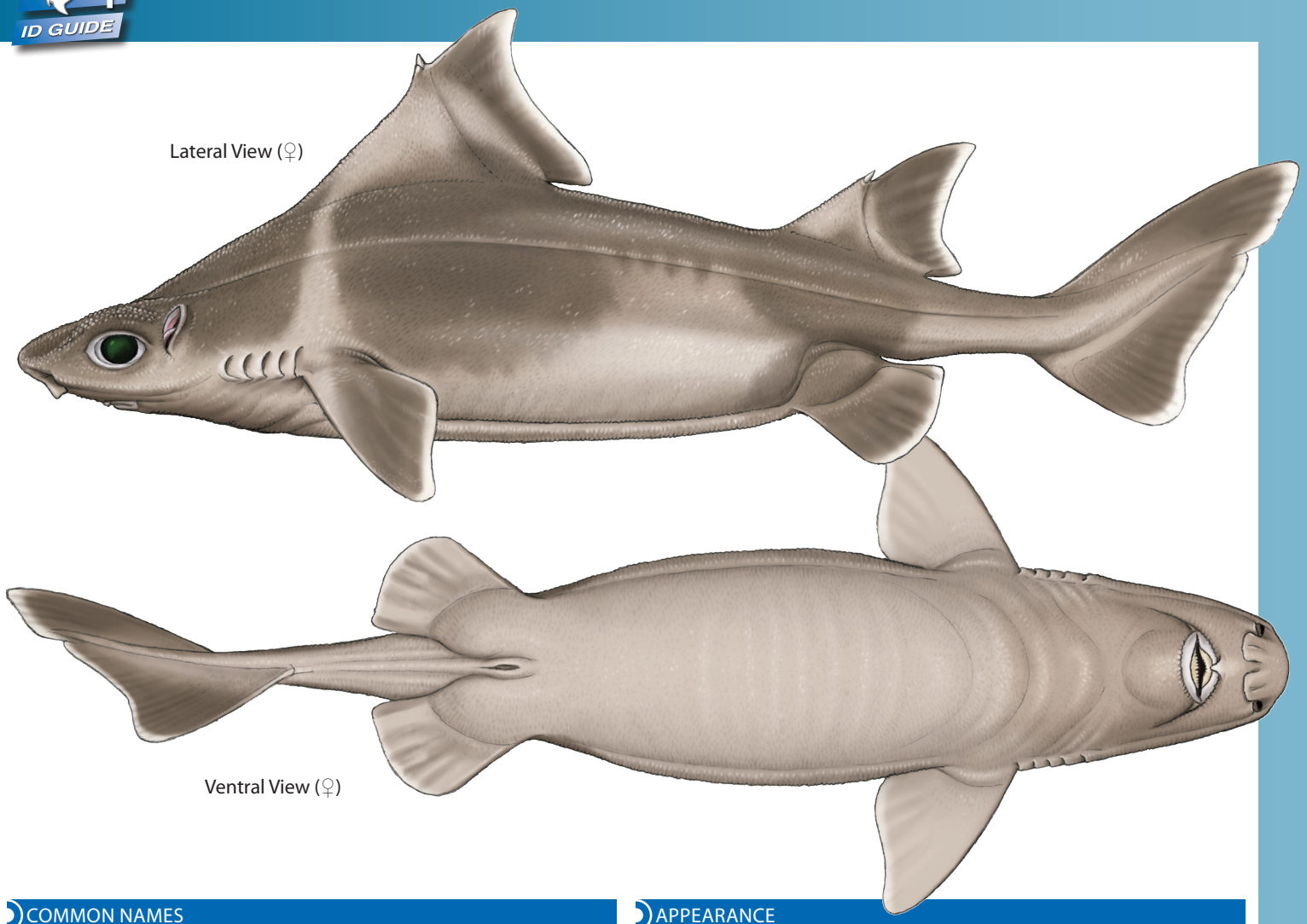
# Angular Rough Shark

## *Oxynotus centrina*



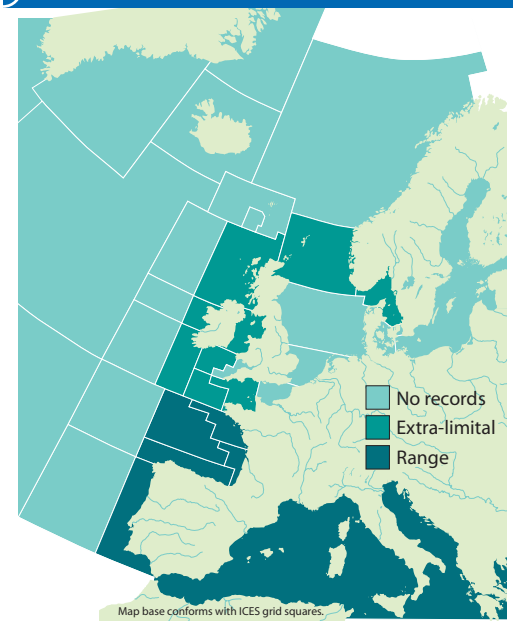

## COMMON NAMES

**Angular Rough Shark**, Centrina Shark, Flatiron Shark, Prickly Dogfish, Centrine Commune (Fr), Cerdo Marino (Es).

## SYNONYMS

*Squalus centrina* (Linnaeus, 1758), *Centrina salviani* (Risso, 1826), *Centrina oxynotus* (Swainson, 1839), *Centrina vulpecula* (Moreau, 1881).

## DISTRIBUTION




The Angular Rough Shark has a core range from the Bay of Biscay to Senegal including the Mediterranean Sea. It has been found as far north as the British Isles and rarely to the western Baltic Sea. It is known as far south as South Africa (Compagno, 1984).

## APPEARANCE

- Compressed body, triangular in cross section.
- Broad, flattened head with flat, blunt snout.
- Two large, sail-like dorsal fins.
- No anal fin.
- Heavy ridges over eyes covered with enlarged denticles.
- Extremely large, vertically expanded spiracles.
- Grey or grey-brown dorsally.
- Darker blotches on head and sides.
- Light horizontal line on cheek below the eye.

One of only two species of Oxynotidae found in the northeast Atlantic, the Angular Rough Shark is unlikely to be confused with any species other than the Sailfin Rough Shark, *Oxynotus paradoxus*. The most useful features in distinguishing these species are the spiracles, dorsal fins and dermal denticles. The spiracles of the Angular Rough Shark are very large and vertically expanded while the spiracles of the Sailfin Rough Shark are relatively small and almost circular. The first dorsal fin spine of the Sailfin Rough Shark leans backwards while it leans forwards in the Angular Rough Shark (Avezedo *et al*., 2003). For details and SEM images of the differing dermal denticles see Avezedo et al (2003).

