

Stomatopoda (Crustacea) of the KARUBAR Expedition in Indonesia

Shane T. AHYONG

Department of Marine Invertebrates, Australian Museum,
6 College St., Sydney, NSW 2010 (Australia)
shanea@austmus.gov.au

Ahyong S. T. 2002. — Stomatopoda (Crustacea) of the KARUBAR Expedition in Indonesia. *Zoosystema* 24 (2) : 373-383.

ABSTRACT

Stomatopods collected by the KARUBAR Expedition to Indonesia are reported. The six species represented are new records for the Kai, Aru and Tanimbar islands and increase the known fauna to 28 species. The six species are *Alainosquilla foresti* Moosa, 1991, *Odontodactylus latirostris* Borradaile, 1907, *Lysiosquilla sulcirostris* Kemp, 1913, *Kasim karubar* n. sp., *Kaisquilla laevis* n. gen., n. sp., *Oratosquillina quinquedentata* (Brooks, 1886) and *Squilloides leptosquilla* (Brooks, 1886). *Kasim karubar* n. sp. closely resembles *K. philippinensis* (Moosa, 1986) but differs chiefly in having shorter eyestalks, and five teeth instead of seven on the dactylus of the raptorial claw. *Kaisquilla laevis* n. gen., n. sp. most closely resembles species of *Anchisquilloides* Manning, 1977 and *Anchisquillopsis* Moosa, 1986, but most significantly differs in lacking submedian abdominal carinae. The present specimen of *Alainosquilla foresti* is the largest known specimen of the species and represents the first record of the species since it was first described. Moosa's (1991) description is erroneous in several important features. Therefore, *Alainosquilla* Moosa, 1991 is rediagnosed.

KEY WORDS

Crustacea,
Stomatopoda,
Alainosquilla,
Kaisquilla n. gen.,
Kasim,
Indonesia,
new genus,
new species.

RÉSUMÉ

Crustacés stomatopodes de l'Expédition KARUBAR en Indonésie.

Les stomatopodes récoltés lors de l'Expédition KARUBAR en Indonésie sont répertoriés. Les six espèces représentées sont de nouvelles mentions pour les îles de Kai, d'Aru et de Tanimbar et portent à 29 le nombre d'espèces connues. Les six espèces sont *Alainosquilla foresti* Moosa, 1991, *Odontodactylus latirostris* Borradaile, 1907, *Lysiosquilla sulcirostris* Kemp, 1913, *Kasim karubar* n. sp., *Kaisquilla laevis* n. gen., n. sp., *Oratosquillina quinquedentata* (Brooks, 1886) et *Squilloides leptosquilla* (Brooks, 1886). *Kasim karubar* n. sp. ressemble à *K. philippinensis* (Moosa, 1986) mais en diffère principalement par des pédoncules oculaires plus courts et par la présence de cinq dents au lieu de sept sur le dactyle de la pince ravisseuse. *Kaisquilla laevis* n. gen., n. sp. est proche des espèces d'*Anchisquilloides* Manning, 1977 et d'*Anchisquillopsis* Moosa, 1986 mais en diffère principalement par l'absence des carènes abdominales submédianes. Le spécimen étudié d'*Alainosquilla foresti* est le plus grand connu et le premier récolté depuis la description de l'espèce. La description de Moosa (1991) est erronée pour plusieurs points importants et en conséquence, une nouvelle diagnose d'*Alainosquilla* Moosa, 1991 est donnée.

MOTS CLÉS

Crustacea,
Stomatopoda,
Alainosquilla,
Kaisquilla n. gen.,
Kasim,
Indonésie,
nouveau genre,
nouvelles espèces.

INTRODUCTION

The 1991 French-Indonesian KARUBAR Expedition to the southeastern Indonesian islands of Kai, Aru and Tanimbar resulted in a small, but significant collection of Stomatopoda. Of the six species reported here, two are new to science and one is also referable to a new genus. The collection also includes the first Indonesian record of *Alainosquilla foresti* Moosa, 1991, a species previously only known from New Caledonia.

MATERIALS AND METHODS

Terminology and size descriptors follow Ahyong (2001). All measurements are in millimetres. Total length (tl) is measured along the midline from the tip of the rostrum to the apices of the submedian teeth. Carapace length (cl) is measured along the midline and excludes the rostral plate. Corneal index (CI) is given as 100cl divided by cornea width. Abbreviations used in this account include: antennule (A1); antenna (A2); abdominal somite (AS); thoracic somite (TS);

maxilliped (MXP); median (MD); submedian (SM); intermediate (IM); lateral (LT); marginal (MG); pleopod (PLP). Specimens are deposited in the Muséum national d'Histoire naturelle, Paris (MNHN).

