



ScienceWatch - Something to Crow About

"If men had wings and bore black feathers, few of them would be clever enough to be crows" (Rev. Henry Beecher, ca. 1850)

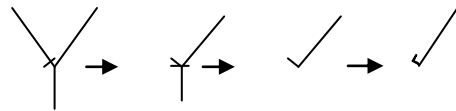
An old Lenape Indian legend says that the crow carried a fire stick down from the Creator to warm the people. In the process the fire charred him black and the smoke made his voice croak, but he was forever honored because he brought fire to the people.

Many researchers have documented the high degree of intelligence demonstrated by corvids. Two scientists, Garvin Hunt and Russell Gray, animal psychologists at the University of Auckland, Auckland, New Zealand have been studying New Caledonian crows (*Corvus moneduloides*) for a number of years. Their research shows that the crows not only use sticks as tools, but craft them into hooks as well. Another team that studies the crows is headed by Christian Rutz, University of Oxford, Oxford, UK. They recently showed that at least one part of the Lenape legend, the carrying of sticks, is true.

New Caledonia, a group of islands formed about 50 million years ago by the breakup of the ancient supercontinent Gondwanaland, is located in the Pacific Ocean, 1,200 km (745 mi) east of Australia, and like many islands it abounds with endemic species. In an online report of the *Royal Society*, (Oct. 30, 2003) Hunt and Gray show that the crows living there, closely related to the American crow (*Corvus brachyrhynchos*), can make hooked tools from forked panadanus twigs.*

The two investigators set up an observation post consisting of a blind several feet from a horizontal dead log into which they drilled holes and placed pieces of meat. They then video recorded two crows each making a hooked tool to extract the bait. Instead of simply picking up a twig from the ground the birds first nipped off a branched twig.

They next snapped off the side branch so as to leave a piece that would later form the hook. They then snapped off the stem close to base of the fork and removed the leaves. Finally, they nipped tiny pieces off the tip so they could fashion a sharpened hook (see illustration), and



using their newly sculpted tool they fished the meat from the hole. Hunt and Gray were able to video record the two birds making a total of 10 tools, always using the same steps.

New Caledonian crows not only can perform actions demonstrating sophisticated tool-making skills that rival the crafting of tools by early humans. The second study by Rutz and his team shows that the crows have another ability once thought to be exclusively human, the ability to plan ahead.

Writing in the October 4, 2007 online issue of *Scienceexpress* the Oxford team describes how they used miniaturized, tail-mounted cameras to study the natural foraging behavior of New Caledonian crows. The videos show many instances of crows carrying preferred

tools around with them as they search for food, a clear demonstration of forethought. Previously, only great apes were shown to have this capacity, (see *Science Watch - Planning Ahead*; Jan/Feb 2007, or at www.hras.org) and now we see it in crows as well.

Culture, language, foresight, making and using tools—all were once thought to be the sole provenance of humans. But as we learn more and more about the abilities of other creatures, we see that we are not so unique and have less and less to crow about.

Saul Scheinbach

*Google image has several videos of New Caledonian crows shaping and using tools
(<http://journals.royalsociety.org/content/74uvfklmqnagk6dn/media1.mov>)