

THE GREENSTONE 2005

Your Guide to Isle Royale National Park
www.nps.gov/isro

National Park Service
 U.S. Department of the Interior



Our Connections to the Past



Rock Harbor Lighthouse circa 1890

IS THE ROCK HARBOR LIGHTHOUSE just a big, empty stone building? How about the Kemmer cottage in Tobin Harbor? Is it just another old cabin along the shore? The smell of coffee and bread may not waft from the cabin as it did when Elizabeth Kemmer (EK) lived there and the Rock Harbor lighthouse may not be bustling with the activity of the Johnson fishing family any

more, but the stories are still there. Cabins aren't just wood and shingles nailed together. They are the remnants of an important history that help us find out about Isle Royale and possibly also about ourselves.

There are stories everywhere. If you stand at the top of the cliffs at Passage Island lighthouse, you stand in the footsteps of 100 years of lightkeepers and assistant lightkeepers, watching the lake and trying to keep ships safe. If you stood with the Passage lightkeepers on a stormy December night in 1906, you would have shared their concern and wonder as they saw something near Blake's Point. "Is it a fire? It's December, how can there be a fire over there? As soon as these waves calm down a bit, I'll take the rowboat and check it out." Two days later, you might have joined the assistant keeper as he set out to find the answer to their questions. You might have been with him when he discovered the wrecked ship, *Monarch*, and helped initiate the rescue of her passengers and crew.

At McCargoe Cove campground, mixed in the dirt near the shelters and picnic tables, you can find historic nails and bits of clay pipe used in the 19th century.



EK at her cabin

You can also find small flakes chipped off from stone tools the natives used 1000 years ago or more. Up at the mining site, what you see now are large piles of rock amidst the growing trees and wildflowers, all that's left of the copper mines. You might happen upon an ancient stone hammer. These piles of rock can connect you to the nails and pipe stems littered at the shore and more

importantly, to the people who used them. It is quiet now, but if you were there 130 years ago, the scene would have been very different. You would hear sounds of men digging, blasting, and loading the rock; horses neighing; dogs barking; and children playing. You could smell the blasting powder and feel the dust in the air. Landscapes may change over time, but they continue to represent a rich and interesting history.

Why do we need to keep these places? Can't we just write down the stories and leave it at that? The sites provide the tangible resources that can link us to the stories and history of the island. The memory of EK remains because her cabin is still here, otherwise we might forget about her. The Passage Island lighthouse stands strong as a reminder of the thousands of mariners who have passed by the island and those who are still passing by. We have to do our best to preserve the sites so we can also preserve the stories and memories of a way of life that came before us. Nothing can compare to standing on the dock at Wright Island, feeling the fresh lake air, watching a moose across the harbor, and hearing the distant call of a loon. We can't just write down that Ingeborg Holte used to stand here and watch the sun rise. We need to be able to stand here too so we can feel at least a little what it was like for her. Being able to stand in the same spot connects us to the past in a way that words simply cannot.

Without the visible - cabins, docks, landscapes - we might forget about the history and those who were here before us. We need these tangible reminders to link us to the past. We need these places because they can take us away from our lives for awhile, for a few minutes or a few days, and let us connect to a different time, away from modern distractions—a place where we can go for peace of mind and memories.

Liz Valencia
 Branch Chief of Cultural Resources



Passage Island Lighthouse circa 1890



Wright Island circa 1950

4 Interpretive Activities

Educational Programs about the natural and cultural history of the Park.

5-8 Wilderness Use

Pull-out section with information on Leave No Trace, hiking, camping, fishing, and boating.

11 Transport & Fees

Ferry schedules, daily fees, and Rock Harbor Lodge.

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Books and maps provided through the Isle Royale Natural History Association.



Contacts

Isle Royale National Park

800 E. Lakeshore Drive
Houghton, MI 49931-1869

Phone: 906-482-0984

Fax: 906-482-8753

Website: www.nps.gov/isro

E-mail for General Information:

ISRO_ParkInfo@nps.gov

Emergencies:

During business hours:

906-482-0984

After Hours:

906-483-3170

906-337-4994

906-482-2121

Isle Royale Natural History Association (Books & Maps)

800 East Lakeshore Drive
Houghton, MI 49931-1869

Phone: 800-678-6925; 906-482-7860

Website:

www.irnha.org

E-mail:

irnha@irnha.org

Rock Harbor Lodge Summer

P. O. Box 605

Houghton, MI 49931-0605

Phone: 906-337-4993

Winter

Isle Royale Resorts, P. O. Box 27,
Mammoth Cave, KY 42259-0027

Phone: 270-773-2191

Website:

www.isleroyaleresort.com

E-mail:

isleroyaleresort@starband.net

Weather Forecasts for Isle Royale Michigan

www.crh.noaa.gov/mqt

Minnesota

www.crh.noaa.gov/dlh

National Weather Service Radio Forecasts

- 162.400 MHz from Houghton, Michigan.
- 162.475 MHz from Thunder Bay, Ontario, Canada.

Michigan's Keweenaw Tourism Council

Phone: 800-338-7982

Website:

www.keweenaw.info

E-mail: info@keweenaw.info

Minnesota's Grand Marais Visitor Information Center

Phone: 888-922-5000

Website:

www.grandmarais.com

Michigan Department of Natural Resources Fishing License Purchase:

Website:

www.michigan.gov/dnr

This publication is produced by Isle Royale National Park and the Isle Royale Natural History Association.

- Edited by Greg Blust, Jill Burkland, and Valerie Bowen.
- Photographs from the Isle Royale National Park collection.
- Isle Royale Natural History Association funded this publication.

