Short Communication

A NEW RECORD OF THE SQUAT LOBSTER MUNIDOPSIS CYLINDROPHTHALMA (ALCOCK, 1894), (CRUSTACEA: ANOMURA: GALATHEIDAE), OFF THOOThUKUDI COAST OF GULF OF MANNAR (08º 35’ 22.5” N lat. 78º 27’ 40.9” E long and 08º 31’ 91.2” N lat. 78º 25’ 32.7”E)

T. Vaitheeswaran
Research and Development, Quality Control, Department of New Drug Discovery (Marine Division), RARBIO Energies Private Limited, Chennai – 600 095.

Received : 10.10.2013 Accepted : 30.03.2014

ABSTRACT

The squat lobster, Munidopsis cylindrophthalma (Alcock, 1894) was recorded for the first time from the Indian mainland coast while investigating the biodiversity of the squat lobster of Gulf of Mannar during April, 2013. One specimen of the said species was collected as an incidental by-catch in the deep sea trawl fisheries off Thoothukudi coast of Gulf of Mannar, between 08º 35’ 22.5” N lat. 78º 27’ 40.9” E long and 08º 31’ 91.2” N lat. 78º 25’ 32.7”E long at a depth of 305-310 m. The present records show its extended distribution from Gulf of Mannar to east of Andamans and further to South China Sea.

Key words: Munidopsis cylindrophthalma - Galatheidae – First record from Thoothukudi coast of Gulf of Mannar – India

The squat lobsters include six recognized families (Chirostylidae, Eumunididae, Kiwaidae, Galatheidae, Munididae and Munidopsidae) in two super families (Chirostylidae and Galatheidae) of decapods crustaceans within the infraorder Anomura (Ahyong et.al., 2010; Schnabel and Ahyong, 2010). Squat lobsters are abundant, speciose and distributed worldwide. Taxonomic and ecological interest in squat lobsters has grown considerably over the last two decades. Approximately 930 described species of squat lobsters are reported from a wide range of depths (littoral to abyssal) and exhibit a worldwide distribution (Macpherson et al., 2010). A Galatheidae are exceptionally diverse and include 675 species in 34 genera. Most speciose genera are Munida (243 species), Munidopsis (224) and Galathea (70). Most species of Munida are from shelf and slope depths. The majority of species of Galathea live in shallow waters whereas those of Munidopsis are found mainly on continental slopes and abyssal plains. Seventeen galatheid

Vaitheeswaran

genera are exclusively found in the Pacific Ocean. In contrast, only one genus is found exclusively in the Atlantic Ocean (Anomoeomunida) and one in the Indian Ocean (Nanogalathea). Members of the anomuran family Chirostylidae (squat lobsters or pinch bugs) most commonly live at depths beyond the continental shelves and are found along slopes, ridge systems and seamounts of all oceans. Taxonomical studies on the Chirostylid and Galatheid lobsters of India are dealt with by Alcock (1894 & 1901), Alcock & Anderson (1895), Doflein & Balss (1913a), George and Rao (1966), Rao (1974), Tirmizi & Javed (1993), Thirumilu, (2011) and Vaitheeswaran and Venkataramani (2012).

A total of 51 species (10 from Family: Chirostylidae and 40 from Family Galatheidae) are recorded, mostly from the deeper waters of Lakshadweep Sea, Arabian Sea, Bay of Bengal and Andaman Sea, while a single galatheid lobster Munidopsis regia Alcock & Anderson, 1894, Eumunida funambulus (Gordon, 1930), Agononida eminens (Baba, 1988), and Munida heteracantha (Ortmann, 1892) has been reported from Gulf of Mannar by Vaitheeswaran and Venkataramani (2012).

While examining the crustacean catches landed by larger trawlers, which operated in deeper waters off Thoothukudi, one specimen of squat lobster was obtained. On closer examination, it was identified as Munidopsis cylindrophthalma and it was new to Thoothukudi waters. Thus, the total number of squat lobsters from India now rose to 51. The taxonomic and systematic position of the present species reported based on new classification given by Baba (2005) for the Superfamily Galatheoidea. The present record from Thoothukudi coast of Gulf of Mannar is the first specimen from the coast of main land.

