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A NEW SPECIES OF THE GENUS *PONTOGENEIA* (CRUSTACEA, AMPHIPODA) FROM MATSUKAWAURA INLET, FUKUSHIMA PREFECTURE, JAPAN

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ABSTRACT

A new species of the genus *Pontogeneia* taken from a shallow inlet of Fukushima Prefecture, Japan, is described and figured. The new species is closely related to *P. intermedia* from Japan Sea and California but is distinguished from it by a slightly dilated propod of gnathopod 1, the presence of calceoli on antennae 1 and 2, and absence of an anterocephalic notch.

INTRODUCTION

During a survey of the diurnal rhythm of fish fry at Matsukawa-ura Inlet, Fukushima Prefecture, in February 1989, Dr. Y. Oozeki and his co-workers collected many amphipod specimens with plankton nets. About 20 species of gammarid amphipods were identified from these specimens. One of these species that belongs to the genus *Pontogeneia* and occurs most frequently is the subject of the present study. About 25 species of the genus *Portogeneia* have been reported in the world (J. L. Barnard, 1952, 1964, 1969, 1979; K. H. Barnard, 1932; Boeck 1870; Bousfield, 1973; Bulytscheva, 1957; Nagata, 1965; Oldevig, 1959; Rabindranath, 1972; Sars, 1895; Schellenberg, 1931; Shoemaker, 1933; Stebbing, 1906). The present species is closely related to *P. intermedia* Gurjanova, 1938, which has been recorded from the Japan Sea (Gurjanova, 1951) and California (J. L. Barnard, 1969, 1979). However, as several distinct differences in morphology between them are observed, I report the present pontogeneid as a new species.

All the specimens including the types studied by the authors are deposited in the collection of Asia University.

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Pontogeneia stocki n. sp. (Figs. 1-3)

Material examined. — Holotype: Male, 9.6 mm, taken from Matsukawa-ura Inlet, Fukushima Prefecture, Japan; February 1989; coll. Yoshioki Oozeki and his co-workers. Paratypes: Male, nos. 1-5 (6.0 mm, 5.9 mm,

