

Jurassic Fact File

Rhamphorhynchus

Pterosaurs are not actually dinosaurs, but are flying reptiles related to them. In many respects they are very similar to the modern birds; for example, they have hollow bones and few teeth to keep their weight down and get airborne more easily.

Is it a bird, is it a bat?

Generally they have small bodies with short hind legs and large wings made of membrane like those of a bat. In bats, the membrane is stretched between all of the fingers like webbing; in pterosaurs, the whole thing is supported by the little finger which has grown very long. The other fingers can still be seen as hooks at the edge of the wing where it folds. The membrane also has rigid struts running through it to give it some rigidity and to stop any holes and tears getting too big.

Like birds, their skeletons are extremely delicate with thin bones and lots of air-filled spaces inside the bone. Unfortunately this means that they do not fossilise very well, and so pterosaur remains are very rare. They are usually found in rocks formed from the sediments of lakes and shallow seas, and so scientists believe that many pterosaurs lived like seagulls do today – nesting on ledges on rocky cliffs, and fishing in the nearby lakes and seas. Certainly a lot of pterosaurs have ‘fishing teeth’ – long sharp needle-like teeth that are good for gripping slippery fish. But there are also some with no teeth or blunt peg-like teeth – and even a few that look as if they were filter feeders, like flamingos today.

A furry fisher?

Rhamphorhynchus was one of the earliest species of pterosaur found, and is easily recognised as such because of its long tail. Later pterosaurs had gradually shorter tails, giving them a greater surface area of wing to a lower amount of body. This pterosaur also had teeth adapted for catching fish, but lacked the bony crest at the back of the skull which many later species have. It is thought that crests helped the reptiles to balance the weight of their heavy beaks and prey (such as fish) without losing too much lift. Some of the finest fossils in the world seem to show that *Rhamphorhynchus* may have had a throat pouch like a pelican to carry fish after snatching them from the sea.

Some *Pterosaurus* fossils have even been found with a dark outline round the bones, suggesting that they may have been covered in hair or feathers to keep them warm and save energy – making it a very modern animal.