

Water related habitats in Libyan Sahara desert: Kel Tadrart Tuareg knowledge

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Changes in the environment, and uncertainty due to growing dryness are major features of Holocene Sahara history: studying the interface between deteriorating environmental conditions and human perception is a way to better understand the nature of social organization of groups living in fragile, marginal environments. During the “Saharan Waterscapes” project a multi-disciplinary research programme, based on geoarchaeological, ethnoarchaeological and ethnobotanical surveys, was carried out in the Akakus Mts. (SW Libya, central Sahara), today inhabited by the Tuareg Kel Tadrart. The basis for the assessment of water resources today are embedded in the Tuareg ‘social memory’, necessary to provide the first repertory of the natural and artificial water features in the study region. The local and traditional knowledge of Kel Tadrart herders appears to be rooted in late prehistoric times, as evident in the main water reservoir, where rock markings – signs, rock art, inscriptions – backdate to the Late Pastoral (from around 5000 uncalibrated years B.P. onward). No permanent water is present in the area – but for a spring on the westernmost part of the scarp, wadi Akakus – and water resources are limited to natural rocky reservoir, where precipitation is trapped and can last for months. These are locally called *guelta* (in Arabic) or *agelma* in Tamasheq (the spoken language of Tuareg). A *guelta* is a desert river-bed pool which occurs in mountain regions, situated at the foot of a former or sporadic waterfall or at a site where the sandy or rocky river-bed was deepened by fluvial or solutional processes. During the fieldwork the structure of the vegetation was analyzed at a district scale, from wadis to the vicinity of *gueltas*, together with floristic and ethnobotanical analysis and a particular focus was directed towards the *etaghas*, specific areas suitable for flood-recession cultivation, in fact practiced by the Kel Tadrart until recently.