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GSA Annual Meeting in Indianapolis, Indiana, USA - 2018

Paper No. 188-1

Presentation Time: 9:00 AM-6:30 PM

SCOLICIA AND ITS PRODUCER IN SHALLOW MARINE DEPOSITS OF THE LOWER MIOCENE CHENQUE FORMATION OF PATAGONIA, ARGENTINA: FUNCTIONAL MORPHOLOGY AND IMPLICATIONS FOR UNDERSTANDING BURROWING BEHAVIOR

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Scolicia is one of the most conspicuous trace fossil in lower shoreface deposits of the lower Miocene Chenque Formation of Patagonia, Argentina. This ichnotaxon consists of horizontal, sinuous or meandering trails with a laminated backfill and two parallel strings located at the base. Abundant body fossils attributed to *Brisaster iheringi* occur in close association to these trace fossils. The echinoids are very well preserved, and most of the specimens have some areas with their spines attached in life position. In particular, preservation of the subanal tufts of spines, associated to isopores (which are interpreted as being associated to funnel building tube feet), supports the interpretation that these organisms are the producers of *Scolicia*. A shaft connecting the burrow with the sediment-water interface was not observed in the vertical sections of the excavations, although in bedding plane surfaces, some small vertical tubes are recognized. However, the great diversity and abundance of ichnofossils co-occurring in these deposits may be precluding the identification of these vertical structures. These deposits provide an excellent opportunity to integrate trace fossil data, body fossil information and observations from modern analogues in order to perform a morpho-functional analysis of *Scolicia*.

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Tuesday, 6 November 2018: 9:00 AM-6:30 PM

Halls J-K (Indiana Convention Center)

Geological Society of America *Abstracts with Programs*. Vol. 50, No. 6
doi: 10.1130/abs/2018AM-322266

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