

PRESENTS

MOSASAURUS

Mosasaurus hoffmannii

They are extinct aquatic reptiles that belong to the genus *Mosasaurus*. Its name comes from the Latin *Mosa* which means river where the first specimen was found and from the Greek *saurus* which means lizard. The largest and best-studied species is *Mosasaurus hoffmanni*. It is believed to have gone extinct suddenly during the Cretaceous, at the peak of their evolutionary radiation.

TAXONOMY

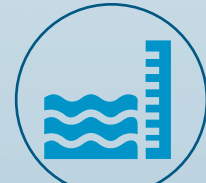
Kingdom: Animalia
Phylum: Chordata
Class: Reptilia
Order: Squamata
Family: Mosasauridae
Subfamily: Mosasaurinae
Genus: *Mosasaurus*
Conybeare, 1822
Species type:
Mosasaurus hoffmanni
Mantell, 1829



Distribution: In the area of present-day Western Europe, North America, South America and Antarctica.



Diet: It fed on fish, turtles, ammonites, and possibly smaller mosasaurs.

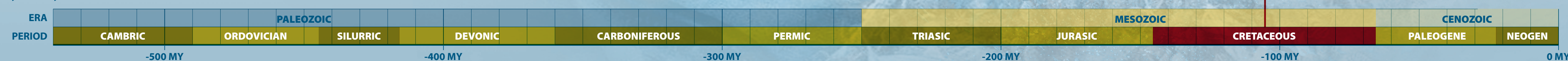


Habitat: It stayed close to the surface and although it was capable of diving, it preferred not to venture into deeper waters.

WHEN WAS THIS SPECIES ALIVE?

They are a diverse group of scaly marine reptiles from the Upper Cretaceous. These predators lived during this period in the Mesozoic era, 70-66 million years ago.

