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New Pycnogonida from Queensland

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Abstract

Two new species of pycnogonid are described; *Endeis straughani* n.sp. from Townsville and *Anoplodactylus minusculus* n.sp. from the Brisbane River. A third specimen of *Rhopalorhynchus clavipes* Carpenter is recorded.

INTRODUCTION

THE two new pycnogonids described here were collected by Dr I. M. Straughan, University College of Townsville, during fouling surveys. That the only pycnogonids encountered should prove new to science further supports my earlier contention (Clark, 1963) that the pycnogonid fauna of Australia is still largely unknown. Further support for this view may be deduced from the dubious taxonomic status of *Rhopalorhynchus clavipes* Carpenter, 1893, the third species mentioned in this paper.

Except as noted, all material has been deposited in the Australian Museum, Sydney.

Family ENDEIDAE Norman, 1908

Endeis straughani n.sp. Figs. 1–8.

Phoxichilus (?) *charybdaeus* Haswell *nec* Dohrn, Haswell, 1885, p. 1033.

MATERIAL: One male (holotype) Northern Electrical Authority Powerhouse, Ross Creek, Townsville, Queensland, coll. I. M. Straughan, January 31, 1967. Two females (one is the allotype), same locality and collector, September 6, 1966. One female, three juvenile males, two males (one ovigerous) same data as above, September 1, 1966. (Deposited in Zoology Department, University College of Townsville.) One ovigerous male, one female, 17 juveniles, same data as above collected between March 7-20, 1967.

DESCRIPTION: Trunk robust, all segments distinct, lateral processes separated by their own width. Lateral processes may bear one or two small dorsal eminences near their distal ends. Development of such eminences very variable, not being constant even between left and right sides of one animal. Eminences may, or may not bear a single small spinule. Remainder of trunk smooth. Cephalon with a distinct " collar " of two parts above the proboscis base. Ocular tubercle in centre of cephalon; height a little greater than diameter at base; cylindrical up to level of eyes, conical above this point, tip bluntly rounded. Abdomen short, sparsely spinose near tip, usually erect, but may tend towards the horizontal. Proboscis with double constriction typical of the genus, sparsely setose near tip.

Chelifores and palps absent in both sexes.

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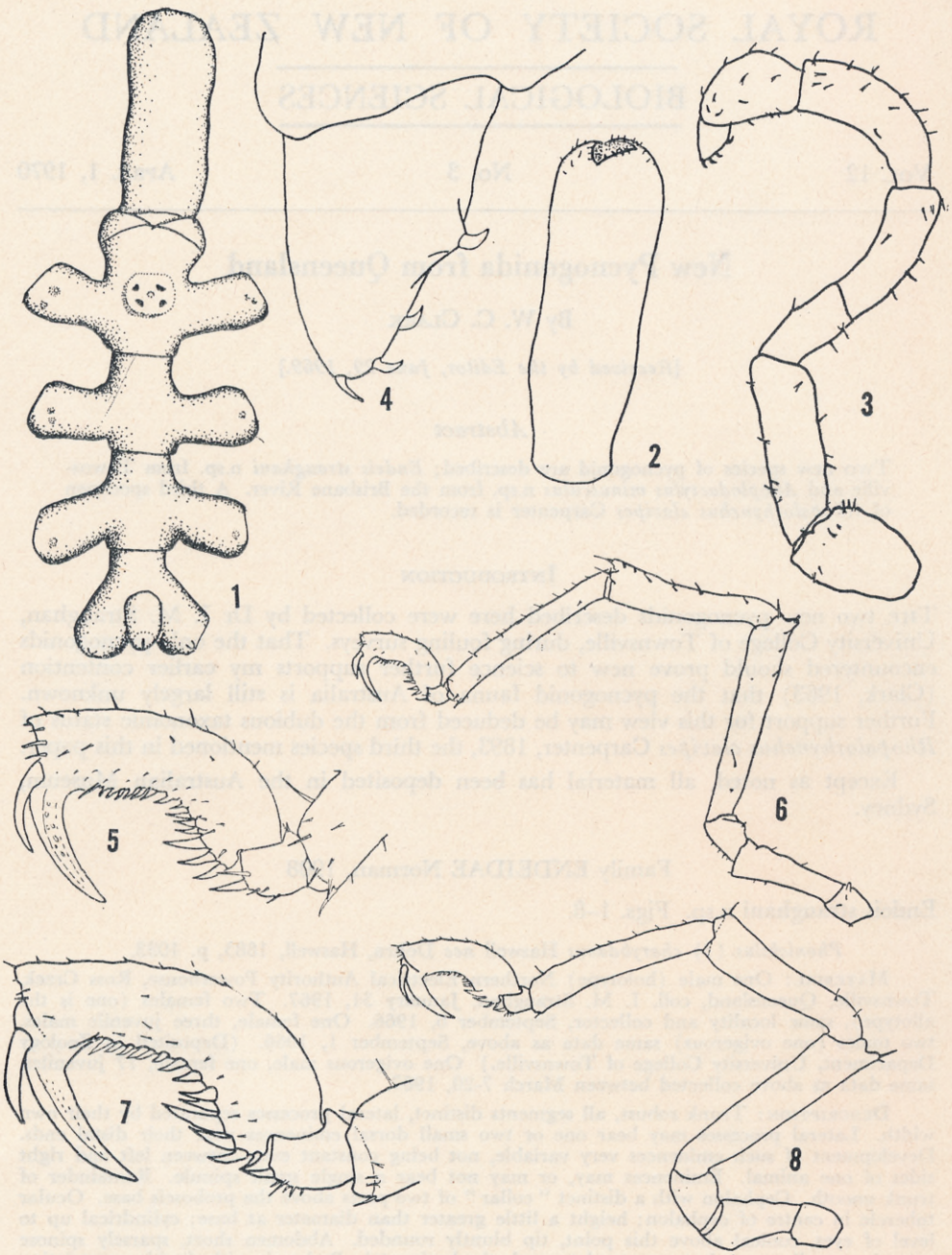


