

**Further Records of Deep-sea Shrimps of the Genus  
*Glyphocrangon* (Crustacea: Decapoda: Caridea:  
Glyphocrangonidae) from the Southwestern Pacific,  
with Descriptions of Two New Species**

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Collections made during recent French expeditions to the Solomon Islands (SALOMON 1 and 2) and Vanuatu (BOA 0 and 1) yielded 10 species of the caridean genus *Glyphocrangon* A. Milne-Edwards, 1881, including two new to science: *G. boa* sp. nov. from Vanuatu and *G. prostrata* sp. nov. from the Solomon Islands. Affinities of these two new species are discussed. The following eight species are newly recorded from the Solomon Islands: *G. confusa* Komai, 2004, *G. faxoni* De Man, 1918, *G. indonesiensis* Komai, 2004, *G. lineata* Komai, 2004, *G. megalophthalma* De Man, 1918, *G. proxima* Komai, 2004, *G. pugnax* De Man, 1918 and *G. similior* Komai, 2004. *Glyphocrangon demani* Komai, 2006 and *G. rudis* Komai, 2006 are shown to represent the male and female, respectively, of the same species, and the latter name is given priority over the former.

**Key Words:** Crustacea, Decapoda, Caridea, Glyphocrangonidae, *Glyphocrangon*, southwestern Pacific, new species, synonym.

### **Introduction**

The caridean shrimp genus *Glyphocrangon* A. Milne-Edwards, 1881 is currently represented by 87 species worldwide (Holthuis 1971; Burukovsky 2004; Komai 2004, 2005, 2006, 2007, 2010; Komai and Chan 2008; Hendrickx 2010), all of which inhabit continental slopes down to abyssal basins (200–6500 m). Recent studies have shown that species occurring in the Indo-Pacific region are highly localized, and thus discovery of new species from little-investigated areas is still expected.

During recent French cruises to the Southwest Pacific (SALOMON 1 and 2 cruises to the Solomon Islands; BOA 0 and 1 cruises to Vanuatu), interesting collections of *Glyphocrangon* were taken. Thanks to the revisionary studies by Komai (2004, 2006) and Komai and Chan (2008), species of the genus are well documented particularly in the Philippines, Indonesia, Vanuatu, and New Caledonia, but a large part of the area in the western Pacific remains to be investigated. The present material reveals the existence of 10 species, including one new to science (*G. prostrata* sp. nov.), in waters around the Solomon Islands, and adds one more new

species (*G. boa* sp. nov.) to waters around Vanuatu. These two new species are described and illustrated in detail, and compared with close relatives. Eight species are newly recorded from the Solomon Islands.

The material used in this study is deposited in the Muséum National d'histoire Naturelle, Paris (MNHN), and the Natural History Museum and Institute, Chiba (CBM). The measurements given in millimeters are of postorbital carapace length (cl), measured from the posterior orbital margin to the midpoint of the posterodorsal margin of the carapace. Another abbreviation used in the text is CP from the French "chalut à perche", meaning beam trawl. The morphological terminology generally follows Komai (2004).

### Taxonomy

Genus *Glyphocrangon* A. Milne-Edwards, 1881

*Glyphocrangon armata* Komai, 2004

*Glyphocrangon armata* Komai, 2004: 570, figs 95, 96, 121 [type locality: New Caledonia, 870–1000 m].

**Material examined. Vanuatu.** BOA 1, stn CP 2435, Big Bay, 14°51.10'S, 166°53.80'E, 773–900 m, 9 September 2005, 2 males (cl 16.5, 24.2 mm), MNHN-IU-2011-802; stn CP 2466, 16°44.10'S, 167°59.20'E, 786–800 m, 13 September 2005, 1 ovigerous female (cl 29.9 mm), MNHN-IU-2011-803.

**Remarks.** This species was already recorded from Vanuatu by Komai (2004), although the determination of the specific identity still remains provisional because of the variation exhibited by different populations. The present specimens agree with the previous specimens from Vanuatu reported by Komai (2004).

### *Glyphocrangon boa* sp. nov.

(Figs 1–3)

**Material examined. Holotype.** BOA 0, stn CP 2309, NE of Santo, Vanuatu, 14°48.50'S, 167°04.70'E, 700–818 m, 15 November 2004, ovigerous female (cl 29.4 mm), MNHN-IU-2011-804.

**Description.** Body (Fig. 1) relatively robust. Integument glabrous, without dense pubescence or scattered short setae.

Rostrum (Figs 1, 2A, B) upturned distally, 0.6 times as long as carapace, armed with 2 pairs of sharply pointed teeth proximally, posterior pair weakly bilobed (Fig. 2C); median carina displaying series of lateral extensions forming shallow foveolations on anterior part, posterior part minutely tuberculate, bearing 1 prominent tooth-like tubercle; dorsolateral ridges between 2 lateral teeth strongly raised; ventral surface nearly flat in distal part, ventrolateral margins distinctly carinate.

Carapace (Figs 1, 2D–F) as long as width between tips of anterior teeth of posterior third carinae; surfaces of carinae and tubercles etched with minute pits; major carinae relatively high for genus. Anterior first (submedian) carina com-

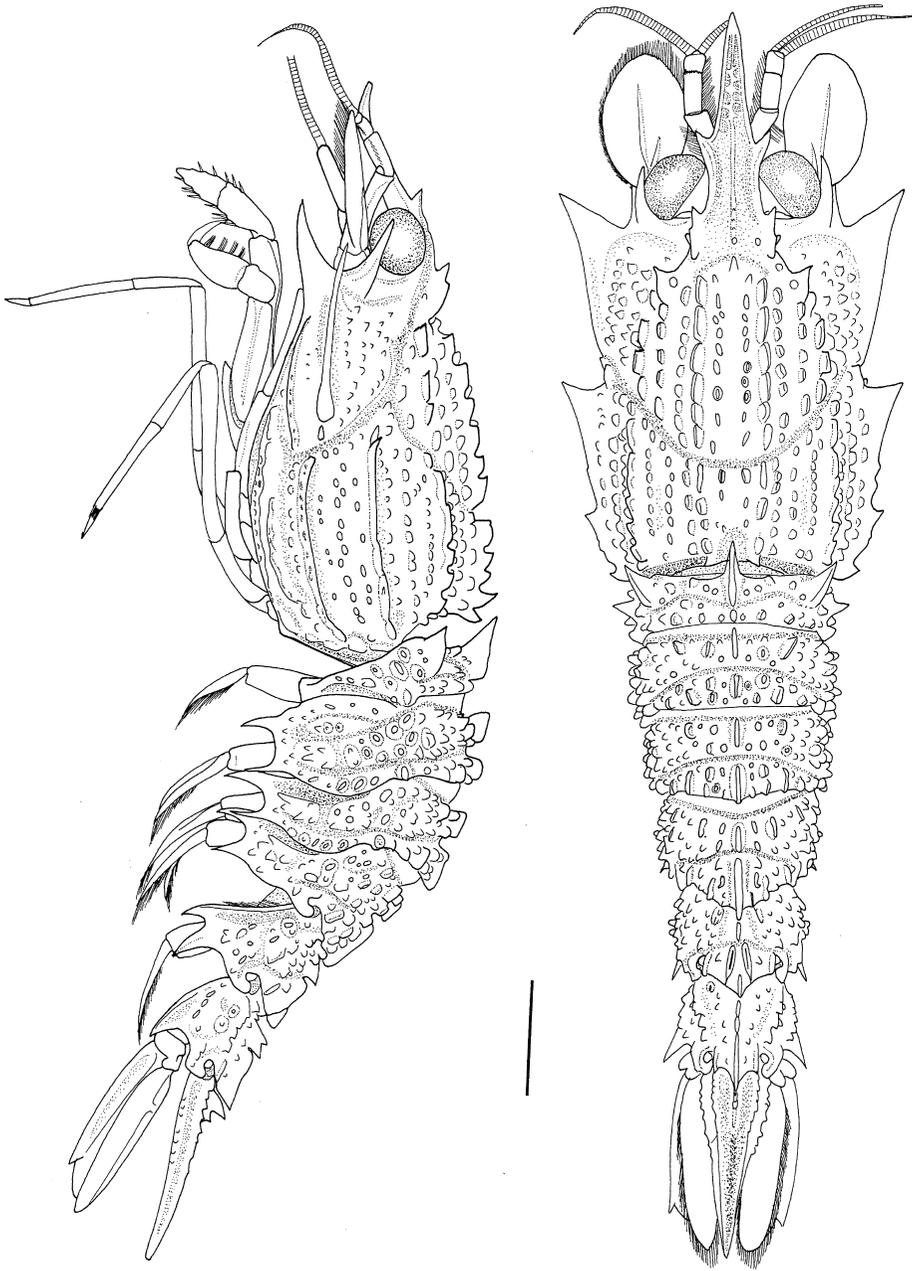
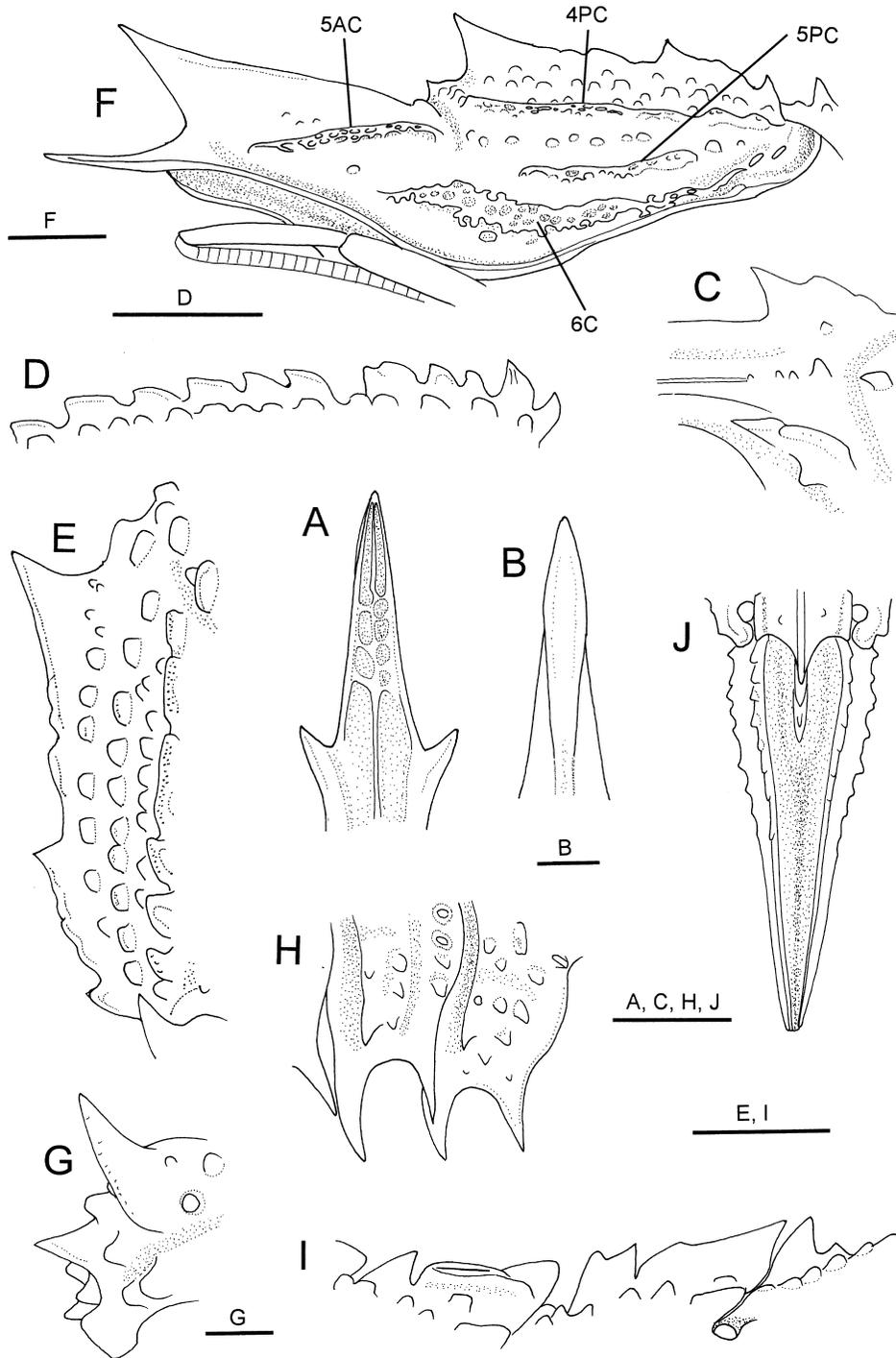


