

This shard of a continent becalmed in the green fresh-water sea is indeed royal, isolate, and supreme.

> T. Morris Longstreth The Lake Superior Country, 1924

FROM THE NORTHWEST CORNER OF LAKE SUPERIOR A ROCKY ARCHIPELAGO RISES. THE COLD, DEEP WATERS OF ONE OF THE WORLD'S LARGEST LAKES BOTH ISOLATE AND PROTECT THIS PLACE. ITS DISTANCE FROM THE MAINLAND HAS LIMITED THE DIVERSITY OF SPECIES-ONLY THOSE ABLE TO MAKE THE CROSS-ING CAN CALL THE ISLAND HOME. HUMANS TOO MUST MAKE THE CROSS-ING, AND HAVE BEEN DOING SO FOR AT LEAST 4,500 YEARS. ISLE ROYALE'S GEOGRAPHIC SEPARATION PROTECTS IT FROM OUTSIDE INFLUENCES, BUT IT IS NOT IMPENETRABLE. HIGH CONTAMI-NANT LEVELS IN INLAND LAKES AND REDUCED WINTER ICE COVER REMIND US THAT ACTIONS ELSEWHERE CONNECT ISLE ROYALE WITH THE REST OF THE WORLD. HOWEVER ISOLATED, ISLE ROYALE IS NOT IMMUNE TO HUMAN-DRIVEN CHANGE.

Kayaker on Lake Superior

You will see the red squirrel more often than any other mammal on Isle Royale. How did it make the crossing from the mainland? No one knows—but because of its long isolation from its relatives the Isle Royale red squirrel is now considered a subspecies. Smaller and less red than its mainland counterparts, it makes different sounds. Its subspecies name, *regalis* (regal) suits its self-important behavior. Other mammals on Isle Royale, like the American marten, are also genetically distinct from mainland species.

Range of devil's club

geographically.

Devil's club

Disjunct plant species are closely related but widely

separated from each other

# **Evolving Wilderness**

**From Isolation, Novelty** 

Early human crossings of Lake Superior to Isle Royale presented both risks and rewards. Pre-contact cultures, and later the Ojibwe, harvested copper deposits, an abundant fishery, and other resources. Commercial fishermen and copper miners, lumberjacks, and lighthouse keepers depended upon the island for their livelihood. Cool summer temperatures and wilderness pursuits enticed vacationers in the early 1900s. Today Isle Royale National Park is a designated wilderness and biosphere reserve, attracting hiking, paddling, and backpacking enthusiasts as well as boaters, divers, and others.

Isle Royale red squirrel

## **Plants Far from Home**

Some plant species that thrive along Isle Royale's cooler shores are not typically found this far south. Northern paintbrush and three-toothed saxifrage, both arctic disjuncts, were probably stranded when the last continental ice sheet retreated. Other species, like Isle Royale's iconic thimbleberry shrub, are western disjuncts. Thimbleberry is typically found west of the Rocky Mountains.

Thimbleberry

Three-toothed saxifrage Northern paintbrush © MARK EGGER

## **Island Laboratory**

Scientist Durward Allen, who founded the Isle Royale Wolf-Moose Study in 1958, expressed one value of islands as laboratories when he described them as places "where the animals you are counting and studying do not wander away."

Isle Royale's isolation shapes its ecosystem. It excludes some species. Others arrive by chance. Some that could make the trip rarely do so. As a result, less than half of the over forty mammal species on the surrounding mainland have populations on Isle Royale today. Fewer species result in fewer relationships among species—creating opportunities for research and long-term monitoring in a relatively simple ecosystem.

Studies on the island have increased our understanding of predator-prey interactions and their cascading effects on other species. Monitoring of bird and fish populations, water levels, and water quality sheds light on the consequences of global changes. Research revealing a rainbow of colors in the island's garter snake population rekindles our wonder for the vibrancy of the natural world.

Nothing stays the same for very long on an island. A little over a hundred years ago, a survey of Isle Royale's mammals would have resulted in a list quite different from the present one. Moose would be noticeably absent. Caribou would represent the large prey species, while coyote and lynx would serve as the predators.

This ecosystem may not be as simple as it first appears. On Isle Royale, a world within our world, all life exists in a dynamic web.

Moose

Chippewa Harbor

UNITED

STATES

RIDGE Lake Su



Customs at Windigo and Rock

Harbor ranger stations.

to the park are required to clear US grounds, docks, and anchorages. The park is remote. Plan carefully and exercise caution to prevent ac-

Superior waters.

National Park Foundation Join the park community www.nationalparks.org

### Islands upon islands on the horizon

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