

**A NEW RECORD OF AXIOPSIS CONSOBRINA (DE MAN, 1905) (FAMILY:  
AXIIDAE : BORRADAILE, 1903) (CRUSTACEA : DECAPODA :  
THALASSINIDEA) OFF THOOTHUKUDI, SOUTHEAST COAST OF INDIA  
(08° 53.6'N 78° 16'E and 08° 53.8'N 78° 32'E)**

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**ABSTRACT**

*A new record of Axiidae off Thoothukudi coast of Gulf of Mannar, southeast coast of India is reported. Axiopsis consobrina species were newly recorded from Indian waters. The present species (Axiopsis consobrina) are recorded from Thoothukudi coast of Gulf of Mannar, southeast coast of India. One specimen was caught at the depth of 310 m as an incidental by-catch. It was found in tropical waters from about 08° 53.6'N 78° 16'E and 08° 53.8'N 78° 32'E/310m from Thoothukudi fishing harbour, southeast coast of India.*

**Keywords:** Crustacea, Decapoda, Thalassinidea, Axiidae, Axiopsis consobrina, First record - Indian waters

**INTRODUCTION**

The *Thalassinidea* of Thoothukudi coast of Gulf of Mannar, Southeast coast of India are poorly known. Though the *Axiidae* are becoming better known presently, identification may still be difficult. A more fundamental problem concerns the systematic importance of the shape of the 4<sup>th</sup> thoracic sternite, which is not sexually dimorphic in this group. It is connected to structure of endophragmal system and its muscles, as well as those of the 1<sup>st</sup> and 2<sup>nd</sup> pleopods which are

most probably based on hermaphroditic characteristics. The axiid and calocaridid fauna of the Pacific Ocean is known from numerous scattered works, major contributions including De Man (1925), Poore and Griffin (1979), Sakai and de Saint Laurent (1989), Sakai (1992), and Poore (1994). At present, the taxa of the family Upogebiidae (Borradaile, 1903) itself attributed to the superfamily Thalassinidea (Dana, 1852) consist of two subfamilies, 11 genera, and 156 species

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(including 4 spp. inquirendae) world-wide. The Thalassinidea comprise seven families: Callianassidae, Axiidae, Callianideidae, Upogebiidae, Laomediidae, Axianassidae and Thalassinidae (Gurney, 1938; Wear & Yaldwyn, 1966) but these have been reduced to four by inclusion of the Axianassidae in the Laomediidae and the Upogebiidae and Callianideidae as subfamilies of the Callianassidae (Balss, 1957). The measurements given in the descriptions are: carapace length (cl.) measured from the tip of the rostrum to the posterior border of the carapace; total length (tl.) measured from the tip of the rostrum to the posterior border of the telson (Poupin, 1998).

**Superfamily: Axioidea (Huxley, 1879)**

**Family: Axiidae (Borradaile, 1903)**

**Genus: *Axiopsis***

***Axiopsis consobrina* (De Man, 1905)  
(Fig. 1A, B, C, D, E )**

*Axiopsis consobrina* De Man, 1905: 595.  
(Fig. 4)

Balss 1925: 209.

Sakai 1994: 198, fig. 14.

Komai *et al.* 2002: 29.

*Axiopsis (Axiopsis) consobrina* – de Man  
1925: 80, pl. 6, fig. 13-13c.

Poore and Griffin 1979: 230, fig. 4. Non

*Axiopsis consobrina*

Tirmizi 1983: 91, fig. 4.

Nguyen NGOC-HO 2005: 55, fig. 4

**Material :** One male measuring 24.3 cm total length and 40g weight (Fig. 1A, B, C, D, E )

**Location:** 08° 53.6'N 78° 16'E and 08° 53.8'N 78° 32'E off Thoothukudi coast of Gulf of Mannar, Southeast coast of India; depth at trawling 310 m.

**Description :** Dorsomedian region of carapace with lateral carina with ten to twelve teeth, submedian carina with eight teeth, median carina with 10 teeth, and intermediate regions between carinae unarmed; anterolateral margin of carapace with small antennal tooth (Fig. 1A), but unarmed on pterygostomial region. Rostrum (Fig. 1E) triangular, acuminate, with six lateral teeth, continuous laterally with lateral carina of carapace. Pleuron 1 rounded at ventral angle; pleura 5-6 with small tooth on anterior margin, and pleuron 6 without an apical tooth ventrally.

Antennal segment 2 with distodorsal tooth reaching midlength of segment 4, scaphocerite extending to near distal margin of segment 4, bearing strong proximal tooth on medial margin. Maxilliped 3 with ischium bearing two distinct medial teeth; merus with five medial teeth, distally increasing in size; carpus with distomedial tooth. Pereopod (Fig. 1D) unequal; fingers of larger cheliped distinctly shorter than palm, these of smaller cheliped about as long as palm. Pleopod 1 absent. Pleopod 2 in male with appendices masculinae and interna. Pleopods 3-5 with appendices interna. Uropod (Fig. 1B) exopod with suture; three spinules and movable distal spine along lateral margin, external dorsal carina with five spinules; endopod with two spinules and distal spine on

lateral margin, dorsal with five spines, distal one near distal border.

