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Understanding how Obstacles Affect Tool-use: Experiments on Cotton-top Tamarins, *Saguinus oedipus* Oedipus

Tool-use requires a sophisticated level of intelligence. The cotton-top tamarin (*Saguinus oedipus* Oedipus) has the ability to use tools while understanding relevant and irrelevant features of the problem, which is needed to solve a problem containing an obstacle. In this study, nine cotton-top's ability to use tools to solve a task while avoiding an obstacle was tested. They were presented with two conditions with different obstacles. The first condition (Hole) was tested over three days, twice daily and the second (Stopper) was tested over five days, once daily. The subjects pulled a cane either on the side with an obstacle or without it. The tamarins did not solve the problem by avoiding the obstacle at levels above chance in the Hole condition. Subjects that fully completed the Stopper condition showed an average of 80.93% (binomial test: $p = 0.00035$) for the 30 trials they each did, showing they were able to solve the task. This suggests the monkeys have a better understanding of some obstacles than others and more research is needed to clarify this idea. There were clear individual differences in the way different monkeys interacted with the apparatus. However, with additional time, other monkeys may have participated more.