

New species of Jurassic pterosaur discovered on the Isle of Skye

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Reconstruction of *Ceoptera evansae*. Credit: NHM & Witton 2021

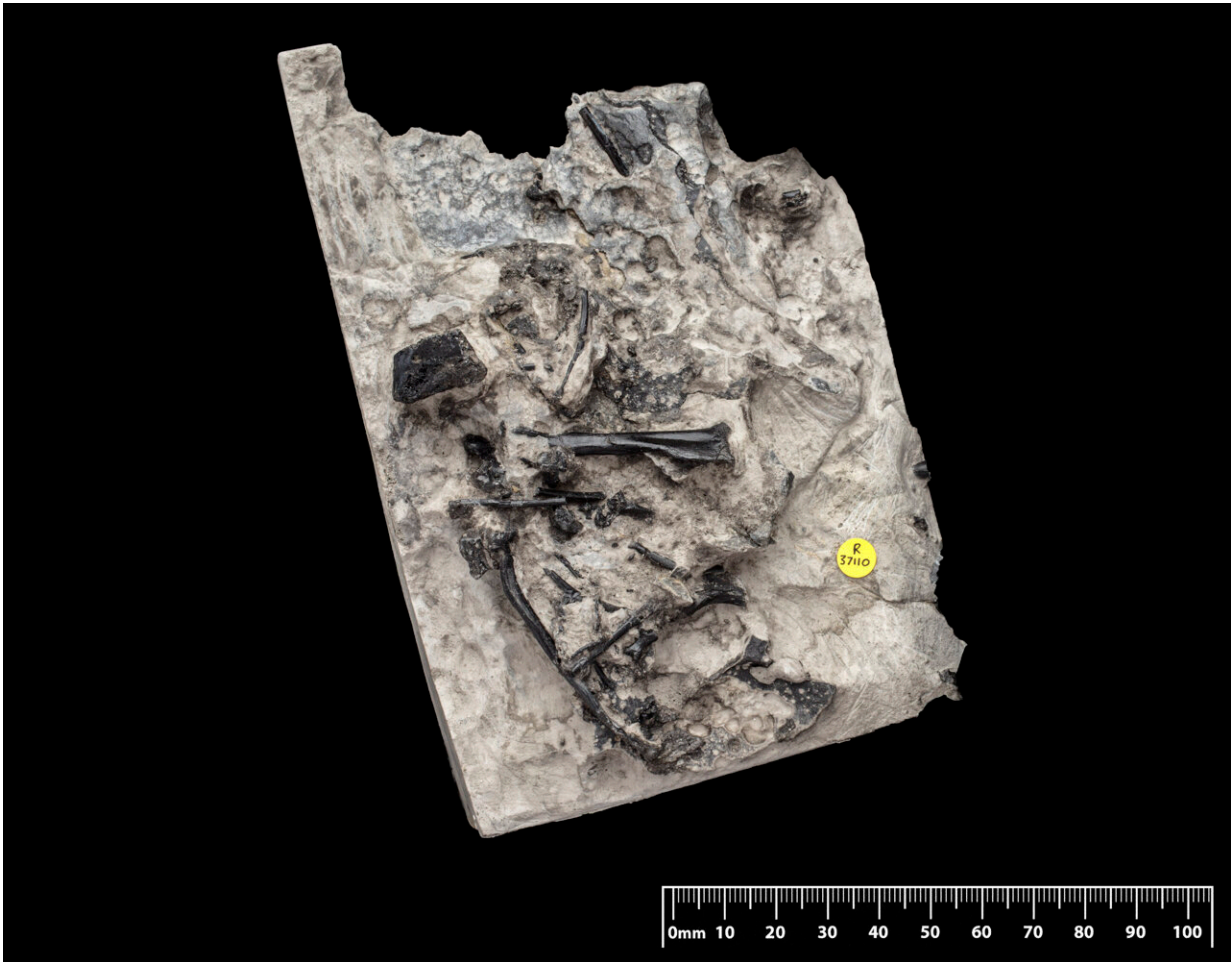
A new species of pterosaur from specimens found on the Isle of Skye, Scotland, has been announced by scientists from the Natural History Museum, University of Bristol, University of Leicester, and University of Liverpool.

The new pterosaur is part of the Darwinoptera clade of pterosaurs. Its

discovery shows that the clade was considerably more diverse than previously thought, and persisted for more than 25 million years, from the late Early Jurassic to the latest Jurassic. During this period species within the clade spread worldwide.

The discovery underpins a new and more complex model for the early evolution of pterosaurs. The study "A new pterosaur from the Middle Jurassic of Skye, Scotland and the early diversification of flying reptiles" is published in the *Journal of Vertebrate Paleontology*.

The rarity of Middle Jurassic pterosaur fossils and their incompleteness have previously hampered attempts to understand early pterosaur evolution. This discovery shows that all principal Jurassic pterosaur clades evolved well before the end of the Early Jurassic, earlier than previously realized. The discovery also shows that pterosaurs persisted into the latest Jurassic, alongside avialans, the dinosaurs which eventually evolved into [modern birds](#).

