

# New fossil was one of the largest marine turtles ever

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An illustrated reconstruction of *Leviathanochelys aenigmatica*. Credit: ICRA\_Arts.

A new species of ancient turtle discovered in Spain may have been one of the largest marine turtles to have ever lived, suggests a new paper published in *Scientific Reports*. With an estimated body length of up to 3.74 meters, it represents the largest marine turtle to have been found in Europe to date.

The largest known marine turtles such as the ancient extinct genus *Archelon*, which grew to sizes of 4.6 meters long and weighed up to 3.2 tons, lived in the seas surrounding the North American continent towards the end of the Cretaceous period. In [contrast](#), no known European marine turtle—extinct or living—has exceeded 1.5 meters in shell-length.

Àngel H. Luján, Albert Sellés, and colleagues describe the remains of a new marine turtle specimen—which they name *Leviathanochelys aenigmatica*—found in the Cal Torrades locality, Northeastern Spain, which appeared nearly as large as *Archelon*. The remains, which were excavated between 2016 and 2021, consist of a fragmented but almost complete pelvis and parts of the upper shell (carapace), and date to the Campanian Age, between 83.6 to 72.1 million years ago.

The specimen possesses a distinctive prominence of bone that protrudes forwards from the front of the pelvis. This feature differs to other marine turtles, and indicates that *Leviathanochelys* represents a new taxon (group) of ancient marine turtles. This protrusion may have related to the respiratory system, suggest the authors.



Excavating the fossil remains of *Leviathanochelys aenigmatica*. Credit: Àngel Galobart

Based on the size of the pelvis, the authors calculate that *Leviathanochelys* could have reached a [body length](#) of up to 3.74 meters. They estimate that the maximum width of *Leviathanochelys*' pelvis was 88.9 centimeters, which is slightly larger than the biggest estimates for *Archelon*'s best known specimen (81.0 cm wide). The length of the [pelvis](#) from front to back was estimated to be 39.5 cm, slightly smaller than that of *Archelon* (46.0 cm long).

This makes *Leviathanochelys* the largest marine turtle ever discovered in Europe, and one of the largest found worldwide. These findings indicate that gigantism in marine turtles developed independently in different

lineages in both North America and Europe, according to the authors.



The excavation site. Credit: Àngel Galobart

**More information:** Àngel H. Luján, A gigantic bizarre marine turtle (Testudines: Chelonioidea) from the Middle Campanian (Late Cretaceous) of South-western Europe, *Scientific Reports* (2022). [DOI: 10.1038/s41598-022-22619-w](https://doi.org/10.1038/s41598-022-22619-w).  
[www.nature.com/articles/s41598-022-22619-w](https://www.nature.com/articles/s41598-022-22619-w)

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