SYSTEMATICS

Superfamily GONODACTYLOIDEA Giesbrecht, 1910
Family ALAINOSQUILLIDAE Moosa, 1991
Genus *Alainosquilla* Moosa, 1991

Alainosquilla foresti Moosa, 1991
(Fig. 1)

Alainosquilla foresti Moosa, 1991: 167-169, fig. 3.
Type locality: New Caledonia. — Manning 1995: 19.

MATERIAL EXAMINED. — Kai Islands, stn DW18, 05°18'S, 133°01'E, 205-212 m, 24.X.1991, 1 ♀ tl 20 (MNHN).

DIAGNOSIS. — Cornea subglobular. A2 protopod with flattened, articulated plate on inner dorsal margin. Raptorial claw with terminal ischiomerall articulation; propodus pectinate, with one movable spine proximally; dactylus with two teeth, uninflated basally. Abdominal somites subcylindrical in cross-section,

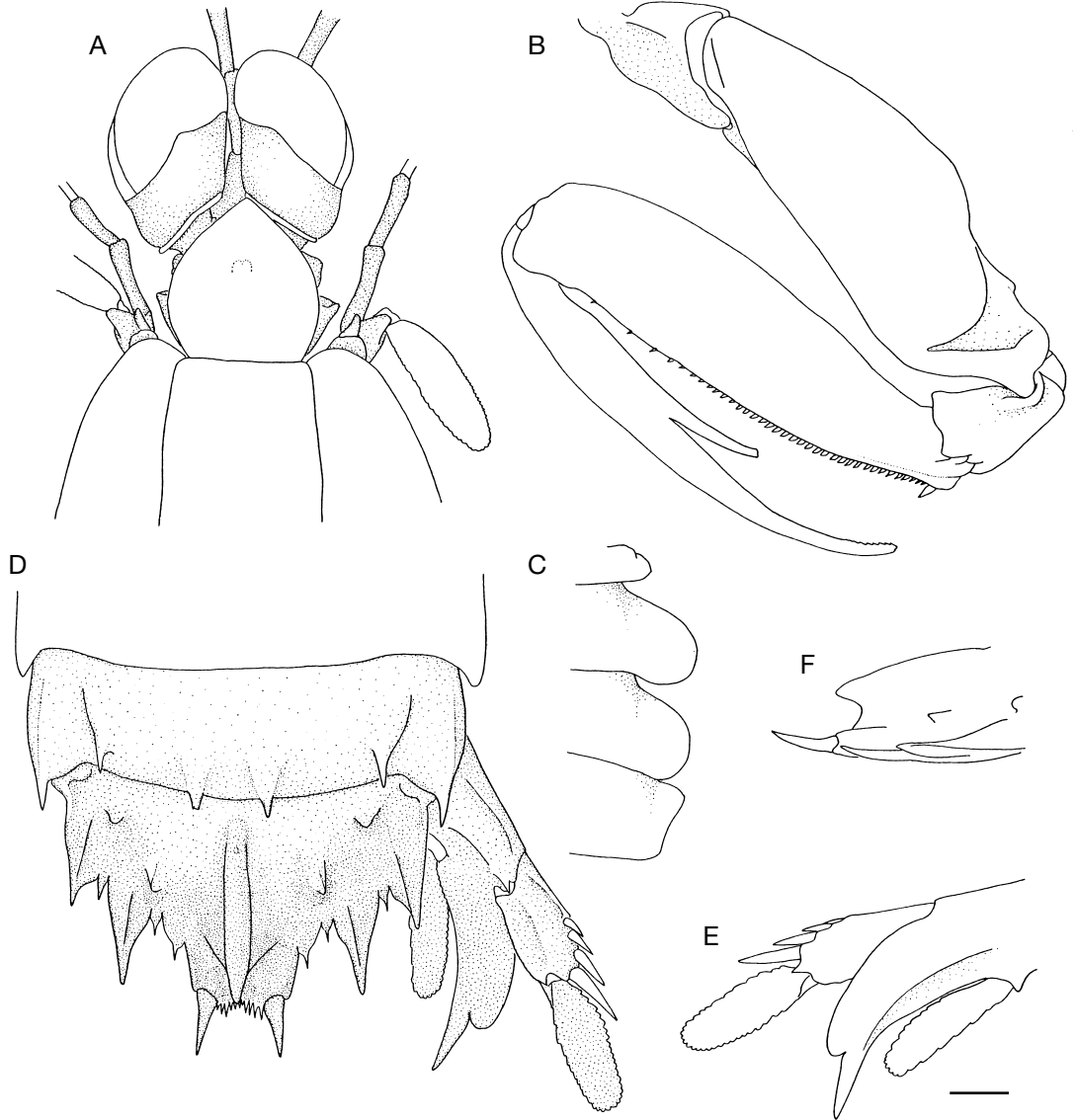


FIG. 1. — *Alainosquilla foresti* Moosa, 1991, ♂ tl 20 mm; **A**, anterior cephalon, dorsal; **B**, raptorial claw, right lateral; **C**, TS5-8, right dorsal; **D**, AS5-6, telson and uropod, dorsal; **E**, uropod, right ventral; **F**, telson, right lateral. Scale bar: 0.5 mm.

without dorsal carinae; articulation compact. Telson with distinct MD carina, short anterior SM carinae, minute SM and two IM denticles. Uropodal protopod with one primary spine; exopod segments with terminal articulation.