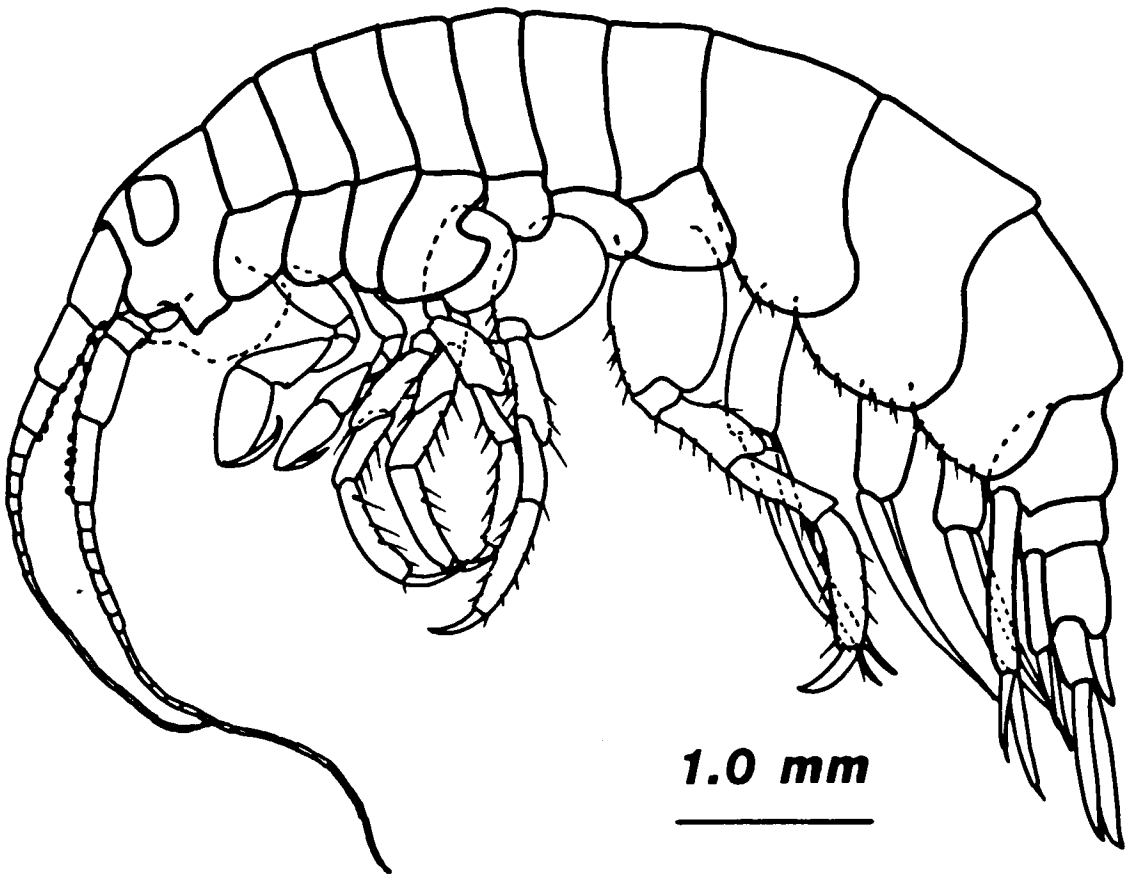

Fig. 1. *Pontogeneia stocki* sp. nov. Holotype, male, 9.6 mm.

7.1 mm, 6.8 mm, 5.7 mm); female, nos. 6-10 (9.0 mm, 8.6 mm, 9.0 mm, 6.2 mm, 5.2 mm); collected with the holotype. Holotype and a part of paratype no. 6 (female) are mounted on glass slides in a gum-chloral medium. Collection number: Asia-4.

Description of the male holotype (9.6 mm)

Body. Head: rostral projection small; anterocephalic lobes rectangular, lacking ventral notch; anteroventral angle blunt, with 3 minute setae. Gills present on pereonites 2-7. Pleonites 1-3 not extending backward dorsally; pleonal epimeron 2 lacking posterodistal tooth; pleonal epimeron 3 not conspicuously expanding backward, lacking posterodistal tooth.

Antennae. Antenna 1 shorter than antenna 2; relative length ratios of peduncular segments 1-3, 9:6:4; peduncular segments 2-3 ornamented with calceoli ventrally; accessory flagellum absent. Antenna 2: gland cone of peduncular segment 2 broad, extending to mid-point of peduncular segment 3; peduncular segments 4-5 ornamented with calceoli dorsally.

Mouthparts. Lower lip: inner plate coalescent with outer plate, distinct. Maxilla 1: inner plate with 6 plumose setae, apical seta stoutest; outer plate with 8 comb-like teeth; palp biarticulate, distal segment with 7 tooth-like spines, 5 stiff marginal setae and submarginal row of 10 setae on inner distal region. Maxilla 2: inner plate with 5 plumose setae on proximal half of inner margin. Mandibles: incisor ornamented with 6

or 7 blunt teeth, lacinia mobilis bifid on right mandible, with 5 teeth on left mandible, following 4 accessory blades; palp triarticulate, basal segment with 3 setae, penultimate segment slightly expanded medially, densely setose on expanding margin. Maxilliped: inner plate with 2 conical teeth; outer plate with 8 tooth-like spines on inner margin, with 5 stiff setae on outer margin.

Gnathopods. Gnathopod 1: carpus subtriangular, propod about 1.2 times as long as carpus, slightly rounded posteriorly; palm oblique, serrate; dactyl not serrate on grasping margin. Gnathopod 2 similar to gnathopod 1, propod more rounded.

Pereopods 3-4. Homopodous. Relative ratios of posterior lengths from basis to dactyl about 9:2:6:6:9:4, plumose setae present on posterior margin of merus, carpus and propod; propod of pereopod 3 with only one locking spine.

