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TAPED WOLF HOWLS AID SEARCH FOR AN ENDANGERED WOLF

Tape recordings of howling wolves are now being broadcast by the U.S. Fish and Wildlife Service in its stepped-up search for information on the status of the Northern Rocky Mountain wolf (Canis lupus irremotus). This wolf was thought to be extinct in the United States.

The winter search, which will continue through May's thaw, concentrates on the Shoshone National Forest east of Yellowstone National Park in Wyoming. Scattered reports of wolf sightings and howlings in recent years indicate wolves have returned to the backcountry of Yellowstone Park and Shoshone Forest. At least two positive identifications of the Northern Rocky Mountain wolf have been made in Montana recently. Since this area is the center of the Northern Rocky Mountain wolf's former range, Fish and Wildlife Service biologists Fred Christensen and Dennis Goyn hope the recorded howls will lure into view what may be a remnant or returned population of Northern Rocky Mountain wolves estimated to number about 20.

Periodically over the past two winters Christensen and Goyn have searched for wolf tracks in the snow from low flying aircraft. When they spotted sure signs of wolves, they followed up on the trail in a slower flying helicopter. No wolves were actually spotted using this method, because all tracks led ultimately into high timber where the trail blurred.

The spotting and photographing of wolves is the first step in what biologists Christensen and Goyn hope will be a process that results in positive identification of a Northern Rocky Mountain wolf in the Yellowstone area--a complicated affair ultimately requiring an animal's skull for firm identification. There are no plans to kill any wolves, however.

If a pack is roaming the backcountry, the initial spotting and photographing may provide clues to territorial claims of the pack. When spring arrives a thorough search of the area may turn up a wolf carcass that can be museum-tested for species identification.

The tapes being used in the experiment were recorded by a Fish and Wildlife Service biologist, David Mech, in his work with eastern timber wolves (Canis lupus lycaon) of northern Minnesota. The eastern timber wolf is a close relative of the Northern Rocky Mountain wolf. Both are gray wolves, and experts believe the howls of each are similar enough to prompt replies from the scattered wolves of Shoshone-Yellowstone.

Howling wolves at night have struck fear in men's hearts for centuries--breeding, perhaps, most of the sinister notions afoot about this animal.

All manner of wolf noises have intrigued outdoorsmen, biologists, and writers alike. A historian, D. R. Keim, in his book, On the Border With Sheridan's Troopers, written in 1924 described wolves eating. "A wolf feast over the carcass of a buffalo is one of those sharp toned entertainments, which could only be compared to an old fashioned tea party, composed of snappish octogenarian, paralytic, and generally debilitated characters of both sexes, with a fair sprinkle of shriveled virginity, and a few used up celibates of the masculine gender. Each one guzzling to his heart's content, and growling, and finding fault with his neighbor."

No doubt the type of communication for which the wolf is most famous is its howling, reports David L. Mech. He states, however, that howling is only one kind of sound the wolf delivers. Various authorities classify the types of wolf vocalization differently, but the system adopted in 1966 by an expert named Joslin in his study is used by most experts. He listed the following basic types of wolf vocal sounds: the whimper, the growl, the bark, and the howl.

Attempts to describe the wolf howl objectively have been made only recently by scientists at the University of Ontario in 1967. Using spectographic and auditory analysis techniques, they studied 700 howls of three adult wolves and provided the following description. "The howl is a continuous sound from about a half second to 11 seconds in length. It consists of a fundamental frequency which may lie between 150 and 780 cycles per second, and up to 12 harmonically related overtones. Most of the time the pitch remains constant or varies smoothly, and may change direction as many as four or five times. Total intensity does not vary throughout."

Lois Crisler, another expert on wolves, described a tame female's howl. "Sometimes she ululated, drawing her tongue up and down in her mouth like a trombone slide. Sometimes, on a long note, she held the tip of her tongue curled against the roof of her mouth. She shaped her notes with her cheeks, retracting them for plangency, or holding the sound in with them for horn notes. She must have had pleasure or sensitiveness about her song, for if I entered (howled) on her note, she instantly shifted by a note or two. Wolves avoid unison singing. They like chords."

David Mech says that during a pack howling session, one wolf begins, and, after its first or second howl, others join in. Each animal starts more or less by itself, beginning with a few long, low howls and working up to a series of shorter, higher ones, somewhat in chorus with other pack members. Such a session lasts an average of 85 seconds, and is sometimes followed by a repeat performance.

A 1958 study of wolf howls stated, "Like a community sing, a howl is a happy social ocassion. Wolves love a howl. When it is started, they instantly seek contact with one another, troop together fur to fur. Some wolves will run from any distance, panting and bright eyed to join in, uttering, as they near, fervent, little wows, jaws wide, hardly able to wait to sing."

Mech's observations suggest that an emotional state related to the wolf's social sense is probably the stimulus for chorus howling. It is significant, he says, that Canadian scientisits found that a high rate of spontaneous howling in one of their captive wolves was correlated with that animal's isolation from other wolves or people.

It does appear, Mech goes on to report, that one of the main functions of howling is to aid in assembling the pack. Many authorities have described various circumstances in which one wolf began howling and immediately drew other pack members to it. The advantage of a method of assembling scattered pack members is obvious, and it is easy to see how this function could have evolved from whatever social gratification howling may give.

Many people believe, Mech states, that howling is the call of the chase just as in certain breeds of hunting dogs. Evidence for this is lacking, however, and there are even some indications that wolves are silent during the chase based on his observation of wolves in Minnesota.

Beside conveying the location of an individual wolf, Mech says, howling may also identify that wolf. That is, each pack member may be able to recognize each other by its howl.

Experiements with taped howls in the field have met with varying success in Canada. One scientist received replies from broadcast howls in only 13 percent of 476 trials, conducted in an area where wolf population was light. Under good conditions, other scientists have had a 50 percent success in receiving responses. Several other authorities have reported that wolves will reply to recorded howls, human imitations, and even fire sirens.

The Northern Rocky Mountain wolf formerly ranged over parts of Montana, the Black Hills of South Dakota, all of Idaho, and parts of Oregon, Washington, and two Provinces of Canada.

The cause of the decline of this species was primarily poisoning, trapping, hunting, and land development which brought about a loss of habitat.

This experiment is but one facet of Federal and State programs to restore endangered species. The chances for success of this particular effort are unknown at this stage. The wolf, however, is more fortunate than other endangered species such as the limestone salamander or the Pine Barrens tree frog, for it has its own natural beauty going for it. A Canadian naturalist guiding visitors down a lonely, dark road in wolf country wrote, "When finally wolves are located and the pack begins to howl, excitement is high, and shivers run rampant up and down the spine of the listeners . . . Almost inevitably the silence that follows the end of the howling of the pack is suddenly broken by an intense babble of the voices of people all talking together, excitedly sharing the thrill of a superb wilderness experience. Almost inevitably, too, disinterest fades, and people begin to understand why man should always be prepared to share his environment with creatures of nature."

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