

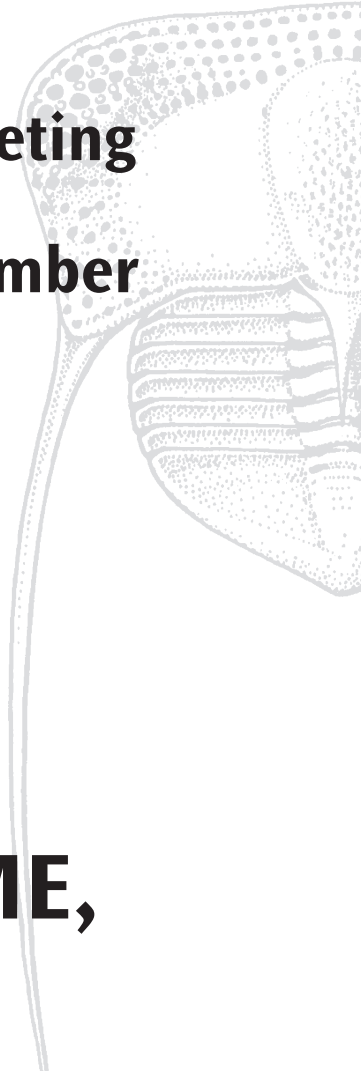
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**PROGRAMME,  
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biozones. Three species, two of which are common to the lower part, are recorded from the lower *protobalticus* Biozone (late Tremadocian?). Seven species are recorded from the upper part of the Fezouata Shale (Floian), from horizons ranging from the lower *jacksoni* to the *minutus* biozones. Overall the fauna is dominated by orthide and lingulide taxa. In addition, a number of species in the lower part of the Fezouata Shale (*copiosus* Biozone) represent the oldest occurrences of their respective genera. The composition of the brachiopod fauna reflects a typical western peri-Gondwanan affinity.

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### Ordovician conodonts from Peru: new data and reappraisal

**Josefina Carolrosi<sup>1</sup>, Graciela N. Sarmiento<sup>2</sup>, Juan Carlos Gutierrez-Marco<sup>2,3</sup>, Cesar A. Chacaltana<sup>4</sup> and Victor Carlotto<sup>5</sup>**

<sup>1</sup>*Institute of Geological Correlation INSUGEO-CONICET, Argentina*

<sup>2</sup>*Complutense University of Madrid, Spain*

<sup>3</sup>*Instituto de Geociencias (CSIC UCM), Spain*

<sup>4</sup>*INGEMMET, Peru*

<sup>5</sup>*Universidad Nacional San Antonio abad del Cusco, Peru*

Ordovician conodont faunas are poorly known from the northern part of the Central Andean Basin, in contrast with data from the northwest of Argentina and south of Bolivia, areas located in the southern part of the same basin. A single occurrence of late Floian conodonts of the upper *Oepikodus evae* Zone was reported in 2008 from the Carcel Puncco section (Inambari River valley) of southwestern Peru, close to the Subandean Fault. Further research in the Eastern Cordillera of Peru led to the discovery of three additional occurrences of Early to Middle Ordovician conodonts, also in the San José Formation but representative of different horizons. The first of them consists of an assemblage belonging to the *Trapezognathus diprion*–*Baltoniodus cf. triangularis* zones (late Floian), and was characterised in the Kimbiri section (Apuřimac River valley). The remaining Abra de Yanacocha and Huancampa localities provided much younger assemblages, representative of the *Lenodus variabilis*–*Yangtzeplacognathus crassus* zones (early–middle Darriwilian). Early Ordovician conodonts from Peru display palaeobiogeographic affinities with similar assemblages known from Baltica, South China and northwestern Argentina, whereas the Middle Ordovician occurrences bear resemblances with coeval assemblages from Baltica, central South China and the Argentinean Precordillera.

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### Completeness of the non-avian theropod fossil record

**\*Daniel Cashmore, Richard J. Butler and Roger A. Close**

*University of Birmingham, UK*

Changes in the quality of the fossil record through time and space can bias our interpretations of diversity, palaeoecology, biogeographical patterns and macroevolutionary processes. The completeness of fossil specimens has been previously quantified for several groups of tetrapods using the character completeness metric (CCM) and the skeletal completeness metric (SCM), and used to assess fossil record biases. CCM quantifies the phylogenetic information contained within a specimen (*i.e.* the proportion of phylogenetic characters it can be scored for), and SCM quantifies the proportion of a complete skeleton that a specimen preserves. Specimen-level SCM scores were collected from the literature for over 300 non-avian theropod species that have been included in previous phylogenetic