Lice Found On Kenai Wolves

by Ted Spraker

When biologists on the Kenai Peninsula talk about "lousy" wolves, they aren't making a value judgment. To varying degrees, wolves on the peninsula have been infested with lice since at least 1982. For political, practical, and economic reasons, it appears as if they will always be.

Trichodectes canis (*T. Canis*) is the scientific name of this louse, which is fairly common on domestic dogs in warmer environments. According to Dr. Charles Schwartz, who led the initial investigation of the Kenai infestation, *T. canis* has been reported infrequently on coyotes and red and gray wolves in the contiguous United States and southern Canada. Its occurrence on more northern populations of wild canids was undocumented before the Kenai infestation. We assume that Kenai wolves were exposed initially by infested free-ranging dogs.

T. canis feeds on hair and other debris near the skin surface. Wolves scratch and rub in response to irritation caused by lice, resulting in moderate loss of guard hair on adult wolves and extensive loss of guard hair and under-fur on pups. This scratching sometimes becomes so severe that body secretions (called sebum) collect on the skin and hair. Sebum mats the hair, reducing its insulating quality and causes the animal to smell like rotten flesh. Scratching and biting at lice also causes open sores which number in the hundreds in severe cases. (Infestation also may impair the ability of wolves to survive during periods of stress.) Below-normal weights have been documented in infested wolves, although mortalities have not. Additionally, lice infestation detracts from the appearance of wolves and significantly reduces the value of pelts to trappers and hunters.

The presence of lice was detected during the winter of 1981-82 when a trapper submitted poor quality pelts of seven wolves he had taken from the Bear Lake and Point Possession packs, two of nine packs identified in the northern portion of the peninsula.

By the following winter, the three remaining packs (Skilak Lake, Elephant Lake, and Swanson River) in the northern portion of the peninsula were infested. By the winter of 1983-84 the infestation had spread to the eastern half of the Kenai. In subsequent years, "lousy" wolves were reported from one of three packs in the west central portion of the Kenai and two of five packs in the southwestern part of the peninsula.

The initial plan by the Department of Fish and Game (ADF&G) and the U.S. Fish and Wildlife Service was to remove, by aerial shooting, all infested wolves (a total of 14) in the Bear Lake and Point Possession packs in March 1982. By closing wolf hunting and trapping seasons in the northern section the following year, we thought wolves from adjacent areas would have moved into the vacant territories and re-established their numbers. However, before a final decision was reached, snow began to melt. This made tracking difficult and the probability of success questionable. Success for this program meant all 14 wolves had to be removed or treated. There was also public opposition to killing the wolves. As the snow faded, so did the only opportunity likely to eradicate the infestation. By the following winter, the lice had spread to all five packs in the northwest Kenai.

The next step was a treatment program with ivermectin, a drug which is used to kill both internal and external parasites. Success was short-lived. Ivermectin is able to kill lice for less than one year after treatment. Therefore, it was necessary to re-medicate entire packs if a single animal escaped capture initially. In cases where the entire pack was captured and treated, the pack remained clean only until an infested wolf joined the pack. Recaptures and reports from trappers showed successfully treated packs remained clean from one to three years.

The treatment program temporarily succeeded in controlling the spread of lice. However, the enormous time and cost prompted abandonment of the program. Ivermectin is also effective if it is ingested. Biologists dropped small pieces of meat treated with ivermectin at the site of fresh wolf-killed moose. Examination of pelts brought in by hunters and trappers suggested pups ate the treated bait. Adult wolves apparently refused to eat the bait and remained infested. These adults could serve as a source of lice to reinfect the other pack members.

Although free-ranging dogs are thought to be the source of the original infestation, natural dispersal by wolves probably accounted for its spread and the reinfestation of wolves treated with ivermectin. According to six wildlife parasitologists who evaluated the situation, the entire life cycle of *T. canis* is spent on the host. Lice cannot survive for any length of time off the host. Close association between hosts, such as that occurring during the care of young, copulation, and contact between members of a pack, provided the greatest opportunity for transfer of lice.

In the winter of 1990-91, *T. canis* was documented in at least five packs on the Kenai Peninsula. The infestation has again begun spreading across the peninsula, despite the extensive agency efforts during the mid-1980s. Three tagged wolves from the peninsula have moved to interior Alaska. However, there is no evidence that the lice problem has spread to the mainland.

