

SOME NEW VICTORIAN COPEPODA.

By J. SEARLE.

(Read before the Field Naturalists' Club of Victoria, 11th Dec., 1911.)

Two of the species described in this paper were collected at Nyora on 7th November, 1911; the other I have known for some time and collected in many places.

The *Brunella* was taken in a peaty swamp about a mile to the west of Nyora and south of the railway line.

It is a graceful animal, and can be distinguished readily from other species by the great length of its first antennæ. From this feature it takes its specific name, *B. longicornis*.

The second, *Boeckella nyoraensis*, is one of the largest, and by far the most striking, of all the Boeckellidæ.

The enormous thoracic projections of the female, and the amethyst tint of the antennæ, render it a striking object. This species was taken in a clear-water, weedy pond near the railway line, and about four miles west of Nyora.

The third species, *B. pseudochelæ*, is also a remarkable one, from the shape of the last pair of legs in the male. The end of the claw on the right leg possesses an appendage somewhat resembling the chela or nippers of a crab. It is not at all uncommon; I have taken it in great numbers at Yarra Glen and West Warburton, also at Fairfield and Mansfield, but always in small, shallow pools. Indeed at Mansfield I picked them up with a pipette from a small pool by the roadside in which the water was not three inches in depth.

The Boeckellidæ seem to be composed of two groups—one of a sturdy, thick-set nature, opaque and brightly coloured, the females possessing large wing-shaped projections on the last thoracic segment; the other more slender and graceful, translucent grey or green in colour, and with less prominent elongations on the thorax.

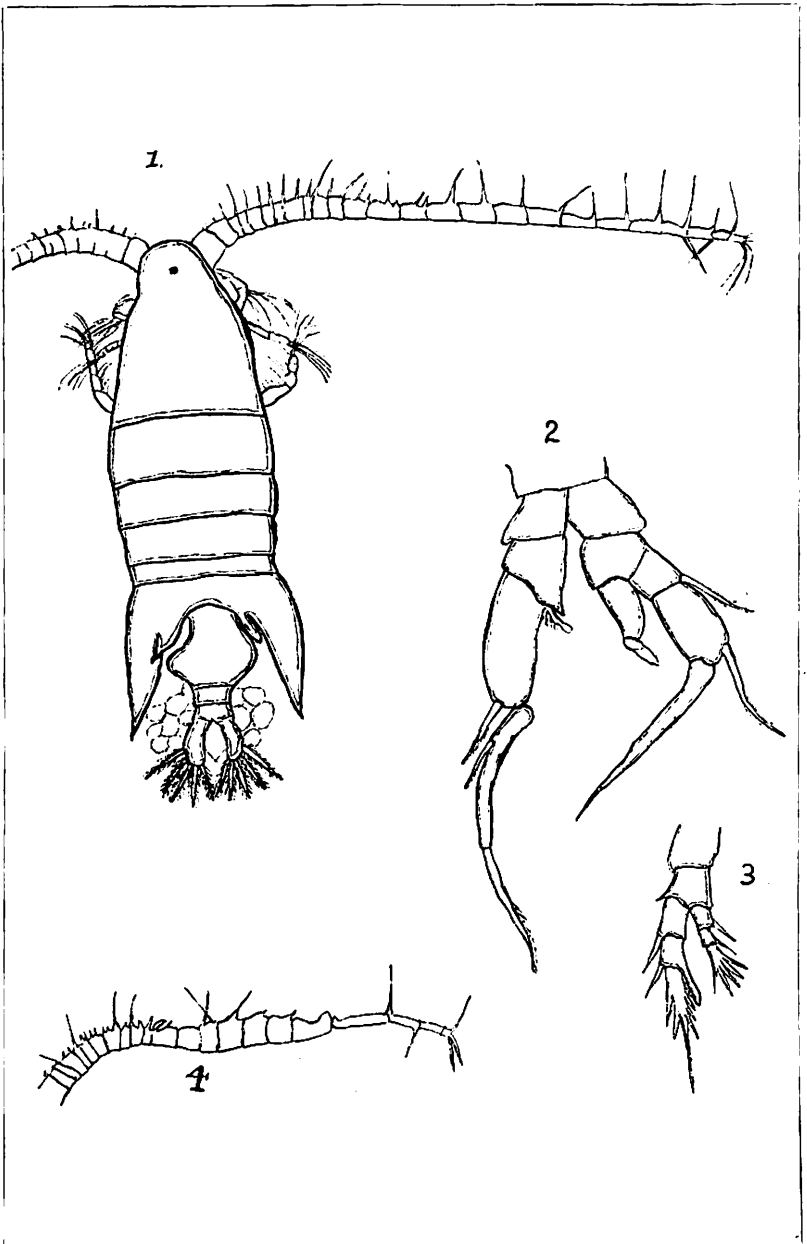
The two species of *Boeckella* here described belong to the former group. The figures are all drawn from specimens by the aid of a camera lucida.

