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HOW DO LEMURS RETURN TO IMPORTANT LOCATIONS?

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The aim of this study is to determine how *Varecia variegata* locate nests and feeding trees. Although studies have shown that monkeys and apes can remember the locations of important resources, little is known about lemur spatial cognition. We collected detailed GPS and behavioral data on four *Varecia* for nine months in Ranomafana National Park, Madagascar. *Varecia* focused their foraging behavior on a small number of feeding trees which they visited repeatedly. We analyzed travel to 1) trees where the focal animal spent more than five percent of its feeding time and 2) "birthing nests" which the females repeatedly visited in the days preceding parturition. We analyzed routes in which the goal was more than 100 meters from the start location. If *Varecia* use memory, they should travel to goals more efficiently than expected. We tested this prediction with a computer model created by Charles Janson which uses observed turning angles and step lengths to generate expected distances. The results support the hypothesis that *Varecia* use memory to travel to nests and feeding trees. In addition, *Varecia's* tendency of returning to trees where they have long feeding bouts suggests that they may consider the productivity of the trees.