
Pleistocene-Holocene environmental changes on Madagascar and associated extinctions

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Abstract

On the basis of the late Pleistocene-Holocene fossil record, Madagascar underwent important climatological changes, which in turn had a dramatic impact on the island's ecosystems and the different organisms they held. These vicissitudes led to the extinction or range contraction of a considerable number of endemic land vertebrates. Subsequently, people colonized the island, further extenuating ecological shifts, which resulted in further extinctions. The main objective is to better understand the processes that led to environmental change in the late Pleistocene-Holocene. Over the past decade, new paleontological and archeological sites have been excavated and studies including, for example, inference from stable isotopes to speleothem analyses have been conducted, which provide new refinement on the impacts of these different events and causes on the island's ecosystems. Further, the date of initial human colonization has been pushed back several millennia and there is good evidence of a Neolithic culture. In the context of this presentation, a synthesis is presented of these different lines of evidence, which in turn provide new insights into the question as to what happened, the time-scale, and separating natural climatic change versus human-induced.

Keywords: Madagascar, late Pleistocene, Holocene, natural change, human induced change

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