



XII Congreso de la Asociación Paleontológica Argentina

LIBRO DE RESÚMENES

23 - 26 de Noviembre, 2021

VIRTUAL



y *Pholadella*). En este intervalo, se registra un género endémico, que tuvo su primera aparición en el Ludlow–Pridoli de Bolivia (*Pleurodapis*). El Devónico Medio a parte del Superior (Eifeliano a Frasniano), presenta 18 géneros, de los cuales, 16 son cosmopolitas y ecuatoriales en su mayoría y dos son endémicos, y ya estaban presentes en la cuenca (*Notonucula* y *Pleurodapis*). Esta reconstrucción de las afinidades paleobiogeográficas de los bivalvos registrados permite documentar el carácter cosmopolita de los intervalos de la cuenca en los que el nivel del mar alto conectaba varias cuencas entre sí, es decir, entre el Ludlow y el Lochkoviano temprano y entre el Eifeliano y el Frasniano. Por otro lado, entre el Lochkoviano terminal y el Emsiano, el Reino Malvinokáfrico o Bioregión Malvinohosana, de endemismo pronunciado en otros *phyla*, registra en cambio, en el caso de los bivalvos, presencia de géneros mayoritariamente cosmopolitas.

FIRST PALYNOLOGICAL RECORD FROM THE WINNIPEG SHALE (UPPER ORDOVICIAN) IN THE NORTHERN BLACK HILLS OF SOUTH DAKOTA, U.S.A.

M. DI PASQUO¹ AND J. E. MARTIN^{2*}

¹Laboratorio de Palinoestratigrafía y Paleobotánica, CICYTTP (CONICET-Entre Ríos-Universidad Autónoma de Entre Ríos). Dr. Materi 149, E3105BWA Diamante, Entre Ríos, Argentina. medipa@cicyttp.org.ar

²School of Geosciences, Geology Museum, University of Louisiana. Lafayette, LA 70504, USA. jim.martin929@gmail.com

The marine Winnipeg Formation exposed in the northern Black Hills of South Dakota is composed of the Icebox and Roughlock members, which represent the southern extension of transgressive episodes documented in the northern Great Plains (Williston Basin) of the USA and Canada. The typically dark green to black shales of the Icebox grade up into argillaceous carbonates of the Roughlock. The first palynologic analysis of the Icebox and lower Roughlock members includes a well-preserved and diverse palynoflora from 14 unweathered samples collected from Spearfish Canyon (U.S. Highways 14 and 85). The lower 10 samples were taken approximately every meter from the nine meters of Icebox shales and three additional samples from thin transitional layers into the calcareous shale of the Roughlock (1 m), from which another sample was collected. The 14 assemblages are variably composed of chitinozoans (25 species) and acritarchs (23 species), with fewer cryptospores, cyanophycean *Gloecapsomorpha prisca*, and five scolecodonts. Frequency trends from the last four samples, corresponding to the transition of Icebox to Roughlock, show chitinozoans dominating the lower sample with a lesser proportion of acritarchs that dominate in the next two samples. *Gloecapsomorpha prisca*, an Ordovician colonial marine microorganism, was found intermittently through the entire interval but is especially abundant in the sample from the Roughlock; hence interpreted as blooms related to environmental changes. Although many chitinozoans and acritarchs are long-ranging Ordovician species, the chitinozoans *Calpichitina lenticularis*, *Euconochitina (Jenkinochitina) tanvillensis* and *Belonechitina robusta*, documented from the base up to the mid-upper Icebox, support a correlation of our studied interval with the mid Caradocian (equivalent to North American Trentonian and current Sandbian–Katian stages) homonymous palynozones of North Gondwana. The acritarchs *Elektoriskos aktinotos*, *Peteinosphaeridium accintulum* and *Sylvanidium paucibrachium*, known from the Ashgillian of Missouri, and *Peteinosphaeridium septuosum* from the Caradocian and Ashgillian of Kansas, Missouri and Oklahoma, and *Belonechitina punctata* (recorded in the upper Icebox), reinforce this age. This is in concordance with previous studies of conodonts from upper Icebox and Roughlock at Icebox Gulch and Whitewood Creek in the Black Hills, where lower and mid Caradocian species were documented (*Belodina (Panderodus) compressa*, *Chirognathus duodactylus* (= *delicatula*), *Distacodus insculptus*, *Falodus prodentatus*, *Oulodus serratus*, *Plectodina dakota*, *Plectodina tenuis*, *Ptiloconus gracilis*, *Scyphiodus primus*, and several species of *Panderodus*). A preliminary paleobiogeographic affinity indicates a close relationship to Northern Gondwanan, Baltic and Laurentian chitinozoan assemblages during the late Ordovician.

*Financial support: CONICET (Fulbright Scholarship 2009, PIP 0812 2015–2017).

BIOSTRATIGRAPHY OF DEVONIAN–MISSISSIPPIAN SAPPINGTON FORMATION IN SOUTHWESTERN MONTANA, U.S.A.

M. DI PASQUO¹, B. RICE², G. W. GRADER³, P. T. DOUGHTY³, P. ISAACSON⁴, AND L. SILVESTRI^{1*}

¹Laboratorio de Palinoestratigrafía y Paleobotánica, Centro de Investigaciones Científicas y Transferencia de Tecnología a la Producción (CICYTTP, CONICET-Entre Ríos-Universidad Autónoma de Entre Ríos). Dr. Materi y España 149, E3105BWA Diamante, Entre Ríos, Argentina. medipa@cicyttp.org.ar; leosilvestri@gmail.com