



الدورية العربية لعلوم الأرض
Arabian Journal of Earth Sciences (AJES)
www.arabianjournalofscience.com/index.php/AJES



The ichnogenus “Selenichnites” from the Middle Jurassic (Bathonian) Strata of the Skoura syncline (Middle Atlas, Morocco)

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ABSTRACT

This research provides the first evidence of invertebrate biogenic sedimentary structures attributed to the ichnogenus *Selenichnites* from the Jurassic of Morocco. The ichnofossils occur in calcareous strata from the Ich Timellaline-Bou Akrabène Formation (Late Bajocian-Early Bathonian) of the Skoura synclinal (Middle Atlas, Morocco). The ichnofossils (Fig. 1) occur in a range of sizes that were preserved as exogenic concave epirelief at the water/substrate interface and/or beneath a veneer of substrate of contrasting lithology, as concave epirelief undertracks (Seilacher, 1964), on subhorizontal slabs. The morphology of the trace fossils are crescentic in form in which the best preserved has a posterior central axial impression. The ichnofossils are provisionally interpreted as possible resting (*cubichnia*), feeding (*fodinichnia*) and/or hiding traces (Seilacher, 1953, 1964, 1967). Romano and Whyte (1987, 1990) had suggested limulids (horseshoe crabs) as the potential tracemakers of the ichnogenus *Selenichnites*, however these invertebrate traces could be referred to all organism with similar morphological characters. *Selenichnites* is generally attributed to xiphosurans with the lunate region representing the carapace and the posterior linear imprint representing the telson (Romano and Whyte 1987; Hardy 1970; Fischer 1978; Wang 1993). The ichnofossil-bearing strata is a sandy-carbonate indicative of a relatively protected shallow-water subtidal setting. The palaeoenvironmental conditions preceded the Bathonian regression of the Atlas domain. This discovery

provides the first evidence of xiphosurans or xiphosuran-like organisms inhabiting the southern shores of the Tethys in the Middle Jurassic.



Fig.1- Examples of concave epirelief *Selenichnites* isp. on calcareous strata of the Middle Jurassic (Skoura, Middle Atlas, Morocco).

Keywords: *Selenichnites*, xiphosuran, Middle Jurassic, Skoura, Middle Atlas.

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