

The Escarpão Plateau (South of Portugal) – A study case of nesting geosites from the aspiring algarvensis geopark

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Located along the southern limit of the aspiring algarvensis UGGp, the Escarpão Plateau is a singular geomorphological structure sculpted by the conjugation of fluvial, karst and tectonic processes (Fig. 1).

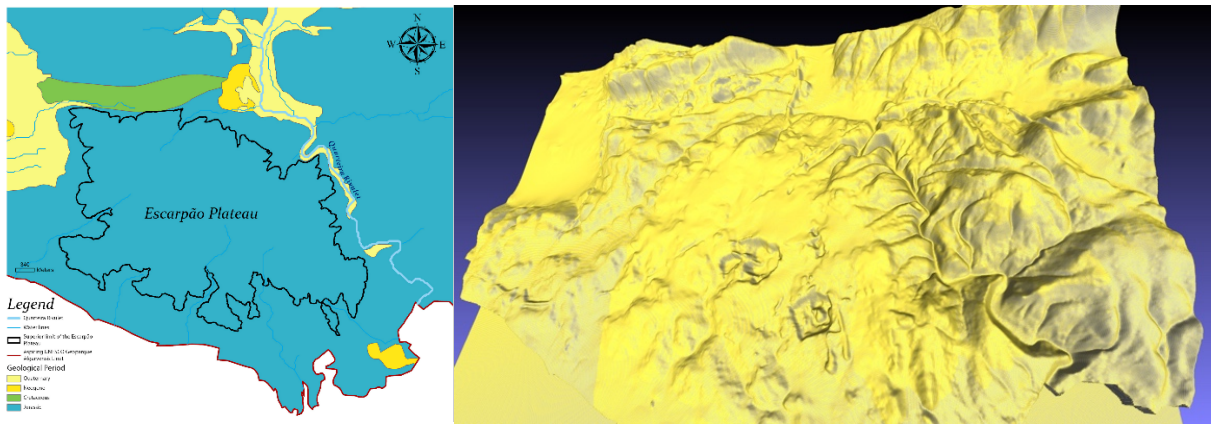


Figure 1. Escarpão Plateau contour and geochronology (left) and digital elevation model (right).

The plateau is deeply scarred by the Quarteira Rivulet forming a valley that crosses the most complete sedimentary sequence of the Upper Jurassic of the Eastern Algarve (161,2 to 145,5 million years) (Terrinha et al., 2006). This sequence includes five geological formations representing different depths of carbonate ramp deposition from the Tethys Sea: Peral Formation, Jordana Formation, Cerro da Cabeça Formation, Escarpão Formation and Limestone Formation with *Anchispirocyclina lusitanica* (foraminifera), from the oldest to the most recent at the top (Fig. 2) (Leinfelder et al., 2005; Ramalho, 2015; Terrinha et al., 2006). Throughout the Quaternary Period, the karst processes shaped a landscape of sparse and poor soils in which successive generations knew how to adapt their subsistence agriculture and way of life.

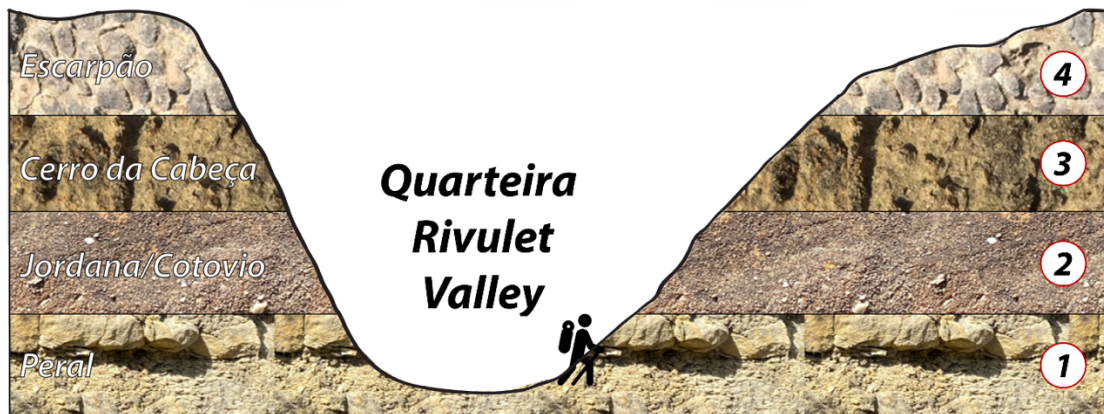


Figure 2. Valley transect exposing the different carbonated formations from the Upper Jurassic.

The geomorphology of the plateau and of the rivulet valley, the sequence of the carbonated formations and the diversity of sedimentary and paleontological records (Fig. 3) can be all considered as possible geosites at different scales and with different purposes, forming thus nested geosites.

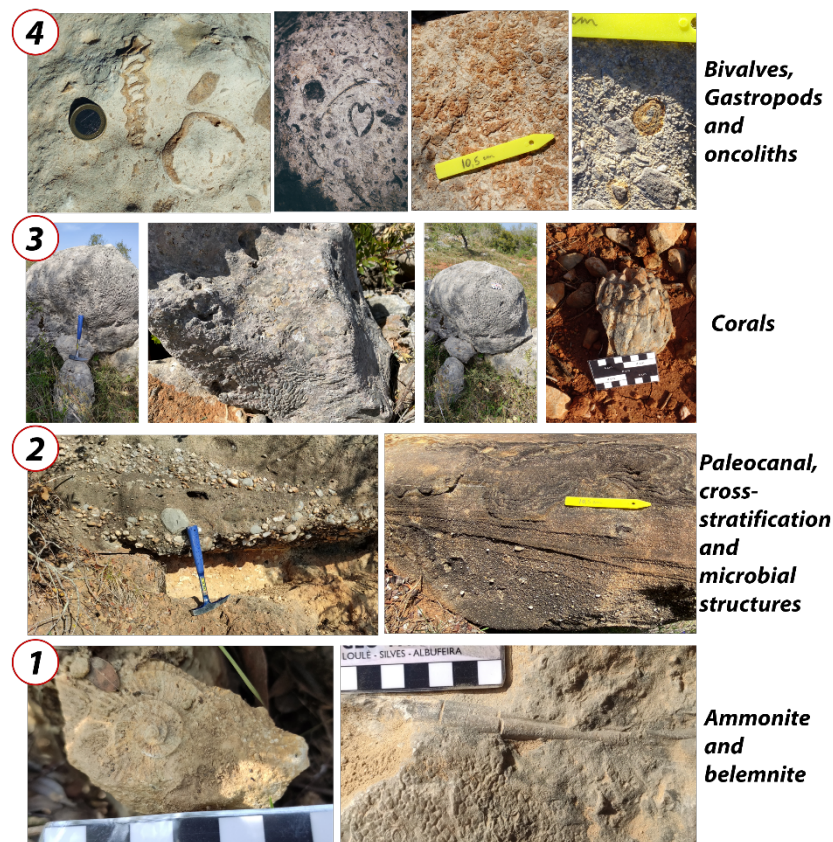


Figure 3. Details of sedimentary and paleontological records from the geological formations of the Escarpão Plateau.

In order to promote and preserve these geosites the Algarvensis aspiring geopark started to create a 8 km long interpretative walking paths, passing through 11 points of interest, including biosites and geosites (with interpretative boards) and having a view to the surrounding cultural and historical heritage. The interpretative boards allow not only highlighting the different geological heritage existing in the Escarpão Plateau but also their relation in space and time.

References

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