



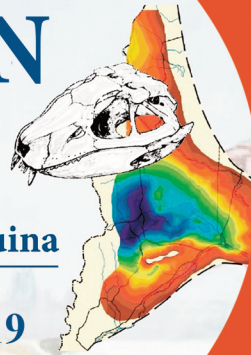
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REVISITING *VELOCISAURUS UNICUS* BONAPARTE, 1991 (THEROPODA, CERATOSAURIA, NOASAURIDAE): INFERENCES ON THE NOASAURIDAE/ABELISAURIDAE SYSTEMATIC

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In 1991, Bonaparte described *Velocisaurus unicus* upon an almost complete right tibia and a near complete right autopodium. He regarded this specimen a new taxon on the base of a metatarsal II and IV very mediolaterally compressed, being the metatarsal III two to three times wider than metatarsals II and IV. Brusatte and Carrano considered this taxon devoid of peculiar characters, although they kept it valid on the base of its provenance. In contrast, Brisson and colleagues reported a new specimen of this species and reinforced its validity by identifying three new autapomorphies. Indeed, all *Velocisaurus*'s autapomorphies cited by the aforementioned authors seem to have a rather wide distribution within Noosauridae, or even they are convergent with Abelisauridae. For instance, a triangular transverse section of the proximal end of the femur (hypertrophy of anterior muscular line) is present also in the abelisaurids *Ekrixinatosaurus*, *Xenotarsosaurus*, *Skorpiovenator* and *Aucasaurus*; the presence of transversely thin metatarsals II and IV are typical of noosaurids, however, the rod-like shape of metatarsals II mentioned by Brisson and colleagues is based on a fragmentary and weathered specimen; a phalanx IV-1 with a triangular proximal surface, and a dorsal facet narrower than the ventral one with a medial tilting is present also in *Vespersaurus*, *Skorpiovenator* and *Aucasaurus*. Although we regard *Velocisaurus unicus* as representative of a likely valid taxon, the discovery of additional specimens with new anatomical data will be essential for the taxonomy of this form.

NEW ABELISAURID MATERIALS FROM THE ANACLETO FORMATION (CAMPANIAN, UPPER CRETACEOUS) OF PATAGONIA, ARGENTINA, SHED LIGHT ON THE DIAGNOSIS OF BRACHYROSTRA (THEROPODA, ABELISAURIDAE)

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Abelisauridae is a theropod clade with a wide distribution in the Upper Cretaceous of Gondwana. The best preserved abelisaurid record is represented by forms such as *Skorpiovenator*, *Majungasaurus*, *Carnotaurus* and *Aucasaurus*. The most distinguishable features of this family include ornamented snout bones and cranial roof; extremely reduced forelimbs; spherical humeral head; pickaxe-like lateral processes on caudal vertebrae; and axe-shaped cnemial crest. We report new abelisaurid materials found in the same quarry of a recently published abelisaurid specimen (MPCN-PV-69) including: a distal end of a unidentified neural spine; a mid-caudal vertebra; a distal part of a left metatarsal IV articulated with a proximal part of phalanx IV-1; and several phalanx of Digit IV. By reviewing that specimen and the holotypes of *Skorpiovenator* and *Aucasaurus*, we identified a new apomorphic feature that is shared with Brachyrostra, increasing the diagnosis of that clade. Abelisauroid features in MPCN-PV-69 include a triangular distal end of metatarsal IV; a phalanx IV-1 with the proximal surface dorsoventrally taller than mediolaterally wide; a ventral surface transversely wider than the dorsal one, and the presence of medial tilting. Interestingly, certain features present in the phalanx IV-1 such as a ridge that spans from the proximodorsal projection and splits in two branches that surround an obliquely oriented and oval hyperextensor pit, is unquestionably present in all abelisaurids with a known Digit IV (except *Majungasaurus*), and not observed in any other theropod clade. Hence, here we propose the aforementioned combination of features as a possible synapomorphic character for the clade Brachyrostra.