MORE LIKE MAMMALS THAN FISH:
Blue sharks in the Mediterranean

Six out of 48 embryos found in the uterus of a gravid female.

Blue shark is widely distributed in the world's oceans mainly in temperate and tropical waters and ideally suited to the challenges of the open sea. Its long slender body, long snout, elegant, scimitar-shaped pectoral fins, and flanks of brilliant ultramarine render this shark easily recognizable. In the Mediterranean Sea it is found from the Strait of Gibraltar in the west to the Lebanon coasts in the east and from the African to European continental shelf. Its spatial distribution shows a strong gradient whereby its occurrence increases in an east to west direction (Megalofonou *et al.,* 2005).

Until now its stock structure remains uncertain. Nevertheless, the available historical data from the swordfish fisheries indicate that its abundance in the Mediterranean Sea has shown a remarkable decline in the last thirty years, primarily as a result of increased fishing pressure. This vulnerability to overexploitation stems from their unique biology, which in many ways makes them more like mammals than fish.

A recent study, published in *JMBA*, provides new data on the biological characteristics of the species in the Mediterranean Sea. We know now that the majority of the Mediterranean blue shark caught has not reached maturity, since more than 80% of the catches are composed of immature and maturing specimens from 1–4 years old. The smallest free-swimming blue shark observed in the catches was 55 cm while the largest one was 368 cm in total length.

The sex-ratio, constantly in favour of males in the eastern Mediterranean Sea, is similar to that reported in the eastern North Atlantic Ocean and the Strait of Gibraltar but inverse to those reported in the western North Atlantic and in British and Irish waters, reflecting probably geographical sexual segregation.

Blue shark caught accidentally by a longline vessel targeting swordfish in the eastern Mediterranean Sea.

The presence of many mature specimens as well as gravid females with embryos in the Ionian Sea supports the evidence that the blue shark reproduces in the Mediterranean basin. Probably gravid females occupy a niche that is different from that of the rest of the specimens. The blue shark is a viviparous species, nourishing the young in the uterus and giving birth to live pups during spring after a gestation period of almost 8 months. Litters usually consist of between 30 to 50 individuals of a. calculated total length of 30.6 cm at birth

Females mature at a relatively larger size than males. Total length at 50% maturity was estimated to be almost 203 cm for males and 215 cm for females, while age at 50% maturity was estimated at 4.9 years for males and 5.5 years for females. These results suggest that similar aged in the Mediterranean Sea blue shark possibly reach sexual maturity at a smaller size than blue shark in the Atlantic Ocean.

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Also Published in *JMBA*
Megalofonou, P., Damalas, D. & De Metrio, G. Biological characteristics of blue shark, *Prionace glauca*, in the Mediterranean Sea.

Blue shark on board vessel targeting swordfish in the Aegean Sea.