

Short communication

# First Record of the Basket Star *Astrospartus Mediterraneus* (Risso, 1826) (Echinodermata: Ophiuroidea) in the Libyan Waters

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**Abstract** - The basket star *Astrospartus mediterraneus* (Risso, 1826) is reported for the first time in the Libyan waters. The species was collected by trawling at 73 m of depth in Tripoli waters. This note gives details about this observation.

**Keywords** — *Astrospartus mediterraneus*, Basket star, Libyan waters.

## I. INTRODUCTION

The basket star *Astrospartus mediterraneus* (Risso, 1826) is an echinoderm of the family gorgonocephalidae Ljungman, 1867. *A. mediterraneus* is only known from the Mediterranean Sea and North Atlantic Ocean (European waters) ([1]).

In the Mediterranean Sea, the basket star is the only species of the genus *Astrospartus* Döderlein, 1911, and it is known from its western and central basins ([1], [2], [3], [4], [5], [6]). It is also present in the Adriatic, Aegean and Alboran Seas ([7]).

For the south Mediterranean Sea, *A. mediterraneus* is common for the Morocco ([3]) and Algerian ([8]) waters and is already known from the Tunisian waters ([9]). However, it has never been reported from the Libyan waters. Therefore, this note constitutes a first record of the basket star *Astrospartus mediterraneus* in the Libyan waters.

## II. MATERIALS AND METHODS

In August 2020, one individual of *Astrospartus mediterraneus* was collected by trawling at 73 m depth in Tripoli, Libyan waters (32.58985°N, 13.21485°E) (Fig. 1). Accordingly, photos of the specimen were taken for identification, and the specimen was preserved in alcohol.



**Fig. 1** Location where *astrospartus mediterraneus* was collected in tripoli, libyan waters

## III. RESULTS AND DISCUSSION

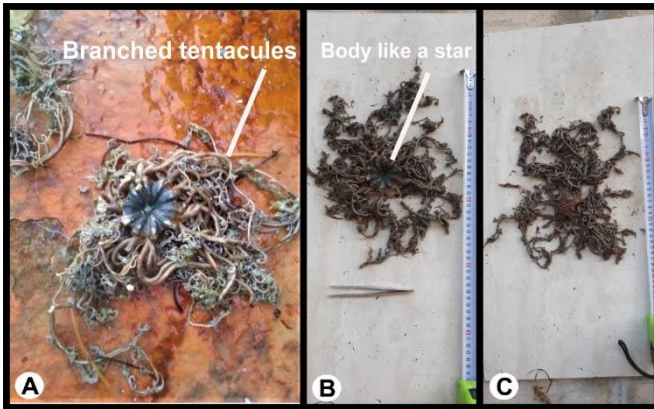
From a morphological point of view, *A. mediterraneus* in the Libyan waters is similar to the specimen described in the Mediterranean Sea and Atlantic Ocean (Figure 2 and Fig. 3). The collected specimen has a grey body with a diameter of 5 cm. Its star body easily distinguishes it with the presence of five tentacles highly branched repeatedly (Fig. 2).

*A. mediterraneus* generally live from 50 meters (rarely 30 m) depth up to 800 meters, on branches of Anthozoan (e.g. *Antipathella subpinnata* (Ellis & Solander, 1786), Fig. 3B), and Gorgons (e.g., *Paramuricea clavata* (Risso, 1826), *Eunicella verrucosa* (Pallas, 1766), Fig. 3A), and Porifera (Fig. 3A) species. It is a filter feeder capturing suspended particles and small planktonic animals via its tentacles ([1, 2], Aguilar.pers.comm.).

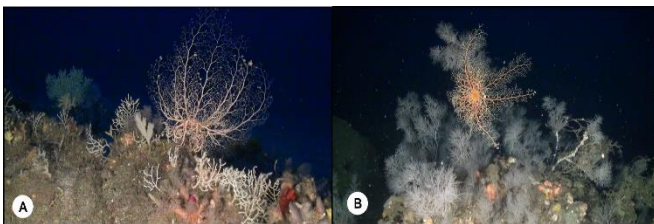


However, *A. mediterraneus* has limited records in the Mediterranean Sea ([2-9]). It is, therefore, should be protected and conserved.

This report highlights the importance of the connection between the fisherman and scientific researcher as an effective monitoring tool to detect new marine species, especially Echinodermata, in the Libyan waters [10]. In this context, it is recommended to enforce citizen-sciences as a powerful tool to report new marine species, especially non-indigenous ones, in the Libyan waters



**Fig. 2** The collected specimen of *A. mediterraneus*. **A:** *A. mediterraneus* with the presence of highly branched tentacles, **B.** Dorsal view of the specimen; **C.** Ventral view of the specimen



**Fig. 3** Photographed specimen of *A. mediterraneus* from a different region. **A.** *A. mediterraneus* associated with *Eunicella verrucosa* and Porifera species from Chella Bank (Alboran Sea, Western Mediterranean Sea). **B.** *A. mediterraneus* associated with *Antipathella subpinnata* from Sao Vicente Canyon (Atlantic Portugal). Photos credit: © Ricardo Aguilar, OCEANA

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