881.

Thriscothorax laetus (Blackburn), Sharp, Fauna Hawaiiensis **3**: 262, 1903.

Mecyclothorax laetus Sharp, Fauna Hawaiiensis **3**: 247, 1903.

Length: 3.7-4.3 mm. *Colour:* dark reddish brown with margins of elytra slightly paler; antennae and legs testaceous. *Pronotum:* lateral margins narrowly reflexed, with or without setiferous punctures at posterior angles; base with a few fine punctures and longitudinal strigae; median longitudinal groove fine, scarcely impressed; anterior transverse groove almost entirely obliterated;

disk smooth and shining; posterior angles sharp and square; ratio 1.0 : 1.55 : 1.05 : 1.30. *Elytra:* with shoulders visible; striae 1-7 impressed and faintly punctured in basal half; striae becoming fainter from 1-7; stria 7 very faint; striae 1-4 and 7 more strongly impressed towards apex; intervals quite flat throughout. *Microsculpture:* absent from disk of pronotum; distinct, isodiametric on elytra.

Maui: Haleakala, alt. 4,000-5,000 ft., holotype male and 23 examples (Perkins).

Mecyclothorax gracilis (Sharp) (fig. 11, *b*).

Thriscothorax gracilis Sharp, Fauna Hawaiiensis 3 : 258, 1903.

Length: 4.25-4.50 mm. *Colour:* head, pronotum, and elytra dark brown, elytra usually with a slight purple sheen; margins of pronotum and elytra and sutural interval reddish; epipleurae testaceous; ventral surface dark brown; antennae brown with 3.5 basal segments testaceous; legs testaceous. *Head:* with eyes prominent. *Pronotum:* characterised by the strong sinuation in front of posterior angles which are acute and recurved; base with a few obsolete punctures and longitudinal strigae; ratio 1.0 : 1.50 : 1.0 : 1.25. *Elytra:* shoulders prominent; striae 1 and 2 strongly impressed; other striae fainter towards outside; striae 6 and 7 very faint; puncturations of striae rather variable; in the holotype only stria 1 shows any trace of puncturation; some individuals show punctures on striae 1-4 in basal halves; all striae except the first are faint near base. *Microsculpture:* faint or absent on head and pronotum; distinct, isodiametric on elytra.

Hawaii: Kona, alt. 4,000 ft., September 1892, holotype male and eight paratypes (Perkins).

Mecyclothorax apicalis Sharp, Fauna Hawaiiensis 3 : 264, pl. 7, fig. 12, 1903. (See figure 11, *c*.)

Length: 3.5-4.1 mm. *Colour:* black, with extreme margins of pronotum and elytra reddish; ventral surface black, epipleurae reddish brown; legs and antennae testaceous. *Pronotum:* with narrow lateral margins only slightly reflexed; anterior transverse groove distinct; median line fine, slightly impressed; base with a number of obsolete punctures and longitudinal strigae; ratio 1.0 : 1.45 : 1.0 : 1.15. *Elytra:* as in *M. laetus* but rather more depressed. *Microsculpture:* head and disk of pronotum with faint isodiametric microsculpture; strong at base between punctures; distinct, isodiametric on elytra.

Maui: Haleakala, alt. 10,000 ft., April 1894, holotype female and 15 paratypes (Perkins).

This species is close to *M. laetus* but differs in colour and in the more transverse pronotum.

Mecyclothorax nubicola (Blackburn) (fig. 11, *d*).

Cyclothorax nubicola Blackburn, Ent. Mo. Mag. **15** : 156, 1878.

Mecyclothorax nubicola, Sharp, Fauna Hawaiiensis 3: 244, 1903.
Mecyclothorax rupicola Blackburn and Sharp, Roy. Dublin Soc., Trans. 2(3): 216, 276, 1885, error for *nubicola.*

Length: 4.1 mm. *Colour:* dark reddish brown, extreme margins, sutural interval and apices of elytra reddish, antennae and legs testaceous. *Pronotum:* with transverse and median grooves faint; base roughened by fine punctures and longitudinal strigae; ratio 1.0: 1.40: 0.95: 1.10. *Elytra:* with shoulders distinct, noticeably parallel-sided, relatively long, 3.1 times as long as pronotum; striae 1-6 distinctly punctured in basal half but not or slightly impressed; striae 1-4 becoming more strongly impressed and unpunctured towards apex; stria 7 completely absent; striae 2-6 disappear just before reaching base; intervals flat. *Microsculpture:* absent on head and pronotum; faint, isodiametric on elytra.

Maui: Haleakala, holotype female only (Blackburn).

Mecyclothorax rusticus Sharp, Fauna Hawaiiensis 3: 244, 1903 (fig. 11, *e*).

Length: 3.8-4.4 mm. *Colour:* dark brown to black, margins of pronotum and elytra dark reddish brown; legs and antennae testaceous. *Pronotum:* ratio 1.0: 1.50: 1.0: 1.20; lateral margins distinctly reflexed. *Elytra:* with shoulders distinct, rather broad (length = 1.45 × breadth) and depressed; striae 1-5 distinctly impressed and regularly punctured in basal half; striae 6 and 7 usually absent but stria 6 sometimes represented by two or three punctures; striae 1-5 more strongly impressed at apex; intervals flat or slightly convex. *Microsculpture:* absent; head, pronotum, and elytra shining.

