

# Study shows wild monkeys can learn new tricks from watching training videos

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Video box & Experimental set-up. Credit: *Biol. Lett.* September 2014 vol. 10 no. 9 20140439. doi: 10.1098/rsbl.2014.0439

(Phys.org) —A trio of researchers working in a South American jungle has shown that wild monkeys are able to learn how to perform an activity by watching videos of other monkeys performing the task. In their paper published in the journal *Biology Letters*, Tina Gunhold, Thomas Bugnyar and Andrew Whiten of the Universities of Vienna and

St Andrews, respectively, describe how they trained monkeys to perform tasks, videotaped them doing it and then showed the results to wild marmosets living in Pernambuco Brazil, and what they learned as a result of doing so.

Scientists have known for some time that certain captive animals are capable of learning by watching others like them perform tasks that have been video-recorded. In this new effort, the researchers wanted to know if such capabilities would extend to [wild animals](#) as well. They chose wild marmosets, which are native to Brazil because they are extremely social, curious and have been seen to learn from one another.

The team first trained a group of captive marmosets to open a drawer or to pull open a lid, to a clear plastic box to retrieve a food reward inside. They then put a laptop into a protective enclosure and placed it in a tree in the jungle where marmosets are known to live and had it play the videos. Next they filmed different groups of marmosets as they were drawn to the enclosure and then reacted to what they saw.

In all twelve groups were filmed, 108 marmosets in all—some of the groups were shown video of marmosets opening the box using the drawer, others lifting the lid—a control group was shown a still image. Reviewing the tape revealed that 12 of the marmosets were able to open the box, 11 of which had seen it done first in a video—the lone individual figured it out after seeing just a still image.



Video box & Experimental set-up. Credit: *Biol. Lett.* September 2014 vol. 10 no. 9 20140439. doi: 10.1098/rsbl.2014.0439

The results by the team suggest that some wild animals are capable of being trained via video, a finding that could impact wildlife management, though more research will have to be done to see which other animals might learn the same way. What's still a mystery is what happens in the minds of the monkey's as they watch the video, they obviously understand that the previously trained marmosets aren't actually there in the tree with them—marmosets are very territorial, they'd react strongly to a stranger—so, how do they reconcile what they see with reality and learn from it? That will have to be the subject of other studies.

**More information:** Video demonstrations seed alternative problem-solving techniques in wild common marmosets, *Biol. Lett.* September

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## **Abstract**

Studies of social learning and tradition formation under field conditions have recently gained momentum, but suffer from the limited control of socio-ecological factors thought to be responsible for transmission patterns. The use of artificial visual stimuli is a potentially powerful tool to overcome some of these problems. Here, in a field experiment, we used video images of unfamiliar conspecifics performing virtual demonstrations of foraging techniques. We tested 12 family groups of wild common marmosets. Six groups received video demonstrations (footage of conspecifics either pulling a drawer open or pushing a lid upwards, in an 'artificial fruit'); the other six groups served as controls (exposed to a static image of a conspecific next to the fruit). Subjects in video groups were more manipulative and successful in opening the fruit than controls; they were also more likely to use the technique they had witnessed and thus could serve as live models for other family members. To our knowledge, this is the first study that used video demonstrations in the wild and demonstrated the potent force of social learning, even from unfamiliar conspecifics, under field conditions.

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