

INSECTS OF CAMPBELL ISLAND. APPENDIX.
COLEOPTERA: HYDRAENIDAE, LEPTODIRIDAE (LARVAE)¹

By G. A. Samuelson

BISHOP MUSEUM, HONOLULU, HAWAII

Abstract: The larvae of *Meropathus campbellensis* Brookes (Hydraenidae), and *Paracatops campbellicus* (Brookes) (Leptodiridae) are described and illustrated.

Placement of the larvae of the hydraenid, *Meropathus campbellensis* Brookes, and the leptodirid, *Paracatops campbellicus* (Brookes) (= *Austrocatops*) was made by W. O. Steel to whom I am indebted. The material was returned for descriptions and illustrations.

Steel reported (letter of 25 March 1964) that the Campbell larva of *Paracatops* differs distinctly from those of *Catops* in lacking frayed setae. He also found the larva of *Meropathus campbellensis* to be very close to that of *M. chuni* Enderlein.

Acknowledgements are due to Tina Abbott and to Eugene Bojarski for preparing part of the illustrations.

Meropathus campbellensis Brookes Fig. 1.

Mature larva: mostly fuscus above; head darker than thorax, frontal sutures and ocelli pale, clypeus and labrum darkest; thorax with a thin pale median line; meso-, metanota and basal 2 abdominal segments pallid apically and forming transverse bands, with pale area of metanotum distinctly broader than those of adjacent segments; basal abdominal sternites paler than apical ones; legs pale. Dorsum with long erect submedial and sub-lateral setae placed subapically on each segment except last 2; abdominal sternites 2-9 clothed with shorter setae; last clothed apically with fine setae; urogomphus with basal segment bearing 5 or 6 long bristle-like hairs; legs subglabrous.

Body mostly subdepressed, but basal 2 abdominal segments subrounded in cross section and smaller in size causing body to appear constricted from dorsal aspect. Head 3/4 as long as broad, breadth subequal to mesothorax, surface feebly convex medially, rounded laterally, with 5 ocelli as follows: 2 placed obliquely near antenna, 1 further behind, 1 near base of mandible and 1 rather indistinct one further behind; frons triangular, anterior margin slightly concave, lateral margin sinuate, surface nearly flat, finely and indistinctly punctured; clypeus transverse, surface slightly convex and smooth; labrum slightly deeper than clypeus, anterior margin feebly rounded at middle and feebly notched at antero-lateral angle, surface broadly excavated medially; antenna 3-segmented, directed an-

1. Field work supported by National Science Foundation grants (G-18800, G-23720) from the U. S. Antarctic Research Program.

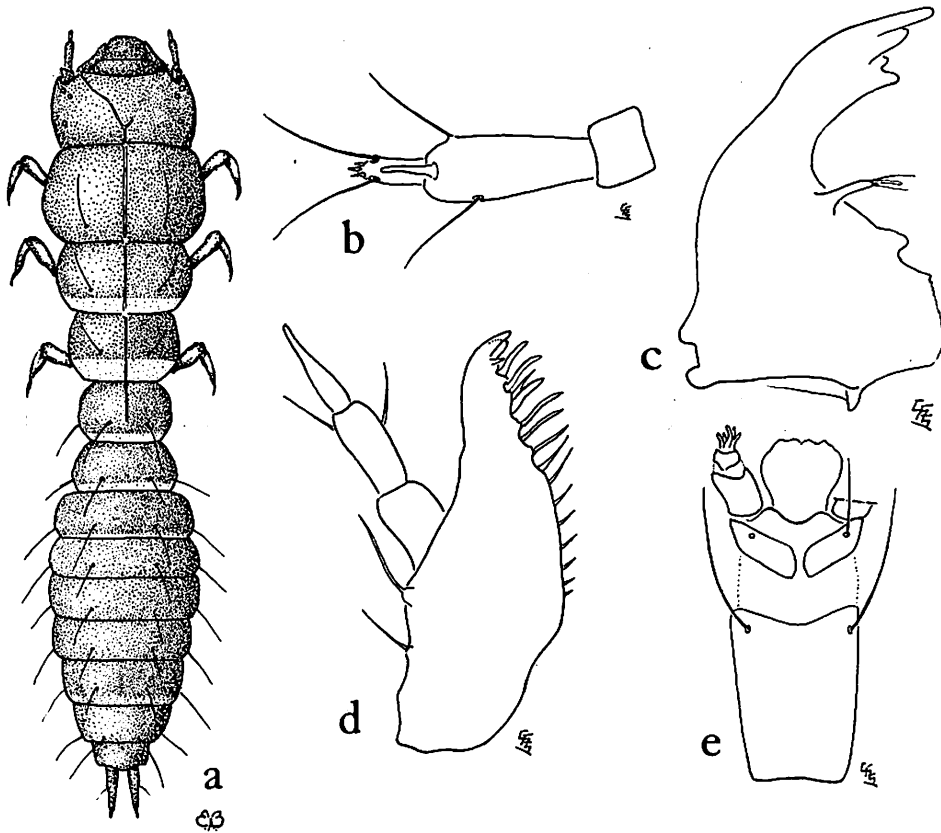


Fig. 1. *Meropathus campbellensis*: a, larva, dorsal view; b-e, larval head structures, ventral views: b, antenna, right; c, mandible, right; d, maxilla, right; e, labium, showing right palpus.

teriorad; antenna, mandible, maxilla and labium as illustrated (same scale). *Thorax* with segments apically decreasing in breadth; prothorax distinctly broader than any other part of body; propleuron with a basal swelling bearing a spiracle. *Abdomen* with segment 1 somewhat narrower than 2, 2 rather narrow, 3-8 expanded, 9-10 retractile; urogomphi arising from apex of 9, each 2-segmented with apical one minute. *Legs* long; metacoxa stout, slightly longer than femur, trochanter very short internally, femur and tibia subequal, claw simple. Length 3.9 mm; breadth 0.9.

