

A new species of the deepwater pandalid shrimp of the genus *Pandalopsis* (Crustacea: Decapoda: Pandalidae) from the Kuril Islands, North Pacific

Yukio Hanamura, Hideo Khono, and Hideo Sakaji

Abstract.—A new species of the pandalid shrimp genus *Pandalopsis* is reported from the Kuril Islands. *Pandalopsis spinosior* new species is closely related to *P. miyakei* Hayashi, 1986, particularly in the rostral formula and the spine arrangement of the ambulatory legs. However, the new species is immediately distinguished from the latter by having the anteriormost spine of the dorsal rostral series (except subapical ones) situated anterior to the antennular peduncle, the pleuron of the fourth abdominal somite with a posteroventral spine and the telson armed with a greater number of dorsolateral spines.

Introduction

The pandalid shrimp genus *Pandalopsis* contains 15 species (Komai, 1994; Jensen, 1998). Species of *Pandalopsis* are primarily members of the North Pacific faunal community, except for one species, *P. ampla* Bate, 1888, which occurs both in the eastern Pacific and the western South Atlantic (Takeda & Hatanaka, 1984; Komai, 1994). Due to their large body size and abundance, *Pandalopsis* includes some species of particular interest for commercial fisheries (Holthuis, 1980). Since Bate (1888), various authors have undertaken taxonomic studies of *Pandalopsis*. The following studies are significant: Rathbun (1904), Kobjakova (1936), Urita (1941), Boschi (1973), Butler (1980), Hayashi (1986), Komai & Amaoka (1989), Komai (1994, 1997), and Jensen (1998). Despite these contributions, there still remains some

uncertainty and more studies on this genus are required (Komai, 1994).

Recently, several shrimps, collected in the Kuril Islands and subsequently landed at a local fishery port in Aomori Prefecture, were sent to the authors for identification. Our study revealed that they belong to an unknown species of *Pandalopsis* and are described here as a new species, *P. spinosior*.

Abbreviations used are: cl, postorbital carapace length; NSK, Nansei National Fisheries Research Institute at Kochi (now Kuroshio Station, National Fisheries Research Institute of Fisheries Science); NSMT, National Science Museum, Tokyo.

Systematic account

Pandalopsis spinosior new species

Figs. 1–3

Material.—Holotype: ovigerous female (cl 36.4 mm); definite data unknown but collected in the Urup (or Etorofu) Strait by a Japanese fishery vessel at depths around 400 m with an otter trawl during the period from August 1999 to February 2000 (NSMT).

Paratypes: 3 transitional males (cl 35.0–36.2 mm), 3 females (cl 36.0–37.8 mm), 3 ovigerous females (cl 34.5–35.8 mm) (NSMT). Data same as for the holotype.

Description.—Body moderately robust, naked (Fig. 1).

Rostrum (Fig. 1) distinctly exceeding beyond distal margin of antennal scale, 1.19–1.35 (average 1.28) times as long as

