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***Munidopsis kareenae*, a new species of seamount squat lobster from New Zealand with a key to the New Zealand species of *Munidopsis* (Crustacea: Decapoda: Munidopsidae)**

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Abstract

A new species of the squat lobster genus *Munidopsis* is described from Nukuhou Seamount, North Island, New Zealand. The new species is allied to members of the “*Galathodes* group” within *Munidopsis* that share a flattened, distally trifid rostrum, an unarmed carapace surface (apart from paired epigastric spines in some species), unarmed abdominal tergites and absence of pereopodal epipods. The new species is readily separated from these species by the combination of unarmed lateral carapace margins posterior to the anterolateral spine, absence of epigastric spines, and prominently spinose extensor margins of the pereopod 2–4 meri. Fourteen species of *Munidopsis* are now recorded from New Zealand; a key to the New Zealand species is provided.

Key words: Anomura, seamount, taxonomy, squat lobster, *Munidopsis*

Introduction

More than 220 species of the squat lobster genus, *Munidopsis* Whiteaves, 1784, are known, with the majority from the Indo-West Pacific region (Baba *et al.* 2008). *Munidopsis* was considered part of the Galatheidae Samouelle, 1819, but recent studies have shown that the former subfamily Munidopsinae Ortmann, 1898, should be recognised as a separate family for *Munidopsis*, *Galacantha* A. Milne-Edwards, 1880, and *Leiogalatea* Baba, 1969 (Ahyong *et al.* 2010, 2011; Schnabel *et al.* 2011).

The munidopsid fauna of New Zealand has been subject of few studies (Baba 1974; Schnabel & Bruce 2006; Ahyong 2007; Schnabel 2009; Ahyong *et al.* 2010), with only 13 species recorded to date (Webber *et al.* 2010; Yaldwyn & Webber 2011). As part of ongoing deep-water benthic surveys by the National Institute of Water and Atmospheric Research (NIWA), an unusual species of *Munidopsis*, not hitherto recorded from New Zealand, was collected from the Nukuhou Seamount, North Island, New Zealand. The species is herein described as new and a key to the 14 known New Zealand species of *Munidopsis* provided.

Material and methods

Morphological terminology generally follows Baba (2005) and Ahyong *et al.* (2010). Carapace length (cl) is measured along the dorsal midline from the rostral apex to the posterior margin of the carapace. Postrostral carapace length (pcl) is measured dorsally from the base of the rostrum to the posterior margin of the carapace. The holotype is deposited in the invertebrate collection of the National Institute of Water and Atmospheric Research, Wellington (NIWA).

Systematics

Munidopsidae Ortmann, 1898

Munidopsis Whiteaves, 1874

Munidopsis kareenae sp. nov.

(Fig. 1)

Holotype. NIWA 19202, male (cl 18.4 mm, pcl 13.3 mm), Nukuhou Seamount, Bay of Plenty, North Island, New Zealand, 37°08.11'S, 177°17.81'E, 1050 m, dredge, X201, 6 December 1989.

Description. *Carapace:* Moderately convex from side to side; sparsely covered with short, fine setae and fine striae; cervical groove shallow; pair of short epigastric striae. Posterior orbital margins oblique, outer orbital spine prominent. Frontal margins oblique; anterolateral spine slightly larger than outer orbital spine. Lateral margins broadly convex; widest at posterior third; margins unarmed but with 2 shallow well spaced notches on hepatic margin. Rostrum broad, 0.35 remaining carapace length; trifid distally; carinate dorsally; apex slightly inclined dorsally; lateral proximal margin almost straight. Pterygostomian flap with short, sparse striae; anterior margin blunt, angular.

Sternum: Sternum longer than wide. Sternite 3 about one-third width of sternite 4. Posterior margin of sternite 3 in point contact with anterior margin of sternite 4. Sternites smooth, unarmed, without striae.

