

First record of a Late Jurassic rhamphorhynchine pterosaur from Gondwana

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We describe partial remains of a non-pterodactyloid pterosaur from Upper Jurassic levels of the Atacama Desert in northern Chile. The material includes a left humerus, a possible dorsal vertebra, and the shaft of a wing phalanx, all preserved in three dimensions and likely belonging to a single individual. The humerus has a hatchet-shaped deltopectoral crest, proximally positioned, and its shaft is markedly anteriorly curved, which are characteristic features of the clade Rhamphorhynchidae. In addition, the presence of a groove that runs along the caudal surface of the phalanx, being flanked by two asymmetric crests, is a distinctive feature of the clade

Rhamphorhynchinae, which includes such genera as *Rhamphorhynchus* and *Nesodactylus*. Previous to this research, known records of Rhamphorhynchinae were restricted to Laurasia; thus, the specimen studied here represents the first evidence of this group found to date in Gondwana. Associated ammonoids allow us to assign the material to a middle Oxfordian age, which makes this specimen the oldest known pterosaur found in Chile, and the first of Oxfordian age in Gondwana. This discovery suggests that the clade Rhamphorhynchidae had a global distribution during the Late Jurassic.

Key words: Pterosauria, Rhamphorhynchidae, Rhamphorhynchinae, Oxfordian, Chile, Laurasia, Gondwana.

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