

FIRST PALYNOLOGICAL RECORD OF THE SILURIAN/DEVONIAN BOUNDARY IN THE SAN JUAN PRECORDILLERA, ARGENTINA

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The Silurian/Devonian boundary in the Precordillera has been scarcely fossil-dated because of the lack of accurate markers. The complexity of the Silurian and Devonian deposits in western Gondwana is a result of the tectonic events related to the development of a foreland basin in the active margin. Acritarch diversity declined worldwide during late Silurian and Devonian time, probably in response to extrinsic changes in seawater chemistry. Otherwise, terrestrial palynomorphs are broadly used to constrain the Silurian/Devonian boundary. The aim of this work is to present the miospore and phytoplankton assemblages recorded in the upper part of the Los Espejos Formation and the lower part of the Talacasto Formation in Río Jáchal section. Furthermore, this work serves the purpose of reporting the identification of the Silurian/Devonian boundary within the Los Espejos Formation, so far uncertainly defined in the San Juan Precordillera, because mostly the 100 ms of the top of the Los Espejos Formation were palynologically barren (e.g. Cerro del Fuerte and Loma de Los Piojos sections). Ten samples were collected from the upper section of the Los Espejos Formation and nine from the lower section of the Talacasto Formation. The lowest studied level of the Los Espejos Formation contains *Chelinospora* cf. *cantabrica*, which is an accessory species of the *reticulata-sanpetrensis* (RS) and *hemisferica* (H) biozones from Spain, pointing out a Ludfordian-Pridoli? age. Towards the top of the unit, some Devonian badly preserved phytoplankton and spores species have been recognized, such as cf. *Latosporites ovalis*, *Estiastra culcita*, and cf. *Thysanoprobolus polykion*. Below the top of the Los Espejos Formation, at 6.25 m from it, a single specimen of *Streelisporea* cf. *newportensis* was found, representing the second record of this species in Gondwana. Its presence could allow the identification of the Silurian/Devonian boundary in the Central Precordillera, supporting the previous suggested age based on brachiopods. Also, at 4.75 m and 2.5 m below the top the Los Espejos Formation, *Cymbosporites proteus* and *Dictyotriletes* cf. *emsiensis* Morphon were recorded. These species could also support a Lochkovian age. Above the base of the Talacasto Formation, at 8-16 m, *Dictyotriletes* cf. *emsiensis* Morphon, cf. *Dibolisporites echinatus*, and cf. *Zonotriletes* sp. were found, which could confirm that the Early Devonian age reaches this level. Based on palynological record, it is possible to assign a Ludlovian/Pridoli? to Lochkovian to the studied