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29 al 31 de mayo de 2019

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Centro Cultural Córdoba - Av. Poeta Lugones 401 - Córdoba, Argentina

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INFLUENCIA DE CAPAS ANATÓMICAS SOBRE EL RANGO DE MOVIMIENTO *EX VIVO* DEL MIEMBRO POSTERIOR DE UNA ALPACA JUVENIL (*VICUGNA PACOS,* CAMELIDAE). UN ESTUDIO DE CASO*

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La Paleontología estudia e interpreta el pasado de la vida sobre la Tierra mediante los fósiles. Una de las problemáticas para el desarrollo de interpretaciones morfo-funcionales es la incipiente información del tejido blando en el registro fósil, lo que dificulta la determinación de indicadores tales como el rango de movimiento articular (RMA). Nuestro objetivo fue determinar la influencia de capas anatómicas sobre el RMA *ex vivo* de rodilla, tobillo y metatarso-falángica (MTT-F) de una alpaca juvenil. Se diseccionó *ex vivo* el miembro posterior derecho de una alpaca juvenil. Dos evaluadores midieron en grados el RMA de máxima extensión relativa en rodilla, tobillo y MTT-F para 4 condiciones de integridad de capas anatómicas: 1) tegumentos + muscular + articular + óseo [T+M+A+O], 2) muscular + articular + óseo [M+A+O], 3) articular + óseo [A+O], 4) óseo [O]. La comparación del RMA según condiciones fue mediante ANOVA de Friedman con post hoc de Dunn. La rodilla presenta [T+M+A+O]=91±1°; [M+A+O]=102±3° (+12%); [A+O]=161±1° (+77%, p<0,05); [O]=173±2° (+91%; p<0,001). Tobillo registró [T+M+A+O]=117±5°; [M+A+O]=152±5° (+30%, ns); [A+O]=173±2° (+49%, p<0,05); [O]=174±2° (+49%, p<0,01). En MTT-F se midió [T+M+A+O]=108±5°; [M+A+O]=136±5° (+26%; ns); [A+O]=170±5° (+57%, p<0,05); [O]=246±4° (+127%; p<0,001). Concluimos que la disección de capas anatómicas del miembro posterior de una alpaca juvenil se traduce en un incremento del RMA, no obstante, la magnitud del cambio es diferente según la articulación evaluada. Este procedimiento se proyecta *ex vivo* en diferentes clases de tetrápodos actuales con el propósito de establecer factores de corrección del RMA para inferencias paleobiológicas.

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A NEW MEGARAPTORID SPECIMEN (THEROPODA, COELUROSAURIA) FROM CAÑADÓN AMARILLO (ANACLETO FORMATION, CAMPANIAN, UPPER CRETACEOUS), MENDOZA PROVINCE, ARGENTINA*

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Megaraptorids constitute a recently recognized new clade of theropod dinosaurs that have been documented in Africa, Oceania, and Asia, although the most abundant record comes from South America and especially from Argentina. Here we report a new megaraptoran specimen (MCNA-PV 3109 to 3117 and 5119 to 5123) recovered from Cañadón Amarillo in outcrops of the Anacleto Formation, which consist of a left ulna, five manual phalanges, right and left metatarsals (Mt) II and III, and probably right pedal phalanges I-2, IV-1 and IV-5. The ulna exhibits a remarkable proximolateral tuberosity, a slightly curved shaft and a conspicuous depression on the lateroposterior end. This ulna is more robust and the olecranon process is less posteriorly projected than that of *Australovenator* and *Megaraptor*. The manual phalanx II-3 is very similar to that of *Megaraptor*. Metatarsals are 25% longer than those of *Australovenator*. Mt-II has an almost straight shaft with a slightly curved distal end. Mt-III exhibits a marked extensor fossa, which is deeper than in the Mt-III of *Australovenator*. The pedal phalanx IV-1 shows conspicuous proximal, ventral, medial and lateral processes; and a deep medial collateral ligament pit. The pedal ungual has lateral and medial vascular grooves nearly symmetrical. The other megaraptorid from the same area

and stratigraphic levels is *Aerosteon.* Unfortunately, none of the bones here described overlap with those of *Aerosteon*, so it's not possible to assign them to this taxon. The new specimen helps to increase the knowledge of the limb anatomy of this poorly known clade of theropod dinosaurs.

VERTEBRATE COPROLITES FROM THE TACUAREMBÓ FORMATION OF URUGUAY (LATE JURASSIC–?EARLY CRETACEOUS)*

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The Late Jurassic–?Early Cretaceous Tacuarembó Formation crops out in northeast Uruguay. This unit was deposited in a rather arid environment, and includes both perennial and ephemeral paleorivers, intercalated with aeolian paleodunes. Several fossil remains were described for this formation: freshwater mollusks, crustaceans, fishes, turtles, crocodiles, theropod teeth, and dinosaur footprints. Coprolites were first mentioned for this unit in 1981 but they have not been described yet. They were collected in several outcrops of the Tacuarembó Formation, in association with fish and tetrapods (turtles, crocodyliforms, and theropod dinosaurs) remains. The studied coprolites measure from 0.6 cm to 11 cm in length. Their mineralogy, inclusions and morphology were analyzed to infer their biological source and taphonomy. A wide variety of morphotypes was identified, including knots, spiral coprolites (both heteropolar and amphipolar) and a massive and rectangular one. Spiral heteropolar coprolites are assigned to chondrichthyans or primitive osteichthyans. Knot-like coprolites are tentatively assigned to fishes. Corroded ganoid scales were found inside a further large mass of broken material, which is hence assigned to a carnivore vertebrate, possibly a crocodyliform. The paleoichthyofauna of the Tacuarembó Formation is represented by hybodontid sharks, ceratodontiform dipnoans, ginglymodians, and mawsoniid coelacanths. Any of these species could have produced spiral coprolites. This assemblage of coprolites may represent a subaqueous environment of the Tacuarembó Formation, particularly sheetflood deposits.

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A NEW RECORD OF *CERATOPHRYS* SP. FROM THE DOLORES FORMATION (LATE PLEISTOCENE–EARLY HOLOCENE), URUGUAY

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Ceratophrys is a genus of Neotropical amphibians also known as "escuerzos". They are characterized by their large size, robustness and pedicelled teeth. The head is wider than longer, highly ornamented and with high degree of fusion between their bones. There are few antecedents of Pleistocene fossil amphibians in Uruguay, assigned to *Leptodactylus* sp. and *Ceratophrys* sp. In this work, we describe a new skull fragment of *Ceratophrys*, from the outcrops of Aparicio creek, (Canelones Department), southern Uruguay. This material was unearthed from sediments assigned to the Dolores Formation (Late Pleistocene–Early Holocene). The material is referred to the genus *Ceratophrys* based on the following synapomorphies: (1) high and robust skull; (2) strong akinesis; (3) extreme exostosis in the skull bones, which are strongly adorned by tubers and (4) by the presence of two otic notches in the dermocranium. Although the described skull is very fragmentary, the preserved frontoparietal margins are fused forming the post-orbital fenestra. Despite this material is similar to that of *Lepidobatrachus*, the difference between both is the absence of post-orbital fenestra in the last one. The material described here shares characters with different species of *Ceratophrys*, which prevents the specific assignment. Furthermore, some authors point out that the alpha taxonomy of isolated materials is unreliable because the genus has high ontogenetic variability. The presence of *Ceratophrys* in the Late Pleistocene allows paleoenvironmental inferences, since ceratophryine amphibians currently inhabit temperate zones, dry and humid with the presence of temporary pools.