Figs. 1–8.—*Endeis straughani* n.sp. (1) dorsal view of trunk; (2) ventral view of proboscis; (3) male oviger; (4) tip of oviger; (5) male propodus; (6) male third leg; (7) female propodus; (8) female leg.

Ovigers absent in the females, seven-segmented in the males. Segments 2 and 5 almost equal and the longest. Segment 7 very short, almost triangular in outline. Simple spines on segments 1–6 with four recurved spines on segment 7. Lengths of oviger segments (holotype): 1, 0.38; 2, 0.65; 3, 0.38; 4, 0.52; 5, 0.55; 6, 0.35; 7, 0.2mm.

Third leg moderately robust, legs of females less spinose than legs of males. First coxa about two-thirds as long as third coxa. Second coxa more than twice as long as first. Femur straight, the longest segment, cement glands not seen. Second tibia little longer than first tibia. Propodus heavy, arcuate with well developed heel spines. Spines of sole weaker than on heel. Claw strong, half as long as propodus. Auxiliary claws half as long as main claw.

Genital pores on second coxae of all legs in females, and the second coxae of the third and fourth legs in the males.

MEASUREMENTS: (in mm; male holotype first, female allotype in brackets) length trunk (tip cephalon to tip fourth lateral processes) 2.6 (2.4), length cephalon 0.95 (0.9), width across second lateral processes 1.6 (1.5), length proboscis 1.9 (2.0), greatest width proboscis 0.5 (0.6), length abdomen 0.45 (0.6). Third leg coxa 1, 0.35 (0.37); coxa 2, 1.0 (0.9); coxa 3, 0.55 (0.65); femur 2.2 (2.25); tibia 1, 1.77 (1.87); tibia 2, 2.0 (2.0); tarsus 0.2 (0.25); propodus 0.97 (1.2); claw 0.5 (0.57); auxiliary claw 0.27 (0.32).

REMARKS: I think one can be reasonably sure that this is the species that Haswell, 1884, referred to as "*Phoxichilus charybdaeus* (?) Dohrn". The propodes of the two species, and at least some of the dimensions are sufficiently similar to have permitted such an identification at that time, especially as Haswell had a single juvenile from Port Molle, about 140 miles south-east of the type locality of *E. straughani*. *E. straughani* n.sp. is readily distinguished from its geographically closest relative *E. holthuisi* Stock, 1961, by the arcuate propodus and lack of large lateral spines on the second coxa. Of the known species *E. straughani* comes closest to *E. flaccida* Calman, 1923, but differs from it in possessing more arcuate propodes, more widely spaced lateral processes, a more inflated sixth oviger segment, apparently a more robust cuticle, and in the lack of the prominent terminal dorsal spine on the first coxae.

Some specimens (in alcohol) still retain a bright green colour. I have named the species for its collector, Dr I. M. Straughan of the Zoology Department, University College of Townsville.