Maui: Haleakala, alt. 9,500-10,000 ft., about the crater, April and October 1894, holotype male and 52 examples (Perkins).

Mecyclothorax konanus Sharp, Fauna Hawaiiensis 3: 248, 1903 (fig. 11, *f*).

Length: 4.0 mm. *Colour:* head, pronotum, and elytra dark reddish brown, margins and apices of elytra paler, epipleurae testaceous; ventral surface reddish brown; antennae brown, 3.5 basal segments testaceous; legs testaceous. *Pronotum:* median groove fine, slightly impressed, becoming wider and deeper at base; base with a few coarse punctures; ratio 1.0: 1.50: 1.0: 1.23; sides slightly sinuate before posterior angles which are square and sharp. *Elytra:* striae 1-5 strongly impressed, distinctly punctured in their basal halves; striae 6 and 7 faint; striae 2-7 only faintly impressed close to base; intervals convex. *Microsculpture:* head and pronotum faint, elytra distinct, transverse.

Hawaii: Kilauea, August 1895, holotype male and allotype (Perkins); two other examples which were identified by Blackburn as *M. vulcanus.*

Key to argutor Group

1. Elytra with strong microsculpture; posterior angles of pronotum square; length 5.25 mm. (Molokai) ..... **platysminus** (Sharp)
   Elytra shining, without microsculpture; posterior angles of pronotum distinctly recurved (fig. 12, *a*, *b*) 2
2(1). Length about 5.25 mm.; sides of pronotum less sharply sinuate (fig. 12, *a*), pronotum ratio greatest width: length = 1.15; colour of elytra black, with margins and suture dark reddish brown; head and pronotum dark reddish brown; longitudinal groove of pronotum does not reach base (Molokai) ..... **quadratus,** new species
   Length about 5.0 mm.; sides of pronotum more sharply sinuate (fig. 12, *b*); pronotum ratio greatest width: length = 1.19; colour uniform reddish brown (possibly immature); longitudinal groove of pronotum reaches base (Molokai) ..... **argutor** (Sharp)

Mecyclothorax platysminus (Sharp).

Thriscothorax platysminus Sharp, Fauna Hawaiiensis 3: 268, pl. 7, fig. 15, 1903.

Length: 5.25 mm. *Colour:* head, pronotum, and elytra uniform dark reddish brown; legs and antennae testaceous; ventral surface dark brown; the colouring may be rather immature. *Head:* with eyes reduced as in *M. argutor* and *M. quadratus*. *Pronotum:* with fine median groove which becomes wide and deep at base; base strongly and coarsely punctured near middle; lateral depressions practically free of punctures, smooth; ratio 1.0: 1.28: 0.87: 1.05; pronotum and elytra depressed. *Elytra:* with prominent shoulders. Striae as in *M. occultus* but striae 5 and 6 not faint at base, and intervals slightly convex. *Microsculpture:* absent from head, faint and transverse on pronotum, distinct, isodiametric on elytra.

Molokai: alt. about 4,000 ft., June 1896, holotype female only (Perkins).

Mecyclothorax quadratus, new species (fig. 12, *a*).

Length: 5.25 mm. *Colour:* head, pronotum, and elytra shining black; reflexed margins of elytra and sutural interval dark reddish brown; epipleurae dark reddish brown; ventral surface black; legs and antennae uniform brown. *Head:* small, with eyes reduced. *Pronotum:* with median groove represented by a fine impressed line not reaching base; middle of base occupied by a few punctures and small longitudinal strigae; outer quarters of base (lateral depressions) smooth and unpunctured; ratio, 1.0: 1.23: 0.8: 1.05. *Elytra:* as in *M. argutor,* but with all intervals quite flat throughout their length and shining, without trace of microsculpture.

Molokai: alt. about 4,000 ft., June 1896, holotype male only (Perkins).

This specimen was one of the two described as *M. platysminus* by Sharp. It is, of course, closely allied to that species but differs from the specimen marked "Type" by Sharp in the slightly less transverse

pronotum, the less strongly punctured base of the pronotum, and the brilliant shining surface of the elytra, without trace of microsculpture. The microsculpture of *M. platysminus* is quite obvious. *M. quadratus* is also close to *M. argutor.*

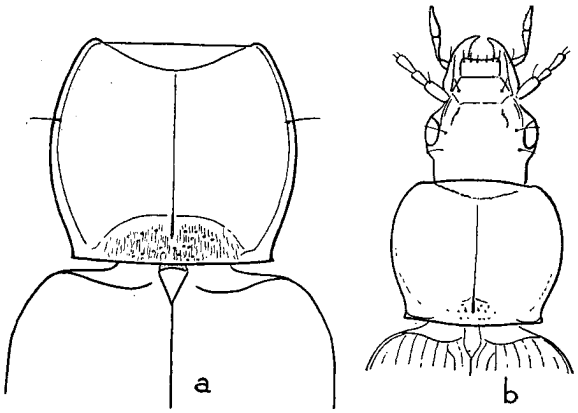

FIGURE 12.—**a,** *Mecyclothorax quadratus;* **b,** *M. argutor.*

Mecyclothorax argutor (Sharp) (fig. 12, *b*).

Thriscothorax argutor Sharp, Fauna Hawaiiensis 3 : 268, 1903.

