

Palaeoenvironmental evolution in South-western Amazonia (Brazil) in the Neogene

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The investigation of microfossils from outcrops (Aquidabã, Torre da Lua and Morada Nova) and core samples (1-AS-31-AM) in the southwestern Amazonas state (Brazil) enables a more detailed reconstruction of the palaeoenvironmental evolution of Amazonia during the Neogene. The microfauna points to an abrupt palaeoenvironmental change due to a very short-lived marine ingression, probably in early Miocene times. A mixture of marine and transitional or non-marine elements was found co-occurring in a few samples between 170.90 and 174.40 m. The microfauna, however, suffered from the salinity change and had to adapt to this new environmental conditions. The presence of nodes on *Cyprideis* valves could reflect these stress-conditions. Analysis of stable isotopes ($\delta^{18}\text{O}$, $\delta^{13}\text{C}$) on ostracod valves from these samples yielded very low values. This suggests that a marine environment, although it reached the area in the early Miocene, was not fully established. After that brief marine invasion, environments returned to continental ones. The record of freshwater ostracods and the disappearance of marine elements, like foraminifers, document this event from Middle Miocene time onwards, at least, up to the Pliocene.

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