

**Research article**[urn:lsid:zoobank.org:pub:ABAF299C-BD0F-4A22-98E6-E5ECE63CFBC4](https://zoobank.org/pub:ABAF299C-BD0F-4A22-98E6-E5ECE63CFBC4)**New and notable stomatopods (Crustacea, Stomatopoda)  
from Mozambique**Rouane BROKENSCHA <sup>1,\*</sup>, Jannes LANDSCHOFF <sup>2</sup> & Charles GRIFFITHS <sup>3</sup><sup>1,3</sup>Department of Biological Sciences and Marine Research Institute, University of Cape Town,  
Cape Town, Rondebosch, South Africa.<sup>1,2</sup>Sea-Change Trust, 6 Buxton Ave., Oranjezicht, 8001, Cape Town, South Africa.\*Corresponding author: [rouaneb@gmail.com](mailto:rouaneb@gmail.com)<sup>2</sup>Email: [jannes@landschoff.net](mailto:jannes@landschoff.net)<sup>3</sup>Email: [charles.griffiths@uct.ac.za](mailto:charles.griffiths@uct.ac.za)<sup>1</sup>[urn:lsid:zoobank.org:author:FD3DAA64-8008-445B-BD30-A0B26442862A](https://zoobank.org/author:FD3DAA64-8008-445B-BD30-A0B26442862A)<sup>2</sup>[urn:lsid:zoobank.org:author:10E62F8E-9036-4588-8EED-0CAB4A970C7F](https://zoobank.org/author:10E62F8E-9036-4588-8EED-0CAB4A970C7F)<sup>3</sup>[urn:lsid:zoobank.org:author:502DBCD2-2011-49C2-9C90-8194367D9490](https://zoobank.org/author:502DBCD2-2011-49C2-9C90-8194367D9490)

**Abstract.** New and notable stomatopods are reported on and added to the Mozambican faunal list, based principally on material housed in the collections of the Iziko South African Museum. Seven species are reported for the first time from Mozambican waters including one undescribed species of *Clorida* Eydoux & Souleyet, 1842, bringing the total known Mozambican stomatopod fauna to 22 species, comprising 17 genera and eight families. The known fauna is tabulated and taxonomic accounts of eight species are given, seven of these representing the new species records including one undescribed species, while the eighth species account is of the previously poorly documented *Erugosquilla woodmasoni* (Kemp, 1911), which is reported on from unpublished material. The new record of *Manningia australiensis* Manning, 1970 represents the first record of the family Eurysquillidae from southern Africa.

**Keywords.** Mantis shrimp, taxonomy, new records, Western Indian Ocean, biodiversity.

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**Introduction**

Mantis shrimps, or stomatopods (Order Stomatopoda) are an important group of marine malacostracan crustaceans. They are mobile, specialised predators that occupy a wide range of continental shelf habitats, but are most common in shallow-water environments, where they inhabit burrows in mud or sand substrates, or dwell within crevices in coral reef systems (Ahyong 2012). Some species leave their dens and venture great distances and are often caught in mid to bottom trawl and dredge surveys. However, many appear less mobile and ambush prey from their dens. Mantis shrimp taxonomy has received much global attention, as stomatopods are both biologically intriguing and visually appealing animals.

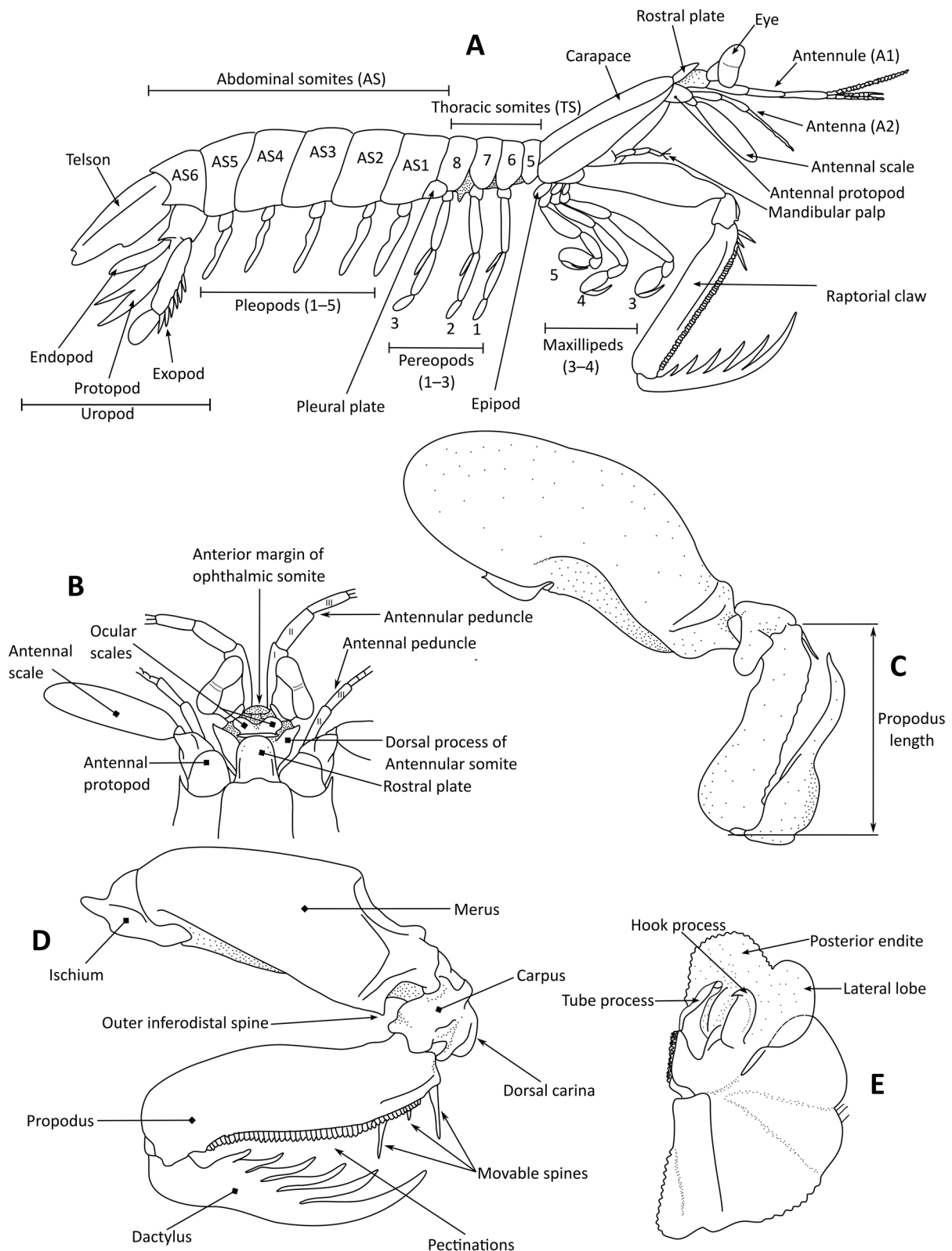
Despite their striking features and importance in the marine benthos, the stomatopod fauna of Mozambique remains poorly known. The current state of knowledge for Mozambican mantis shrimps is also scattered across the literature, mostly within broader studies on the crustacean fauna of the entire southern African region (Hilgendorf 1879; Barnard 1950, 1955, 1958, 1962) and no exclusive treatment or review of the stomatopod fauna of Mozambique exists. Most species accounts from within the Mozambican Exclusive Economic Zone (EEZ) are included in early catalogues or taxonomic revisions of the mantis shrimps of southern Africa. The first such consolidating account, by Barnard (1950), listed 17 species from along the coast of southern Africa and these included nine species found from Mozambican waters. Four additional species were added by Barnard (1958, 1962) and Kalk (1958) based on specimens prominently collected from Maputo Bay and Inhaca Island, in southern Mozambique. Subsequently, Manning (1969) reported on 13 species of mantis shrimps from South Africa and Mozambique, based on a small mantis shrimp collection compiled during the University of Cape Town Ecological Surveys and the RV *Anton Bruun*, Cruise VII. This resulted in one additional new species record of *Lenisquilla lata* (Brooks, 1886) (as *Squilloides lata*) from southern Mozambique. Lastly, a new species, *Faughnia profunda* Manning & Makarov, 1978, was described from specimens collected from Madagascar, Kenya and southern Mozambique, bringing the current number of species known to occur in Mozambican waters to 15.

Half a century after these studies, no more new species have been added to the Mozambique fauna. Meanwhile, many of these existing species have undergone taxonomic name changes with a considerable increase in the global state of taxonomic knowledge as well as the number of stomatopod species descriptions. Furthermore, continued sampling surveys off the South African and Mozambican coasts have resulted in the accumulation of a backlog of unidentified material housed in the Iziko South African Museum, Cape Town, that requires examination. The aim of the present study is to update and collate the taxonomic knowledge of the mantis shrimps of Mozambique and to report on new species records and potentially new species to science in the accumulated material housed in the Iziko South African Museum collection.

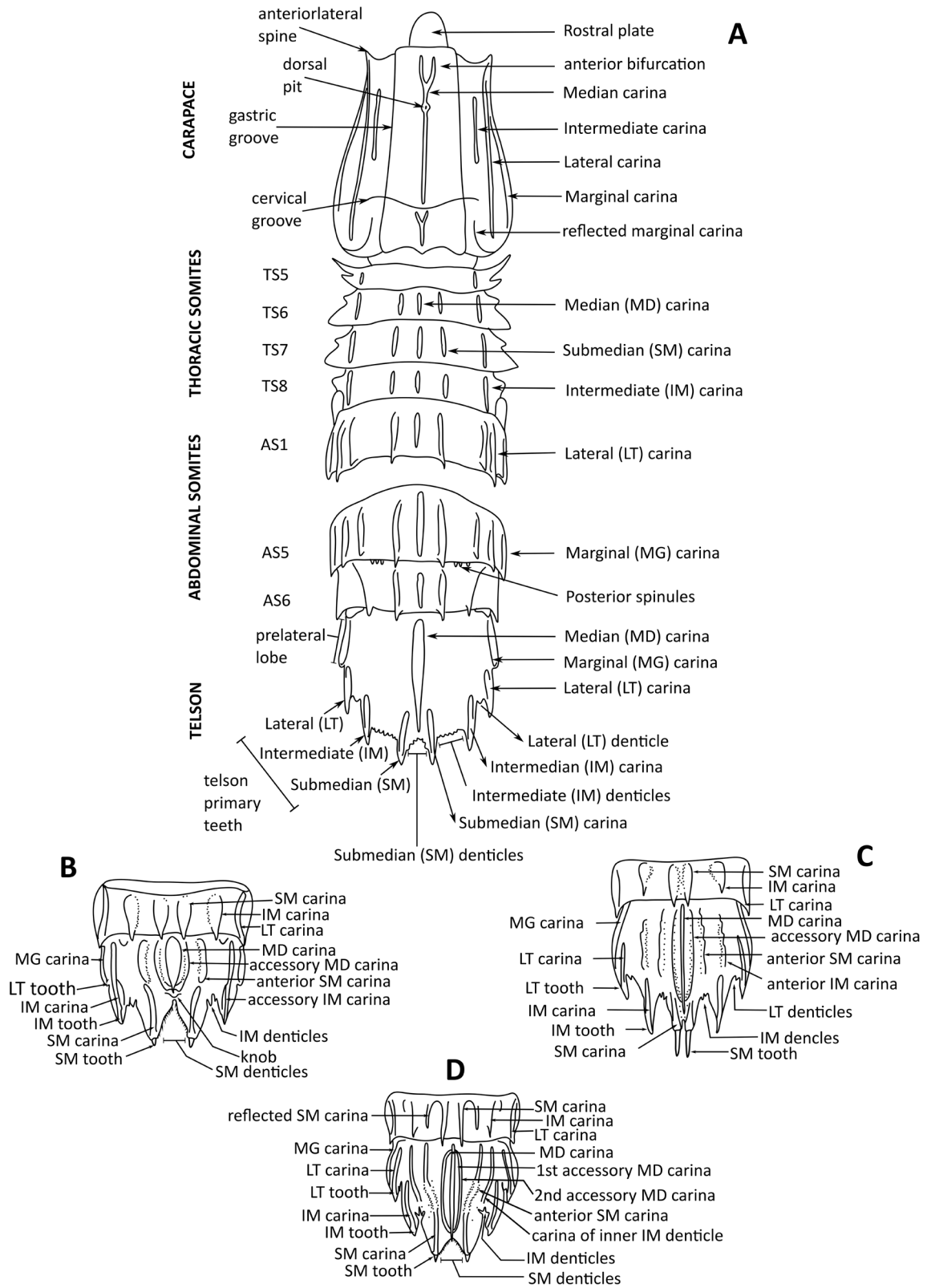
## Material and methods

The information reported on herein is based on the examination of preserved stomatopod material housed in the Iziko South African Museum, Cape Town (SAMC). The majority of new records are from previously unidentified specimens, but some accounts are based on specimens that were previously misidentified and are corrected herein. All specimens are preserved in 70% ethanol. The stomatopod collection comprises some 35 lots from Mozambican waters, and these have collection dates between 1900 and 2017. Specimens were sampled using a range of methods, the most common being bottom and mid-water trawling and dredging. The geographical area reported on here is restricted to localities within the Mozambican Exclusive Economic Zone (EEZ).

Species synonyms are listed in accordance with the most recent literature. Preserved specimens of each species were photographed and traced to produce drawings in Inkscape Project (2020). The figures show features considered most characteristic. Each account also consists of the sections Material examined, Diagnosis (in full, either copied or adapted), Measurements, Colour in alcohol, Colour in life (adapted), Distribution (local and global) and Remarks. The live colouration of specimens could only be reported from previous species accounts, where available. However, some more recently collected samples did exhibit faded, but still recognisably, characteristic colouration and these are described under Colour in alcohol. Only measurements of Mozambican specimens are recorded under Measurements, while in some cases, specimens collected from outside the Mozambican EZZ are illustrated and described in Material examined.



**Fig. 1.** Stomatopod general morphology (adapted from Ahyong 2012). **A.** Entire, right lateral. **B.** Anterior cephalothorax. **C.** Right raptorial claw, ‘smasher’. **D.** Right raptorial claw, ‘spearer’. **E.** Right pleopod 1 endopod, male.