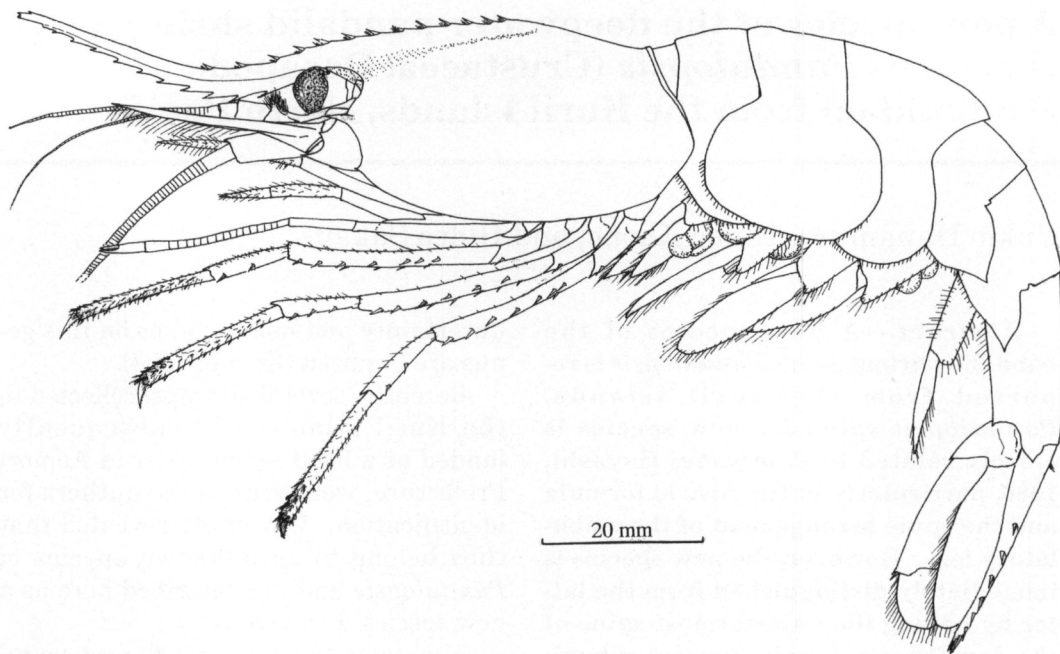


Fig. 1. *Pandalopsis spinosior* new species, holotype ovigerous female, cl 36.4 mm.

carapace, curving dorsad, armed dorsally with 13–16 spines, including usually 6–8, infrequently 5, spines situated on carapace, posteriormost spine placed at midlength of carapace, anteriormost spine placed anterior to distal end of antennular peduncle, unarmed in distal half except for 2 fixed subapical spines; ventral margin armed with 10–12 spines for entire length, posteriormost spine slightly smaller than preceding one; lateral carina well developed throughout entire length.

Carapace (Fig. 1) smooth, branchial ridge indistinct, postrostral carina moderately high, running to posterior two-fifths, then rounded posteriorly except for weak tubercle but no transverse setal tufts near posterodorsal margin; antennal spine stout, reaching base of cornea; branchiostegal spine small; pterygostomian corner broadly rounded.

Abdomen (Fig. 1) rounded dorsally, 6th somite 1.72–1.89 (average 1.84) times as long as 5th. Pleura of first 3 somites

broadly rounded, those of 4th and 5th somites normally with posteroventral spine, but infrequently rounded on either side.

Telson (Figs. 1, 2a) dorsally flattened or feebly rounded, 0.76–0.80 (average 0.78) times as long as carapace, 1.38–1.43 (average 1.40) times as long as 6th abdominal somite, armed with 7 or 8 dorso-lateral spines on each side in addition to terminal 3 pairs, with dorsal tuft of setae at anterior dorsal surface. Uropod (Figs. 1, 2a) reaching as far as end of telson; exopod slightly longer than endopod, with movable spine at just mesial to lateral spine.

Eye (Fig. 2d) broadly subpyriform, cornea well developed, maximal diameter about 0.2 times as long as carapace, ocellus in contact with cornea, small.

Antennular peduncle (Fig. 2b) with 1st segment slightly more than 1.5 times as long as length of 2nd and 3rd segments combined, stylocerite short, broadly rounded distally; outer flagellum not in-