DISTRIBUTION. — New Caledonia and now from Indonesia at depths between 110 and 212 m.

REMARKS

The specimen agrees well with the holotype (tl 17) but shows several size related differences: the rostral plate is slightly broader, the median carina on the telson is sharper, and four instead of three movable spines are present on the outer margin of the uropodal exopod. The present

specimen is female and the type series is based on subadults (and possibly some postlarvae), so the adult morphology of the endopod of the male first pleopod remains uncertain.

According to Moosa's (1991) account, *Alainosquilla* resembles euryaquillids in having a depressed, loosely articulated body, and resembles gonodactylids in bearing a fixed dorsal process on the antennal protopod and in having subterminally articulated uropodal exopod segments. Re-examination of the type material along with the present specimen shows that the body is strongly convex with compact articulation, the dorsal process on the antennal protopod is articulated and the uropodal exopod segments are terminally articulated, as in hemisquillids and pseudosquillids. *Alainosquilla foresti* is rediagnosed above.

Family ODONTODACTYLIDAE Manning, 1980
Genus *Odontodactylus* Bigelow, 1893

Odontodactylus ?*latirostris* Borradaile, 1907

Odontodactylus latirostris Borradaile, 1907: 212, pl. 22, figs 3, 3a. Type locality: Amirante Islands, Seychelles. — Debelius 1999: 280, 281. — Ahyong 2001: 83, 84, fig. 40.

Odontodactylus brevirostris — Moosa 1973: 12, 13 [non *O. brevirostris* (Miers, 1884)].

MATERIAL EXAMINED. — Kai Islands, stn DW01, 05°46'S, 132°10'E, 156-305 m, 22.X.1991, right raptorial claw, propodus length 12 (MNHN).

DISTRIBUTION. — The Seychelles to Australia, south-eastern Indonesia and New Caledonia at depths between 20 and 305 m.

REMARKS

Based on the mottled colour pattern on the merus and presence of seven teeth on the dactylus of the raptorial claw, the specimen is likely referable to *O. latirostris*. *Odontodactylus latirostris* was reported from various localities in Indonesia by Debelius (1999) and from Ceram (03°15'S, 128°08'E) by Moosa (1973) as *O. brevirostris*. Ahyong (2001) recently reported *O. latirostris* from northern Australia.

Superfamily LYSIOSQUILLOIDEA Giesbrecht, 1910
Family TETRASQUILLIDAE Manning & Camp, 1993
Genus *Kasim* Manning, 1995

Kasim karubar n. sp.
(Fig. 2)

TYPE MATERIAL. — Tanimbar Island, stn DW80, Arafura Sea, 09°37'S, 131°02'E, 199-201 m, 4.XI.1991, holotype ♂ tl 38 (MNHN).

ETYMOLOGY. — Named for the KARUBAR Expedition, derived from the names of the Kai, Aru and Tanimbar islands; noun used in apposition.

DIAGNOSIS. — Eye with cornea asymmetrically bilobed. A1 somite dorsal processes directed anteriorly. A2 protopod without mesial or ventral papillae. Raptorial claw dactylus with five teeth. TS6-7 lateral processes each with posterolateral margin rounded, not produced posteriorly. AS6 lacking submedian and intermediate carinae or spines. Telson dorsal surface smooth, lacking carinae; with low posteromedian projection terminating in blunt median projection flanked by three slender, well spaced, posteriorly directed spines above marginal armature; ventral surface with postanal spine, lacking carinae laterally.

DISTRIBUTION. — Known only from off Tanimbar, Arafura Sea, at 199-201 m depth.

DESCRIPTION

Eye with cornea asymmetrically bilobed, extending beyond A1 peduncle segment 1; cornea with mesial lobe rounded. Ophthalmic somite with anterior margin rounded. Ocular scales fused.

A1 peduncle 0.46cl. A1 somite dorsal processes directed anteriorly. A2 protopod without mesial or ventral papillae. A2 scale slender 0.37cl; entire margin setose.

Rostral plate with short, broad basal portion and long apical spine not extending anteriorly beyond cornea; dorsal surface smooth; ventral surface with carina. Carapace anterolateral angles broadly rounded; posterior margin unarmed.