**Fig. 2.** Stomatopod general morphology (adapted from Ahyong 2001, 2012). **A.** Dorsal carinae defined as a normal complement of carinae. **B.** Telson (Gonodactylidae). **C.** Telson (Eurysquillidae, Parasquillidae, Pseudosquillidae, Alainosquillidae and Hemisquillidae). **D.** Telson (Odontodactylidae).

Where information concerning habitat type was available, this is documented under Distribution and habitat. Furthermore, Mozambican provincial distribution is given under Distribution. Station coordinates are presented as Degrees Decimals Minutes. However, some of the older samples use descriptive or pre-rounded data. Other abbreviations used to describe locality data are ‘leg.’ preceded by collector; ‘stn’ for station name or number; and ‘SFI’ for SFI-RS *Africana* Anchovy recruitment cruise.

In general, taxonomic terminology and size descriptors follow Ahyong (2012), with additional species-specific terminology taken from the cited literature. The basic mantis shrimp morphology and terminology as well as abbreviations for morphological features are shown in Figs 1–2. Total length (TL) is measured along the midline from the apex of the rostral plate to the apices of the submedian teeth of the telson. Carapace length (CL) is measured along the midline and excludes the rostral plate. Measurements of the antennule (A1) and antenna (A2) are expressed proportionate to the carapace length (CL), unless specified otherwise. The relative lengths of the uropodal exopod segments and the endopod are useful for identifying some species, and the greatest length and width are given respectively. Corneal index (CI) is calculated by  $100 \times \text{CL} / \text{corneal width}$ , while abdominal-width carapace-length index (AWCLI) is calculated by  $100 \times (\text{AS5 width}) / \text{CL}$ .

The representation of spination of the abdominal carinae follows Ahyong’s (2012) system. For example, ‘SM 6, IM (3)4–6, LT 2–6, MG 2–5’ means that the submedian carinae are posteriorly spined on AS6; the intermediate carinae may or may not be spined on AS3 but are always spined on AS4–6; the lateral carinae are spined on AS2–6 and the marginal carina are spined on AS2–5.

## Results

Subphylum Crustacea Brünnich, 1772  
Order Stomatopoda Latreille, 1817  
Family Eurysquillidae Manning, 1977  
Genus *Manningia* Serène, 1962

*Manningia australiensis* Manning, 1970 new record  
Fig. 3

*Manningia australiensis* Manning, 1970a: 78–81, fig. 1 [type locality off Gillett Cay, Swain Reefs, Australia].

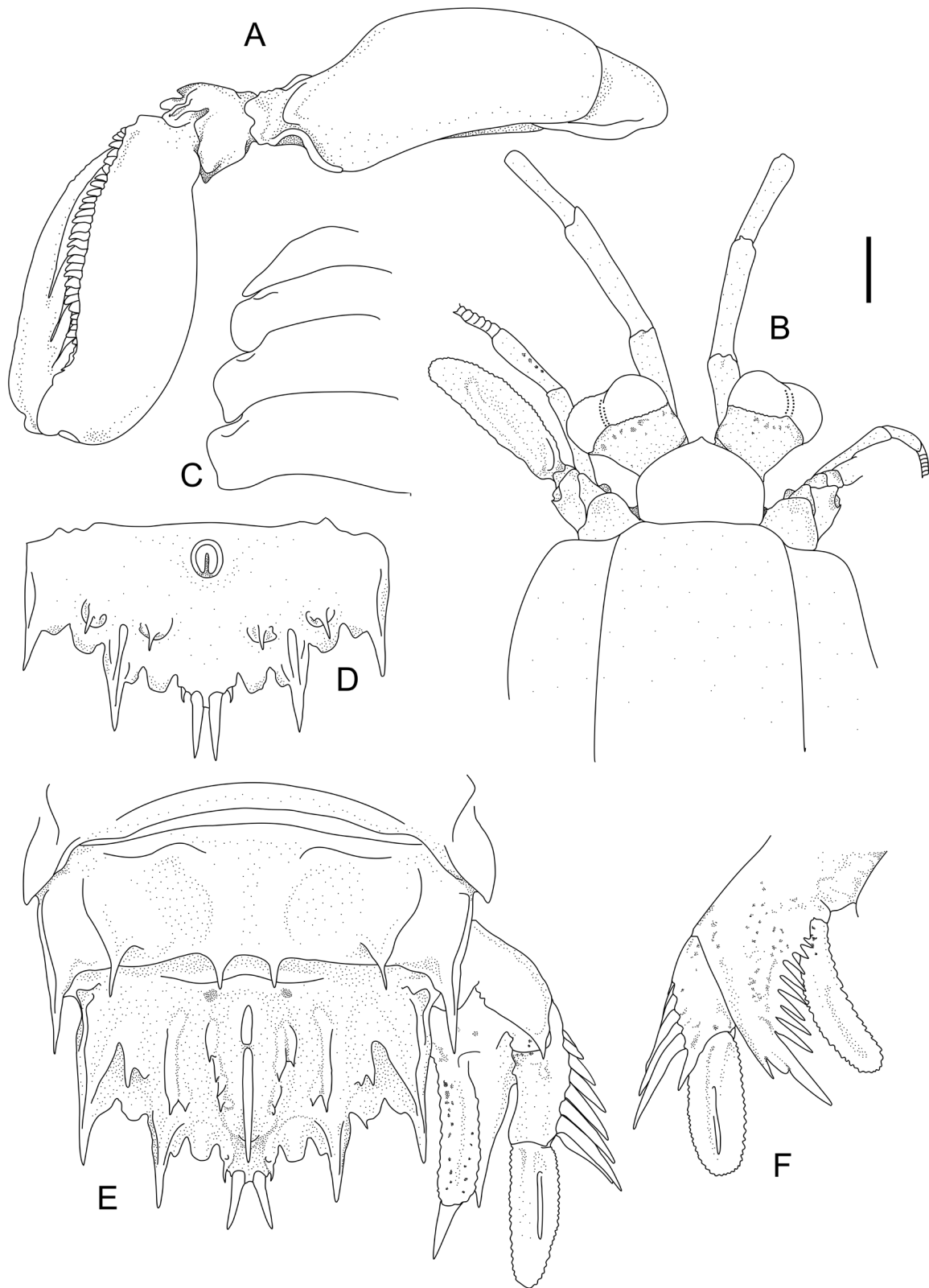
*Manningia vinogradovi* Makarov, 1978: 183, fig. 4.

*Manningia thorsoni* Naiyanetr, 1987: 239, figs 2–3.

*Manningia australiensis* – Makarov 1978: 183. — Moosa 1991: 154. — Manning 1995: 19, 34. — Ahyong 1997: 331, 332; 2001: 23–24, fig. 11. — Debelius 1999: 291. — Liu 2008: (list).

## Diagnosis

A2 protopod with 1 ventral papilla; with blunt dorsal tooth and anteriorly-directed ventral spine. Rostral plate cordiform to subpentagonal; apex acute; rounded laterally. Raptorial claw merus without outer inferodistal spine. TS6–8 without carinae. AS1–5 with MG carina and submarginal sulcus; unarmed posterolaterally. AS6 with armed SM, IM, and LT carinae. Telson dorsolateral surface with distinct MD carina and 3 longitudinal carinae in addition to MG carina as follows: accessory MD carina interrupted, composed of 4 or 5 posteriorly directed spines; anterior IM carina uninterrupted, armed posteriorly; LT carina sinuous and recurved proximally terminating in 1 or 2 spines. Telson posterior margin with 3 broad horizontal lobes between SM and IM teeth, inner lobe with inner IM denticle on margin; with 2 broad horizontal lobes between IM and LT teeth. Telson ventral surface with depressed outer IM and LT denticles only. Uropodal protopod inner margin with 8–10 slender spines; exopod outer margin with 6–8 movable spines; endopod without carinae.



**Fig. 3.** *Manningia australiensis* Manning, 1970, ♂, TL 30 mm (HIOE2MOZ125). **A.** Left raptorial claw, lateral. **B.** Anterior cephalothorax, dorsal. **C.** TS5-8, left dorsal. **D.** Telson, ventral. **E.** Telson and left uropod, dorsal. **F.** Left uropod, ventral. Scale bar = 1 mm.

### Material examined

MOZAMBIQUE • 1 ♂ (TL 30 mm); Sofala Province, Mozambique Channel; 20°13'10.0" S, 35°55'23.4" E; 66–67 m depth; 22 Oct. 2017; RV *Agulhas II*; dredge; stn IIOE2M205 INV264A; SAMC IIOE2MOZ125.

### Colour in alcohol

Mostly faded, but with dorsal mottling of dark-brown pigment. Telson carinae with traces of dark colouration and dark-brown along lateral margins of primary teeth. The holotypic account (Manning 1970a) of preserved material agrees with the present material. Colour in life unknown.

### Measurements

Male (n = 1) TL 30 mm. A1 peduncle 0.94CL. A2 scale 0.43CL. Largest known specimen at TL 32 mm from Queensland, Australia (Ahyong 2001).

### Distribution and habitat

Vietnam, Thailand, New Caledonia, Papua New Guinea, Australia and now the Western Indian Ocean from Mozambique [Sofala]. Fine to coarse sand or shell substrates at depths 20–93 m.

### Remarks

This is the first record from the Western Indian Ocean, as well as the first record of the family Eurysquillidae from southern Africa. The depth and habitat profile matches that described for specimens from Australia and New Caledonia (Manning 1970a; Moosa 1991; Ahyong 2001). Makarov's (1978) specimen of *M. vinogradovi* from Vietnam and Naiyanetr's (1987) *M. thorsoni* described from Thailand have subsequently been found to be indistinguishable from *M. australiensis* and are now considered synonyms (Ahyong 2001). These species synonyms expanded the species range, which is now further extended across the Indian Ocean to the Mozambique Channel.

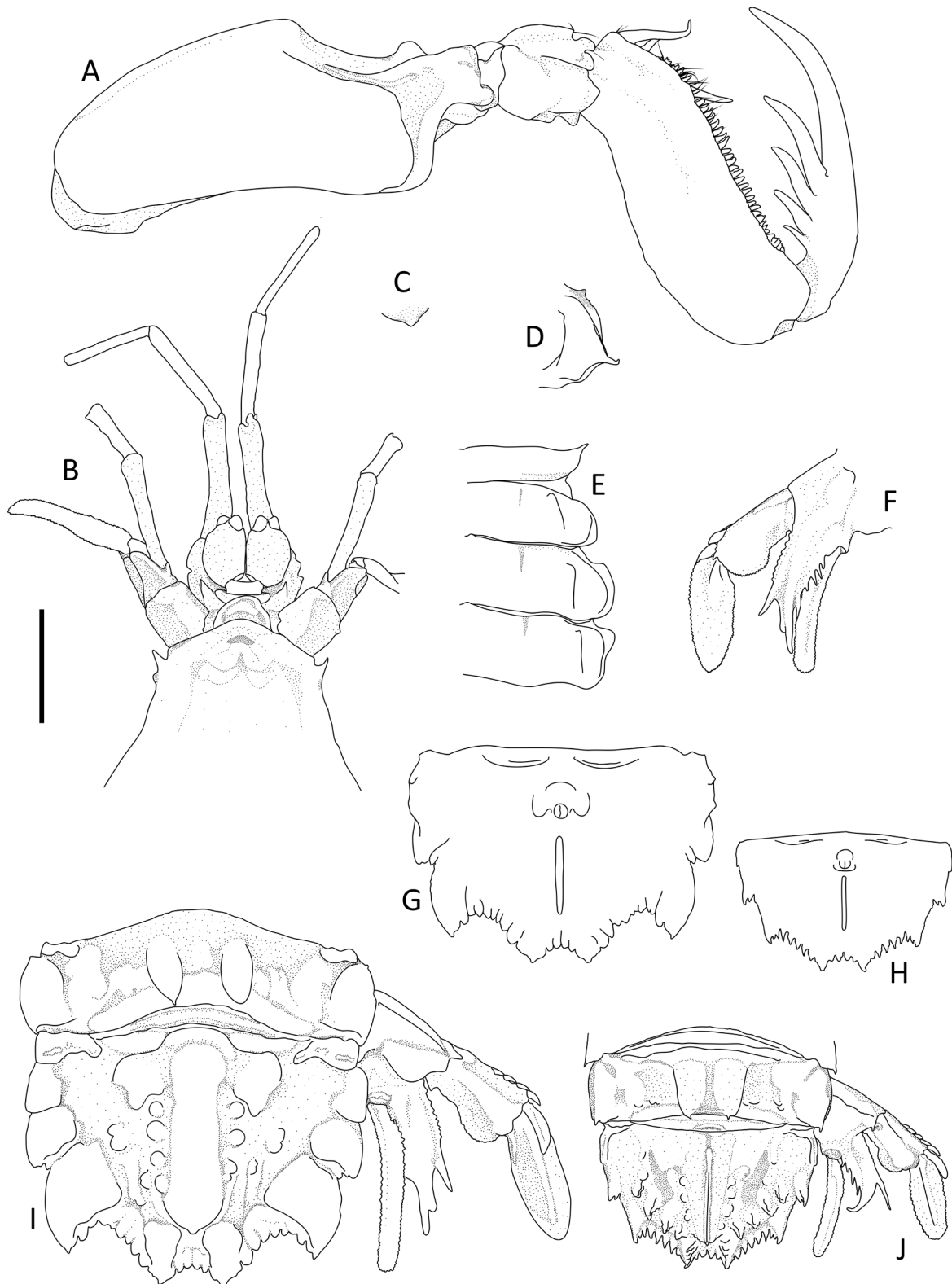
*Manningia australiensis* is distinguished from the other eleven species of *Manningia* by the shape of the rostral plate being cordiform to sub-pentagonal with rounded lateral margins and a small apical spine (Fig. 3B). The present specimen agrees well with previous accounts. The number of spines of the accessory median carina, as well as the outer margin of the uropodal exopod and the inner margin of the uropodal protopod for the specimen herein lie within the range of previously noted variation in telson and uropodal spination (Moosa 1991; Ahyong 2001). The present specimen exhibits eight movable spines on the outer margin of the uropodal exopod, as well as eight spines on the inner margin of the uropodal protopod (Fig. 3F). Four spines adorn the accessory median carina (Fig. 3E).