Pereopods 5-7. Pereopods 5-6 homopodous except for coxae; posterior lobe of coxa 6 deeper than that of coxa 5, with 3 spines ventrally. Pereopod 7 similar but longer than pereopod 6; basis more elongate than that of pereopod 6.

Pleopods. Pleopod 3 well developed; peduncule stout; rami multiarticulate, proximal segment short; swimming setae short.

Uropods. Uropod 1: peduncle spinose on lateral margin, 2.0 times as long as outer ramus; outer ramus about 0.7 times as long as inner ramus, apex bifid, armed with single spine; inner ramus bifid, with 2 apical spines, one elongate. Uropod 2 extending beyond telson; peduncle slightly shorter than half of length of outer ramus; outer ramus almost 0.7 times as long as inner ramus, with outer-apical tooth and 2 unequal apical spines; outer ramus apically bifid, with 2 unequal apical spines laterally; rami foliaceous, marginally spinose and setose; outer ramus slightly shorter than inner ramus.

Telson. Subrectangular, cleft to 0.75 of length, without setae or spines, apically rounded.

Description of female (paratype no. 6, 9.0 mm)

Similar to male. Peduncle of antennae lacking calceoli. Gnathopod 1: basis and carpus relatively more elongate than those of male; carpus less setose, not subtriangular; propod about 0.8 times as long as carpus, palm not serrate. Gnathopod 2: propod relatively longer than that of male; and more slender than that of male; palm not serrate.

Etymology. The specific name, *stocki*, is dedicated to Dr. Jan Stock, the very famous amphipodologist.

REMARKS

Morphologically the present species is closely related to *Pontogeneia intermedia* Gurjanova, 1938 (J. L. Barnard, 1969, 1979; Gurjanova, 1951), collected from Japan Sea and California, by sharing the following characters: 1) rostral projection very small; 2) the number of facial plumose setae on the inner plate of maxillae 1-2 being 5 or 6; 3) relative length and form of the carpus and propod of gnathopods; 4) pleonal epimeron 3 not conspicuously expanded backward, lacking a tooth on the hind angle; 5) depth of cleft in telson slightly longer than 1/2 of length of telson (J. L. Barnard, 1969, 1979) (in Gurjanova's (1951), cleft more than 2/3 of telson length). However, the present species is distinguished from *P. intermedia* by the following characters: 1) antennae 1 and 2 of male lacking calceoli (in the present species, ornamented with many calceoli); 2) anterocephalic notch distinct (absent in the present species) and anteroventral angle acute (blunt in the present species); 3) propod of gnathopod 1 almost straight posteriorly (slightly and broadly expanded in the present species) and dactyl serrate on the grasping margin (smooth in the present species); 4) in the inner plate of maxilla 2, facial plumose setae inserted on the medial margin extending to near the group of apical setae, although these setae in the present species inserted below the mid-point of medial margin.

