

NOTES ON SPECIES OF ACTAECIA DANA (ISOPODA, ONISCOIDEA) FROM TASMANIA AND NEW ZEALAND

By

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A Tasmanian species, which was described in an earlier paper but wrongly assigned there to *Actaecia euchroa* Dana, is named as *Actaecia thomsoni*, n. sp. Differences between *A. euchroa* and *A. thomsoni* are listed. The presence of pseudotracheae in the pleopoda of *A. thomsoni*, and of *A. pallida* Nicholls and Barnes, is confirmed. Variations in the colour of specimens of *A. euchroa* from New Zealand are noted.

INTRODUCTION

In a study of Tasmanian Oniscoidea (Green, 1961) descriptions of two species of genus *Actaecia* Dana, 1853, were published under the names of *A. euchroa* Dana, 1853, and *A. pallida* Nicholls and Barnes, 1927. A subsequent paper on *Actaecia* by Vandel (1964) has shown the need for amendments to these accounts.

Presence of pseudotracheae

The generic diagnosis of *Actaecia* quoted in my paper (1961, p. 295) claimed that, in this genus, the pleopods do not contain pseudotracheae, and no further mention of these structures was made in descriptions of species. Vandel (1964, p. 170, fig. 4) demonstrated the presence of pseudotracheae in the exopodites of all five pairs of pleopods in specimens of *A. euchroa* from New Zealand, and claimed that this feature is characteristic for the genus as a whole. The Tasmanian material on which my descriptions were based, i.e., that of "*A. euchroa*" from Eaglehawk Neck and *A. pallida* from Hawley, was therefore re-examined for evidence of these structures which I had previously overlooked. In both species there are, in fact, pseudotracheae present in the exopodites of all five pairs of pleopods, in both sexes.

Family ACTAECIIDAE

In my study of Tasmanian Oniscoidea, genus *Actaecia* was placed, with genus *Deto* Guérin, 1836, in family Scyphacidae. This position has now been revised, as Vandel (1964, p. 172) has transferred *Actaecia* to a separate family, Actaeciidae, principally because of the presence of pseudotracheae in its pleopods.

Actaecia pallida Nicholls and Barnes

Actaecia pallida Nicholls and Barnes, 1927, p. 155, text—fig. 2, pl. 20.

Description

Additions to the account of specimens from Hawley, Tasmania, given by Green, 1961, pp. 301-4, figs. 91-100:—

Pereion.—First epimeron slightly revolute, its lateral border thickened but not cleft. Second epimeron with a shallow, oblique fold which forms a notch in its lateral border. First to 3rd epimera each with a blunt, subquadrangular lobe on ventral surface.

Pleopods.—Exopodites of 1st-5th pleopods each with pseudotracheae located within a thickened band, raised above dorsal surface, towards outer side of exopodite.

Actaecia thomsoni, n. sp.

Actaecia euchroa Thomson, 1893, p. 56, pl. 2, figs. 1-8 (non Dana, 1853),
Actaecia euchroa Green, 1961, p. 295, figs. 75-90.

Location of type specimens

Holotype male and allotype female in the Australian Museum, Sydney.

Paratype male and female in the Western Australian Museum, Perth.

Paratype male and female in the Tasmanian Museum, Hobart.

Description

The account given by Green, 1961, pp. 295-301, figs. 75-90, with the following additions:—

Pereion.—First epimeron slightly revolute, its lateral border thickened but not cleft. Second epimeron with lateral border entire. First to 3rd epimera each with a blunt, subquadrangular lobe on ventral surface.

Pleopods.—Exopodites of 1st-5th pleopods each with pseudotracheae located within a thickened band, raised above dorsal surface, towards outer side of exopodite.

Type locality

A sandy beach on the shore of Pirates' Bay, Eaglehawk Neck, Tasmania.

Remarks

When studying specimens of *Actaecia* from Eaglehawk Neck, I decided to follow Thomson (1893, p. 56) in identifying the species concerned as *A. euchroa* Dana, even though I noted differences between my Tasmanian specimens and descriptions of New Zealand examples of *A. euchroa* in the shape of the eyes and the number of ocelli present (1961, p. 300). These differences were further stressed by Vandel (1964, p. 163) who suggested that the Tasmanian form probably belongs to a separate species or sub-species.

