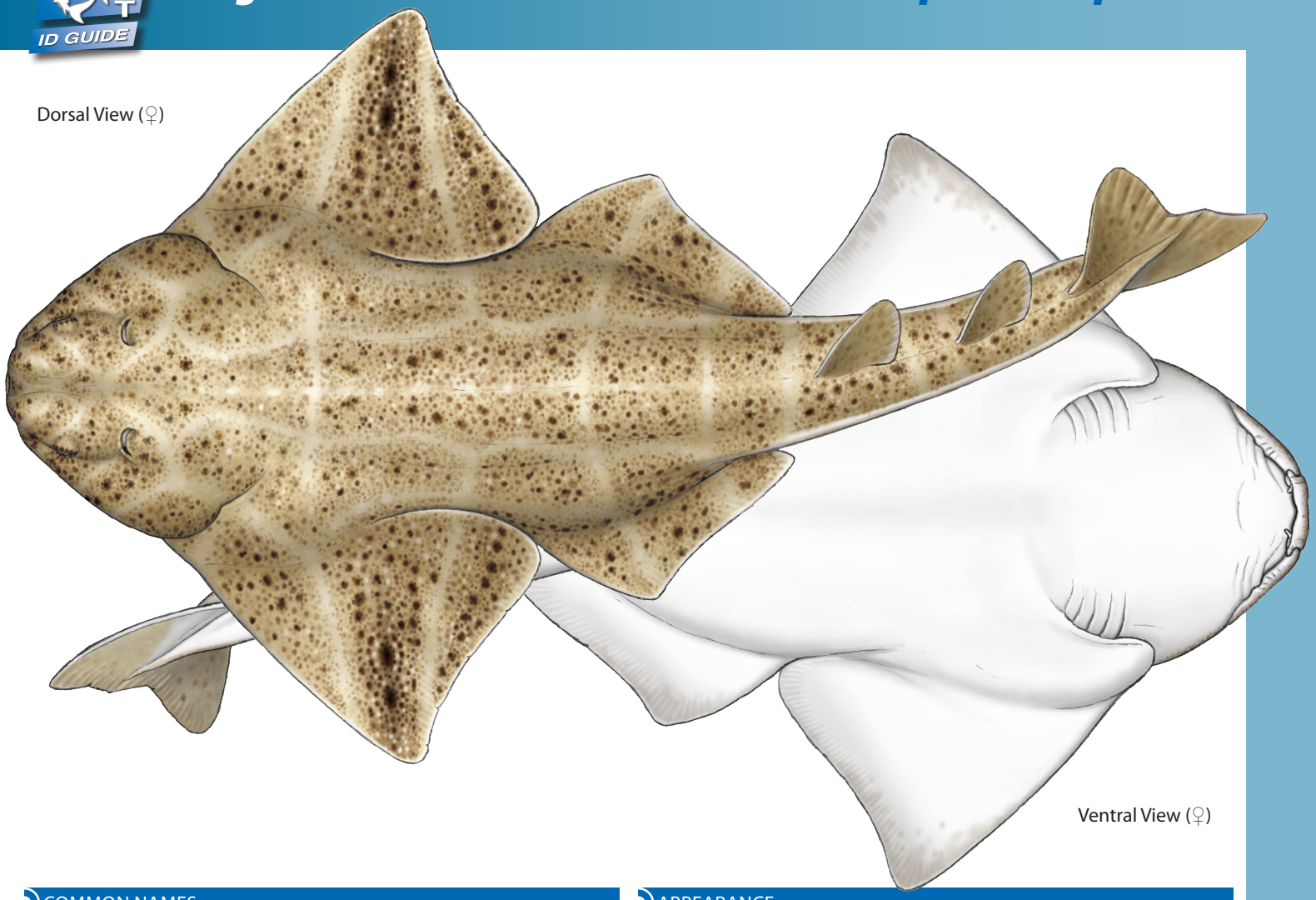
Angelshark

Squatina squatina



COMMON NAMES

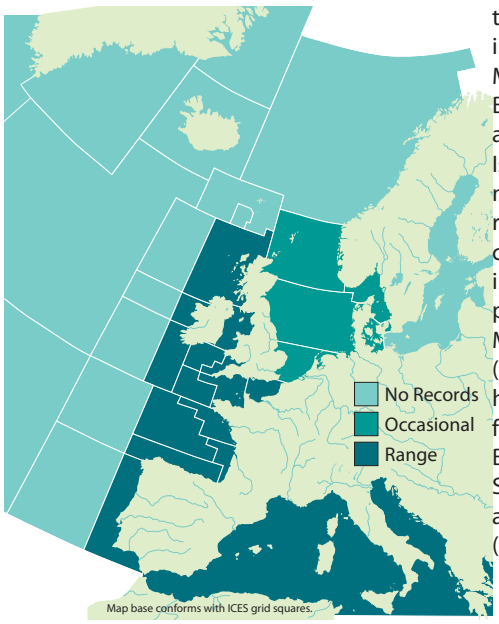
Angelshark, Monkfish, Angel Fiddle Fish, Angel Puffy Fish, Angel Ray, Angelfish, Fiddle Fish, Ange de Mer Commun (Fr), Angelote (Es).

SYNONYMS

Squatina vulgaris (Risso, 1810), *Squatina angelus* (Blainville, 1816), *Squatina laevis* (Cuvier, 1817), *Squatina lewis* (Couch, 1825), *Squalraia acephala* (de la Pylaie, 1835), *Squalraia cervicata* (de la Pylaie, 1835), *Squatina europaea* (Swainson, 1839).

DISTRIBUTION

The Angelshark was historically found from Norway and Sweden to North Africa, including the Mediterranean and Black Seas, Iceland and the Canary Islands. Its range is now significantly reduced and it is considered extinct in the North Sea and parts of the northern Mediterranean (Morey *et al*., 2006). It has been extirpated from the Bay of Biscay, the Adriatic Sea, the Irish Sea and English Channel (Dulvey *et al*., 2003).



APPEARANCE

- Dorsoventrally flattened with large pectoral and pelvic fins.
- Two large dorsal fins on tail.
- Large caudal fin.
- Conical nasal barbs and smooth or weakly fringed nasal flaps.
- No eyespot pattern on body.
- Grey to red-brown, sometimes to green-brown.
- Small white spots and scattered dark blotches.
- Light lines covering body in some populations.
- To maximum length of at least 183cm, possibly to 244cm.

The Angelshark is an extremely distinctive species in the northeast Atlantic. Dorsoventrally flattened it resembles a ray (Torpediniformes in particular) more than a shark, although the pectoral fins are not fused to the head. These fins are very high and wide with broadly rounded rear tips. Like the Torpediniformes, the dorsal and caudal fins are large and well developed with no associated spines. Small spines may be present on the midline from the head to the first dorsal fin and between the dorsal fin bases. They can also be found on the snout and above the eyes. The eyes are small in relation to the body and the spiracles are horizontally elongated (Compagno, 1984).

Dorsally the Angelshark can be grey to reddish brown and occasionally to green brown. There is normally a pattern of small white spots and scattered dark blotches (Compagno, 1984). In the Canary Islands, animals are regularly encountered by divers with lattice pattern of light lines across the back which camouflages them perfectly against the black and white sand (Murch, 2008). Ventrally it is paler to white. The largest recorded size is 183cm total length, although there have been unsubstantiated reports of individuals up to 244cm in length (Compagno, 1984).

