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SEX DIFFERENCES, HANDEDNESS, AND SELECTION PREFERENCES IN THE STONE TOOL-USE OF ANDAMAN LONG-TAILED MACAQUES (MACACA FASCICULARIS AUREA)

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Andaman long-tailed macaques around Laemson National Park, Thailand use stone tools to crack open oysters and other shelled mollusks and crustaceans in intertidal regions. In addition, they crack nuts along forest edges and stream beds. In December 2009, we conducted a tool selection experiment at Piak Nam Yai Island to determine if macaques showed weight preferences when selecting tools. We also collected scan and focal samples to explore handedness and sex differences. We found that on average smaller tools were selected to open attached oysters than unattached food sources. From 1,204 scan samples, we found evidence of significant sex differences. Females used small tools (i.e., hand-sized or smaller) in 73% of their tool-use scan samples, while males only in 36%. Males, in contrast, used large tools (i.e., twice as large as hand or greater) in 36% of their tool-use scans, while females only in 4%. We also observed a population-level right-hand bias (69%) in the 238 scan samples of tool-use employing one hand. This bias was further supported from data in our focal samples. We conclude that the weight selection of a tool is dependent on the food source. We also conclude there was a population-level bias in handedness and distinct sex differences for size of tool used. The Laemson population of macaques is a useful resource for investigating non-human primate tool use. Unfortunately, land-use and introduction of domesticated animals within the park may be disrupting their lithic traditions. These threats will also be discussed.

Keywords: long-tailed macaque, stone tools, handedness, tool selection