Family PHOXICHILIDIIDAE Sars, 1891

Anoplodactylus minusculus n.sp. Figs. 9–16.

MATERIAL: One male (holotype), several females and juveniles, tidal reaches of Brisbane River, Queensland; collector, Dr I. M. Straughan. (The juveniles and females were destroyed in attempting to recover them from the dried out slides on which they had been mounted.)

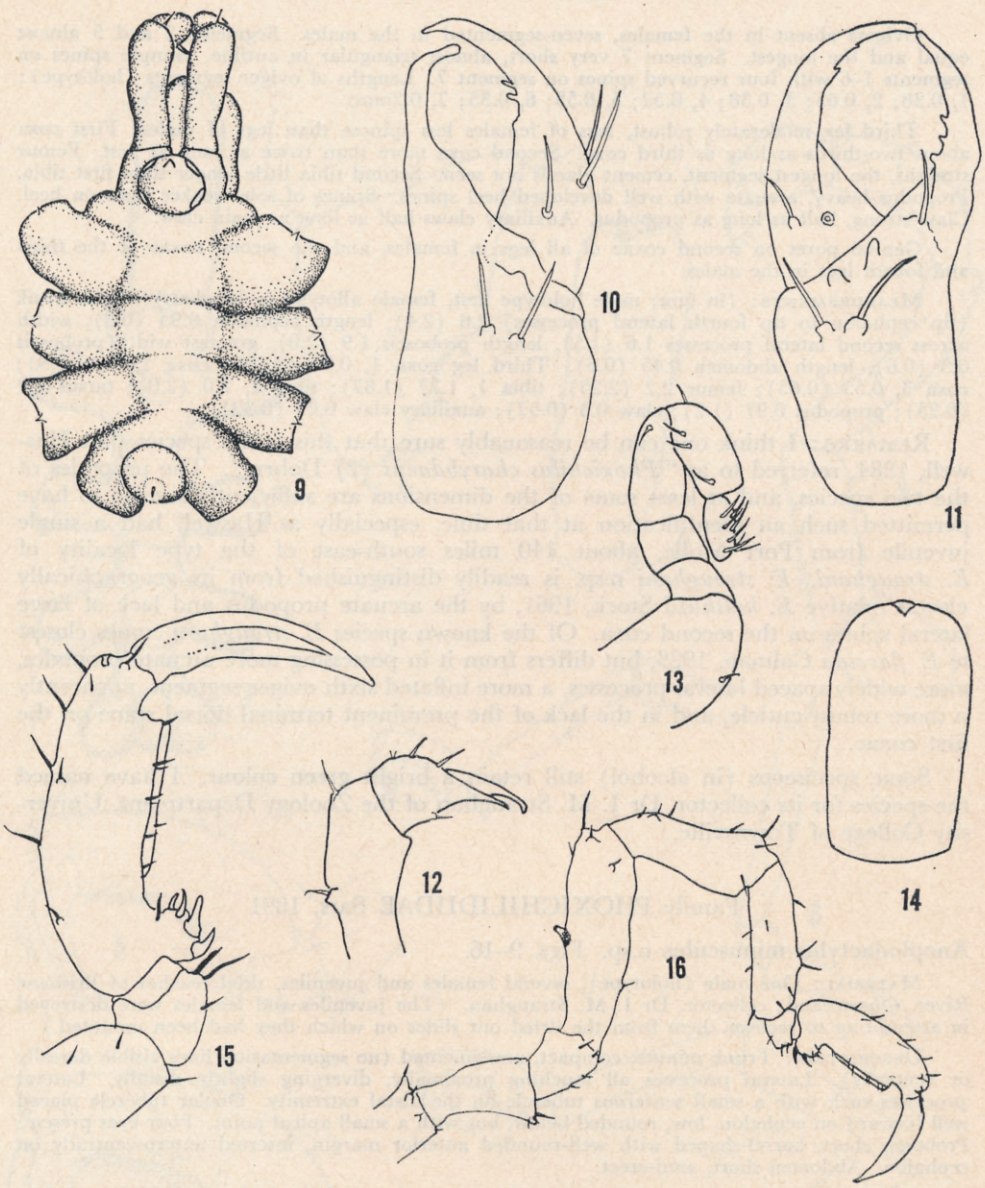
DESCRIPTION: Trunk minute, compact, unsegmented (no segmentation lines visible dorsally or ventrally). Lateral processes all touching proximally, diverging slightly distally. Lateral processes each with a small setiferous tubercle on the distal extremity. Ocular tubercle placed well forward on cephalon, low, rounded below, but with a small apical point. Four eyes present. Proboscis short, barrel-shaped with well-rounded anterior margin, inserted antero-ventrally on cephalon. Abdomen short, semi-erect.