—Printed on recycled paper—

Managing With Fewer Resources

Isle Royale's sparkling waters, rocky shorelines, and deep forests are relatively impervious to the ebbs and flows of human activity. However, the financial resources to preserve and protect the island's natural and cultural world, its facilities, and visitor services are decreasing through inflation, flat budgets, and mandated cost increases. As an isolated marine park, Isle Royale incurs operational costs that mainland parks do not. We generate our own electricity, produce our own drinking water, treat sewage, transport garbage from the island, and transport fuel to maintain park operations—all increasingly costly operations. Although Isle Royale will always be here for the public's enjoyment; this year's financial burden will result in reduced services for the public.

Isle Royale's General Management Plan is committed to maintaining services for all who visit the park. We will continue, as long as we can, to provide a base level of support for all visitors, including limited concession services at Windigo and a full-service concession operation at Rock Harbor. However, the flat budget projections over the next three to five years will result in the park absorbing roughly \$150,000 of inflationary costs every year. This is the equivalent of ten seasonal employees who support your island visit. The cumulative effect will be significant; this year alone we are reducing our seasonal workforce by 37%. The purpose of this article is to notify you of proposed cutbacks.

Meetings with our Regional Office continue, in hopes that we may mitigate some of these reductions, but if help is not found, the following changes will be implemented this

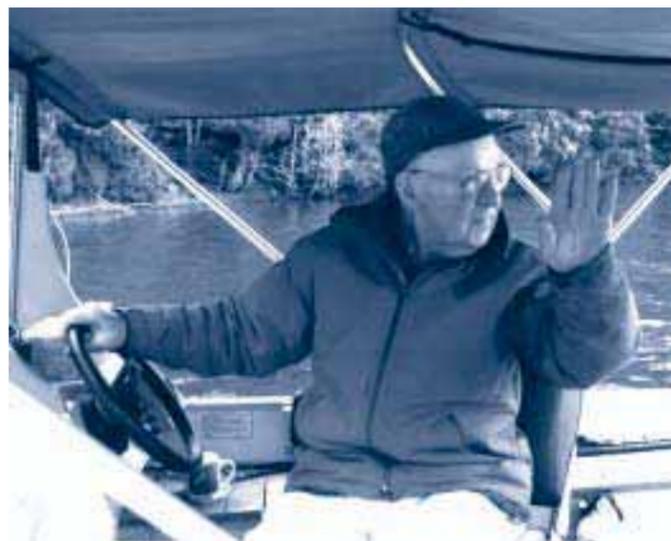
year: Visitor center hours and interpretive programs will be reduced. The Edison Fishery Cultural Demonstration and Rock Harbor Lighthouse will be open only during July and August. Trail maintenance will be cut in half, focusing on critical needs which will reduce or eliminate trail brushing and bridge maintenance. Park Rangers will have a reduced presence in the backcountry which will affect visitor services from education to emergency response. Routine maintenance projects will be significantly reduced, thus adding to our current \$38 million maintenance backlog. Funding to support a Historic Properties Management Plan will be reduced. Many historic structures that we hoped to stabilize in the next five years will continue to deteriorate – some potentially beyond repair.

We are trying to implement innovative ideas to save money where we can. Funds have been requested to support an alternative energy study; we continue to exercise fuel conservation; and work continues with other Lake Superior National Parks to develop a non-profit fund to support enhanced visitor services and resource protection.

Isle Royale, as a National Park, is committed to serving the visitor, but financial uncertainties may cause change to some of the ways we have previously supported your visit. We appreciate your willingness to join in our stewardship of this island gem as you enjoy the many facets that Isle Royale National Park has to offer.

Phyllis Green
Superintendent

A Life Dedicated to Isle Royale



Robert Linn 1926 — 2004

(Photo by Dr. Rolf Peterson)

Robert Linn, former Isle Royale Chief Park Naturalist and Chief Scientist for the National Park Service, discovered Isle Royale as a young man and dedicated his life to studying, protecting, and enjoying it.

Bob was born in 1926. After serving in WWII, he enrolled at Kent State University. He began his lifelong association with Isle Royale National Park, through his university field work, surveying plant ecosystems on the island. After completing a Ph.D. at Duke University, he began working for the National Park Service on Isle Royale. He served as Chief Park Naturalist from 1958 to 1963.

Bob participated in the first Isle Royale winter research sessions of the world-renowned and ongoing Wolf/Moose Studies, working closely with the study's founder, Durward Allen. He was a co-founder of the Isle Royale Natural History Association and began their publication program. Many of the publications listed on the back page of the Greenstone were published under the careful direction of Bob Linn.

In 1963, Bob reluctantly left his beloved Isle Royale to work in Washington, D.C. for the NPS where he attained the position of Chief Scientist for Research.

After his retirement in 1980, Bob co-founded the George Wright Society, an international professional association of researchers, resource managers and educators dedicated to the protection, preservation and management of cultural and natural parks and reserves.

Bob spent his life promoting better research, resource management and education in and around national parks and other protected places. His devotion to Isle Royale, in particular, was nothing short of remarkable. Even after he left the area to work in Washington, Bob managed to make at least one trip to the island each year. In all, he visited Isle Royale for 58 years in a row, making his last trip in July of 2004.

Bob died at his home in October, 2004, following a long struggle with cancer. His presence will be felt on Isle Royale for many years to come.

Valuing Wilderness

Solitude, Tranquility, Reflection, Adventure, Challenge, Re-creation ... these are all experiences that today's Isle Royale visitors seek to find in wilderness.

When early Europeans arrived in the Americas, the landscape was nearly all wilderness, something to be conquered. Now it is endangered. With wilderness, naturally occurring, who would think it would take so much to protect and maintain?