Abdomen: Tergites with short, fine, scattered setae, without spines. Tergites 2–4 with elevated anterior ridge; tergites 2–3 also with shallow groove behind anterior ridge. Tergite 6 with posterior margin not strongly produced. Telson composed of 8 plates. Uropodal endopod lateral margins setose, unarmed.

Eye: Ocular peduncle unarmed, surface sparsely setose; movable; partially concealed by rostrum. Cornea subglobular, slightly wider than peduncle; small slender spine directly lateral to ocular peduncle.

Antennule: Basal article squat, 2 subequal distolateral spines; distomesial margin dentate.

Antenna: Basal article with triangular mesial and lateral tooth, neither overreaching article 2. Article 2 with strong distolateral spine, reaching beyond midlength but not apex of article 3. Article 3 unarmed. Article 4 with lateral triangular projection. Flagellum twice carapace length.

Maxilliped 3: Dactylus, propodus and carpus unarmed. Merus extensor margin with slender distal spine; flexor margin with small distal spine and 2 large spines proximally, first with prominent convex lobe on posterior margin, second slender. Ischium wider than long, with distal flexor and extensor spine. Crista dentata finely denticulate.

Pereopod 1 (cheliped): Elongate, 3 times carapace length; with tufts of long, simple setae, most numerous on dorsal and ventral margins; subcylindrical to ovate. Propodus with row of dorsal and subventral spines, palm about twice as long as high; dorsal margin of palm as long as dactylus. Pollex and dactylus occlusal margins dentate, apices with interlocking teeth; pollex occlusal margin with low tooth anterior to midlength; dactylus occlusal margin with low proximal dentate lobe. Carpus with 4 distal spines (dorsal, ventral, mesial, lateral); dorsal margin with distal and subdistal spine, latter largest; lateral distal spine preceded by row of 2 spines. Merus with row of 3 strong, graded dorsal spines, largest distally; mesial margin with 2 large mesial spines, one distally at carpal articulation, one slightly distal to midlength of margin; ventromesial margin with 2 strong spines proximally and distal spine. Ischium with ventrodistal spine and dorsal spine. Epipod absent.

Pereopods 2–4: Slightly compressed; decreasing in length posteriorly; scattered, setose striae. Merus extensor margin with prominent upright spines (6 on pereopods 2–3, 1 or 2 on pereopod 4) in addition to large distal spine; flexor margin irregularly serrated or minutely spinose, strong distal spine. Carpus with distal extensor spine and 3 spines along margin of pereopods 2–3, pereopod 4 margin unarmed; low, irregular, lateral carina. Propodus length 6.5–6.7 times height; extensor margin unarmed; flexor margin with movable spine at distal one-third to one-quarter, paired movable spines distally adjacent to dactylar articulation. Dactylus longer than carpus, about two-thirds propodus length; extensor margin unarmed, with scattered setae; flexor margin with 10–12 short, triangular teeth, each bearing corneous movable spine; movable spine at base of corneous unguis. Epipods absent.

Etymology. Named for Kareen Schnabel (NIWA), for her important contributions to New Zealand carcinology, especially squat lobsters.

