



## *Protomedeia prudens* J.L. Barnard, 1966

Nomenclature	
Phylum	Arthropoda
Class	Malacostraca
Order	Amphipoda
Family	Corophiidae
Common Synonyms (S) Previous Names (PN)	

Distribution	
Type Locality	
Geographic Distribution	Skidegate Inlet, Queen Charlotte Islands, B.C. to La Jolla Canyon, CA (Conlan 1983)
Habitat	Subtidal to 400 m but sometimes found at low water, on mud or sand of protected coasts (Conlan 1983).



### Description

From Conlan 1983, p. 31 (unless otherwise noted)

**Size/Body Shape:** Male to 6.0 mm, female 4.5 to 7.5 mm; body dorsoventrally depressed.

**Head/Rostrum/Eyes:** Head lobe square, A1 sinus shallow. Eye small to medium, round (described as oval and black in Thomas and McCann 1995).

**Antennae:** A1 slightly longer than A2, peduncular segment 3 less than half the length of segment 1, accessory flagellum 4-6 articles (Thomas and McCann 1995). A2 weakly setose, flagellum shorter than article 5.

**Mouthparts:** Upper lip, epistome roundly triangular. Mandible with 2-3 raker spines, molar flake present, palp strong, article 3 not wider distally than proximally, articles 2 and 3 with numerous setae, article 2 longer than 3 (Thomas and McCann 1995). Maxilla 1 bearing a setal group at the base of palp.

**G1:** Male, segment 1 not posterodistally produced into a lobe; segment 5 longer than segment 6; segment 6, hind margin cusped, palm transverse. Juvenile male, segment 5 broader and subequal to segment 6, hind margin of segment 6 not cusped, dactyl shorter than in the adult. Female, hind margin of segment 6 not cusped, otherwise similar to adult male.

**G2:** Male, segment 2 bearing a posterior tooth at the junction of the coxa; segment 5 longer and wider than segment 6; segment 6 distally tapered, hind margin cusped, palm transverse, bearing a medial

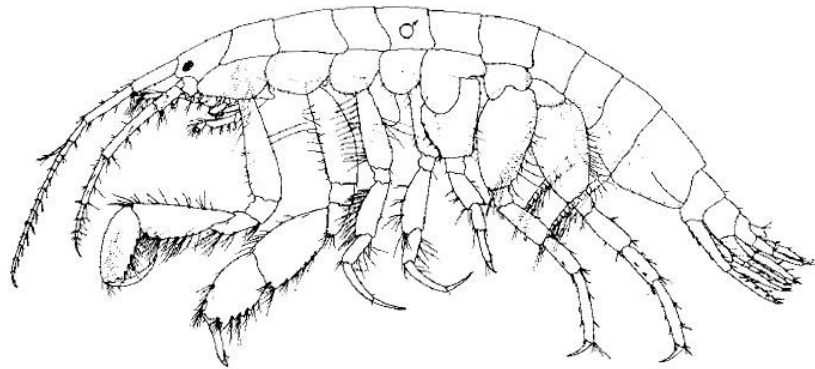
tooth and an articulating defining spine; dactyl straight and slightly sinuous and overlapping the palm by more than ½ its full length. Juvenile male, coxal tooth lacking, segment 5 shorter and broader than in the adult, segment 6 not posteriorly cusped, dactyl shorter and evenly rounded. Female, hind margin of segment 6 not cusped, segment 5 wider than segment 6, segment 6 distally tapered, palm oblique and lacking medial tooth; dactyl not overlapping palm. Otherwise similar to adult male.

**Coxae/ Pereopods:** Coxae shallow. Margins of coxae 1-3 weakly setose. P3 and P4, anterior margin of segment 4 densely setose, segment 4 not anterodistally produced over segment 5, dactyl shorter than segment 6. P5, coxa deeper than coxae 1-4; segment 2 anteriorly bulged.

