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Rapid Anthropogenic Response to Short-Term Local Aeolian and Fluvial Palaeoenvironmental Changes during the Late Pleistocene-Holocene Transition (at the Edge of the Northwestern Negev Dunefield, Israel)

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Several prehistoric camp sites, mainly attributed to the Natufian culture, were excavated over the past decades along Nahal Sekher on the eastern edge of Israel's northwestern Negev Desert dunefield. In this research we reconstruct the aeolian and fluvial environs of these sites by integrating field mapping, stratigraphic sections, particle-size analysis, sand spectroscopy, optically stimulated luminescence ages, and radiocarbon dates. Intermittent surface stabilization and aeolian deflation are hypothesized to explain the appearance of the Natufians who probably inhabited the region during the last main Negev dune encroachment in a windy palaeoenvironment. It is argued that the residual sequences of diagnostic low-energy fluvial fine-grained deposits (LFFDs) documented around the Natufian sites resemble the ephemeral event-layers of hyper-concentrated flow into the ever-emptying dryland-type reservoirs formed by dunes that dammed wadis. The location of the Natufian sites along the shorelines of these water bodies point to rapid but temporary anthropogenic responses to short-term and improved local palaeoenvironmental conditions during the Late Pleistocene-Holocene transition.