



# 3rd Palaeontological Virtual Congress

**Book of Abstracts**

December 1–15<sup>th</sup>, 2021



## 3<sup>rd</sup> Palaeontological Virtual Congress

Book of Abstracts

Palaeontology in the virtual era

From an original idea of Vicente D. Crespo

**Published by** Evangelos Vlachos, Penélope Cruzado-Caballero, Vicente D. Crespo, María Ríos Ibañez, Fernando Antonio M. Arnal, Jose Luis Herraiz, Francesc Gascó-Lluna, Rosalía Guerrero-Arenas and Humberto G. Ferrón.

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**ISBN** 978-84-09-36657-6

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**Date of Publication** December 9, 2021

**How to cite this book:** Vlachos, E. Penélope Cruzado-C., Crespo V. D., Ríos Ibañez M., Arnal F. A. M., Herraiz J. L., Gascó-Lluna F., Guerrero-Arenas R., and Ferrón H. G. (eds) (2021) Book of Abstracts of the 3<sup>rd</sup> Palaeontological Virtual Congress, 304 pp.

# Main Menu

Preface

Support

Organizing  
Committee

Scientific  
Committee

Keynote  
Presentations

Virtual  
Palaeontology

Palaeontological  
Heritage

Conservation  
Paleobiology

Multiple  
Perceptions

Palynology

Taiwan

Molecular  
Palaeontology

Life &  
Environment

Palaeozoic

Mesozoic

Cenozoic

General  
Palaeontology

Virtual  
Field Trips



## VERTEBRATE MICRO-REMAINS FROM THE LOWER CRETACEOUS AGRIO FORMATION (NEUQUÉN BASIN, ARGENTINA)

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### Keywords

Fish teeth, Ichthyoliths, Agua de la Mula Member, Lower Cretaceous, Neuquén Basin

Fish skeletal debris, composed of minute-sized teeth and dermal scales highly resistant to dissolution, occurs in marine and non-marine palaeoenvironments, especially in the deep-sea. Although parataxonometrically classified and generally rare, ichthyoliths have been used to interpret abundance and diversity of fish communities, and as biostratigraphic markers in otherwise barren, muddy sediments. Here we describe three teleost teeth from marly shales (*Crioceratites schlagintweiti* Zone) and calcareous shales (*Crioceratites diamantensis* and *Paraspiticeras groeberi* zones) of the Lower Cretaceous (Hauterivian) Agua de la Mula Member (Agrid Formation), which formed in a mixed siliciclastic-carbonate marine homoclinal ramp system, under low energy and dysoxic conditions. Specimens were picked from three washing residues (90 g total weight) that yield foraminiferal assemblages with low abundance and species richness. The specimens are between 0.5 and 1.5 mm long, triangular in outline, and have a smooth external surface with straight margins. Adopting the system of morphological descriptors for ichthyoliths, the specimen with flattened cusp and circular section in occlusal view can be referred to type a8/b1/c1/d1, while two teeth showing acute cusps and with sub-oval and acute laterally section can be referred to types a9/b1/c5/d2/e1/f1/g1/h0 and a9/b2/c5/d2/e4/f3/g1/h0, respectively. The new material enriches the poor vertebrate fossil record of the marine members of the Agrid Formation, to date composed of scattered remains of marine 'reptiles', pycnodontiform fishes, hybodont and lamniform sharks, and adds further faunal components exploiting different, as yet unrecorded, niches.

The study was supported by The Micropalaeontological Society Grant-In-Aid to M.C.





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