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Classification and study of geomorphologic forms present in Serra das Mesas (Sabugal, Portugal). A first approach to identify the processes associated.

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The Serra das Mesas (Table Mountain) is located in the East-North central part of Portugal, moreover in the Sabugal County and as a peak at 1256 m. This mountain is a circular batholith with a vast originality and diversity of geomorphologic forms, which makes Serra das Mesas an important place to study the evolution of complex systems involved in the generation of such forms.
This study is the first approach to recognize and classify the different geomorphologic forms present in Serra das Mesas, as well as the attempt of identification all the processes involved in the generation of each form type. In another hand, this work could be use as a didactic and touristic resource in a perspective of diffusion and improvement of geomorphologic heritage, and could be an important strategy to promote the regional and local development.
In order to identify and categorize the geomorphologic forms present in the study area, in a fist approach had been done a literature research to find papers where similar forms were described. Taking into account the unique and diverse geomorphologic environment a field survey was carried out to located and inventory the forms at Serra das Mesas. With the aim of organized them in a simple system, we decide group the forms according to the morphological dimension. In this way, one considered three categories: (i) large forms, which are above hundreds of meters until kilometer scale; (ii) medium forms, where we clustered forms between decameter to hectometer; and (iii) detail forms, which are below the metric dimension.
In Serra das Mesas had been identified a large form (Lameirão Platform) and a medium form (Castle Koppie). The detail form is the most representative category with 18 different geomorphologic forms (tables, spheroidal weathering, residual blocks, bolideira stones, pedestal blocks, mushroom forms, pedunculate blocks, cracked blocks, sinks, tafone, flute, polygonal cracks, pseudostrtification, tors, chaos of balls, chaos of slabs, quartz veins and cone shapes).
Due to the geomorphologic diversity and the scientific potential, the Serra das Mesas is an exceptional place to study the complex systems involved in the generation of different geomorphologic forms and Earth surface processes.