As wilderness became scarce, its value increased. So much so, that a group of individuals saw the need to provide it with special protection. The Wilderness Act of 1964 established a means to designate and protect areas "where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain."

Today, the National Park Service protects more Wilderness than any other federal land management agency. Over half of the land area managed by the National Park Service is designated Wilderness and protected by law, including 99% of Isle Royale's land area.

While more people visit Yellowstone in one day than visit Isle Royale in a year, Isle Royale's backcountry gets more use per acre than any other National Park.

Managing Isle Royale's Wilderness is tricky business. Through the Wilderness Act, the Park is mandated to "secure for the American people ... and future generations the benefits of an enduring resource of wilderness ... unimpaired for future use and enjoyment." Isle Royale National Park managers carefully consider



Canoeist in fog

every policy decision. As ongoing research deepens our understanding of the island's complex natural systems and our interactions with them, park management evolves to balance use with preservation. Regulations and guidelines are designed to preserve the park's wilderness character. But in the end, it is the visitors' character and values that will define the future of this wilderness island.

Of National Park areas, Isle Royale has one of the highest rates of return visitors, a sure sign that people value

this unique place. Each time a visitor returns some mark is left on this wilderness. But by following regulations and guidelines and treating the island with respect we may be able to sustain a wilderness resource that is truly enduring.

Solitude, Tranquility, Reflection, Adventure, Challenge, Re-creation ... May your children's children find them here.

Steve Martin
West District
Ranger

Clif Edwards
South Shore
Ranger

On the Leeward Side

The Challenges of Facility Management

Beyond Isle Royale's shoreline you will see the footprint of modern man—the developed areas that are the portals to Isle Royale National Park and the wilderness beyond. The historic lighthouses, the trails you hike, the modern structures that may provide your lodging, the ranger station, the visitor center, and the store are all integral parts of the Park's infrastructure. The infrastructure at Isle Royale consists of 450 structures, 165 miles of hiking trails, 36 campgrounds, 70 boat docks, 3 visitor centers, 33 marine vessels, and 3 major utility systems that produce electricity and drinking water and treat waste water.

Our utility systems are as complex as systems in most communities. The faucet you turn on to fill your water bottle is the end result of the water treatment plant. Water is pumped from the lake, transported via pipeline to the

plant where it is treated, filtered, and tested to meet state and federal standards, and then stored in tanks for use. The process starts all over again when the precious water, after use, is delivered to the waste water plant to be treated, tested and processed until the final result is water that is contained in a small enclosed wetland.

When you hike the trails or tie off to one of the boat docks, take a minute to appreciate the workmanship and consider the methods and materials used in the construction process. A trail designed or maintained without using modern methods and without having sensitivity to location can damage the environment. A poorly maintained trail creates runoff, impacting streams and wetland areas. A dock, when constructed without using the proper materials, can leach chemicals into the waters. A properly designed and constructed dock provides critical habitat for aquatic life and will be serviceable over a longer time span, reducing maintenance costs.

In every aspect of facility management there is one continuous challenge, to find environmentally safe alternatives to the way we currently do business. We are seeking methods and technology to reduce fossil fuel use on the island and

Draft Wilderness and Backcountry Management Plan

The *Draft Wilderness and Backcountry Management Plan and Environmental Impact Statement* (WBMP/EIS) should be available in May, 2005. The public will have at least 60 days to comment on the plan, as provided under the National Environmental Policy Act. Park employees will respond to substantive public comments, and those responses will be printed in the final plan. The development of the WBMP/EIS incorporates eight years of planning, a multitude of scientific studies, and several opportunities for public participation, to ensure protection of the park's most enduring resource, Wilderness. The purpose of the final plan is twofold: 1) Outline steps for preserving Isle Royale's Wilderness character, natural resources, and cultural resources while also providing for the use and enjoyment of the park's Wilderness and backcountry by current and future generations; and 2) Provide accountability, consistency and continuity in managing Isle Royale's Wilderness and backcountry. Both the draft and final plan/EIS will be available on the park's website at www.nps.gov/isro

Mark C. Romanski
Lead Biological Science Technician

to utilize sun and wind to produce our energy needs, cleaning the air and preserving the natural quiet. We look at the latest sustainable design practices and incorporate sustainable materials in the rehab or construction of buildings. We consider site location and orientation of new structures to reduce energy used in cooling and heating. We purchase and use "Green" cleaning products, water-based paints and stains, and materials brought to the island are

either used or recycled.

As you enjoy your visit—whether it be in the backcountry, on the waters, or in the developed areas—you will have the opportunity to experience the beauty of the park's natural resources and to appreciate the challenges that the park faces in protecting those resources while providing the amenities necessary for our visitors.

Division of Facility Management



Wright Island Dock

Interpretive Activities

Enjoyable and educational programs are offered on Isle Royale at Rock Harbor, Daisy Farm, and Windigo, and they are also presented on the National Park Service vessel, *Ranger III*. In addition, guided excursions explore such areas

as Passage Island and Lookout Louise near Rock Harbor. Ranger guided programs are free, although those involving the tour boat *MV Sandy* include a transportation fee. Check at local bulletin boards for further details. For outdoor

activities, dress for the possibility of cold or rain and wear sturdy footwear. Trails are slippery and muddy during or after wet weather; wear shoes with good ankle support, weatherproofing, and soles that grip well. COME JOIN US!

Budget shortfalls have reduced staffing. Check at Park Visitor Centers for availability of educational programs.

