

Cranial anatomy and phylogenetic position of the titanosaurian sauropod *Bonitasaura salgadoi*

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Knowledge of titanosaurian cranial anatomy has improved substantially in the last decade because several skulls have come to light or were restudied. The discovery of *Bonitasaura salgadoi*, a partial titanosaurian skeleton including cranial bones, permitted the definitive recognition of square jaws in a titanosaurian sauropod as well as a peculiar skull morphology that increases the morphological diversity of the group. Here we present a full description and illustration of the skull material of *B. salgadoi*. Among cranial bones, the lacrimal, quadrate, and dentary exhibit apomorphic differences from those of other titanosaurs. Conversely, the frontal and parietal are more conservative. A phylogenetic analysis recovers *B. salgadoi* as a member of the Titanosauria, related to mid-sized to large titanosauroids from the Turonian–Campanian of South America, in contrast to a previous hypothesis that suggested a nemegtosaurid affinity. The skull reconstruction presented here shows that the skull of *B. salgadoi* is anteroposteriorly short and dorsoventrally high, contrasting with the elongate skull of *Rapetosaurus krausei*.

Key words: Sauropoda, Titanosauria, skull, Late Cretaceous, Río Negro, Argentina.

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