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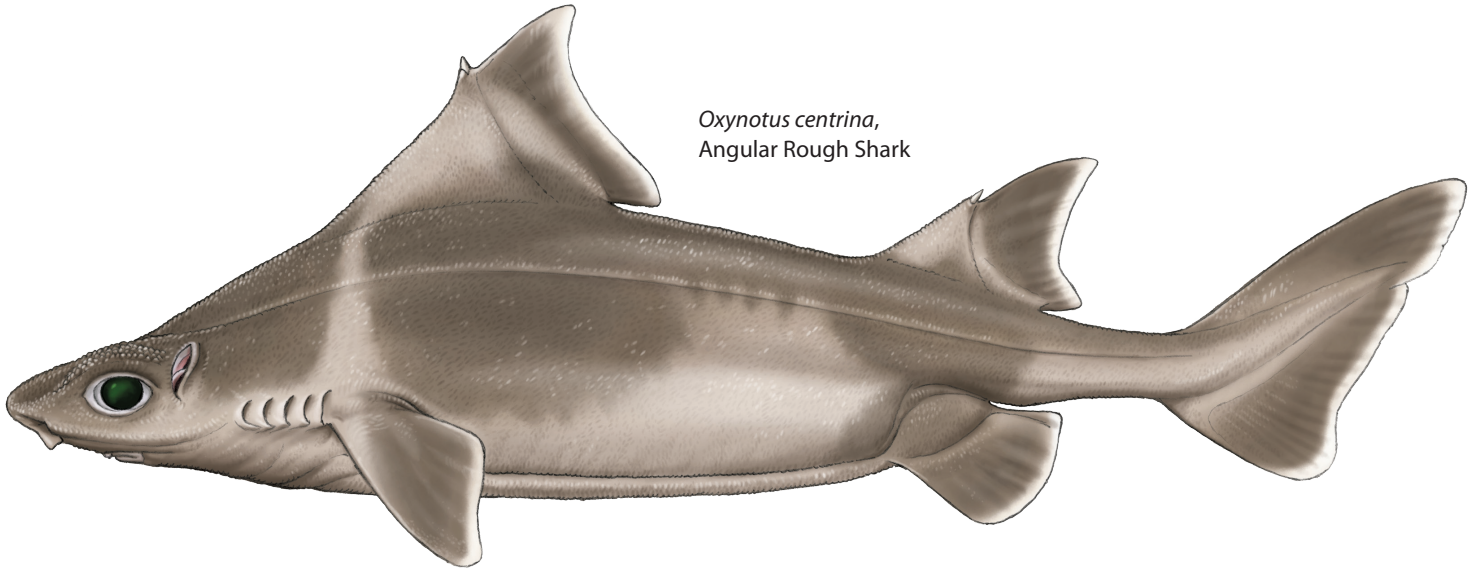
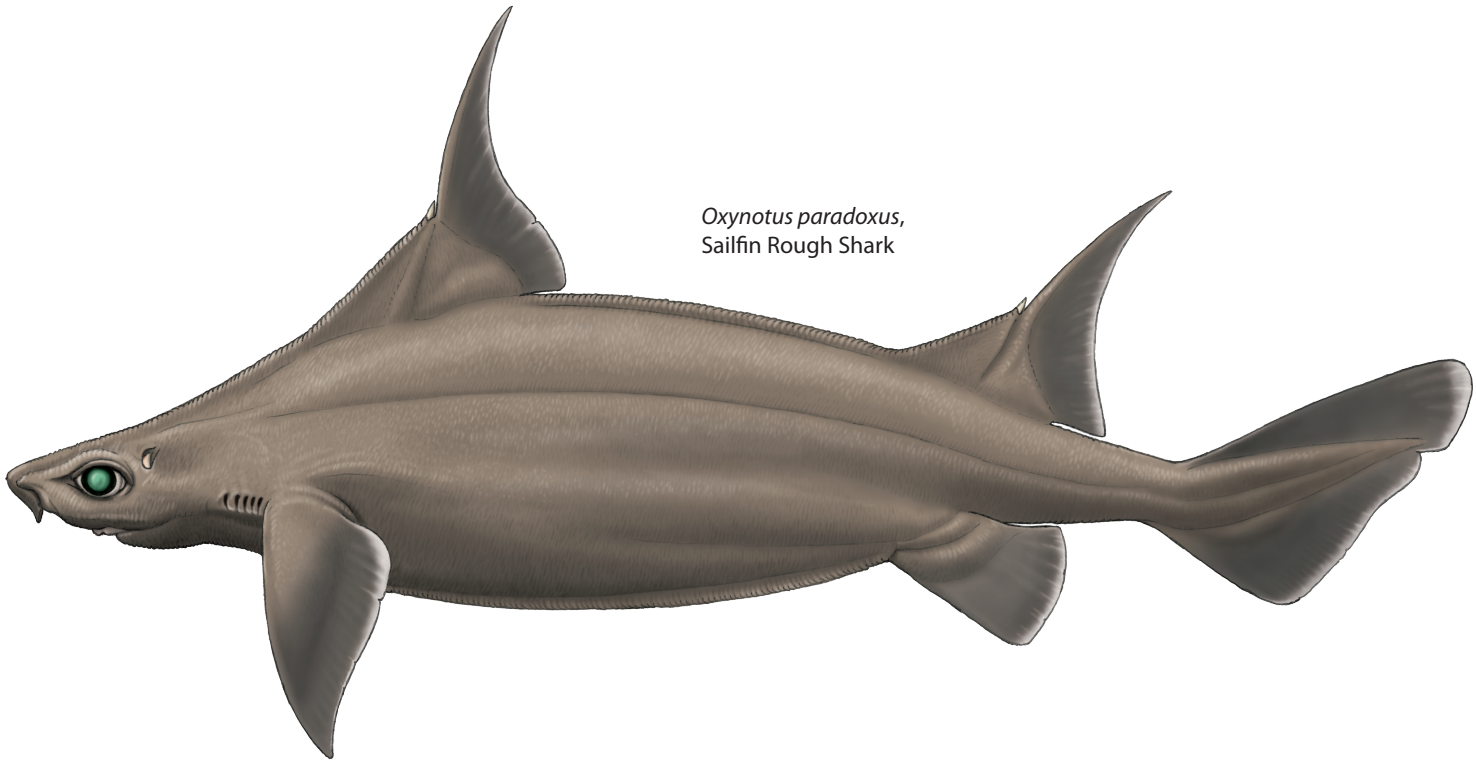
# Angular Rough Shark

