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Palaeoenvironmental reconstruction from Lake Iznik (W Turkey) and Üçağızlı Cave (S Turkey) - implications for human dispersal in the Upper Palaeolithic along coastal Anatolia.

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Transcontinental dispersal of modern humans from the Near East to the Balkans in the Middle and Upper Palaeolithic is expected to have followed the coastline (i.e. Yarımburgaz, Karain and Üçağızlı caves). Lake Iznik is situated 80 km south of the Bosphorus (Western Turkey) close to the Marmara Sea. Here we retrieved a continuous sediment record covering the past ∼40 ka cal BP. A multiproxy approach enabled us to reconstruct the environmental history. We included biological proxies i.e. diatoms, cladocerans and ostracods as biological proxies, but also physical and geochemical proxies were analysed. Geomorphological findings in the lake basin and geochemical analyses hint to changing lake water levels at least since 40 ka cal BP that lasted until c. 11 cal. kyr BP. This supports the theory of persisting dry climate conditions before the onset of the Holocene also inferred from geochemical sediment proxies (i.e. element analysis), diatoms and ostracod shell chemistry. The Upper Palaeolithic sequences (45-33 ka cal BP) at the Üçağızlı Cave (Hatay) yield clear evidence of the technological transition between Initial Upper Palaeolithic and Ahmarian, but also documents major shifts in diet of past hunting community. The identified animal remains in the cave sequence change from larger ungulates to smaller ungulates and increase in fish and shellfish. It is proposed that the compositional change in game is not solitarily caused by technology advances, but also by environmental and climatic changes as inferred from sediment archives of Lake Iznik.