

Promotion and Management of the geological heritage in the Naturtejo Geopark(Portugal): The Fossils Trail of Penha Garcia

M. M. Catana^{1,2,3a}, M.I. Caetano Alves² & C. Neto de Carvalho³

¹ MSc. Student, University of Minho, Braga, Portugal. Email: a - mmcatana@gmail.com

² Earth Sciences Centre, University of Minho, 4710-057 Braga, Portugal

³ Geology and Palaeontology office, GNMM – Centro Cultural Raiano, 6060-101 Idanha-a-Nova, Portugal

Naturtejo Geopark (GNMM) is one of the European Geoparks, which is located in central Portugal, near the eastern Portuguese-Spanish border. In the GNMM area 16 geosites were identified as suitable for public promotion. The Ichnological Park of Penha Garcia (IPPG) is one of these geosites, located near Penha Garcia village of the Idanha-a-Nova Municipality. The ichnological heritage is in the Lower Ordovician mud-quartzarenitic rocks of the Armorican Quartzite Formation, and the best outcrops can be seen in the gorge of the Ponsul River.

The IPPG Arenigian rocks contain a relevant ichnofossil record due to its preservation quality, abundance, diversity and individuality associated to a remarkable geological heritage. The most relevant ichnofossils are the *Cruziana*, feeding trails produced by trilobites and other morpho-similar life forms. The Idanha-a-Nova Municipality has determined to give a legal status to the Geological, Palaeontological, Biological, Historical and Cultural heritage in the gorge of the Ponsul River, and has classified this area as a Property of Municipal Interest. The PR3 – *Fossils Trail*, a circular pedestrian itinerary with 3Km long, was marked with the goal of promoting that relevant heritage. This is not only a Palaeontological trail, but also a Geological Trail due to the great geodiversity features observable, namely rocks and minerals, sedimentary structures, biostratigraphic environments, tectonic structures and landforms.

Since a long time ago the fossils of Penha Garcia have been attracting amateurs and geologists, such as the pioneer Nery Delgado, back in 1885. Nowadays, the marked PR3 provides a rise in the number of visitors. They are tourists of diverse countries and ages, general public and special ones: geotourists, nature tourists and students. Several activities have been carried out in this Trail, in order to reach all these different types of public. There are guided and summer field trips addressed to the general public, as well as guided field trips specifically addressed to the school population. Some of them are developed in association with sports and adventure competitions along with donkey's rides, among others. In order to improve the geological knowledge of the general public and to create scientific tools to support a sustainable management of resources some geosites and areas were selected in the IPPG for educational purposes. Furthermore, with the purpose of increasing public awareness of geodiversity and geoconservation the training of staff from this Park who, in the future, will be guiding field trips is already scheduled. The training course will be opened to tourism technicians in general and from the hotels and outdoor companies around. This training course will include the explanation on the field trail, a booklet, and also other deliverables available.

Keywords: Ichnofossils, Education and Recreation, Management, Geopark