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Tethyan calpionellids in the Neuquén Basin (Argentine Andes), their significance in defining the Jurassic/Cretaceous boundary and pathways for Tethyan-Eastern Pacific connections

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ABSTRACT

The study of calpionellid distribution in the well-documented Las Loicas section of the Vaca Muerta Formation in the Neuquén Basin, Argentine Andes, allows the recognition of the upper part of the Crassicollaria Zone and the lower part of Calpionella Zone across the Jurassic/Cretaceous boundary. The Crassicollaria Zone, Colomi Subzone (Upper Tithonian) is composed of *Calpionella alpina* Lorenz, *Crassicollaria colomi* Doben, *Crassicollaria parvula* Remane, *Crassicollaria massutiniana* (Colom), *Crassicollaria brevis* Remane, *Tintinnopsella remanei* (Borza) and *Tintinnopsella carpathica* (Murgeanu and Filipescu). The Calpionella Zone, Alpina Subzone (Lower Berriasian) is indicated by the explosion of the small and globular form of *Calpionella alpina* dominating over very scarce *Crassicollaria massutiniana*. The FAD of *Nannoconus wintereri* can be clearly correlated with the upper part of Crassicollaria Zone and the FAD of *Nannoconus kamptneri minor* with the Calpionella Zone. Additional studies are necessary to establish a more detailed calpionellid biozonation and its correlation with other fossil groups. The present work confirms similar calpionellid bioevents in westernmost Tethys (Cuba and Mexico) and the Andean region, strengthening the Paleo-Pacific-Tethyan connections through the Hispanic Corridor already known from other fossil groups.

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