

New flying reptile species was one of largest ever flying animals

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Cryodrakon boreas. Credit: David Maas

A newly identified species of pterosaur is among the largest ever flying animals, according to a new study from Queen Mary University of London.

Cryodrakon boreas, from the Azhdarchid group of [pterosaurs](#) (often

incorrectly called 'pterodactyls'), was a flying reptile with a [wingspan](#) of up to 10 metres which lived during the Cretaceous period around 77 million years ago.

Its remains were discovered 30 years ago in Alberta, Canada, but palaeontologists had assumed they belonged to an already known species of pterosaur discovered in Texas, USA, named Quetzalcoatlus.

The study, published in the *Journal of Vertebrate Paleontology*, reveals it is actually a new species and the first pterosaur to be discovered in Canada.

Dr. David Hone, lead author of the study from Queen Mary University of London, said: "This is a cool discovery, we knew this animal was here but now we can show it is different to other azhdarchids and so it gets a name."

Although the remains—consisting of a skeleton that has part of the wings, legs, neck and a rib—were originally assigned to Quetzalcoatlus, study of this and additional material uncovered over the years shows it is a different [species](#) in light of the growing understanding of azhdarchid diversity.



Cryodrakon boreas. Credit: David Maas

The main skeleton is from a young animal with a wingspan of about 5 metres but one giant neck bone from another specimen suggests an adult animal would have a wingspan of around 10 metres.

This makes *Cryodrakon boreas* comparable in size to other giant azhdarchids including the Texan Quetzalcoatlus which could reach 10.5 m in wingspan and weighed around 250 kg.

Like other azhdarchids these animals were carnivorous and predominantly predated on small animals which would likely include lizards, mammals and even baby dinosaurs.



Right humerus of *Cryodrakon boreas* (upper arm bone seen from the side and slightly behind, about 25 cm long). Credit: David Hone

Dr. Hone added: "It is great that we can identify *Cryodrakon* as being distinct to *Quetzalcoatlus* as it means we have a better picture of the diversity and evolution of predatory pterosaurs in North America."

Unlike most pterosaur groups, azhdarchids are known primarily from terrestrial settings and, despite their likely capacity to cross oceanic distances in flight, they are broadly considered to be [animals](#) that were adapted for, and lived in, inland environments.

Despite their large size and a distribution across North and South America, Asia, Africa and Europe, few azhdarchids are known from more than fragmentary remains. This makes *Cryodrakon* an important animal since it has very well preserved bones and includes multiple individuals of different sizes.

More information: '*Cryodrakon boreas* gen. et sp. nov. a Late Cretaceous Canadian azhdarchid pterosaur'. Hone, David; Habib, Michael; Therrien, Francois. *Journal of Vertebrate Paleontology*. [DOI: 10.1080/02724634.2019.1649681](https://doi.org/10.1080/02724634.2019.1649681)

Provided by Queen Mary, University of London

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