

## Smart is Sexy for Parakeets

**“For the first time we looked directly at whether seeing smart behavior influences partner choice.” – C. ten Cate**



In *The Origin of Species* (1859) Charles Darwin introduced the idea of sexual selection. Unlike the struggle for existence occurring in natural selection, sexual selection was a struggle between males for possession of females, what he called the “Law of Battle.” It explained the evolution of male large body size and weapons like antlers.

But male competition couldn’t account for traits that are deleterious to survival (“The sight of a feather in a peacock’s tail, whenever I gaze at it, makes me sick,” he wrote a friend). So Darwin invoked a second mechanism, which he called the “Taste for the Beautiful.” In *The Descent of Man* (1871) he said females choose males they consider beautiful. “Just as man can give beauty, according to his standard of taste, to his male poultry, ... so it appears that female birds in a state of nature, have by a long selection of the more attractive males, added to their beauty or other attractive qualities.” While male aggression concurred with Victorian culture, female choice didn’t. Critics ridiculed the idea and it faded away.

Today evolutionary biologists accept female choice but debate its role in evolution. Many believe sexual selection is just a special case of natural selection. They say females choose males that prove they are truly robust by surviving in spite of the physical handicaps. Others like Richard Prum (*The Evolution of Beauty*, 2017) have returned to Darwin, defending his idea that ornaments like the peacock’s tail occur simply because peahens find them beautiful. “Birds are beautiful because they are beautiful to themselves,” he says. Some have also proposed that female choice is responsible for the development of cognitive ability in humans and nonhumans.

Now a study reported in the January 11, 2019 issue of *Science* looks at the influence of “smartness” on mate choice in budgerigars (*Melopsittacus undulatus*), a small Australian parrot, or as we know them, parakeets.



Biologist Carel ten Cate, Leiden University, Leiden, Netherlands, and his team led by Jiani Chen, Chinese Academy of Science, Beijing, China, studied whether female parakeets prefer males that have become skillful in obtaining food over those that haven’t. They used an apparatus where females could choose between two males before and after one male was trained to obtain food from a petri dish and a translucent puzzle box.

Once a female made her choice by spending more time with one male, the less-preferred male was trained to get food from the containers out of sight of the female. The female then watched each male succeed or fail at obtaining food. In each case the trained male was successful while the untrained one failed, and when tested again the females shifted their preference to the previously non-preferred, but now “smarter” male.

Control trials showed that the females didn't switch merely because the trained males were eating seed. After females in the control group made their choice, they watched the less-preferred male get food from a regular container while the preferred male had an empty container. In the subsequent preference test these females again spent more time with the originally preferred male.

According to the authors, "Our results show that direct observation of behavior indicating the presence of cognitive skills in potential mates can affect mate preference in a non-human animal." But in an accompanying article, behavioral scientists George Strieder and Nancy Burley, University of California, Irvine, CA, say, "Although the main result is straightforward, its interpretation is less clear-cut." They say that without performing the foraging tasks themselves, females may not have realized problem-solving prowess was required. Nevertheless, they applaud the methodology of Chen, *et al*, and hope others will further clarify the role of "smartness" in mate choice.

Maybe one day men will finally figure out what women want.

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### **Hawaiian Crow ('Alalā) Released into the Wild Update - Good news for the critically endangered 'Alalā**

In 2017 I wrote about five captive-reared 'Alalā (*Corvus hawaiiensis*) released on a Big Island reserve in late 2016 (see <http://hras.org/sw/swmarapr2017.htm>). Within weeks one died of starvation, two were killed by their natural predator, the 'Io or Hawaiian hawk (*Buteo solitaries*), and the program manager had to rescue the two remaining crows.

Happily, of eleven 'Alalā, released in late 2017, ten have survived multiple volcanic eruptions and a hurricane. One was found dead with wounds, probably from a predatory attack. But the rest have attained a record one year survivorship in the wild and an additional 10 birds released in the fall of 2018 on a different part of the reserve are also still alive.

Previous releases failed because the crows didn't know how to react to the hawk and hadn't been coached to act as a group. Thanks to predator-avoidance and social training during captivity, they now do what crows are supposed to do to hawks, they mob them.

The San Diego Zoo Global, which heads the project, has been trying to restore the 'Alalā since it disappeared from the wild in 1990.

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