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Records of human activity during the late-Holocene in the soils of the African dense humid forest

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Recently, several authors gathered data about the presence of past human populations in tropical regions covered by dense forest nowadays. In Central Africa, there is a growing body of evidence for past human settlements along the Atlantic coast, but very little information is available further inland. In the perspective, soil records seem to be the most appropriated so as to appraise the spatial and temporal extent of human activity in the African dense humid forest. In this paper, we thus aimed to present a synthesis of the archaeological and archaeobotanical data obtained during several fieldwork campaigns in an archaeologically unexplored area of 200,000 km^2 located in southern Cameroon and the northern Republic of Congo. A total of 275 test pits, among them 30 pedological pits up to 150 cm deep, were excavated in the study area. So as to get a long temporal scale as well as a fine resolution spatial scale, we quantified wood charcoal and charred endocarps in soil samples by layers of 10 cm taken for 100 pits located along transects of systematic sampling. Spatial projections were performed using statistics together with multivariate analyses. AMS radiocarbon dating allowed interpreting the temporal framework. Evidence of past human activities through either artifacts or charred botanical remains was observed in all pits, in particular with the ubiquitous presence of charcoal at each site. Main charcoal peaks were interpreted as fields (slash-and-burn agriculture) in the vicinity of ancient villages, the later marked by the presence of both potsherds and oil palm endocarps. The dichotomy of these kinds of activities may have impacted differentially the environment during the past. The set of 73 radiocarbon dates extending from 15,000 BP to the present time provided more dates in the late-Holocene showing a bimodal distribution which was interpreted as two phases of human expansion with an intermediate phase of population crash. The 2300–1300 BP phase is correlated with the migrations of supposed farming populations from northwestern Cameroon. Between 1300 and 670 BP, less material could be dated. Following that population collapse, the 670–20 BP phase corresponds to a new period of human expansion known as the Late Iron Age. The dates obtained support the established chronology reported for whole Central Africa. This study underlines the necessity of fieldwork efforts and of the usefulness of archives sealed in soil records so as to bring new, extensive and precise evidence of human activities in the Congo Basin.