Abstract

The preservation of delicate structures such as feathers is very rare in the paleontological record, due to the fragility of their components. Fossil feathers have been reported from approximately 50 deposits around the world, from the Late Jurassic to the Pleistocene. In Brazil initial findings consisted of a primary feather of a large bird found in the Tremembé Formation. Other occurrences are preserved in the Crato Formation, where several symmetrical and one single asymmetrical feather was found. Based on three new specimens and reassessing further feather occurrences we cannot confirm the presence of volant Aves in this deposit. The presence of an asymmetrical feather without barbules and hooks hints at the previous existence of a flightless animal within this deposit, possibly a flightlessness bird or a non-avian theropod. Conversely, the presence of a feather from morphotype II present in Tyrannosauroidae, Compsognathidae, Therizinosauroidae and Dromeosauridae, points to a non-theropod origin. Since there are no confirmed records of birds and other feathered archosaurs in the region to date, more evidence is required to identify the animal from which these structures originated.

Keywords

Araripe Basin, Crato Formation, Cretaceous, feathers, theropod.