Wolves Need Wildlands to Recolonize

By K.C. and Aaron Morris

Wolves have been viewed as a threat by settlers since the first Europeans arrived in North America. As a result, almost all of them were killed in the "lower 48" United States by the mid-1900s. But since 1974, when gray wolves became protected by the Endangered Species Act of 1973, they have successfully **recolonized** many areas in the U.S.

In their article, "Gray Wolf (*Canis lupus*) recolonization failure: a Minnesota case study," a group of researchers led by Dr. L. David Mech tells the story of their research on the Isanti pack—gray wolves that were *not* successful at recolonizing an area about 25 miles north of Minneapolis and St. Paul, Minnesota.

Where did they do the study?

The researchers' study area in east-central Minnesota was chosen based on places where the Isanti pack had been. While people typically believe that wolves live in **wildlands**, most of the study area was farmland with a few widely spaced homes; the rest was thickly wooded. One of the largest wooded areas was the University of Minnesota's Cedar Creek Ecosystem Science Reserve, where scientists do experiments to learn about how humans impact nature. Animals that live there include white-tailed deer and wild turkeys. **Domesticated** cattle and dogs live nearby.

How did they do the study?

Even though the Isanti pack was unsuccessful at permanently recolonizing the study area, the pack did survive there for about three years. Researchers observed and documented the pack's survival over those years.

Trail cameras were one of the researchers' main tools. Trail cameras are attached to trees or posts in areas where researchers want to watch and count wild animals. The cameras detect the motion of animals walking in front of them and take pictures; some trail cameras also record video. Researchers then use the photos and videos to identify the species and count how many are there. In this study, trail camera photos recorded wolves of different ages, showing that the pack had survived in the area for some time.

Visual observations made by researchers at the Science Reserve and by people living in the study area also provided data on the Isanti pack. At two different times, visual observations documented nine wolves in the study area. Multiple wolf pups were seen, indicating that the pack was suc-

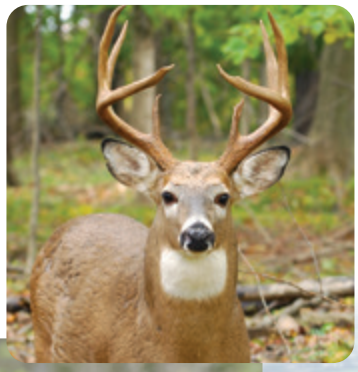
Words you'll see in this story:

Recolonize Settle and survive again in a specific place or habitat

Wildlands Lands that are not lived in or farmed by humans

Domesticated Tamed; changed over time to depend on humans

Sign Evidence in nature of a wild animal



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Pups: Adobe Stock / ????????
Landscape: Cedar Creek Ecosystem Science Reserve

cessfully breeding. Observers also helped researchers discover where the wolves' dens were located.


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Researchers documented wolf **sign** throughout the study area as evidence of the wolves' attempt to recolonize there. While conducting winter road surveys (driving through the area looking for wolf tracks), Dr. Mech found spots where up to eight wolves had crossed the roads. In one instance, wolf fur was found on a barbed-wire fence.

In combination, these observations showed researchers that the Isanti pack was trying to recolonize the study area—and that the pack did have some early success.

Why did recolonization fail?

In their article, the researchers explain that some wolves in the study area occasionally killed cattle and dogs; they had to be removed by lethal control. Lethal control— eliminating a wild animal from an area by killing it—is one federal government response to predators that kill domesticated animals. It was used on the wolves in this study to prevent more cattle and dogs from being killed, and it eventually resulted in the Isanti pack's failure to recolonize the study area. While the researchers observed that the study area itself could (and did, for a while) support the survival of a wolf pack, the conflict between humans and wolves ultimately meant that the pack could not survive there.

Why does it matter?

As researchers continue to monitor and study gray wolf populations across the U.S., it is important for them to understand the types of places wolves try to recolonize and how conditions in those places might affect the wolves' success. According to the researchers in this study, the Isanti pack was unsuccessful in recolonizing land that overlapped too much with human activity. This shows why long-term survival for a wolf pack "requires large areas of extensive wild lands."

In other words, this study shows us that wildlands are important because wolves need spaces where they can survive and thrive *apart* from conflict with human neighbors. ■


Kari Cieszkiewicz/USFWS

Try it yourself...

While some wildlife research requires the use of special equipment like trail cameras, you can practice being a wildlife researcher by using simpler methods like visual observation and tracking at a local park—or in your backyard.

Squirrels, songbirds, rabbits and other wild animals that are common in parks and neighborhoods make great subjects for practicing your visual observation skills. Take a pencil and paper, and record what you see the animals doing. How many do you see? Are they feeding, resting, moving, standing or interacting with other animals? Do they have places they use more than other spots? (There may be a good source of food there, or maybe a nest.)

Tracking animals is easiest when you have fresh snow, but you can also find tracks in dust, mud and sand. When you find tracks, can you figure out which direction the animal was going? Are there tracks from more than one individual animal? How many? What species of animal made the tracks? Use your pencil and paper to sketch what the tracks look like. Then use your computer, or visit your local or school library, to look up "common animal tracks" where you live.

Aaron Morris, a wildlife ecologist and International Wolf Center board member, and his wife, K.C., who is a third-grade teacher, have summarized a recent scientific paper into language that's easier for children and young adults to understand. This article is written for students with reading levels at 10th to 12th grade.