Family Squillidae Latreille, 1802  
Genus *Clorida* Eydoux & Souleyet, 1842

*Clorida* sp., undescribed species  
Fig. 4

### Diagnosis

A1 somite dorsal processes with short, triangular apices. A2 peduncle segment 1 extending anteriorly beyond eyes. Carapace with anterolateral spines. Raptorial claw dactylus with 5 teeth; outer proximal margin with basal notch. Mandibular palp 3-segmented. TS5 lateral process a short slender lobe, apex spiniform, with small ventral spine. TS6 lateral process broadly rounded. TS7 lateral process subtruncate; anterolateral and posterolateral angles obtusely rounded. TS7–8 and AS(1)2–5 with low SM carinae. AS6 with distinct SM carinae. Abdominal carinae spined as follows: SM6, IM 5–6, LT 5–6, MG (4)5.



**Fig. 4.** *Clorida* sp. **A–B, G, I.** ♂, 64 mm (SAMC–A006796). **C–F, H, J.** ♀, 53 mm (SAMC–C079439). **A.** Right raptorial claw, lateral. **B.** Anterior cephalothorax, dorsal. **C.** TS8 sternal keel, right lateral. **D.** TS5 lateral process, left posterior. **E.** TS5–8, left dorsal. **F.** Right uropod, ventral. **G–H.** Telson, ventral. **I–J.** Telson and right uropod, dorsal. Scale bar = 5 mm.



Telson dorsolateral surface with widely-spaced rows of tubercles; margin of IM and LT teeth faintly crenulate to strongly tuberculate; denticles SM 4–6, IM 5–8, LT 1; ventral surface with long postanal carina, extending beyond half distance between anal pore and posterior margin. Uropodal protopod outer margin crenulate to serrate (smooth in one example); inner margin with 3–6 slender spines. Uropodal exopod proximal segment outer margin with 6–8 movable spines; distal segment longer than proximal segment; with black patch at articulation of exopod segments.

#### Material examined

MOZAMBIQUE • 1 ♂ (TL 64 mm), 2 ♀♀ (TL 47, 53 mm); Mozambique (exact location data unavailable); depth unknown; 1924; J.D.F. Gilchrist leg; SAMC–A006796.

SOUTH AFRICA • 2 ♀♀ (TL 47, 53 mm); KwaZulu-Natal; 29°10.9' S, 31°42.8' E; 40 m depth; 25 May 1976; RV *Meiring Naude*; beam trawl; stn SM114; SAMC–A017939.

#### Measurements

Male (n = 1) TL 64 mm, female (n = 2) TL 47–53 mm. A1 peduncle 1.05–1.18CL. A2 scale 0.46–0.49CL.

#### Colour in alcohol

Mostly faded from dark-brown to pale amber. Uropodal exopod with darker patch at articulation of proximal and distal segments. Colour in life unknown.

#### Distribution and habitat

Recorded for the first time from Mozambique [unknown location] and South Africa.

#### Remarks

The Mozambican sample was collected a century ago and it is only after the recent taxonomic study of the ‘*Clorida* complex’ by Ahyong (2000) that this species could be compared to the similar species *C. latreillei* Eydoux & Souleyet, 1842 and *C. albolitura* Ahyong & Naiyanetr, 2000. All specimens examined herein were previously identified as *C. latreillei* in the museum collection. The present specimens are most similar to *C. albolitura* described from the Gulf of Thailand (Ahyong & Naiyanetr 2000) and known from the Indian Ocean and most recently in the Mediterranean as an invasive species (Ahyong & Galil 2006). *Clorida albolitura* is morphologically distinguished from *C. latreillei* by the length of the postanal carina of the telson extending beyond half the distance between the anal pore and posterior margin and this characteristic is shared by the present specimens (Fig. 4G–H). But the degree of inflation in the adult male specimen is significantly greater than that exhibited by *C. albolitura*, and instead resembles that of an adult male of *C. latreillei*. Furthermore, an unusual feature of the present material is the crenulated or serrate outer margin of the uropodal protopod which is always smooth in *C. latreillei* and *C. albolitura*. This feature coupled with the degree of inflation of the telson teeth carinae as well as the long post-anal keel suggests that the specimens represent an undescribed species.

Genus *Leptosquilla* Miers, 1880

*Leptosquilla schmeltzii* (A. Milne-Edwards, 1873) new record

Fig. 5

*Squilla schmeltzii* A. Milne-Edwards, 1873: 11, pl. II fig. 7 [type locality ‘habite Upolu’, Samoa Islands, Pacific Ocean].

*Leptosquilla schmeltzii* – Miers 1880: 13. — Holthuis 1967: 13. — Manning 1968: 121–122, fig. 5b; 1970b: 1433–1344.

*Squilla schmeltzii* – Hansen 1926: 10. — Holthuis 1941: 257, fig. 2.

**Diagnosis**

Eyes elongated; cornea subglobular. A1 somite significantly elongate, extending anteriorly well beyond apex of rostral plate. Carapace with anterolateral spines. Mandibular palp absent and 2 epipods present. Raptorial claw with 6 or 7 teeth on dactylus. TS5 lateral process an obliquely rounded lobe. Telson broader than long with SM teeth with movable apices. Uropodal exopod outer margin with 4 movable spines, distal two spines spatulate; protopod with 2 lobes between terminal spines, inner margin with 5–6 spines.

**Material examined**

MOZAMBIQUE • 1 ♀ (TL 34 mm); Morrumbene Estuary; 23°42'34.7" S, 35°23'03.4" E; depth unknown; 21 Jan. 1954; UCT Ecological Survey leg; stn MOR.49.H; SAMC–A092092 • 1 ♂ (TL 26 mm); same collection data as for preceding except 19 Jul. 1954; stn MOR.203C; SAMC–A092093.

**Measurements**

Male (n = 1) TL 26 mm, female (n = 1) TL 34 mm. CI 423–483. AWCLI 836–860.

**Colour in alcohol**

Stained pinkish amber. Body covered in black spots most visible on eyes and uropods.

**Colour in life**

Light grey with small black spots described as star-shaped in original description (Milne-Edwards 1873).

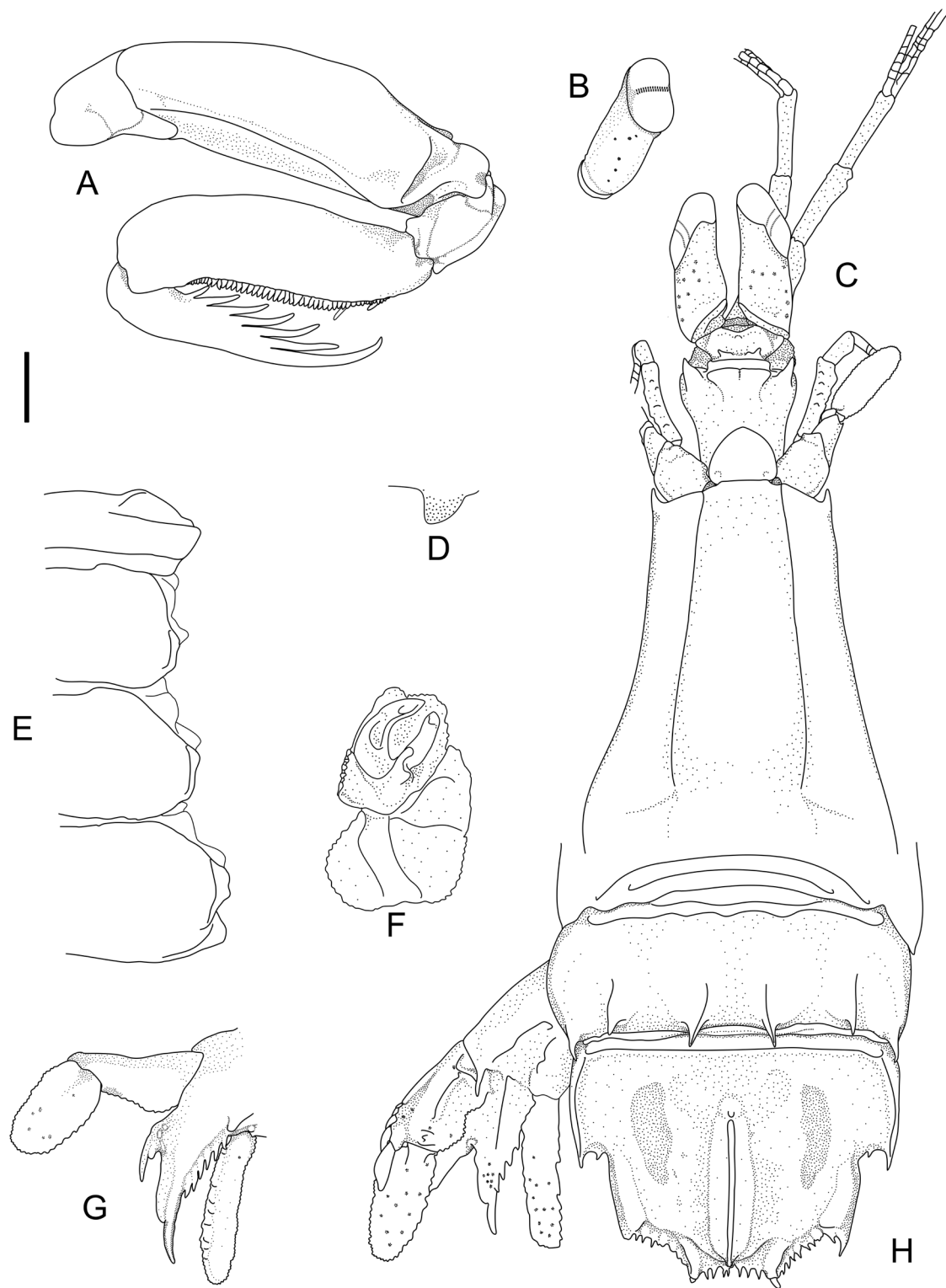
**Distribution and habitat**

Indo-West Pacific from Samoa, Lesser Sonda Islands, Andaman Islands and Red Sea. Localities from Western Indian Ocean include Madagascar (Manning 1970b), Mauritius (Miers 1880) and now southern Mozambique [Inhambane]. Associated with mud to coarse shell substrata; 7–77 m depth.

**Remarks**

The only species of its genus, *L. schmeltzii* is recorded for the first time from southern Mozambique. The present specimen agrees in all aspects with the most recent account of *L. schmeltzii* from Madagascar (Manning 1970b). The specimen of *L. schmeltzii* illustrated by Hansen (1926) is distinct in bearing a single lobe between the terminal spines of the uropodal protopod, but when the specimen was examined a small second lobe was found. The single lobe can be considered a by-product of a stylized illustration of the uropod (private correspondence with Shane Ahyong). The present study material agrees with the species accounts by Holthuis (1941) and Manning (1970b) in having two lobes present between the terminal spines of the uropodal protopod (Fig. 5H). Sexual dimorphism in the form of a more inflated median carina of the telson has been reported in large males exceeding 15 mm total length (Holthuis 1941) and is confirmed for the male specimen examined herein. The female specimen has six teeth on the left dactylus of the raptorial claw and seven on the right, while the male has seven teeth on both dactyli.

As corrected in Manning (1970b), the present specimens were found to have two epipods instead of the four previously recorded in Manning's (1968) revision of the family Squillidae. The material examined herein reflected Manning's (1970b) representation of the species from Madagascar with 2 epipods present. In Ahyong's (2001) most recent key of family Squillidae, the genus *Leptosquilla* is still distinguished via the presence of epipods on maxillipeds 1–4. This error is corrected herein.



**Fig. 5.** *Leptosquilla schmeltzii* (A. Milne-Edwards, 1873). **A–C, F, H–I.** ♀, TL 34 mm (SAMC–A092092). **D, G.** ♂, TL 26 mm (SAMC–A092093). **A.** Right raptorial claw, lateral. **B.** Eye right, lateral. **C.** Anterior cephalothorax, dorsal. **D.** TS8 sternal keel, left lateral. **E.** TS5–8, right dorsal. **F.** Right pleopod 1 endopod, anterior. **G.** Right uropod, ventral. **H.** AS6, telson and left uropod, dorsal. Scale bar: A–C, E, G–H = 1 mm; D, F = 0.5 mm.

Genus *Erugosquilla* Manning, 1995

*Erugosquilla woodmasoni* (Kemp, 1911)

Fig. 6

*Squilla wood-masoni* Kemp, 1911: 99; 1913: 74–76, pl. V figs 63–65 [type locality Madras, India, by lectotype selection (Ahyong 2001)].

*Oratosquilla tweediei* Manning, 1971: 11–14, fig. 4 [type locality Singapore].

*Oratosquilla jakartensis* Moosa, 1975: 13–17, fig. 1 [type locality Jakarta Bay, Indonesia].

*Squilla wood-masoni* – Stephenson 1952: 5–6. — Stephenson & McNeill 1955: 243–244 (part).

*Squilla woodmasoni* – Stephenson 1953: 42. — Barnard 1962: 244 (list). — Manning 1966: 100–101, fig. 5.

*Oratosquilla woodmasoni* – Manning 1971: 11; 1978: 36–39, figs 21–22; 1991: 12–13. — Cannon *et al.* 1987: 63.

*Erugosquilla woodmasoni* – Manning 1995: 200–204, pl. 36 figs 123b, 124–126, 136k–m. — Ahyong & Manning 1998: 661. — Ahyong 2001: 251–253, fig. 123. — Liu 2008: (list).

### Diagnosis

Ophthalmic somite anterior margin broadly rounded, with median spinule. A1 somite dorsal processes with obtuse apices, directed anterolaterally. Rostral plate short, broader than long, subtrapezoid. Raptorial claw dactylus with 6 teeth; merus outer inferodistal angle acutely angled or produced to a spine. Abdominal spination as follows SM (4)5–6, IM 3–6, LT 2–6, MG 1–5. Telson MD carina not flanked by rows of tubercles; prelateral lobe length subequal to margin of LT tooth; denticles SM 2–4, IM 7–10, LT 1. Uropodal protopod terminal spines with lobe on outer margin of inner spine rounded to spiniform; exopod proximal segment outer margin with 7–10 movable spines.

### Material examined

MOZAMBIQUE • 1 ♂ (TL 119 mm); Mozambique Channel; 19°49'00.0" S, 36°05'00.0" E; 54 m depth; 14 Jun. 1994; RV *Algoa* Mozambique SCAD survey; bottom trawl; SFI; SAMC–A04171 • 1 ♂ (TL 115 mm); Mozambique Channel; 17°56'00.0" S, 37°42'00.0" E; 65 m depth; 17 Jun. 1994; RV *Algoa* Mozambique SCAD survey; bottom trawl; SFI; SAMC–A041709.

