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En el municipio de Camargo (Chuquisaca, Bolivia) se reconocen las areniscas rojizas, cuarcíticas estratificadas con un conglomerado basal, pertenecientes a la Fm. Chaupiuno (Grupo Puca) del Cretácico Superior, discordante sobre rocas del Ordovícico e integrantes del “Sinclinal de Camargo”; en cuyo flanco occidental los estratos están en disposición casi vertical. En esta zona, concretamente en la localidad de La Quemada (15 km al SO Camargo) hay expuesto un estrato en cuyo techo se reconocen decenas de estructura circulares-subcirculares que clásicamente han sido interpretadas como huellas de dinosaurios. El estudio exhaustivo de tales estructuras atendiendo a parámetros morfológicos, distribución, relaciones entre ellas y con restos corporales fósiles del entorno, ha permitido establecer una nueva interpretación biogénica. Las trazas fósiles estudiadas se corresponden con un comportamiento de depredación de peces raya (Batoidea) que conforme detectan las presas (moluscos y crustáceos endobentónicos) los desentieran inyectando con su boca chorros de agua dirigidos que levantan el sedimento, generando así depresiones de contorno subcircular y perfil vertical en “cuenco” a cónico (icnogénero *Piscichnus* Fiebel, 1987), lejos de la esperada sección con base plana de una huella. La distribución aleatoria por tamaños y ausencia de solapes no muestran que sean rastros de huellas de locomoción. La presencia en las areniscas de restos fósiles de *Myliobatis* (Batoidea, Elasmobranchii) refuerza a estos como productores de las estructuras. El estudio detallado de las trazas fósiles de La Quemada en Camargo desecha su interpretación como huellas de dinosaurios y reporta la primera presencia del icnogénero *Piscichnus* en Bolivia.

### **Application of the multiple imputations method in the morphometric study of theropod teeth**

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From the pioneering work of Currie and collaborators at the beginning of the 90s, a large number of qualitative and quantitative parameters began to be established and systematized, with the aim of achieving a more precise classification of isolated theropod teeth. Due to exposure of these materials to taphonomic processes, the missing data are relatively common in the study of these elements. Such loss of information can lead to a drastic reduction of the original dataset, and therefore to biased conclusions. Currently, few statistical programs are available that allow the direct use of incomplete data sets to perform different multivariate methods, but all of them show a low statistical power. The objective of this work is to evaluate the quality of a database obtained after the



application of the multiple imputation method to recover lost data. The most common approaches to deal with missing data have different consequences on the dataset and hence on the results of the analysis. "Casewise/variable deletion" consists on removing the specimens or variables that have missing values. In "Mean value imputation" missing values are replaced by their column average, resulting in a reduction of variation and an artificial increase in the power of tests. In the method of "Iterative imputation", missing values are initially replaced by their column average. An initial PCA run is then used to compute regression values for the missing data. The procedure is iterated until convergence. The results obtained suggest this method provides a better resolution for the identification of isolated teeth.

### **New information on the skull of *Patagonykus puertai* (Theropoda, Alvarezsauridae)**

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The small coelurosaur theropod *Patagonykus puertai* (PVPH-37), recovered in Portezuelo Formation (Turonian-Conician, Upper Cretaceous), from Neuquén Province, Argentina, was originally published as represented by postcranial elements of a single individual. A recent review of the holotype specimen has revealed the presence of several cranial remains that include: both frontals articulated and attached to the right prefrontal, a possible fragment of the right nasal, a fragment of the left squamosal articulated with a distal fragment of the postorbital, and a fragment of the left dentary. Frontals are longer than wide, with a simple interfrontal suture, lacking the complex interdigitation observed in *Shuvuuia*. In the anterior end, the frontal shows a short and transversal contact with the nasal, similar to the condition present in *Haplocheirus*. Anterolaterally, the frontal has a long contact with the prefrontal, as observed in *Shuvuuia*. The squamosal is triangular, presumably with the plane facing dorsolaterally and ventromedially as in *Shuvuuia*. The anterior projection is compressed anteromedially to dorsolaterally, and contacts the postorbital through a sigmoid suture. Anteroventrally, the quadratojugal process is short and robust resembling *Shuvuuia*, but dorsoventrally flat as in *Haplocheirus*. The dentary is dorsoventrally low and lateromedially wide, as in *Haplocheirus*. The new cranial information could improve the internal phylogenetic relationship of the clade, especially between the Patagonykinae and the other internal taxa of Alvarezsauridae.

### **New vertebrate remains from the Huinul Formation (Cenomanian-Turonian; Upper Cretaceous) in Río Negro, Argentina.**

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