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characters obtaining 128 best trees with 904 steps. The strict consensus (CI= 0.15; RI= 0.53) shows a clade including virtually all the Silurian–Devonian taxa. The Ordovician taxa are located in successive external groups defining not substantial clades. The basal position of some taxa, close to the outgroups, moved us to revise the diagnosis of the family. The new diagnosis emphasizes characters not taken into account before, including the frontal lobe of the glabella extended laterally, the course of the facial suture far away from the preglabellar furrow, and the nearly subtriangular pygidium. Based on this new definition, a number of taxa previously considered dalmanitids are excluded from the family, such as the genera *Dreyfussina* Hupé in Choubert *et al.*, 1956, *Morgatia* Hamman, 1972, and *Ormathops* Delo, 1935. Dalmanitinae and Synphoriinae are not supported by this new proposal. Moreover, based on new diagnostic characters, some genera previously considered synphoriinids define a clade almost endemic of the Eastern American Realm. The remaining Silurian–Devonian genera are included in a sister group with a Devonian diversification into two large subclades with a high biogeographic signal: one Malvinokaffric (from Southwestern Gondwana) and another from the Old World Realm (mainly including Eurasia).

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DORSAL SPINOSITY IN TRILOBITES: A MAXIMUM PEAK AT THE DEVONIAN

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Spines, particularly those dorsally projected, are usually considered defensive. Studies on invertebrates, as snails, crinoids, brachiopods, and bivalves, indicate that evolutionary bursts of spinosity usually coincide with patterns of rising predation pressure, particularly tested during the mid-Paleozoic and the Jurassic. However, despite of a significant number of contributions on Paleozoic faunas and predation, mentions about trilobite spinosity usually refer to some striking Devonian taxa. The variation of the spinosity overtime on each family has never been tested. We analyzed the number of spinose trilobite genera from the Ordovician to the Devonian, taking into account their proportion on each family, sampling data from the Paleobiology Database. The number of dorsally spinose genera is nearly constant from the Ordovician throughout the Silurian. Fluctuation of this trend is influenced only by diversity changes of typically spinose families, such as Odontopleuridae, Cheiruridae, or Encrinuridae. In contrast, during the Devonian, we recognized a sudden increase of the number of spinose genera. This pattern is significantly enhanced when typically spinose families are disregarded from the analysis. Thus, the Devonian dorsal spinosity peak is mainly defined by families which previously lacked spines, including Acastidae, Dalmanitidae, Homalonotidae, Phacopidae, Proetidae, Stigynidae, and Tropicocoryphidae. After the Late-Devonian extinction crises, trilobites become represented only by Proetida and the number of spinose genera decreases notably. These preliminary results indicate a polyphyletic evolutionary burst of defensive spines in trilobites in a similar way to other main prey-groups but mainly restricted to the Early–Middle Devonian. Our preliminary results are in accordance with a context of a sudden rise of predation pressure during the Devonian as proposed by the hypothesis of the Mid Paleozoic Marine Revolution.

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A NEW CROCODYLIFORM RECOVERED FROM EOLIAN DEPOSITS OF THE LATE CRETACEOUS BAJO DE LA CARPA FORMATION, NEUQUÉN CITY, ARGENTINA

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We report new remains of a Mesoeucrocodylia from the Bajo de la Carpa Formation, Neuquén Group (Upper Cretaceous). It was found in the Boca del Sapo paleontological site (38° 56' 16" S; 68° 02' 42" W), Neuquén city, Neuquén province. The sedimentology of the fossil site corresponds to alternations of medium grained and coarse quartzitic sands, which present a low-grade cross lamination (< 5°). These characteristics suggest the presence of an eolian system, consisting of flat sand accumulations (sand sheets). The specimen here described is MUCPv-203 and belongs to the collection of the Museo de Geología y Paleontología of the Universidad Nacional del Comahue. The remains of MUCPv-203 are completely disordered, presenting a small cluster of bone fragments and dispersed remains around it. This cluster consists of articulated cervical and cervicodorsal vertebrae, ribs, fragmented humerus and proximal metacarpals, a radius, and a large number of overlapped osteoderms. The dispersed remains consist in an incomplete ulna, a basisphenoids preserving the internal carotid and both lateral eustachian foramina. It also preserves many osteoderms, most of them are scattered and separated from each other. Most of the osteoderms are poorly preserved; however, a longitudinal ridge arranged asymmetrically can be observed. MUCPv-203 also counts with a left ilium and a caudal vertebra, both randomly deposited. Two fragments of both dentaries have been identified; one of them presenting a curved outline in dorsal and anterior views. One dentary has only three teeth, two placed in the anterior area and the other in the posterior portion of the fragment. Behind the first two teeth, MUCPv-203 preserves two small alveoli of circular section. The other dentary just counts with one tooth located in its anterior area. Due to the poor preservation of the elements, it is difficult to address its taxonomy. However, we conclude that MUCPv-203 represents a new specimen of *Comahuesuchus* (Notosuchia) from the Bajo de la Carpa Formation based on the features seen in the partial dentaries.

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LA SUBZONA DE *FRYXELLODONTUS INORNATUS* (FURONGIANO) EN LA CORDILLERA ORIENTAL DE JUJUY, ARGENTINA

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Se analiza la bioestratigrafía de conodontes de la sección media-superior de la Formación Lampazar, expuesta en el área de Angosto del Moreno, Cordillera Oriental de Jujuy. Esta formación suprayace a la Formación Padrioc (Cámbrico tardío) e infrayace a la Formación Cardonal (Cámbrico tardío–Tremadociano temprano), con un espesor de *ca.* 150 m, y consiste en lutitas intercaladas con delgados niveles de areniscas, calcarenitas y coquinas ocasionales, depositadas en ambientes predominantemente de *offshore*. Dos muestras de calcarenitas (3170 g) suministraron 605 conodontes, correspondientes a 36 especies: *Coelocerosodus bicostatus*, *C. latus*, *Cordylodus andresi*, *C. caboti*, *C. caseyi*, *C. deflexus*, *C. hastatus*, *C. oklahomensis*, *C. primitivus*, *C. proavus*, *C. viruanus*, *C. cf. andresi*, *Cordylodus* n. sp., *Eoconodontus notchpeakensis*, *Eodontatus* sp., *Fryxellodontus inornatus*, *F. lineatus*, *Furnishina curvata*, *F. furnishi*, *F. ovata*, *Furnishina* n. sp., *Furnishina* sp. A, *Furnishina* sp. B, *Granatodontus ani*, *Hirsutodontus hirsutus*, *Phakelodus elongatus*, *Ph. tenuis*, *Proconodontus muelleri*, *P. serratus*, *Prooneotodus gallatini*, *P. rotundatus*, *Prosaqittodontus* aff. *eureka*, *Teridontus nakamurai*, Gen. et. sp. nov. A y B y Gen. et. sp. indet. Los especímenes recuperados se encuentran en buen estado de preservación, exhibiendo un *Color Alteration Index* (CAI) de 1.5–2, que representa paleotemperaturas de entre 50 y 140°C. La asociación de conodontes corresponde a la Subzona de *Fryxellodontus inornatus*, parte media de la Zona de *Cordylodus proavus*, indicando una edad furongiana tardía para los niveles estudiados. Ésta contribución constituye el primer registro de la mencionada subzona en la Cordillera Oriental y en Sudamérica, siendo la misma reconocida en Norteamérica, China y Australia.

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