

ON A SMALL COLLECTION OF STOMATOPODA (CRUSTACEA)
FROM GOA

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ABSTRACT

Four species pertaining to 3 genera and 2 families are reported for the first time from Goan waters. Of these *Acanthosquilla humesi* Manning is new to Indian waters.

INTRODUCTION

The present study is based on a small collection of stomatopods made by the author during a general faunistic survey in 1975 and a few specimens lying unnamed in the Zoological Survey of India. On close examination the material was found to belong to 4 species pertaining to 3 genera and 2 families. The finding of *Acanthosquilla humesi* Manning, 1968 is of special significance as it is being reported here for the first time since its discovery off Madagascar. The specimens were collected from coastal inshore waters mainly on board a fishing trawler provided by the National Institute of Oceanography, Panaji as well as from dragnets operated by fishermen. A perusal of literature reveals occurrence of 21 species along the west coast of India, but none from Goa. In view of this the author deems it worthwhile to give an account of the Stomatopod fauna of this region. Descriptions for all the species together with restricted synonymy, geographical distribution and key to the species have been provided.

SYSTEMATIC ACCOUNT

Key to species of Stomatopoda of Goa

1. Telson with sharp median carina, 4 or more intermediate denticles on telson (Squillidae) ... 2
- Telson lacking sharp median Carina (Lysiosquillidae) ...
- Telson with 2 or four pairs of fixed marginal teeth, uropodal exopod with strong proximal fold on outer margin (*Acanthosquilla*). ...
- Rostral plate with sharp median spine, anterolaterally angled; dactylus of claw with 7 teeth; sub-median denticles in transverse row. ... *Acanthosquilla humesi* Manning, 1968
2. Eyes large, T-shaped, Cornea bilobed, upper margin of propodus of claw with alternate long and short spines (*Harpiosquilla*). ...
- Lateral process of 5th thoracic somite rounded, propodus of claw with more than one short spine between larger ones. ... *Harpiosquilla harpax* (de Haan, 1849)