Fig. 1. *Glyphocrangon boa* sp. nov., holotype, ovigerous female (cl 29.4 mm), MNHN-IU-2011-804, entire animal in dorsal and lateral views. Scale bar: 10 mm.

posed of 6 tubercles, these tubercles forwardly directed with blunt or subacute tips, somewhat compressed laterally; posterior first carina composed of 4 (right) or 5 (left) tooth-like tubercles, first tubercle weakly subdivided, posteriormost 2 tubercles acuminate, directed upward. Anterior second (intermediate) carina composed of 4 tubercles, anteriormost one larger than others, dentate with anterolaterally directed, acute tip, second one acuminate, third one subacute, and fourth one blunt; posterior second carina weakly arched in lateral view, composed of 6 lobes or tubercles, third lobe longest, faintly subdivided, fourth to sixth tubercles triangular, directed forwards. Anterior third (antennal) carina confined to antennal tooth; posterior third carina high, somewhat compressed vertically, terminating anteriorly in strong, anterolaterally directed tooth, bearing 2 smaller teeth posteriorly, margin diverging anteriorly in dorsal view; distance between tips of teeth subequal to distance between tips of acute laminae of anterior fourth carinae. Anterior fourth (lateral) carina not continuous with branchiostegal tooth, expanded into single large, vertically compressed, acute lamina overreaching posterior margin of orbit, distance between tips of laminae subequal to carapace length; posterior fourth carina moderately high, upturned posteriorly, anterior two-thirds only faintly divided, posterior one-third divided into 3 tubercles with forwardly directed tips, anterior end angular. Anterior fifth (sublateral) carina not sharply delimited, surface eroded; posterior fifth carina rather broad, faintly divided, surface roughly eroded, posteriorly followed by 2 tubercles. Sixth (submarginal) carina showing as broad elevation with roughly eroded surface, extending posteriorly to posterolateral corner of carapace. Submarginal posterolateral ridge separated from marginal corner by deep groove. Orbital margin elevated; postorbital region with few minute, conical tubercles. Median part of gastric region with 2 rows of tubercles, these tubercles high, somewhat compressed laterally, none with acute apex; posteromedian part also with 2 rows of tubercles. Lateral part of gastric region with space between first and second carinae having 2 rows of tubercles (these tubercles similar to those on median part); space between second carina and lateral groove with single row of tubercles. Posterior dorsolateral region with 3 rows of tubercles, none sharply pointed or spiniform. Hepatic region with upper part bearing about 20 scattered subconical tubercles, none spiniform; lower part with a few minute granules. Branchial region with upper part bearing about 30 laterally compressed tubercles arranged in 3 rows, these tubercles anteriorly directed, non-spiniform; middle part with about 25 tubercles; lower part with single row of tubercles. Space between anterior fifth and sixth carinae with a few minute tubercles. Antennal tooth strong, mesially curved, ascending (angle against horizontal plane

Fig. 2. *Glyphocrangon boa* sp. nov., holotype, ovigerous female (cl 29.4 mm), MNHN-IU-2011-804. A, Distal part of rostrum, dorsal view; B, same, ventral view; C, basal part of rostrum, left oblique dorsal view; D, left first (submedian) carina on carapace, lateral view; E, upper part of left branchial region, dorsal view; F, ventrolateral part of carapace; G, lateral part of first abdominal somite, dorsal view; H, left pleura of third and fourth abdominal somites, lateral view; I, dorsal part of fifth and sixth abdominal somites and proximal part of telson, lateral view; J, telson, dorsal view. Scale bars: 5 mm for A, C, E, F, H–J; 2 mm for B, G; 10 mm for D. Abbreviations: 4PC, posterior fourth carina; 5AC, anterior fifth carina; 5PC, posterior fifth carina; 6C, sixth carina.



about 40°), falling slightly short of distal corneal margin. Branchiostegal tooth directed anteriorly in dorsal and lateral views, reaching level of distal corneal margin, hardly visible in dorsal view; lateral face without ridges or carinae. Marginal posterolateral corner flared laterally, distinctly angulate. Anterior and cervical grooves deep.

Abdomen (Fig. 1, 2G–I) with numerous prominent tubercles. First abdominal somite with median elevation defined by deep transverse groove, with 3 small tubercles on either side of median carina; median carina showing as large, strongly compressed tooth with forwardly directed, acute apex; posterior part of tergum with several conical or laterally compressed tubercles on either side of midline. Dorsolateral carina showing as strong tooth with forwardly directed, acute apex. Lateral carina composed of two tubercles, anterior one strong, conical, acuminate; posterior one blunt, somewhat compressed laterally. Pleuron ornamented anteriorly with several prominent tubercles, none spiniform; posterior depression abruptly delimited; anteroventral corner slightly produced, bluntly pointed.

Second to fourth abdominal somites with numerous prominent tubercles, none spiniform; median carinae strongly compressed laterally, crested; tubercles or prominences composing submedian or dorsolateral carinae compressed laterally; surfaces of carinae and tubercles weakly etched. Posterior transverse grooves moderately narrow, deep. Vertical ridges on third and fourth pleura each with acute spiniform tubercle at ventral end. Pleural teeth strong, acute, subequal (fourth somite) or slightly unequal in length (second and third somites). Second somite with anterior part of median carina markedly produced anterodorsally into blunt tooth, posterior part rounded. Third somite with anterior part of median carina slightly produced anteriorly, posterior part longer than anterior part, somewhat produced posteriorly. Fourth somite with anterior part of median carina much shorter than posterior part, its posterior end slightly produced posteriorly; posterior part of median carina bearing median groove, produced posteriorly in bluntly triangular tooth.

Fifth abdominal somite with numerous prominent tubercles, some of these tubercles compressed laterally. Anterior median carina posteriorly directed, spiniform; posterior median carina produced posteriorly in bluntly triangular tooth. Tergum with shallow oblique groove; anterior submedian carinae showing as short crest; posterior submedian carinae slightly diverging, abruptly narrowed posteriorly, each with median groove; 2 strong pleural teeth, slightly unequal with posterior tooth longer.

Sixth abdominal somite with highly crested median carina, principally divided into 2 parts by narrow notch, anterior part further divided into 2 sharp teeth, posterior part produced posteriorly into strong, acute tooth, dorsal margin sinuous in lateral view. Tergum with some small tubercles arranged in longitudinal row on either side of middorsal carina. Lateral carina composed of laterally compressed, posteriorly directed tubercles, none spiniform. Pleuron with a few small tubercles; lateroventral carina composed of row of subacute tubercles; ventral tooth strong, without support of carina.

