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## Lateral and "vertico-lateral" cave dwellings in Haddej and Guermessa: characteristic geocultural heritage of Southeast Tunisia

Nouri Boukhchim (1), Tarek Ben Fraj (2,3), and Emmanuel Reynard (4)

(1) Université de Kairouan, Faculté des Lettres et des Sciences Humaines, Tunisia (boukhchim.nouri@gmail.com), (2) Université de Sousse, Faculté des Lettres et des Sciences Humaines, Tunisia, (3) Université de Tunis, Laboratoire CGMED, Tunisia (tarekbfraj@yahoo.fr), (4) Université de Lausanne, Institut de géographie et durabilité, Lausanne, Switzerland (emmanuel.reynard@unil.ch)

Southeast Tunisia is known for different types of cave dwellings developed for centuries on the Matmata-Dahar plateau. Their shaping takes into account the geological and geomorphological context of the sites. They thus provide an interesting example of geoheritage on which was developed an important cultural and architectural heritage. Most of these sites are now not more used and partly abandoned. An interdisciplinary research – crossing geomorphological and archaeological approaches – was carried out in two sites: Haddej and Guermessa.

Haddej site belongs to the Matmata area and its surroundings located in the northern part of the plateau. It is characterized by cave dwellings dug vertically and then laterally in the Quaternary wind silt accumulations (loess) filling the valleys that dissect the plateau surface. The latter corresponds to the back of a monoclinic structure cuesta. Guermessa site belongs to the Tataouine region, located in the southern part of the plateau. It is characterized by troglodyte dwellings dug laterally in alternations of limestone, clay, marl and dolomite layers of Cenomanian and Turonian age. These alternations are the backbone of buttes still partially attached to the front of the cuesta.

Both sites offer favourable conditions for geomorphological study. They exhibit a wide range of structural landforms within the monoclinic structure, and their surroundings present a variety of shapes and Quaternary formations allowing the study of the geomorphological and palaeoenvironmental changes that happened during the Quaternary in this now arid region.

These geosites were assessed using the method developed by the University of Lausanne (Reynard et al. 2015), which allowed us to assign them a strong scientific, aesthetic, cultural, educational and tourist value. Proposals for their tourist promotion were then proposed taking into account the lack of maintenance that reduces their cultural and tourist value.

## Reference

Reynard E., Perret A., Bussard J., Grangier L., Martin S. (2015). Integrated approach for the inventory and management of geomorphological heritage at the regional scale, Geoheritage, DOI: 10.1007/s12371-015-0153-0