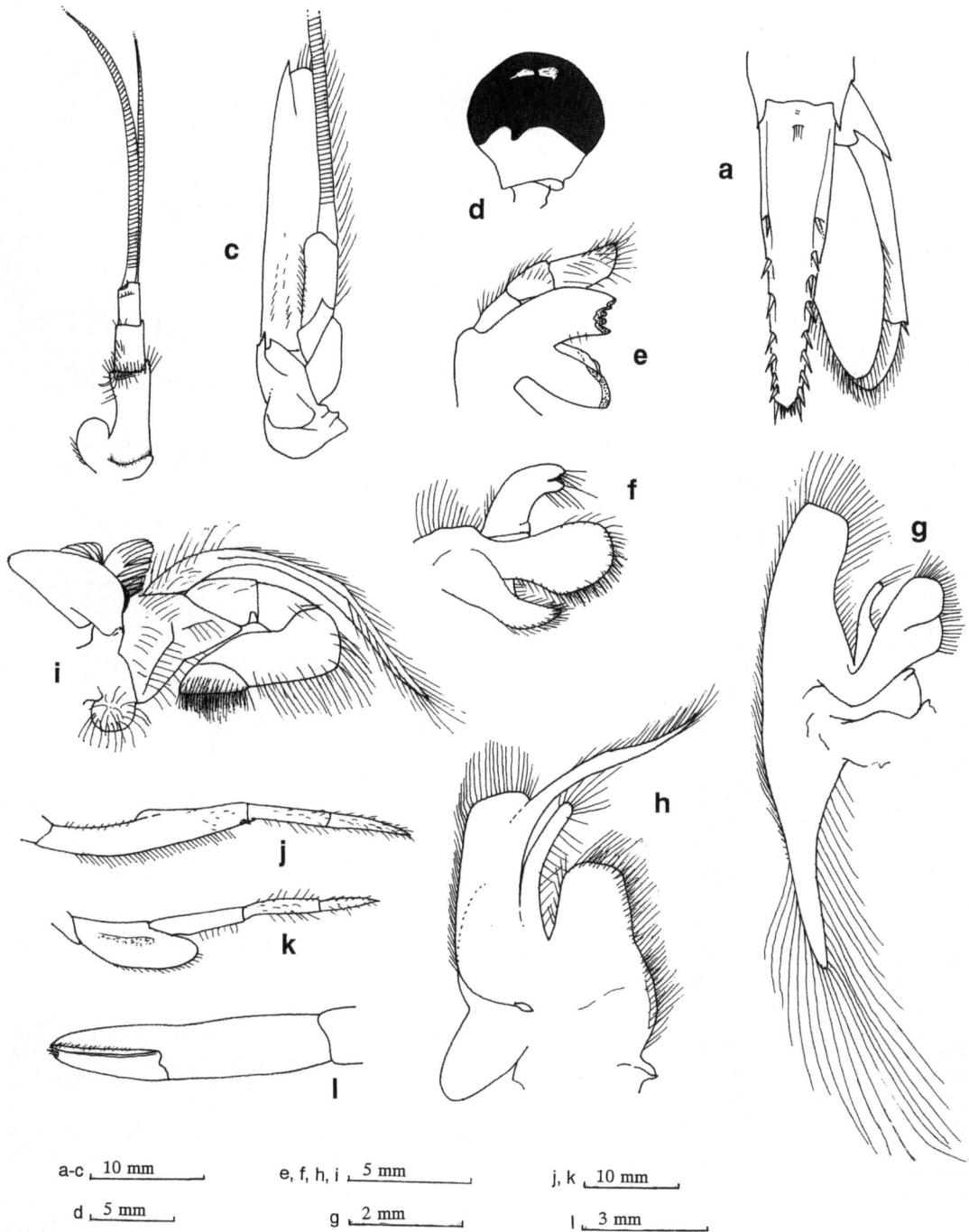


Fig. 2. *Pandalopsis spinosior* new species, holotype ovigerous female, cl 36.4 mm (a, d-l) and paratype female, cl 37.8 mm (b, c): a, tail fan; b, left eye, dorsal aspect; c, left 1st antenna, dorsal aspect; d, left 2nd antenna, ventral aspect; e, right mandible; f, right 1st maxilla; g, right 2nd maxilla; h, right 1st maxilliped; i, right 2nd maxilliped; j, right 3rd maxilliped; k, right 1st pereopod; l, left chela of 2nd pereopod.