Telson (Figs 1, 2J) about 0.6 times as long as carapace; anterior projection on dorsal surface prominent, laterally compressed, spiniform with posteriorly directed apex, bearing small accessory tubercle slightly posterior to its base. Dorsolateral carinae distinctly tuberculate in anterior 0.4; ventrolateral carinae also dis-

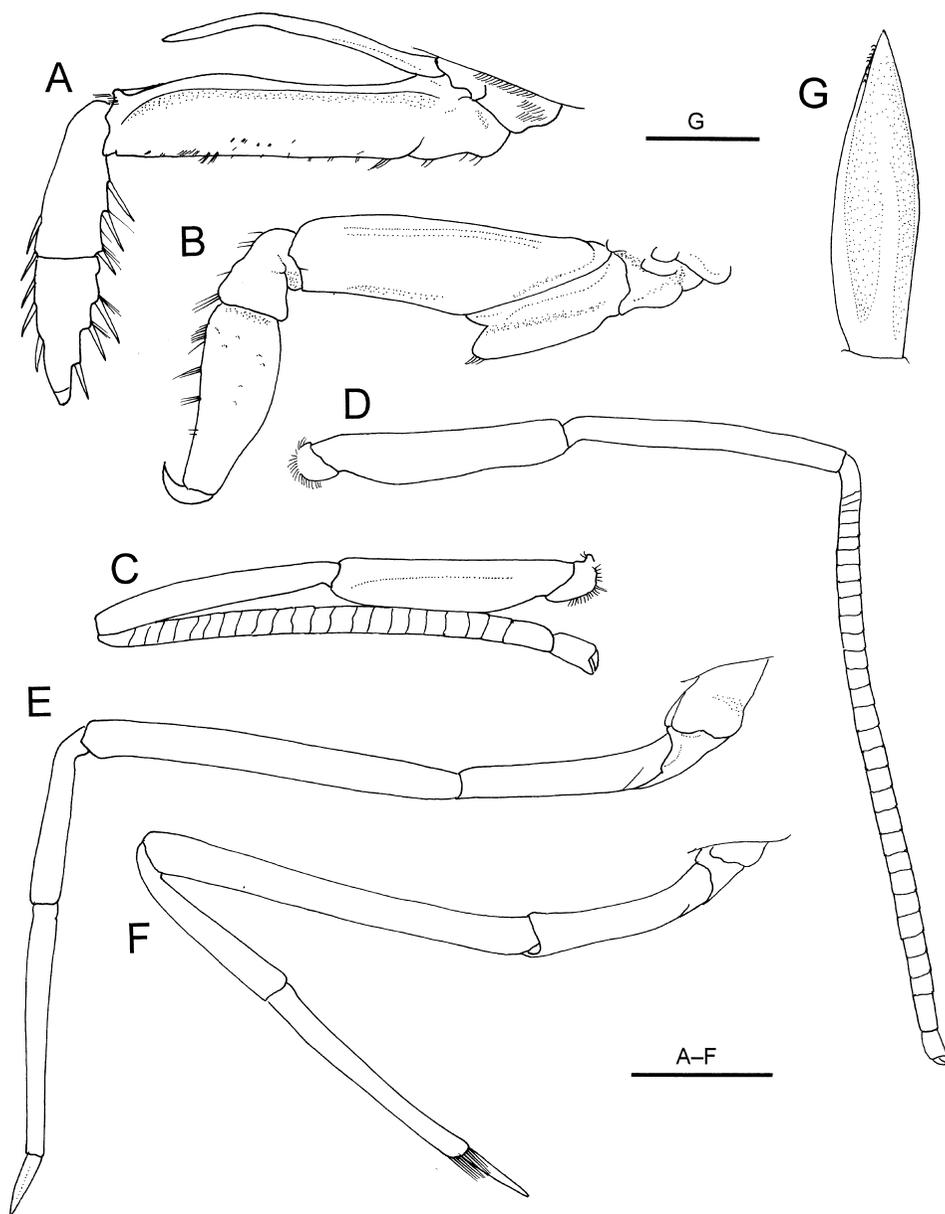


Fig. 3. *Glyphocrangon boa* sp. nov., holotype, ovigerous female (cl 29.4 mm), MNHN-IU-2011-804. A, Left third maxilliped, lateral view; B, left first pereopod, lateral view; C, left second pereopod, lateral view; D, right second pereopod, lateral view; E, left third pereopod, lateral view; F, left fifth pereopod, lateral view; G, dactylus of left fifth pereopod, extensor view (setae omitted). Scale bars: 5 mm for A-F; 1 mm for G.

tinctly tuberculate in anterior half.

Cornea (Fig. 1) darkly pigmented even in preservative, corneal width 0.20 of carapace length. Ocular peduncle with small, papilla-like process on anteromesial face (not illustrated).

Antennular peduncle (Fig. 1) reaching anterior margin of antennal scale; second peduncular segment slightly widened anteriorly, about 2.0 times longer than wide. Antennal scale (Fig. 1) oval, 1.6 times longer than wide, without trace of lateral tooth; carpocerite (fifth segment of antenal peduncle) falling short of anterior margin of antennal scale.

Third maxilliped (Fig. 3A) moderately stout for genus, reaching anterior margin of antennal scale. Ultimate segment with several moderately stout spines on margins and mesial face. Merus with dorsolateral margin sharply carinate.

First pereopod (Fig. 3B) reaching midlength of antennal scale; palm naked on lateral face; merus with 2 faint longitudinal ridges dorsally and ventrally; ventral lamina of ischium bluntly pointed distally. Second pereopods unequal; left (Fig. 3C) overreaching antennal scale by length of chela, carpus subequal in length to merus and ischium combined, divided into 23 articles; right (Fig. 3D) overreaching antennal scale by half length of carpus, carpus longer than merus-ischium combined, divided into 30 articles. Third pereopod (Fig. 3E) reaching antennal scale by tip of dactylus; dactylus compressed laterally, 0.27 times as long as propodus. Left fourth pereopod missing, right in process of regeneration. Fifth pereopod (Fig. 3F) moderately stout, falling slightly short of distal margin of antennal scale; dactylus (Fig. 3G) 0.30 times as long as propodus, subspatulate, extensor surface with 2 shallow longitudinal sulci, lateral and mesial margins sharply edged, bearing short row of minute curled setae on lateral margin distally.

**Coloration in life.** Unknown.

**Distribution.** Known only from the type locality, NE of Santo, 700–818 m.

**Remarks.** This new species is referred to the *Glyphocrangon regalis* Bate, 1888 species complex (cf. Komai 2004), and is characterized by the anterior fourth carina on the carapace being expanded into a vertically compressed, acute lamina, the absence of a midventral carina on the rostrum, and the glabrous palm of the first pereopod. It appears most similar to *G. tasmanica* Komai, 2004 from the Tasman Sea in having a strong anterior tooth of the posterior third carina on the carapace and conspicuous intercarinal tubercles on the carapace. However, *G. boa* n. sp. is distinctive in the species complex in having 1) spiniform posterior tubercles on the posterior first carina on the carapace, 2) acute posterior teeth on the posterior third carina on the carapace, and 3) spiniform tubercles on the pleural lobes of the second to fifth pleonal somites. In other species referred to this complex, the mentioned tubercles or teeth are absent, or at most blunt if present. The subdivided posterior lateral teeth on the rostrum and the conical lateral process composing the lateral carina on the first abdominal somite are also characteristic of this new species.

**Etymology.** Named after the project name BOA, the French multidisciplinary expedition “Bois coulés et Organismes Associés”. Used as a noun in apposition.

***Glyphocrangon confusa* Komai, 2004**

*Glyphocrangon confusa* Komai, 2004: 597, figs 110, 112A–D, 122 [type locality: Halma-hera, Indonesia, 545 m].

**Material examined. Solomon Islands.** SALOMON 2, stn CP 2175, SW of Russel Island, 09°05.8'S, 158°59.9'E, 579–585 m, 21 October 2004, 1 female (cl 11.0 mm), MNHN-IU-2010-1903; stn CP 2184, SE of Santa Isabel Island, 08°16.9'S, 159°59.7'E, 464–523 m, 23 October 2004, 1 female (cl 16.7 mm), MNHN-IU-2010-1902; stn CP 2186, 08°18'S, 160°00'E, 487–541 m, 23 October 2004, 1 ovigerous female (cl 26.5 mm), MNHN-IU-2010-1899; stn CP 2214, NW of Santa Isabel Island, 07°41.6'S, 157°43.8', 550–692 m, 26 October 2004, 1 female (cl 13.5 mm), MNHN-IU-2010-1904; stn CP 2226, off Choiseul Island, 06°39.0'S, 156°14.3'E, 490–520 m, 28 October 2004, 1 ovigerous female (cl 26.0 mm), MNHN-IU-2010-1901; stn CP 2244, 07°45.0'S, 156°26.7'E, 554–586 m, 1 November 2004, 1 female (cl 24.9 mm), CBM-ZC 10446; stn CP 2248, 07°42.5'S, 156°24.8'E, 650–673 m, 1 November 2004, 1 male (cl 23.0 mm), MNHN-IU-2010-1900; stn CP 2264, Vella Gulf, 07°52.4'S, 156°51.0'E, 515–520 m, 3 November 2004, 1 female (cl 14.0 mm), MNHN-IU-2010-1905.

**Distribution.** Previously known from Indonesia and Northwestern Australia, at depths of 443–794 m. The present material extends the geographical range of this species to the Solomon Islands.

**Remarks.** It has been noted that differentiation among *G. confusa*, *G. rubricinctuta* Komai, 2004, and *G. similior* Komai, 2004 is rather difficult. Komai (2004) noted that the dorsal surface of the antennal scale is covered with short setae in *G. confusa* and *G. rubricinctuta*, but naked in *G. similior*. However, examination of the present specimens referred to *G. confusa* shows that the antennal scale is actually naked on the dorsal surface, but covered with fine particles probably derived from substratum. Careful cleaning has revealed that there are no setae nor any pubescence on the antennal scale in *G. confusa*. Furthermore, the dorsolateral carina on the first abdominal somite varies from subacutely pointed to rounded in the present specimens. Nevertheless, *G. confusa* can be distinguished from *G. similior* in having smaller, less conspicuous intercarinal tubercles on the carapace. As was noted by Komai (2004), the coloration of the abdomen is also different between *G. confusa* and *G. similior*. In *G. confusa*, each of the first to fifth abdominal somites has a distinct reddish vertical marking on the middle portion of the lateral surface, whereas such markings are absent in *G. similior*.

