



**HAL**  
open science

## Arkarua-like fossils from the Anti-Atlas region (Morocco): A new opportunity to test the Ediacaran-Cambrian radiation

Jamal El Kabouri, Ezzoura Errami, Bruno Becker-Kerber, Nasser Enih, Ulf Linnemann, Clémentine Fellah, Antoine Triantafyllou, Bertrand Lefebvre

► **To cite this version:**

Jamal El Kabouri, Ezzoura Errami, Bruno Becker-Kerber, Nasser Enih, Ulf Linnemann, et al.. Arkarua-like fossils from the Anti-Atlas region (Morocco): A new opportunity to test the Ediacaran-Cambrian radiation. 11th European Conference on Echinoderms, Bertrand Lefebvre; Thomas Saucède, Oct 2023, Villeurbanne, France. hal-04271131

**HAL Id: hal-04271131**

**<https://hal.science/hal-04271131v1>**

Submitted on 5 Nov 2023

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



# ECE 11

Lyon, France

## ABSTRACT BOOK

11<sup>th</sup> European Conference on Echinoderms (ECE11)

October 16–20, 2023

Lyon, France

## ***Arkarua*-like fossils from the Anti-Atlas region (Morocco): A new opportunity to test the Ediacaran–Cambrian radiation**

Jamal EL KABOURI<sup>1</sup>, Ezzoura ERRAMI<sup>1,2</sup>, Bruno BECKER-KERBER<sup>3</sup>, Nasser ENNIH<sup>1</sup>,  
Ulf LINNEMANN<sup>4</sup>, Clémentine FELLAH<sup>5</sup>, Antoine TRIANTAFYLLOU<sup>5</sup>  
& Bertrand LEFEBVRE<sup>5</sup>

<sup>1</sup> Faculté des Sciences, Université Chouaïb Doukkali, EGGPG, B.P. 20, 24000, El Jadida, Morocco.  
jamalelkabouri1995@gmail.com

<sup>2</sup> Faculté Polydisciplinaire de Safi, Université Cadi Ayyad, Got, B.P. 4162, 46 000, Safi, Morocco.

<sup>3</sup> Brazilian Synchrotron Light Laboratory (LNLS), Brazilian Center for Research in Energy and Materials (CNPEM), 13083-970, Campinas, Sao Paulo, Brazil

<sup>4</sup> Senckenberg Naturhistorische Sammlungen Dresden, Museum für Mineralogie und Geologie, GeoPlasmaLab, Königsbücker Landstraße 159, D-01109, Dresden, Germany

<sup>5</sup> UMR CNRS 5276 LGLTPE, ENS de Lyon, Université Lyon 1, Villeurbanne, France.

The Ediacaran period represents a remarkable stage in the diversification of life on Earth. During this time, the first complex ecosystems were established in shallow and deep marine environments, and were inhabited by a wide range of macro-organisms known as the Ediacaran biota. The study of the biological aspects of the Ediacaran biota focuses mainly on classic localities (Nama, Newfoundland, Flinders Ranges...), and therefore the search for and study of new fossiliferous localities is of key importance.

This contribution describes a new fossiliferous locality in the Ougnate inlier, in the Anti-Atlas region (Morocco). The fossiliferous unit is the Izelf Formation (567-550 Ma), which belongs to the Ouarzazate Group. Sedimentological surveys indicate that the Izelf Formation consists of 200 meters of siliciclastic (sandstone, siltstone) and carbonate (stratified carbonate, carbonate stromatolites, and carbonate phosphate levels) sediments deposited in a shallow marine environment.

The fossil-bearing sediments of the Izelf Formation yielded four types of fossils: *Aspidella*, ivesheadiomorphs, *Charniodiscus*, and *Arkarua*-like forms. *Arkarua* is represented by four specimens with pentaradial symmetry. These *Arkarua*-like specimens are very similar to those found in Australia (Gehling, 1987), offering a new opportunity to test the link between the Ediacaran fauna and the Cambrian radiation of echinoderms.

### References

Gehling, J.G. 1987. Earliest known echinoderm—a new Ediacaran fossil from the Pound Subgroup of South Australia. *Alcheringa*, 11(4), 337–345.