## SIMILAR SPECIES

*Oxynotus paradoxus*, Sailfin Rough Shark



*Oxynotus centrina*,
Angular Rough Shark



*Oxynotus paradoxus*,
Sailfin Rough Shark

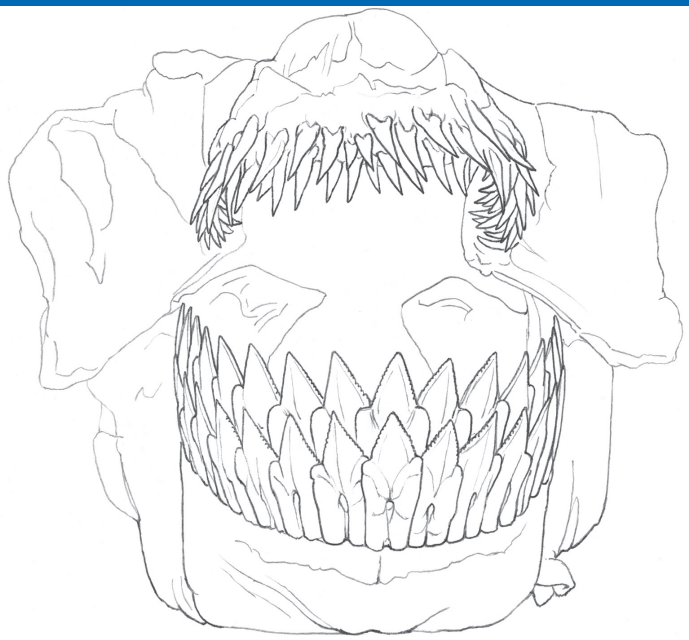
(Not to scale)

# Angular Rough Shark

*Oxynotus centrina*

## TEETH

The upper teeth are lanceolate, the lower teeth blade-like and arranged into less than 12 rows (Compagno, 1984).



## ECOLOGY AND BIOLOGY

### HABITAT

The Angular Rough Shark is a little known shark of the continental shelf and upper slope from 60–660m, most common below 100m. In the northern Mediterranean it is rarely found deeper than 200m. There is a single record of an individual captured at 800m (Sion *et al.*, 2004). It is most commonly associated with coralline and muddy substrates (Bradaï *et al.*, 2007).

### EGGCASE

N/A

### DIET

The feeding habits of the Angular Rough Shark are poorly understood but it is known to feed on polychaetes, crustaceans and molluscs (Bradaï *et al.*, 2007).

### REPRODUCTION

It has been reported that both male and female Angular Rough Sharks mature at 50–70cm. Some studies have shown a slightly larger size at maturity for females than males (66cm as opposed to 60cm). It is an ovoviviparous species producing litters of 10–12 pups annually. These pups measure between 21 and 24cm in length at birth (Bradaï *et al.*, 2007).

Supported by:

# Angular Rough Shark

## COMMERCIAL IMPORTANCE

The Angular Rough Shark constitutes a minor bycatch of offshore trawl fleets. It is sometimes utilised for fishmeal, oil and dried-salted for human consumption (Compagno, 1984). It has been reported that fishermen in the Mediterranean believe rough sharks to be bad luck and discard them immediately on capture (Bradaï *et al*., 2007).

## IUCN RED LIST ASSESSMENT

Vulnerable (2007).

## THREATS, CONSERVATION, LEGISLATION

The Angular Rough Shark is taken in the Mediterranean as bycatch by bottom and pelagic trawl fisheries. As its habitat lies entirely in the depth range in which commercial fisheries operate, bycatch mortality is likely to be high. The legal minimum mesh size in much of the Mediterranean is approximately 20mm, meaning that the probability of capture before breeding is high. Throughout much of the Mediterranean rough sharks are discarded, although it is not known what the survival rate of these individuals is. In the northeast Atlantic, deepwater trawl fisheries are expanding in both range and effort with regulation often ineffective or none existent. However, species specific population data from these fisheries is lacking, making quantifying any declines difficult. There are currently no management plans in place for the conservation of the Angular Rough Shark (Bradaï *et al*., 2007).

## HANDLING AND THORN ARRANGEMENT

- Handle with care.
- Large dorsal spines.
- Abrasive skin.
- Sharp teeth.

## REFERENCES

AVEZEDO, J. M. N., SOUSA, F. L., BRUM, J. M. M. 2003. Dermal Denticles and Morphometrics of the Sailfin Roughshark *Oxynotus paradoxus* (Elasmobranchii, Oxynotidae), with Comments on its Geographic Distribution. *Cybium*, 27 (2): 117–122.

BRADAÏ, M. N., SERENA, F., BIANCHI, I. (MEDITERRANEAN), EBERT, D. A. (SOUTH AFRICA). 2007. *Oxynotus centrina*. In: IUCN 2009. IUCN Red List of Threatened Species. Version 2009.1. www.iucnredlist.org.

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