### Colour in alcohol

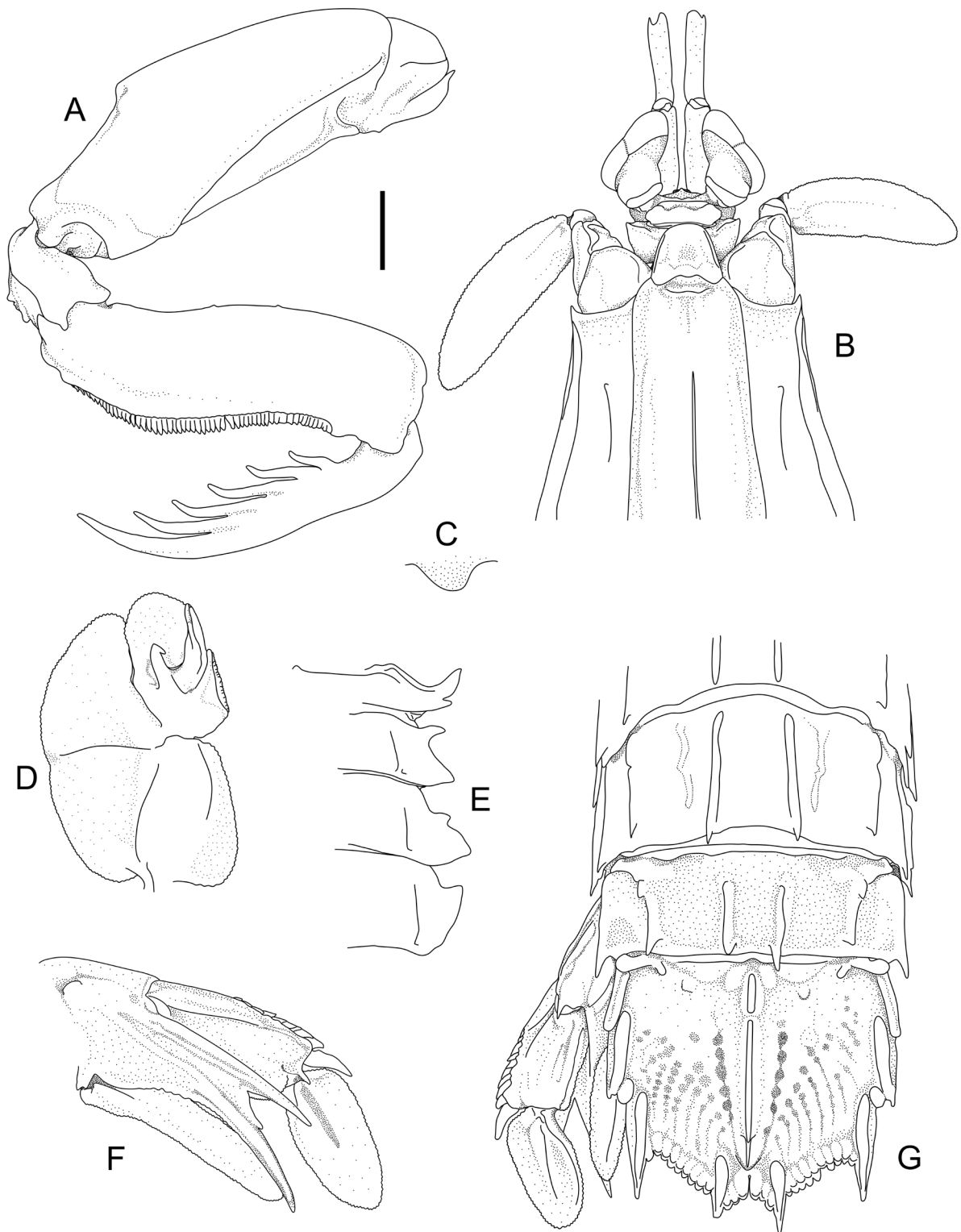
Mostly faded, but with definite hints of overall grey-green colouration. Carinae and grooves of carapace, SM and IM carinae of body all dark. A1 distal segments dark maroon in colour on outer margin. Posterior margins of body somites purple. Telson with MD carina and carinae of primary teeth maroon. Uropodal protopod spine appearing dark purple and endopod almost completely dark distally; distal half of proximal segment of exopod and inner half of distal segment dark.

### Colour in life

Overall body colour is generally a uniform pale grey-green, but some specimens bear diffuse concentrations of chromatophores mid-dorsally on the abdominal somites, giving a slightly mottled to somewhat banded appearance. Mid-dorsal surface of telson maroon. Uropodal exopod blue; distal segment dark blue medially, pale blue or clear laterally. A2 protopod red to maroon (Ahyong 2001).

### Measurements

Male (n = 2) TL 115–119 mm. CI 363–369. A1 peduncle 0.93–0.98CL. A2 scale 0.66–0.70CL. Largest specimen known at TL 153 mm from Australia (Ahyong 2001).



**Fig. 6.** *Erugosquilla woodmasoni* (Kemp, 1911). **A, D.** ♂, TL 115 mm (SAMC–A041709). **B–C, E–G.** ♂, TL 119 mm (SAMC–A041711). **A.** Left raptorial claw, lateral. **B.** Anterior cephalothorax, dorsal. **C.** TS8 sternal keel, left lateral. **D.** Left pleopod 1 endopod, anterior. **E.** TS5–8, right dorsal. **F.** Left uropod, ventral. **G.** AS5–6, telson and left uropod, dorsal. Scale bar: A–B, E–G = 5 mm; C–D = 2.5 mm.

### Distribution and habitat

Indonesia, Vietnam, Philippines, Taiwan, Japan and Australia to Western Indian Ocean and now confirmed from Mozambique [Sofala and Zambezia]. Associated with level habitats usually on sandy mud substrates and in sheltered coastal areas; 20–93 m depth.

### Remarks

The present specimens represent the first verifiable record of *E. woodmasoni* from the Mozambique Channel. Previously, Barnard (1962) examined a specimen of *E. woodmasoni* collected from Inhaca Island, Maputo Bay, by Dr W. Macnae and Mrs M. Kalk, University of Witwatersrand. However, Barnard's (1962) listing included no account of the specimen, or justification of the identification, giving only the species name and named location. As Barnard supplied so little information and no mention or documentation of the record is found in any other relevant literature, an account of *E. woodmasoni* from Mozambican waters is given here.

The specimens examined fall within the range of morphological variation documented in Ah Yong's (2001) recent account of the species from Australia. In one specimen, the anterior bifurcation of the median carina of the carapace is faintly visible, while in the other it is completely absent (Fig. 6B). Both Mozambican specimens exhibited the median spinule on the anterior margin of the ophthalmic somite, but this feature has been found to be absent in previous descriptions of the species (Ah Yong 2001). The shape of the outer inferodistal angle of the merus of the raptorial claw has been recorded to vary from acute to forming a spine, while the specimens examined here both showed acutely angled outer inferodistal angles of the merus (Fig. 6A). The lobe between the spines of the uropodal protopod can be triangular, but the Mozambican material showed a more rounded lobe (Fig. 6F). Ah Yong (2001) lists some specimens of *E. woodmasoni* from Australia and Malaysia with armed SM carina on AS4, but most agree with the present study material and have spines on the SM carinae of AS5–6 (Fig. 6G).

*Erugosquilla woodmasoni* can be distinguished from all other species in the genus by the broad and rounded shape of the anterior margin ophthalmic somite and the acutely shaped outer inferodistal margin of the merus of the raptorial claw. Both features have been previously recorded to vary. However, the anterior margin of the ophthalmic somite is trapezoid to broadly triangular and the outer inferodistal margin of the merus of the raptorial claw is obtusely angled in other species of *Erugosquilla*. Otherwise, the present study material agrees in all features and measurements with previous accounts (Manning 1995; Ah Yong 2001), with 3 SM and 9 and 10 IM telson denticles and 9 movable spines on the outer margin of the uropodal exopod proximal segment. Moreover, at 54 m and 65 m the present specimens represent the deepest collection record of the species. Manning (1995) records the greatest abundance of the species from shallow depths of 15–25 m in Cauda and Nha Trang Bays, Vietnam. Ah Yong (2001) documents specimens found in the shore to around 50 m which most closely resembles the depth distributional recorded herein.

Family Gonodactylidae Giesbrecht, 1910  
Genus *Gonodactylellus* Manning, 1995

***Gonodactylellus choprai*** (Manning, 1967) new record  
Fig. 7

*Gonodactylus choprai* Manning, 1967a: 16–18, fig. 6 [type locality off Somalia].

*Gonodactylus demani espinosus* – Chopra 1939: 176. — Ingle 1963: 28, figs 26, 56.  
*Gonodactylellus choprai* – Manning 1995: 19, 56–57. — Ah Yong 2001: 44–45.

### Diagnosis

Ocular scales small, rounded, separate. Rostral plate anterolateral angles rounded, anterior margins transverse. Mandibular palp 2-segmented. 5 epipods present. TS6–7 lateral process subtruncate, width subequal with TS6 being slightly greater. AS1–4 without posterolateral spine. AS5 with swollen but unarmed carinae; armed posterolaterally. Telson broader than long with SM teeth well-developed with numerous (12–16) denticles present; IM teeth indistinctly formed with 2 or 3 denticles; LT teeth barely present as a faint indentation on lateral margin. Telson without spinules over surface of mid-dorsal carinae. Telson MD carina strongly inflated, tapering posteriorly, and flanked by accessory MD carina that fuse posteriorly with MD carina, accessory MD carina separated from MD carina by a groove in large specimens. SM carina and IM carina present. Uropodal exopod proximal segment without fixed distal spine ventrally; distal segment and the inner margin of proximal segment fringed with setae. Uropodal endopod with inner margin completely fringed with setae, margin serrate for insertion of setae.

### Material examined

MOZAMBIQUE • 1 ♂ (TL 17 mm); Inhambane Province, south of Tofo; 24°19'57.4" S, 35°26'53.2" E; 68–91 m depth; 20 Oct. 2017; RV *Agulhas II*; dredge, stn IIOE2TD2 INV78; SAMC 110E2MOZ475 • 1 ♂ (TL 14 mm); Sofala Province; 20°48'35.3" S, 35°45'23.8" E; 61–93 m depth; 21 Oct. 2017; RV *Agulhas II*; dredge; stn IIOE2M106 INV165; SAMC 110E2MOZ467 • 1 ♂ (TL 12.6 mm); same collection data as for preceding; stn IIOE2M106 INV191; SAMC 110E2MOZ460.

### Measurements

Male (n = 3) TL 12.6–17.0 mm. A2 scale 0.41–0.55CL. AWCLI 750–880. The largest specimen recorded by Chopra (1939) at TL 22 mm.

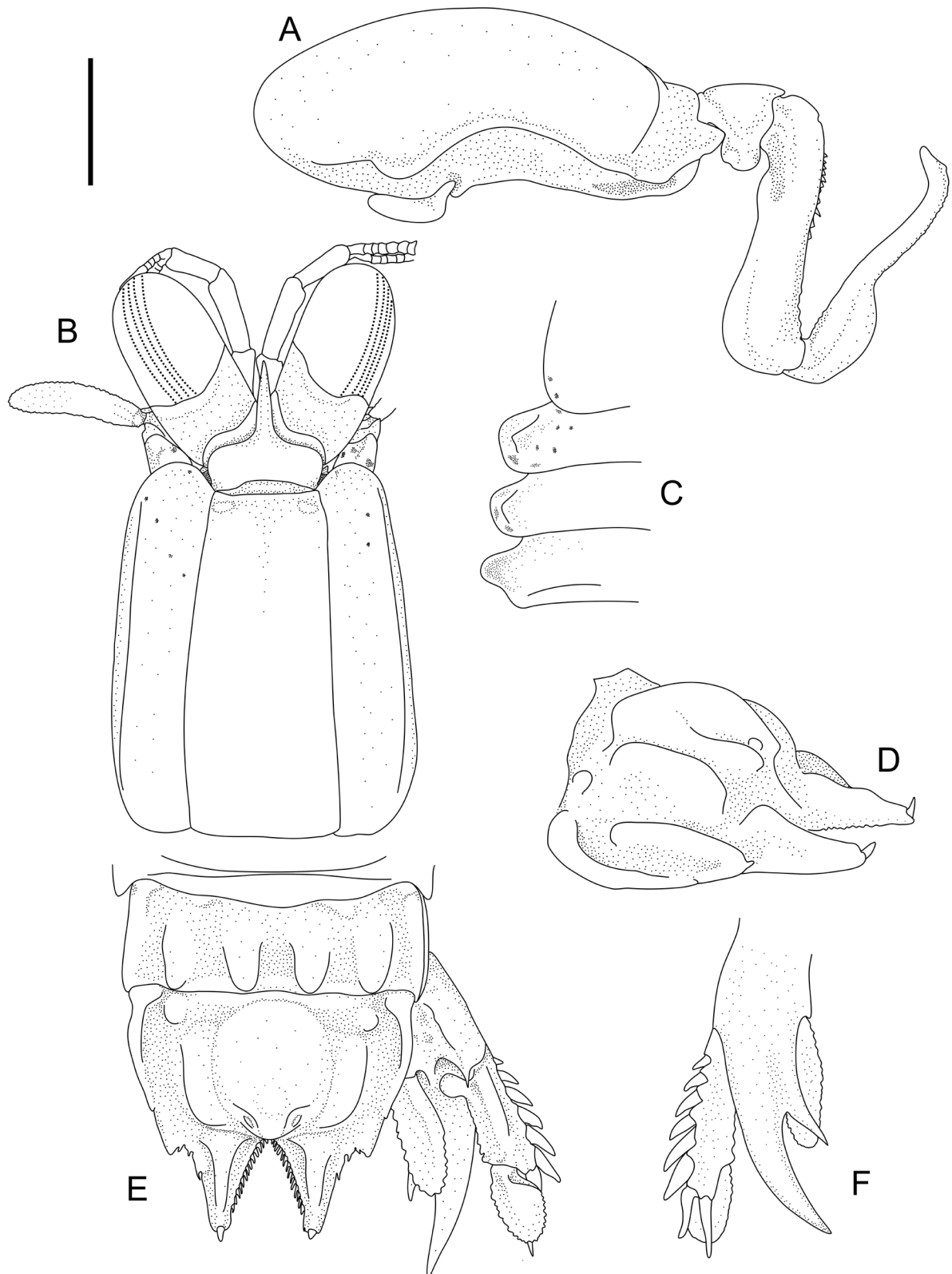
### Distribution and habitat

Known only from the north-western Indian Ocean; Red Sea, South Arabian coast (Chopra 1939), Somalia (Manning 1967a), and now from Mozambique [Inhambane and Sofala]. Recorded at depths 70–82 m. Chopra (1939) recorded much shallower depths of 29–38 m for the species associated with thalloid red algae.