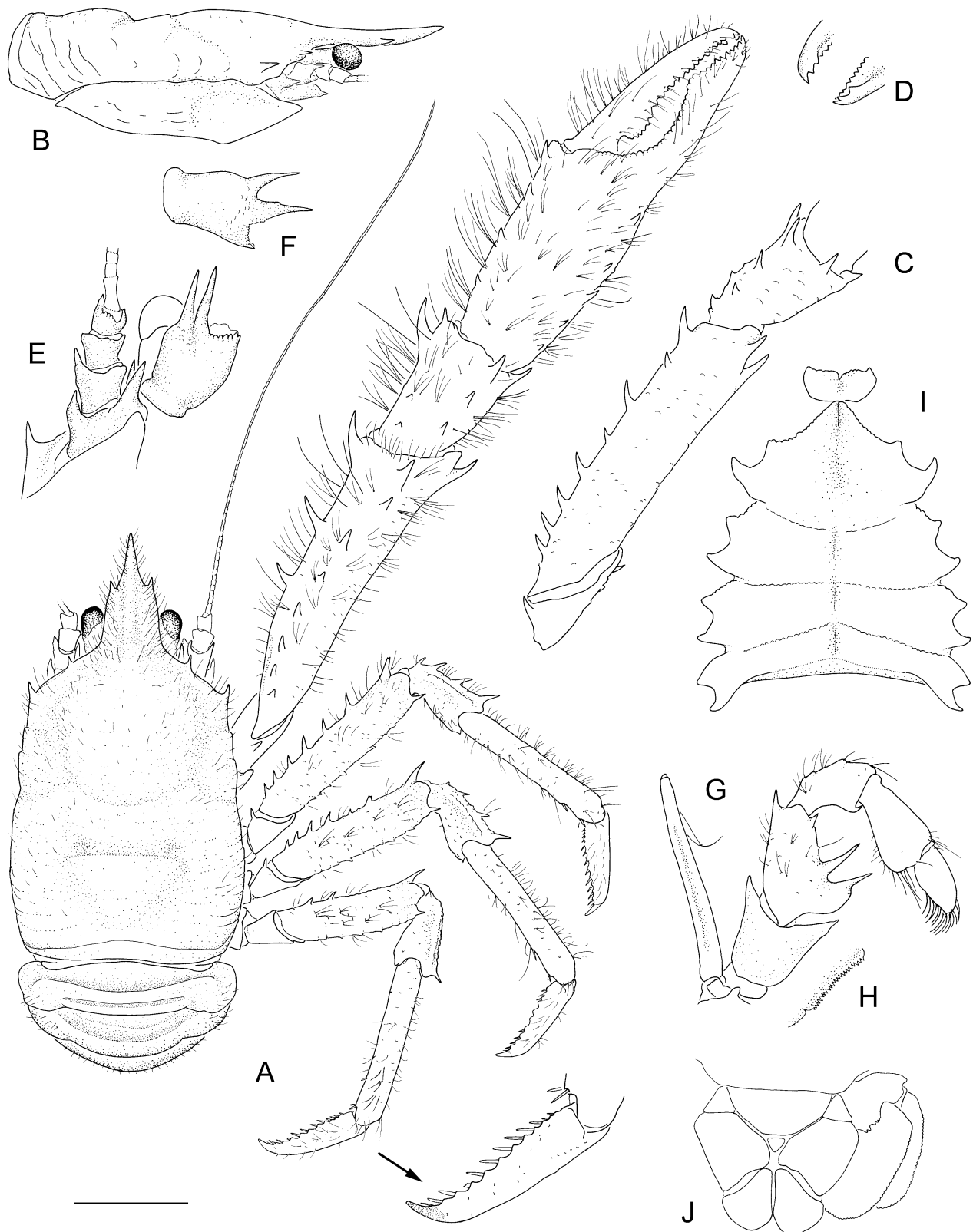


FIGURE 1. *Munidopsis kareenae* sp. nov., male holotype, cl 18.4 mm, pcl 13.3 mm (NIWA 19202). A, dorsal habitus; B, carapace, right lateral view; C, right cheliped proximal segments, ventrolateral view; D, right cheliped finger tips, mesial view; E, right antenna and antennule, ventral view; F, right antennular basal article, lateral view; G, right maxilliped 3; H, right crista dentata; I, sternal plastron; J, telson and right uropod. Scale: A–D = 5.0 mm; E–I = 2.5 mm; J = 4.0 mm.

