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Title:	Technology, Chronology and Landscape Archaeology of Microlithic Occurrences in the Central Narmada Basin, Madhya Pradesh, India
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Abstract:	The research carried out for this PhD thesis aimed to survey open-air microlithic sites in Sehore and Hoshangabad Districts of the central Narmada Basin or river valley in Madhya Pradesh, India. Geographically, the surveys were targeted along the Vindhyan Hills to the north of the basin, along the Gondwanas or Satpuras to the south of the basin and the intermediate Narmada floodplain zone in the center, thus dividing the study area into three distinct zones, i.e. nor thern, central and southern. The study area selected for this study is located in the central region of Indian Subcontinent. This region must have served as a corridor for various faunal species and hominins (abundant vertebrate and invertebrate fossils and the only-known archaic hominin fossil, a partial cranium was discovered in this region). The goal of this research was threefold: (1) to understand the geoarchaeological and spatial contexts of the microlithic record and associated attributes in the central Narmada Basin, (2) to establish a preliminary geochronological framework of microliths in this region and spatially documenting the evidence to reconstruct the landscape adaptations by hominins in the north, central and south of the Narmada River in this part of the basin and (3) to address specific characters of the regional microlithic typology, technology and chronology in the study area and broad comparisons with other regions of India. To fulfill the aforementioned objectives, a methodology was developed that included (1) fieldwork (2) laboratory work (OSL dating- carried out BSIP, Lucknow and lithic analysis- carried out at IISER Mohali and The M.S University of Baroda, Vadodara) and (3) theoretical frameworks. The fieldwork and laboratory components are represented by extensive field surveys, detailed documentation of microlithic sites, systematic collections and study of stone tool specimens, geoarchaeological excavations and geochronological applications. Locations of two hundred and twenty-five individual microlithic occurrences were recorded with a GPS over five seasons (2015-2019) of fieldwork, during which 14,608 artefacts were collected from all three zones. Morphometric and multivariate statistical analyses were selectively carried out on 2,383 specimens from eighteen of the most important site assemblages. Significant attributes were recorded to understand the techno-functional nature of assemblages and individual tool-types, revealing that non-geometric microliths are dominant over geometric microliths. Most sites were found in isolated open areas in the pediment zone along the northern and southern foothills and were the least disturbed. Indeed, artefact densities were comparatively higher in the open-air contexts closer to rock shelters, indicating dynamic land-use patterns. Seven of the studied sites were strategically selected for optically stimulated and infrared stimulated luminescence dating after multiple field visits to establish a broad geochronological framework for the microlithic recording of this vital region of central India. This doctoral research brought to light microlithic occupations in the central Narmada Basin and their typo-technology in an open-air context. The general composition of the microlithic assemblage is non-geometric and geometric component is missing. A historical review of microlithic technology in India uncovered many facts which have not been considered widely amongst scholars in the recent past. A discourse on 'Mesolithic' in India and significance of understanding the 'microlithic technology' as an independent entity has been carried out in this thesis. The dating results demonstrate the timing of microlithic adaptations to broadly range between ~59,000 and 2,000 years in age, the latter indicating the extended survival of hunter-gatherer techno-subsistence strategies into the Historical phase in this region.
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