

# INTERNATIONAL WOLF

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The National Park Service (NPS) on December 16, 2016 released a proposal to reintroduce 20 to 30 wolves into Isle Royale National Park in Lake Superior over the next three to five years. Before proceeding with reintroduction, the National Park Service will consider public input offered during a 90-day period ending March 15.

Dr. Rolf Peterson has been studying the Isle Royale population since 1970, along with Dr. John Vucetich who began as a field assistant in 1991. *International Wolf* (IW) was pleased to discuss this major proposal with Dr. Peterson.

**IW: Dr. Peterson, please describe Isle Royale, its size and location, distance from the mainland, etc.**

**Peterson:** Isle Royale is the largest island in Lake Superior, about 20 miles off the adjacent Ontario shore near the Minnesota border. Forty-five miles long and entirely forested, it has been a U.S. national park since 1940. Importantly, only about one-third of the mainland mammal species have become established on the island, so it is dominated by a single predator (wolf) and a single major prey (moose), with beaver a significant secondary prey during the open-water season, making it a relatively simple predator-prey system where none of the species are killed by people.

**IW: Why and how has wolf research on Isle Royale been important?**

**Peterson:** The long-term narrative about wolves and moose on Isle Royale has fostered more favorable attitudes toward the wolf. Research began in the dark days of the 1950s when wolves were summarily persecuted and denied a place to live, even in remote regions sparsely inhabited by humans. The long-term story simply fascinates people, and the resulting public interest has aided wolf recovery in North America and throughout the Northern Hemisphere. The focus of the

research is advancing our understanding of this predator-prey system, and science has produced an increasingly nuanced picture of wolf predation.

**IW: Why can't wolves naturally recolonize the island?**

**Peterson:** Winters have become warmer, shorter, and windier, resulting in a much-reduced frequency of ice bridges that would allow wolves to travel to Isle Royale. Solid ice bridges were present eight years out of ten in the 1960s, while presently there is good ice about one year in ten. It is clear now that the rare arrival of an immigrant wolf to Isle Royale—one that lives to reproduce with new genetic viability—has kept the population going since the late 1940s.

**IW: What would happen if Isle Royale wolves went extinct and the population was never reintroduced?**

**Peterson:** Fortunately, predictions can be based on Isle Royale history and

# Wolf Reintroduction





on recent information from Canadian national parks where there are moose but no wolves. In short, moose numbers would increase until they hit limits imposed by limited food. However, by then forest communities would have lost plant species, some tree species would be unable to regenerate, aquatic habitats would be degraded, shorelines trampled into mudflats, and during severe winters, moose would starve *en masse*, sometimes catastrophically. By then moose density would be around 13 per square mile or more. At Isle Royale, forested habitats would be severely compromised by loss of tree species and overhead canopy and, given additional stressors caused by climate change, forest communities would become simplified (less species-rich) and subject to invasion by exotic species, including many grasses. Parks Canada, responsible for managing the country's national parks with the goal of maintaining ecological integrity, has

in recent years gone to the extreme of culling moose in several national parks in the maritime region where there are no wolves—and no reasonable chance of introducing any because of public fear and hatred.

**IW: How long would it take for wolves to reduce the moose population significantly after wolves are re-established?**

**Peterson:** That's a huge unknown at this point, especially since we are probably still two years away from having new paws on the ground. We anticipate there would be well over 100 moose available for each wolf in the early years of wolf introduction—far more than a wolf could affect—and it might take some years for wolves to self-organize in packs that would exert maximal predation pressure. A major die-off of moose may be unavoidable at this point. In any case, a race is on between an increasing moose

population and the balsam fir saplings that started growing a decade ago when moose numbers were reduced dramatically by wolf predation. This is the last cohort of regenerating fir on two-thirds of the island, where the parent trees have already disappeared.

**IW: If wolves are reintroduced to Isle Royale, would there be an advantage to do so while the original wolves are still alive? If so, what would that be?**

**Peterson:** Introducing wolves that would breed with the existing population was an option—termed *genetic rescue*—that could be expected to lead to recovery. That is unrealistic now, as the remaining wolves are rather old and could easily die before mainland wolves can be released. If the objective is to have wolves on Isle Royale, the sure-fire way to do this now is simply to introduce a new population. ■

Public comments can be made by visiting:  
<http://bit.ly/isleroyalenp>

You may also mail or hand-deliver your written comments to: Superintendent Phyllis Green, Isle Royale National Park, ISRO Wolves, 800 East Lakeshore Drive, Houghton, Michigan 49931-1896.

Comment period ends March 15, 2017.

# to Isle Royale?

An interview with Dr. Rolf Peterson



George Desort

A world authority on wolves and moose, Rolf Peterson began leading the Wolf-Moose Project in the early 1970s. After retiring as a professor in 2006, he devoted himself even more to the project and now spends more time on Isle Royale than on the mainland. Rolf continues to be fascinated by the scientific insights and surprises the island provides. To learn more about the project, visit [isleroyalewolf.org](http://isleroyalewolf.org).