***Glyphocrangon faxoni* De Man, 1918**

*Glyphocrangon (Plastacrangon) faxoni* De Man, 1918: 298 (in part) [type locality: SE of Selat Roti, Indonesia, 520 m]; 1920: 243 (in part), pl. 20, fig. 62a–c.

*Glyphocrangon faxoni*: Chace 1984: 10 (in part); Komai 2004: 530, figs 71, 72, 119; Komai and Chan 2008: 40, fig. 12B1–B3.

**Material examined. Solomon Islands.** SALOMON 1, stn CP 1783, 08°32.8'S, 160°41.7'E, 399–700 m, 29 September 2001, 1 female (cl 9.9 mm), 2 males (cl 12.7, 13.7 mm), MNHN-IU-2011-807; stn CP 1792, 09°15.4'S, 160°08.9'E, 477–505 m, 30 Sep-

tember 2001, 1 male (cl 13.5 mm), MNHN-IU-2011-808; stn CP 1795, 09°18.8'S, 160°22.9'E, 442–451 m, 1 October 2001, 1 male (cl 10.7 mm), 3 ovigerous females (cl 13.5–14.7 mm), MNHN-IU-2011-809; stn CP 1796, 09°19.2'S, 160°25.4'E, 469–481 m, 1 October 2001, 3 males (cl 12.7–14.7 mm), MNHN-IU-2011-810; stn CP 1805, 09°35.0'S, 160°42.7'E, 367–500 m, 2 October 2001, 1 male (cl 12.4 mm), MNHN-IU-2011-811; stn CP 1859, 09°32.6'S, 160°37.3'E, 283–305 m, 7 October 2001, 4 females (cl 10.3–14.2 mm), 2 ovigerous females (cl 13.4, 13.7 mm), MNHN-IU-2011-812. SALONON 2, stn CP 2184, SE of Santa Isabel Island, 08°16.9'S, 159°59.7'E, 464–523 m, 23 October 2004, 10 females (cl 9.0–12.6 mm), 4 ovigerous females (cl 12.8–13.8 mm), 26 males (cl 12.3–15.0 mm), MNHN-IU-2010-1892; stn CP 2186, SE of Santa Isabel Island, 08°17'S, 160°00'E, 487–541 m, 23 October 2004, 2 females (cl 9.6 mm, crushed), 3 ovigerous females (cl 11.9–13.6 mm), 7 males (cl 12.0–14.5 mm), MNHN-IU-2010-1893; stn CP 2187, SE of Santa Isabel Island, 08°17.5'S, 159°59.8'E, 482–604 m, 23 October 2004, 4 females 9.5–12.0 mm, 6 ovigerous females (cl 12.2–13.6 mm), 10 males (cl 9.2–13.6 mm), MNHN-IU-2010-1894; stn CP 2194, SW of Santa Isabel Island, 08°24.8'S, 159°26.7'E, 440–521 m, 24 October 2004, 1 female (cl 11.8 mm), MNHN-IU-2010-1896; stn CP 2195, SW of Santa Isabel Island, 08°25.5'S, 159°26.4'E, 543–593 m, 24 October 2004, 1 male (cl 12.3 mm), MNHN-IU-2010-1898; stn CP 2226, off Choiseul Island, 06°39.0'S, 156°14.3'E, 490–520 m, 28 October 2004, 1 male (cl 13.4 mm), MNHN-IU-2010-1895; stn CP 2261, Vella Gulf, 08°01.9'S, 156°54.1'E, 433–470 m, 3 November 2004, 2 males (cl 12.0, 12.6 mm), 4 ovigerous females (cl 13.3–15.2 mm) (CBM-ZC 10439); stn CP 2262, Vella Gulf, 07°56.4'S, 156°51.2'E, 460–487 m, 3 November 2004, 1 ovigerous female (cl 16.1 mm), 1 male (cl 13.6 mm), MNHN-IU-2010-1897.

**Distribution.** Previously known from Indonesia, northwestern Australia, and the Philippines, at depths of 390–551 m (Komai 2004; Komai and Chan 2008). The present material extends the geographical range of the species to the east. In the Solomon Islands, this species occurs at depths of 283–700 m, but appears most abundant at depths of 400–600 m.

**Remarks.** The present specimens from the Solomon Islands agree well with the previously reported specimens by Komai (2004) and Komai and Chan (2008).

### *Glyphocrangon indonesiensis* Komai, 2004

*Glyphocrangon hastacauda*: De Man 1920: 224; Chace 1984: 13; Takeda and Hanamura 1994: 28.

*Glyphocrangon indonesiensis* Komai, 2004: 408, figs 10, 11, 114 [type locality: Tanimbar Island, Banda Sea, Indonesia].

**Material examined. Solomon Islands.** SALOMON 1, stn CP 1748, 09°29.4'S, 159°58.2'E, 509–522 m, 25 September 2001, 1 ovigerous female (cl 24.2 mm), MNHN-IU-2011-813; stn CP 1749, 09°20.9'S, 159°56.2'E, 582–594 m, 25 September 2001, 1 female (cl 15.2 mm), 1 ovigerous female (cl 27.6 mm), MNHN-IU-2011-814; stn CP 1750, 09°15.6'S, 159°54.6'E, 693–696 m, 25 September 2001, 1 ovigerous female (cl 24.3 mm), MNHN-IU-2011-815; stn CP 1751, 09°19.4'S, 159°53'E, 749–799 m, 25 September 2001, 1 male (cl 24.0 mm), MNHN-IU-2011-816; stn CP 1806, 09°37.9'S, 160°49.7'E, 621–708 m, 2 October 2001, 1 juvenile (cl 9.2 mm), MNHN-IU-2011-817.

**Distribution.** Previously known from Indonesia and the Philippines, at

depths of 200–869 m. The present material extends the geographical range of this species to the Solomon Islands.

**Remarks.** The present material agrees well with the specimens from Indonesia and the Philippines in Komai (2004).

***Glyphocrangon lineata* Komai, 2004**

*Glyphocrangon regalis* var.?: De Man 1920: 223, pl. 18, fig. 55–55b.

*Glyphocrangon investigatoris*: Chace 1984: 14 (in part); Takeda and Hanamura 1994: 29.

*Glyphocrangon lineata* Komai, 2004: 545, figs 79, 80, 120 [Kai Islands, Banda Sea, Indonesia, 769–809 m].

**Material examined. Solomon Islands.** SALOMON 1, stn CP 1751, 09°10.4'S, 159°53'E, 749–799 m, 25 September 2002, 1 female (cl 25.0 mm), MNHN-IU-2010-1883. SALOMON 2, stn CP 2179, 08°48.6'S, 159°43.3'E, 765–773 m, 22 October 2004, 1 female (cl 24.0 mm), 1 ovigerous female (cl 30.7 mm), CBM-ZC 10440; stn CP 2180, Santa Isabel Island, 08°47.5'S, 159°40.6'E, 708–828 m, 22 October 2004, 6 females (cl 14.2–29.0 mm), 1 male (cl 24.4 mm), MNHN-IU-2010-1887; stn CP 2181, Santa Isabel Island, 08°46.9'S, 159°39.8'E, 645–840 m, 22 October 2004, 2 females (cl 15.0, 21.8 mm), 1 ovigerous female (cl 32.7 mm), MNHN-IU-2010-1888; stn CP 2188, SE of Santa Isabel Island, 08°17.9'S, 160°01.3'E, 495–677 m, 23 October 2004, 1 ovigerous female (cl 29.0 mm), MNHN-IU-2010-1891; stn CP 2189, SE of Santa Isabel Island, 08°19.6'S, 160°01.9'E, 660–854 m, 23 October 2004, 3 females (cl 17.0–21.4 mm), MNHN-IU-2010-1889; stn CP 2196, SW of Santa Isabel Island, 08°25.6'S, 159°25.9'E, 724–765 m, 24 October 2004, 1 female (cl 25.1 mm), MNHN-IU-2010-1886; stn CP 2241, S of Taylor Reef, 06°55.3'N, 156°21.2'E, 815–1000 m, 30 October 2004, 4 females (cl 25.0–17.2 mm), 1 male (cl 26.5 mm), MNHN-IU-2010-1884; stn CP 2251, 07°27.9'S, 156°14.0'E, 1000–1050 m, 2 November 2004, 1 female (cl 21.5 mm), 1 male (cl 25.4 mm), 1 juvenile (cl 9.2 mm), MNHN-IU-2010-1890; stn CP 2270, 07°37.9'S, 156°58.8'E, 970–1060 m, 4 November 2004, 1 juvenile (cl 9.7 mm), MNHN-IU-2010-1885.

**Distribution.** Previously known from Indonesia (Makassar Strait, Celebes Sea, Flores Sea) and off northwestern Australia, 200–1053 m. The present material slightly extends the geographical range of this species to the east.

**Remarks.** The present material agrees well with the specimens discussed by Komai (2004).

***Glyphocrangon megalophthalma* De Man, 1918**

*Glyphocrangon megalophthalma* De Man, 1918: 296 [type locality: Makassar Strait, 2029 m]; De Man 1920: 237, pl. 20, fig. 60a–f; Chace 1984: 18; Komai 2004: 479, figs 46, 47, 117.

**Material examined. Solomon Islands.** SALOMON 1, stn CP 1764, 08°36.6'S, 160°07.4'E, 1327–1598 m, 27 September 2001, 2 females (cl 15.7, 16.8 mm), 3 ovigerous females (cl 18.2–18.8 mm), 5 males (cl 13.3–16.2 mm), MNHN-IU-2011-818.

