# FIRST RECORDS OF THE LITTLE SLEEPER SHARK, SOMNIOSUS ROSTRATUS, IN MALTESE FISHERIES' LANDINGS

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### Abstract

In 2011, two little sleeper sharks, *Somniosus rostratus*, were captured from the Central Mediterranean, making them the first two records of this shark species landed in the Maltese Islands. These records fall within the outer most eastern distribution range of the species

Keywords: Elasmobranchii, Fisheries, South-Central Mediterranean

#### Introduction

The little sleeper shark, Somniosus rostratus (Risso, 1826), is a deep-sea shark living in a depth range of 180m to 2220m, with a geographic distribution is limited to the Northeast Atlantic Ocean and the Mediterranean Sea [1,2,3], with absent to very rare occurrence in the Eastern Mediterranean basin [4, 5]. In 2009, it has been evaluated as Data Deficient by IUCN, due to its rarity possibly related to a natural low population density and lack of records within scientific surveys [6, 7]. In the Mediterranean Sea, Somniosus rostratus, as being evaluated as Least Concern [8], as it occurs below the depth of many demersal fisheries, while the restricted fishing activities below 1000m in the Mediterranean offering protection to this deep-sea species. Nonetheless, this species is still vulnerable at shallower parts of its depth range, whereas the lack of scientific knowledge on the species and its small geographical distribution range make any data available on this species valuable.

## Methods

As part of ongoing fisheries and conservation research on elasmobranchs ongoing since 2002, the conservation biology research group conducts regular fishmarket surveys to keep detailed records of elasmobranch species landed in the Maltese Islands. Any first time landed species is collected for further studies. This paper presents one such record.

## **Results and Discussion**

In June, 2011, two specimens of *Somniosus rostratus*, were landed at the Maltese fisheries. These two specimens represent the first two landing records of this species amongst the fisheries species landed in the Maltese Islands. They were caught together as by-catch on long-lines off the Northeast of Malta. They were identified on the basis of their morphological characters [2,9]. These two specimens were both females having a total length of 935mm and 1036mm (Figure 1) respectively. The smaller specimen was an immature female with a gonosomatic index [(GW/TW)\*100] of 0.5, while a gonosomatic index of 19.2 was noted for the second specimen Additionally the second specimen had expanded and round uteri full of yolk. The hepatosomatic index [(LW/TW)\*100] was 12.4 and 9.7 respectively, indicating a large liver in both specimens, as expected in sub-adult and adult shark specimens [10].



Fig. 1. Specimen of *Somniosus rostratus* landed at the Fish market of the Maltese Islands in 2011.

#### References

- 1 Barrull J. and Mate I., 2001. First record of a pregnant female little sleeper shark *Somniosus rostratus* (Risso, 1826) on the Spanish Mediterranean coast. Boletin Instituto Espanol de Oceonografia, 17(4), 323-325.
- 2 Ebert D.A. and Stehmann M.F.W., 2013. Sharks, batoids, and chimaeras of the North Atlantic. FAO Species Identification Guide for Fishery Purposes, Rome. pp523.
- 3 Kyne P. and Simpfendorfer C. A., 2007. A collation and summarization of available data on deepwater chondrichthyans: biodiversity, life history and fisheries., IUCN SSC Shark Specialist Group. pp137.
- 4 Bariche M., 2012. Field identification guide to the living marine resources of the Eastern and Southern Mediterranean. FAO Species Identification Guide for Fishery Purposes, Rome, pp610.
- 5 Compagno L.J.V., 1984. Sharks of the world. An annotated and illustrated catalogue of sharks species known to date Hexanchiformes to Lamniformes. FAO species guide, Rome. pp249.
- 6 SÈret B., Guallart J., Vacchi M., Mancusi C., and McCormack C., 2009. Somniosus rostratus, IUCN Red List of Threatened Species. Version 2012.1., (www.iucnredlist.org).
- 7 Cavanagh R.D. and Gibson C., 2007. Overview of the Conservation Status of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea. Gland, Switzerland and Malaga, Spain: IUCN, 2007, p. 442.
- 8 Abdul Malak D., Livingstone S.R., Pollard D., Polidoro B.A., Cuttelod A., Bariche M., Bilecenoglu M., Carpenter K.E., Collette B.B., Francour P., Goren M., Hichem Kara M., Massutl E., Papaconstantinou C. and Tunesi L., 2011. Overview of the conservation status of the marine fishes of the Mediterranean Sea. IUCN, Gland, Switzerland and Malaga, Spain. p.61.
- 9 Yano K., Stevens J.D., and Compagno L.J.V., (2004). A review of the systematics of the sleeper shark genus Somniosus with redescriptions of *Somniosus (Somniosus) antarcticus* and *Somniosus (Rhinoscymnus) longus* (Squaliformes: Somniosidae). Ichthyological Research, 51(4) 360-373.
- 10 Yigin C.C. and Ismen A., 2013. Reproductive Biology of Spiny Dogfish Squalus acanthias, in the North Aegean Sea. Turkish Journa of Fisheries and Aquatic Sciences, 13, 169-177