Chelifores a single segmented scape with at least one subterminal seta. Chelae chelate with a few minute setae. Shape of chelae apparently variable (cf. Figs. 10 and 11 which are chelae from one male). Palps absent.

Oviger (males only) of six segments of which the first is the longest and widest. Segments four, five, six with a few simple reversed spines as in Fig. 13.

Third leg short and stout; second coxa longer than first and third combined. Femur the longest and stoutest joint with a moderately strong terminal spine and with a short dorsal cement gland with shallow vesicular glandular body below this. First and second tibiae shorter than femur and decreasing in length in that order. Tarsus short with a few ventral spinules. Propodus with a well-developed heel bearing two major heel spines. Sole with a delicate knife edge and a few minor spinules. Claw large three-quarters as long as propodus.

MEASUREMENTS: Holotype male (in mm), length trunk 0.56, length cephalon 0.225, width across second lateral processes 0.41, chelifore scape 0.18, length proboscis 0.29, width proboscis 0.14, length abdomen 0.14. Third leg: coxa 1, 0.09; coxa 2, 0.205; coxa 3, 0.14; femur 0.36; tibia 1, 0.295; tibia 2, 0.27; tarsus 0.08; propodus 0.27; claw 0.19.



Figs. 9–16.—*Anoplodactylus minusculus* n.sp. (9) dorsal view of trunk; (10 and 11) chelae from a single specimen; (12) lateral view of chelifore; (13) male oviger; (14) proboscis; (15) male propodus; (16) male third leg.

Remarks: This species is comparable in size with *A. minutissimus* Stock, 1954, and with *A. pygmaeus* (Hodge, 1864). *A. minusculus* n.sp. differs from *A. minutissimus* in having the lateral processes close together (they are well spaced in *A. minutissimus*) and in the absence of auxiliary claws. It differs from *A. pygmaeus* in the form and position of the abdomen and most strikingly in the form of the basal segments of the oviger.

A. minusculus is readily distinguished from all other "compact" (i.e., lateral processes touching or nearly touching) species known from Australia by its small size and the absence of auxiliary claws.

This species makes up the entire category " Pycnogonida " in Straughan's study of fouling in the Brisbane River (Straughan, 1967).

Family COLOSSENDEIDAE Hoek, 1881

Rhopalorhynchus clavipes Carpenter, 1893.

Rhopalorhynchus clavipes Carpenter 1893, pp. 24–25, pl. 2, figs. 1–10.
Rhopalorhynchus kroeyeri Calman, 1923 (in part), pp. 268–270.
Rhopalorhynchus clavipes Stock, 1958, pp. 127–128, figs. 35–38.

MATERIAL: One subadult (?) female, dredged in 86m due east of Jumpin Pin Bar, Queensland, amongst fan corals. Coll. Prof. W. Stephenson, July 1, 1961.

MEASUREMENTS: (in mm, using notation of Stock, 1958) proboscis α 3.75, β 2.5, γ 3.79, δ 2.0, ξ 0.85, ζ 0.35; Trunk segments, first 0.9, second 2.85, third 2.3, fourth 1.5, width across second lateral processes 1.85, width trunk 0.33. Third leg: coxa 1, 0.5; coxa 2, 0.5; coxa 3, 0.5; femur 8.3; tibia 1, 8.3; tibia 2, 7.0; tarsus 1.5; propodus 1.85; claw 1.0.

REMARKS: In this specimen the shape of the femora is as shown by Carpenter and Stock, and as I am unable to find any sign of genital pores I assume that the specimen is a sub-adult female. The present specimen differs notably from the holotype in having the slender part of the proboscis anterior to the tooth longer by about 25 per cent, and in the possession of longer tibiae and femora. Other measurements are generally comparable with those given by Stock, 1958.

This species is only known with certainty from a single female from Torres Strait. Stock doubtfully referred a male specimen now in the Indian Museum, but of unknown origin, to this species. Although the present specimen, despite its immaturity, is larger than the holotype I prefer to avoid further confusion in this genus by not erecting another species based on a single specimen. The specimen is not referable to the other species of the genus known from Australian waters, *Rh. tenuissmum* (Haswell, 1885), which is a longitarsal species.

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