Raptorial claw dactylus with five teeth; penultimate tooth slightly shorter than preceding tooth, outer margin faintly sinuous, proximal margin with basal notch; carpus dorsal margin terminating in short spine directed ventrally; propodus with opposable margin pectinate and with four movable spines proximally; merus outer inferodistal angle



FIG. 2. — *Kasim karubar* n. sp., holotype (MNHN); **A**, anterior cephalon, dorsal; **B**, eye, right dorsal; **C**, raptorial claw, right lateral; **D**, TS5-8, right dorsal; **E**, AS5-6, telson and uropod, dorsal; **F**, telson, ventral; **G**, uropod, right ventral; **H-J**, pereiopods 1-3, right posterior; **K**, PLP1 endopod, right anterior; **L**, TS8 sternal keel, right lateral. Scale bar: A-J, 1.25 mm; K, L, 0.6 mm.

unarmed; ischium approximately one-third merus length.

Mandibular palp 3-segmented. MXP1-5 each with epipod. MXP5 basal segment lacking ventrally directed spine; merus with broad, evenly convex flange on inner margin.

TS5 lateral process obsolete. TS6-7 lateral processes subtruncate laterally, rounded anterolaterally and posterolaterally; posterolateral margin not produced posteriorly. TS8 lateral process rounded; sternal keel conical, apex blunt.

Pereiopods 1-3 basal segment with posterior, ventrally directed spine. Pereiopods 1-2 with distal segment of endopod subcircular; endopod 3 distal segment slender, elongate.

AS6 smooth medially; lacking submedian and intermediate carinae or spines; lateral spines slender; with one slender spine and one broad triangular projection anterior to uropod articulation; sternum posterior margin unarmed.

Telson broader than long; with three pairs of primary teeth (SM, IM, LT); SM teeth with movable apices; IM teeth with apices extending posteriorly beyond base of SM teeth; with 10 SM denticles either side of midline; with four IM denticles, second and fourth longest; LT denticle spiniform; lateral margins unarmed. Dorsal surface smooth, lacking carinae; with low posteromedian projection terminating in blunt median projection flanked by three slender, well spaced, posteriorly directed spines above marginal armature. Telson ventral surface with postanal spine; lacking carinae lateral to postanal spine.

Uropodal protopod terminating in two slender, flattened spines, dorsally and ventrally carinate, triangular in cross-section, inner longer; unarmed dorsally excepting dorsal spine above proximal exopod articulation; with slender ventral spine anterior to endopod articulation. Uropodal exopod proximal segment unarmed dorsally; inner margin with low, round distal lobe; outer margin with six movable spines, distalmost exceeding midlength but not apex of distal segment; distal margin with slender ventral spine. Exopod distal segment longer than proximal

segment. Endopod unarmed dorsally; length 2.57 breadth.

Colour in alcohol

Completely faded.

Measurements of holotype

tl 38, cl 7.1, A1 peduncle 3.3, A2 scale 2.6, propodus length 6.2.

REMARKS

Kasim now includes three species, *K. insuetus* (Manning, 1970) from southern Australia, *K. philippinensis* (Moosa, 1986) from the Philippines, and *K. karubar* n. sp. from Indonesia. *Kasim karubar* n. sp. most closely resembles *K. philippinensis* and both differ from *K. insuetus* in lacking a ventral papilla on the antennal protopod, lacking longitudinal carinae on the telson, and in bearing no more than four intermediate denticles on the telson. *Kasim karubar* n. sp. differs from *K. philippinensis* in bearing shorter, but asymmetrically bilobed eyes, fused instead of separate ocular scales, five instead of seven teeth on the dactylus of the raptorial claw, the posterolateral margin of TS6-7 is not posteriorly produced, and the posteromedian process of the telson is a blunt lobe instead of a slender spine. The three species of *Kasim* can be separated using the key below.

Species of four tetrasquillid genera have a postanal spine on the ventral surface of the telson: *Acaenosquilla* Manning, 1991, *Heterosquillopsis* Moosa, 1991, *Kasim* Manning, 1995, and *Tectasquilla* Adksion & Hopkins, 1984. Unlike other tetrasquillids, however, in *Acaenosquilla*, *Heterosquillopsis* and *Kasim*, the endopods of pereiopods 1-2 are subcircular to ovate as in Nannosquillidae, but unlike nannosquillids, the endopod is slender on pereiopod 3. *Acaenosquilla*, *Heterosquillopsis* and *Kasim* form a discrete group in the Tetrasquillidae, being united by the postanal spine and morphology of the pereiopodal endopods (Ahyong & Harling 2000).

