

Raw material procurement for termite fishing tools in wild chimpanzees

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Chimpanzee (*Pan troglodytes*) termite fishing has been studied for decades. However, we still know little about how raw material for the extraction of tools is obtained. This is particularly true for potential selection criteria and what these imply for underlying cognitive mechanisms, such as forward planning. We employed traditional archaeological methods while studying termite fishing in two ecologically distinct habitats in western Tanzania: the Kasekela community, with approximately 55 habituated individuals who reside in the forests and woodlands of Gombe; and the Issa community of around 67 members, in process of habituation, who live in the more open, drier woodland-savannah of the Issa Valley. Results suggest that chimpanzees select particular species as tool sources, many of which are also food plants. Chimpanzees at both sites chose three identical species, perhaps for their especially suitable physical properties, like bark that is easy to peel off. At both sites, chimpanzees used plants close to termite mounds, but also from further away (up to 35 m), indicating a mixed strategy of opportunism and forward thinking. The populations also differed, in that Issa chimpanzees clearly preferred bark as raw material, while Gombe chimpanzees also used twigs and grass. Moreover, a quarter of sourced plants at Issa were not visible from the mound, and, compared to Gombe, on average 5 m further away. These disparities are likely caused by environmental differences, in that the more open and drier habitat at Issa might necessitate a higher degree of planning.