- All times are Eastern Daylight Time
- \$ = transportation cost
- ** = indicates tours with a park ranger

ROCK HARBOR AREA	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Rock Harbor Visitor Center Information, books, maps, educational sales materials, camping permits, user fee payments			Daily 8:00 a.m. to 6:00 p.m. — June 11 through September 9 Reduced hours, May 20 through June 10 and Sept. 10 through Sept. 23				
Island Connections Join a park ranger for an in-depth exploration of Isle Royale's natural and cultural history. May be offered during evening hours.			Check at the Visitor Center for availability, location, and time.				
Rock Harbor Reflections Take a leisurely hike with a park ranger to discover Rock Harbor's special places.			Check at the Visitor Center for availability, location, and time.				

MV SANDY TOURS FROM ROCK HARBOR	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
The trails on guided tours are rocky and uneven with some steep climbs and descents; trails may be slippery. Be prepared for cold temperatures and the possibility of rain. If stormy weather cancels the boat trip, an alternate guided hike is offered.	For all tours and programs involving the <i>MV Sandy</i> , obtain tickets and information at the Lodge Registration Office. <i>MV Sandy</i> Tours will operate from June 7 through September 9. Fare rates for the various tours are available at the Rock Harbor Lodge and Rock Harbor Visitor Center; children under 12 are charged half-price for the <i>MV Sandy</i> .						

Hidden Lake/Lookout Louise (\$)** Greenstone Shuttle A 4-mile boat trip on the <i>MV Sandy</i> to Hidden Lake Trailhead followed by a guided 2-mile round trip hike past Hidden Lake up 320 feet to Lookout Louise. View the south shore of Canada and the north shore of Isle Royale. Return with the group or bring a lunch and water and hike 9.4 miles back to Rock Harbor.			9:00 a.m. to 12:30 p.m.		9:00 a.m. to 12:30 p.m.		
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Passage Island (\$)** An 8-mile boat tour on the <i>MV Sandy</i> crosses one of Isle Royale's popular shipping lanes followed by a guided 2-mile round trip walk to the Passage Island Lighthouse. You'll experience an island which reflects a low moose presence.		1:30 p.m. to 6:00 p.m.	Due to project work in July and early August the lighthouse may only be viewed from a distance.			1:30 p.m. to 6:00 p.m.	
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North Side Cruise/Minong Mine (\$) Cruise two hours each way along Isle Royale's north shore bays. Pass Blake Point and Amygdaloid Island, with a possible stop at Belle Isle. A guide may be available to lead a 3-mile hike from McCargoe Cove to the historic Minong Mine. The hike includes difficult walking over steep piles of loose rock on an unmaintained trail. Trip may include a hike to Pine Mountain, offering excellent views of the Canadian shoreline. Bring lunch and beverage.				9:00 a.m. to 5:30 p.m.			
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Edisen Fishery and Rock Harbor Light (\$) Visit the historic commercial fishery with the resident fishery demonstrator (July thru August), take a quarter-mile walk to the oldest lighthouse (1855) on Isle Royale and enjoy its maritime exhibits.					2:00 p.m. to 6:00 p.m.		9:00 a.m. to 1:30 p.m.
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Captain's Cruise (\$) Explore with the Captain of the <i>MV Sandy</i> , scenic, out-of-the-way destinations, such as Middle Island Passage, Lorelei Lane, Rock Harbor Lighthouse, Davidson Island, and Starvation Point.			2:00 p.m. to 5:30 p.m.				
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Raspberry Island/Sunset Cruise (\$) Take a walk along a boardwalk through the spruce bog on Raspberry Island followed by a cruise on the <i>MV Sandy</i> around Scoville and Blake Points to view features like the Canada shoreline, the site of the <i>Monarch</i> shipwreck, and a Lake Superior sunset (after Aug. 15, cruise only).			8:00 p.m. to Sunset in June-July 7:30 p.m. to Sunset in August-September				
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DAISY FARM	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Check for availability of evening programs at the campground bulletin board. Learn about Isle Royale's natural and cultural history at the site of a historic settlement.				May be offered 7:30 p.m. to 8:30 p.m.			May be offered 7:30 p.m. to 8:30 p.m.

WINDIGO	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Windigo Visitor Center Information, books, maps, and other educational sales materials, camping permits, user fee payments.	Daily 8:00 a.m. to 4:30 p.m. — (may close midday for ferry arrivals) June 11 through September 18 Reduced hours, May 13 through June 10 and Sept 19 through Sept. 23						
Island Insights Join a park ranger for an in-depth exploration of Isle Royale's natural or cultural history. May be offered during evening hours.			Check at Visitor Center for availability, location, and time.				
West End Wanders Stroll along the trail with a park ranger to discover Windigo's special places.			Check at Visitor Center for availability, location, and time.				
Windigo Whispers Listen to stories of Isle Royale's natural or cultural history as shared by a park ranger.			Check at Visitor Center for availability, location, and time.				

HOUGHTON	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Houghton Visitor Center Information, books, maps, and other educational sales materials, <i>Ranger III</i> and group camping reservations, trip planning, boater camping permits, and user fee payments.	Open year-round, except for fall and winter holidays, 8:00 a.m. to 4:30 p.m. Monday through Friday 6/13 through 8/20 open 8:00 a.m. to 6:00 p.m. Monday through Friday. Saturday 10:00 a.m. to 6:00 p.m. 8/22 through 9/10 open 8:00 a.m. to 4:30 p.m. Monday through Friday, Saturday 10:00 a.m. to 4:30 p.m.						

RANGER III	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Maritime Program (\$) While onboard, park staff and guest speakers, weather permitting, will present educational and interpretive programs centered around Isle Royale and Lake Superior. Park staff will assist you in trip planning, answering questions, and issuing your backcountry camping permit.			9:00 a.m. to 3:00 p.m. 5/31 thru 9/6	9:00 a.m. to 3:00 p.m. 6/1 through 9/7		9:00 a.m. to 3:00 p.m. 6/3 thru 9/9	9:00 a.m. to 3:00 p.m. 6/4 through 9/10

JUNIOR RANGER PROGRAM							
	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Children 6 to 12 years old can participate in the Junior Ranger Program. Check at any Isle Royale National Park Visitor Center for details. Children can graduate in one full day and receive a badge and certificate.			Available daily at Rock Harbor and Windigo. Available Tuesdays, Wednesdays, Fridays, and Saturdays aboard the <i>Ranger III</i> .				

