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First Report of Marble shrimp *Saron marmoratus* (Olivier, 1811) (Crustacea: Decapoda: Hippolytidae) from the South West Coast of India

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ABSTRACT: One live specimen of marble shrimp, *Saron marmoratus* (Olivier, 1811) is obtained from the Vizhinjam coast during sampling near Rocky areas of vizhinjam coast, Kerala on 14 June 2016. These shrimp are greenish to light brown in body colour with whitish and yellowish speckled spots and having a typical tuft of cirri on the back. Marbled shrimps are highly demanded and good priced in the marine aquarium trade. The present Report is the first record of Marbled Shrimp, *Saron marmoratus* from the Kerala coast, south west coast of India.

Keywords: *Saron marmoratus*, Marbled shrimp, Hippolytidae, South West coast of India, Kerala.

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INTRODUCTION

Crustaceans exhibit fourth largest diversity among the animal groups on the planet (Deshmukh 2013). Infraorder Caridea includes 389 genera are known to date, Family Hippolytidae contains species of some economic interest in the Western Indian Ocean (Josileen 2013). *Saron marmoratus* (Olivier, 1811) is commonly known as 'marbled shrimp', 'saron shrimp', 'buffalo shrimp', or 'monkey shrimp' is a species of shrimp in the family Hippolytidae. The Hippolytidea of Indo-Pacific regions are morphologically varied, but as compared with Northern Pacific they are represented by comparatively few species. This is probably the most abundant and widely distributed species of coral-reef hippolytid in the Indo-Pacific region (Holthuis, 1947 and Chace, 1997). The shrimps of the genus *saron* are very numerous and have highly varied appearances usually corresponding to non-identified species. Exact number of species of Caridean prawns present in Indian waters is uncertain, as most species have no economic value and hence studies are limited to the economically important species (Radhakrishnan *et al.* 2012). *Saron marmoratus* is most likely a complex of several species. This is a poorly studied group and further research is needed to proper identification and classification of all the species.

One live specimen of marble shrimp, *Saron marmoratus* (Olivier, 1811) is obtained from the Vizhinjam coast during sampling near Rocky areas of vizhinjam coast, Kerala on 14 June 2016. The species was identified following description provided by Nobili (1901), De Man (1902), Kemp (1916), Barnard (1950), Miyake and Hayashi (1966) and Chace (1997).

Systematics

Phylum : Arthropoda
Subphylum : Crustacea
Class : Malacostraca
Order : Decapoda

Infraorder : Caridae
Family : Hippolytidae
Genus : *Saron*

***Saron marmoratus* (Olivier, 1811)**

Description

Marbled shrimp *Saron marmoratus* (Olivier, 1811) has a typical greenish to light brown in body colour with whitish and yellowish speckled spots. Legs are generally banded red and white. During night the body commonly shifts to a more solid red colouration. This is a defensive mechanism to hide from predators during the twilight. The rostrum is provided with seven teeth on the upper border, the proximal three of which stand upon the carapace, and with five to eight teeth on the lower. The rostrum, a little longer than the carapace, strongly curved upward. Carapace with single orbital margin. Antennular peduncle without erect spine on 3rd segment. Antennal peduncle with basicerite lacking prominent distoventral tooth. Second pereopod with movable finger smooth, not finely serrate, on opposable margin, carpus composed of 9-13 articles. Fifth pereopod with 2 subdistal spines on merus. Fourth pleopod with appendix interna attached to endopod over much of length. The branchiostegal spine is situated much nearer to the middle point of the antero-lateral margin than to the pterygostomian spine. These shrimps are highly priced in marine aquarium trade.

The species is common on the outer reefs to a maximum depth of 37 metres deep. Found at night in the coral crevices. Body very mimetic, easily confused with the substrate. Free-living shrimp, sometimes observed in coral or between sea urchin spines. The specimen obtained was a female, measuring 85.32 mm in total length and 45.63 mm in carapace length.

Remarks

This species spreads over the whole Indo-West-Pacific region, from the Hawaii, Marquesas and Tahiti Islands, southward to Australia and westward to the Malay Archipelago and across the tropical Indian ocean to the Red Sea and east coast of Africa. Previously *S. marmoratus* was reported from the Agatti Island, Lakshadweep, India (Sibi Thaitharanikathil Baby *et al.* 2014) as well as from the Hawaii, Eastern Australia, Red sea, East coast of Africa and Iran (Miyake and Hayashi 1966; Sheibani-Tezerji and Sari 2007; Poupin and Junkcker 2010). The present report is the first record of the species from the south west coast of India.

Fig. 1. Live Specimen of *Saron marmoratus* (Olivier, 1811) collected from Kerala Coast, South-West Coast of India.

Table 1: Morphometric Measurements of *Saron marmoratus* caught from vizhinjam coast, Kerala and comparison of morphometric and diagnostic characters between different findings.

Characters	Present study	Turan *et al.* (2018)	Sheibani-Tezerji and Sari (2007)			Baby *et al.* (2016)	
Location	Vizhinjam Coast, Kerala, India	Iskenrerun Bay, Turkey	Makran coast, Iran			Lakshadweep Archipelago, India	
No. of Specimen	1	1	3			2	
Sex	F	M	F	Juvenile	Juvenile	Juvenile	Juvenile
Total length(mm)	85.32	59.10	62.23	27.41	29.46	34.30	35.24
Carapace length	45.63	22.20	30.74	10.90	12.33	6.35	7.23
Rostral formula upper rostral teeth on the carapace (UC) +upper rostral teeth (UR) + lower rostral teeth (LR)	4+3+6	3+5+7	4+3+6	4+44+6	4+44+ 6	44+3+6	44+3+6
Third maxillipedlength(mm)	41.25	29.50	27.20	8.7	8.97	14.67	5.02
First Pereopod Length (mm)	36.42	25.70	23.98	7.48	7.90	13.86	14.12

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