

Brother Wolf, Brother Raven



"Midnight Dreary" Karla Morreira, www.whalebonewatercolors.com



A Bird and Mammal Might Have Coevolved

by STEVE GROOMS

To understand an animal like the wolf, we need to see it not as an isolated species but as an animal intimately and complexly connected to all the species in its world. To me, the most fascinating relationship in the world of the wolf is the one it has with the raven.

Wolves and ravens share a great deal of range. The raven is considered the most widespread bird species in the northern hemisphere. The wolf historically had the same kind of range before persecution and habitat destruction reduced it. Wolves and ravens currently cohabit vast stretches of northern forested lands in Eurasia and North America.

Wolves and ravens have much in common. Both are highly social, with complex social structures and many different vocalizations. The wolf and the raven are also some of the most intelligent species in their shared habitat.

In tests, ravens show remarkable ability to solve challenges, use tools and even to modify objects to make them function better as tools. Ravens have learned to put heavy nuts in streets, where passing cars will smash them open. In Scandinavia, a man fishing with an unattended line began to experience thefts of his fish. The thief turned out to be a raven

that would pull the line in, using its beak and foot, and steal the fish.

Wolves are similarly intelligent. There is even a story of wolves stealing fish from set lines just like the raven story above. Wolves have demonstrated great ingenuity in finding ways of escaping enclosures. Observers have watched wolves solve problems using intelligence and analytical powers (see *International Wolf*, Winter 2002, “A Pack Solves a Problem”).

Wolves and ravens also have in common the fact that they are playful. Wolves play all sorts of games with each other, such as tag and keep-away. Ravens perform aerial maneuvers that seem playful, and they do such things as roll down hills, apparently for the fun of it.

There are many observations of wolves and ravens playing with each other. Ravens tease wolves, dive-bombing them, pecking them and landing on their backs. Wolves often threaten and snap at ravens, and there is one record of a wolf feigning death in order to lure a raven close enough to grab it. While it all looks like a game, now and then a raven goofs by getting too close, and then it pays with its life. However, ravens are adept at staying just out of reach.

The time of the most intense interaction is when both species are attempting to feed at a kill site. These interactions vary. At times wolves and ravens share a kill while paying little attention to each other. At other times wolves drive ravens away, at least until the wolves have gorged themselves.

Ravens use wolves to find food. A study in Yellowstone proved that ravens often failed to discover randomly placed carcasses but always were on the scene after wolves made a kill, suggesting that ravens critically count upon wolves as a food source. Ravens also use wolves as a way of confirming that an animal is truly dead and thus safe to approach. Many observers have witnessed ravens following wolf packs, waiting for them to make a kill. There is one report—often cited but not necessarily true—of ravens flying ahead of a wolf pack, leading wolves to possible prey.

It might work the other way around, too. Wolves can locate carrion by moving toward the ruckus ravens make around a carcass. It is somewhat easier to show that ravens find food with the help of wolves than the other way around, but some observers feel the benefit works both ways.

Wolves and ravens travel together so much that a standard way of locating wolves is to look under ravens. Biologists can often find wolf kills and even spot wolves by snowshoeing into areas where ravens are feeding with their typical raucous din.

Wolves and ravens also share table manners. Wolves are known to “wolf” their food, gobbling down large quantities of food before curling up to sleep in a condition Native Americans called being “meat drunk.” Ravens are downright “ravenous” as

they eat. A single raven can gather up to five pounds of food from a kill in a day, which is astonishing. Ravens and wolves both cache food at times.

Ravens steal food from wolves. Wolves could afford to lose a few pounds of meat from a moose to a single raven, but ravens always come to a kill, and they come in bunches. A kill typically attracts six to twenty-five ravens, and there is documentation of groups as large as a hundred ravens. The impact of so many ravenous ravens adds up. Ravens once consumed half of a 600-pound moose in a single day.

Recently researchers have suggested that the presence of ravens might explain one of the oldest mysteries about wolves, namely why they hunt in packs. Large carnivores typically hunt alone.

Given the scarcity of prey, hunting in large packs might seem counterproductive for individual wolves, for the food must be shared with many pack members.

People previously explained pack size by hypothesizing that it is useful to have many hunters to help take down dangerous prey. This speculation was encouraged by the fact that wolf packs that rely on big and dangerous prey, like moose, are larger than packs that mainly feed on deer. And wolves in desert regions that feed on smaller prey have the smallest pack sizes of all.

One problem with this explanation is that it just isn't true. Even when wolves hunt in large packs, most of the killing is usually done by a few expert hunters in the pack. And in a recent study on Isle Royale, researchers observed a single wolf

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"The Ravens and the Wolves are Partners" Mary Roberson, www.maryroberson.com

kill a moose on eleven occasions. The most effective and efficient killing team would be a pair of wolves, not a pack of 16.


Hunting in packs seemed like a losing strategy until researchers factored in the impact of raven flocks. Moose are large prey. A single wolf or pair of wolves could only eat a small portion of a moose and then would need to sleep off the meal before resuming feeding. Ravens would use that time to strip the carcass if there were not more wolves working on the carcass.


According to calculations from the Isle Royale study, a pair of wolves might lose 37 percent of a moose kill to ravens, whereas a pack of six wolves would lose only 17 percent. Living and hunting in large packs doesn't make sense unless the wolf-

raven relationship is considered, but in that context it is clear that wolves can make the most efficient use of their prey if they hunt and eat in groups.

This is just another example of the intricate and fascinating relationship between the wolf and the raven. Because there is increasing evidence that wolves and ravens may have coevolved, their complex symbiotic relationship may yield more surprises for us in the future. ■

Steve Grooms has recently rewritten his best-selling book, *The Return of the Wolf*.

 For further study, read Bernd Heinrich's *The Mind of the Raven*.

 For details on the study of the impact of ravens on wolf pack size, see "Raven scavenging favours group foraging in wolves," by John Vucetich, Rolf Peterson and Thomas Waite at http://www.isleroyalewolf.org/pdf_files/V%20et%20al%202004%20raven.pdf.