**Remarks :** De Man (1925) figured and described this species well and our specimens agree with his remarks. This species is one of a number of thalassinideans previously known from Indonesian islands and Australia which have now been recorded in Thoothukudi coast of Gulf of Mannar, Southeast coast of India. The present species agrees with the lectotype of *Axiopsis carsobrina* in several features: 1) the triangular rostrum, pointed at tip with five spinules on each lateral border; 2) the media carina extending onto the rostrum; 3) the intermediate region between carinae unarmed; 4) the A2 acicle with a subproximal spine on the mesial border; 5) the general morphology of P1, except for the dactylus; and 6) the general morphology of the telson and uropods. There are differences in: 1) a higher number of spinules or tubercles on the carinae (still within the range of variations of the species) (Sakai, 1994: table 1).

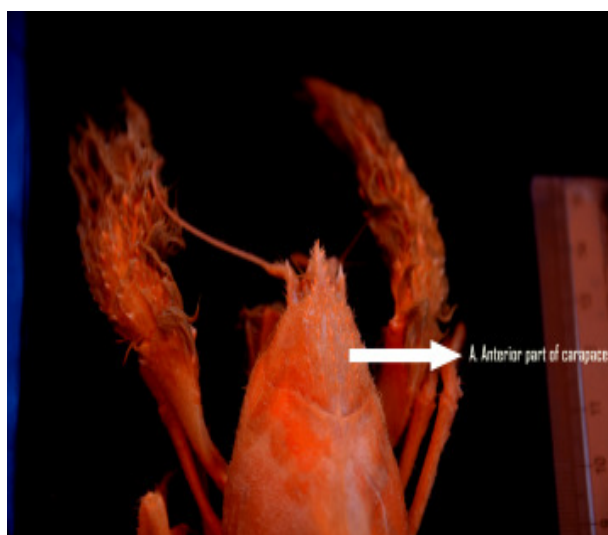
**Distribution :** From McArdle's (1901) description, and Alcock and McArdle's illustration (1902) and De Man's (1925) the Bay of Bengal species (*Calastacus longispinis*) Family: Axiidae (*Eutrichocheles modestus*), and *Thalassina squamifera* (Family Thalassinidae) has been recorded earlier from Bay of Bengal and Porto Nova and southeast-west coast of India (Chopra, 1933; Balasubrahmanyam and Jacob, 1961; Sankolli 1970). The present record from Thoothukudi coast in Gulf of Mannar extends its distribution to the southeast coast of India. Other records from Indo-Pacific region are from Malacca, Dong Hoa, Southeastern Vietnam, Indonesia (de Man, 1905); Gulf of Carpentaria, Queensland, Australia (Poore and Griffin, 1979); Japan, Tahiti, Society, French Polynesia (Nguyen NGOC-Ho, 2005).

**Table 1. Variation of characters in *Axiopsis consobrina*.**

St. Spec.	S305 No.	S204	N817	N7157	N7157	Off Thoothukudi coast of Gulf of Mannar, India  08° 53.6'N 78° 16'E and 08° 53.8'N 78° 32'E/310m
Sex	♂	♀	♂	♀	♀	♂
TL (mm)	34.0	32.0	17.5	11.0	8.0	24.3/40 g
Antenn. tooth	+	+	+	-	-	+
Pterygost. tooth	-	+	+	-	-	-
Rostrum Lateral teeth	5	4-5	3-5	6	4-5	6
Longitud. Carinae						
Lateral teeth	9	8-9	6	5-8	9-12	10-12
Submed. Teeth	7-8	7	6-8	7-9	7-8	7-8
Median teeth	13	16	12	10	9	10

St. Spec. No. = S, stations number of Siboga Expedition; n, catalogue number of specimen belonging to NTM; antenn. Tooth = antennal tooth; pterygost. Tooth = pterygostomial tooth; (\*) measurements taken by De Man, 1925.

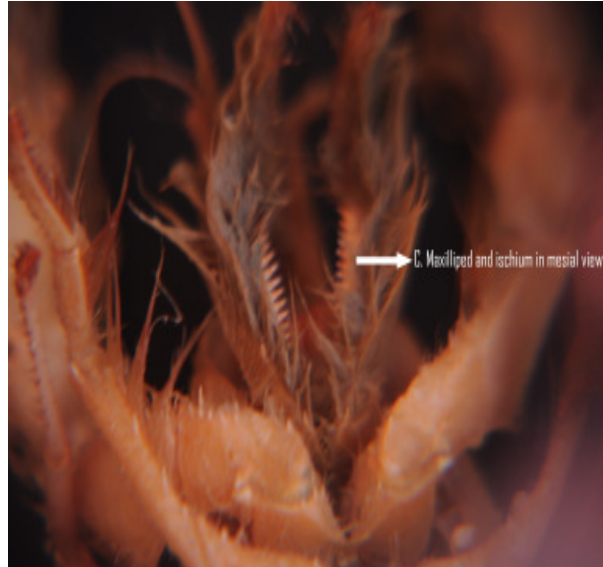
**Fig. 1.** *Axiopsis consobrina* De Man, 1905



**Fig 1. A - anterior part of carapace**



**Fig 1. B - telson and uropods**



**Fig 1. C - maxilliped and ischium in median view**



**Fig 1. D - pereopod**



**Fig 1. E - dorsal view**

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