

FIRST AUSTRALIAN RECORD OF *HESIONURA* (POLYCHAETA: PHYLLODOCIDAE), WITH THE DESCRIPTION OF A NEW SPECIES

by G. HARTMANN-SCHRÖDER* & S. A. PARKER†

Summary

HARTMAN-SCHRÖDER, G. & PARKER, S. A. (1990) First Australian record of *Hesionura* (Polychaeta: Phyllodocidae), with the description of a new species. *Trans. R. Soc. S. Aust.* 114(4), 203–205, 30 November, 1990.

A new species of phyllodocid polychaete, *Hesionura australiensis* sp. nov., is described from Spencer Gulf, South Australia. The single specimen, collected in coarse sand at a depth of 11 metres, represents the first record of the genus *Hesionura* Hartmann-Schröder, 1958, from Australia.

KEY WORDS: Polychaeta, Phyllodocidae, *Hesionura australiensis*, new species, Australia.

Introduction

Hesionura Hartmann-Schröder, 1958 (Phyllodocidae: Eteoninae) currently contains nine described species, all of which live interstitially, most no deeper than 40 m, but one to 100 m and one to 200 m. Until recently the genus had not been known from Australia. In February 1986, during a benthic survey of upper Spencer Gulf, South Australia, the S. Aust. Fisheries Dept collected a single specimen of *Hesionura*, which examination revealed to represent an undescribed species.

Materials and Methods

Measurements are in millimetres, made with an eyepiece micrometer. Drawings were made with the aid of a camera lucida on a Zeiss microscope. The holotype is deposited in the South Australian Museum, Adelaide (SAM).

Family PHYLLODOCIDAE Williams, 1852

Subfamily Eteoninae Bergström, 1914

Genus *Hesionura* Hartmann-Schröder, 1958

Hesionura australiensis sp. nov.

FIGS 1–5

Holotype: SAM E2324, Station 8, 32°47'18" S., 137°50' E., upper Spencer Gulf, South Australia, 11 m, in coarse sand, collected by E. Oks, S. Aust. Fisheries Dept, February, 1986.

Definition: A *Hesionura* lacking simple setae; shaft of uppermost (compound) seta trifid distally, the remainder bifid; blade of second uppermost seta 2–3 times as long as the others, serratulate, the teeth very long and fine.

Description of Holotype: Seventy-three setigers (incomplete), length 5.1, width (excluding parapodia) 0.12. Colour in alcohol brownish-green, bases of posterior parapodia containing reddish-brown pigment.

