

An Unintentional Common Raven "Experiment"

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Common Ravens (*Corvus corax*) have often been observed at our family's Long Lake home feasting on unwanted rodent kills deposited on the lawn by our resident cat. In March of 2001, Common Ravens nested at the top of a large white pine tree close to our home, and the rodent cleanup became a regular observation. The question of whether ravens utilize scent, in addition to their keen sight, to find carrion, is one that I've pondered for a year. The answer came unexpectedly this winter.

A pair of Common Ravens arrived in mid February 2002. They were frequently observed outside our home keenly watching the ground around our house. On 3 Mar 2002 the temperature hit 50 degrees, and two old cat kills surfaced from the snow on our back porch. They were tossed into the backyard of our home, and taken away by the ravens a few hours later. Early the next morning, on 4 Mar, a Common Raven was spotted digging with its bill in hard icy snow at the edge of our back porch. It dug down about three to four inches. Since a feeder hangs above this spot on the porch, it was hard to know if it was interested in seed, or was seeking another cat kill. The raven was then observed venturing UNDER the porch, where the cat often leaves dead rodents. Its partner was up in a tree about 20 feet away. The raven in the tree was turning its head side to side, appearing to be on the "lookout", which gave this observer a feeling that a bank robbery was under way! A short time after this seemingly cooperative behavior, the raven in the tree flew off. I was not able to observe the raven under the porch fly off to know if it had retrieved anything.

On 6 Mar, near the area where the ravens had taken the two cat kills on 3 Mar, a Pine Marten was observed intently digging in the snow. It dug down a foot, and uncovered an old cat kill! The question of why the ravens had not discovered this old kill first, and again the issue of whether they can utilize scent came to mind. Maybe digging down a foot in snow would prove too difficult for ravens? Bernd Heinrich's *Mind of the Raven*, was consulted on the issue of scent, and his experiments shed light on this area. He had used a skunk carcass buried in snow to discover if Common Ravens could indeed utilize scent to find carrion. After many experiments, Heinrich's conclusion was that there is not a shred of evidence to support that Common Ravens use scent to locate food. Instead, his conclusions indicated they use complex visual cues, looking for bumps in the snow, or any type of disruption to the snow surface to find carrion. If carrion was buried in snow, with no visual cue to aid in finding it, the ravens were unable to locate the food.

Having read that Pine Martens are fond of peanut butter, a piece of bread spread with peanut butter was placed in our backyard the day my family and I had watched the marten. The next day, 7 Mar, a raven enjoyed the bread! On 8 Mar, six Common Ravens were spotted outside our home. On 9 Mar, thirteen Common Ravens were outside! Two more pieces of bread with peanut butter were placed

in the backyard, and were eaten while our family was away hiking. On the morning of 10 Mar, thirteen Common Ravens were observed in a tree outside our home. Three pieces of bread with peanut butter were tossed outside. One raven flew down to a piece of bread, and proceeded to take it a few feet away. The raven stood on the bread, and ate a few pieces. It appeared skittish, and picked up the piece of bread, and flew off with it. The other two pieces of bread quickly became covered by snow in the over sixty mph winds, and blizzard conditions that day.

The next morning, on 11 Mar, there was no indication of where the other two pieces of bread with peanut butter were, the new wind swept snow leaving no bump or trace of the bread. At noon, raven tracks were observed in the snow. The raven had landed near the back porch, and walked to two bumps in the snow near a rock wall that was not far from where the bread was actually left. The bumps were slight drifts in the snow. The tracks then led closer to where the bread had actually been left. The raven had dug holes in three different locations, but had not found the bread! It evidently remembered the vicinity of the where the bread was, but without any visual cue, seemed unable to find the exact spot. Later in the day, the spot where the raven had dug was more closely observed. At the third dig spot the bread was only about one to two inches away under about two to three inches of snow – seemingly close enough for the raven to have discovered it, but the bread was untouched – maybe the raven had been frightened off for some reason, or simply gave up. It did not return that day, and the bread was eaten overnight by an unidentified mammal (tracks covered a bit by new snow). Knowledge of the general area where the bread was located, but with no visual cue to help, evidently left the raven with a missed opportunity for a meal.

In the process of an initial intent to feed a Pine Marten bread with peanut butter, it was discovered that Common Ravens also enjoy this food. In a further attempt to keep observing Common Ravens, the three pieces of bread were left out on 10 Mar. The weather conditions unexpectedly set up a similar situation to Heinrich's skunk experiments in burying the bread under snow without a visual trace of where. In line with Heinrich's experience, a Common Raven with knowledge that an area holds a potential snow-buried food source was unable to use scent to discover exactly where. The answer to the question of whether Common Ravens utilize scent to find food appears negative both in Heinrich's experiments, and in my own backyard!

Literature Cited

Heinrich, Bernd. 1999. *Mind of the Raven*. Harper Collins, New York.
pp. 160-162