Remarks. *Munidopsis kareenae* **sp. nov.** is allied to members of the “*Galathodes* group” within *Munidopsis* (Ahyong *et al.* 2011), and in particular, those species within the group sharing a flattened, distally trifold rostrum, an unarmed carapace surface (apart from paired epigastric spines in some species), unarmed abdominal tergites and absence of pereopodal epipods. These species include *M. acuminata* Benedict, 1902 [off South Carolina, northwestern Atlantic], *M. comarge* Taylor, Ahyong & Andreakis, 2010 [Taiwan to Western Australia and New Zealand], *M. mina* Benedict, 1902 [Galápagos Islands], *M. modesta* Benedict, 1902 [Galápagos Islands], *M. norfanz* Ahyong, 2007 [Tasman Sea], *M. pubescens* Macpherson, 2007 [Madagascar], *M. serricornis* Lovén, 1852 [Atlantic Ocean], *M. ternaria* Macpherson, 2007 [New Caledonia], *M. transtridens* Pequegnat and Pequegnat, 1971 [Gulf of Mexico and Brazil], *M. treis* Ahyong & Poore, 2004 [southern Australia to New Caledonia including New Zealand], *M. tridens* (A. Milne-Edwards, 1880) [Caribbean Sea], and *M. trifida* Henderson, 1885 [widespread in the Indo-West Pacific region]. *Munidopsis kareenae* differs from each of these species, except *M. comarge*, *M. norfanz* and *M. ternaria*, in lacking spines on the lateral margins of the carapace behind the anterolateral spine. *Munidopsis kareenae* is readily separated from *M. ternaria* by lacking epigastric spines, and from *M. norfanz*, *M. ternaria* and *M. comarge* in having prominently spinose (rather than serrate) extensor margins of the meri and carpi of pereopods 2 and 3. Aside from the absence of epigastric spines, and absence of lateral carapace spines behind the anterolateral spine, *M. kareenae* is most similar to *M. trifida* and *M. treis*: in both species, the apical spine of the rostrum is elongate, so that the lateral spines are nearer the rostral midlength than apex; the frontal margins of the carapace distinctly and consistently slope posteriorly, rather than being transverse or concave behind the eye.

Distribution. Presently known only from Nukuhou Seamount, Bay of Plenty, North Island, New Zealand; 1050 m.

Key to New Zealand species of *Munidopsis*

1. Rostral plate distally trifold 2
– Rostral plate margins unarmed, not distally trifold. 5
2. Carapace lateral margins behind anterolateral spine without spines. 3
– Carapace lateral margins behind anterolateral spine with spines 4
3. Meri of pereopods 2–4 prominently spinose on extensor margin *M. kareenae* **sp. nov.**
– Meri of pereopods 2–4 serrated or irregular on extensor margin *M. comarge* Taylor, Ahyong & Andreakis, 2010
4. Carapace lateral margin with 2 spines behind anterolateral spine *M. treis* Ahyong & Poore, 2004
– Carapace lateral margin with 3 spines behind anterolateral spine *M. cf. serricornis* (Lovén, 1852)
5. Rostrum slender, spiniform 6
– Rostrum broad, flattened 9
6. Carapace with outer orbital spine (antennal spine) *M. maunga* Schnabel & Bruce, 2006
– Carapace without outer orbital spine (antennal spine) 7
7. Eyestalk unarmed *M. kaiyoe* Baba, 1974
– Eyestalk with 1 or 2 anterior spines 8
8. Carapace with epigastric spines; surface coarsely granular *M. antonii* (Filhol, 1884)
– Carapace without epigastric spines; surface smooth. *M. victoriae* Baba & Poore, 2002
9. Carapace without epigastric spines or processes. Pereopods 1–4 without epipods *M. marginata* (Henderson, 1885)
– Carapace with pair of epigastric spines or processes. Pereopods 1–3 with epipods. 10
10. Dorsal ridges of anterior abdominal tergites ornamented with granules or spines *M. papanui* Schnabel & Bruce, 2006
– Dorsal ridges of anterior abdominal tergites smooth, unarmed 11
11. Cheliped palm slender, length about 4 times height *M. proales* Ahyong & Poore, 2004
– Cheliped palm stout, length not more than 3 times height 12
12. Upper distal margin of basal antennular segment with cluster of 3 or 4 splayed spines. *M. bractea* Ahyong, 2007
– Upper distal margin of basal antennular segment with single stout spine 13
13. Rostrum widest at base *M. tasmaniae* Ahyong & Poore, 2004
– Rostrum widest near midlength *M. ceres* Macpherson, 2007

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