Length: 4.75 mm. *Colour:* head, pronotum, and elytra dark reddish brown; margins of elytra and epipleurae testaceous; ventral surface dark brown; legs and antennae testaceous. *Head:* with eyes less prominent than usual in the genus. *Pronotum:* ratio 1.0 : 1.25 : 0.8 : 1.05; median longitudinal groove reaches base; base with a few small punctures on either side of midline; lateral depression smooth and free from punctures; pronotum and elytra depressed. *Elytra:* shoulders prominent; scutellar striole impressed and marked by 3 punctures; striae 1-6 impressed and regularly punctured, punctures becoming fainter towards apex; stria 7 faint; intervals slightly convex. *Microsculpture:* absent from head and pronotum; that of elytra faint, isodiametric.

Molokai: alt. 4,000 ft., June 1896, holotype female only (Perkins).

Key to microps Group

1. Sides of pronotum not, or only very slightly, sinuate immediately in front of posterior angles which are, therefore, toothlike (fig. 13, *a, b*) (Maui) 2

   Sides of pronotum with a relatively long sinuation in front of posterior angles which are distinct, not toothlike (fig. 13, *c, d*) (Maui, Molokai) 3

2(1). Pronotum uniformly reddish brown (though possibly immature), more elongate; ratio greatest width: length = 1.20; 7th elytral stria faint and unpunctured (Maui) (fig. 13, *a*).....**minor,** new species

Pronotum dark brown or black, with reddish margins and base; more transverse; ratio greatest width: length = 1.25; 7th elytral stria distinctly impressed though fainter than striae 1-6, faintly punctured (Maui) (fig. 13, *b*).....**angusticollis** (Blackburn)

3(1). Pronotum less constricted at base (fig. 13, *c*); ratio greatest width: width at base = 1.45 (Molokai).....**microps** Sharp

Pronotum more constricted at base (fig. 13, *d*); ratio greatest width: width at base = 1.50 (Maui).....**lahainae,** new species

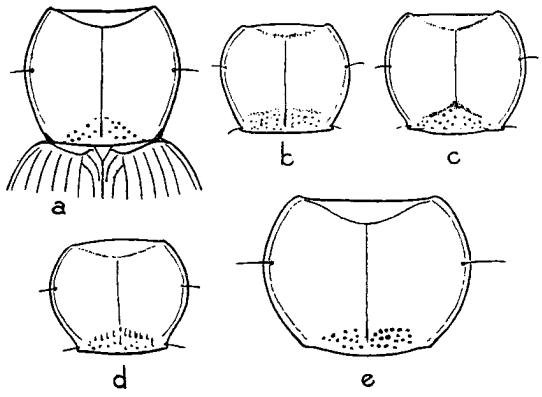

FIGURE 13.—**a,** *Mecyclothorax minor;* **b,** *M. angusticollis;* **c,** *M. microps;* **d,** *M. lahainae;* **e,** *M. brevis.*

Mecyclothorax minor, new species (fig. 13, *a*).

Length: 3.5 mm. *Colour:* head and pronotum dark reddish brown, elytra with disk dark brown and lateral and sutural margins yellowish; legs and antennae uniform testaceous. *Head:* with eyes reduced, not raised above surface of head. *Pronotum:* ratio 1.0: 1.32: 0.90: 1.13; anterior transverse groove strongly impressed; median line fine and faintly impressed; base with about 12 distinct punctures on each side and a number of longitudinal strigae; two setiferous punctures on each side. *Elytra:* shoulders distinct; striae 1-6 distinct and faintly punctured in basal half; stria 7 fainter, unpunctured; intervals slightly convex. *Microsculpture:* faint, isodiametric on head; distinct, transverse on pronotum and elytra.

Maui: Haleakala, alt. 5,000 ft., May 1896, holotype only (Perkins).

M. minor is not closely related to *M. angusticollis,* from which it is distinguished by its colour and the less transverse pronotum.

Mecyclothorax angusticollis (Blackburn) (fig. 13, *b*).

Cyclothorax angusticollis Blackburn, Ent. Mo. Mag. **15**: 156, 1878.
Mecyclothorax angusticollis, Sharp, Fauna Hawaiiensis **3**: 246, 1903.

Length: 3.3-3.6 mm. *Colour:* head, pronotum, and elytra dark brown or black; lateral margins and base of pronotum reddish brown; base, lateral margins, and apices of elytra reddish brown; ventral surface dark brown; sides of abdomen paler; antennae brown with 3.5 basal segments testaceous; legs testaceous. *Pronotum:* with base marked by longitudinal strigae and a number of obsolescent punctures; ratio 1.0: 1.40: 0.90: 1.15. *Elytra:* with all striae impressed throughout their length and punctured in basal half; all intervals distinctly convex throughout. *Microsculpture:* of head distinct, isodiametric, middle of frons often roughened; microsculpture of pronotum and elytra faint, isodiametric.

Maui: Haleakala, holotype male and one paratype (Blackburn); Haleakala, alt. 4,000-5,000 ft., under stones and in moss, March to May 1894 and 1896, 25 examples (Perkins).

Mecyclothorax microps Sharp, Fauna Hawaiiensis **3**: 245, 1903 (fig. 13, *c*).