KEY TO SPECIES OF *KASIM* MANNING, 1995
(Species dealt with in this paper is in bold)

1. Inner margin of cornea conical. Dactylus of raptorial claw with six teeth. AS6 with submedian and armed intermediate spines. Dorsal surface of telson with four to five pairs of longitudinal carinae *K. insuetus*
- Inner margin of cornea rounded. AS6 without submedian or intermediate spines. Dorsal surface of telson lacking longitudinal carinae 2
2. Dactylus of raptorial claw with seven teeth. Ocular scales separate. Posterolateral margins of TS6-7 produced posteriorly *K. philippinensis*
- Dactylus of raptorial claw with five teeth. Ocular scales fused. Posterolateral margins of TS6-7 not produced posteriorly *K. karubar* n. sp.

Superfamily SQUILLOIDEA Latreille, 1802
Family SQUILLIDAE Latreille, 1802

Kaisquilla n. gen.

TYPE SPECIES. — *Kaisquilla laevis* n. gen., n. sp. by monotypy.

ETYMOLOGY. — Named after the type locality, Kai Islands, in combination with the generic name *Squilla*. Gender feminine.

DIAGNOSIS. — Eye with bilobed cornea, distinctly broader than and set slightly obliquely on stalk. Ocular scales separate. A1 somite dorsal processes with short slender apices, directed anterolaterally. Carapace with anterolateral spine; with faintly indicated LT and reflected MG carinae indicated posteriorly only. Mandibular palp present. MXP1-2 each with epipod. TS5-7 lateral processes single. TS5 without ventral spine. AS1-5 without MD and SM carinae. Telson broader than long, with three pairs of primary teeth (SM, IM, LT); SM teeth with movable apices; prelaterolobe absent; dorsolateral surface rugose, with short, low, mid-dorsal carina; ventral surface without postanal carina; ventrolateral carina extending posteriorly to base of LT denticle. Uropod protopod with smooth inner margin.

REMARKS

Kaisquilla n. gen. superficially resembles *Levisquilla* Manning, 1977, and *Rissoides* Manning & Lewinsohn, 1982, in the rounded lateral process of TS6-7 and reduced dorsal carinae. In other respects, however, such as general habitus, the bilobed cornea, rostral plate shape, ab-

sence of a pair of ventral spines on TS5, the blunt hook process on the endopod of PLP1, telson and uropod structure, *Kaisquilla* n. gen. most closely resembles *Anchisquilloides* Manning, 1977 and *Anchisquillopsis* Moosa, 1986. A cladistic analysis of the squilloid genera (unpublished data) shows that *Kaisquilla* n. gen. is most closely related to *Anchisquilloides* and *Anchisquillopsis*. Unlike most other squilloids that have a single lateral process on TS5, *Kaisquilla* n. gen., *Anchisquilloides* and *Anchisquillopsis* share a blunt instead of acute hook process on the endopod of the first male pleopod.

Kaisquilla laevis n. sp.
(Fig. 3)

TYPE MATERIAL. — Kai Islands, stn DW14, 05°18'S, 132°28'E, 245-246 m, 24.X.1991, ♂ holotype tl 28 (MNHN).

ETYMOLOGY. — Named *laevis*, meaning smooth, for the absence of median and submedian carina on the abdomen in *Kaisquilla* n. gen., that are present in species of *Anchisquilloides* and *Anchisquillopsis*.

DISTRIBUTION. — Known only from Kai, at 245-246 m depth.

DESCRIPTION

Dorsal integument smooth, polished.

Eye with cornea bilobed, distinctly broader than and set slightly obliquely on stalk, not extending beyond antennular peduncle segment 1; CI 421.

