

SHORT NOTES

GIOVAN BATTISTA GIUSTO & SERGIO RAGONESE

FINDING OF THE ALMOST DISAPPEARED ANGEL SHARK  
(*Squatina squatina*, LINNAEUS, 1758) (*Chondrichthyes Squatinidae*),  
OFF THE SOUTH COASTS OF SICILY  
(MEDITERRANEAN SEA)

*Ritrovamento del quasi scomparso squalo *Squatina squatina* al largo delle coste meridionali Siciliane*

Angel sharks (Squatinidae) are benthic, bottom-dwelling, non batoid, bizarrely-shaped elasmobranchs that occur circumglobally in tropical and temperate waters and have been found at depths ranging from near shore to more than 1000 m (COMPAGNO, 1984). Among the three species traditionally recognized in the Mediterranean Sea (Sawback angel shark, *Squatina aculeata*, Cuvier, 1829, Smoothback angel shark, *Squatina oculata*, Bonaparte, 1840, and Angel shark, *Squatina squatina*, Linnaeus, 1758) only the latter species has been commonly reported in the historical faunistic list concerning the grounds off the south coasts of Sicily (RAGONESE *et al.*, 2013). Nowadays, *Squatina squatina* is almost disappeared and only one specimen has been sampled in 1985 (but close to Malta Island) within more than 25 years of experimental bottom trawl surveys carried out in the whole Strait of Sicily (RAGONESE *et al.*, 2013).

In October 18<sup>th</sup> 2011, a male specimen of Angel shark has been caught by a trammel net set by the artisanal vessel Barracuda (MV0849) at 85 m of depth at 11 nautical miles SW off Mazara del Vallo (N 37°31'00"; E12°26'00"; South Sicily, Central Mediterranean Sea). Given the current rarity of the finding, the crew of Barracuda decided to bring the specimen to the scientific Institute (IAMC-CNR) of Mazara. The Angel shark was photographed (Fig. 1), measured and identified according to COMPAGNO (1984), SERENA (2005) and IGLESIAS (2011) systematic keys. On the base of the main diagnostic features (1<sup>st</sup> dorsal fin in line with pelvic fin rear extremity, pectoral fins only marginally covering the anterior margin of pelvic fins, nasal barbeels simple, dermal folds on sides of head with triangular lobe, and lack of large spines on midline of back and tail) the specimen was classified as *Squatina squatina*.

The basic morphometric measures were: 1495 mm, total length (herein L); 23660 g, total body weight; 140 mm, snout L; 55 mm, snout height (herein H); 910 mm, snout – 1st dorsal fin L; 330 mm, head L; 55 mm, pre orbital L; 19 mm, eye L; 350 mm, body H; 70 mm, base of 1<sup>st</sup> dorsal fin L; 160 mm, 1st dorsal fin H; 690 mm, lateral line L; 160 mm, base of pectoral fin L; 425 mm, pectoral fin H; 230 mm, base of pelvic fin L; 380 mm, pelvic fin H; 240 mm, base of caudal fin L; and 220 mm, caudal fin H.

Notwithstanding Angel sharks have represented a low value by-catch of Mediterranean commercial fisheries, their low resilience to exploitation has determined the almost disappearance from

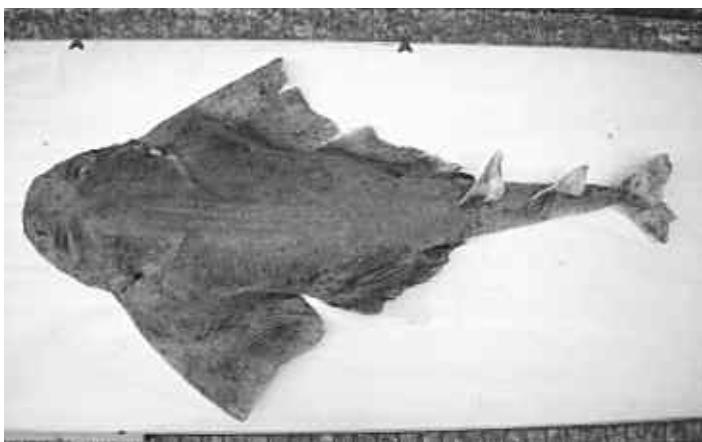


Fig. 1 — *Squatina squatina* specimen (male, 1495 mm total length) caught by a trammel net set off the South coasts of Sicily (FAO - GFCM Geographical Sub Area n° 16; Central Mediterranean Sea).

the bottoms and their inclusion among the endangered (*S. aculeata* and *S. oculata*) and even critically endangered (*S. squatina*) in the red list species (FROESE & PAULY, 2013).

The present finding is the first documented occurrence of *S. squatina* off South Sicily coast (GFCM Geographical Sub Area n° 16) in the last 30 years, in spite of the continuous survey monitoring program and large reduction in fishing capacity of the Sicilian fleets; all these factors raise a deep concern about the recovering capability of such sensible animals.

*Acknowledgements* — Thanks to the skipper Luciano Giacalone and the crew of the fishing boat “Barracuda” for having provided the Angel shark specimen. Thanks also to Roberta Ragonese for the photo.

#### BIBLIOGRAPHY

- COMPAGNO L.J.V., 1984. Sharks of the World: An Annotated and Illustrated Catalogue of Shark Species Known to Date. Volume 4, Part 1. Hexanchiformes to Lamniformes. FAO, Rome.
- FROESE R. & PAULY D. (eds), 2013. FishBase. World Wide Web electronic publication. Fishbase website. Available: [www.fishbase.org](http://www.fishbase.org). Accessed 15 May 2013.
- IGLÉSIAS S.P., 2012. Chondrichtyens du Nord-est Atlantique et de la Méditerranée. Une classification naturelle basée sur des spécimens de collection, avec barcodes ADN et photographies standardisées. Vol. I (plates), Provisional Version 06, 01 avril 2012. 83 p. Mnhn website. Available: <http://www.mnhn.fr/iccanam/>. Accessed 23 Nov 2013.
- RAGONESE S., VITALE S., DIMECH M., & MAZZOLA S., 2013. Abundances of Demersal Sharks and Chimaera from 1994-2009 Scientific Surveys in the Central Mediterranean Sea. *PLoS ONE* 8(9): e74865. doi:10.1371/journal.pone.0074865
- SERENA F., 2005. Field Identification Guide to the Sharks and Rays of the Mediterranean and Black Sea. Species Identification Guide for Fishery Purposes. FAO, Rome, 97 pp.

*Authors' address* — G.B. GIUSTO, S.RAGONESE, IAMC-CNR, Via L. Vaccara, 61 - 91026 Mazara (TP) (I); e-mail: battista.giusto@iamc.cnr.it