Length: 4.0 mm. *Colour:* head, pronotum, and elytra reddish brown, margins and apices of elytra, and sutural interval paler; epipleurae testaceous; ventral surface brown; antennae and legs testaceous. *Head:* eyes small, though more prominent than in *M. minor;* pronotum as in fig. 13, *c,* sides not sinuate above posterior angles, which appear as sharp teeth; base with a few widely separated, coarse punctures; ratio 1.0: 1.45: 0.94: 1.29. *Elytra:* rather flat on disk, shoulders not entirely rounded off; intervals 1-6 distinctly impressed and quite strongly punctured in basal half; stria 7 faint, almost obliterated; striae 4, 5, and 6 faint near the base; intervals 1-4 distinctly convex, outer intervals less convex. *Microsculpture:* faint on head; absent on pronotum; faint and transverse on elytra.

Molokai: Kalawao, Aug. 1, 1893, holotype female only (Perkins).

Mecyclothorax lahainae, new species (fig. 13, *d*).

Length: 3.7 mm. *Colour:* reddish brown with margins of elytra paler; ventral surface reddish brown; epipleurae, legs and antennae testaceous. *Head:* eyes reduced, only slightly projecting. *Pronotum:* as in *M. laetus* but ratio 1.0: 1.51: 1.0: 1.21; two setiferous punctures on each side. *Elytra:* as in *M. laetus. Microsculpture:* faint, isodiametric on head and elytra, absent from disk of pronotum.

Maui: Lahaina, alt. 3,000 ft., December 1896, holotype female only (Perkins).

M. lahainae is quite closely related to *M. laetus* and *M. apicalis* but can be distinguished from both by the reduced eyes. The pronotum is

Mecyclothorax perkinsi (Sharp) (fig. 14, *a*).

Thriscothorax perkinsi Sharp, Fauna Hawaiiensis 3 : 265, pl. 7, fig. 13, 1903.

Length: 4.2-4.6 mm. *Colour:* head and pronotum dark brown, elytra dark reddish brown, margins of pronotum and elytra slightly paler; ventral surface dark brown or black; tibiae and tarsi brown, femora testaceous but brownish at base; antennae with segments 1 and 3 testaceous, 2, and 4-11 dark brown. *Head:* middle of frons roughened by stronger microsculpture. *Pronotum:* anterior transverse groove strong, marked by longitudinal strigae; median line fine, impressed, distinct; disk marked by irregular transverse wrinkles; base strongly punctured, shape varies considerably; ratio for holotype 1.0 : 1.76 : 1.15 : 1.39, and posterior angles slightly recurved, sharp and acute; ratio varying from 1.0 : 1.80 : 1.18 : 1.46 in a small example to 1.0 : 1.67 : 0.95 : 1.30 in a large example; posterior angles always sharp-pointed, acute or obtuse. *Elytra:* depressed, shoulders prominent; striae entirely unpunctured, strongly impressed but broken and irregular; intervals 2 and 4 or 2 and 5 united by a bridge across intervals 3 or 3 and 4 in basal quarter; striae 3-6 much broken and intervals irregularly fused just behind mid point; intervals strongly convex. *Microsculpture:* distinct, isodiametric on head and pronotum; strongly transverse on elytra.

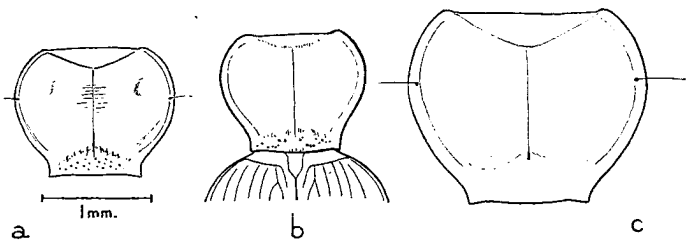

FIGURE 14.—**a,** *Mecyclothorax perkinsi;* **b,** *M. perstriatus;* **c,** *M. constrictus.*

Molokai: alt. 4,000-5,000 ft., June 15 to Sept. 13, 1893, holotype female and six paratypes (Perkins).

Mecyclothorax perstriatus Sharp, Fauna Hawaiiensis 3 : 260, pl. 7, fig. 8, 1903. (See figure 14, *b*.)

Length: 3.6-4.2 mm. *Colour:* as in *M. constrictus* but darker throughout; elytra black on disk. *Pronotum:* ratio 1.0 : 1.60 : 1.0 : 1.30. *Elytra:* as in *M. constrictus. Microsculpture:* distinct, isodiametric on head and apex and base of pronotum; faint, transverse on disk of pronotum; distinct, transverse on elytra.

Maui: Haleakala, alt. 4,000 ft., May 1896, holotype and four examples (Perkins); Lahaina, alt. 3,000 ft., one example.