Wilderness Use

During Isle Royale's early history, visitors risked much to get there. They did not come to vacation; they came to tame the wilderness through mining its copper, harvesting its fish, and logging. The island was never tamed, the resource never conquered, but its landscape holds the scars of these early attempts. Today Isle Royale has reverted back to a primitive wilderness. The environmental conditions historically viewed as a burden are now attracting a new clientele. Today's visitors, as in the past, can still adversely affect this sensitive resource. To minimize your impact on park resources and other visitors, please practice "Leave No Trace" (for more information visit the Leave No Trace website at www.lnt.org). Where you place your feet is as important as how you treat and dispose of waste. Be part of the solution: help maintain the sense of solitude and preserve the wilderness flavor, a flavor that has the potential to change your life. Proper wilderness use begins with reading, supporting, and putting into practice the following information.

Camping

Permits are required for all overnight stays at campgrounds, cross-country sites, docks, or at anchor, regardless of group size or method of travel.

Party Size Defined

The party size for camping at Isle Royale is divided into two categories.

"Individual" parties are defined as a group of six or less people. "Group" parties are defined as seven to ten people. There are different requirements outlined below based on party size.

Individual Camping Permits — parties of six or less

Camping for individual parties is on a first-come, first-serve basis. Individual parties can obtain permits onboard the *Ranger III* or upon arrival at Rock Harbor or Windigo Visitor Centers. For trip planning assistance, call (906) 482-0984; write to Isle Royale National Park, 800 East Lakeshore Drive, Houghton, Michigan 49931, or E-mail ISRO_ParkInfo@nps.gov.

Group Camping Permits — parties of seven to ten

Advance reservations are required for group camping. For reservations and trip planning assistance call (906) 482-0984; write to Group Reservations, Isle Royale National Park, 800 East Lakeshore Drive, Houghton, Michigan 49931, or E-mail ISRO_GroupReserve@nps.gov. If your party exceeds ten people, you must split into two groups, each independent and traveling on completely separate itineraries. Groups shall camp in group tent site locations only (see chart on page six). Group leaders shall carry medical information for each group member including known allergies, known medical conditions, and medications currently taken. Organizations may not have more than twenty people camping on the island at any one time and are limited to eighty people per year.

Where to Camp

All campsites on Isle Royale offer tent sites and/or three-sided shelters. Shelter and tent sites are available on a first-come, first-served basis. Shelters may not be reserved and may not be used solely for cooking or storage of gear. Tents may not be erected at shelter sites. Be gentle with screen doors on shelters to minimize intrusive noise and to prevent damage.

Expect crowded conditions at park campsites during mid-July through August. When sites are full, we ask campers to double up and share empty tent pad space.

Campers must stay in established campsites unless off-trail (cross-country) arrangements are made at the time the permit is obtained. Off-trail hiking and camping is difficult at Isle Royale, and is only recommended for experienced campers.

Commercial Groups

Organizations that charge trip participants a fee or that compensate members or trip leaders in any way are commercial groups under federal law. This applies to both non-profit and for-profit organizations. Commercial groups must apply for and receive an Incidental Business Permit (IBP) to conduct trips in the park. There is a fee for this permit. IBP applications are only accepted between January 2 and May 15; contact the park's Chief Ranger's Office at (906) 487-7148.

"Quiet, Please"

Most visitors come to Isle Royale to hear the sounds of nature in a wild setting. Excessive human noise disturbs wildlife and other visitors. Sound travels easily over the water and on the trail. During quiet hours, between 10:00 p.m. and 6:00 a.m. EDT, if people in adjacent campsites can hear your activities, you are being too loud.

Respect Wildlife

Observe, photograph, and enjoy park wildlife from a safe distance. Use binoculars or a zoom lens "to get closer" to wildlife. If animals flee, become defensive, or change their natural activities in your presence, you are too close! Loons are especially susceptible to disturbance, and may abandon their nests when approached too closely by boats. Cow moose with calves, particularly in the spring, and bull moose during the fall rut can be dangerous; give them a wide berth.

It is illegal to feed, touch, tease, or intentionally disturb wildlife, their homes, nests, or activities. Animals, particularly fox and otter, when habituated to human food, may eventually overcome their natural wariness of humans and may have to be destroyed.

Human Waste

Proper disposal of human waste helps prevent pollution of water sources, minimizes aesthetic impacts to other visitors and reduces the spread of illness. Never defecate within 200 feet (at least 75 steps) of lakes, streams, trails, gullies, or campsites. In areas without outhouses, select a site that visitors are unlikely to discover. With a small trowel, dig a "cathole" 6 to 8 inches deep and 4 to 6 inches in diameter. Place used toilet paper and fecal material in the hole. Use toilet paper sparingly. After

use, cover the "cathole" with the excavated soil and disguise it with natural materials. Urinate on durable surfaces, such as rocks, gravel, or fallen logs; away from campsites and water sources. Pack out all used feminine-hygiene products, carrying them in plastic bags, doubled to confine odor.

Showers

The concession operation offers token-operated shower facilities at Rock Harbor (5/27-9/9) and Windigo (6/7-9/11).