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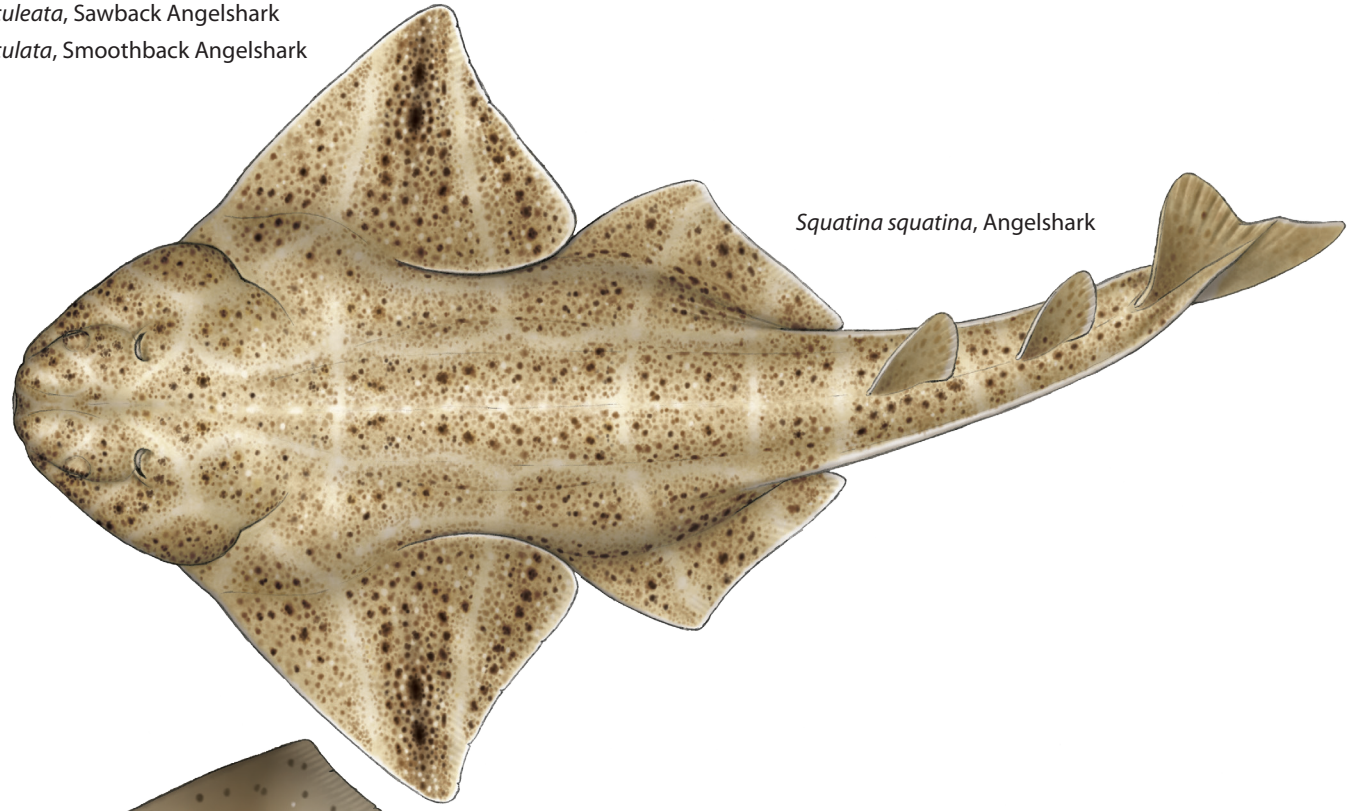
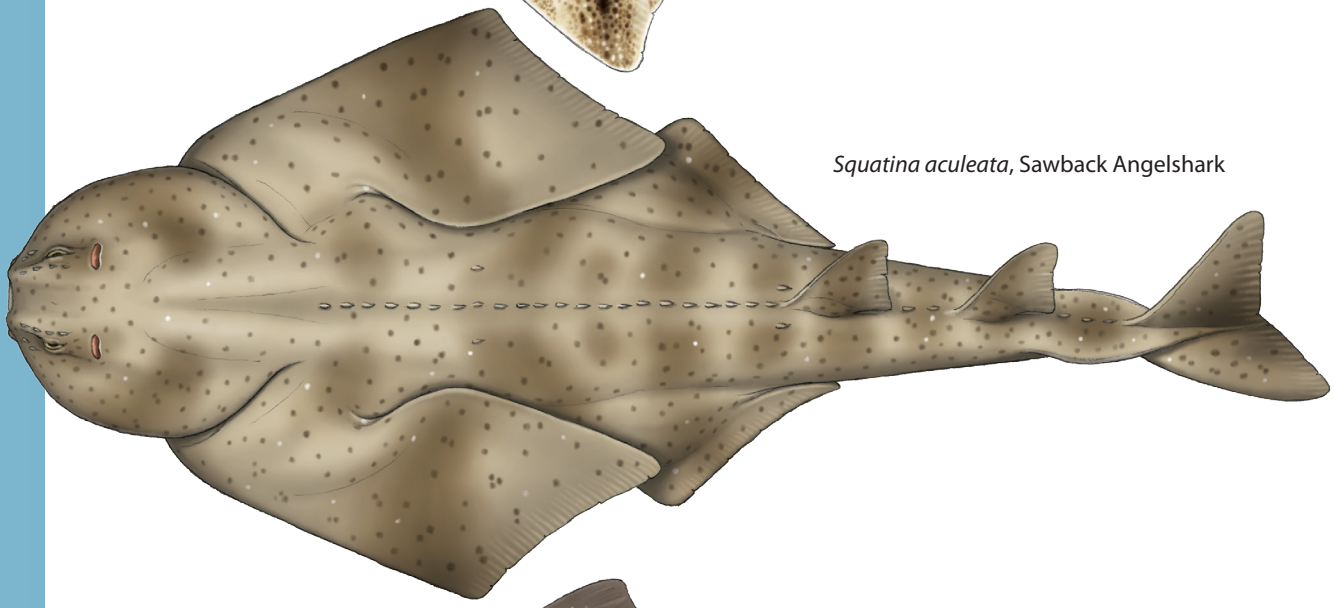
Angelshark