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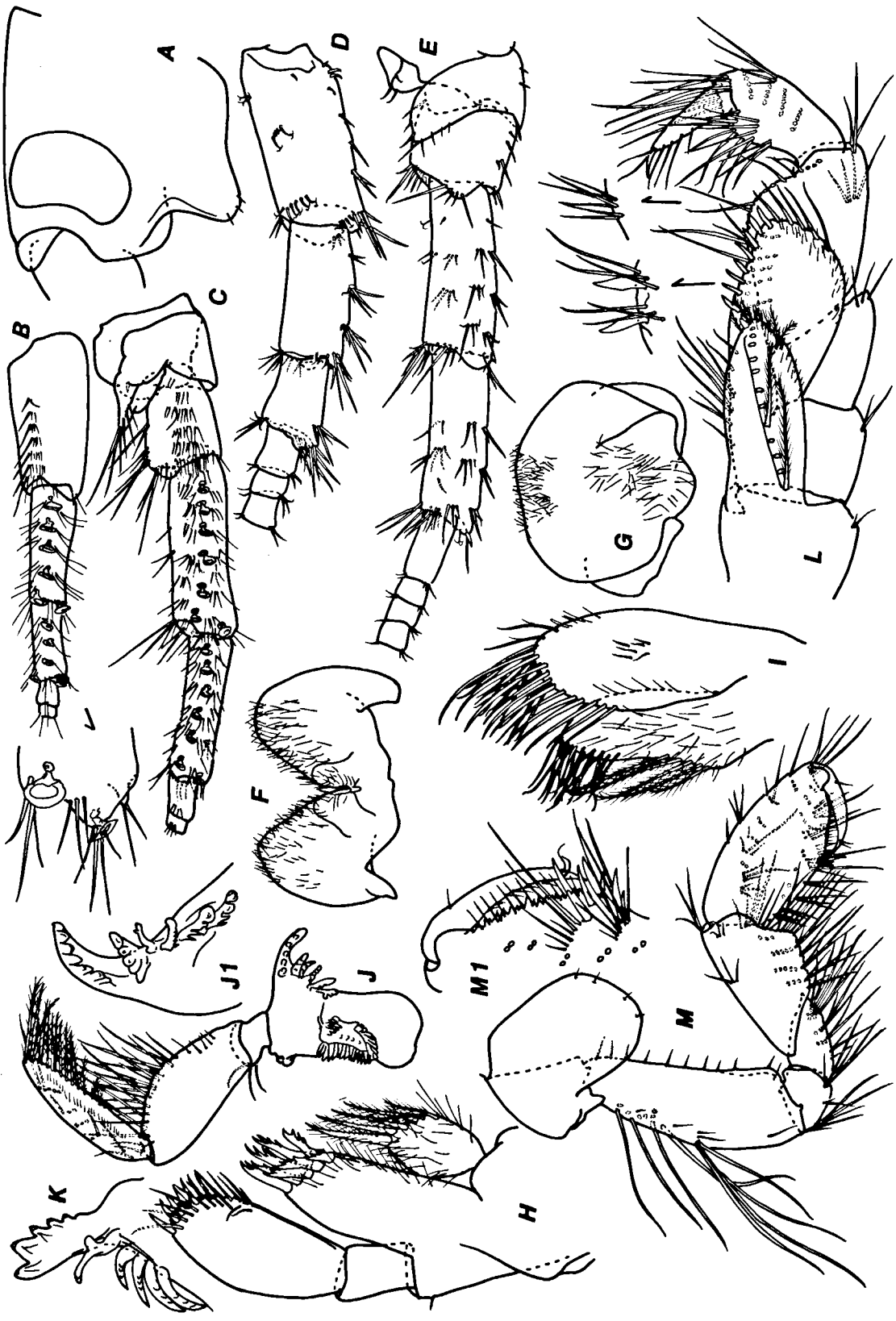