**Distribution.** Until now known with certainty only from Indonesia, at depths of 1886–2160 m. The present material represents the first record of the species outside Indonesia and slightly extends the bathymetrical range to 1327–1598 m.

**Remarks.** The present specimens agree well with the known specimens (Komai 2004).

*Glyphocrangon musorstomia* Komai, 2006

*Glyphocrangon musorstomia* Komai, 2006: 256, figs 1D, E, 6, 7, 10 [type locality: Tuscarora Bank, 900 m].

**Material examined. Vanuatu.** BOA 0, stn CP 2310, NE of Santo, 14°45.87'S, 167°06.56'E, 864–927 m, 15 November 2005, 1 female (cl 13.0 mm), 10 ovigerous females (cl 13.1–14.3 mm), MNHN-IU-2011-805; stn CP 2311, NE of Santo, 14°44.04'S, 167°06.45'E, 932–986 m, 15 November 2005, 16 males (cl 8.3–13.0 mm), 2 females (cl 10.7, 11.5 mm), 4 ovigerous females (cl 12.5–14.1 mm), MNHN-IU-2010-1909; stn CP 2312, NE of Santo, 14°44.48'S, 167°08.40'E, 964–1036 m, 7 males (cl 8.3–10.8 mm), 14 females (cl 9.2–12.6 mm), 17 ovigerous females (cl 12.2–14.3 mm), MNHN-IU-2011-806.

**Remarks.** Komai (2006) noted that the specimens from Vanuatu differ from those from Wallis and Futuna Islands, including the type series, in having acute or subacute, rather than subacute or rounded dorsolateral carinae on the first abdominal somite. The present specimens support this observation. Furthermore, in the present specimens, the anterior ends of the posterior first carina and each of the three lobes of the posterior second carina on the carapace are frequently subacutely or acutely pointed, rather than obtuse to bluntly pointed as in the type series. Molecular comparison will likely necessary to finally determine the specific identity of the specimens from Vanuatu.

*Glyphocrangon prostrata* sp. nov.

(Figs 4–6)

**Material examined. Holotype.** SALOMON 2, stn CP 2241, S of Taylor Reef, Solomon Islands, 06°55.3'N, 156°21.2'E, 815–1000 m, 30 October 2004, ovigerous female (cl 24.3 mm), MNHN-IU-2011-819.

**Paratypes. Solomon Islands.** SALOMON 1, stn CP 1752, 09°06.9'S, 159°53.2'E, 896–912 m, 25 September 2001, 1 female (cl 18.7 mm), MNHN-IU-2011-820; stn CP 1753, 09°02.7'S, 159°49.4'E, 1001–1012 m, 1 male (cl 18.2 mm), MNHN-IU-2011-821; stn CP 1764, 08°36.6'S, 160°07.4'E, 1327–1598 m, 27 September 2001, 2 females (cl 10.2, 14.5 mm), 2 juveniles (cl 6.8, 8.7 mm), MNHN-IU-2011-822; stn CP 1781, 08°21.2'S, 160°37.7'E, 1036–1138 m, 29 September 2001, 1 ovigerous female (cl 21.0 mm), 1 male (cl 18.4 mm), CBM-ZC 10208. SALOMON 2, same data as holotype, 2 ovigerous females (cl 19.6, 20.0 mm), MNHN-IU-2011-823; stn CP 2182, Santa Isabel Island, 08°47.0'S, 159°37.9'E, 762–1060 m, 22 October 2004, 3 females (cl 10.3–17.6 mm), 2 juvenile (cl 7.0, 7.1 mm), MNHN-IU-2011-824; stn CP 2197, SW of Santa Isabel Island, 08°24.4'S, 159°22.5'E, 897–1057 m, 24 October 2004, 3 females (cl 11.2–16.1 mm), 1 male (cl 17.3 mm), 1 juvenile (cl 7.8 mm), MNHN-IU-2011-825; same data as holotype, 2

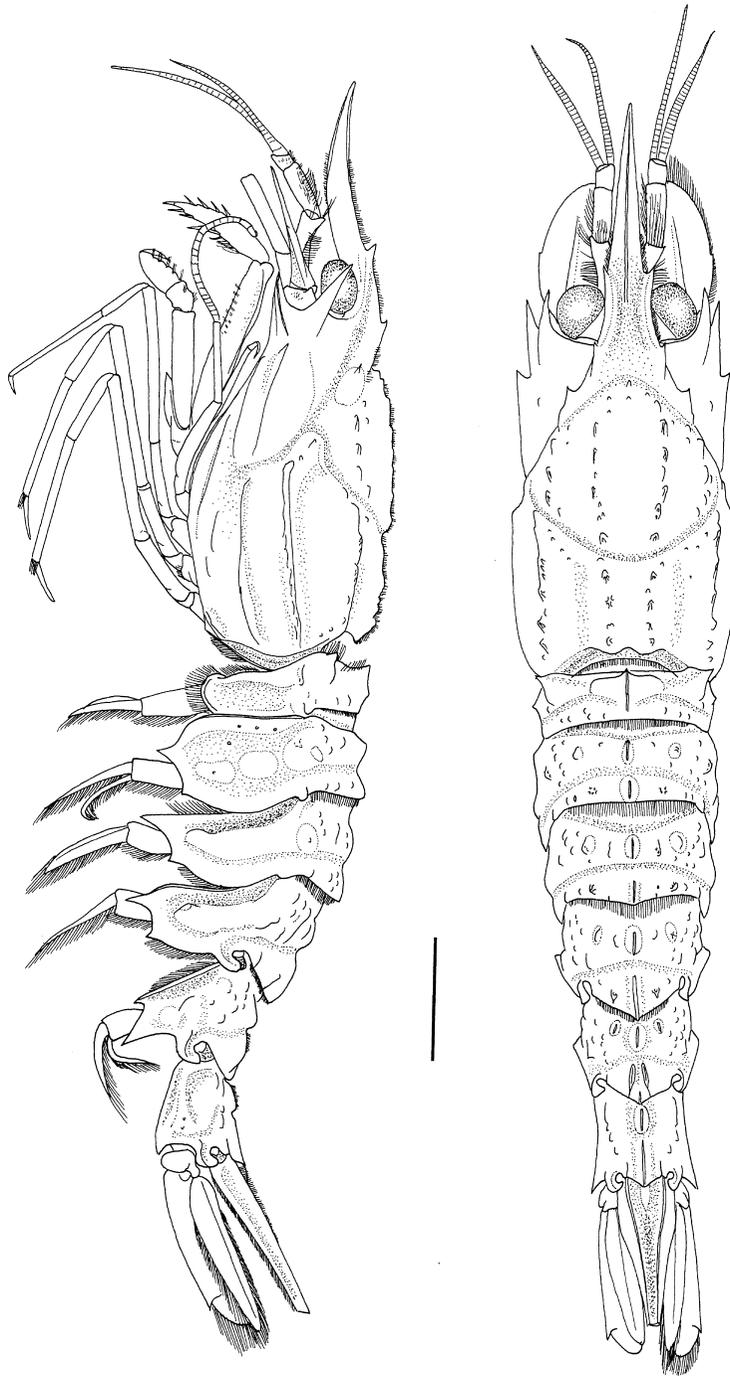


Fig. 4. *Glyphocrangon prostrata* sp. nov., holotype, ovigerous female (cl 24.3 mm), MNHN-IU-2011-819, entire animal in dorsal and lateral views (tip of telson broken off). Scale bar: 10 mm.

ovigerous females (cl 20.0, 20.1 mm), CBM-ZC 10443; stn CP 2251, 07°27.9'S, 156°14.0'E, 1000–1050 m, 2 November 2004, 3 ovigerous females (cl 19.5–21.1 mm), MNHN-IU-2011-826; stn CP 2252, 07°28.4'S, 156°17.5'E, 1059–1109 m, 2 November 2004, 4 females (cl 13.1–16.0 mm), 4 ovigerous females (cl 19.8–24.2 mm), 2 males (cl 14.9, 15.0 mm), 1 juvenile (cl 10.0 mm), MNHN-IU-2011-827; stn CP 2253, 07°26.5'S, 156°15.0'E, 1200–1218 m, 2 November 2004, 1 ovigerous female (cl 19.2 mm), CBM-ZC 10444.

*Non-type material.* SALOMON 2, stn CP 2182, Santa Isabel Island, 08°47.0'S, 159°37.9'E, 762–1060 m, 22 October 2004, 2 juveniles (cl 7.0, 7.1 mm), MNHN-IU-2011-828; stn CP 2232, NW of Choiseul, 06°24.1'S, 156°20.4'E, 1045–1207 m, 29 October 2004, 1 juvenile (cl 8.0 mm), MNHN-IU-2011-829.

**Description.** *Adult female.* Body (Fig. 4) relatively slender for genus. Integument of body covered with dense short pubescence.

Rostrum (Figs 4, 5A) moderately narrow, 0.7–0.8 times as long as carapace, slightly upturned, deepest at base; armed with 2 pairs of moderately strong, acute teeth on weakly raised dorsolateral ridges; middorsal carina extending to proximal 0.2 of rostrum, conspicuous and higher than dorsolateral ridges in distal third; dorsal surface without sculpture; dorsolateral ridge between lateral teeth devoid of longitudinal sulcus; ventral surface with shallow median groove flanked by sharply delimited, parallel ventrolateral carinae; midventral carina absent.

