



Short Communication

Record of the Pronghorn Spiny Lobster, *Panulirus penicillatus* (Malacostraca: Decapoda: Palinuridae) off the South Coast of Oman

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ABSTRACT

The present paper is the first confirmed finding of the pronghorn lobster, *Panulirus penicillatus* in the southern coastal waters of Oman of the Arabian Sea. A single specimen was captured using a bottom set gill net at a depth of 12 m on 26 March 2019. It was male measuring 42.0 cm in total length, 17.2 cm in carapace length and weighed 3.15 kg. Description of morphological characters and illustrations are presented.

Article Information

Received 24 January 2020

Revised 22 May 2020

Accepted 20 July 2020

Available online 30 December 2020

Authors' Contribution

MCH, SSH, NA designed the study. SS collected the specimen from Dhofar, made measurements and provided the images. NA helped in preparation of the manuscript. MCH did the taxonomic identification and wrote the manuscript.

Key words

Arabian Sea, Lobster, Oman, *Panulirus penicillatus*

The pronghorn lobster, *Panulirus penicillatus* (Olivier, 1791), also known as red lobster, tufted lobster, double-spined rock lobster and variegated crayfish is the most widely distributed species among spiny lobsters in the tropical and subtropical Indian and Pacific Oceans, ranging from the Red Sea to South Africa, through the Indian Ocean to Australia, Indonesia, Philippines, Japan, China, and to the islands off the west coast US and Mexico (Fischer and Bianchi, 1984; Holthuis, 1991). The SeaLife Base (Palomares and Pauly, 2019) and IUCN Red List of Threatened Species (Cockcroft *et al.*, 2011) reported *P. penicillatus* within the north-western part of the Indian Ocean in Somalia, Djibouti, Egypt, Saudi Arabia, Yemen, Oman, Pakistan, Iran and India. The *P. penicillatus* is known as heavily exploited throughout its wide range by local fishermen (Holthuis, 1991), but it is not commercially harvested in Oman and there was no report about its actual existence in Omani waters. The *P. penicillatus* was not included in the description of lobsters of Oman (Al-Abdessaalam, 1995) and was not registered in the coastal Omani waters during numerous fish and lobster surveys from mid-1980's to 2018. Present paper is the first record

of the pronghorn lobster, *P. penicillatus* from the southern waters of Oman.

Materials and methods

On 26 March 2019, a local fisherman caught a single specimen of *P. penicillatus* using a bottom set gill net near rocky reef at 12 m depth in Dhofar region between Al-Fizayah and Rakhute (16°46'30 N, 53°39' E). The lobster was purchased from the fisherman and transported frozen to a laboratory in the Fisheries Research Center-Dhofar for the study. Identification of the species was based on the morphological characteristics using the taxonomic key from FAO species identification books (Fischer and Bianchi, 1984; Holthuis, 1991; Chan, 1998). The specimen was preserved in 96% ethanol and deposited in the Fisheries Research Center-Dhofar (FRCS), Salalah, Sultanate of Oman.

Results

The study lobster was male with total length of 42.0 cm, carapace length 17.2 cm, carapace width 13.3 cm and weighing 3.15 kg (Supplementary Fig. 1). The lobster has some peculiarities compared to the description of other specimens (Holthuis, 1991; Chan, 1998; Nair *et al.*, 1973; Radhakrishnan *et al.*, 1990). According to Holthuis (1991) and Chan (1998), the spines on the antennular

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0030-9923/2021/0001-0399 \$ 9.00/0
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plate of *P. penicillatus* differ in size and the posterior pair is larger, while the specimen from Oman has such spines very small and equal in size (Supplementary Fig. 2). Described specimens from the Gulf of Mannar have the median notch in II-V somites (Nair *et al.*, 1973) and from Madras have a median notch on II and III abdominal somites (Radhakrishnan *et al.*, 1990), while in the present specimen all six abdominal somites have uninterrupted straight transverse groove without a median notch. Anterior margin of I-V abdominal pleurons are spinous, pleuron of somite III with 2 spines. The lobster has two short spines on the posterior margin of the pleura of somite VI that is similar to those described by Radhakrishnan *et al.* (1990).

The basic colour pattern of the specimen was dark carapace, speckled with many tiny white and creamy spots, and dark brown abdomen. A conspicuous two rather large white spots are present on the first abdominal somite. Walking legs are dark brown with yellowish longitudinal stripes extending from the base to the tip. Membranes at outer bases of antenna and antennula are light blue.

Discussion

The current finding confirms the presence of the pronghorn lobster in Oman. Obviously, this spiny lobster appeared in the southern waters of Oman from Yemen and given its large size, it is of great interest for fishery. Thus, it is necessary to monitor the distribution of this species in Omani waters.

The *P. penicillatus* is known to live in very shallow rocky and coral reef areas at a depth less than 6 m (Fischer and Bianchi, 1984; Holthuis, 1991; Chan, 1998). Radhakrishnan *et al.* (1990) reported a single specimen from Madras (India) that was caught by a fish trawl at a depth of 25-30 m, but the authors suggested that it might be a stray specimen, probably drifted away from its natural habitat. The present specimen was captured in Dhofar on a rocky reef at a depth of 12 m indicating a greater depth of habitat for the species than was previously known.

The *P. penicillatus* was reported to attain the maximum total body length of 40 cm. The present specimen reached 42.0 cm TL, 17.2 cm CL and 3.15 kg, which is larger than previously stated and is the largest of any registered lobster in Oman. It was previously reported that *P. penicillatus* reaches a maximum total body length of about 40 cm (Fischer and Bianchi, 1984; Holthuis, 1991; Chan, 1998). However, our specimen was larger, reaching 42.0 cm TL, 17.2 cm CL and 3.15 kg. It is the largest lobster recorded in Oman.

Acknowledgement

The authors acknowledge the Fisheries Research Center-Dhofar of the Ministry of Agriculture and Fisheries Wealth and the A.O. Kovalevsky Institute of Biology of the Southern Seas RAS for support of their biological investigations.

Supplementary material

There is supplementary material associated with this article. Access the material online at: <https://dx.doi.org/10.17582/journal.pjz/20200124080116>

Statement of conflict of interest

The authors have declared no conflict of interest.

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