BRUNELLA LONGICORNIS, J. Searle, n. sp.

This is the fifth species of *Brunella* I have recorded for Victoria, and second new species from Nyora.

Specific Characters.—Body of female ovate in form, broadest at the first thoracic segment. Head and segment fused with it longer than the following three segments. Fifth thoracic segment small, without lateral projections, simply rounded off. Abdomen consists of three segments, genital segment asymmetrical, swollen in the middle, and very protuberant on the ventral side; caudal furca nearly as long as the abdomen. First

PLATE IV.



BOECKELLA NYORAENSIS, J. SEARLE, N. SP.

antennæ of great length—far exceeding that of the whole animal, including the caudal setæ—and adorned with very long setæ.

Fifth thoracic legs in female of the shape typical of the genus.

Fifth pair of legs in male closely resembling those of *B. tasmanica*, having the spatulate exopodite and the peculiar lobes attached to the endopodite.

First antenna of male geniculated on right side, scarcely thickened in the middle, and furnished with numerous *æsthetasks*.*

Colour.—Brown.

Length.—1.5 mm.

Occurrence.—Nyora.

I have since collected this species in a swamp at Caulfield (2nd December, 1911).

BOECKELLA NYORAENSIS, J. Searle, n. sp.

Specific Characters.—Body of female oblong, with head tapering and rounded off anteriorly. Head and segment fused with it as long as the succeeding segments.

Fifth thoracic segment with enormous lateral projections, very slightly divergent, lanceolate, hooked outwards at the tip and extending backwards nearly to the end of the caudal furca; inner lobe on left side small, triangular, with pointed end, that on the right inconspicuous, with parallel sides, round at the end. The abdomen consists of three segments, genital segment asymmetrical, much swollen in the middle and slightly protuberant on the ventral side; furcal processes with short, very stout setæ, densely plumose; egg-sac containing thirty-five to forty eggs. First antennæ twenty-five joints, when reflexed reaching beyond the caudal furca. Fifth legs resemble *B. triarticulata*. First antennæ of male geniculated on right side, and bearing a great many *æsthetasks*.

The fifth pair of legs of male resemble those of *B. saycei*, but the spines on the first and second joint of the exopodite of right leg are setaceous, the terminal claw much straighter; the endopodite, with three imperfect joints, also differs somewhat in shape from *B. saycei*. The terminal claw on the left leg also bears numerous small setæ.

Colour.—Body green, antennæ amethyst coloured.

Length.—2.60 mm.

Occurrence.—Nyora.

* *Æsthetask* is the term applied by Geisbrecht to various-shaped attachments to the antennæ of Copepods; they are supposed to be of a sensory character ("Das Tierreich—Gymnoplea," Geisbrecht und Schmeil).

BOECKELLA PSEUDOCHELÆ, J. Searle, n. sp.

Specific Characters.—Body of female robust, oblong, rounded off in front, head and segment fused with it longer than the two following segments.

Lateral projections on fifth thoracic segment scarcely divergent—triangular; the inner ones, when viewed from the dorsal side, appear nearly equal in length to the outer ones, but distinctly hooked outwards at the tip. Seen from the side they are broad triangular plates, extending downwards considerably, and apparently shielding the genital segment.

First antennæ twenty-five joints, when reflexed reaching to the end of the first abdominal segment. Genital segment broad, slightly asymmetrical, protuberant on ventral side. Abdomen consists of three segments, and is about one-third the length of the body.

Fifth pair of legs in female resemble *B. triarticulata*, but are more slender. Fifth pair of legs in male are very remarkable, and are powerfully developed. Right leg—exopodite two-jointed, ending in a stout claw, which has a chela-like appendage at the tip, hence its specific name. Endopodite one-jointed, shaped at the base somewhat like *B. oblonga*, but is bluntly notched at the distal end, and is much swollen in the middle; it extends beyond the two joints of the exopodite. Left leg—exopodite two-jointed, the last joint being very slender and fused to the terminal claw; second basal joint ends in a rounded lobe inside, which is a triangular plate. Attached to this joint, and extending nearly to the end of the first joint of the exopodite is a thin, flat, hyaline plate, not easily seen unless the limb is moved about. Right antennæ of male geniculated; the peculiar projection on the second last joint forms a marked feature, closely resembling that of *B. rubra*.

Colour.—Reddish-brown.