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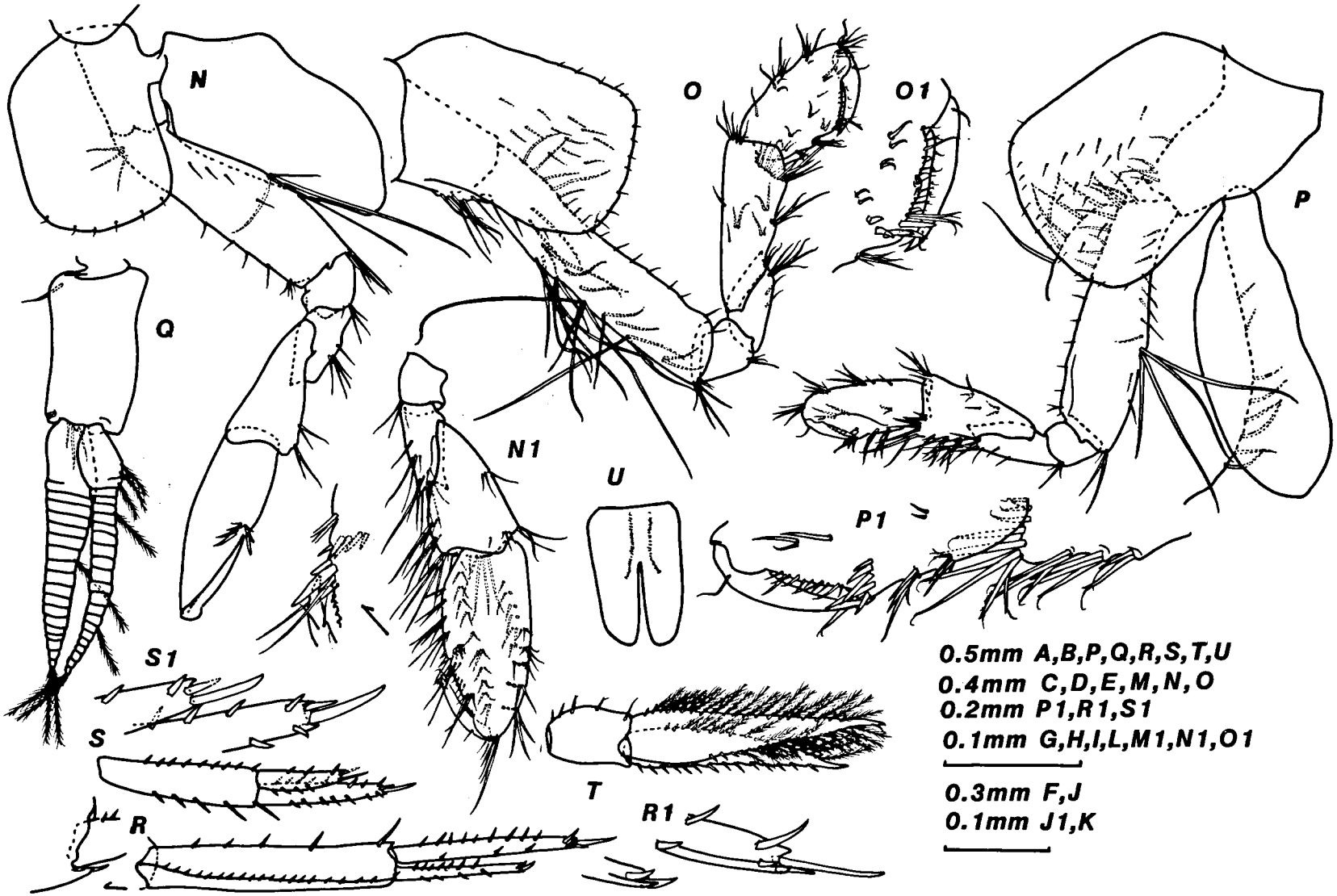

