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NOTES AND NEWS

NEW RECORDS OF MARINE ISOPOD CRUSTACEANS (SPHAEROMATIDAE) FROM HAWAIIAN WATERS

BY

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INTRODUCTION

The shallow water Isopoda of the Hawaiian islands are poorly known, and few records exist in the literature (e.g., Miller, 1941, 1968). The significance of the present material lies in the great range extension of the monotypic genus *Neonaesa* and of the presumed southern hemisphere genus *Cymodocella* Pfeffer (cf. Harrison & Holdich, 1982b).

TAXONOMY

Sphaeromatidae Latreille, 1825

Dynameninae Bowman, 1981

Neonaesa Harrison & Holdich, 1982

Neonaesa rugosa Harrison & Holdich, 1982

Neonaesa rugosa Harrison & Holdich, 1982a: 422, figs. 1, 2. — Müller, 1991: 84, figs. 1-6.

Material. 11♂♂, 2♀♀, off Honolulu, Hawaii, 5 May 1915, dredged 19-75 m, coral bottom. Th. Mortensen (ZMUC).

Remarks. — This species has been reported from the Great Barrier Reef and Coral Sea (Harrison & Holdich, 1982a) and the Society Islands (Müller, 1991). It is also present at Madang, Papua New Guinea and Fiji (personal observation, author's collections). This record from Hawaii significantly expands the distributional range of the species, and is the first time it has been recorded from the northern hemisphere.

Cymodocella Pfeffer, 1887

Remarks. — The genus *Cymodocella*, recently redefined by Harrison & Holdich (1982b) cannot be considered well known. Of the 13 species included by

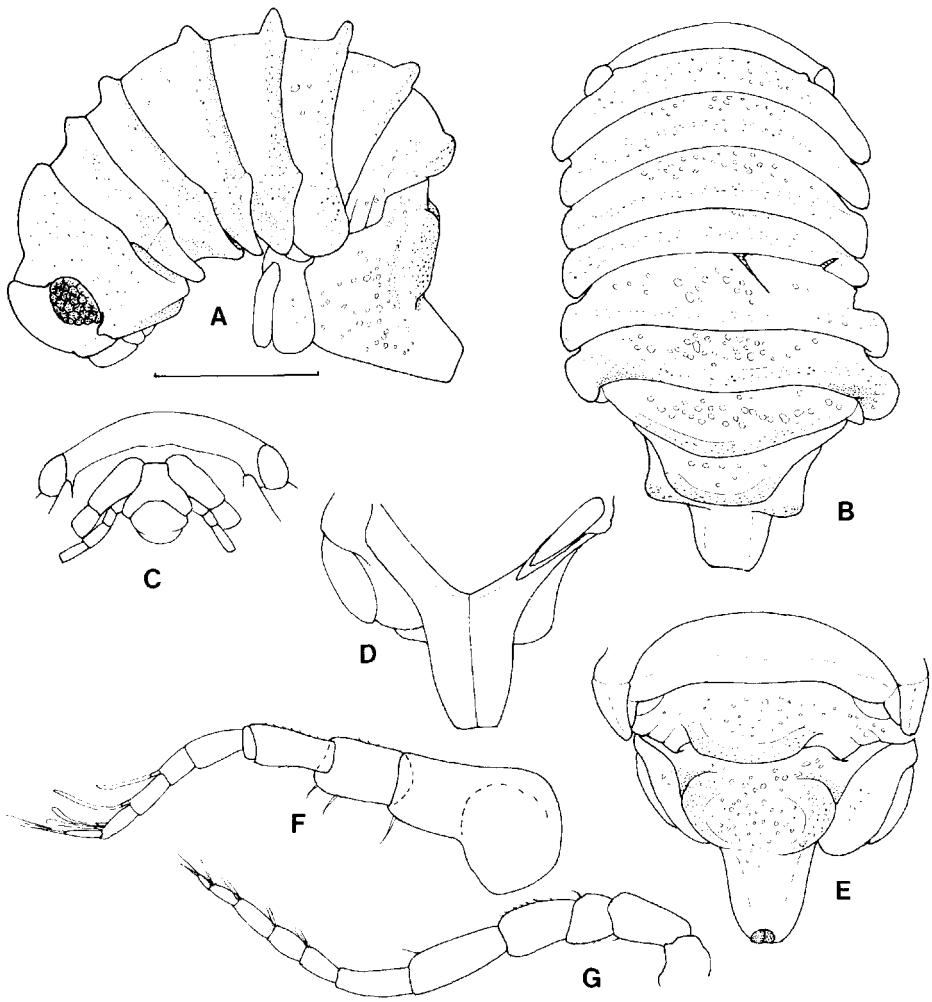

Fig. 1. *Cymodocella hawaiiensis* sp. nov. A-E, holotype; F, G, paratype. A, lateral view; B, dorsal view; C, frons; D, pleotelson, ventral view; E, pleon and pleotelson in dorsal view; F, antennule; G, antenna. Scale line 0.5 mm.