### Remarks

This is the first record of *G. choprai* from Mozambique, as well as southern Africa. The most recent report on this species is Manning's (1967a) description from Somalia, which suggests that this species is inconspicuous or possibly quite rare. However, three specimens from three separate locations were collected on a cruise along the coast of Mozambique and northward into Tanzania in 2017–2018. This species is relatively small, the largest specimen was recorded by Chopra (1939) at 22 mm total length, while the largest specimen documented herein was only 17 mm.

The three specimens examined in the present series agree well with the holotype presented by Manning (1967a). Some variation in telson carinae form was observed for the present specimens compared to the holotypic illustration. All examined specimens had accessory median carinae that were fused posteriorly with the median carina and flanked by small inner bumps posteriorly (Fig. 7F–G). This variation has yet to be described for the species. *Gonodactylellus choprai* and *Gonodactylellus kandi* Ahyong & Erdmann, 2007 can be distinguished from all other species of *Gonodactylellus* by the absence of the fixed distal spine on the proximal segment of the uropodal exopod. *Gonodactylellus choprai* is readily distinguished from *G. kandi* by the absence of spinules on the primary teeth of the telson and the telson median carina posterior.



**Fig. 7.** *Gonodactylellus choprai* (Manning, 1967), ♂, TL 14 mm (110E2MOZ467). **A.** Right raptorial claw, lateral. **B.** Anterior cephalothorax, dorsal. **C.** AS6–8, left dorsal. **D.** Telson, right lateral. **E.** AS6, telson and right uropod, dorsal. **F.** Right uropod, ventral. Scale bar = 1 mm.



Genus *Gonodactylus* Berthold, 1827

***Gonodactylus botti*** Manning, 1975 new record  
Fig. 8

*Gonodactylus botti* Manning, 1975: 289, fig. 1 [type locality Jakarta, Indonesia].

*Gonodactylus botti* – Manning & Lewinsohn 1986: 5, 15 (list), fig. 3. — Manning 1990: 97, 104 (key).  
— Cappola & Manning 1995: 274–275. — Ahyong 2005: 159.

non *Gonodactylus chiragra* – Holthuis 1967: 26, 41 (list), fig. 7a. — Tirmizi & Manning 1968: 21,  
fig. 7. [not *G. chiragra* (Fabricius, 1781)].

non *Gonodactylellus affinis* – Moosa 1991: 155. [not *Gonodactylellus affinis* (de Man, 1902)].

### Diagnosis

Ocular scales broad, flattened, separate, together slightly broader than 0.50 rostral plate width, anterior margins transverse. Rostral plate basal portion with anterior margins slightly concave; anterolateral angles rounded; lateral margins divergent anteriorly; apical spine just longer than base. Lateral margin of TS6 broader than TS7. Telson with LT tooth indicated by shallow notch in margin of telson between anterolateral angle and apex of IM tooth; mid-dorsal carinae blunt, neither sharp nor crested dorsally and strongly inflated in adults; MD carina unarmed posteriorly; accessory MD carinae forming ‘anchor’; with 8–13 SM denticles. Uropodal exopod distal segment outer margin with 12 movable spines.

### Material examined

MOZAMBIQUE • 1 ♂ (TL 53 mm), 1 ♀ (TL 40 mm); Coconut Bay; 24°00′21.6″ S, 35°30′28.7″ E; depth unknown; 17 May 1973; event no. 19730517; SAMC–A019434.

SOUTH AFRICA • 1 ♂ (TL 63 mm), 8 ♀♀ (TL 10–66 mm); Jesser Point, Sodwana Bay; 27°32′33″ S, 32°40′50.0″ E; rock pool at 13.5 m depth; 2 Aug. 1976; event no. RW 26; R. Winterbottom leg; S. Ahyong det.; SAMC–A015632.

### Colour in alcohol

Faded yellow, but with scattered blue pigment on all limbs and uropods. Dactylus of raptorial claw white. Raptorial claw with ‘meral spot’ also white. Colour in life unknown.

### Measurements

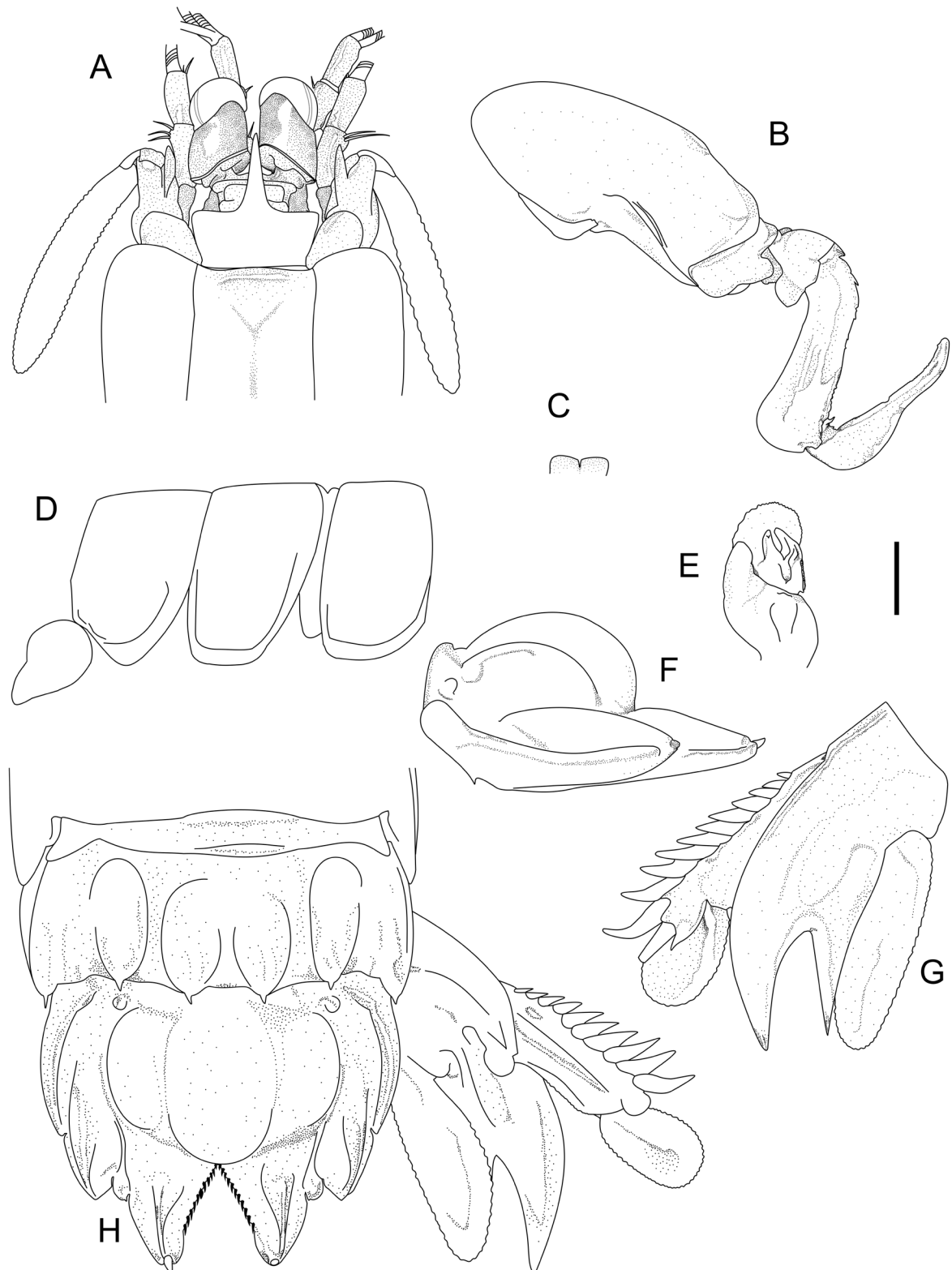
Male (n = 1) TL 53 mm. A1 peduncle 6.0CL. A2 scale 0.58CL. AWCLI 755.

### Distribution and habitat

Indonesia to Western Indian Ocean from Pakistan, Red Sea, Persian Gulf, Somalia, South Africa and now Mozambique [Inhambane]. Found in southern Africa by Ahyong (2005) from the coral reef systems in both sandy and rocky tidal pools at the base of dead coral in shallow water; shore to 13.5 m depth.

### Remarks

As *G. botti* is presently understood, historical species records are restricted to localities west of Pakistan (Ahyong 2005). It was first recorded from southern Africa by Ahyong (2005) in the coral reefs of Sodwana Bay, South Africa. This single male specimen from Coconut Bay is the first account of the species from Mozambique.



**Fig. 8.** *Gonodactylus botti* Manning, 1975, ♂, TL 63 mm (SAMC-A015632). **A.** Anterior cephalothorax, dorsal. **B.** Right raptorial claw, lateral. **C.** Ocular scales, dorsal. **D.** TS6–8, right lateral. **E.** Right pleopod 1 endopod, anterior. **F.** Telson, left lateral. **G.** Right uropod, ventral. **H.** AS6, telson and right uropod, dorsal. Scale bar: A, C–H = 2 mm; B = 4 mm.

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

***Odontodactylus japonicus*** (de Haan, 1844) new record  
Fig. 9

*Gonodactylus japonicus* de Haan, 1844: pl. 51 fig. 7 [type locality Japan].  
*Gonodactylus edwardsii* Berthold, 1845: 48.

*Gonodactylus japonicus* – de Haan 1849: 255 [text]. — Miers 1880: 116.  
*Odontodactylus japonicus* – Alexander 1916: 10. — Holthuis 1941: 276. — Stephenson & McNeill 1955: 248–249. — Stephenson 1960: 61. — Manning 1965: 260; 1967b: 7–10, fig. 2; 1995: 20, 82. — Graham *et al.* 1993: 73. — Yamaguchi & Baba 1993: 176–178, fig. 9. — Ah Yong & Norrington 1997: 103. — Moosa 2000: (list). — Ah Yong 2001: 81–83, fig. 39. — Liu 2008: 1267 (list).

**Diagnosis**

Ocular scales oblique to bodyline, appressed medially. A2 scale with anterior margin smooth, without setae in adults. Rostral plate triangular, but appearing trapezoid dorsally; lateral margins sinuous; apex deflexed. Raptorial claw dactylus with 5–8 teeth on inner margin; proximal margin strongly inflated; without basal notch. AS1–5 posterolateral angles rounded, unarmed in adults. Telson mid-dorsal surface with distinct MD carina and 4 longitudinal carinae either side of midline (double accessory MD; anterior SM; carina of inner IM denticle) in addition to carinae of primary teeth. Uropodal exopod proximal distinctly longer than distal segment; outer margin with 10–12 movable spines, distalmost evenly tapering (juveniles) to spatulate with blunt or minute spinular apex (adults).

**Material examined**

MOZAMBIQUE • 1 ♀ (TL 110 mm); north of Beira; 19°49'00.0" S, 36°05'00.0" E; 54 m depth; 14 Jun. 1994; RV *Algoa* Mozambique Scad Survey; bottom trawl; SFI; SAMC–A041710.

**Colour in alcohol**

Faded to creamy yellow with telson still retaining salmon colour of live specimen. Eyes green. Uropod exopod distal segment dark and proximal segment with distal third dark. Uropodal protopod, exopod proximal segment and endopod covered in dark speckles.

**Colour in life**

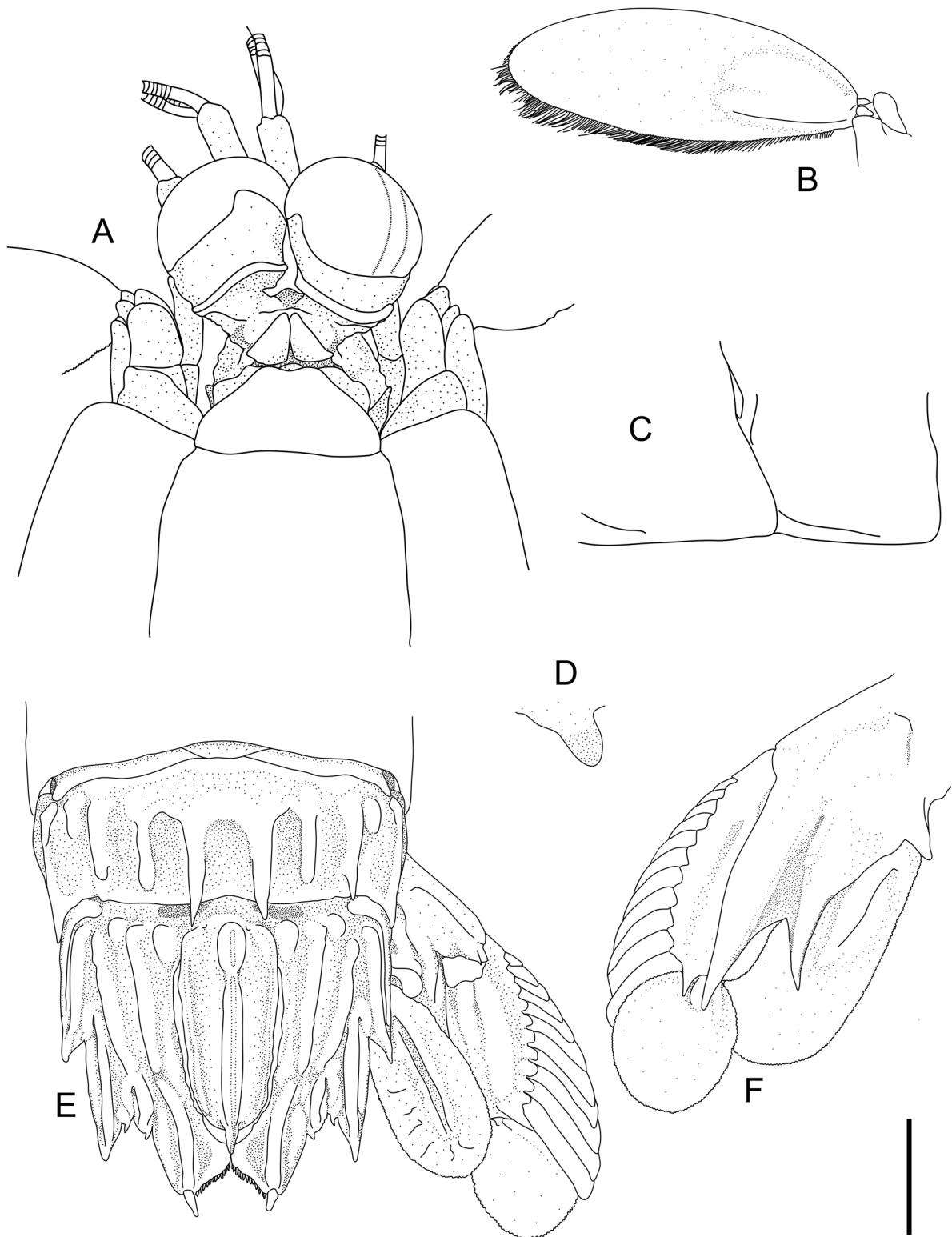
Overall colour salmon (Ah Yong 2001) or males' bright salmon red; females' salmon red anteriorly and blue, green posteriorly (Manning 1967b). A2 scale salmon proximally, pink distally. Uropods yellow; exopod with outer movable spines yellow orange with blue posterior margin; endopod and distal segment of exopod with red setae.