SIMILAR SPECIES

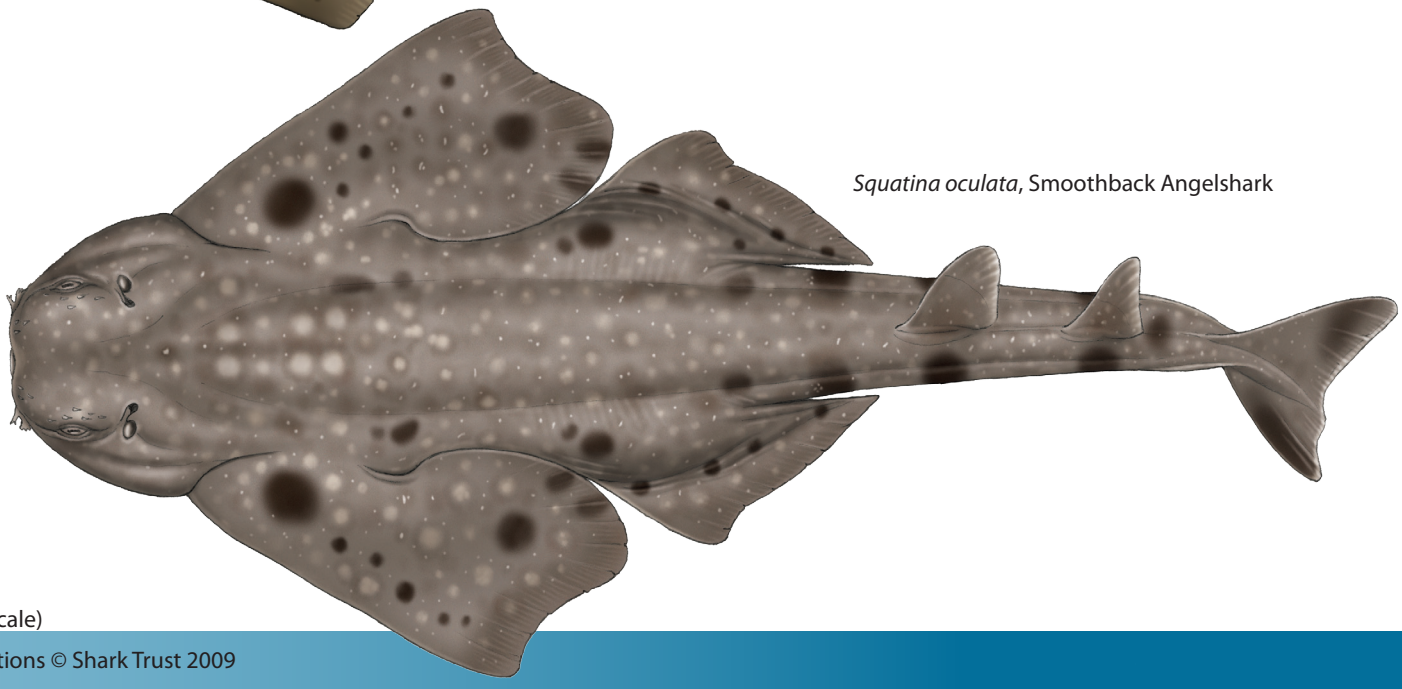
Squatina aculeata, Sawback Angelshark
Squatina oculata, Smoothback Angelshark