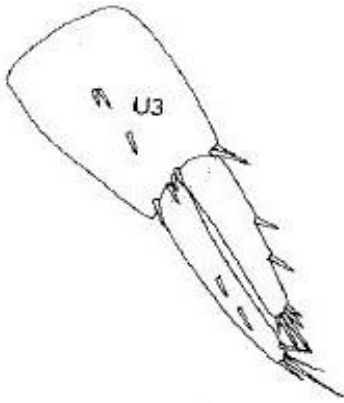
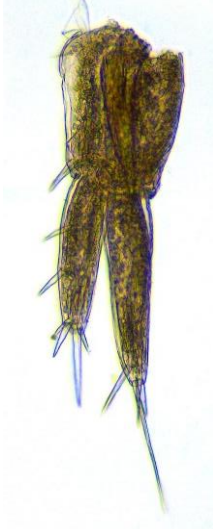
**Epimeron:** Epimera bearing lateral ridge.

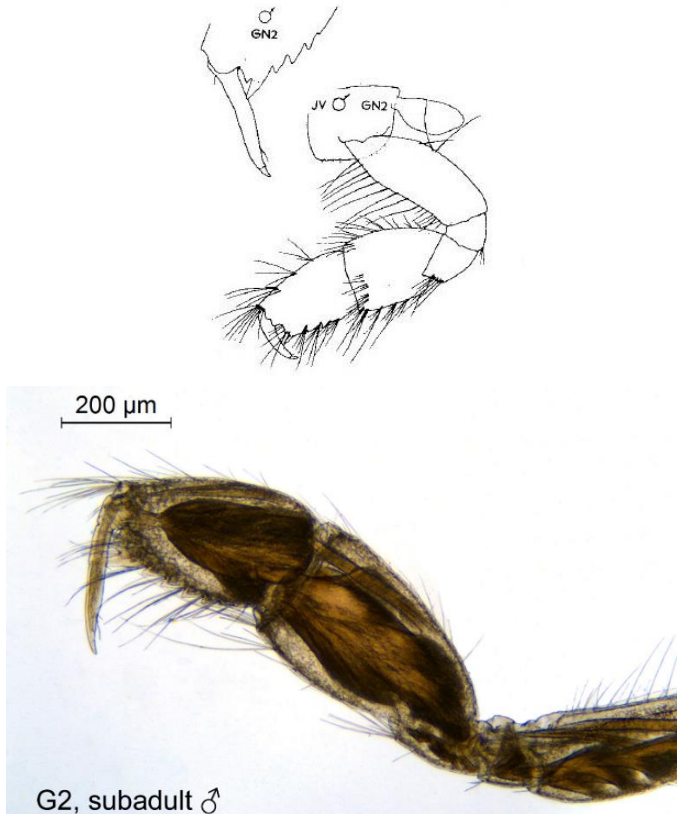
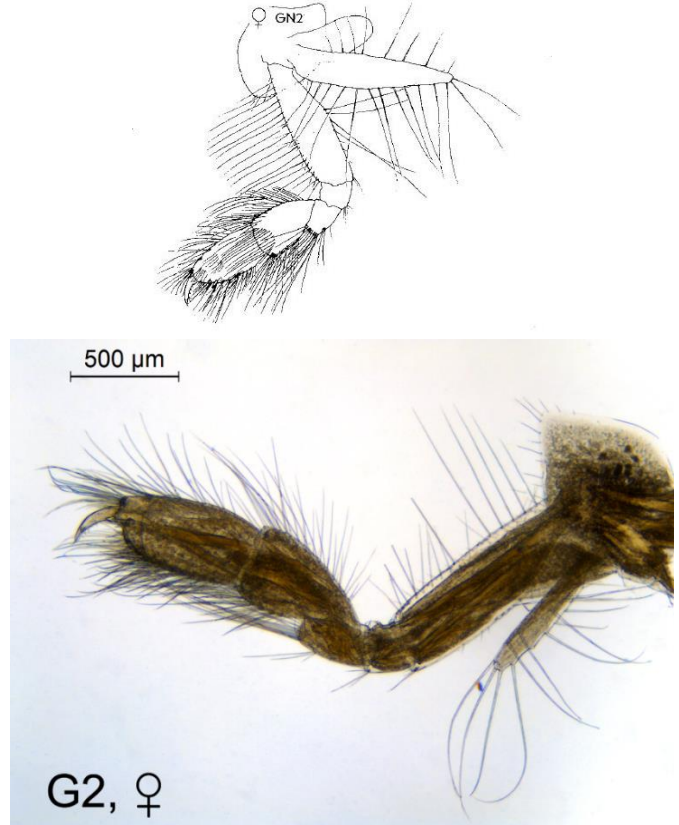
**Urosome/Uropods:** Urosome dorsally smooth. U3, inner ramus slightly shorter than outer (see note in comments section), spines slender.