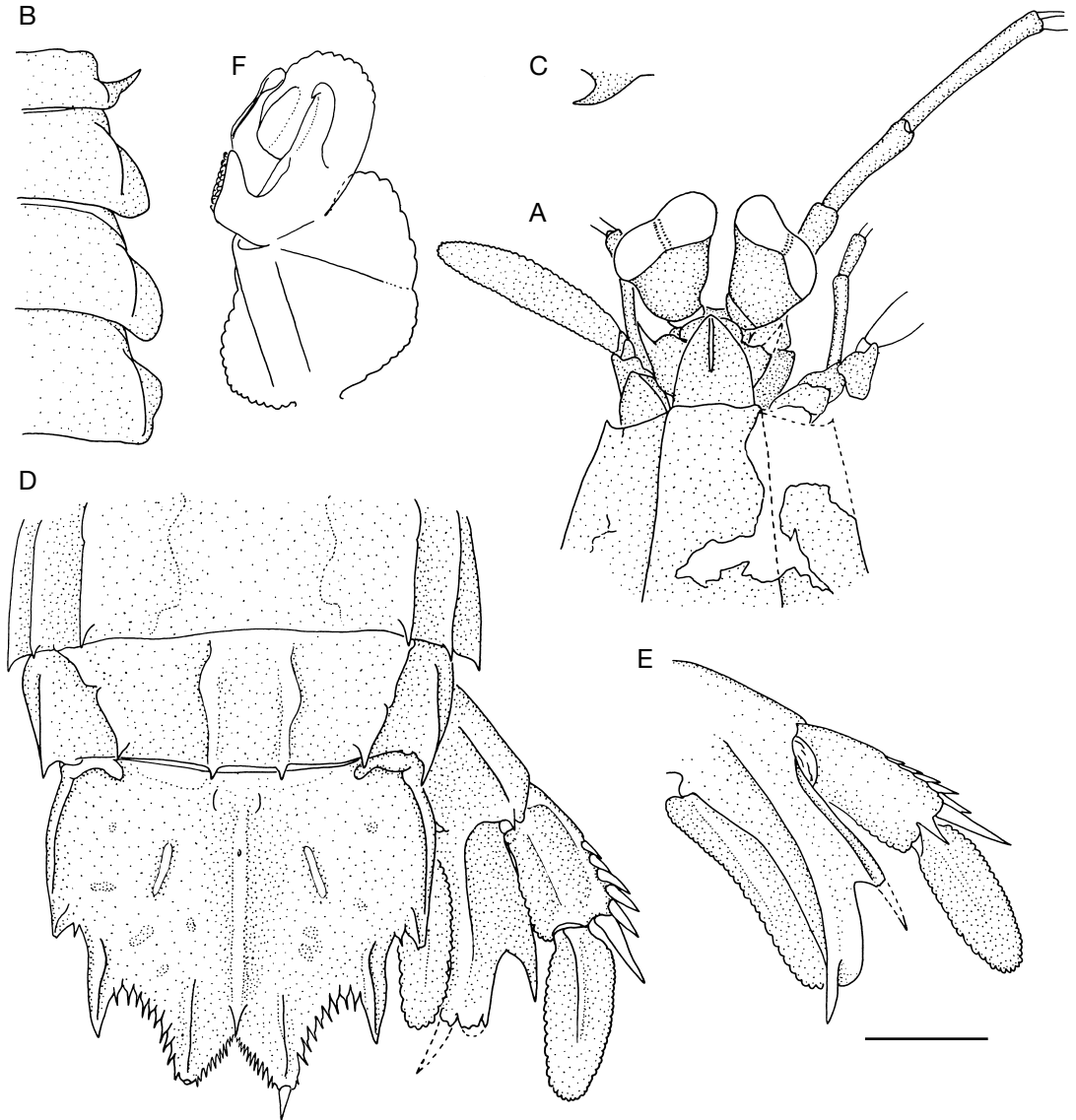


FIG. 3. — *Kaisquilla laevis* n. gen., n. sp., holotype (MNHN); **A**, anterior cephalon, dorsal; **B**, TS5-8, right dorsal; **C**, TS8 sternal keel, right lateral; **D**, AS5-6, telson and uropod, dorsal; **E**, uropod, right ventral; **F**, PLP1 endopod, right anterior. Scale bar: A-E, 1.25 mm; F, 0.6 mm.

Ophthalmic somite with medially emarginate anterior margin. Ocular scales rounded, separate.

A1 somite dorsal processes with short slender apices, directed anterolaterally; A1 peduncle 1.10cl. A2 scale slender, 0.40cl; entire margin setose.

Rostral plate longer than broad; lateral margins convex; apex blunt; with distinct median carina.

Carapace anterior width less than half median length; anterolateral spines not extending anteriorly to base of rostral plate; with faintly indicated lateral and reflected mg carinae indicated posteriorly only.

Raptorial claw unknown.

Mandibular palp 2-segmented (damaged on left side). MXP1-2 each with epipod. MXP5 basal segment without ventrally directed spine.

Pereiopods 1-3 basal segment unarmed; endopod 2-segmented, distal segment slender.

TS5 lateral process a single slender spine directed anterolaterally; ventral spine absent. TS6-7 lateral process broadly rounded. TS6-8 each with distinct IM carinae. TS8 anterolateral margin rounded; sternal keel produced as a posteriorly directed spine.

AS1-5 each with IM, LT and MG carinae. AS6 with SM, IM and LT carinae; with ventrolateral spine anterior to uropodal articulation; sternum posterior margin unarmed, without transverse carinae. Abdominal carinae spined as follows: SM 6, IM 5-6, LT 5-6, MG 4-5.

Telson broader than long, with three pairs of primary teeth, each with dorsal carina; SM teeth with movable apices; prelateral lobe absent; MD carina with proximal pit and posterior spine; dorsolateral surface rugose, with short, low, mid-dorsal carina and a few shallow pits; denticles spiniform SM 12-14, IM 9-10, LT 1; ventral surface without postanal carina; ventrolateral carina extending posteriorly to base of LT denticle.

Uropodal protopod terminating in two slender spines, dorsally and ventrally carinate, inner longer; unarmed dorsally except for dorsal spine above proximal exopod articulation; protopod inner margin smooth, without ventral spine or tubercle anterior to endopod articulation; lobe on outer margin of inner spine rounded and deflected dorsally, broader than adjacent spine, proximal margin faintly concave.