Carapace (Figs 4, 5B, C) 1.3–1.4 times longer than width across anterior ends of posterior third carinae; surfaces of carinae and tubercles roughly etched by irregular striae and/or minute depressions; all longitudinal carinae relatively low for genus. First (submedian) carina consisting of 6 or 7 blunt tubercles in anterior part, 4 or 5 in posterior part, posterior end of carina produced, overhanging posterodorsal margin. Anterior second (intermediate) carina composed of 5 or 6 low tubercles, anteriormost one acuminate, spiniform; posterior second carina arcuate in lateral view, consisting of 6 or 7 low, blunt tubercles. Anterior third (antennal) carina restricted to antennal tooth; posterior third carina nearly parallel to horizontal plane of carapace, almost entire, terminating anteriorly in obtuse angle. Anterior fourth (lateral) carina slightly converging posteriorly in dorsal view, entire, far falling short of anterolateral margin of carapace, terminating anteriorly in small acute tooth; posterior fourth carina also entire, subparallel to posterior third carina, its anterior end not forming conspicuous angle or tooth. Anterior fifth (sublateral) carina with rather sharp edge; posterior fifth short, obsolescent. Sixth (submarginal) carina sharply delimited, continuous with posteroventral angle and posterolateral carina. Intercarinal spaces without conspicuous tubercles; space between posterior first and second carinae bearing some tiny blunt tubercles along cervical groove. Anterior and cervical grooves moderately deep. Antennal tooth strong, ascending in lateral view (angle about 40° against horizontal plane of carapace), directed forwards and slightly curving inwards in dorsal view, reaching nearly to distal corneal margin. Branchiostegal tooth relatively weak, directed forward in lateral view, very slightly diverging to directed forward and visible in dorsal view, reaching as far as antennal tooth; lateral face with 2 weak longitudinal carinae, both independent from fourth or fifth carinae. Marginal posterolateral angle rounded.

Major carinae, elevations, and tubercles on abdomen comparatively low; tubercles blunt, none spiniform; transverse grooves and pleural depressions rela-

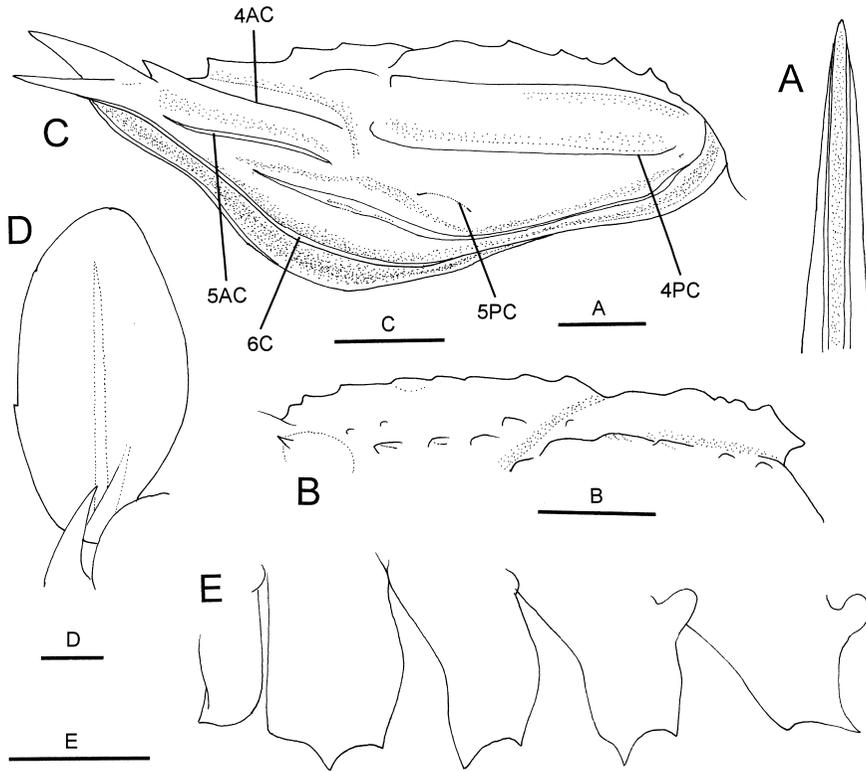


Fig. 5. *Glyphocrangon prostrata* sp. nov. A–D, Holotype, ovigerous female (cl 24.3 mm), MNHN-IU-2011-819 (pubescence on integument omitted); E, paratype, male (cl 18.4 mm), CBMZC 10208. A, Rostrum, ventral view; B, dorsal part of carapace in left lateral view, showing configuration of first and second carinae; C, ventrolateral part of carapace; D, left antennal scale, dorsal view; E, outline of first to fifth abdominal pleura, lateral view. Scale bars: 2 mm for A, D; 5 mm for B, C, E. Abbreviations: 3PC, posterior third carina; 4AC, anterior fourth carina; 4PC, posterior fourth carina; 5AC, anterior fifth carina; 5PC, posterior fifth carina; 6C, sixth carina.

tively shallow (Fig. 4); middorsal carinae all with sharp edge. First abdominal somite with median elevation low, without tubercles laterally; middorsal carina not interrupted, terminating anteriorly in forwardly directed weak tooth, not reaching posterodorsal margin of tergum. Posterior section of tergum with 3–5 tiny blunt tubercles on either side of middorsal carina. Dorsolateral carina terminating in moderately strong acute tooth directed anterodorsally. Lateral carina bearing 1 subacute tubercle at middle. Pleuron without tubercles; anteroventral margin rounded.

Second abdominal somite with both anterior and posterior parts of middorsal carina weakly produced dorsally. Tergum with small tubercles; anterior part with tubercle-like dorsolateral carinae; dorsolateral carinae on posterior part reduced to small tubercle. Pleuron with tiny tubercles anteriorly; anteroventral angle rounded or subacutely pointed, posteroventral angle with small blunt or subacute

tooth; ventral tooth moderately strong, acute.

Third abdominal somite with slightly produced posterodorsal margin; both parts of middorsal carina with convex dorsal margin in lateral view. Tergum with several small tubercles; dorsolateral carinae on both anterior and posterior parts low, tubercle-like. Pleuron with or without tubercles; anterior ventral tooth strong, acuminate, posterior ventral tooth weak, acute or subacute.

Fourth abdominal somite with noticeably produced posterodorsal margin; anterior part of middorsal carina with convex dorsal margin in lateral view; posterior part of middorsal carina terminating posteriorly in blunt point. Tergum with several tiny tubercles laterally; anterior dorsolateral carinae low, tubercle-like; posterior dorsolateral carinae Y-shaped, obsolescent, not reaching posterodorsal margin. Pleuron with or without tubercles; anterior ventral tooth strong, posterior ventral tooth weak but acuminate.

Fifth abdominal somite with posterior middorsal carina terminating posteriorly in blunt tooth. Tergum with some tiny tubercles laterally; dorsolateral carinae on anterior part tubercle-like, bearing sharp edge; submedian carinae reaching posterodorsal margin. Pleural teeth greatly unequal, both acuminate, directed posteriorly.

Sixth abdominal somite with anterior middorsal carina subtruncate posteriorly, posterior middorsal carina crested, terminating posteriorly in moderately strong acute tooth; notch dividing middorsal carina U-shaped. Lateral carina consisting of 3 or 4 tubercles with posteriorly directed blunt apices; ventrolateral carina blunt, nearly entire. Posteroventral tooth moderately strong, acuminate.

Telson (Fig. 4) 0.7–0.8 times as long as carapace; anterior ridge crested with convex dorsal margin in lateral view; dorsolateral and ventrolateral carinae smooth.

Cornea (Fig. 4) moderately large, maximum diameter 0.17–0.18 of carapace length, darkly pigmented in preservative; eyestalk with small papilla anteromedially.

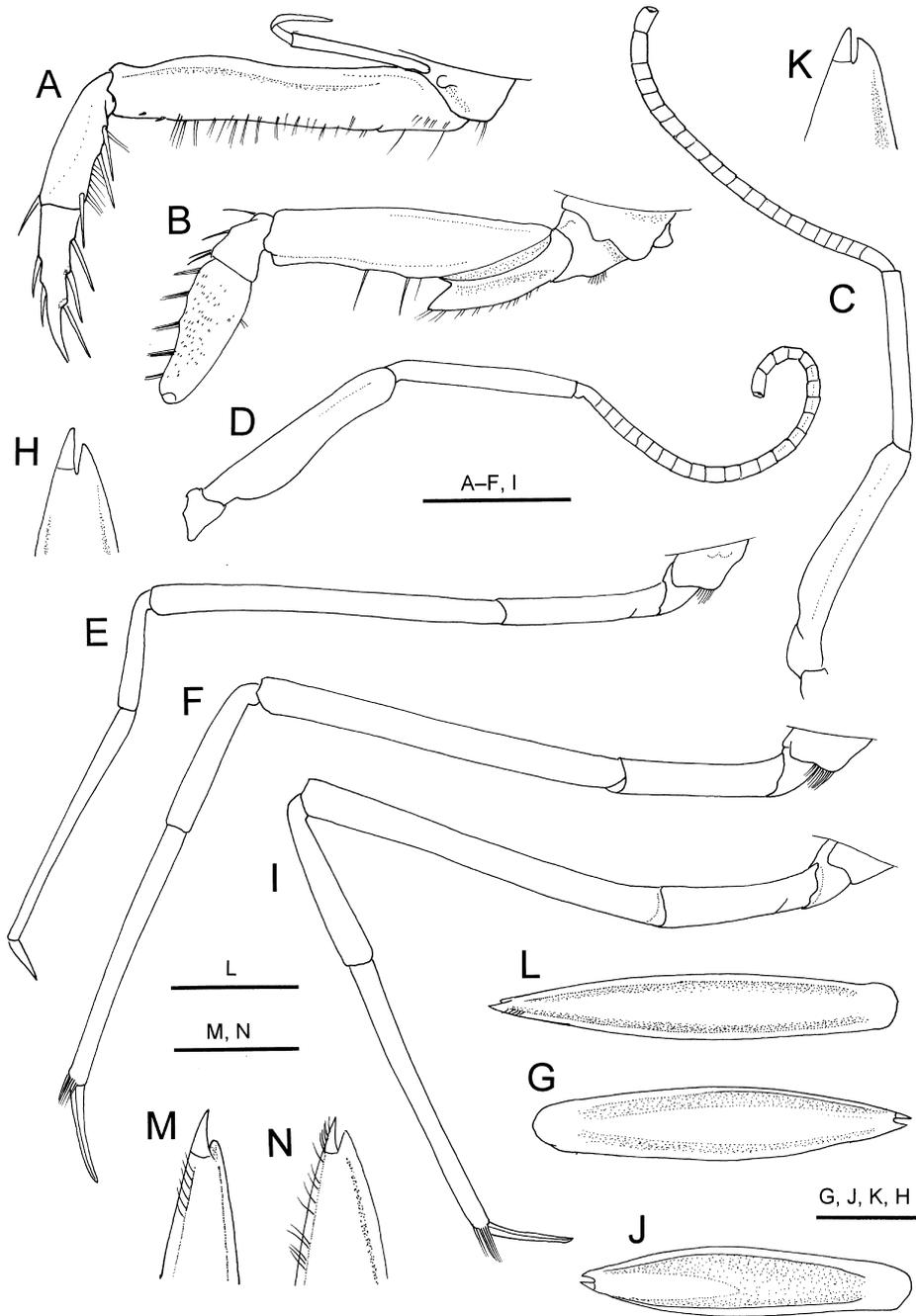
Antennular peduncle (Fig. 4) reaching distal margin of antennal scale. Second segment 3.0–3.2 times longer than wide. Outer flagellum with thickened aesthetasc-bearing portion about 0.3 times as long as carapace.