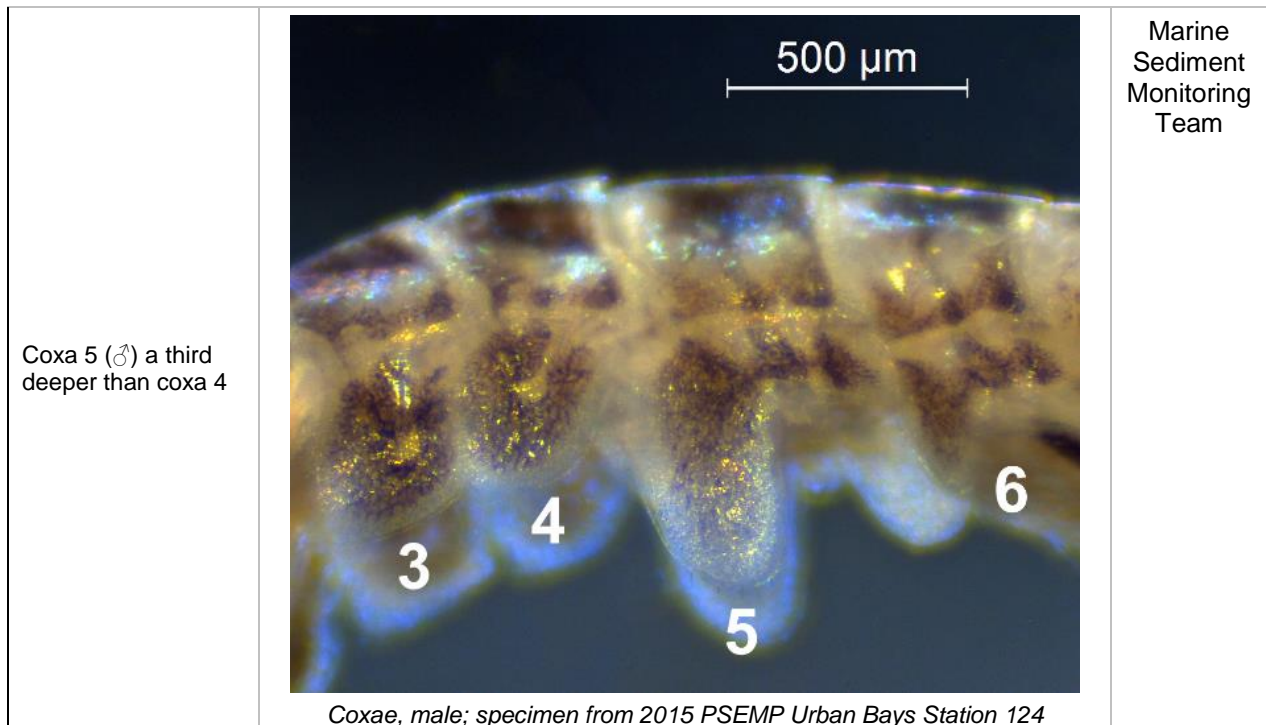
**Telson:** With a pair of apical cusps or small spines (characteristic of genus).