Waste Water Disposal

Cleaning Cookware

Most cookware can be cleaned with hot water, a little elbow grease, and sand or other natural scrubbers. Clean cookware at least 200 feet (75 steps) from lakes, streams, trails, gullies, or campsites. Soap is unnecessary for most dishwashing jobs; if used, use it sparingly. Even biodegradable soaps take a long time to degrade. Use a small strainer or screen to remove food bits from the water and pack them out with your garbage. The remaining gray water should be scattered or broadcast over a wide area away from camps and water sources.

Bathing/Cleaning Clothes

When bathing use soap only if necessary and use it sparingly. Get wet and rinse on land at least 200 feet (75 steps) away from water sources or campsites. Rinse water can be carried in collapsible containers or pots. Clothes can be cleaned by taking them away from water sources and campsites and thoroughly rinsing them with plain water.

Drinking Water

Potable water is only available at Rock Harbor and Windigo proper. All surface lake and stream water should be considered contaminated with natural parasites. Drinking contaminated water can make you very sick. Water collected in the park should be boiled for at least two minutes, purified, or passed through a 0.4-micron water filter. Chemical treatment is not an effective method of water purification. If you boil your water, bring plenty of stove fuel. If filtering, bring a replacement cartridge for those filters that cannot be cleaned in the field.

Precautions should be taken to prevent filters from becoming clogged. Filter water from a pot rather than directly from a lake or creek. Allow the sediment in the pot to settle and filter only from the cleaner water on top.

Dehydration is a problem in hot weather. The Greenstone, Minong, and other trails become hot and dry, and creeks that once offered water may be dry. In addition, there is little or no dependable water available along many trails. To avoid dehydration, be sure to carry a minimum of 2 quarts of water per person. Drink as much water as possible while near water sources. Start hiking early before the day heats up – on ridges it starts getting hot at 10:00 a.m. on sunny days and gets hotter through late afternoon. Hike at a slower pace than usual and rest in shady spots. Watch for early warning signs of dehydration such as

thirst, heavy sweating, fatigue, and a red face. Watch for signs of severe dehydration such as reduced or no sweating, headache, long stretches without urinating, dizziness, and nausea.

Virus Watch

West Nile Virus

This virus has been in the United States since 1999. There have been no reported cases of this virus at Isle Royale National Park. Illness from the virus is rare. Most infections are mild, and symptoms include fever, headache, and body aches, occasionally with skin rash and swollen lymph glands.

Birds are a main source of infection for West Nile Virus. Mosquitoes acquire the virus from biting an infected bird. Infected mosquitoes transmit the virus to humans while biting. Additional information on the West Nile Virus can be found at www.cdc.gov/ncidod/dvbid/westnile/index.htm.

To minimize risk, wear a long-sleeved shirt and long pants. Apply insect repellents containing DEET up to 35% concentration for adults and 10% for children. Avoid using DEET on children less than two years old. Reduce harmful effects of DEET on the human body by applying it to clothing rather than skin.

Hantavirus

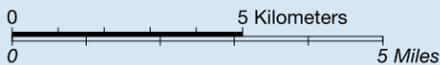
There have been no reported cases of Hantavirus at Isle Royale National Park. Generally, there is a low probability of infection. However, the death rate is very high among infected individuals. The first symptoms are flu-like; the primary symptom is difficulty in breathing and quickly progresses to an inability to breathe.

The deer mouse is the primary carrier of the virus. An infected mouse carries the virus in its urine, saliva, feces, and in the carcass. The primary way humans become infected is through breathing in the virus. Infection can also occur by touching the mouth or nose after handling contaminated materials.

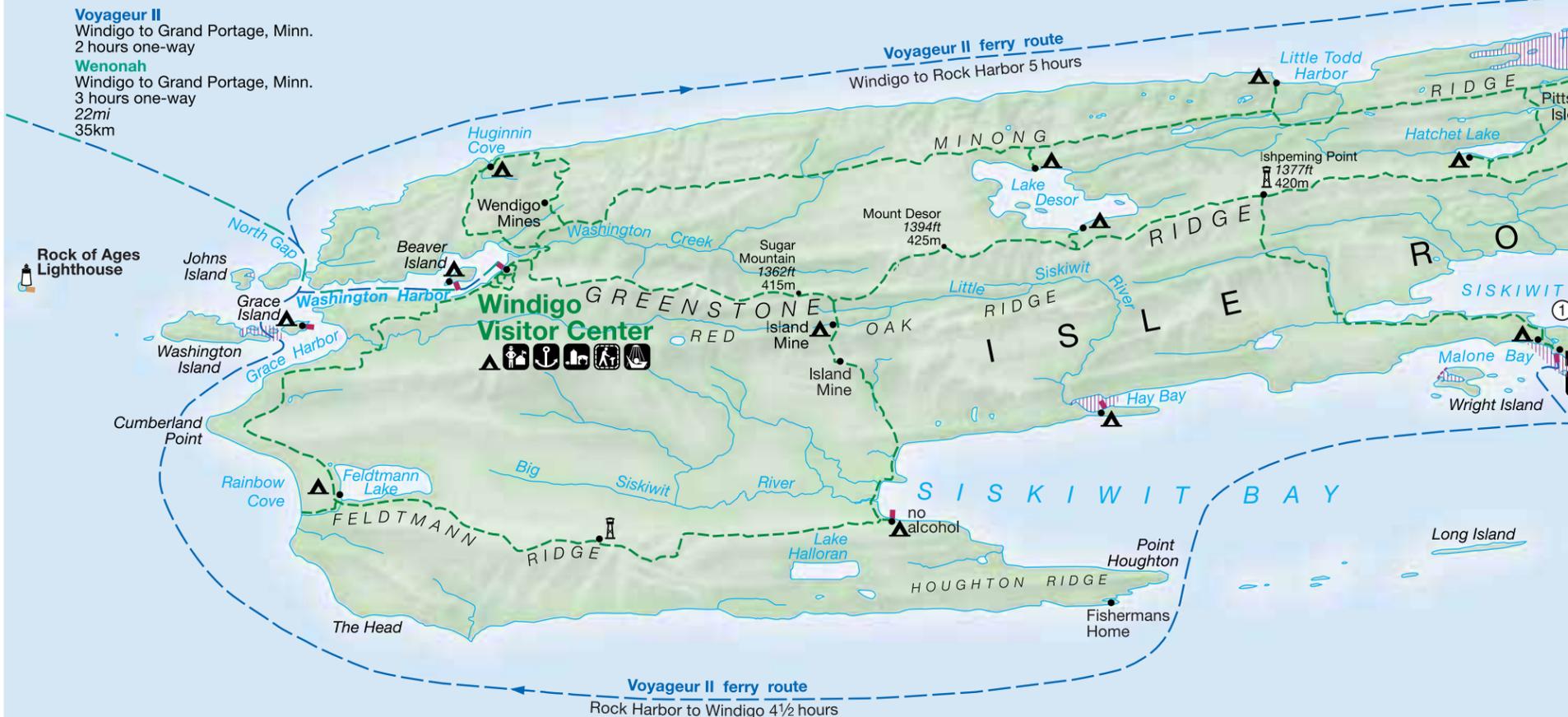
To minimize risk, avoid coming into contact with rodent droppings and burrows, avoid sleeping on bare ground, and store food and garbage in rodent-proof containers. For additional information on Hantavirus contact the Centers for Disease Control and Prevention at 800-532-9929.