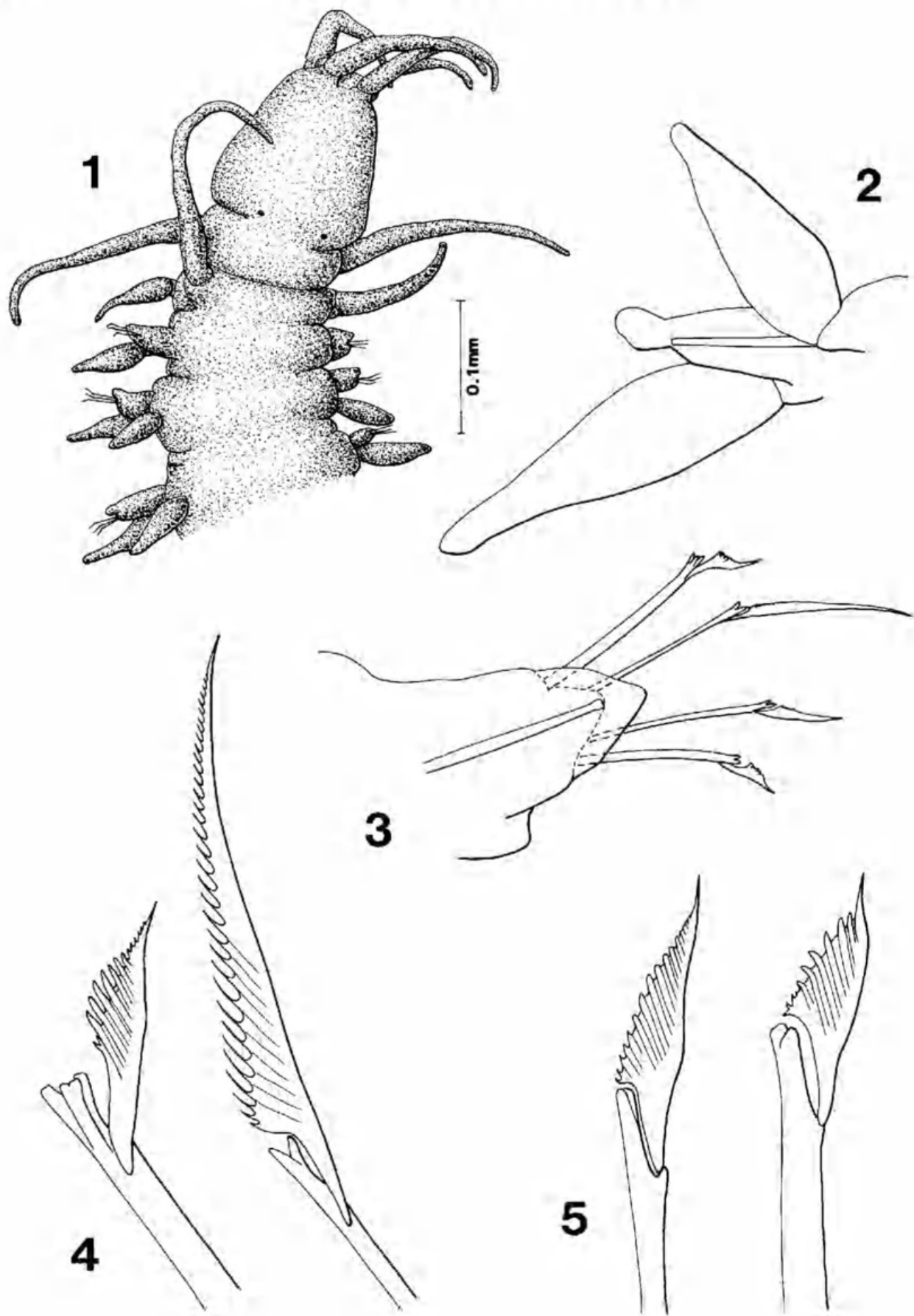
Prostomium (Fig. 1) trapezoid, length equal to greatest width, with two small red eyes near posterior margin and four elongate antennae (slightly longer than prostomium) near anterior margin. First segment not completely separated from prostomium, bearing one pair of tentacular cirri of similar shape to antennae but longer. Segment 2 with two pairs of tentacular cirri, the dorsal pair slightly longer than those of segment 1, ventral pair shorter, lanceolate. Segment 3 bearing parapodia, setae and lanceolate ventral cirri; dorsal cirri absent. Dorsal cirri of succeeding segments lanceolate to subulate, slightly exceeding parapodial lobes; ventral cirri lanceolate but much longer; parapodia conical, each with one large conical presetal lobe and one stout acicula (Fig. 2). In addition, each parapodium bears four compound setae (Fig. 3), uppermost with distally trifid shaft and short, coarsely dentate blade, next one thinner with shaft distally bifid, blade long, serratulate (Fig. 4), the two inferior setae with distally bifid shafts and short, coarsely dentate blades (Fig. 5).

Comparison with other species

Other *Hesionura* spp. lacking simple setae and with the shaft of at least the uppermost seta trifid distally are *H. coineau* (Laubier, 1962) and *H. laubieri* (Hartmann-Schröder, 1963). *H.*

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australiensis resembles *H. coineau* in having the shaft of the second uppermost seta bifid distally but differs in having the blade of the same not coarsely denticulate but serratulate, the teeth very long and fine. There are also differences in the lengths of the setal blades: in *H. c. coineau* all four are short, in *H. c. difficilis* (Banse, 1963) the uppermost and lowermost are short, the other two about twice as long, and in *H. australiensis* the uppermost and two lowermost are short, with the second uppermost 2–3 times as long. *H. australiensis* further differs from *H. coineau* in having the ventral tentacular cirri and the dorsal and ventral parapodial cirri longer. The new species resembles *H. laubieri* in having the blade of the

second uppermost seta serratulate and longer than the rest, but differs in having this blade even more elongated and its shaft distally bifid, not trifid.

Distribution and Ecology

Known only from the type-locality in northern Spencer Gulf, S.A., where the single specimen was collected in coarse sand at a depth of 11 m. Apparently much less common in the area than the equally small, interstitial polychaetes of the genus *Pisone* (Pisionidae), of which 342 specimens were obtained during the same survey (Hartmann-Schröder & Parker 1990).

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DEVELOPMENTAL BIOLOGY OF THE AUSTRALIAN HYLID FROG *NYCTIMYSTES DAYI* (GÜNTHER)

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Summary

The Australian hylid frog *Nyctimystes dayi* (Günther) lays large unpigmented eggs that hatch no later than stage 22. Early larvae are nourished by a well-developed yolk sac and feeding commences after stage 24. Tadpoles exhibit adaptations to fast flowing streams. The mouth disc is large and sucker-like with two upper and three lower rows of labial teeth. The oral disc is hemispherical and the floor of the labrum is covered with well-developed ridges. Tadpoles can overwinter and metamorphose in the following spring/summer.

KEY WORDS: *Nyctimystes dayi*, tadpoles, life history, lotic adaptations.



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