A subsequent opportunity to collect material in New Zealand has enabled me to compare New Zealand examples of *A. euchroa* side by side with my specimens from Eaglehawk Neck, a comparison which has confirmed the status of the latter as a separate species. I have chosen to name the new species *A. thomsoni*, after the late Mr. G. M. Thomson of Dunedin, N.Z., who first collected and described it.

The most conspicuous differences between *A. euchroa* and *A. thomsoni* (based on specimens from Moeraki, N.Z., in the case of *A. euchroa*) are listed in the following table:—

<i>A. euchroa</i> Dana.	<i>A. thomsoni</i> , n. sp.
Eye crescentic, composed of about 80 ocelli arranged in four sub-equal rows.	Eye oval, composed of 14 ocelli.
Lobe on ventral surface of 1st epimeron of pereion blunt and sub-triangular; lobes on 2nd and 3rd epimera each subquadrangular, with posterior angle acute and produced backwards.	Lobes on ventral surface of 1st-3rd epimera of pereion each subquadrangular, with angles bluntly rounded.
Second epimeron with lateral border cleft.	Second epimeron with lateral border entire.
Third pleuron of pleon subquadrangular, longer than 4th pleuron, and forming part of general outline of body.	Third pleuron of pleon subtriangular, shorter than 4th pleuron, not forming part of general outline of body.
Outer lobe of protopodite of uropod sharply rounded posteriorly, its maximum breadth about equal to breadth of exopodite.	Outer lobe of protopodite of uropod broadly rounded posteriorly, its maximum breadth more than twice breadth of exopodite.

A. thomsoni is distinguished from *A. pallida* by the shape of the 4th and 5th pleura and the uropods (see Green, 1961, p. 295).

Reference to Chilton's (1901, p. 132, pl. 15, fig. 4; pl. 16, fig. 1) description of the one remaining species in the genus, *A. ophiensis* Chilton, 1901, shows that *A. thomsoni* is distinguished from this species by the form of the 3rd pleura and the uropods, and of the endopodites of the 1st pleopods in the male.

Actaecia euchroa Dana.

Actaecia euchroa Dana, 1853, p. 735, pl. 48, fig. 6.

Specimens obtained in New Zealand

The following collections were made by the author:—

From Piha, west of Auckland (North Island), on 14.II.1965; enrolled in burrows in sand a little below high tide level; 11 males and 9 females.

From Moeraki, North Otago (South Island), on 14.III.1965; running on sand at edge of incoming tide; 61 males and 31 females.

From Little Papanui Beach, Otago Peninsula (South Island), on 10.VIII.1964; enrolled in burrows in sand a little below high tide level; one male and 2 females.

A comparison of North Island specimens from Piha with South Island specimens from Moeraki revealed no morphological distinction between these animals from different islands.

Variations in colour

In all specimens from Piha, Moeraki and Little Papanui Beach the background colour of the dorsal surface of the body is almost white. However differences occur in the density and colour of the chromatophores, these differences being correlated with the colour of the sand from which the animals were obtained. In each case, the overall impression of colour given by the live animals was the same as that of their background of sand, thus providing them with an excellent camouflage. More detailed information is given in the following table:—

Locality.	Colour of sand.	Density of chromatophores in <i>A. euchroa</i> .	Colour of chromatophores in <i>A. euchroa</i> .
Piha	Dark grey, almost black.	Chromatophores very numerous and, in some areas, so close as to be almost touching.	Most chromatophores black; a few orange-brown or yellow.
Moeraki	Intermediate between reddish-brown and light grey.	Chromatophores very numerous and, in some areas, so close as to be almost touching.	A majority of black chromatophores, but many orange-brown and yellow ones also present.
Little Papanui Beach	Light grey, whitish.	Chromatophores less numerous and mostly well separated.	Most chromatophores black; a few orange-brown.

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