Fig. 2. *pontogeneia stocki* sp. nov., holotype (male, 9.6 mm) and paratype no. 6 (female, 9.0 mm: D, E, O, O1, P and P1). A: Head. B: Male antenna 1. C: Male antenna 2. D: Female antenna 1 (para. 6). E: Female antenna 2 (para. 6). F: Lower lip. G: Upper lip. H: Maxilla 1. I: Maxilla 2. J and J1: Left mandible. K: Right mandible. L: Maxilliped. M and M1: Male gnathopod 1 and palm. N and N1: Male gnathopod 2. O and O1: Female gnathopod 1 and palm (Para. 6). P and P1: Female gnathopod 2 and palm (Para. 6). Q: Pleopod 3. R and R1: Uropod 1. S and S1: Uropod 2. T: Uropod 3. U: Telson.

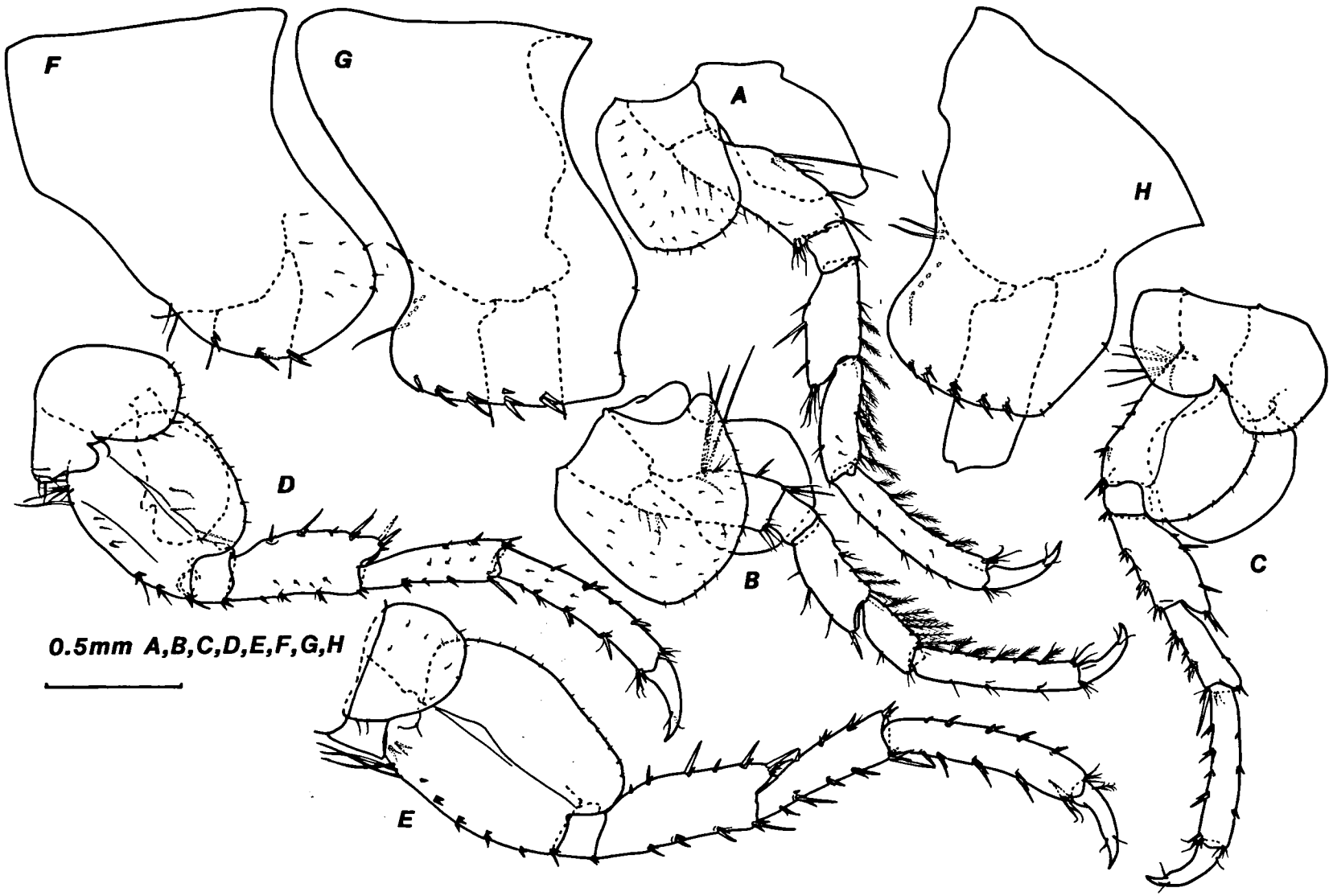

Fig. 3. *Pontogeneia stocki* sp. nov., holotype (male, 9.6 mm). A: Pereopod 3. B: Pereopod 4. C: Pereopod 5. D: Pereopod 6. E: Pereopod 7; F: Pleonite 1. G: Pleonite 2. H: Pleonite 3.

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