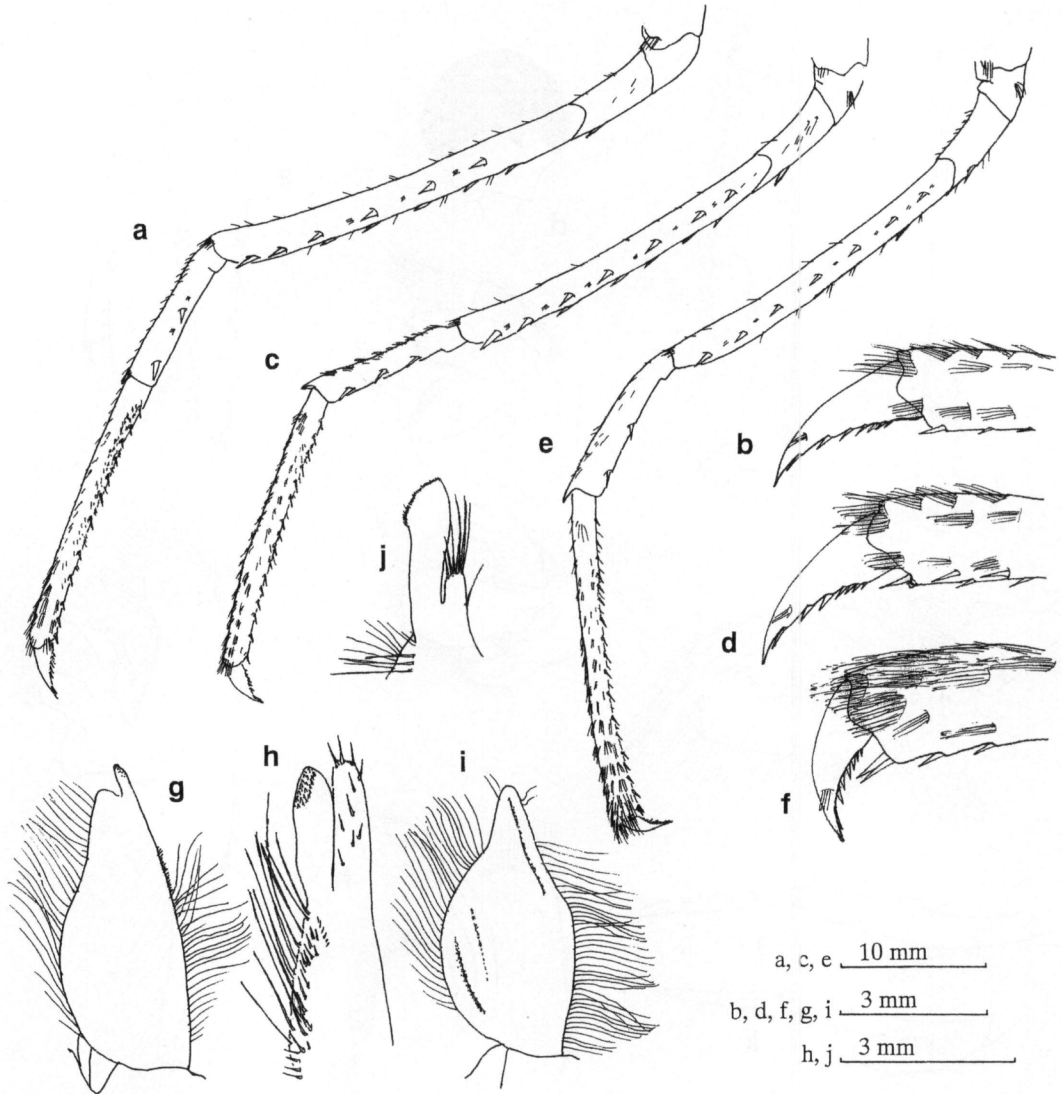


Fig. 3. *Pandalopsis spinosior* new species, holotype ovigerous female, cl 36.4 mm (a–f), paratype transitional male, cl 36.2 mm (g, h), and paratype ovigerous female, cl 34.5 mm (i, j): a, left 3rd pereopod; b, same, dactylus enlarged; c, left 4th pereopod; d, same, dactylus enlarged; e, left 5th pereopod; f, same, dactylus enlarged; g, right endopod of 1st pleopod of transitional male; h, right appendix interna and appendix masculina of transitional male; i, right endopod of 1st pleopod of ovigerous female; j, right appendix interna and reduced appendix masculina of ovigerous female.

tact in any specimens, basal thickened aesthetasc-bearing portion slightly more than 0.6 times as long as carapace.

Antennal scale (Fig. 2c) 0.71–0.78 (average 0.74) times as long as carapace, 3.44–3.90 (average 3.62) times as long as wide, distolateral spine extending slightly beyond distal margin of lamella, lateral

margin nearly straight. Flagellum as long as entire body length.

Mouthparts (Fig. 2e–i) typical of genus. Third maxilliped (Fig. 2j) falling short of distal margin of antennal scale, distal segment 1.05–1.22 (average 1.12) times as long as penultimate.

First pereopod (Figs. 1, 2k) reaching