

Technological innovations and functional diversity in North and Central Sulawesi during the Late Pleistocene and Holocene

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Recent excavations in Central and Northern Sulawesi produced an archaeological sequence from the late Pleistocene and Holocene. The sites of Topogaro on the eastern coast of Central Sulawesi, and Leang Sarru, located in the Talaud Islands in North Sulawesi, yielded numerous osseous and lithic artefacts in association with anatomically modern humans (AMH) that arrived in this region by 30,000 BP, if not considerably earlier. Sulawesi is the largest island in Wallacea and located along the early AMH migration routes to Sahul and Near Oceania that required open sea crossings between the past continents of Sunda and Sahul. An experimental use-wear study was conducted on lithic and bone artefacts from Topogaro and Leang Sarru. The utilization of a variety of technologies based on organic and inorganic materials, which on the one hand is dominated by the use of simple unmodified flakes, but on the other hand also produced carefully crafted bone tools, can already be observed during the early stage of the expansion and dispersal of modern humans across South and East Asia, Island Southeast Asia (ISEA), and Sahul. While bone-based technologies had a more intensive use and wider appearance after the end of the Pleistocene in ISEA and Sulawesi. This paper presents the results of our study in context with the ongoing use-wear studies in the region.

Traceological analyses can contribute to the understanding that those early seafarers possessed a wide range of technologies and complex behavioural strategies that enabled them to successfully navigate and colonize remote islands and coastal region at the time of their arrival in the Wallacean region. The variability in the use of bone, plant and lithic technologies also demonstrates the capacity of those early islanders for flexible responses to changing island and rainforest environments during the transition from the late Pleistocene to the Holocene and to adapt their subsistence strategies to the given conditions.

Keywords: Use-wear analysis, Prehistoric Technologies, AMH, Maritime Interaction, Wallacea