Uropodal exopod proximal segment unarmed dorsally; distal margin with slender ventral spine; outer margin with six movable spines, distalmost not exceeding midlength of distal segment; exopod distal segment longer than proximal segment; endopod unarmed dorsally, entire margin setose.

Colour in alcohol

Largely faded, but with dark pigment around the posterolateral margins of the carapace, lower and posterior margins of the thoracic and abdominal

somites. AS6 with dark submedian patch. Telson dark on posterior half. Uropodal protopod dark proximally, on inner distal margin and apex of outer spine. Uropodal exopod proximal segment with dark pigment distally.

Measurements of holotype

tl 28, cl 5.9, A1 peduncle 6.4, A2 scale 2.5, cornea width 1.4.

REMARKS

Unfortunately, the specimen is badly damaged: both raptorial claws are missing, the right anterior portion of the carapace is fragmented, and the ocular somite fractured and almost fully detached from the cephalon. Therefore, Fig. 3 shows a partial reconstruction.

The well-developed penes and endopod of PLP1 show that this specimen is sexually mature.

Genus *Oratosquillina* Manning, 1995

Oratosquillina quinquedentata (Brooks, 1886)

Squilla quinquedentata Brooks, 1886: 21, 26, pl. 1, fig. 3, pl. 2, fig. 6. Type locality: Arafura Sea. — Kemp 1913: 52 [not addendum p. 95]. — Stephenson & McNeill 1955: 243.

Oratosquillina quinquedentata – Manning 1971: 14; 1978: 23-25, fig. 12.

Oratosquillina quinquedentata – Manning 1995: 25, 225, 227. — Ahyong 2001: 295-298, fig. 144.

MATERIAL EXAMINED. — Kai Islands, stn DW01, 05°46'S, 132°10'E, 156-305 m, 22.X.1991, 1 ♂ postlarva tl 22 (MNHN).

DISTRIBUTION. — Gulf of Thailand, India, Indonesia, and Australia from the shore to 156-305 m depth.

REMARKS

The postlarva lacks raptorial claws, but agrees well with Alikunhi's (1967) account of postlarval *O. quinquedentata*. The present specimen represents the deepest known record for *O. quinquedentata*. *Oratosquillina quinquedentata* was previously known from the shore to 51 m depth (Dingle *et al.* 1977; Manning 1978; Ahyong 2001).

Genus *Squilloides* Manning, 1968*Squilloides leptosquilla* (Brooks, 1886)

Squilla leptosquilla Brooks, 1886: 30-34, pl. 1, figs 1, 2. Type locality: Celebes Sea, Philippines, 12°46'N, 122°10'E. — Jurich 1904: 370-372, pl. 25 (I), fig. 1-1b. — Kemp 1913: 46-48. — Hansen 1926: 10.

Squilloides leptosquilla — Moosa 1986: 410, 411, pl. I, figs D, E. — Ahyong 2001: 310-312, fig. 150.

MATERIAL EXAMINED. — Tanimbar Islands, stn CP84, 09°23'S, 131°09'E, 275-246 m, 4.XI.1991, 1 ♂ tl 58 (MNHN). — Stn DW44, 07°52'S, 132°48'E, 291-295 m, 29.X.1991, 1 broken ♀ cl 7.5 (MNHN). — Kai Islands, stn DW24, 05°32'S, 132°51'E, 230-243 m, 26.X.1991, 1 ♂ tl 33 (MNHN). — Stn 10/81, 10.X.1991, 1 ♂ tl 87 (MNHN). — Stn CP16, 05°17'S, 132°50'E, 315-349 m, 24.X.1991, 1 ♀ tl 62 (MNHN).

DISTRIBUTION. — The Philippines, the Andaman Islands, Australia, the Banda Sea, and now from Kai and Tanimbar, Indonesia at depths between 170 and 754 m (Ahyong 2001).

REMARKS

The specimens in the present series generally agree well with the holotype and published accounts (Brooks 1886; Kemp 1913; Moosa 1986; Ahyong 2001). Variation in the Indonesian specimens resembles that reported by Ahyong (2001) for Australian material. In the smaller specimens, the eye is more triangular, and the median carina on the carapace and rostral plate is less distinct than in the largest specimen. The lateral process of TS5 is directed laterally in the smallest specimen, and anterolaterally in the largest specimen.

