C. R. Palevol xxx (2016) xxx–xxx

Contents lists available at ScienceDirect

Comptes Rendus Palevol

www.sciencedirect.com

General Palaeontology, Systematics and Evolution (Invertebrate Palaeontology)

First occurrence of the Ichnogenus *Selenichnites* from the Middle Jurassic Strata of the Skoura Syncline (Middle Atlas, Morocco); Palaeoecological and palaeoenvironmental context

Première découverte de l'ichnogenre Selenichnites *du Jurassique moyen dans le synclinal de Skoura (Moyen Atlas, Maroc) ; contexte paléoécologique et paléoenvironnemental*

Mostafa Oukassou[a,*], André Charrière[b], Abdelouahed Lagnaoui[c,d], Stacey Gibb[e], André Michard[f], Omar Saddiqi[g]

[a] *Laboratory "DBSCG", Department of Geology, Faculty of Sciences Ben M'sik, Hassan II University of Casablanca, BP 7955, Sidi Othman, Casablanca, Morocco*
[b] *University Toulouse III, 26, rue Jean-Pierre-Chabrol, 34740 Vendargues, France*
[c] *Laboratory of Geodynamic and Geoamatics, Department of Geology, Faculty of Sciences, Chouaïb Doukkali University, BP 20, 24000 El Jadida, Morocco*
[d] *Laboratory of Stratigraphy of Oil and Gas Bearing Reservoirs, Department of Paleontology and Stratigraphy, Institute of Geology and Petroleum Technologies, Kazan (Volga Region) Federal University, Kremlyovskaya str. 18, 420008 Kazan, Russian Federation*
[e] *Department of Earth & Atmospheric Sciences, University of Alberta, Edmonton, AB T6G 2E3, Canada*
[f] *Em. Pr. University Paris-Sud, 10, rue des Jeûneurs, 75002 Paris, France*
[g] *Laboratory "Géosciences", Department of Geology, Faculty of Sciences Aïn Chock, Hassan II University of Casablanca, BP 5366, Maârif, Casablanca, Morocco*

ARTICLE INFO

Article history:
Received 17 March 2015
Accepted after revision 27 October 2015
Available online xxx

Handled by Danièle Grosheny

Keywords:
Selenichnites
Limulids
Subtidal palaeoenvironment
Middle Jurassic
Skoura
Middle Atlas

ABSTRACT

Mesozoic strata of North Africa yield the first occurrence of the ichnogenus *Selenichnites*. The trace fossils occur on the top surface of a sandy carbonate deposit in the axis of a Middle Atlas syncline (Skoura Syncline, NE Morocco). The ichnofossil-bearing horizon belongs to the Late Bajocian–Early Bathonian Ich Timellaline/Bou Akrabene Formation. The trace fossils are crescent-shaped and the best preserved exhibits a posterior central axial impression (possible telson tail impression). They are interpreted as feeding burrows (fodinichnia) or hiding depressions of Xiphosurids or Limulids (horseshoe crabs) on a sandy carbonate substrate beneath a veneer of muddy deposits. The sedimentological character suggests a relatively protected shallow water subtidal palaeoenvironment preceding 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.

Mots clés :
Selenichnites

RÉSUMÉ

Des traces d'invertébrés, attribuées à l'ichnogenre *Selenichnites*, ont été découvertes dans les couches d'âge Bajocien supérieur–Bathonien inférieur (formation d'Ich Timellaline/Bou

* Corresponding author.
E-mail addresses: mostafa.oukassou@gmail.com, mostafa.oukassou@univh2m.ma (M. Oukassou).

http://dx.doi.org/10.1016/j.crpv.2015.09.013
1631-0683/