Length.—2.50 mm.

Occurrence.—Yarra Glen, West Warburton, Mansfield, Fairfield.

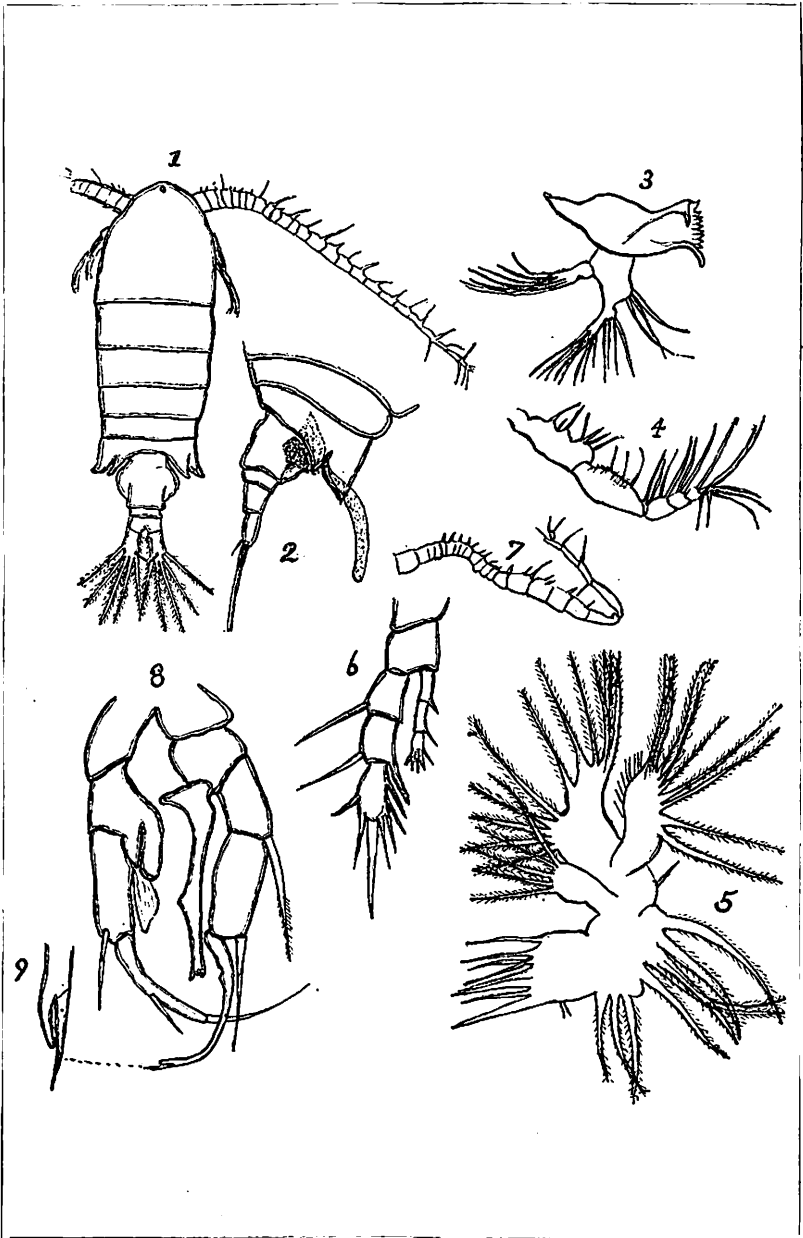
EXPLANATION OF PLATES.

PLATE III., *Brunella longicornis*, J. Searle, n. sp.—Fig. 1, adult female, × 29. Fig. 2, last thoracic segment and abdomen, female, side view. Fig. 3, fifth thoracic leg of female. Fig. 4, first antenna of male. Fig. 5, fifth pair of legs of male.

PLATE IV., *Boeckella nyoraensis*, J. Searle, n. sp.—Fig. 1, adult female, × 29. Fig. 2, fifth pair of legs, male. Fig. 3, fifth pair of legs, female. Fig. 4, first antenna of male, showing *asthetascs*.

PLATE V., *Boeckella pseudochelæ*, J. Searle, n. sp.—Fig. 1, adult female, × 23. Fig. 2, side view of last thoracic segment and abdomen, with spermatophore attached near genital aperture. Fig. 3, mandible and palp, male. Fig. 4, second maxilliped, male. Fig. 5, maxilla, male. Fig. 6, last thoracic leg, female. Fig. 7, first antenna of male. Fig. 8, fifth pair of legs, male. Fig. 9, detail of end of claw.

PLATE V.



BOECKELLA PSEUDOCHELÆ, J. SEARLE, N. SP.

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