

## A NEW ECHINODERM LAGERSTÄTTE IN PORTUGAL: PRELIMINARY RESULTS

**Bruno Claro Pereira<sup>1</sup>, Pedro Pereira<sup>2</sup>, Susana Machado<sup>3</sup>,  
Jorge Carvalho<sup>4</sup> and Lia Mergulhão<sup>5</sup>**

1. School of Earth Sciences, University of Bristol, U. K.; CICEGe, Universidade Nova de Lisboa, Portugal; Museu da Lourinhã, Portugal. [glbmcp@bristol.ac.uk](mailto:glbmcp@bristol.ac.uk)
2. DCeT, Universidade Aberta; Centro de Geologia da Universidade de Lisboa, Portugal.
3. Laboratório Nacional de Geologia, LNEG, Portugal.
4. EDM – Empresa de Desenvolvimento Mineiro, SA, Portugal.
5. Instituto de Conservação da Natureza e Florestas, ICNF, Portugal.

At the locality of Cabeço da Ladeira (Municipality of Porto de Mós in central Portugal; Lusitanian Basin), about ninety fossilized echinoderms remains were found in limestones dated at approximately 170 million years old (Bajocian, Middle Jurassic). The site was formerly a limestone quarry, inactive since approximately 2010. The fossils are located on the top surface of four of the layers, within a stratigraphic section of seven layers. Beautifully preserved echinoid, asteroid, crinoid and ophiuroid fossils can be seen at this site, many of which are museum-quality specimens and hold a high potential for becoming type specimens of new genera and species. As an example, a completely articulated *Heterocidaris* sp. and a *Rhabdocidaris* sp. were retrieved from that site. Also, among the specimens found, there is the first completely articulated ophiuroid from the Portuguese fossil record. The vast majority of the specimens are semi-articulated, showing all their ossicles in almost like-life position. Such excellent preservation probably resulted from cyclic storm events, as indicated by their preservation and distribution through the section, which suddenly killed and preserved these animals. The number and state of preservation of the fossils makes this locality unique in the Portuguese fossil record and rare in the international context in sections of Middle Jurassic age. Plans are being made to preserve the site and transform it into an open-air museum.