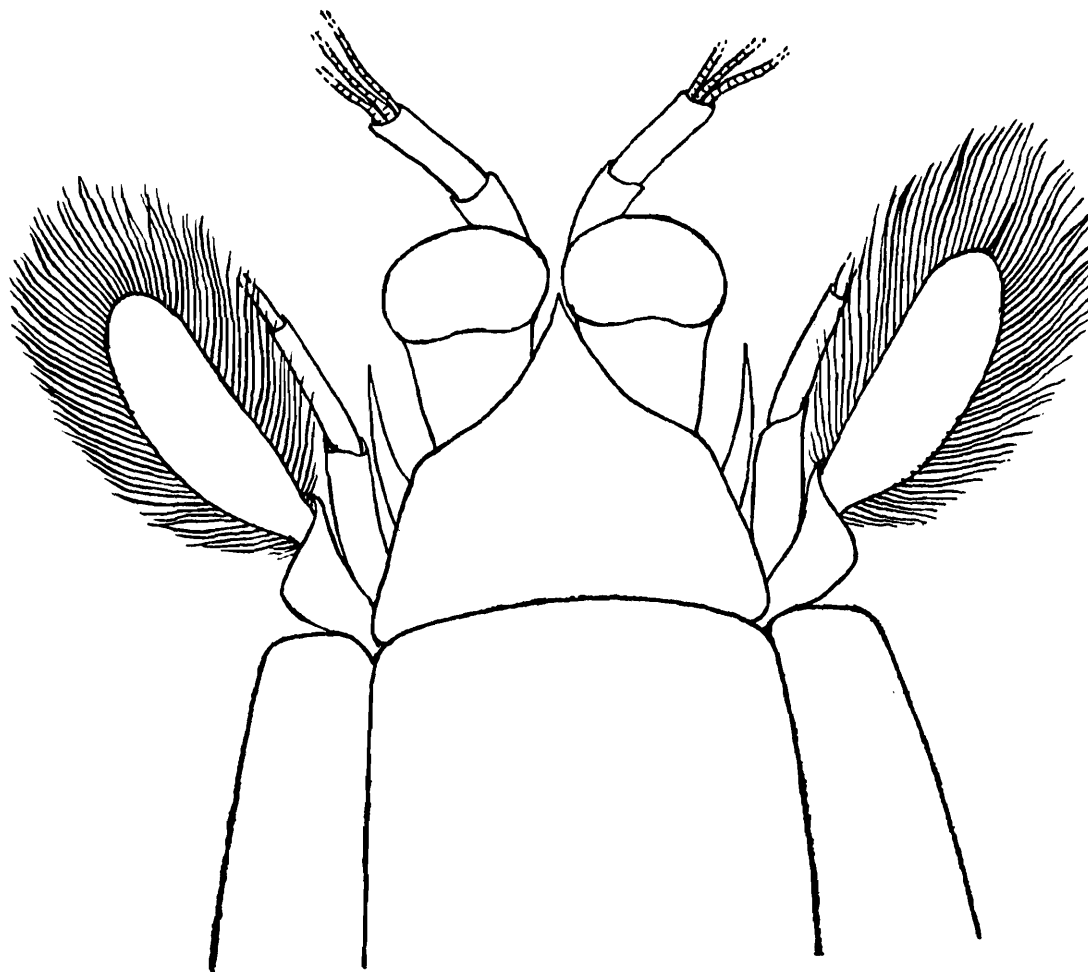


Fig. 1. *Acanthosquilla humesi* Manning, male, TL. 40.0 mm ; Marmagao Bay, Goa.
Anterior portion of body.

- Eyes small, not T-shaped, Cornea bilobed, upper margin of propodus pectinate (*Oratosquilla*). ... 3
- 3. Median carina of carapace distinct and uninterrupted, bifurcation open posterior to dorsal pit. ... *Oratosquilla nepa* (Latreille, 1825)
- Median carina of carapace interrupted at base of bifurcation, bifurcation open anterior to dorsal pit. ... *Oratosquilla interrupta* (Kemp, 1913)

Order STOMATOPODA

Family LYSIOSQUILLIDAE Giesbrecht, 1910

Acanthosquilla humesi Manning

(Figs. 1-3)

1968. *Acanthosquilla humesi* Manning, *Proc. U. S. natn. Mus.*, 124 (no. 3641) : 33.

Material : 1 ♀, mm ; Marmagao Bay ; F. G. Megitt ; Reg. No. C 1609/2.

Description : Eyes small, cornea subglo-bular, set obliquely on stalk. Rostral plate with slender median spine, anterolaterally angled. Carapace smooth, narrowed ante-

riorly, rounded anterolaterally and posterolaterally. Mandibular palp and 5 epipods present. Exposed thoracic somites smooth, lateral margins rounded. Abdominal somites broad, smooth, depressed, unarmed except for the slender posterolateral spines on sixth. Telson broader than long, with dorsal fan of 5 teeth, marginal armature on either side of mid-line : 1 movable submedian tooth ; 4 fixed teeth ; 6-7 submedian denticles in transverse row ; 1 denticle between each of the marginal teeth. Uropodal exopod with 7 movable spines on outer margin of proximal segment, last extending to midlength of distal segment ; endopod with prominent fold on inner proximal margin, inner spine of basal prolongation longer than outer.

Colour : Due to long preservation the specimen has become completely faded.

Manning (1968) has dealt with its colour pattern in detail.

Remarks : Manning (1968) in his original description of *Acanthosquilla humesi* has noted 7 teeth on the dactylus of claw. The present specimen lacks both the dactyli. However, the characters of anterior part of body, telson and uropod provided sufficient clues to identify this specimen with *A. humesi*. *A. humesi* can easily be distinguished from *Acanthosquilla acanthocarpus* (Miers, 1880) and *A. multifasciata* (Wood-Mason, 1895) reported from west coast of India, by the presence of 4 pairs of fixed marginal teeth on telson instead of 2 in the latter two species. The present record is first from Indian waters and extends the distribution eastwards into the Arabian sea.