Pack It In, Pack It Out

It starts at home. Through careful meal planning and repackaging of food items, you can reduce food leftovers and trash in the backcountry. Please pack out everything you take in. Leftover food, food-scrap, orange peels, nutshells, apple cores, twist-ties, candy wrappers, fishing line, and cigarette butts must be packed out. If you have food leftovers, either save and eat them later or pack them out. Do not burn, bury or place trash, food scraps or garbage in outhouses. Please help keep the backcountry clean by packing out what you packed in.



Do not use this map for navigation. See Boating on Page 8.



Isle Royale National Park boundary extends 4.5 miles into Lake Superior from Isle Royale and the outer islands, or to the international boundary.

- Public overnight dock
- Trail
- Ranger Station
- Lookout Tower
- Marina
- Day use only dock
- Quiet/No Wake
- Campsite
- Lighthouse
- Self-guiding Trail

CAMPGROUNDS

WARNING: Depth at dock. Know your boat's draft.

KEY: CR - Fires in community ring only
 S - Self contained stoves only
 W - Treated water supply
 F - Campfires allowed or standing grills provided
 A - No Alcohol

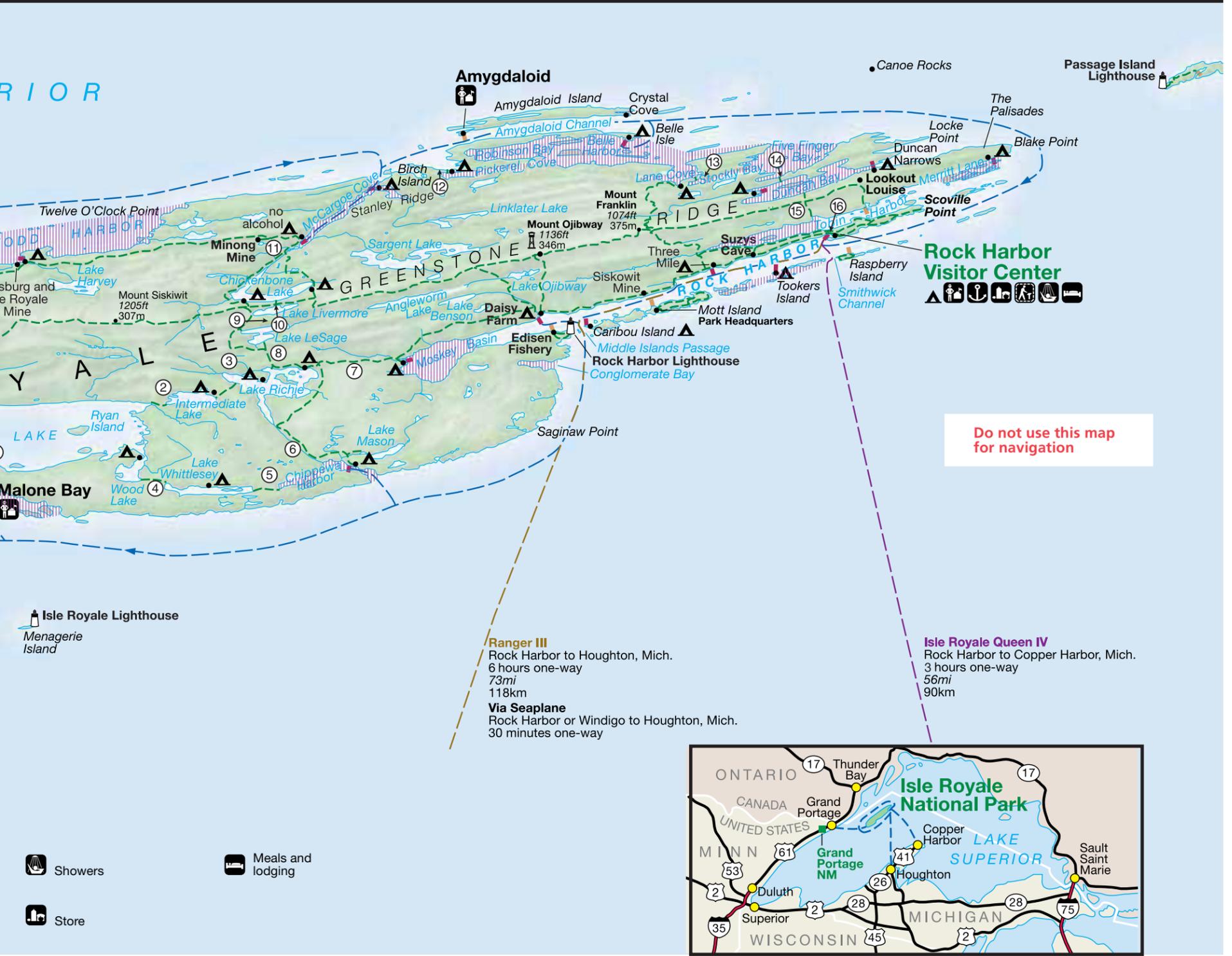
	Consecutive Night's Stay Limit Effective 6/1 - 9/2	Individual Tent Sites	Shelters	Group Tent Sites	Special Information	Approx. Depth at Dock in Feet	On-board Generator Use Permitted*
Beaver Island	3	0	3	0	S	2' - 5'	yes
Belle Isle	5	1	6	0	F	13'	yes
Birch Island	3	1	1	0	S	5'	no
Caribou Island	3	1	2	0	CR	10'	yes
Chickenbone E.	2	3	0	1	S	-	-
Chickenbone W.	2	6	0	3	S	-	-
Chippewa Harbor	3	2	4	1	F	7'	no
Daisy Farm	3	6	16	3	S	9'	no
Desor N.	2	3	0	0	S	-	-
Desor S.	2	7	0	3	S	-	-
Duncan Bay	3	1	2	0	F	6'	no
Duncan Narrows	3	1	2	0	F	6'	no
Feldtmann Lake	2	5	0	2	S	-	-
Grace Island	3	0	2	0	S	2' - 4'	yes
Hatchet Lake	2	5	0	3	S	-	-
Hay Bay	3	1	0	0	S	3' - 7'	yes
Huginnin Cove	3	5	0	0	S	-	-
Intermediate Lake	2	3	0	0	S	-	-
Island Mine	3	4	0	2	F	-	-
Lake Richie	2	4	0	2	S	-	-
Lake Richie/Canoe	2	3	0	0	S	-	-
Lake Whittlesey	2	3	0	0	S	-	-
Lane Cove	3	5	0	0	S	-	-
Little Todd	2	4	0	0	F	-	-
