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Archaeology and environment in Oas Depression, northwestern Romania

Ciprian Astalos(1) and Angelica Feurdean(2)

(1) Satu Mare County Museum, Vasile Lucaciu 21, 440031 Satu Mare, Romania (2) School of Geography, Centre for the Environment, University of Oxford, South Parks Road, OX1 3QY, Oxford, England

The Oas Depression, situated in NW Romania, is one of the few areas in the country with archaeological sites from the Middle Palaeolithic. Although none of these sites have independent chronology, this region shows potential for archaeological study. This paper links the archaeological evidence from Oas Depression to the vegetation and climatic records in order to reveal the relationship between human and environment, and to estimate the scale of the human impact on the surrounding landscapes. The study combines results from archaeological excavations and surface surveys, and high-resolution dated pollen diagrams from two peat bogs in the Gutâi Mountains. The undated archaeological finds of Middle and Upper Palaeolithic sites are difficult to be correlated with high temporal resolution environmental changes in Gutâi Mountains. During the Early Holocene, corresponding to Mesolithic (11500-8000 cal yr BP), no archaeological finds and no change in deciduous woodlands (Ulmus, Quercus, Tilia, Picea) were detected. Archaeological evidence of Early Neolithic culture are provided by the recent excavations from Calinesti-Oas, which appears to coincide with increasing forest fire intensity (ca. 8000 cal yr BP). During mid Holocene (7000-4800 cal yr BP), the archaeological finds became scarce. The pollen diagrams indicate, however, development of woodlands dominated by Corylus and Picea, with two phases (6600-6000, 5750-5500 cal yr BP) of possible human-induced changes in vegetation. Consistent patterns are also seen between archaeological and vegetation records during Bronze Age and Early Hallstatt (4800-2800 cal yr BP). The Fagus woodland opens up and an increase in herbaceous pollen values reflects extension of meadows and pastureland in these openings. The archaeological evidence attest the increases in population density starting with the Roman Age (cca. 1900 cal yr BP) and

written sources point to the emergence of numerous villages in the last millennium AD. This increase in population is also reflected in the pollen diagrams by an abrupt reduction in forest density and diversity and cultivation of cereals (Secale, Hordeum group).