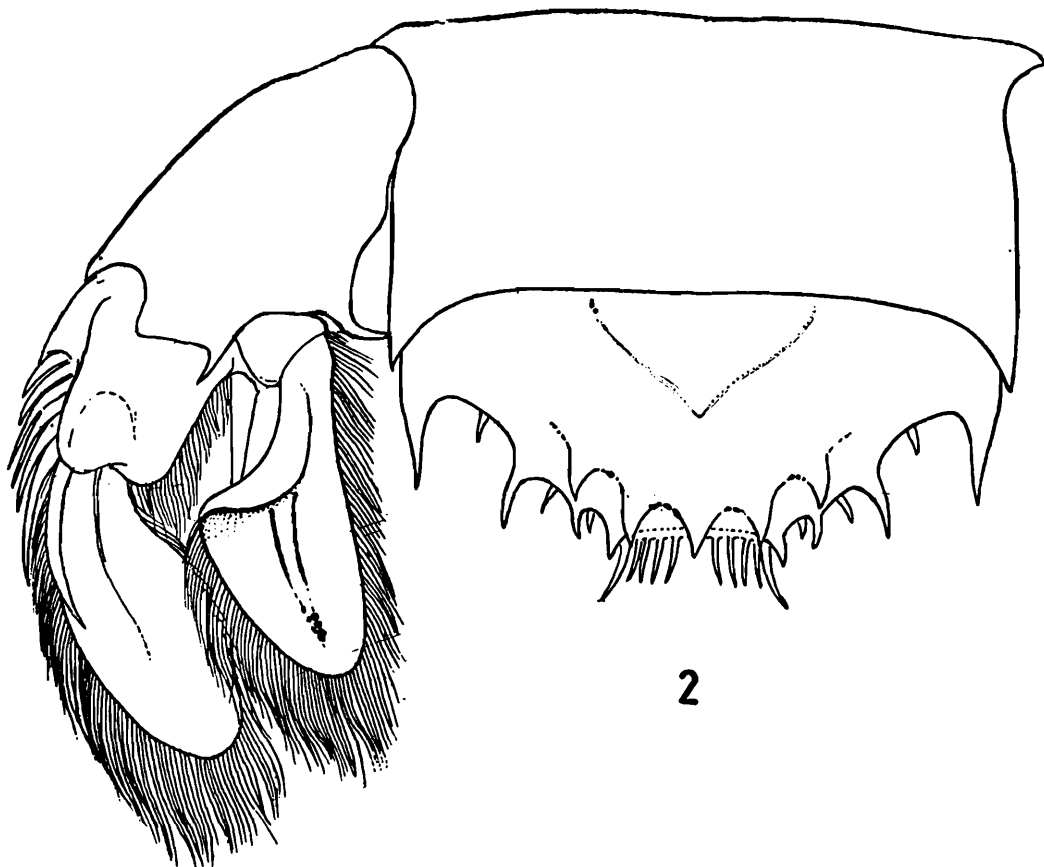


Fig. 2. *Acanthosquilla humesi* Manning, male, TL. 40.0 mm ; Marmagao Bay, Goa.
Sixth abdominal somite, uropod and telson.

Distribution : Nosy Be ; Madagascar (Type-locality) and Goa.

Family SQUILLIDAE Latreille, 1803

Harpiosquilla harpax (de Haan)

1849. *Squilla harpax* de Haan, *Faun. Jap. Crust.* : 222.

1952. *Squilla harpax* : Tiwari and Biswas, *Rec. Indian Mus.*, 49 : 358.

1964. *Harpiosquilla harpax* : Holthuis, *Crustaceana*, 7 (2) : 140.

1969. *Harpiosquilla harpax* : Manning *Smithson, Contr. Zool.* No. 36 : 25.

Material ; 2 ♂♂, 145 & 148 mm ; Off Dona Paula beach, Panaji ; H. C. Ghosh ; 25.2.1975 ; Reg. No. C 1607/2.