Key to obscuricornis Group

1. Pronotum unusually broad, ratio greatest width of elytra: greatest width of pronotum less than 1.40; sides of pronotum uniformly curved out from apex to base, with posterior angles toothlike (figs. 13, *b;* 14, *c*) 2
   Pronotum of normal width, ratio 1.40-1.50; sides of pronotum straight or smoothly sinuate in front of posterior angles (fig. 15, *a*) (Maui) .. 3
2(1). Elytra with faint, strongly transverse microsculpture; eyes of normal convexity (Molokai) ..... **bicolor** Sharp
   Elytra with strong isodiametric microsculpture; eyes reduced, only slightly convex (Maui) (fig. 13, *b*) ..... **angusticollis** (Blackburn)
3(1). Size larger, length 3.2-3.8 mm.; head and pronotum with strong isodiametric microsculpture, that on elytra faint, transverse ..... **obscuricolor** (Blackburn)
   Size smaller, length less than 3.2 mm.; microsculpture of head and pronotum strong or faint, that of elytra very faint and isodiametric, or absent 4
4(3). Head and pronotum with strong isodiametric microsculpture; pronotum with strong transverse wrinkles (fig. 15, *b*); pronotum and elytra aeneous black, with broad yellow margins ..... **daptinus** Sharp
   Microsculpture of head distinct, isodiametric; that of pronotum obsolete, faint, surface smooth and shining; pronotum and elytra dark reddish brown with broad paler reddish margins .. **obscuricornis** Sharp

Mecyclothorax bicolor Sharp, Fauna Hawaiiensis 3: 246, 1903 (fig. 15, *a*).

Length: 3.2 mm. *Colour:* head and pronotum uniform reddish brown; basal sixth of elytra, lateral and apical margins and sutural interval reddish brown; remainder of elytra darker brown; antennae and legs testaceous. *Elytra:* with striae strongly impressed, unpunctured or with slight indications of punctures. *Microsculpture:* distinct, isodiametric on head, transverse on pronotum and elytra.

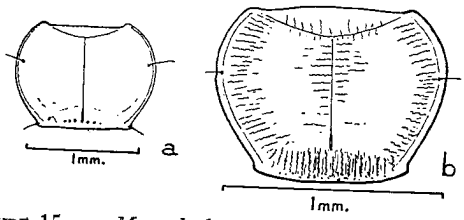

FIGURE 15.—**a**, *Mecyclothorax bicolor;* **b**, *M. daptinus.*

Molokai: alt. 4,000 ft., June 1896, holotype and paratype (Perkins).

Similar to *M. bradycellinus,* differing only in size, the presence of microsculpture, normally projecting eyes, and the fewer punctures at the base of the pronotum.

Mecyclothorax obscuricolor (Blackburn).

Cyclothorax obscuricolor Blackburn, Ent. Mo. Mag. **15**: 156, 1878.

Thriscothorax obscuricolor, Sharp, Fauna Hawaiiensis **3**: 266, 1903.

Length: 3.2-3.8 mm. *Colour:* dark brown, with all margins of pronotum and elytra reddish; sutural interval reddish; femora mainly testaceous, the proximal third dark brown, coxae and trochanters reddish; ventral surface dark brown; tibiae and tarsi pale brown, darker than femora; antennae with basal segment testaceous, remainder reddish brown. *Elytra:* striae strongly impressed, unpunctured, intervals moderately convex. *Microsculpture:* strong on head and pronotum, faint on elytra; that on head isodiametric; transverse on elytra.

Maui: Haleakala, alt. 4,000 ft., holotype and 10 examples (Blackburn, Perkins); Lahaina, alt. 3,000 ft., one example (Koebele).

Mecyclothorax daptinus Sharp, Fauna Hawaiiensis **3**: 249, 1903 (fig. 15, *b*).

Length: 2.8-3.2 mm. *Colour:* head, disk of pronotum and of elytra aeneous black; margins of pronotum, including base and apex, yellow; elytra with sutural interval reddish in basal half, becoming yellow towards apex; all intervals yellow at apex; interval 6 yellow at base, intervals 7 and 8 and the margins entirely yellow; ventral surface black; legs and epipleurae testaceous; antennae with basal 3.5 segments testaceous, remainder dark brown. *Pronotum:* sides straight in front of posterior angles which are obtuse and marked by a tooth; anterior transverse and median grooves moderately impressed; whole surface of pronotum covered with wrinkles which are mainly transverse; base roughened by longitudinal strigae; ratio 1.0 : 1.46 : 1.04 : 1.14 (holotype), varying to 1.0 : 1.53 : 1.07 : 1.25 in a large example. *Elytra:* with striae strongly impressed and unpunctured, intervals strongly convex. *Microsculpture:* strong, coarse, isodiametric on head; that of pronotum fainter and transverse; elytra shining, with microsculpture absent on disk, faint at sides.

Maui: Haleakala, alt. 5,000 ft., June 1894, holotype and 29 examples (Perkins).

Mecyclothorax obscuricornis Sharp, Fauna Hawaiiensis **3**: 245, 1903.

Length: 2.7-3.2 mm. *Colour:* head, pronotum, and elytra dark aeneous brown; margins and base of pronotum broadly reddish yellow; margins and apices of elytra and the greater part of intervals 7 and 8 yellow; base of elytra and apical half of sutural interval also yellowish; basal segment of antennae testaceous, remainder brown; legs uniformly testaceous. *Pronotum:* with a few coarse punctures at base. *Elytra:* striae strongly impressed with faint traces of puncturation in basal half; intervals distinctly convex. *Microsculpture:* strong, coarse, isodiametric on head; transverse on pronotum, stronger towards sides; isodiametric on elytra, stronger towards sides.

Maui: Haleakala, alt. 4,000-5,000 ft., May 1894, holotype and eight paratypes (Perkins).

