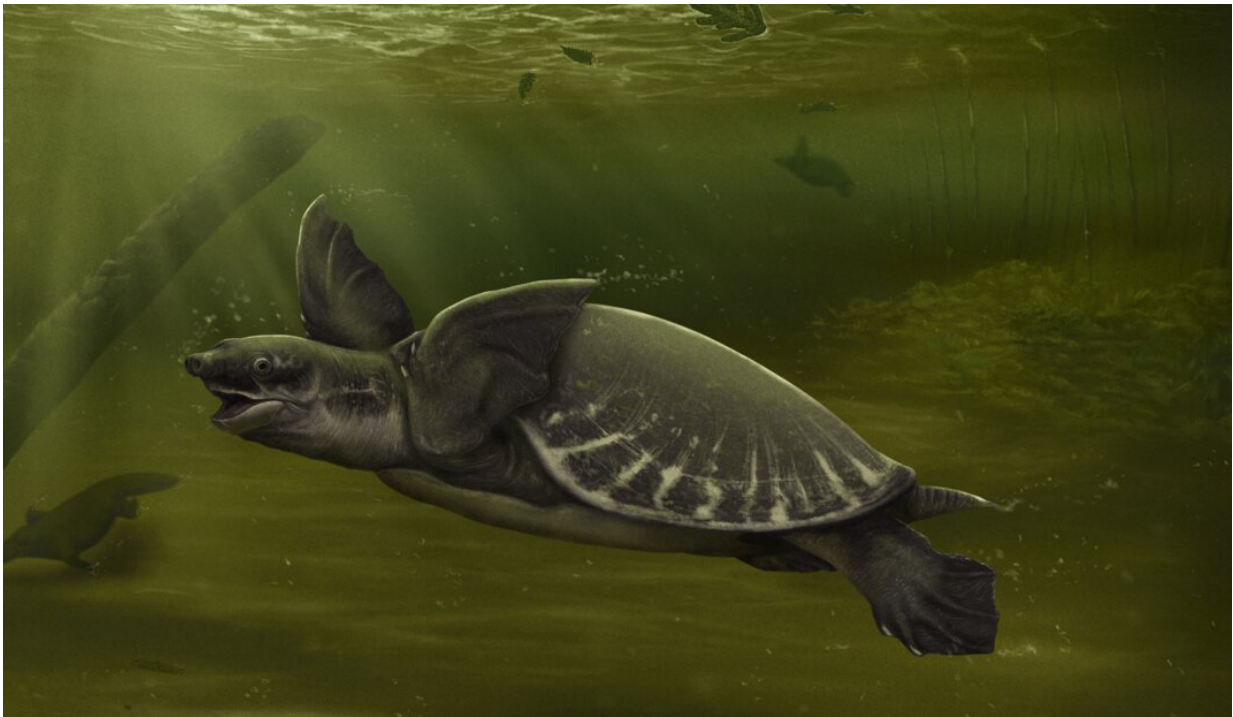


Rare pig-nosed turtles once called Melbourne home

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Pig-nosed turtles lived in Melbourne 5 million years ago. Credit: Jaime Bran

Pig-nosed turtles are found in tropical freshwater ecosystems in northern Australia and New Guinea, only arriving here a few thousand years ago.

But now, scientists have discovered a five-million-year old pig-nosed turtle fossil in Melbourne, thousands of kilometers south from their

typical home.

The finding is outlined in a study led by Monash University biologists, in collaboration with Museums Victoria, published today in *Papers in Palaeontology*.

Pig-nosed turtles are endangered, and the sole survivors of an extinct group of tropical turtles from the Northern Hemisphere.

The fossil housed in Melbourne Museum was discovered at Beaumaris, a bayside Melbourne suburb 20 km from the CBD, and completely rewrites the evolution of pig-nosed turtles.

"Almost the entire evolutionary history of pig-nosed turtles occurred in the [northern hemisphere](#), with their present limited occurrence on the northern margin of Australia," said lead study author Dr. James Rule, from the Monash University School of Biological Sciences.

"The discovery of a five million-year-old pig-nosed turtle fossil in Beaumaris changes this picture entirely," he said.

It points to a broader pattern of turtles migrating across entire oceans in the ancient past to reach the once tropical waters of southern Australia.

"This one [fossil specimen](#) reveals a previously unknown evolutionary history of tropical turtles in Australia, and suggests we still have much to learn about the endangered pig-nosed turtle," Dr. Rule said.

Five million years ago, the climate in Melbourne was far warmer and was home to turtles found only in the tropics today.

"Climate change in the last few million years eliminated these tropical habitats, leaving the northern Australasian pig-nosed [turtles](#) as sole

survivors," Dr. Rule said.

"Our discovery provides key insights into ancient [climate change](#) shaping modern species distribution."

This fossil is the latest important discovery to come from the Beaumaris [fossil](#) site.

"We are so lucky in Melbourne to have such fossils right here in our own backyard," said Dr. Erich Fitzgerald, a senior curator of vertebrate paleontology at Museums Victoria and co-author of the paper.

"The fossils at Beaumaris still have so much to teach us about our past, present and future."

More information: James P. Rule et al, Turtles all the way down: Neogene pig-nosed turtle fossil from southern Australia reveals cryptic freshwater turtle invasions and extinctions, *Papers in Palaeontology* (2021). [DOI: 10.1002/spp2.1414](https://doi.org/10.1002/spp2.1414)

Provided by Monash University

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