

Isle Royale Moose Thrive As Wolf Population Declines

Moose are thriving on Lake Superior's Isle Royale NP, but the island's wolf population continues to decline and a park researcher says food supplies may be the key factor in both cases.

"A combination of adequate food supply and low wolf numbers has allowed a maximum rate of increase for Isle Royale's moose," says Rolf Peterson, wildlife biologist at Michigan Technological University and director of the NPS-sponsored wolf-moose research project.

"There is enough balsam fir on the island to support the park's moose herd during the crucial winter months, and most of the animals are young, healthy, and in prime breeding condition," says Peterson. "We expect these conditions to continue until the early 1990s, when overbrowsing by the growing moose herd should begin to limit food supplies and result in lower moose survival rates, especially for calves."

Peterson says he and fellow researchers counted 1,380 moose on the island this year, 355 more than a year ago. "That's about seven per square mile, a phenomenal density compared to mainland moose populations," he says. "This is three times higher than the average density of other moose populations in North America." Peterson expects the Isle Royale moose to reach a peak of about 2,000 animals sometime during the next decade.

But while moose enjoyed another successful year, the island's wolf population suffered a setback.

"Wolf numbers are down to 15 from 20 last year," Peterson reported. "We saw one wolf being attacked and killed by other wolves while we were on the island this winter, but we don't know for sure what caused the other deaths. Food stress may have played a role, since healthy moose are hard for wolves to kill."

Peterson says three wolf packs inhabited the island at the start of this year's winter survey: the West Pack and East Pack, whose territories included the west and east ends of the island respectively, and the Harvey Lake Pack, which occupied the territory between the other two. This year's study showed the West Pack was down from 11 to 8 members, the East Pack had declined from 5 to 4, the Harvey Lake Pack started out at 3 members, and one wolf roamed the island alone.

"Then one day while we were conducting our aerial survey, we witnessed a territorial confrontation between the Harvey Lake and East packs that changed the situation," says Peterson. "We saw the Harvey Lake Pack bedded down around a moose they had killed in the East Pack's territory. A few miles away we saw the East Pack coming through the forest. They had picked up the trail of the Harvey Lake group and were headed toward the kill site.

"The East Pack came over a ridge, saw the Harvey Lake wolves, and made straight for the dominant (alpha) male of the Harvey Lake group. Unfortunately, the Harvey Lake male had just eaten and couldn't move quickly enough to get away with the other members of his pack. He put up a furious fight against the three wolves of the East Pack (the fourth East Pack wolf was not present), but after 25 minutes the attackers succeeded in killing him. When we recovered the carcass two days later, the dead wolf weighed 94 pounds and had 12 pounds of meat in his stomach. He was the biggest wolf I've ever seen on Isle Royale."

As a result of this battle, the two surviving members of the Harvey Lake Pack have dispersed and no longer function as a pack, and the East and West packs have divided the island equally between them, according to Peterson.

The MTU researcher expects the wolves to maintain their numbers at roughly 15-20 through the end of this decade.

"Three breeding females are left on the island, the Alpha female in each pack, but the one from Harvey Lake Pack doesn't have a mate as far as we know," he says.

Peterson believes conditions will improve for the wolves only when the island's moose have grown older and weaker, and more susceptible to malnutrition because of lack of food due to overbrowsing. When that happens, the wolves will find their larger adversaries easier to catch and kill, and researchers expect the wolf population will gradually grow. The number of wolves on Isle Royale reached a high of 50 in 1980, then crashed to an all-time low of 14 after two consecutive years of severe losses.

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This article was written at the news bureau of Michigan Tech University in Houghton, MI.