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JOHN VUCETICH/MICHIGAN TECHNOLOGICAL UNIV./AP



Grey wolves are increasingly rare on Isle Royale.

ECOLOGY

Iconic island study at risk

Just three wolves left in 57-year ecology project.

BY EMMA MARRIS

The longest-running predator-prey study in the world may run out of predators as early as next year. Isle Royale in Michigan is down to its last three wolves, researchers announced on 17 April.

That spells the probable end of a 57-year project to chronicle the fluctuating populations of moose and wolves on the 544-square-kilometre island. The effort has tested mathematical models of population dynamics, and provided insight into wolf and moose behaviour.

But inbreeding has taken its toll on the wolf population, causing skeletal abnormalities and

high death rates; the last influx of DNA came in 1997, when a lone male travelled to the island in Lake Superior over a temporary ice bridge into the island, which is a national park. (By contrast, the moose population has grown by about 22% per year, from some 500 in 2011 to 1,250 now.) For years, project leaders Rolf Peterson and John Vucetich, both ecologists at Michigan Technological University in Houghton, called for a 'genetic rescue' to save the study. They say that by transporting just a few wolves onto the island, problems such as malformed spinal columns, caused by recessive genes, would be masked by the incoming dominant genes.

This year, Peterson and Vucetich flew above

the island for 16 days in February and March looking for wolves and wolf tracks in the snow. Most days they came up with nothing. "Just a blank slate," says Peterson. In the end, they counted just three wolves — probably a mated pair of close adult relatives and one pup.

Even if wolves were brought in this year, the pair probably would not break up and mate with the newcomers, the researchers say. And the pup was in such poor shape that the scientists do not expect it to survive. "Genetic rescue is almost certainly too late now," says Vucetich.

Peterson blames the US National Park Service (NPS) for "dithering" over what to do until the window for genetic rescue had closed. A year ago, the NPS announced that it would make a decision on the matter after a "comprehensive planning process".

"We have science coming out our ears and it wasn't enough to carry the day," says Peterson.

MIXED FEELINGS

But Phyllis Green, superintendent of Isle Royale National Park, says that science is just one of several factors that will influence her decision about whether to intervene, along with NPS policies, relevant laws and the needs and desires of park visitors. "Some people love hearing a wolf howl in the wilderness; others say 'if you put the wolf out there, I am not as thrilled about hearing it,'" she says.

And not everyone agrees that the NPS should have added more wolves to the island. Prominent wolf biologist David Mech, who works for the US Geological Survey in St Paul, Minnesota, says that much can be learned from watching what happens without intervention. "Chances are good that one [of the remaining wolves] is a male and one is a female, and that is how the whole population started, so it would be interesting to see what happens in the next year," he says. "I think we should just continue to study the situation and describe what happens."

In March, the US National Science Foundation renewed the grant for the Isle Royale study for another five years, and that US\$90,000 is not contingent on wolves remaining in the system. Moose and vegetation can still be tracked as they react to the disappearance of the predator. The researchers say that they will stay. Vucetich has been working on the study since the early 1990s, and Peterson has been looking for wolf tracks in the snow every winter since 1971. "They can kick me out if they want," Peterson says, "but I won't walk away." ■