Superfamily: Galatheoidea Samouelle, 1819
Family: Galatheidae Samouelle, 1819
Genus: Munidopsis Whiteaves, 1874
Elasmonotus cylindrophthalma (Alcock, 1894) (Plate 1)
Munidopsis cylindrophthalma Alcock, 1894: 333 (type locality: Andaman Sea, 344.403 m)
Alcock & Anderson, 1894: pl. 13, fig.4
Anderson, 1896: 100 (synonym)
Munidopsis (Orophorhynchus) cylindrophthalma Alcock, 1901: 272 (synonym)
Munidopsis (Elasmonotus) cylindrophthalma Doflein & Balss, 1913: 159;
Tirmizi, 1966: 213, figs 28; 29A, 29B (synonym);
Munidopsis okadai Yanagita, 1942: 93, 2 figs (type locality: off Akabane, Aichi Pref., Japan, 200 m) (synonym);
Munidopsis cylindrophthalma Baba, 1986: 177, 293, fig. 127
Baba, 1988: 151, figs 58, 59;
Wu et al., 1988: 139, figs 38, 42D;
Komai, 2000: 357;
Baba, 2005: 145, 287;
Macpherson, 2007: 58, fig 55G;
Osawa et al., 2008a: 38;
Poore et al., 2008: 21 (synonym)

Materials examined: One male specimen (total length 29 mm; carapace length 16 mm; weighing about 5 gm) collected from Thoothukudi beach between 08º 35’ 22.5” N lat. 78º 27’ 40.9” E long and 08º 31’ 91.2”N lat. 78º 25’ 32.7”E long at a depth of 305-310 m, Thoothukudi district, Tamil Nadu, India
A new record of the squat lobster munidopsos cylindrophthalma (Fig.1A 1B, 1C, and 1D). The reference materials are deposited in the museum collections of the Department of New Drug Discovery, RARBIO Energies Private Limited, Chennai, Tamil Nadu, India.

The specimens examined agree quite well with the original description and figures provided by Alcock (1894) and Baba (2005). Carapace smooth, spineless (Fig 1B). Rostrum narrowly triangular, dorsally flattish or concave, slightly upcurved distally, without lateral spines. Abdomen spineless (Fig 1C). Ocular peduncles movable, cornea cylindrical, elongate, much longer than remaining eyestalk, without eyespine. P1 long and slender, cylindrical, spineless, more than 3 times carapace length. P2 – 4 very short; P2 clearly not reaching end of P1; each merus carinate along dorsal margin; each dactylus ending in sharp point preceded by prominent spines on flexor margin (Fig 1D). Epipods absent from pereopods.

Body yellowish-brown to orange-red; abdominal somites 5 – 6 and telson whitish; rostrum bordered by white or light brown band; pereopods light brown, dactyli whitish by Macpherson (2007).

Earlier records of *M. cylindrophthalma* from Indian waters are from Andaman Sea-Type locality (Alcock, 1894), Arabian Sea (Alcock, 1901), while it was reported from Maldives (Timizi, 1966), Indonesia (Doflein & Balss, 1913a), the Philippines, Solomon Islands, Vanuatu, new Caledonia and Fiji (Macpherson, 2007), Taiwan (Osawa *et al.*, 2008), Australia (Poore *et al.*, 2008) and Japan (Yangita, 1942; Baba 1986).

The author is thankful to Thiru M. Kathirvel, former Principal Scientist of Central Institute of Brackishwater Aquaculture (I.C.A.R.), Chennai, for critical reading of the manuscript and helpful suggestion for its improvement. Dr. K. Baba, Professor, Kumamoto University, Japan, has provided me with literature on squat lobsters taxonomy. I wish to thank Thiru. K. Deenadhayalan, my friend and Professional photographer, Trichy, Tamil Nadu for his photograph of this specimen.
**Fig. 1A** *Munidopsis cylindrophthalma* (Alcock, 1894)
Dorsal view of male

[Image of Dorsal view of male]

*Photograph by Deenadhalayan*

**Fig. 1B** *Munidopsis cylindrophthalma* (Alcock, 1894)
Carapace

[Image of Carapace]

*Photograph by Deenadhalayan*

**Fig. 1C** *Munidopsis cylindrophthalma* (Alcock, 1894)
Abdomen

[Image of Abdomen]

*Photograph by Deenadhalayan*

**Fig. 1D** *Munidopsis cylindrophthalma* (Alcock, 1894)
Uppar part of Sternum

[Image of Uppar part of Sternum]

*Photograph by Deenadhalayan*
REFERENCES


Baba, K., (1986). Decapod crustaceans from continental shelf and slope around Japan. The intensive research of unexploited fishery resources on continental slopes. (Baba, K., Hayashi, K. I., Toriyama, M. Ed.), 159, 278–316


A new record of the squat lobster Munidopsos cylindrophthalma


Vaiitheeswaran, T., and V.K. Venkataramani., (2012). Three new records of squat lobsters Eumunida funambulus (Gordon, 1930) (Chirostylidae: Chirostylidae), Agononida eminens (Baba, 1988) and Munida heterocantha (Ortmann, 1892) (Galatheoidea: Munididae) (Crustacea: Decapoda) from Gulf of Mannar”. Tamil Nadu Journal of Veterinary and Animal Sciences. 8 (2), March – April, p. 87 -93.
