

# Unique feeding mechanism among marine reptiles from the age of dinosaurs

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Among the many groups of marine reptiles from the Age of Dinosaurs, elasmosaurs are famous for their necks, which can have up to 76 vertebrae and make up more than half the total length of the animal. These "sea dragons" attained worldwide distribution and vanished only during the mass extinction at the end of the Cretaceous 66 million years ago.

Fossils of the elasmosaur *Aristonectes* were first reported from the Late Cretaceous of Patagonia in 1941. Recent discoveries in Chile and on Seymour Island (Antarctica) have provided much new information on this elasmosaur and the closely related *Morturneria*, respectively. F. Robin O'Keefe (Marshall University, Huntington, WV), and his colleagues reported at the 75th Annual Meeting of the Society of Vertebrate Paleontology (Dallas, October 14-17, 2015) that these reptiles employed a unique mode of feeding.

The massive lower jaws bear a comb-like structure formed by many slender teeth that project sideways. Similarly, the teeth in the upper jaws extend downward and sideways. Together with other features such as a deeply vaulted palate, this arrangement of teeth suggests that these elasmosaurs employed filter-feeding. They would fill the mouth with sea water and then, using coordinated movements of the throat and tongue, squeeze the water out through the tooth combs, leaving only the food particles to be collected by the tongue.

*Aristonectes* and *Morturneria* represented a unique style of food acquisition among [marine reptiles](#) from the Mesozoic Era. Baleen whales independently evolved a very similar method of feeding many millions of years after the extinction of the last elasmosaurs.

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