Disagreement over a decision to kill a few infested wolves in 1982 probably cost us the only realistic opportunity we had to eliminate the problem. Kenai residents, who were close to and familiar with the issue, clearly supported removal of the 14 infested wolves as the only practical attempt to eliminate the infestation. However, when a public meeting was held in Anchorage, several animal-rights groups protested the recommended action enough to delay it. Subsequent developments proved unfortunate for wolves and for the people who appreciate wolves. When similar situations arise in the future, the importance of long-term benefits to an entire population of animals should take precedence over the short-term fate of a few individual animals.

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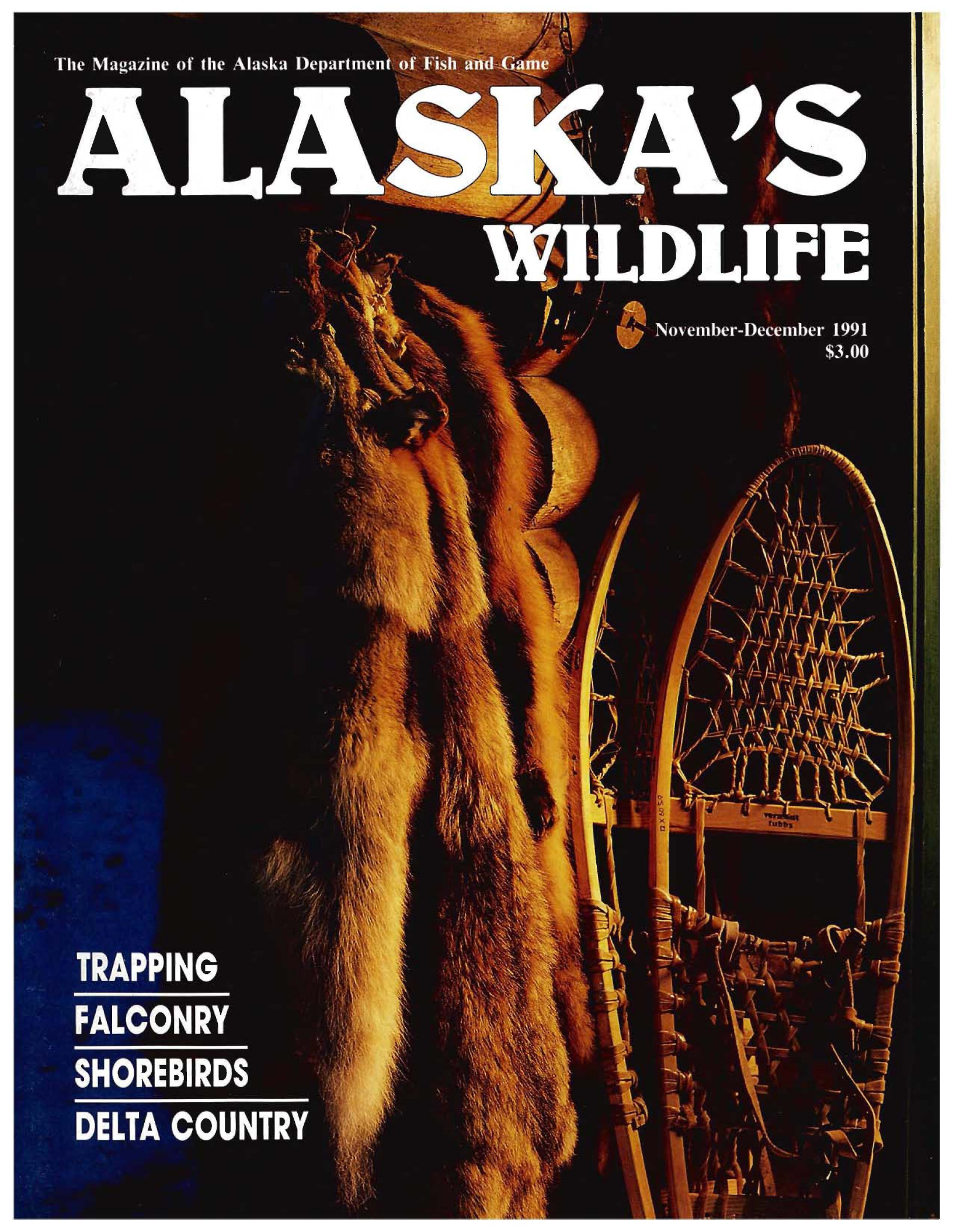

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