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PRESS RELEASE
Naturkundemuseum Stuttgart

Researchers describe a new genus of carnivorous marine reptile from the Early Cretaceous.

The 130-million-year-old fossil of a tuna-shaped marine reptile from Colombia sheds light on the diversity of ancient marine faunas in the tropics. It is one of the geologically youngest ichthyosaurs.

Stuttgart, 25.11.2021. An international team of researchers from Colombia, Canada and Germany, including Dr Erin Maxwell, an ichthyosaur expert at the Natural History Museum Stuttgart, have described a new extinct carnivorous marine reptile called *Kyhytysuka sachicarum.* The fossil ichthyosaur skull, which is about one metre long and dates back to the Early Cretaceous period, has been in a museum collection in Colombia for years. By re-examining the piece on the basis of current scientific knowledge, the palaeontologists were able to show that it is a new ichthyosaur genus. The research results also contribute to a better understanding of the evolution of these geologically youngest ichthyosaurs and have now been published in the “Journal of Systematic Palaeontology”.

Based on a dozen anatomical features of the lower jaw, nasal region and dentition, the researchers described the new genus. "We decided to name the ichthyosaur after an extinct indigenous language from the region where it was found to honour the Muisca culture. We named it *Kyhytysuka*, which means 'the one who cuts with something sharp'," says Dirley Cortés, one of the scientists involved. The unique set of teeth was therefore important for the naming.

Kyhytysuka had different bite zones and could use them to effectively catch, pierce, saw through and finally crush large prey. Such large carnivorous ichthyosaurs were previously only known from the early Jurassic. Many of the classic Jurassic marine ecosystems with deep-water feeding ichthyosaurs, short-necked plesiosaurs and marine-adapted crocodiles were subsequently replaced by new lineages of long-necked plesiosaurs, sea turtles and large marine lizards, the mosasaurs.

For the researchers, it is therefore important that *Kyhytysuka* dates from a transitional period during the Early Cretaceous. "The newly described genus shows that the tropical region was an ancient 'hotspot' of biodiversity at that time. With the close study of each new animal, we can find out more about the ecosystems of the time. The Cretaceous tropical sea is highly interesting for us in terms of the evolution and biology of the creatures of that time," says Dr. Erin Maxwell from the Natural History Museum Stuttgart.

Initially, *Kyhytysuka sachicarum* was assigned to the genus *Platypterygius* and studies on ichthyosaur systematics did not include this species in their analyses. However, the diversity of early Cretaceous ichthyosaurs has increased significantly in recent years with the discovery of new taxa in excavations and museum collections. This has led to new features and a better understanding of the anatomy.

Original publication

Dirley Cortés, Erin E. Maxwell, Hans C.E. Larson: Reappearance of hypercarnivore ichthyosaurs in the Cretaceous with differentiated dentition: revision of *'Platypterygius' sachicarum* (Reptilia: Ichthyosauria, Ophthalmosauridae) of Colombia.

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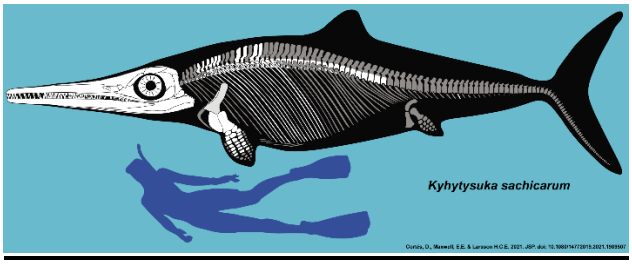

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Description: The newly described fish dinosaur genus *Kyhytysuka sachicarum*.

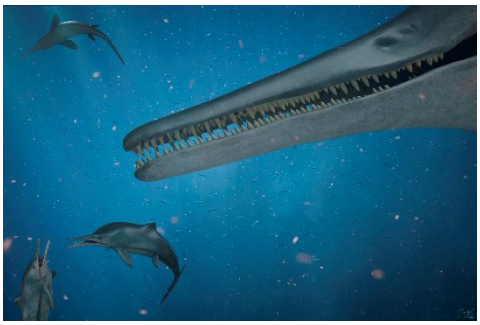

Illustration New Genus Ichthyosaur *Kyhytysuka sachicarum* copyright D.Cortes.jpg
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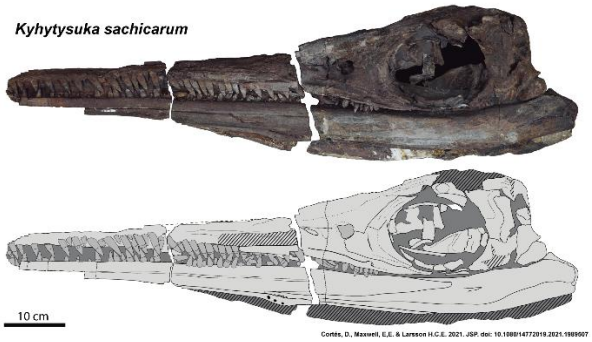
Description: Illustration of the newly described fish dinosaur genus *Kyhytysuka sachicarum* in its natural habitat.



Reconstruction Skull Ichthyosaur *Kyhytysuka sachicarum* Copyright D.Cortes.jpg
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Description: Reconstruction of the skull of the newly described extinct ichthyosaur genus *Kyhytysuka sachicaru*