**Measurements**

Female (n = 1) TL 110 mm. CI 404. A1 peduncle 0.60CL. A2 scale 0.98CL. Uropod exopod distal segment length 1.69 times proximal segment length. The largest specimen is reported from Australia at TL 175 mm (Ah Yong 2001).

**Distribution and habitat**

Indo-West Pacific; Australia and Japan to Western Indian Ocean from Seychelles, Madagascar, and now southern Mozambique [Sofala]. Associated with flat sandy or shelly substrata; 30–100 m depth.



**Fig. 9.** *Odontodactylus japonicus* (de Haan, 1844), ♀, TL 110 mm (SAMC-A041710). **A.** Anterior cephalothorax, dorsal. **B.** Right antennal scale, dorsal. **C.** AS4-5, left lateral. **D.** TS8 sternal keel, left lateral. **E.** AS6, telson and right uropod, dorsal. **F.** Right uropod, ventral. Scale bar: A, C, E-F = 5 mm; B = 10 mm; D = 2.5 mm.

### Remarks

Although this is a new record for the Mozambique Channel, *O. japonicus* has been reported from Madagascar, not far from the locality recorded herein. The Madagascan specimen described by Manning (1967b) was collected from Ambovombe's southern coast in shallow water at around 60 m, a similar depth to the female specimen collected from the Mozambique Channel at 54 m. The present specimen agrees in all aspects with Manning's (1967b) diagnosis, as well as the most recent report by Ahyong (2001) of *O. japonicus* from Australia.

Only *O. scyllarus* (Linnaeus, 1758) and *O. hawaiiensis* Manning, 1967 share the appressed ocular scales and the double accessory MD carinae either side of MD carina of telson with *O. japonicus*. *Odontodactylus japonicus* is distinguished from these similar species in having the longitudinal carina extending anteriorly from the inner IM denticle of the telson (Fig. 9E), as well as the absence of a posterolateral spine on AS5 in adults (Fig. 9C). In addition, the number of teeth on the dactylus of the raptorial claw differs between the species; while *O. scyllarus* has two or three teeth, *O. hawaiiensis* and *O. japonicus* have more than five teeth. *Odontodactylus hawaiiensis* has not yet been recorded off the mainland of southern Africa.

Postlarvae settle at sizes of 19–20 mm. Along with the juveniles of *O. japonicus*, the postlarvae differ from adult specimens in the following characteristics diagnostic for the species: the antennal scale bears setae on its anterior margin and a posterolateral spine on AS(3)4–5, the distal movable spines on the proximal segment of the uropodal exopod are spiniform instead of spatulate and the second accessory MD carina of the telson is underdeveloped (Manning 1967b; Ahyong 2001). Specimens above TL 60 mm are considered adult and exhibit 'adult' diagnostic features (Fig. 9A–F). No juvenile specimens were available to the present study.

### *Odontodactylus latirostris* Borradaile, 1907 new record

Fig. 10

*Odontodactylus latirostris* Borradaile, 1907: 212, pl. 22 figs 3, 3a [type locality Amirante Islands, Seychelles].

*Odontodactylus southwelli* Kemp, 1911: 94 [type locality Andaman Island].

*Odontodactylus southwelli* Kemp 1913: 142, pl. 9 figs 103–106.

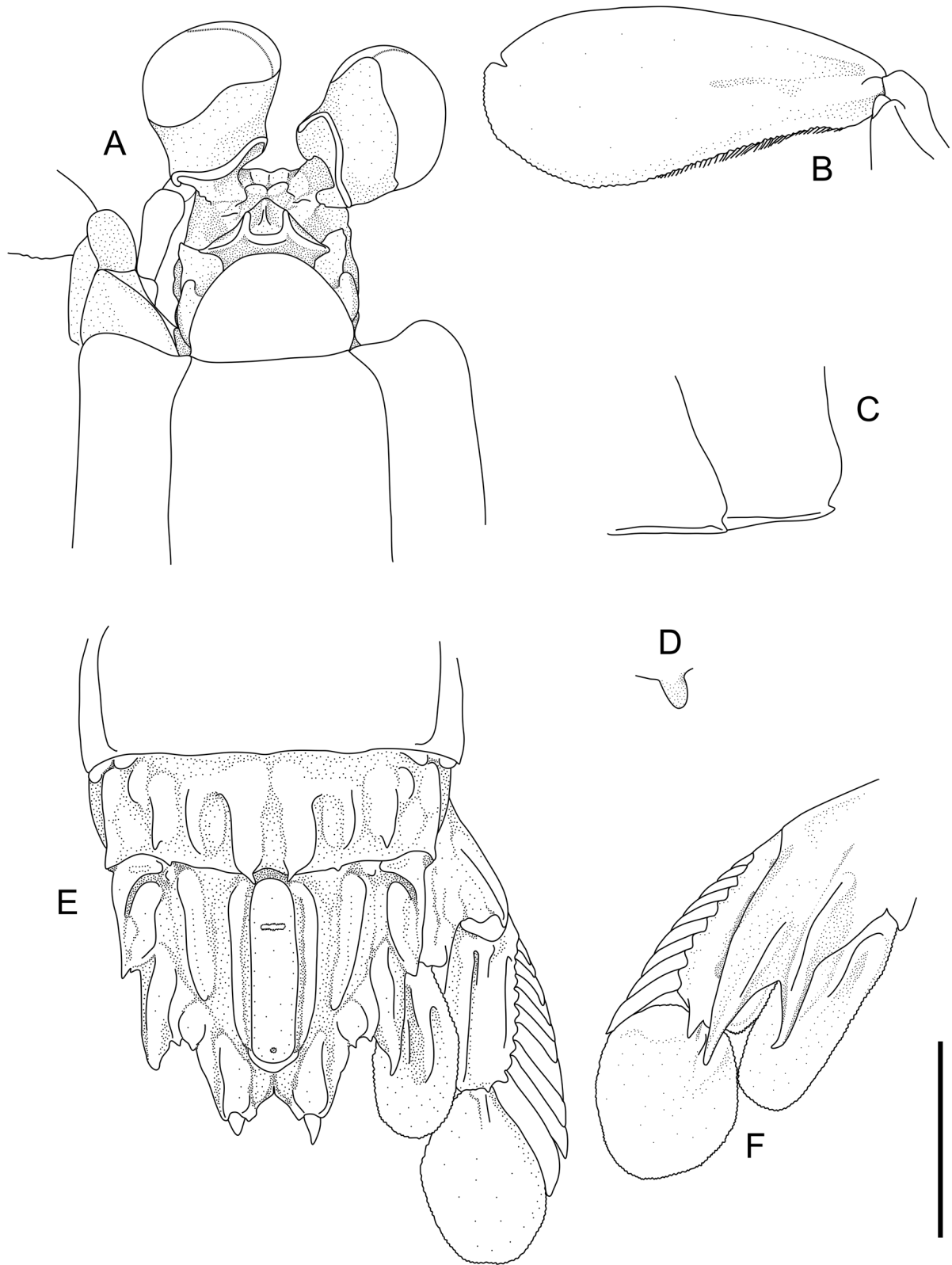
*Odontodactylus latirostris* – Debelius 1999: 280–281. — Ahyong 2001: 83–85, fig. 40. — Ahyong *et al.* 2020: 6 [chart].

non *Odontodactylus japonicus* – Stephenson 1962: 35 [not *Odontodactylus japonicus* (de Haan, 1844)].

non *Odontodactylus brevirostris* – Manning 1967b: 23. — Moosa 1991: 161–162 [not *O. brevirostris* (Miers, 1884)].

### Diagnosis

Ocular scales separated by deep concavity, margins truncate. A2 scale posterior and at most anterior distal 0.33 setose in smallest specimens; anterior setae becoming reduced with size, absent in adults. Rostral plate ovoid, apex rounded. Raptorial claw dactylus with 7 or 8 teeth on inner margin. TS6–7 lateral margins rounded, that of TS6 slightly broader and flatter than that of TS7. AS(4)5 with posterolateral spine. Telson mid-dorsal surface with distinct MD carina and 2 longitudinal carinae either side of midline (accessory MD; anterior SM) in addition to carinae of primary teeth. Uropodal exopod proximal segment entirely, or almost entirely, black, outer margin with 9 or 10 movable spines; exopod distal segment subequal to or longer than proximal segment; endopod with 2 subequal dorsal carinae and 1 ventral carina.



**Fig. 10.** *Odontodactylus latirostris* Borradaile, 1907, ♂, TL 52 mm (SAMC-A079415). **A.** Anterior cephalothorax, dorsal. **B.** Right antennal scale, dorsal. **C.** AS4-5, left lateral. **D.** TS8 sternal keel, left lateral. **E.** AS5-6, telson and right uropod, dorsal. **F.** Right uropod, ventral. Scale bar = 5 mm.

### Material examined

MOZAMBIQUE • 1 ♂ (TL 52 mm); Maputo Bay; 26°04'58.1" S, 32°45'47.9" E; depth unknown; 1–7 Nov. 1900; R. Trott leg; SAMC–A079415.

### Colour in alcohol

Base dorsal colour dark brown, but with faint blue colouration laterally on carapace and posterior margin of abdominal somites. Definite suggestions of blue distal colouration on all primary teeth of telson and on movable spines of exopod proximal segment. Uropod with black band across proximal segment of exopod, adjacent to protopod and endopod.

### Colour in life

Overall colour is a mottled light brown on white-cream, with darker brown mid-dorsal surface of TS6–7 white with tan-brown mottling dorsally. Uropod with black band across proximal segment of exopod, adjacent protopod and endopod; exopod distal segment and A2 scale pink (Ahyong 2001).

### Measurements

Male (n = 1) TL 52 mm. Uropodal exopod distal segment length 1.05 times proximal segment length. The largest known specimen at TL 77 mm reported from Western Australia (Ahyong 2001).

### Distribution

Amirante Islands to Andaman Sea, Indonesia, New Caledonia, Australia, and now southern Mozambique [Maputo]; depths previously recorded between 20 and 147 m.

### Remarks

Morphologically the Mozambican specimen agrees well with Ahyong's (2001) account, as well as his designated lectotype [locality Amirante Islands, Seychelles; TL 53 mm]. *Odontodactylus latirostris* is one of three species, together with *O. hawaiiensis* and *O. hansenii* (Pocock, 1893), that were removed from synonymy with *O. brevirostris* (Miers, 1884) by Ahyong (2001). *Odontodactylus latirostris* is distinguished from these other similar species in the 'brevirostris complex' in having reduced setation of the anterior margin of the antennal scale, by the absence of a posterolateral spine on AS3, as well as an almost entirely, or entirely, black proximal segment of the uropodal exopod and in having the distal segment exceed in length the proximal segment of the uropodal exopod.

Some allometric variation has been recorded in the degree of antennal scale setation, the presence of a posterolateral spine on AS4 (missing in large specimens) and the relative lengths of the uropodal exopod segments. In juvenile specimens (TL 17 mm) the antennal scale was fully setose, while in larger specimens only posteriorly setose (Ahyong 2001). As specimens grow larger, the uropodal exopod distal segment increases in relative size and can be shorter than the proximal segment in juveniles and only subequal in length in midrange specimens (TL 45 mm) to distinctly longer in large specimens (Ahyong 2001). The present specimen (TL 52 mm) from Maputo Bay, Mozambique, exhibited the typical *O. latirostris* antennal setation; only posterior setose present with anterior setae absent (Fig. 10B). Furthermore, the posterolateral spine was present on AS3 and the relative lengths of the proximal and distal segments of the uropodal exopod were subequal with the distal segment only slightly longer than the proximal (Fig. 10E–F). The dactylus of the raptorial claw has eight teeth and the outer margin of the uropodal exopod proximal segment shows ten movable spines (Fig. 10F).

However, live colour according to Ahyong (2001) only partly agrees with the observations of the Mozambican specimen presented herein and no other documentation of live colouration is available. According to the lectotype designated by Ahyong (2001), no blue colouration is recorded for the species.

As the present study only examined preserved material it is possible that the blue tint is due to some unknown discolouration since its collection in 1900.

## Discussion

Eight species of mantis shrimp are reported on here, representing seven new species records including an undescribed species, and one notable record from within the Mozambican Exclusive Economic Zone (EEZ). These records represent seven genera and four families (Table 1). *Manningia australiensis*, reported here from the Mozambique Channel, is also the first record of the family Eurysquillidae for southern Africa. Three of the seven new species additions are from the family Squillidae. Of these, an undescribed species in genus *Clorida* is presented from Mozambique with the addition of material from South Africa. Two new species records of Gonodactylidae are reported on, now bringing the total members of this family known to five species occurring in Mozambican waters. Two new records were added for the family Odontodactylidae, which now includes three known regional species. With the addition of these seven new species records, a total of 22 species in 17 genera and eight families are now known from Mozambique. These are listed in Table 1.