### Diagnostic Characteristics

Diagnostic Characteristics (From Conlan 1983)	Photo, Illustrations	Photo, Illustration Credit
<p>U3, inner ramus nearly as long as outer ramus</p> <p><i>Note: Difference in length between the inner and outer ramus of U3 is more pronounced in Puget Sound specimens than stated in the description in Conlan (1983); inner ramus is only about 2/3 length of outer ramus (D. Burgess and J. Cordell, personal observations).</i></p>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Left uropod 3 (dorsal view)</p> </div> <div style="text-align: center;">  <p>Right uropod 3 (dorsal view); specimen from 2015 PSEMP Urban Bays Station 124</p> </div> </div>	<p>LEFT: Conlan 1983, p. 31</p> <p>RIGHT: Marine Sediment Monitoring Team</p>

<p>G2 (adult ♂), segment 5 longer than segment 6, segment 6 distally tapered; dactyl straight and slightly sinuous, greatly overlapping palm</p>	 <p>G2, subadult ♂</p> <p><i>G2, subadult male; specimen from 2015 PSEMP Urban Bays Station 124</i></p>	<p>Conlan 1983, p. 31</p> <p>Marine Sediment Monitoring Team</p>
<p>G2 (♀), palm oblique</p> <p><i>Note: Some Puget Sound specimens seem to have a slightly more transverse palm than indicated by the figure in Conlan, although not nearly as transverse as the palm of P. grandimana. Specimen in photo may be a subadult female with G2 in a developmental stage (D. Burgess and J. Cordell, personal observation).</i></p>	 <p>G2, ♀</p> <p><i>G2, female; specimen from 2015 PSEMP Urban Bays Station 124</i></p>	<p>Conlan 1983, p. 32</p> <p>Marine Sediment Monitoring Team</p>



Related Species and Characteristic Differences	
Species Name	Diagnostic Characteristics
<i>Protomedeia articulata</i>	Adult male <i>P. articulata</i> differ from <i>P. prudens</i> in G1 and G2; in <i>P. articulata</i> the carpus is hardly longer than the propodus and the dactyl is about ½ the length of the propodus and not recurved on the propodus. The posterior margin of the propodus of G2 is not cusped, and the dactyl is not elongate or straight as in <i>P. prudens</i> . Unfortunately juveniles and adult females of these 2 species are difficult to distinguish (Conlan 1995).
<i>Protomedeia grandimana</i>	Coxa 5 subequal in length to coxa 4; female G2 palm transverse (Conlan 1983).

**Comments**

**From Conlan 1995:** The basis of P5 may not be as anteriorly bulged as figured, and there may be several clusters of spines on the carpus of P5-7. In large males the carpus of G1 and G2 may be almost twice as long as the propodus.

## Literature

- Barnard, J. L. 1966. Submarine canyons of southern California. Part V. Systematics: Amphipoda. *Allan Hancock Pacific Expeditions*, 27(5): 166 pp. (p. 83, Fig 36)
- Barnard, J. L. 1971. Gammaridean Amphipoda from a deep sea transect off Oregon. *Smithsonian Contributions to Zoology*, 61. 86 pp.
- Conlan, K.E. 1983. The amphipod superfamily Corophioidea in the northeastern Pacific region. 3. Family Isaeidae: systematics and distributional ecology. National Museums of Canada, National Museums of Natural Sciences, *Publications in Natural Sciences*: 1-75. (pp. 27-28)
- Conlan, K.E. 1995. Superfamily Corophioidea. pp.177-222. In: Blake J.A., Watling L., Scott P. H., Eds. *Taxonomic Atlas of the Benthic Fauna of the Santa Maria Basin and the Western Santa Barbara Channel*. Volume 12. ISBN 0-936649-17-4. Santa Barbara: Santa Barbara Museum of Natural History. (p. 204)

## More Information

More information about Puget Sound benthic invertebrates is available at:  
<http://www.ecy.wa.gov/programs/eap/psamp/index.htm>

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