

PRESENTS

MEGALODON

Otodus megalodon

Megalodon is an extinct shark species that lived between 23 and 3.6 million years ago during the Miocene and Pliocene eras. Just like living sharks, Megalodon had a skeleton made up of cartilage, so our knowledge of this species is based on fossilized teeth, coprolite and a few central vertebrae. Scientists continue to argue about its evolution and morphology.

TAXONOMY

Kingdom: Animalia
Phylum: Chordata
Class: Chondrichthyes
Order: Lamniformes
Family: Otodontidae
Genus: *Otodus*
Species: *O. megalodon*



Distribution: Fossils have been found all over the world, in both tropical and temperate waters.



Diet: Probably fed on fish, other sharks, turtles and marine mammals.



Predators: Megalodon was a top predator, although juveniles were probably other sharks' prey.



Reproduction: As all Lamniformes, scientists believe it was viviparous.

TIMELINE

CENOZOIC ERA

PALEOGENE

PALEOCENE

66 my

Eocene

54.8 my

OLIGOCENE

33.7 my

Oceans begin to cool down.

As the Panama Isthmus closed and the Tethys Sea changed, ocean currents shifted, catalyzing a glaciation in the northern hemisphere.

Nursery areas begin to disappear and prey become scarce.

NEOGENE

MIocene

23.8 my

The oldest fossils belonging to Megalodon are from the Miocene era, which began around 23 million years ago.

PLIOCENE

5.3 my

Late Pliocene and Pleistocene: several ice ages cooled the oceans even further, which caused *O. megalodon* to become a rare species.

QUATERNARY

PLEISTOCENE

1.8 my

Pleistocene: the fossil record indicates that Megalodon finally went extinct during this epoch (3.5 million years).

HOLOCENE

11 THOUSAND ya

PRESENT

1835: Naturalist Louis Agassiz names *Carcharias megalodon* as a species.

1843: Agassiz, upon further studies, changes the name to *Carcharodon megalodon* based on the teeth's great size.

ANATOMY

Scientists have used the white shark to infer Megalodon's anatomy, however they describe this extinct species as a robust shark but with a longer body than the white shark. Its nose was short and jaws were flat.