Key to interruptus Group

1. Interval 6 irregular, interrupted by union of striae 5 and 6 (fig. 16, *a-c*); microsculpture of head and pronotum strong, isodiametric, surface dull 2
   Interval 6 regular, not interrupted; microsculpture faint and transverse, or absent, surface shining 3

2(1). Elytra abnormally long, 2.8 times as long as pronotum (fig. 16, *a, b*); microsculpture of elytra strong, isodiametric; elytral intervals slightly convex (Maui) ..... **irregularis,** new species
   Elytra of normal length, 2.4 times as long as pronotum (fig. 16, *c*); microsculpture of elytra faint, strongly transverse; elytral intervals strongly convex (Molokai) ..... **incompositus,** new name

3(1). Elytral striae less strongly impressed near base than on disk; pronotum with strong, slightly transverse microsculpture; microsculpture of elytra distinct, strongly transverse; pronotum without setiferous punctures at posterior angles; colour uniform dark aeneous brown (Molokai) ..... **bradyderus** Sharp
   Elytral striae uniformly impressed to basal margin; pronotum and elytra with microsculpture distinct and strongly transverse, or absent; pronotum with a setiferous puncture at each posterior angle (Maui, Molokai) 4

4(3). Size smaller, length 4.2-4.8 mm.; pronotum more constricted at base, ratio greatest width : width at base = 1.55 (fig. 16, *d*); head, pronotum and elytra without microsculpture, eyes reduced, almost flat (Molokai) ..... **bradycellinus** Sharp
   Size larger, length over 4.8 mm.; pronotum less constricted at base, ratio greatest width : width at base = 1.38; head with distinct isodiametric microsculpture; pronotum and elytra with distinct transverse microsculpture; eyes normal, convex (Maui) 5

5(4). Elytral interval 4 interrupted ..... **interruptus** Sharp
   Elytral interval 4 not interrupted ..... **interruptus** var. **integer** Sharp

Mecyclothorax irregularis, new species (fig. 16, *a, b*).

Length: 4.8 mm. *Colour:* head dark brown or black, yellowish around eyes; pronotum yellow, brownish at apex and base; elytra yellowish brown, darker near suture and base; ventral surface of head and thorax dark brown, abdomen yellow, epipleurae yellow; tibiae and tarsi brown, femora testaceous; antennae uniformly brown. *Pronotum:* median line more strongly impressed than anterior transverse groove; latter marked by longitudinal strigae; sides without sinuation, curved outwards to posterior angles which are marked by a tooth; two setiferous punctures on each side; base marked by a number of rather faint punctures which do not extend into the lateral depressions; ratio 1.0 : 1.34 : 1.02 : 1.04. *Elytra:* very depressed, 2.8 times as long as the pronotum, shoulders prominent, strigae strongly impressed, intervals only slightly convex; interval 3 constricted at setiferous punctures; intervals 3 and 5 united by bridges across the 4th at

two points about 0.25 of length of elytra from base and apex; similar fusions incipient between intervals 5 and 7. *Microsculpture:* strong, isodiametric, on head, pronotum, and elytra.

Maui: alt. about 4,000 ft., holotype male only (Blackburn).

This example was one of the original series of *M. multipunctatus.*

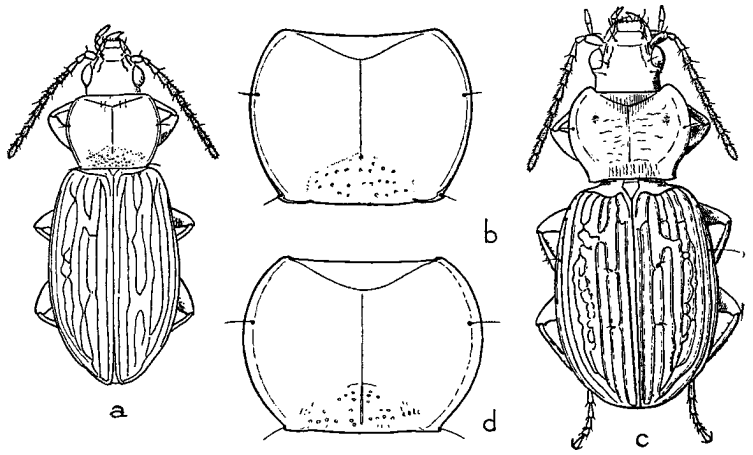

FIGURE 16.—**a, b,** *Mecyclothorax irregularis;* **c,** *M. incompositus;* **d,** *M. bradycellinus.*

Mecyclothorax incompositus, new name for *Thriscothorax laticollis* Sharp, Fauna Hawaiiensis 3: 267, 1903 (not *Mecyclothorax laticollis* Sloane 1899) (fig. 16, *c*).

Length: 4.8 mm. *Colour:* reddish brown, paler at margins of pronotum and elytra; ventral surface of head red, that of prothorax and abdomen black; epipleurae testaceous; antennae with basal segment testaceous; antennal segments 2 and 3 reddish and the remainder reddish at base and dark brown at apex; tibiae and tarsi brown, femora mainly testaceous but dark brown at base. *Pronotum:* strongly depressed, ratio 1.0: 1.43: 0.92: 1.10; anterior transverse and median grooves moderately and about equally strongly impressed; disk covered with irregular wrinkles; with an impression on each side at about 0.33 length of pronotum from apex and same distance from side; base marked by longitudinal strigae. *Elytra:* depressed, 2.4 times as long as pronotum; shoulders prominent; striae strongly impressed, unpunctured, intervals strongly convex; striae rather irregularly connected by cross-striae, especially in region of intervals 5, 6, and 7. *Microsculpture:* strong, isodiametric on head and pronotum, faint, transverse on elytra.