DISCUSSION

Moosa (1973) reported 22 species of stomatopod from Kai, Aru and Tanimbar, none of which are represented in the present collection. Therefore, the six species of stomatopod reported above are all new records for area increasing the known stomatopod fauna to 28. The material reported by Moosa (1973) was collected from the shoreline to a maximum depth of 90 m (usually less than 50 m) whereas specimens reported above

were collected at depths between 156 and 809 m (usually 200-300 m). Not surprisingly then, the species reported here were not represented in Moosa's (1973) collection. The majority of the stomatopods known from Kai, Aru and Tanimbar occur elsewhere in the Australasian region or are widely distributed in the Indo-West Pacific. Thus, *Alainosquilla foresti* was previously known from New Caledonia. *Odontodactylus latirostris*, *Oratosquillina quinquedentata* and *Squilloides leptosquilla* are relatively widespread in the Indo-West Pacific region. *Kasim karubar* n. sp. and *Kaisquilla laevis* n. gen, n. sp., however, are presently known only from Tanimbar and Kai respectively.

Acknowledgements

Special thanks are due to A. Crosnier and B. Richer de Forges (Institut de Recherche pour le Développement) for making this collection available for study. Thanks also to D. Guinot and N. Ngoc-Ho for their assistance and hospitality during a visit to the MNHN. Jean Weiner assisted with the French abstract. My studies on the stomatopod Crustacea were partially supported by a grant from the Joyce Vickery Research Fund (Linnean Society of New South Wales).

REFERENCES

- AHYONG S. T. 2001. — Revision of the Australian Stomatopod Crustacea. *Records of the Australian Museum* Suppl. 26: 1-326.
- AHYONG S. T. & HARLING C. 2000. — The phylogeny of the stomatopod Crustacea. *Australian Journal of Zoology* 48: 607-642.
- ALIKUNHI K. H. 1967. — An account of the post-larval development, moulting and growth of the common stomatopods of the Madras coast, in *Proceedings of the Symposium on Crustacea, Marine Biological Association of India*. Marine Biological Association of India, Mandapan Camp: 824-939.
- BORRADAILE L. A. 1907. — Stomatopoda from the western Indian Ocean. The Percy Sladen Trust Expedition to the Indian Ocean in 1905, under the leadership of J. Stanley Gardiner. *Transactions of the Linnean Society of London* 2, Zoology 12: 209-216.

- BROOKS W. K. 1886. — Report on the Stomatopoda collected by HMS *Challenger* during the years 1873-76. *The Voyage of the HMS Challenger*, *Zoology* 16: 1-116, pls 1-16.
- DEBELIUS H. 1999. — *Crustacea Guide of the World*. IKAN, Frankfurt, 321 p.
- DINGLE H., CALDWELL R. L. & MANNING R. B. 1977. — Stomatopods of Phuket Island. *Phuket Marine Biological Centre, Research Bulletin* 20: 1-20.
- HANSEN H. J. 1926. — The Stomatopoda of the *Siboga* Expedition. *Siboga-Expeditie* 35: 1-48, pls 1, 2.
- JURICH B. 1904. — Die Stomatopoden der Deutsche Tiefsee-Expedition. *Wissenschaftliche Ergebnisse der deutschen Tiefsee-Expedition auf dem Dampfer Valdivia 1898-1899* 7: 361-408, pls 25-30.
- KEMP S. 1913. — An account of the Crustacea Stomatopoda of the Indo-Pacific region, based on the collection in the Indian Museum. *Memoirs of the Indian Museum* 4: 1-217, figs 1-10, pls 1-10.
- MANNING R. B. 1971. — Keys to the species of *Oratosquilla* (Crustacea: Stomatopoda), with descriptions of two new species. *Smithsonian Contributions to Zoology* 71: 1-16.
- MANNING R. B. 1978. — Further observations on *Oratosquilla*, with accounts of two new genera and nine new species (Crustacea: Stomatopoda: Squillidae). *Smithsonian Contributions to Zoology* 272: 1-44.
- MANNING R. B. 1995. — Stomatopod Crustacea of Vietnam: the legacy of Raoul Serène. *Crustacean Research Special No. 4*: 1-339.
- MOOSA M. K. 1973. — The stomatopod Crustacea collected by the Mariel King memorial expedition in Malaku waters. *Marine Research in Indonesia* 13: 1-30.
- MOOSA M. K. 1986. — Stomatopod Crustacea, in Résultats des Campagnes MUSORSTOM I & II Philippines, 2. *Mémoires du Muséum national d'Histoire naturelle*, Paris, série A, Zoologie 133: 367-414 [dated 1985, published 1986].
- MOOSA M. K. 1991. — The Stomatopoda of New Caledonia and Chesterfield Islands, in RICHER DE FORGES B. (ed.), *Le benthos de fonds meubles des lagons de Nouvelle-Calédonie* 1. Éditions de l'ORSTOM, Paris: 149-219.
- STEPHENSON W. & MCNEILL F. 1955. — The Australian Stomatopoda (Crustacea) in the collections of the Australian Museum, with a check list and key to the known Australian species. *Records of the Australian Museum* 23 (5): 239-265.

*Submitted on 5 June 2000;
accepted on 16 January 2002.*