Estimated life span:
88-100 years

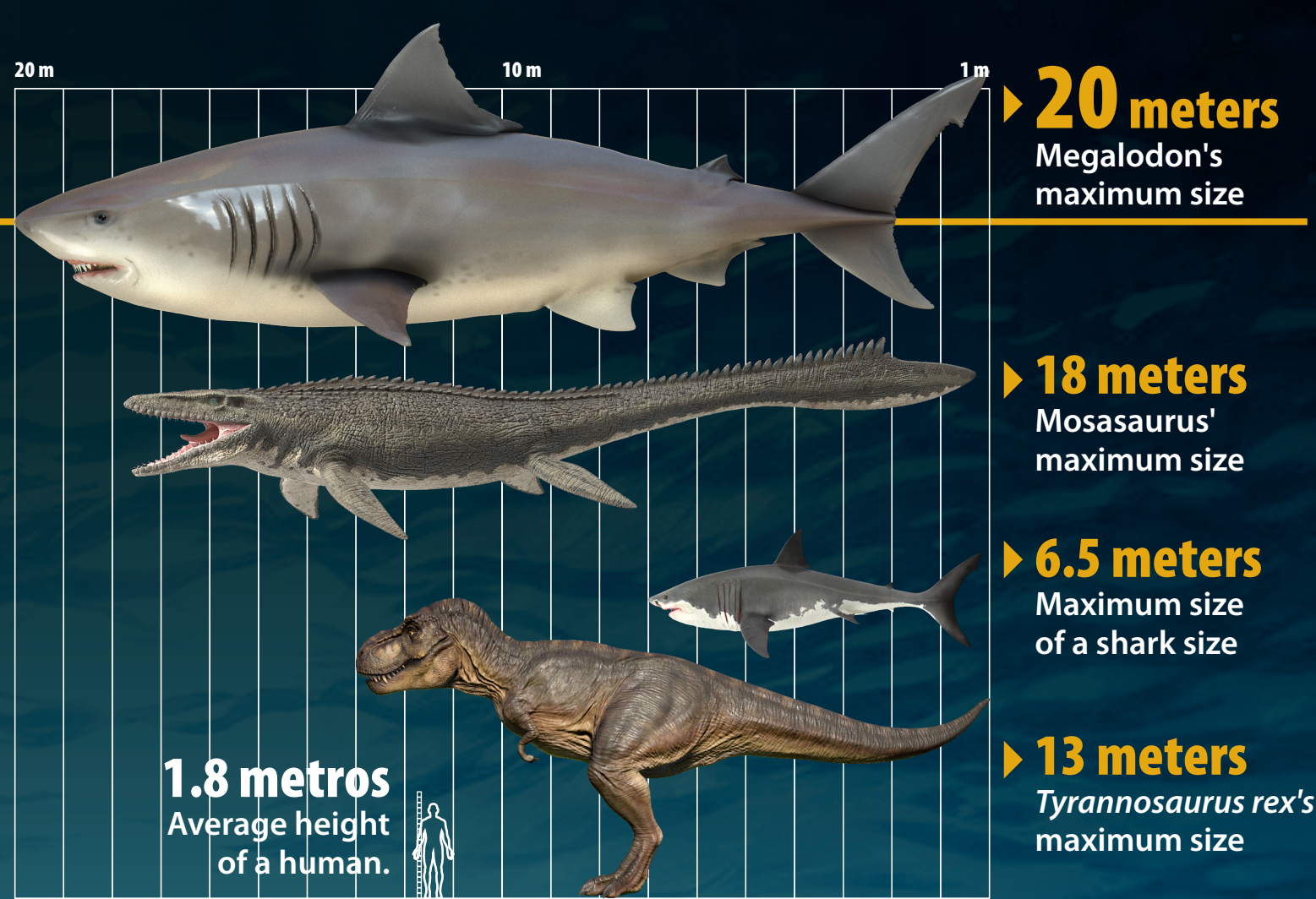


Estimated size:
16 meters



Estimated weight:
80 tons

MONSTER DIMENSIONS



DISTRIBUTION MAP

Fossil records for this species indicate that Megalodon inhabited subtropical and temperate latitudes. Given that the ocean was warmer, *O. megalodon* lived throughout the oceans around the world.



Sites where fossils have been found.

● Pliocene
● Miocene

Nursery areas: Gatun Formation in Panama; Calvert Formation in Maryland and Bone Valley Formation in Florida (USA); and Conception Bank in the Canary Islands.

BEHAVIOR



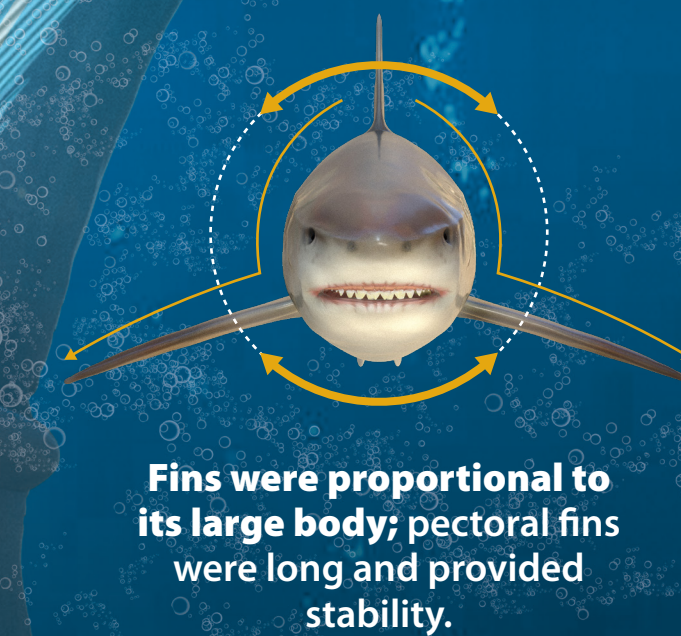
Megalodon lived in a variety of ecosystems, from shallow coastal habitats to oceanic ones.



Scientists believe this powerful hunter attacked its prey biting their fins or thoracic box to inflict damage to vital organs.



In nursery areas, juveniles were protected from predators and had abundant food.



Fins were proportional to its large body; pectoral fins were long and provided stability.

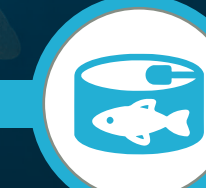
FUN FACTS



Its name derives from the greek **megálos**, meaning large, and **odón** meaning tooth.



Scientists estimate Megalodon could eat
1,134 kg
of food in a day.



This is the same as eating
3,300 latas
of tuna in a day.

ECOLOGICAL IMPORTANCE



They maintained marine communities' structure and functionality.

SOURCES:

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• Sternes, P.C., et al. (2024). White shark comparison reveals a slender body for the extinct megatooth shark, *Otodus megalodon* (Lamniformes: Otodontidae). *Palaeontologia Electronica*, 27(1):a7.
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