While global taxonomic knowledge of stomatopods has dramatically improved over the course of the last century, the continued accumulation of unidentified or misidentified stomatopod material in the Iziko South African Museum revealed several interesting discoveries. For example, the specimen of *O. latirostris* examined herein was collected in 1900 and had been stored in the Iziko South African Museum for over a century before being identified. This specimen was collected by R. Trott from Maputo Bay in 1900, before the species was even described by Borradaile in 1907.

Examination of the present study material found new species records to be predominantly gonodactyloids (*Gonodactylellus choprai*, *Gonodactylus botti*, *Odontodactylus japonicus* and *O. latirostris*). In general, species of *Odontodactylus* are widely distributed in the Indo-West Pacific and are associated with rocky or coral reef habitats in tropical waters. Difficult to differentiate, recent work by Ahyong (2001) on the so called 'brevirostris complex' has elevated six more mantis shrimps to species rank. One of these newly distinguished species, *O. latirostris*, is now recognised from Maputo Bay, Mozambique. Globally *Odontodactylus* is well-studied (Manning 1967b, 1995; Ahyong 2001, 2002a, 2002b, 2012) and the species reported herein are comparatively well-known in the Indo-West Pacific. *Gonodactylellus* is much less well-documented, probably due to the small size (<25 mm) and inconspicuous nature of component species. The examined species *G. choprai* was previously only recorded from the Northern Indian Ocean (Manning 1967a) and this study extends its range into the Western Indian Ocean. Another noteworthy range extension is that of *Manningia australiensis*, which had previously never been documented from waters around the African continent. This species appears to be widespread, with a distribution now extending from Mozambique through the north and east Indian Ocean to the Western Pacific.

*Leptosquilla schmeltzii* from family Squillidae is also widespread in the Indo-West Pacific and has been previously recorded from the Western Indian Ocean, as well as from Madagascar. Therefore, it is not surprising that this study reported the species off Mozambique. Similarly, the undescribed *Clorida* sp. is present in both South African and Mozambican waters. Both species have similar burrowing lifestyles and are found on soft bottoms of muddy sand. Although *L. schmeltzii* has yet to be found in South Africa, the proximity of the present records to the South African border suggests the species probably also extends into South African waters.

It is apparent that some species and genera represented in the present series have needed revision and illustration for some time. Stylised drawings from historical publications have caused some confusion of diagnostic features, for example for *L. schmeltzii* from the monotypic genus *Leptosquilla*. An error in epipod count of four epipods instead of two by Manning (1968) was reiterated for *Leptosquilla* in



**Table 1** (continued on next page). Summary of Mozambican stomatopod fauna giving previous and present species records. Species treated in the present study given in bold and new species records represented by \*. Provinces given [] for localities in the Mozambique Channel. In total, seven new species records are added to the stomatopod fauna of Mozambique, accounting for 30% of all known national species.

Updated family and species	Location	Reference	Recorded as
EURYSQUILLIDAE			
<b><i>Manningia australiensis</i></b> Manning, 1970*	Mozambique Channel [Sofala]	<b>Present study</b>	
GONODACTYLIDAE			
<i>Gonodactylaceus falcatus</i> (Forskål, 1775)	Maputo Bay	Barnard (1950)	<i>Gonodactylus glabrous</i> Brooks, 1886
<b><i>Gonodactylellus choprai</i></b> (Manning, 1967)*	Mozambique Channel [Inhambane; Sofala]	<b>Present study</b>	
<i>Gonodactylellus lanchesteri</i> (Manning, 1967)	Maputo Bay Vilankulos Mozambican islands Magaruque Island	Barnard (1950) <b>Present study</b>	<i>Gonodactylus demanii</i> Henderson, 1893
<b><i>Gonodactylus botti</i></b> Manning, 1975*	Coconut Bay	<b>Present study</b>	
<i>Gonodactylus chiragra</i> (Fabricius, 1781)	Unknown	Hilgendorf (1879)	
ODONTODACTYLIDAE			
<i>Odontodactylus scyllarus</i> (Linnaeus, 1758)	Inhaca Island	Barnard (1958)	
<b><i>Odontodactylus japonicus</i></b> (de Haan, 1844)*	Mozambique Channel [Sofala]	<b>Present study</b>	
<b><i>Odontodactylus latirostris</i></b> Borradaile, 1907*	Maputo Bay	<b>Present study</b>	
PSEUDOSQUILLIDAE			
<i>Pseudosquilla ciliata</i> (Fabricius, 1787)	Maputo Bay	Barnard (1950)	
	Inhaca Island	<b>Present study</b>	
LYSIOSQUILLIDEA			
<i>Lysiosquilla maculata</i> (Fabricius, 1793)	Maputo Bay	Barnard (1950)	
	Inhaca Island	Kalk (1958)	
PARASQUILLIDEA			
<i>Faughnia profunda</i> Manning & Makarov, 1978	Maputo Bay	Manning & Makarov (1978)	
NANNOSQUILLIDAE			
<i>Bigelowina phalangium</i> (Fabricius, 1798)	Inhaca Island	Barnard (1962)	<i>Lysiosquilla acanthocarpus</i> (Claus, 1871)
<i>Keppelius hystricotelson</i> (Barnard, 1958)	Maputo Bay	Barnard (1958)	
SQUILLOIDEA			
<i>Alima neptuni</i> (Linnaeus, 1768)	Maputo Bay	Barnard (1950)	<i>Squilla hieroglyphica</i> Kemp, 1911

**Table 1** (continued). Summary of Mozambican stomatopod fauna giving previous and present species records.

Updated family and species	Location	Reference	Recorded as
<i>Clorida</i> sp. undescribed species*	Unknown	<b>Present study</b>	
<i>Clorida latreillei</i> Eydoux & Souleyet, 1842	Maputo Bay	Barnard (1950)	<i>Squilla latreillei</i> (Eydoux & Souleyet, 1842)
<i>Erugosquilla woodmasoni</i> (Kemp, 1911)	Inhaca Island, Mozambique Channel [Sofala; Zambezia]	Barnard (1962) <b>Present study</b>	<i>Squilla woodmasoni</i> Kemp, 1911
<i>Kempella mikado</i> (Kemp & Chopra, 1921)	Mozambique Channel [unknown]	Barnard (1950) <b>Present study</b>	<i>Squilla mikado</i> Kemp & Chopra, 1921
<i>Leptosquilla schmeltzii</i> (A. Milne-Edwards, 1873)*	Morrumbene Estuary	<b>Present study</b>	
<i>Lenisquilla lata</i> (Brooks, 1886)	Mozambique Channel [Gaza]	Manning (1969)	<i>Squilla lata</i> Brooks, 1886
<i>Miyakella nepa</i> (Latreille in Latreille, Le Peletier, Serville & Guérin, 1828)	Maputo Bay	Barnard (1950)	<i>Squilla nepa</i> Latreille, 1828

the latest key of family Squillidae (Ahyong 2001). Although previously corrected by Manning (1970b), this error is again rectified here and the correct number of two epipods present for the maxillipeds of *L. schmeltzii* confirmed. Moreover, in a single and short entry, Barnard (1962) recorded *Erugosquilla woodmasoni* (as *Squilla woodmasoni*) from off Inhaca Island, Maputo Bay, Mozambique. However, the record consisted of only the species name and location and thus the species account could not be verified. Barnard provided no collection data, and it is unclear where his specimen was deposited as no material corresponding to Barnard's account was found in the Iziko South African Museum collection. The two specimens illustrated herein represent new records and confirm the species occurrence from the Western Indian Ocean and the Mozambique Channel.

Overall, the additions of the stomatopod fauna detailed in this study are mostly of recognisable and well-documented species and the Mozambican mantis shrimp fauna remains particularly under-sampled and underrepresented in scientific literature. The lack of biodiversity knowledge for Mozambique is evident in the limited sampling effort and the comparatively low species number of only 22 reported species from this highly biodiverse country. This compares to 72 species for India (Trivedi *et al.* 2020) and 72 species for Vietnam (Manning 1995) as well as the highest species richness of 152 species recognised for Australia which is the result of major contributions by Shane Ahyong (2001, 2008; Ahyong & Wassenberg 2015). A more targeted and extensive sampling effort has the potential to greatly increase the diversity knowledge of the local fauna of Mozambique.

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## References

- Ahyong S.T. 1997. A new species of *Manningia* (Crustacea: Stomatopoda) from Irian Jaya, Indonesia, with remarks on the genus. *Raffles Bulletin of Zoology* 45 (2): 327–333.
- Ahyong S.T. 2001. Revision of the Australian stomatopod Crustacea. *Records of the Australian Museum* supplement 26: 1–326. <https://doi.org/10.3853/j.0812-7387.26.2001.1333>
- Ahyong S.T. 2002a. A new species and new records of Stomatopoda from Hawaii. *Crustaceana* 75 (6): 827–840. <https://doi.org/10.1163/156854002760289791>
- Ahyong S.T. 2002b. Stomatopoda (Crustacea) from the Marquesas Islands: results of the MUSORSTOM9. *Zoosystema* 24 (2): 347–372.
- Ahyong S.T. 2005. Coral reef mantis shrimps from the vicinity of Sodwana Bay, South Africa (Crustacea: Stomatopoda). *Proceedings of the Biological Society of Washington* 118 (1): 158–164. [https://doi.org/10.2988/0006-324X\(2005\)118\[158:CRMSFT\]2.0.CO;2](https://doi.org/10.2988/0006-324X(2005)118[158:CRMSFT]2.0.CO;2)
- Ahyong S.T. 2008. Stomatopod Crustacea from the Dampier Archipelago, Western Australia. *Records of the Western Australian Museum* 73: 41–55. <https://doi.org/10.18195/issn.0313-122x.73.2007.041-055>
- Ahyong S.T. 2012. The marine fauna of New Zealand: mantis shrimps (Crustacea: Stomatopoda). *NIWA Biodiversity Memoir* 125: 1–111.
- Ahyong S.T. & Erdmann M.V. 2007. Two new species of *Gonodactylellus* from Indonesia. *Raffles Bulletin of Zoology* 55: 89–95.
- Ahyong S.T. & Galil B.S. 2006. First Mediterranean record of the Indo-West Pacific mantis shrimp, *Clorida albolitura* Ahyong & Naiyanetr, 2000 (Stomatopoda, Squillidae). *Aquatic Invasions* 1 (3): 191–193. <https://doi.org/10.3391/ai.2006.1.3.16>
- Ahyong S.T. & Manning R.B. 1998. Two new species of *Erugosquilla* from the Indo-West Pacific (Crustacea: Stomatopoda: Squillidae). *Proceedings of the Biological Society of Washington* 111 (3): 653–662. Available from <https://www.biodiversitylibrary.org/page/34597828> [accessed 22 Sep. 2023].
- Ahyong S.T. & Naiyanetr P. 2000. Revision of the *Clorida latreillei* species complex with description of a new species (Squillidae: Stomatopoda). *Raffles Bulletin of Zoology* 48 (2): 313–325.
- Ahyong S.T. & Norrington S.F. 1997. Stomatopod Crustacea in the Macleay Museum, University of Sydney. *Proceedings of the Linnean Society of New South Wales* 118: 97–110. Available from <https://www.biodiversitylibrary.org/page/34937183> [accessed 22 Sep. 2023].
- Ahyong S.T. & Wassenberg T.J. 2015. The rare mantis shrimp *Areosquilla indica* (Hansen, 1976) (Crustacea, Stomatopoda) from the Great Barrier Reef: first Australian records of the genus and species. *Zootaxa* 4000 (4): 492–496. <https://doi.org/10.11646/zootaxa.4000.4.8>
- Ahyong S.T., Porter M.L. & Caldwell R.L. 2020. The leopard mantis shrimp, *Ankersquilla pardus*, a new genus and species of euryaquillid from Indo-West Pacific coral reefs. *Records of the Australian Museum* 72 (1): 1–8. <https://doi.org/10.3853/j.2201-4349.72.2020.1758>
- Alexander W.B. 1916. Further notes on W.A. stomatopods. *Journal and Proceedings of the Royal Society of Western Australia* 1: 9–10. Available from <https://www.biodiversitylibrary.org/page/50299841> [accessed 22 Sep. 2023].