Squatina squatina, Angelshark



Squatina aculeata, Sawback Angelshark



Squatina oculata, Smoothback Angelshark

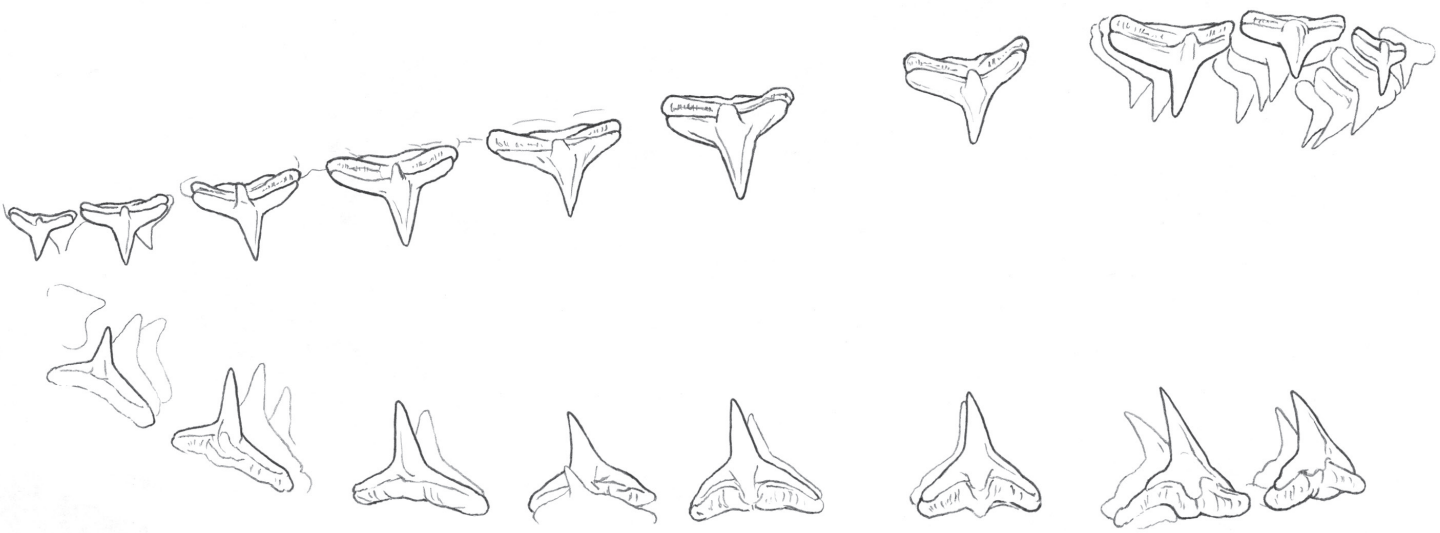
(Not to scale)

Angelshark

Squatina squatina

TEETH

Large, sharp, single-cusped teeth, 18–22 in each jaw (Ellis, 2003).



ECOLOGY AND BIOLOGY

HABITAT

The Angelshark is found around coasts and estuaries from 5–150m. A nocturnal species, it spends the day resting on soft substrate such as sand and mud with only its eyes and spiracles showing. Hunting at night, it can be seen swimming strongly off the bottom. In the north of its range the Angelshark is migratory, moving north during the summer and south during the winter (Compagno, 1984).

DIET

The Angelshark feeds primarily on bony fishes, especially flatfishes but also other demersal fishes and skates, crustaceans and molluscs (Compagno, 1984). Specific prey items include Hake (*Merlucius merlucius*), Sparids (*Pagellus erythrinus*), grunts (*Pomadasys* spp.) flatfish (*Bothus* spp., *Citharus linguatula*), Sole (*Solea solea*), Squid (*Loligo vulgaris*), Cuttlefish (*Sepia officinalis*, *Sepiola* spp.), and crustaceans (*Dorippe lanata*, *Geryon tridens*, *Dromia vulgaris*, *Goneplax rhomboides*, *Macropipus corregatus*, *Atelecyclus rotundatus*). It occasionally swallows more unusual items including eelgrass and seabirds (a single record of a cormorant exists) (Morey *et al*., 2006).

REPRODUCTION

In the Mediterranean, females reach sexual maturity at 128-169cm in length. Males mature smaller at 80–132cm. Age at maturity and longevity are not currently known. An ovoviviparous species, the Angelshark gives birth to litters of 7–25 pups which can vary from 24–30cm in length, apparently in relation to the size of the female. The gestation period is 8–10 months with parturition occurring around July in the north of its range. In the Mediterranean birth occurs earlier around December and January (Morey *et al*., 2006).

EGGCASE

N/A

Angelshark

COMMERCIAL IMPORTANCE

There are currently no directed fisheries for the Angelshark but it is taken as bycatch in trawl, longline and set net fisheries across much of its reduced range. If landed its flesh can be used for human consumption, either fresh or dried-salted, its liver for oil and its carcass can be processed for fishmeal. It is often discarded however (Morey *et al*; 2006).