Harrison & Holdich (1982b), only two can be considered adequately described, the type species *C. tubicauda* Pfeffer, 1887 which was recently redescribed by Brandt & Wägele (1989) and *C. guaraparіensis* Loyola e Silva, 1965 which is known only from female specimens. Of the remaining species none are fully described and, despite this, still present a diverse array of morphological characters. The author is currently preparing a review of the Australian species of "tube-tailed" Dynameninae, and the species described here from Hawaii provides useful biogeographic and morphological data that will assist in developing a more exact concept of the genus.

The genus *Cymodocella* has been considered to have an exclusively southern hemisphere distribution (Harrison & Holdich, 1982b; Harrison & Ellis, 1991). There does exist one northern hemisphere record of a *Cymodocella* sp. from the Bahamas (Miller, 1968). Although Miller was somewhat uncertain about the correct generic placement of his specimens, his illustration suggests that the species may well be an undescribed *Cymodocella*.

The present record positively extends the distribution of the genus, as currently diagnosed, to the northern Pacific, although it is not clear what the relationship of *Cymodocella hawaiiensis* new species is to the other species of the genus. The most notable differences lies in the lack of a posterior pocket to the marsupium and the pereopod dactyli secondary unguis being simple, while all other species have the posterior pocket and bifid or trifid secondary unguis.

Cymodocella hawaiiensis new species
(figs. 1-3)

Material. — Holotype, ♀ (non-ovig., 1.9 mm), off Honolulu, Hawaii, 5 May 1915, 19-75 m, dredged, coral bottom, coll. Th. Mortensen (ZMUC). Paratype (♀ ovig., 2.1 mm, partially crushed), same data as holotype (ZMUC).

Description. — Body a little less than twice as long as wide; dorsal surface, except those that fold under when animal is straightened, punctate and coarsely pitted. Cephalon without rostral point; eyes large, facets distinct. Pereonites 2-7 with posterior margin raised into prominent, thickened ridge; coxae of pereonites 2-7 all with distinct suture; pereonite 7 narrower than 6, lateral margins concealed by those of pereonite 6. Pleon with pleonite 1 largely concealed by pereonite 7; two separate sutures run to posterior margin, medial posterior margin of pleon formed into thickened ridge. Pleotelson with prominent expanded and flattened boss on posterodorsal surface; posterior margin with distinct closed tube, ventral margins of which are wholly in contact.

Antennule articles colinear, article 1 longest, 2 shortest; flagellum short, 5 articles, shorter (0.6) than peduncle. Antenna peduncle as for genus, flagellum of 6 articles, shorter (0.6) than peduncle.

Epistome anterior margin quadrate, separating antennule bases. Mouthparts generally as for the type species but maxilliped palp articles 2-4 only weakly lobate.

Pereopods relatively slender, pereopods 2 and 3 dissimilar in proportion, pereopod 2 being elongate and slender, 1.26 times longer than pereopod 3. Dactylus with secondary unguis simple, with fine longitudinal ridge.

Pleopod 1 rami subequal in length; exopod with medial margin indurate, but not precisely defined. Pleopod 2 rami subequal in length. Pleopod 3 exopod distinctly shorter (0.87) than endopod, without transverse suture. Pleopods 4 and 5 both with weak ridges on both rami; pleopod 5 exopod with simple