Antennal scale (Figs 4, 5D) elongate oval, about 0.4 times as long as carapace and about 1.9 times longer than wide; dorsal surface pubescent; lateral margin gently convex, with lateral tooth located at about 0.4 length of antennal scale. Carapocerite (fifth segment of antennal peduncle) nearly reaching distal margin of antennal scale.

Third maxilliped (Fig. 6A) relatively slender, slightly overreaching antennal

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Fig. 6. *Glyphocrangon prostrata* sp. nov. A–K, Holotype, ovigerous female (cl 24.3 mm), MNHN-IU-2011-819; L–N, paratype, male (cl 18.4 mm), CBM-ZC 10208. A, Left third maxilliped, lateral view; B, left first pereopod, lateral view; C, left second pereopod, lateral view; D, right second pereopod, lateral view; E, left third pereopod, lateral view; F, left fourth pereopod, lateral view; G, dactylus of right fourth pereopod, extensor view; H, same, distal part; I, left fifth pereopod, lateral view; J, dactylus of left fifth pereopod, extensor view; K, same, distal part; L, dactylus of left fourth pereopod, extensor view; M, same, distal part; N, tip of dactylus of left fifth pereopod. Scale bars: 5 mm for A–F, I; 1 mm for G, J, L; 0.5 mm for H, K, M, N.



scale. Ultimate segment subequal in length to penultimate segment, tapering distally; marginal and terminal spines slender. Penultimate segment also with slender spines on flexor margin. Antepenultimate segment with sharp carina dorsolaterally.

First pereopod (Fig. 6B) overreaching midlength of antennal scale; palm with scattered very short setae on lateral face; mesial face with row of tufts of stiff setae; merus with weak longitudinal carina dorsally on lateral surface, ventral margin with a few long stiff setae; ischium with ventral lamina terminating distally in acute tip. Second pereopods (Fig. 6C, D) subequal or slightly unequal (left longer than right), overreaching antennal scale by length of chela and 0.2–0.3 of carpus; carpi consisting of 20–25 articles; ischia slightly longer than meri, each with narrow ventral lamina proximally. Third to fifth pereopods moderately long and slender. Third pereopod (Fig. 6E) overreaching antennal scale by nearly full length of propodus; dactylus lance-shaped, about 0.2 times as long as propodus; propodus slightly tapering distally; carpus about half length of propodus. Fourth pereopod (Fig. 6F) overreaching antennal scale by 0.5–0.6 length of propodus; dactylus (Fig. 6G, H) subspatulate, about 0.3 times longer than propodus, dorsal surface with sharply carinate lateral and mesial margins, median part elevated to broad ridge almost over entire length; tip of dactylus terminating in two unequal acuminate processes, lateral process longer than mesial process, former basally demarcated; carpus about half length of propodus. Fifth pereopod (Fig. 6I) overreaching antennal scale by 0.4–0.5 length of propodus; dactylus (Fig. 6J, K) similar to that of fourth pereopod, but dorsal ridge restricted to distal part and terminal processes more stout.

Pleopods and uropod without distinctive features.

**Male characteristics.** Carinae on carapace and abdomen slightly lower than in females. Pleural ventral teeth shorter (Fig. 5E). Dactyli of fourth and fifth pereopods relatively narrower, minutely bifid distally (Fig. 6L–N). Endopod of first pleopod typical of genus; appendix masculina on second pleopod longer than appendix interna, bearing numerous stiff setae terminally to dorsally.

**Coloration in life.** Unknown.

**Distribution.** Known only from the Solomon Islands, at depths of 896–1598 m.

**Remarks.** *Glyphocrangon prostrata* sp. nov. appears closest to *G. unguiculata* Wood-Mason, 1891. Shared characters include: 1) body integument covered with dense pubescence; 2) carinae on carapace and abdomen low, not strongly tuberculate or dentate; 3) anterior fourth carina entire, not expanded; and 4) dactyli of the fourth and fifth pereopods each provided with a longitudinal ridge and upturned, sharply carinate margins, with tips not simple in females. The new species is distinguishable from *G. unguiculata* by the detailed structure of the dactyli of the fourth and fifth pereopods. In female *G. prostrata*, the distal part of each dactylus is bifid, the lateral process being considered to correspond to the unguis because of the presence of a basal demarcation. In contrast, in female *G. unguiculata*, the distal part of each dactylus appears trifid, consisting of two terminal processes and an unguis flanked by them (cf. Chace 1984; Komai 2004). In male *G. prostrata*, the dactyli are minutely bifid, not simple and acuminate in *G. unguiculata* (Chace 1984; Komai 2004). Furthermore, the branchiostegal tooth on the carapace exceeds as far as the antennal tooth as in *G. prostrata*, whereas it is exceeded by the antennal tooth in *G. unguiculata*.

**Etymology.** From the Latin *prostratus*, meaning down flat, in reference to the non-elevated carapacial carinae of the new species.

***Glyphocrangon proxima* Komai, 2004**

*Glyphocrangon gilesii*: Chace 1984: 11 (in part). Not *Glyphocrangon gilesii* Wood-Mason, 1891.

*Glyphocrangon proxima* Komai 2004: 416, figs 14, 15, 115 [type locality: Kai Islands, Banda Sea, Indonesia, 564 m]; Komai and Chan 2008: 52, fig. 13C1, C2.

**Material examined. Solomon Islands.** SALOMON 2, stn CP 2187, SE of Santa Isabel Island, 08°17.5'S, 159°59.8'E, 482–604 m, 23 October 2004, 1 male (cl 12.0 mm), MNHN-IU-2010-1849; stn CP 2188, SE of Santa Isabel Island, 08°17.9'S, 160°01.3'E, 495–677 m, 23 October 2004, 3 ovigerous females (cl 15.0–15.2 mm), 4 males (cl 11.5–14.5 mm), MNHN-IU-2010-1842; stn CP 2195, SW of Santa Isabel Island, 08°25.5'S, 159°26.4'E, 543–593 m, 24 October 2004, 1 ovigerous female (cl 17.0 mm), MNHN-IU-2010-1846; same data, 2 ovigerous females (cl 16.6, 17.2 mm), CBM-ZC 10441; stn CP 2196, SW of Santa Isabel Island, 08°25.6'S, 159°25.9'E, 724–765 m, 24 October 2004, 1 female (cl 12.6 mm), 1 male (cl 12.1 mm), MNHN-IU-2010-1850; stn CP 2218, New Georgia Island, 07°56.3'S, 157°34.6'E, 582–864 m, 27 October 2004, 1 female (cl 15.2 mm), MNHN-IU-2010-1848; stn 2219, similar locality, 07°58.3'N, 157°34.4'E, 650–836 m, 27 October 2004, 2 females (cl 15.6, 16.2 mm), 1 male (cl 15.2 mm), CBM-ZC 10442; stn CP 2268, Vella Gulf, 07°48.7'S, 156°53.3'E, 632–640 m, 4 November 2004, 2 males (cl 10.2, 13.0 mm), 2 juveniles (cl 8.6, 9.4 mm), MNHN-IU-2010-1845; stn CP 2273, 08°31.8'S, 157°42.8'E, 732–839 m, 5 November 2004, 3 ovigerous females (cl 13.0–16.5 mm), MNHN-IU-2010-1843; stn CP 2274, 08°31.8'S, 157°42.8'E, 750–841 m, 5 November 2004, 2 ovigerous females (cl 14.8, 15.6 mm), MNHN-IU-2010-1844; stn CP 2276, 08°41.5'S, 157°38.2'E, 814–980 m, 5 November 2004, 1 male (cl 12.0 mm), 1 juvenile (cl 6.4 mm), MNHN-IU-2010-1847.

**Distribution.** Previously known from the Philippines, Indonesia and north-western Australia, at depths of 567–809 m. The present material extends the geographical range of this species to the Solomon Islands, where it occurs at depths of 482–980 m.

***Glyphocrangon pugnax* De Man, 1918**

*Glyphocrangon pugnax* De Man, 1918: 293 [Selat Roti, Indonesia, 520 m]; De Man 1920: 225, pl. 18, fig. 56, pl. 19, fig. 56a–c; Chace 1984: 9; Jones and Morgan 2002: 76, unnumbered fig.; Komai 2004: 399, figs 6, 7, 114; Komai and Chan 2008: 52, fig. 13D1, D2.