- Barnard K.H. 1950. Descriptive list of South African stomatopod Crustacea (Mantis Shrimps). *Annals of the South African Museum* 38: 838–864.
- Barnard K.H. 1955. Additions to the fauna-list of South African Crustacea and Pycnogonida. *Annals of the South African Museum* 43 (1): 1–107.
- Barnard K.H. 1958. Further additions to the crustacean fauna-list of Portuguese East Africa. *Memórias do Museu Dr. Álvaro de Castro* 4: 3–23.
- Barnard K.H. 1962. New records of marine Crustacea from the East Africa region. *Crustaceana* 3 (3): 239–245. <https://doi.org/10.1163/156854062X00463>
- Berthold A.A. 1827. *Latreille's natürliche Familien des Thierreichs, aus dem Französischen mit Anmerkungen und Zusätzen*. Herzoglich-Sächsisch Privilegiertes Landes-Industrie-Comptoir, Weimar. <https://doi.org/10.5962/bhl.title.11652>
- Berthold A.A. 1845. *Über verschiedene neue oder seltene Reptilien aus Neu-Granada und Crustaceen aus China*. Königliche Gesellschaft der Wissenschaften, Dieterische Buchhandlung, Göttingen. (dated 1845, published 1846). <https://doi.org/10.5962/bhl.title.5485>
- Bigelow R.P. 1893. Preliminary notes on the Stomatopoda of the Albatross collections and on other specimens in the National Museum. *Johns Hopkins University Circulars* 12 (106): 100–102.
- 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. <https://doi.org/10.1111/j.1096-3642.1907.tb00078.x>
- Brooks W.K. 1886. Report on the Stomatopoda collected by H.M.S. *Challenger* during the years 1873–76. *The Voyage of the H.M.S. Challenger, Zoology* 16: 1–116. <https://doi.org/10.5962/bhl.title.9891>
- Cappola V. & Manning R.B. 1995. Research on the coast of Somalia. Crustacea Stomatopoda. *Tropical Zoology* 7 (2): 271–291 (dated 1994, published 1995). <https://doi.org/10.1080/03946975.1994.10539258>
- Cannon L.R.G., Gordon G.B. & Campbell P. 1987. Community patterns revealed by trawling in the inter-reef regions of the Great Barrier Reef. *Memoirs of the Queensland Museum* 25 (1): 45–70.
- Chopra B. 1939. Stomatopoda. *John Murray Expedition 1933–34, Scientific Reports* 6 (3): 137–181. Available from <https://www.biodiversitylibrary.org/page/61399071> [accessed 22 Sep. 1923].
- Debelius H. 1999. *Crustacea Guide of the World*. Hollywood Import and Export Inc., Gainesville.
- De Haan W. 1833–1850. Crustacea. In: von Siebold P.F. (ed.) *Fauna Japonica sive descriptio animalium, quae in itinere per Japoniam, Jussu et Auspiciis superiorum, qui summum in India Batava Imperium tenent, suscepto, Annis 1823–1830 collegit, notis, observationibus et adumbrationibus illustravit, 1833–1850*. 243. Apud Auctorem, Leiden [Lugduni-Batavorum]. <https://doi.org/10.5962/bhl.title.124951>
- de Man J.G. 1902. Die von Herrn Professor Kükenthal im Indischen Archipel gesammelten Dekapoden und Stomatopoden. In: *W. Kükenthal Ergebnisse einer zoologischen Forschungsreise in den Molukken und Borneo, im Auftrage der senckenbergischen naturforschenden Gesellschaft* 25: 465–929. <https://doi.org/10.5962/bhl.title.10409>
- Eydoux F. & Souleyet L.F.A. 1842. Crustacés. In: *Voyage autour du Monde exécuté pendant les Années 1836 et 1837 sur la Corvette La Bonite commandée par M. Vaillant, Capitaine de Vaisseau, Zoologie* Vol. 1: 219–272. Arthus Bertrand, Paris.
- Fabricius J.C. 1781. *Species insectorum exhibentes eorum differentias specificas, synonyma auctorum, loca Natalia, metamorphosin adiectis, observationibus, descriptionibus* Vol. 1. Impensis C.E. Bohnii, Hamburg and Kiel [Hamburgi et Kilonii]. <https://doi.org/10.5962/bhl.title.36509>

- Fabricius J.C. 1787. *Mantissa insectorum sistens eorum species nuper detectas: adjectis characteribus genericis, differentiis specificis, emendationibus, observationibus* Vol. 1. Impensis C.G. Proft, Copenhagen [Hafniae]. <https://doi.org/10.5962/bhl.title.11657>
- Fabricius J.C. 1793. *Entomologia systematica emendata et aucta. Secundum classes, ordines, genera, species. Adjectis synonymis, locis, observationibus, descriptionibus* Vol. 2. Proft et Storch, Copenhagen [Hafniae]. <https://doi.org/10.5962/bhl.title.125869>
- Fabricius J.C. 1798. *Supplementum Entomologiae Systematicae*. Proft et Storch, Copenhagen [Hafniae]. <https://doi.org/10.5962/bhl.title.122153>
- Forskål P. 1775. *Descriptiones animalium, avium, amphibiorum, piscium, insectorum, vermium*. Ex officina Mölleri, Copenhagen [Haunia]. <https://doi.org/10.5962/bhl.title.2154>
- Giesbrecht W. 1910. Monographie: Stomatopoden. Erster Theil. *Fauna und Flora des Golfes von Neapel und der angrenzenden Meeres-Abschnitte* 33: 1–239. Zoologische Station zu Neapel, Berlin. Available from <https://www.biodiversitylibrary.org/page/7196127> [accessed 22 Sep. 2023].
- Graham K.J., Liggins G.W., Wildfoster J. & Kennelly S.J. 1993. Kapala Cruise Report. *NSW Fisheries Research Institute* 12: 1–74.
- Hansen H.J. 1926. The Stomatopoda of the Siboga Expedition. *Siboga-Expeditie* 35: 1–48. Brill, Leiden.
- Henderson J.R. 1893. A contribution to Indian carcinology. *Transactions of the Linnean Society of London, Series 2 (Zoology)* 5 (10): 325–458. <https://doi.org/10.1111/j.1096-3642.1893.tb00653.x>
- Hilgendorf F. 1879. Die von Herrn Peters in Moçambique gesammelten Crustaceen. *Monatsberichte der Königlich Preussische Akademie des Wissenschaften zu Berlin* 1878: 782–851. Available from <https://www.biodiversitylibrary.org/page/36097499> [accessed 22 Sep. 2023].
- Holthuis L.B. 1941. The Stomatopoda of the *Snellius* Expedition. Biological Results of the *Snellius* Expedition XII. *Temminckia* 6: 241–294.
- Holthuis L.B. 1967. The stomatopod Crustacea collected by the 1962 and 1965 Israel South Sea Expeditions. The second Israel South Red Sea Expedition, 1965, report no. 1. *Israel Journal of Zoology* 16: 1–45.
- Ingle R. W. 1963. Crustacea Stomatopoda from the Red Sea and Gulf of Aden. Contributions to knowledge of the Red Sea, Number 26. *Bulletin, Sea Fisheries Research Station (Haifa)* 33: 1–69.
- Inkscape Project. 2020. *Inkscape*. Available from <https://inkscape.org> [accessed Feb 2021].
- Kalk M. 1958. The Crustacea of Inhaca shores. In: Macnae W. & Kalk M. (eds) *A Natural History of Inhaca Island, Mocambique* 163. Witwatersrand University Press, Johannesburg.
- Kemp S. 1911. Preliminary descriptions of new species and varieties of Crustacea Stomatopoda in the Indian Museum. *Records of the Indian Museum* 6: 93–100. <https://doi.org/10.5962/bhl.part.21329>
- 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. <https://doi.org/10.5962/bhl.title.12631>
- Kemp S. & Chopra B. 1921. Notes on Stomatopoda. *Records of the Indian Museum* 22: 297–311. <https://doi.org/10.5962/bhl.part.1475>
- Latreille P.A. 1802. *Histoire naturelle, générale et particulière, des Crustacés et des Insectes* Vol 3. F. Dufart, Paris. <https://doi.org/10.5962/bhl.title.15764>

- Linnaeus C. 1758. *Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis*, 10<sup>th</sup> Ed., Vol. 1. Laurentii Salvii, Stockholm [Holmiae]. <https://doi.org/10.5962/bhl.title.542>
- Linnaeus C. 1768. *Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis locis*, 12<sup>th</sup> Ed., Vol. 3. Laurentii Salvii, Stockholm [Holmiae]. <https://doi.org/10.5962/bhl.title.157601>
- Liu R. 2008. *Checklist of Marine Biota of China Seas*. China Science Press, Beijing.
- Makarov R.R. 1978. New data on crustaceans of the families Lysiosquillidae and Gonodactylidae (Crustacea, Stomatopoda) from Tonkin Bay (Vietnam). *Zoologicheskii Zhurnal* 57: 176–189. [in Russian.]
- Manning R.B. 1965. Stomatopoda from the collection of his majesty the emperor of Japan. *Crustaceana* 9 (3): 249–262. <https://doi.org/10.1163/156854065X00037>
- Manning R.B. 1966. Notes on some Australian and New Zealand stomatopod Crustacea, with an account of the species collected by the Fisheries Investigation Ship *Endeavour*. *Records of the Australian Museum* 27 (4): 79–137. <https://doi.org/10.3853/j.0067-1975.27.1966.439>
- Manning R.B. 1967a. Notes on the *demanii* section of the genus *Gonodactylus* Berthold with descriptions of three new species. *Proceedings of the United States National Museum* 123: 1–27. <https://doi.org/10.5479/si.00963801.123-3618.1>
- Manning R.B. 1967b. Review of the genus *Odontodactylus* (Crustacea: Stomatopoda). *Proceedings of the United States National Museum* 123: 1–35. <https://doi.org/10.5479/si.00963801.123-3606.1>
- Manning R.B. 1968. A revision of the family Squillidae (Crustacea, Stomatopoda), with the description of eight new genera. *Bulletin of Marine Science* 18: 105–142.
- Manning R.B. 1969. Notes on some stomatopod Crustacea from southern Africa. *Smithsonian Contributions to Zoology* 1: 1–17. <https://doi.org/10.5479/si.00810282.1>
- Manning R.B. 1970a. Two new stomatopod crustaceans from Australia. *Records of the Australian Museum* 28 (4): 77–85. <https://doi.org/10.3853/j.0067-1975.28.1970.419>
- Manning R.B. 1970b. Some stomatopod crustaceans from Tuléar, Madagascar. *Bulletin du Muséum national d'Histoire naturelle, Paris, Série 2* 41 (6): 1429–1441 (dated 1969, published 1970). Available from <https://www.biodiversitylibrary.org/page/55600429> [accessed 22 Sep. 2023].
- 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. <https://doi.org/10.5479/si.00810282.71>
- Manning R.B. 1975. *Gonodactylus botti*, a new stomatopod crustacean from Indonesia. *Senckenbergiana Biologica* 56 (4/6): 289–291.
- Manning R.B. 1977. A monograph of the West African stomatopod Crustacea. *Atlantide Report* 12: 25–181.
- 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. <https://doi.org/10.5479/si.00810282.272>
- Manning R.B. 1980. The superfamilies, families, and genera of recent stomatopod Crustacea, with diagnoses of six new families. *Proceedings of the Biological Society of Washington* 93 (2): 362–372. Available from <https://www.biodiversitylibrary.org/page/34558136> [accessed 22 Sep. 2023].
- Manning R.B. 1990. Stomatopod Crustacea from the Persian Gulf, with the description of a new *Manningia*. *Steenstrupia* 16 (6): 93–108.

- Manning R.B. 1991. Stomatopod Crustacea collected by the *Galathea* Expedition, 1950–1952, with a list of Stomatopoda known from depths below 400 meters. *Smithsonian Contributions to Zoology* 521: 1–18. <https://doi.org/10.5479/si.00810282.521>
- Manning R.B. 1995. Stomatopod Crustacea of Vietnam: the legacy of Raoul Serène. *Crustacean Research* 4: 1–339. [https://doi.org/10.18353/crustacea.Special1995.4\\_1](https://doi.org/10.18353/crustacea.Special1995.4_1)
- Manning R.B. & Lewinsohn C. 1986. Notes on some stomatopod Crustacea from the Sinai Peninsula, Red Sea. *Smithsonian Contributions to Zoology* 433: 1–19. <https://doi.org/10.5479/si.00810282.433>
- Manning R.B. & Makarov R.R. 1978. A new species of *Faughnia* from the western Indian Ocean (Crustacea, Stomatopoda). *Bulletin du Muséum national d'Histoire naturelle, Série 3 Zoologie* 356: 517–523. Available from <https://www.biodiversitylibrary.org/page/58004171> [accessed 22 Sep. 2023].
- Miers E.J. 1880. On the Squillidae. *Annals and Magazine of Natural History, Series 5* 5: 1–30, 108–127. <https://doi.org/10.1080/00222938009459392>
- Miers E.J. 1884. Crustacea. In: *Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. "Alert" 1881–2*: 178–322, 513–575. British Museum, London. <https://doi.org/10.5962/bhl.title.11669>
- Milne-Edwards A. 1873. Description de quelques Crustacés nouveaux ou peu connus provenant du Musée de M. C. Godeffroy. *Journal des Museum Godeffroy* 1: 253–264. <https://doi.org/10.5962/bhl.title.10644>
- Moosa M.K. 1975. Notes on stomatopod Crustacea from Seribu Islands and adjacent waters with a description of a new species. *Marine Research in Indonesia (Penelitian Laut di Indonesia)* 15: 1–20. <https://doi.org/10.14203/mri.v15i0.342>
- 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* Vol. 1: 149–219. ORSTOM, Paris.
- Moosa M.K. 2000. Marine biodiversity of the South China Sea: a checklist of stomatopod Crustacea. *Raffles Bulletin of Zoology* supplement 8: 405–457.
- Naiyanetr P. 1987. Two new stomatopod crustaceans from Thailand with a key to the genus *Manningia* Serène, 1962. *Crustaceana* 53 (3): 237–242. <https://doi.org/10.1163/156854087X00321>
- Pocock R.I. 1893. Report upon the stomatopod crustaceans obtained by P.W. Bassett-Smith, Esq., Surgeon R.N., during the cruise, in the Australian and China seas, of H.M.S. "Penguin", Commander W.U. Moore. *Annals and Magazine of Natural History, Series 6* 11: 473–479. <https://doi.org/10.1080/00222939308677559>
- Serène R. 1962. Révision du genre *Pseudosquilla* (Stomatopoda) et définition de genres nouveaux. *Bulletin de l'Institut océanographique de Monaco* 1241: 1–27.
- Stephenson W. 1952. Faunistic records from Queensland. Part I – General introduction. Part II – Adult Stomatopoda (Crustacea). *Zoology Papers of the University of Queensland* 1 (1): 1–15.
- Stephenson W. 1953. Notes on the Australian Stomatopoda (Crustacea) in the collections of the Queensland Museum. *Memoirs of the Queensland Museum* 13 (1): 40–49.
- Stephenson W. 1960. Notes on Queensland Stomatopoda (mantis prawns). *Queensland Naturalist* 16 (3–4): 61.
- Stephenson W. 1962. Some interesting Stomatopoda – mostly from Western Australia. *Journal of the Royal Society of Western Australia* 45 (2): 33–43.

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. <https://doi.org/10.3853/j.0067-1975.23.1955.634>

Tirmizi N.M. & Manning R.B. 1968. Stomatopod Crustacea from West Pakistan. *Proceedings of the United States National Museum* 125: 1–48. <https://doi.org/10.5479/si.00963801.125-3666.1>

Trivedi J.N., Ahyong S.T., Vachhrajani K.D. & Kumar A.B. 2020. An annotated checklist of the mantis shrimps of India (Crustacea: Stomatopoda). *Zootaxa* 4768 (2): 221–238. <https://doi.org/10.11646/zootaxa.4768.2.4>

Yamaguchi T. & Baba K. 1993. Crustacean specimens collected in Japan by Ph.F. von Siebold and H. Bürger and held by the Nationaal Natuurhistorisch Museum in Leiden and other museums. *In*: Yamaguchi T. (ed.). *Ph.F. von Siebold and Natural History of Japan Crustacea*. The Carcinological Society of Japan, Shimoda Printing, Kumamoto.

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