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| Title: | Microlithic, faunal, floral and isotopic data from an archaeological site 14C dated to LGM in the eastern state of Odisha, India |
| Authors: | Chauhan, Parth R. (/jspui/browse?type=author&value=Chauhan%2C+Parth+R.) |
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| Abstract: | The eastern state of Odisha, India is well known for its rich microlithic assemblages; over 400 sites have been reported, including some with tools for heavy-duty tasks. However, due to the lack of associated vertebrate fossils from stratified horizons and absolute dates, their antiquity and associated environments are yet to be established. We report here, for the first time, in situ fossils of a ruminant 14C dated to 17,875 cal BP associated with microliths from a stratified Quaternary sequence exposed at Pratappur, District Mayurbhanj, Odisha. The dental remains of ruminants are taxonomically identified to be those of the cervid Rusa unicolor (sambar) and an unidentified bovid. Stable carbon and oxygen isotope values (δ13C = 1.9‰; δ18O = −1.83‰, VPDB) on the Rusa unicolor tooth reveal that it was a C4 grazer and lived in an arid environment during the end of the Last Glacial Maximum. However, the bovid-yielding carbonaceous sediments that lie immediately above the R. unicolor horizon have yielded a large number of pollen and spores, belonging to moist deciduous forest suggesting moderate rainfall. Pollens belong to brackish mangrove Nypa and Barringtonia indicating tidal influence and the existence of a coastal environment nearby. |
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