EONOTHEM: PHANEROZOIC EON

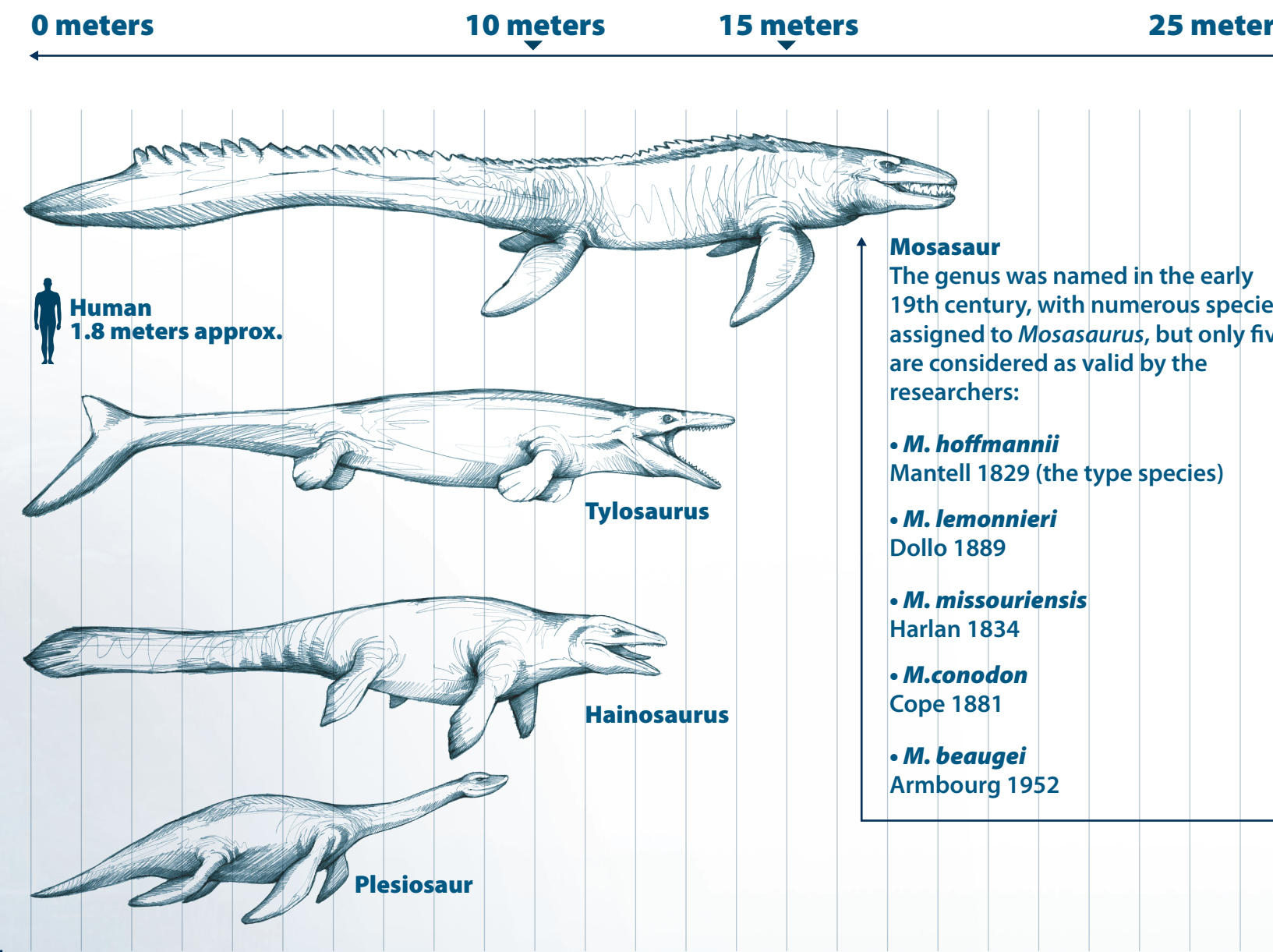


DISCOVERING THE MOSASAURUS

- 1766:** the first remains known to science were fragments of a skull from a quarry of limestone on Mount San Pedro in the Netherlands.
- 1780:** a second partial skull was discovered and acquired by Johann Leonard Hoffmann, a retired physicist from the Dutch/German army.
- 1794:** the skull was transferred to Paris and added to the collection of the National Museum of Natural History in France.
- 1798:** Adriaan Gilles Camper, studies the fossil again arriving at the conclusion that the remains belonged to a giant monitor lizard.
- 1808:** Georges Cuvier confirms Camper's result. The fossil had already become part of Cuvier's early speculations about the possibility of animal species becoming extinct.
- 1822:** William Daniel Conybeare named it *Mosasaurus* by the Latin name (Meuse) of the river Maas (or Meuse) that passes next to the Mount Saint Peter.
- 1829:** The species name *hoffmannii* was added by G.A. Mantell, in honor of Johann Leonard Hoffmann, under the assumption that he was the discoverer of the type specimen.
- 1854:** the German biologist Hermann Schlegel was the first to speculate that *Mosasaurus* had fins instead of normal legs.
- 1998:** another larger and more intact fossil skull was found in the limestone quarries of Maastricht. However, this finding was determined to represent a new species of the genus *Prognathodon*.

MONSTER DIMENSIONS

It was among the last and largest genera of mosasaurs ever found. The largest known species of this genus is *Mosasaurus hoffmanni*, which reached 18 meters in length and was more robust than its Cretaceous relatives.



