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### Capuchin monkeys choose the right tool

Selecting an appropriate tool is key to the success of many tasks, and the development of this ability is typically thought to be restricted to humans and apes. But a new study shows that wild bearded capuchin monkeys can appreciate the properties of different stones and select the best one to use as a tool. The research, led by Elisabetta Visalberghi (Institute of Cognitive Sciences and Technologies, Rome, Italy), showed for the first time that tool selection is within the skill set of wild monkeys and is not limited to apes and humans.

Visalberghi and her colleagues studied a group of wild capuchins (*Cebus libidinosus*) in Brazil that were previously observed using stone 'hammers' to crack the shells of palm nuts. They provided palm nuts to the monkeys as well as stones of various types. The stones differed in friability, size and/or weight. Regardless of the complexity of the differences between the stones, the monkeys chose and used the functional stone more often than would be expected by chance (*Curr. Biol.* published online 15 January 2009; doi:10.1016/j.cub.2008.11.064).

Taken together with other known similarities between humans and capuchins, these findings suggest that capuchins may be a good model for studying the evolution of stone tool use.

### Who says bees don't count?

Many studies have shown that non-human vertebrates such as birds and mammals can recognize numbers, but almost nothing is known about the numerical capabilities of invertebrates. Shaowu Zhang (The Australian National University, Canberra) and colleagues tested bees—which are known to be quite smart, as bugs go—and found that the insects could 'count' up to four.

The researchers placed bees in a chamber in which they were shown a sample pattern consisting of two or three blue dots (*PLoS ONE* **4**, e4263; 2009). Bees could then choose to fly towards a pattern that contained the same number of dots or one that contained a different number of dots, and they received a sugar reward if they picked the matching pattern. Bees were able to perform the task successfully, suggesting that they could distinguish between the different numbers. The researchers gradually made the tasks more difficult, testing, for example, whether subjects would approach an image of three lemons, even if they were shown a picture of three stars in a completely different layout. Bees proved to be equal to the task, though they couldn't distinguish between numbers greater than four.

These findings may be useful for researchers studying the evolution of cognition.

### Primate testing must continue, for now

In Europe, nonhuman primates (NHPs) account for less than 0.1% of the animals used for scientific research (compared with 0.3% in the US). The current European Union policy allows for use of NHPs in research only if there is absolutely no alternative; many Europeans support extending this policy further and banning NHP experimentation entirely. In late 2007, in response to ongoing discussions in the European Parliament on this matter, the European Commission requested an opinion from the Scientific Committee on Health and Environmental Risks (SCHER) on the current need for NHPs in research.

In January 2009, SCHER published its opinion (http://ec.europa.eu/health/ph_risk/committees/04_scher/docs/scher_o_110.pdf).

SCHER states that though it recognizes that technological advances (in genomics and computer modeling, for example) may eventually enable investigators to discontinue NHP testing, at present there are still many areas of biomedical research in which no valid alternatives to NHPs are available. Furthermore, it is still too soon to propose a specific timetable for the complete phasing-out of primate use. In general, the members of SCHER believe that total replacement of NHPs in research will not be feasible in the foreseeable future.