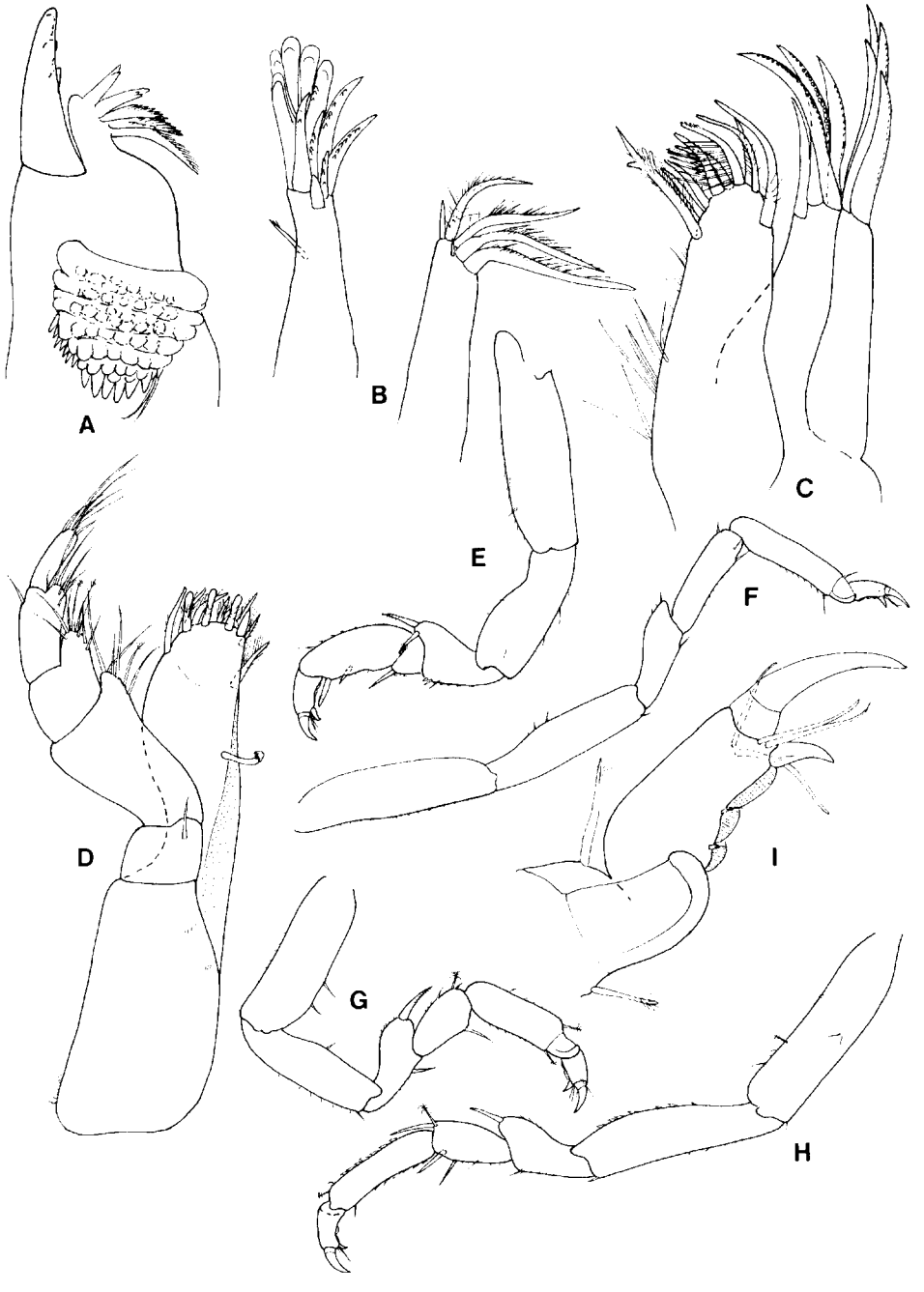

Fig. 2. *Cymodocella hawaiiensis* sp. nov. All figs. of paratype. A, right mandible, incisor, spine row and molar; B, maxillule (lateral lobe, en face); C, maxilla; D, maxilliped; E-H, pereopods 1-3, 7, respectively; I, pereopod 2, dactylus.