MATERIAL EXAMINED: 5 larvae, Courrejolles Penin., 200 m, *Colobanthus*, 14. XII. 1961, Gressitt.

Paracatops campbellicus (Brookes) Fig. 2.

Mature larva: testaceous to fuscus above; head and apical abdominal tergites darker than thorax and basal abdominal segments; dorsum with thoracic segments and basal 3 abdominal tergites pale apically forming a pallid transverse band on each, and with a thin

pale median line running from pronotum to nearly basal margin of abdominal tergite 2; ventral surfaces and legs mostly pale. Body moderately clothed with mostly long erect setae of variable thickness; head with frons and anterior, lateral portions of occiput clothed with simple, slender erect setae; thoracic nota and abdominal tergites with apical or subapical transverse rows of setae, pronotum also with about 4 long hairs on anterior margin; thoracic setae generally finer than those of abdomen; basal segment of urogomphus with 1 conspicuous seta directed ventrad; legs subglabrous on coxae and femora, tibia armed with many short stout setae.

Head about $3/4$ as long as broad, surface rather smooth, barely convex medially, side rounded, with 1 ocellus placed near base of antenna; frons subtriangular, broadly rounded basally, anterior margin concave medially, but not distinct, surface rather flat and smooth; clypeus transverse, side obliquely narrowed to concave anterior margin, surface smooth; labrum small, subevenly rounded from base to antero-lateral corner, anterior margin indistinctly lobed; antenna 3-segmented, fairly long, as illustrated (scale smaller than following illustrations); mandible, maxilla and labium as illustrated (same scale). *Thorax* with pro-

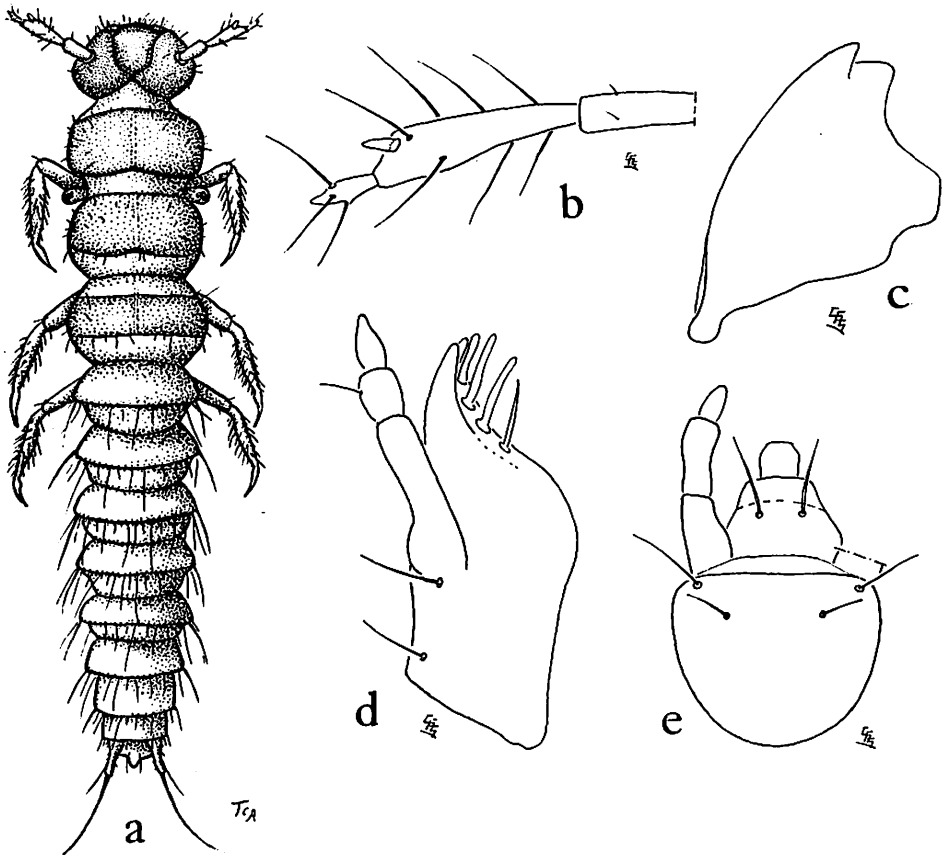


Fig. 2. *Paracatops campbellicus*: a, larva, dorsal view; b-e, larval head structures, ventral views: b, antenna, right; c, mandible, right; d, maxilla, right; e, labium, showing right palpus.

notum slightly larger than following 2 segments; propleuron with a fleshy basal projection bearing a spiracle. *Abdomen* with tergites 1-4 subequal and each slightly smaller than metanotum, 5-8 more compact, 9-10 retractile; urogomphi arising from apex of 9, 2-segmented, long and slender. *Legs* fairly long; metacoxa stout, length subequal to femur, trochanter short internally, tibia subequal to femur, claw simple. Length 4.4 mm; breadth 1.0.

MATERIAL EXAMINED: 7 larvae, S of Courrejolles Penin., 250 m, burrow of sooty shearwater, Berlese, 12. II. 1963, Wise.