Description : Eyes large, T-shaped. Rostral plate longer than broad, with slender apical projection. Carapace with median carina. Dactylus of claw with 8 teeth, outer margin with prominent angular projection in adult males. Propodus of claw with alternating large and small spines. Fifth thoracic somite rounded laterally. Submedian and

intermediate carinae of last three thoracic somites not armed posteriorly. Spines on abdominal carinae : submedian 6 ; intermediate 2-6 ; lateral 1-6 ; marginal 1-5. Denticles on telson : submedian 4-6 ; intermediate 10-12 ; lateral 1. Outer margin of basal segment of uropodal exopod with 9-10 spines.

Colour : Distal segment of uropodal exopod with inner half black. Telson with a pair of dark spots on the dorsal surface nearer to the anterior margin.

Remarks : The specimens agree well with the description and figures provided by Manning (1969).

Distribution : A widely distributed Indo-West Pacific from extending from S. Africa to Japan. Previous records from the Indian seas : Bombay (Chhapgar & Sane, 1968 ; Tiwari & Biswas, 1952), mouth of river Hooghly including sandheads (Kemp, 1913 ; Tiwari & Biswas, 1952), off Madras coast (Kmp, 1913 ; Tiwari and Biswas, 1952), Andamans (Tiwari & Biswas, 1952).

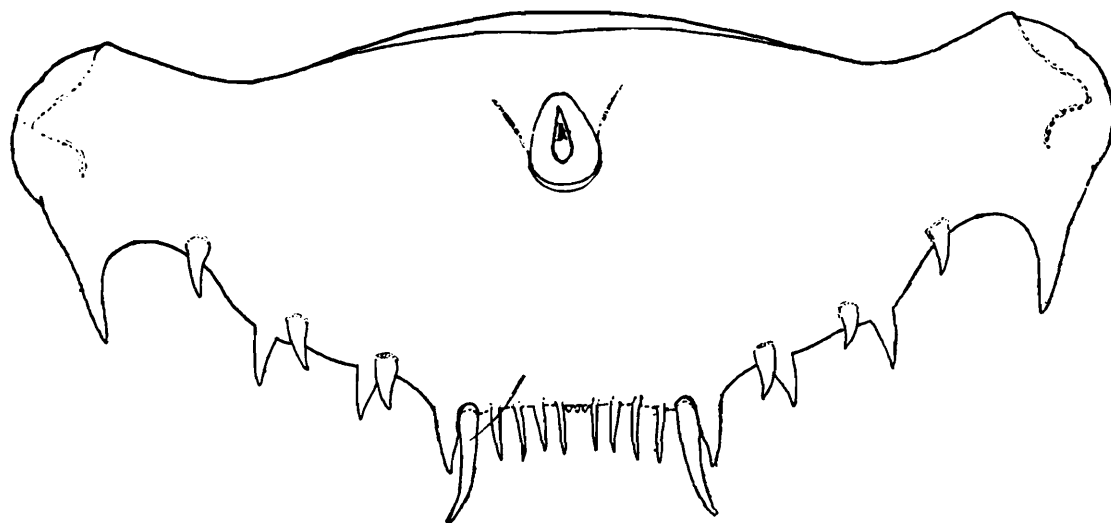


Fig. 3. *Acanthosquilla humesi* Manning male, TL. 40.0 ; Marmagao Bay, Goa, Telson, ventral view.

Oratosquilla nepa (Latreille)

1825. *Squilla nepa* Latreille, *Encycl. Method.*, : 471.
 1913. *Squilla nepa* : Kemp, *Mem. Indian Mus.*, 4
 60.
 1968. *Oratosquilla nepa* : Manning, *Bull. mar. Sci.,
 Gulf Caribb.*, 8 (1) : 134.

Material : 4 ♂♂, 61-70 mm ; 2 ♀♀, 66 & 75 mm ; Off Calangute Beach ; *K. S. Pradhan* ; 27.2.1967 ; Reg. No. C 2606/2.9 ♂♂, 91-118 mm ; 7 ♀♀, 91-113 mm ; off Dona Paula beach ; *H. C. Ghosh* ; 22.2.1975 ; Reg. No. C. 1608/2. 2 ♂♂, 60 & 110 mm ; 13 ♀♀, 80-112 mm ; Marmagao Harbour, *H. C. Ghosh* ; 22.2.1975 ; Reg. No. C 2605/2. 9 ♂♀, 70-117 mm ; 7 ♀♀, 80-117 mm ; Colva beach ; *H. C. Ghosh*, 1.3.1975 ; Reg. No. C 2604/2.