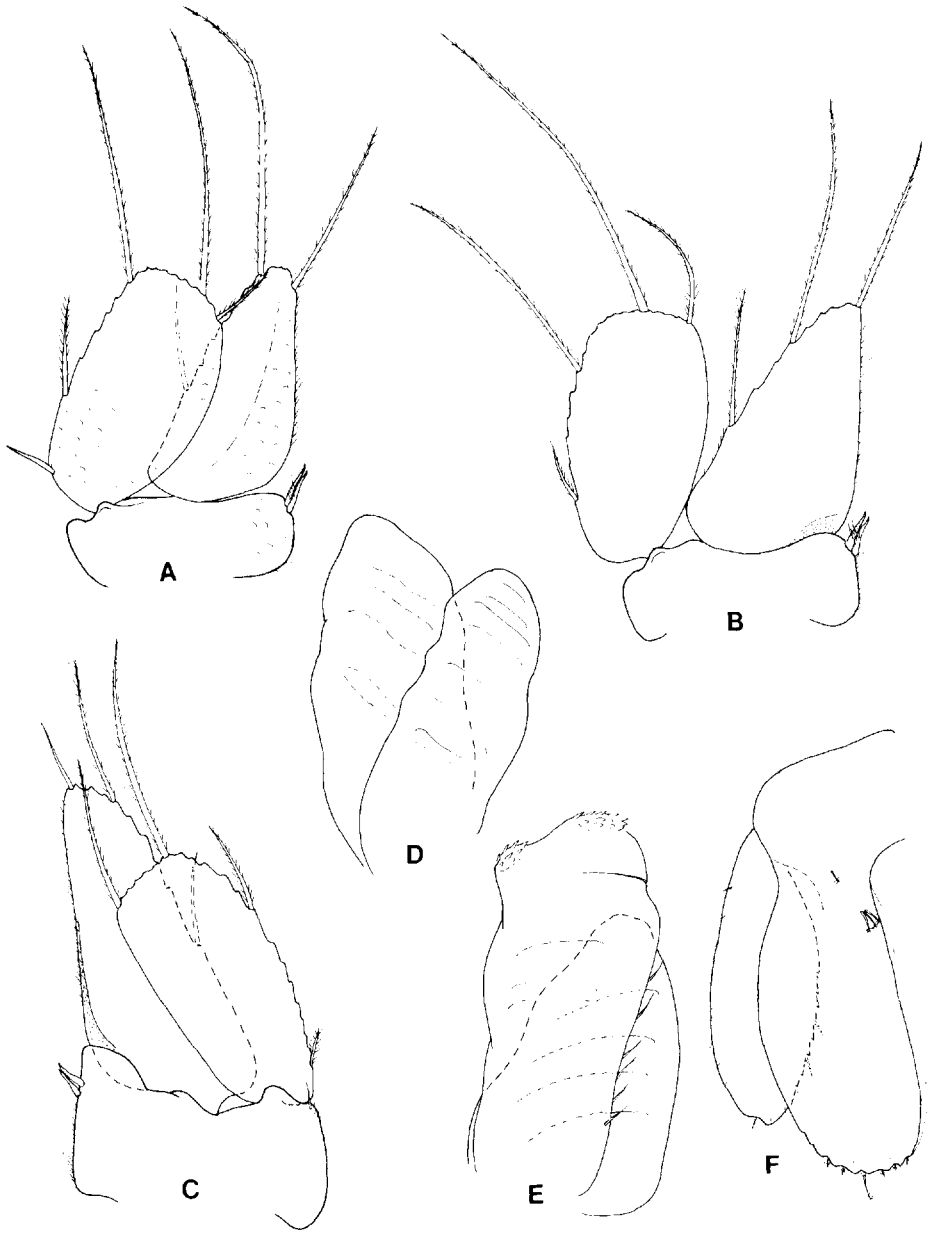

Fig. 3. *Cymodocella hawaiiensis* sp. nov. All figs. of paratype. A-E, pleopods 1-5, respectively; F, uropod.

marginal setae on lateral margin; pleopod 4 lacks transverse suture, incomplete suture present on pleopod 5.

Uropod rami both lamellar, apices broadly rounded; exopod medial margin finely serrate; exopod distal margin indistinctly crenulate.

Brood pouch without posterior pocket; oostegites arising from coxae of pereopods 2, 3, and 4.

Male. — Not known.

Remarks. — Although the mature males of this species are not known, the genus belongs to a group of sphaeromatid genera in which sexual variation is minimal, and includes the genera *Ischyromene* Racovitza, 1908, *Juletta* Bruce, 1993, *Marguerritta* Bruce, 1993 and *Maricoccus* Poore, 1994. Species of *Cymodocella* can all be recognized by their somatic ornamentation and uropod characteristics, and it is improbable that males of this species will differ significantly from females, an assertion further supported by description of Australian *Cymodocella* currently in preparation. It is felt that the importance of this record is sufficient to warrant its description from females alone.

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