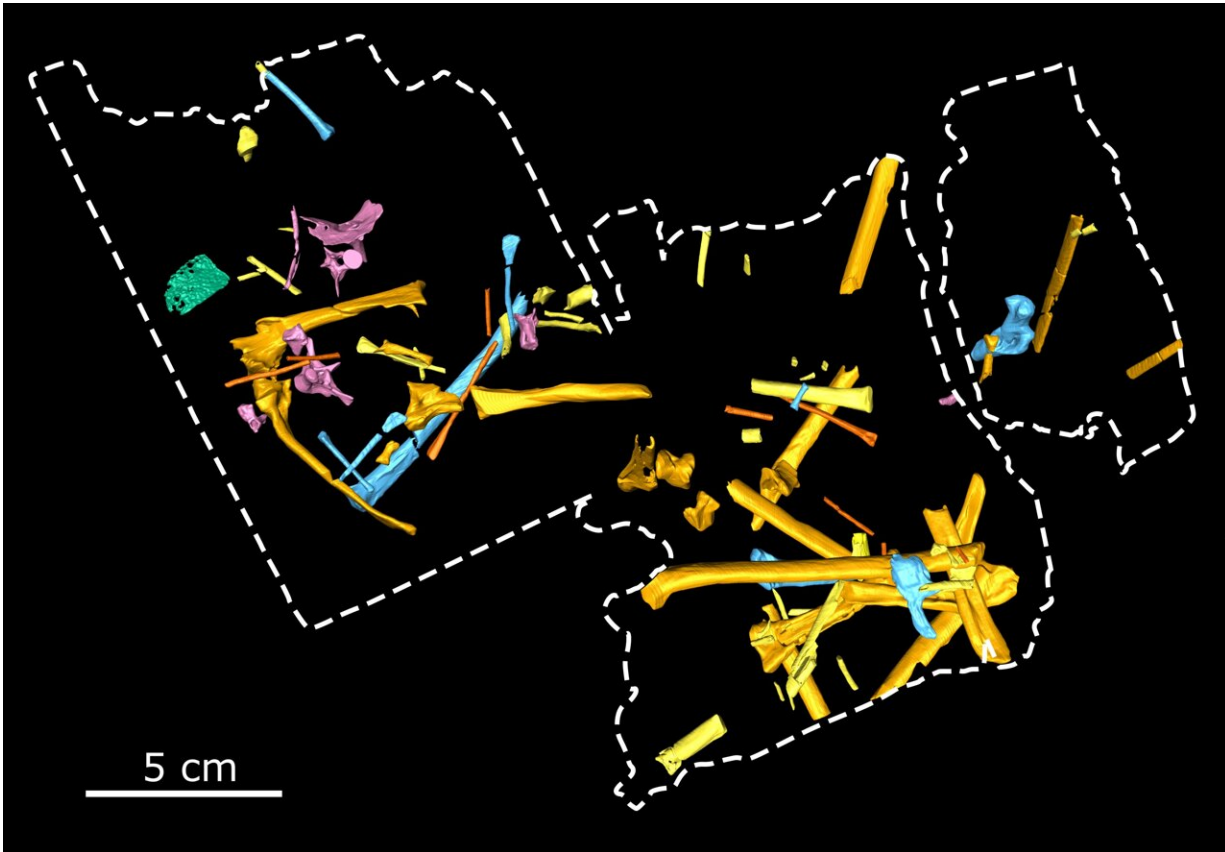


Close up on part of the skeleton of *Ceoptera evansae* showing the shoulder region, parts of the wing and vertebrae. Credit: Trustees of Natural History Museum

The remains consist of a partial skeleton of a single individual, including parts of the shoulders, wings, legs and backbone. Many of the bones remain completely embedded in rock and can only be studied using CT-scanning.

Professor Paul Barrett, Merit Researcher at the Natural History Museum and senior author on the paper, said, "Ceoptera helps to narrow down the

timing of several major events in the evolution of flying reptiles. Its appearance in the Middle Jurassic of the U.K. was a complete surprise, as most of its close relatives are from China. It shows that the advanced group of flying reptiles to which it belongs appeared earlier than we thought and quickly gained an almost worldwide distribution."



3D models of skeleton. Credit: Natural History Museum

Prof. Barrett and his colleagues described the new species, naming it *Ceoptera evansae*: *Ceoptera* from the Scottish Gaelic word *Cheò*, meaning mist (a reference to the common Gaelic name for the Isle of Skye *Eilean a' Cheò*, or Isle of Mist), and the Latin *-ptera*, meaning

wing. Evansae honors Professor Susan E. Evans, for her years of anatomical and palaeontological research, in particular on the Isle of Skye.

Lead author Dr. Liz Martin-Silverstone, a palaeobiologist from the University of Bristol, said, "The time period that Ceoptera is from is one of the most important periods of pterosaur evolution, and is also one in which we have some of the fewest specimens, indicating its significance. To find that there were more bones embedded within the rock, some of which were integral in identifying what kind of pterosaur Ceoptera is, made this an even better find than initially thought. It brings us one step closer to understanding where and when the more advanced pterosaurs evolved."

More information: A new pterosaur from the Middle Jurassic of Skye, Scotland and the early diversification of flying reptiles, *Journal of Vertebrate Paleontology* (2024).

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