
Herpetofaunal remains in the Natufian sequence of el-Wad Terrace (Mount Carmel, Israel): Paleo-environmental reconstruction and its possible connection to cultural change

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Résumé

The Natufian culture in the Levant has great importance as a transitional phase between the Paleolithic cultures with their mobile hunter-gatherer way of life to the beginning of sedentary life and the transition to farming economy. Previous studies have linked the emergence of the Natufian culture and the transition from the Early to the Late Natufian to climatic–environmental changes. However, recent studies have questioned the temporal correlation between climatic changes and the emergence of both the Natufian culture and the transition between the Early and the Late Natufian. Here we reconstruct the environment of the key Natufian sequence of el-Wad Terrace, Mount Carmel, Israel, using herpetofaunal remains. This Natufian sequence is one of the longest and most complete in the Levant and is therefore most relevant to our research.

The study of archaeological herpetofauna (amphibians and reptiles) provides a tool for reconstructing the Natufian environment, as they are ectothermic vertebrates that depend on specific environment and climatic conditions for thermal regulation (reptiles) or the presence of water for respiration and reproduction (amphibians). The distribution and abundance of amphibians and reptiles is determined by the temperature and precipitation in their immediate environment. Thus, herpetofaunal analysis is an accurate tool for paleo-environmental reconstructions of the site's surroundings and can accurately detect climatic and environmental changes through time.

Taphonomic characterization of herpetofaunal accumulation patterns in the Natufian layers will allow reconstruction of the paleo-environments of the Early and Late Natufian in the site of el-Wad Terrace. This research will test the assumed correlation between the emergence of the Early Natufian and the cultural changes in the Late Natufian and environmental-climate change, in order to examine the environmental and cultural attributes that predated the transition to agriculture.

Mots-Clés: Natufian, herpetofauna, paleo, environmental reconstruction, climate change

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