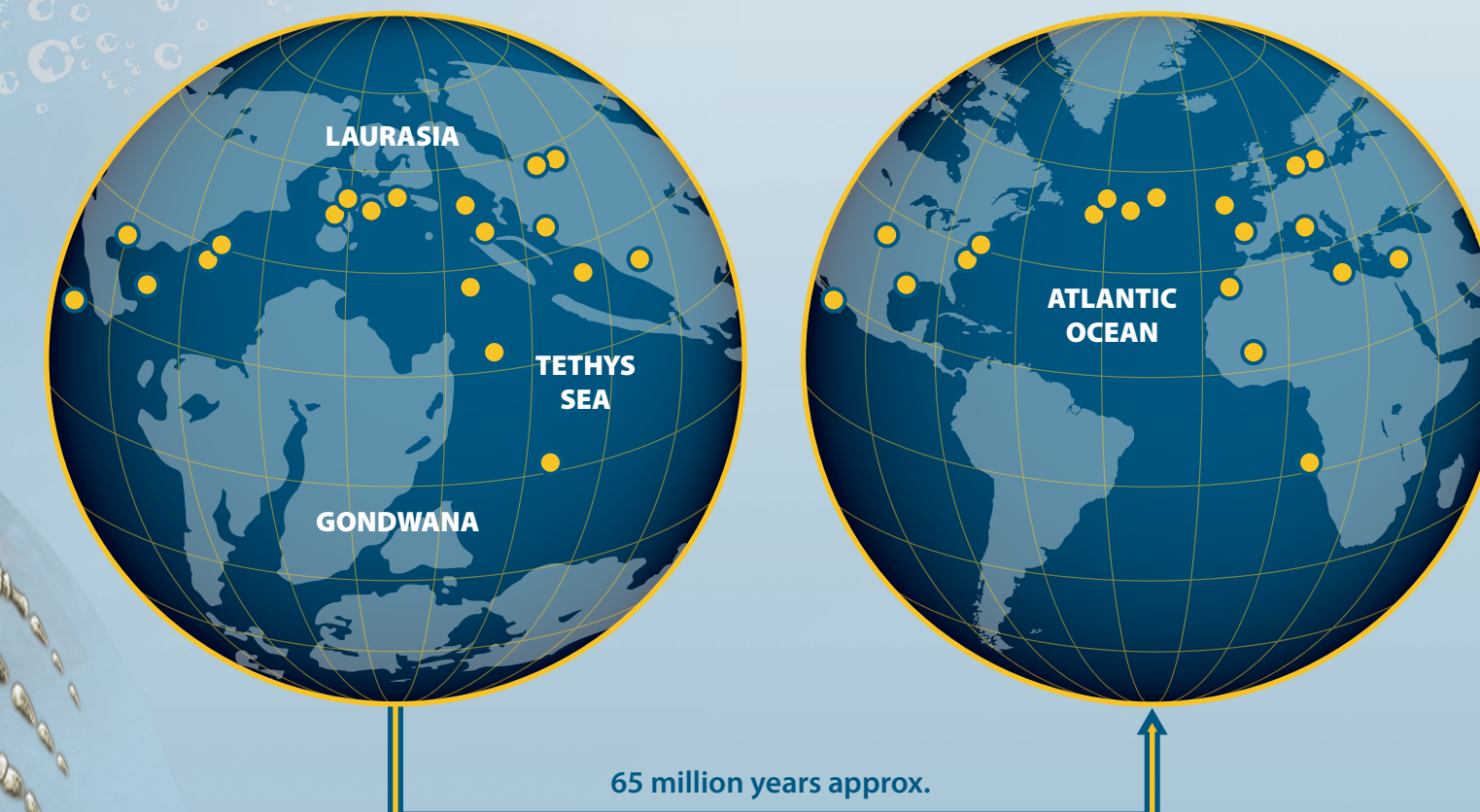
50 km/hour
estimated maximum speed

1,029 kilograms
estimated strength of its bite

40
genuses
comprise the group of mosasaurs

WHERE DID IT LIVE?

At the beginning of the Cretaceous, and as a consequence of the fragmentation of Pangea, there were two continents separated by the Sea of Tethys: Laurasia in the north and Gondwana in the south. This great marine predator inhabited the earth when the continents still did not take the shape we know now.



CONTINENTAL CONFIGURATION IN THE CRETACEOUS

Possible location of mosasaurs

CURRENT CONTINENTAL CONFIGURATION

Possible location of mosasaurs

SOURCES:
• Kowinsky, J. Mosasaur - The Great Marine Reptile. <https://www.fossilguy.com/gallery/vert/reptile/mosasaur/index.htm>
• Mosasaurus. <https://es.wikipedia.org/wiki/Mosasaurus>.
• Lingham-Soliar, T. (1995). Anatomy and Functional Morphology of the Largest Marine Reptile Known, Mosasaurus hoffmanni (Mosasauridae, Reptilia) from the Upper Cretaceous, Upper Maastrichtian of the Netherlands. Phil. Trans. R. Soc. Lond. B 347, 155-172 doi: 10.1098/rstb.1995.0019
• Kowinsky, J. Mosasaur - The Great Marine Reptile. <https://www.fossilguy.com/gallery/vert/reptile/mosasaur/index.htm>
• Lingham-Soliar, T. (1995). Anatomy and Functional Morphology of the Largest Marine Reptile Known, Mosasaurus hoffmanni (Mosasauridae, Reptilia) from the Upper Cretaceous, Upper Maastrichtian of the Netherlands. Phil. Trans. R. Soc. Lond. B 347, 155-172 doi: 10.1098/rstb.1995.0019