

# New caledonian crows find 2 tools better than 1

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Researchers have found that New Caledonian crows—which are known to make complex food-getting tools in the wild—can also spontaneously use one tool on another to get a snack. The researchers report their findings online August 16 in *Current Biology*, a publication of Cell Press.

The birds' tool-use skills rival those seen among great apes, according to the researchers. Moreover, it appears that the birds may have solved the problem that confronted them by using analogical reasoning rather than simple trial and error. Analogical reasoning requires the ability to see a novel situation as being essentially the same as a previous situation, the researchers explained.

"Evidence suggests that, from the earliest human stone tools, analogical reasoning has been at the core of human innovation," said Russell Gray of the University of Auckland. "This hallmark of human intelligence may also be at work in both the great apes and New Caledonian crows and may explain why--out of all the crow species in the world—only these crows routinely make and use tools."

In the study, the researchers presented crows with some meat in a hole and a stick that left the meat out of reach. The birds needed to get a long stick out of a "toolbox" in order to get the meat from the hole. However, the long stick was also out of reach. "The creative thing the crows did was to use the short stick to get the long tool out of the box so that they could then use the long stick to get the meat," said Alex Taylor, also of the University of Auckland.

In a second experiment, the researchers reversed the positions of the two sticks so that the small stick was inside the toolbox and the long stick was handy. The crows then briefly probed the box containing the short stick with the long stick before correcting their error by taking the stick directly to the hole.

"It was surprising to find that these 'bird-brained' creatures performed at the same levels as the best performances by great apes on such a difficult problem," Gray said. "Six out of seven birds tried to get the long stick with the short stick at their first attempt at solving the problem. To do this, they had to inhibit their normal response of trying to get the food directly with the short stick and realize that they could use the short stick to get the long stick."

Source: Cell Press

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