Description : Eyes moderate in size, cornea bilobed, set transversely on stalk. Rostral plate tapering distally, apex truncate, lateral margins upturned. Median carina of carapace distinct, uninterrupted, bifurcation opening posterior to dorsal pit. Intermediate carinae of carapace not extending to posterior margin, converging anteriorly with the lateral. Anterolateral spines of carapace strong. Dactylus of claw with 6 teeth, outer margin sinuous. Dorsal ridge of carpus with three tubercles. Anterior lobe of lateral process of 5th thoracic somite with an anteriorly directed slender spine ; posterior lobe much shorter, apex rounded. Anterior lobe of 6th somite large, apex obliquely truncate ; posterior lobe larger, triangular, apex blunt. Spines on abdominal carinae : submedian 3-4 ; intermediate 3-6 ; lateral 2-6, marginal 1-5. Dorsal surface of telson with lines of pits on either side of median carina. Uropod with 8-9 movable spines on outer margin of proximal segment. Lobe on outer margin of

inner spine of basal prolongation of uropod low, rounded, margin concave.

Remarks : All the variations in the anterior bifurcation of the median carina of carapace figured by Tirmizi and Manning (1968), were noticed in the present specimens.

Distribution : *Oratosquilla nepa* is the most commonly distributed Indo-West Pacific form extending from S. Africa to Hongkong. Previous records from the Indian seas : Bombay (Chhapgar & Sane, 1968), W. Bengal (Kemp, 1913), Andhra Pradesh (Kemp, 1913), Kerala (Kemp, 1913 ; Kurian, 1954).

Oratosquilla interrupta (Kemp)

1913. *Squilla interrupta* Kemp, *Mem. Indian Mus.*, 4 : 72.
 1968. *Oratosquilla interrupta* : Manning, *Bull. mar. Sci. Gulf Caribb.*, 18 (1) : 135.

Material : 1 ♂, 101 mm ; 3 ♀♀, 75-107 mm ; Marmago Harbour ; *H. C. Ghosh*, 22.2.1975 ; Reg. No. C. 2608/2. 3 ♂♂, 107-109 mm ; 3 ♀♀, 100-126 mm ; Colva Beach ; *H. C. Ghosh* ; 1.3.1975 ; Reg. No. C 2607/2.

Description : Eyes small, cornea bilobed, set obliquely on stalk. Rostral plate subquadrate, apex truncate. Anterior bifurcation of median carina of carapace interrupted at base of bifurcation. Bifurcation opening anterior to dorsal pit. Intermediate carapace not extending to anterior margin. Dactylus of claw with 6 teeth. Dorsal ridge of claw with two tubercles. Submedian and intermediate carinae on last three thoracic somites unarmed. Anterior lobe of lateral process of fifth thoracic somite slender, anteriorly directed ; posterior lobe acute, directed laterally. Anterior lobes of 6th and 7th thoracic somites smaller than the triangular posterior lobes. Spines on abdominal carinae :

submedian 5-6; intermediate 4-6; lateral 3-6; marginal 1-5. Telson broad with 3 pairs of marginal teeth, prelateral lobe present. Denticles on telson: submedian 2-3; intermediate 7-9; lateral 1. Telson with lines of pits on either side of median carina. Uropodal exopod with 8-9 movable spines on outer margin of proximal segment. Lobe on outer margin of inner spine of basal prolongation of uropod rounded, margin convex.

Remarks: These specimens agree well with Kemp's (1913) and Tirmizi and Manning's (1968) accounts of the species.

Distribution: Widely distributed in the Indo-West Pacific region extending from Persian Gulf to Hongkong. Previous records from the Indian seas: Bombay (Kemp 1913; Chhapgar & Sane, 1968), Madras (Kemp, 1913), Orissa (Kemp, 1913), W. Bengal (Kemp, 1913; Chopra, 1934).

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