THREATS, CONSERVATION, LEGISLATION

Due to its nature of lying motionless on sandy and muddy bottoms during the day, the Angelshark is highly susceptible to trawl fisheries. Combined with its relatively large size and the increase in trawl fishing effort in the northeast Atlantic and Mediterranean over the last 50 years, it has been significantly affected by fishing mortality across its range. Anthropogenic disturbance through habitat degradation and an increase in recreational scuba diving may have also had an adverse effect on populations (Morey *et al*., 2006).

Evidence of dramatic declines in Angelshark populations can be found from as far back as the start of the 20th century. Historic data from a tuna trap operating in the northern Tyrrhenian Sea shows that between 1898 and 1905, 134 specimens were caught. Between 1914 and 1922, this had dropped to 15 specimens. This reduction in numbers coincides with the start of trawling activity in the area. Currently, catches are reported from Albania, France, Malta, Tunisia and Turkey, combined catches from which dropped from 17 tons a year in the 1980's to 1 or 2 tons a year in the 1990's (Morey *et al.*, 2006).

The Angelshark has been proposed for protection under both the OSPAR Priority List of Threatened Species and the UK Wildlife and Countryside Act (1981), but only the latter application was successful. This means it is protected from killing, injury or taking up to 6 nautical miles from English and Welsh coastal baselines. It is listed under Annex III of the Barcelona Convention as it is a species whose exploitation is limited in the Mediterranean.

In January 2009, all species of angelshark received protection from the European Council in all EC waters, meaning that they cannot be targeted or retained if taken as bycatch. As elasmobranches have no swim bladder that can overinflate or rupture, they are more likely to survive capture and release than teleost fish (Defra, 2008).

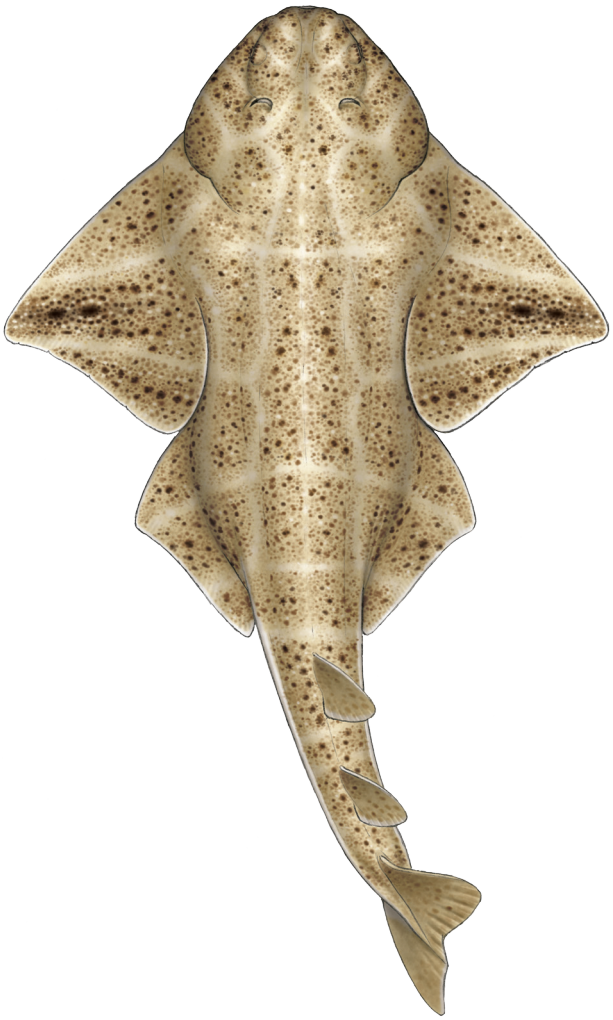
Throughout the rest of its range, the Angelshark is indirectly protected in 3 marine reserves around the Balearic Islands. These reserves, along with places in the Canary Islands, are the only areas left in the Angelshark's former range where it can still be regularly encountered, leading to an increase in recreational dive tourism (Murch, 2008).

IUCN RED LIST ASSESSMENT

Critically Endangered (2006).

HANDLING AND THORN ARRANGEMENT

- Handle with care.
- Sharp teeth and powerful jaws.
- Abrasive skin.



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