Molokai: Molokai mountains, alt. 3,500 ft., June 5, 1893, holotype only (Perkins).

Mecyclothorax bradyderus Sharp, Fauna Hawaiiensis **3**: 267, 1903.

Length: 4.0-4.5 mm. *Colour:* dark aeneous brown, margins of pronotum and elytra reddish; antennae with basal segment testaceous, remainder reddish brown; femora testaceous, tibiae and tarsi reddish brown. *Elytra:* with striae strongly impressed; intervals moderately convex; striae with faint traces of puncturation near base. *Microsculpture:* strong, isodiametric on head, transverse on pronotum and elytra.

Molokai: on the boggy plateau below the densest forest, alt. about 4,000 ft., June 1896, holotype, paratype, and one example (Perkins).

Mecyclothorax bradycellinus Sharp, Fauna Hawaiiensis **3**: 247, pl. 7, fig. 5, 1903. (See figure 16, *d.*)

Length: 4.2-4.5 mm. *Colour:* as in *M. bicolor* but with proximal ends of tibiae darker on outer side. *Head:* smooth, only slightly roughened in middle of frons. *Elytra:* shoulders more obvious than in *M. brevis;* striae strongly impressed, not punctured, or with slightest possible indication of puncturation; intervals distinctly convex. *Microsculpture:* absent, surface shining.

Molokai: alt. 4,000 ft., May 1896, holotype and paratype (Perkins).

Mecyclothorax interruptus Sharp, Fauna Hawaiiensis **3**: 252, 1903.
Mecyclothorax interruptus var. *dubius* Sharp, Fauna Hawaiiensis **3**: 252, 1903, new synonymy.

Length: 4.8-5.0 mm. *Colour:* dark reddish brown with purplish metallic reflection; margins and base of pronotum and elytra paler; antennae and legs testaceous. This species is closely allied to *M. bradycellinus* and *M. bicolor.* It differs from both in size, in the distinct purple sheen of the pronotum and elytra and in the interrupted 4th interval. *Microsculpture:* as in *M. bicolor.*

Maui: Haleakala, alt. 4,000 ft., May 1896, holotype, paratype, and holotype of variety *dubius* (Perkins).

Comparison of the types shows no justification for the separation of variety *dubius.* In this variety the 4th interval is said to be continuous, but in the type, the 4th interval is interrupted on the left side.

Mecyclothorax interruptus var. **integer** Sharp, Fauna Hawaiiensis **3**: 252, 1903.

Differs from the typical form only in the uninterrupted 4th intervals.

Maui: Haleakala, October 1896 (Perkins).

Key to robustus Group

1. Pronotum less strongly constricted at base, ratio maximum width: width at base = less than 1.30 (fig. 17, *a*); colour of head, pronotum, and elytra black (Maui) ..... **aeneus** Sharp
   Pronotum more strongly constricted at base, ratio maximum width of pronotum: width at base 1.35 or more; colour dark reddish brown to dark brown 2

2(1). Elytra elongate and rather parallel-sided; ratio of length of elytra: greatest width = about 1.45; elytra with a slight metallic purple sheen (Maui) ..... **cymindicus** Sharp
   Elytra elongate, with sides not noticeably parallel-sided; ratio length: greatest width of elytra = less than 1.40; elytra sometimes aeneous brown but never with a metallic purple sheen (Maui, Hawaii) 3

3(2). Posterior angles of pronotum sharp and square or slightly acute 4
   Posterior angles of pronotum slightly obtuse and usually rather blunt 5

4(3). Length about 5.0 mm.; pronotum as in fig. 17, *b;* puncturation of base obsolete (Maui) ..... **cognatus** Sharp
   Length about 4.2 mm.; pronotum as in fig. 17, *c;* base uniformly and distinctly punctured (Maui) ..... **chalcosus** (Sharp)

5(3). Pronotum as in fig. 17, *d,* sides not or scarcely sinuate in front of posterior angles (Hawaii) ..... **bembidicus** Sharp
   Pronotum as in fig. 17, *e,* sides with a long smooth sinuation (Maui) ..... **robustus** (Blackburn)

Mecyclothorax aeneus Sharp, Fauna Hawaiiensis 3: 255, 1903 (fig. 17, *a*).

Length: 4.8-5.8 mm. *Colour:* black with faint purple sheen, reflexed margins of elytra reddish; femora mainly dark brown, testaceous along outer edges; tibiae and tarsi brown; ventral surface dark brown or black; antennae with 3.5 basal segments reddish yellow, remainder dark brown. *Elytra:* striae strongly impressed; sutural striole marked by about five distinct punctures; other striae with faint traces of puncturation near base. *Microsculpture:* distinct, isodiametric on head, and on apex and base of pronotum; transverse on disk of pronotum and slightly transverse on elytra.

