Lake Lerna: investigating Hercules' ancient myth

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Greece and the Aegean area are among the first areas in Europe to have been occupied by humans. The record of human interventions in natural environments is thus particularly rich. Some of the interventions of the people inhabiting various localities of the country have been recorded in local mythology. Through the interdisciplinary field of geomythology it is possible to attempt to uncover the relationships between the geological history of early civilizations and ancient myths.

In the present work, we focused on the history of Lake Lerni in the Eastern Peloponnese, an area that is better known through the myth of Hercules and the Lernaean Hydra. The area of the lake – now dried and cultivated – was part of a karstic system and constituted a marshland that was a source of diseases and needed to be dried.

A new core is studied from the area of modern-day Lerni using palaeontological methods in order to reconstruct environmental changes that occurred during the last 6,000 years approximately. The area is known to have gone from marsh-lacustrine environments to dryer environments after human intervention or the intervention of Hercules according to mythology. Levels of peat considered to represent humid intervals were dated using the radiocarbon method so as to have an age model of the core. Samples of sediment were taken every 10 cm; the grain size was analysed for each sample as well as the fossil content for the environmental reconstruction.

The presence of numerous freshwater gastropods reflects the intervals of lacustrine environment accompanied with extremely fine dark sediment. Sedimentology is stable throughout the core with few levels of coarse sand/fine gravel, only changes in colour hint to multiple levels richer in organic material.