**Material examined. Solomon Islands.** SALOMON 1, stn CP 1798, 09°21.0'S, 160°29.2'E, 513–564 m, 1 October 2001, 1 male (cl 21.9 mm), MNHN-IU-2011-830. SALOMON 2, stn CP 2194, SW of Santa Isabel Island, 08°24.8'S, 159°26.7'E, 440–521 m, 24 October 2004, 1 male (cl 19.6 mm), 1 ovigerous female (cl 21.5 mm), MNHN-IU-2010-1872.

**Distribution.** Previously known from the Philippines, Indonesia, and north-western Australia, at depths of 329–821 m. The present specimens extend the geographical range of the species to the Solomon Islands.

**Remarks.** Komai (2004) noted that the specimens from the Philippines differ from those from Indonesia and Northwestern Australia in having a proportionally longer rostrum, although he did not find other morphological differences warranting differentiation at species level. The present specimens from the Solomon Islands agree well in this respect with the specimens from Indonesia in Komai (2004).

*Glyphocrangon rudis* Komai, 2006

*Glyphocrangon caeca*: De Man 1920: 241, pl. 20, fig. 6i. Not *Glyphocrangon caeca* Wood-Mason and Alcock, 1891.

*Glyphocrangon demani* Komai, 2006: 253, figs 1B, 2B, 4, 10 [type locality: between Ceram and New Guinea, 924 m].

*Glyphocrangon rudis* Komai, 2006: 261, figs 1G, 2F, 9, 10 [Solomon Islands, 1036–1138 m].

**Material examined. Solomon Islands.** SALOMON 2, stn CP 2197, SW of Santa Isabel Island, 08°24.4'S, 159°22.5'E, 897–1057 m, 24 October 2004, 2 females (cl 11.5, 13.0 mm), 8 ovigerous females (cl 12.6–16.3 mm), 2 males (cl 10.7, 10.8 mm), 1 juvenile (cl 7.8 mm), MNHN-IU-2010-1878; stn CP 2230, NW of Choiseul Island, 06°27.8'S, 156°24.3'E, 837–945 m, 29 October 2004, 3 females (cl 10.0–13.5 mm), 12 males (cl 11.6–14.7 mm), 1 juvenile (cl 8.4 mm), MNHN-IU-2010-1877; stn CP 2232, NW of Choiseul, 06°24.1'S, 156°20.4'E, 1045–1207 m, 29 October 2004, 3 females (cl 9.2–12.6 mm), 1 ovigerous female (cl 14.4 mm), 18 males (cl 12.7–14.0 mm), 2 juveniles (cl 7.6, 8.0 mm), MNHN-IU-2010-1873; stn CP 2250, 07°29.2'S, 156°16.7'E, 845–970 m, 2 November 2004, 10 ovigerous females (cl 12.9–15.2 mm), 1 male (cl 13.5 mm), MNHN-IU-2010-1875; stn CP 2251, 07°27.9'S, 156°14.0'E, 1000–1050 m, 2 November 2004, 17 females (cl 9.0–14.6 mm), 17 ovigerous females (cl 12.9–14.6 mm), 30 males (cl 10.6–13.9 mm), 5 juveniles (cl 6.2–7.6 mm), MNHN-IU-2010-1876; same data, 4 ovigerous females (cl 13.5–14.5 mm), 3 males (cl 12.1–12.5 mm), CBM-ZC 10445; stn CP 2252, 07°28.4'S, 156°17.5'E, 1059–1109 m, 2 November 2004, 1 female (cl 11.0 mm), 8 males (cl 9.1–13.0 mm), MNHN-IU-2010-1874.

**Distribution.** So far known only from the Solomon Islands and the Ceram Sea in Indonesia, 837–1109 m.

**Remarks.** Examination of this good series of material disclosed that *Glyphocrangon demani* Komai, 2006, represented only by a male holotype from the Ceram Sea in Indonesia, is identical with *G. rudis* Komai, 2006 described on the basis of female specimens from the Solomon Islands, and therefore the two names are synonymous. Differences noted by Komai (2006) are now revealed to be attributable to sexual dimorphism of a single species. In particular, it is worth mentioning that the setation on the tegumental surface is different between males and females of this species; in males, the tegumental surface is naked, whereas in females, it is covered with dense pubescence. In other species of *Glyphocrangon*, such sexual difference has not been reported. Under the First Reviser Principle,

the name *Glyphocrangon rudis* is given priority for this species, as it was originally based on a large series of female specimens.

*Glyphocrangon similior* Komai, 2004

*Glyphocrangon similior* Komai, 2004: 590, figs 107, 109A-D, 122 [type locality: Vanuatu, 602–620 m].

**Material examined. Solomon Islands.** SALOMON 2, stn CP 2243, 07°42.9'S, 156°27.3'E, 518–527 m, 1 November 2004, 1 female (cl 24.0 mm), MNHN-IU-2010-1879. **Vanuatu.** BOA 0, stn CP 2304, Epi, 16°35.60'S, 167°59.34'E, 564–582 m, 14 November 2004, 2 males (cl 18.3, 18.5 mm), 1 female (cl 15.3 mm), 1 ovigerous female (cl 21.0 mm), MNHN-IU-2011-831; stn CP 2305, Epi, 16°37.14'S, 167°58.70'E, 604–605 m, 14 November 2004, 2 females (cl 12.5, ca. 23.0 mm), 1 ovigerous female (cl 25.1 mm), 2 males (cl 18.1, ca. 20.5 mm), MNHN-IU-2011-832; stn CP 2307, Epi, 16°38.17'S, 167°58.23'E, 586–646 m, 14 November 2004, 2 males (cl 11.5 mm, 14.4 mm), MNHN-IU-2011-833; stn CP 2308, NE of Santo, 14°50.38'S, 167°03.0'E, 605–723 m, 15 November 2004, 1 male (cl 17.3 mm), 1 female (cl 20.3 mm), MNHN-IU-2011-834; same data, 1 female (cl 21.2 mm, photographed), MNHN-IU-2011-835; stn CP 2322, Big Bay, 14°59.38'S, 166°55.71'E, 590–622 m, 17 November 2004, 1 ovigerous female (cl 23.0 mm), MNHN-IU-2011-836; stn CP 2323, Big Bay, 14°54.30'S, 166°54.83'E, 742–830 m, 17 November 2004, 2 males (cl 13.4, 22.1 mm), MNHN-IU-2011-837; stn CP 2328, W of Malo, 15°42.99'S, 167°02.43'E, 314–547 m, 18 November 2004, 1 female (cl 19.0 mm), 1 ovigerous female (cl 20.5 mm), MNHN-IU-2011-838; stn CP 2329, W of Malo, 15°43.37'S, 167°03.63'E, 514–609 m, 18 November 2004, 1 female (cl 13.1 mm), MNHN-IU-2011-839. BOA 1, stn 2412, Malo, 15°44.0'S, 167°02.10'E, 373–800 m, 5 September 2005, 1 female (cl 16.0 mm), 1 juvenile (cl 10.4 mm), MNHN-IU-2011-840; stn CP 2419, Big Bay, 15°01.70'S, 166°54.30'E, 441–568 m, 6 September 2005, 1 male (cl 13.4 mm), 1 female (cl 14.8 mm), MNHN-IU-2011-841; stn CP 2432, Big Bay, 14°59.70'S, 166°55.0'E, 630–705 m, 8 September 2005, 3 males (cl 15.8–20.3 mm), 1 female (cl 15.7 mm), 1 juvenile (cl 11.0 mm), MNHN-IU-2011-842; stn CP 2461, 16°35.50'S, 167°57.90'E, 582–614 m, 13 September 2005, 1 ovigerous female (cl 24.1 mm), MNHN-IU-2011-843; stn CP 2468, 16°30.70'S, 167°55.50'E, 550–565 m, 14 September 2005, 1 ovigerous female (cl 22.5 mm), MNHN-IU-2011-844; stn CP 2469, 16°28.20'S, 167°54.20'E, 568 m, 14 September 2005, 1 female (cl 18.4 mm), 1 ovigerous female (cl 25.9 mm), MNHN-IU-2011-845; stn CP 2470, 16°25.20'S, 167°52.40'E, 568 m, 1 female (cl 15.2 mm), 2 ovigerous females (cl 21.8, 27.0 mm), MNHN-IU-2011-846; stn CP 2471, 16°22.80'S, 167°50.40'E, 591–627 m, 14 September 2005, 2 females (cl 16.0, 19.2 mm), 5 ovigerous females (cl 21.8–26.5 mm), MNHN-IU-2011-847; stn CP 2480, 16°44.30'S, 167°48.70'E, 632–677 m, 15 September 2005, 1 male (cl 20.5 mm), 1 female (cl 11.6 mm), 1 juvenile (cl 9.0 mm), MNHN-IU-2011-848.

**Distribution.** Previously recorded from Fiji, Tonga, Vanuatu, New Caledonia, and Chesterfield Reefs in the Coral Sea, 450–1300 m. The present material extends the known geographical range of the species to the Solomon Islands.

**Remarks.** This species appears to be the most common representative of *Glyphocrangon* in waters around Vanuatu. The single specimen from the Solomon Islands is referred to *G. similior* because it agrees well with other populations of the species in having relatively large, conspicuous intercarinal tubercles on the

carapace and no trace of vertical markings on the abdomen.

### Concluding Remarks

The present study reveals the existence of 10 species of *Glyphocrangon* in the Solomon Islands. In the collection from Vanuatu four species are represented, of which three have already been reported (Komai 2004), while the fourth is described herein as new (*G. boa*). Although more collections are desirable, it is noteworthy that there is as yet only one species (*G. similior*) in common between the Solomon Islands and Vanuatu. This supports the view that species of *Glyphocrangon* in the Indo-West Pacific are highly localized (Komai 2004, 2006; Komai and Chan 2008).

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