Maui: Haleakala, alt. 4,500-6,000 ft., March 1894, holotype and paratype (Perkins).

Mecyclothorax cymindicus Sharp, Fauna Hawaiiensis 3: 248, 1903.

Length: 4.0-4.5 mm. *Colour:* dark brown with purple sheen; all margins of pronotum and elytra reddish; apical half of sutural interval reddish; antennae with 3.5 basal segments reddish brown, remainder brown; legs testaceous, tibiae and tarsi slightly darker than femora; ventral surface reddish brown. *Pronotum:* base with a few coarse punctures. *Elytra:* striae strongly impressed, striae with faint indications of punctures in basal half; intervals quite strongly convex. *Microsculpture:* strong, isodiametric or slightly transverse on head; distinct, strongly transverse on disk of pronotum and isodiametric at apex and base; distinct, strongly transverse on elytra.

Maui: Haleakala, alt. 5,000 ft., April 1896, October 1896, holotype and three paratypes (Perkins).

Mecyclothorax cognatus Sharp, Fauna Hawaiiensis 3: 255, 1903 (fig. 17, *b*).

Atelothorax optatus Sharp, Fauna Hawaiiensis 3: 269, 1903, new synonymy.

Length: 5.0 mm. *Colour:* dark aeneous brown; all margins of pronotum and elytra broadly reddish; antennae with basal 3.5 segments reddish yellow; remainder brown, femora testaceous, tibiae and tarsi brown. *Pronotum:* base with a few faint punctures. *Elytra:* striae strongly impressed, faintly punctured in basal half; intervals slightly convex. *Microsculpture:* strong, isodiametric on head and at apex and base of pronotum; distinct, transverse on disk of pronotum and on elytra.

Maui: Haleakala, alt. 5,000 ft., April 1894, holotype only (Perkins).

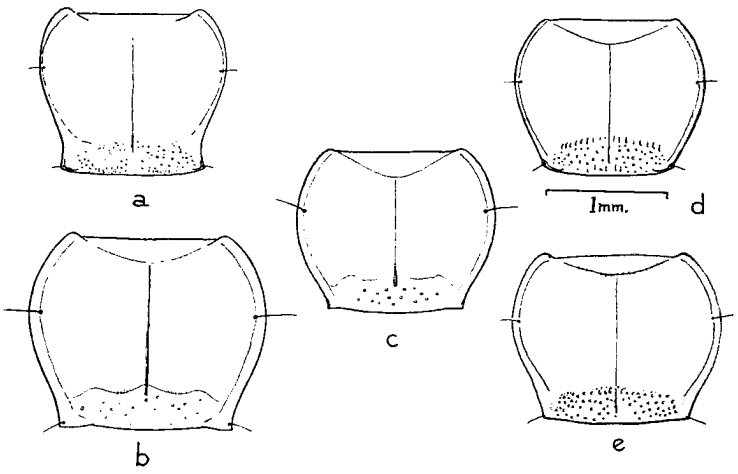

FIGURE 17.—**a,** *Mecyclothorax acneus;* **b,** *M. cognatus;* **c,** *M. chalcosus;* **d,** *M. bembidicus;* **e,** *M. robustus.*

Mecyclothorax chalcosus (Sharp) (fig. 17, *c*).

Thriscothorax chalcosus Sharp, Fauna Hawaiiensis 3: 264, 1903.

Length: 4.2 mm. *Colour:* aeneous brown, with margins reddish, legs and antennae testaceous. *Pronotum:* base with a few coarse punctures. *Elytra:* striae strongly impressed and faintly punctured in basal half; intervals slightly convex. *Microsculpture:* as in *M. cognatus.*

Maui: west Maui mountains, alt. 4,000 ft., September 1894, holotype only (Perkins).

Mecyclothorax bembidicus Sharp, Fauna Hawaiiensis **3**: 254, 1903 (fig. 17, *d*).

Length: 4.5-5.3 mm. *Colour:* head, pronotum, and elytra dark aeneous brown; margins reddish; femora testaceous, tibiae and tarsi brown, basal 3.5 segments of antennae testaceous, remainder brown; ventral surface dark brown or black with epipleurae reddish yellow. *Pronotum:* with a few coarse punctures on each side. *Elytra:* intervals distinctly convex; striae finely, distinctly, and regularly punctured. *Microsculpture:* faint, transverse on head and disk of pronotum; distinct, transverse on elytra.

Hawaii: Kilauea, alt. 4,000 ft., August 1894, holotype and 10 examples (Perkins).

Mecyclothorax robustus (Blackburn) (fig. 17, *e*).

Cyclothorax robustus Blackburn, Ent. Mo. Mag. **17**: 228, 1881.

Mecyclothorax robustus Sharp, Fauna Hawaiiensis **3**: 255, 1903, new synonymy.

Length: 4.5-5.2 mm. *Colour:* dark brown to black with margins of pronotum and elytra reddish, antennae and legs testaceous. *Elytra:* striae strongly impressed and finely and distinctly punctured in basal half; intervals slightly convex. *Microsculpture:* faint, isodiametric on head; faint and transverse on disk of pronotum but distinct at sides; distinct, isodiametric at base and apex of pronotum; distinct, transverse on elytra.

Maui: holotype (Blackburn); Haleakala, alt. 4,000-5,000 ft., 20 examples (Perkins).