Malone Bay	3	0	5	2	F	3' - 6'	yes
McCargoe Cove	3	3	6	3	CR-A	7'	no
Merritt Lane	3	1	1	0	S	8'	no
Moskey Basin	3	2	6	2	S	8'	no
Pickrel Cove	2	1	0	0	S	-	-
Rock Harbor	1	11	9	3	W-S	-	-
Rock Harbor Marina	Unlimited	-	-	-	F	3' - 12'	yes
Siskiwit Bay	3	4	2	3	CR-A	2' - 6'	no
Three Mile	1	4	8	3	S	9'	no
Todd Harbor	3	5	1	3	CR	2'	no
Tookers Island	3	0	2	0	S	7'	no
Washington Creek	3	5	10	4	S-W	-	-
Windigo Dock	5	-	-	-	S	4' - 20'	yes
Wood Lake	2	3	0	0	S	-	-

*see Isle Royale Boating Guide for details

CANOE PORTAGES

- Distance • Elevation-Change • General Comment
- ① Malone Bay - Siskiwit Lake - .3 miles, 40' Gradual Slope
 - ② Siskiwit Lake - Intermediate Lake - .4 miles, 40' Gradual
 - ③ Intermediate Lake - Lake Richie - .6 miles, 120' Hilly and wooded
 - ④ Wood Lake - Lake Whittlesey - .6 miles, 80' Rolling
 - ⑤ Lake Whittlesey - Chippewa Harbor - .6 miles, 140' Steep grades and rocky
 - ⑥ Chippewa Harbor - Lake Richie - 1.2 miles, 160' Hilly
 - ⑦ Moskey Basin - Lake Richie - 2.0 miles, 120' Gradual but very long
 - ⑧ Lake Richie - Lake LeSage - .6 miles, 100' Steep grades, wet
 - ⑨ Lake LeSage - Lake Livermore - .4 miles, 80' Steep grades, wet
 - ⑩ Lake Livermore - Chickenbone Lake - .2 miles, 40' Steep but short
 - ⑪ Chickenbone Lake - McCargoe Cove - .7 miles, 80' Hilly
 - ⑫ Pickrel Cove - .1 miles, 10' Short and sweet
 - ⑬ Lane Cove - Stockly Bay - .1 mile, 8' Short and sweet
 - ⑭ Five Finger Bay - Duncan Bay - .2 miles, 8' Short and sweet
 - ⑮ Duncan Bay - Tobin Harbor - .8 miles, 175' Extremely steep
 - ⑯ Tobin Harbor - Rock Harbor - .2 miles, 40' Up and over

NOTE: Because of Isle Royale's geology, north-facing slopes are much steeper than south-facing slopes.



Do not use this map for navigation

Ranger III
 Rock Harbor to Houghton, Mich.
 6 hours one-way
 73mi
 118km
Via Seaplane
 Rock Harbor or Windigo to Houghton, Mich.
 30 minutes one-way

Isle Royale Queen IV
 Rock Harbor to Copper Harbor, Mich.
 3 hours one-way
 56mi
 90km

- Showers
- Meals and lodging
- Store

MEDICAL + TIPS

- The island's wilderness and Lake Superior present challenges and potential hazards to the inexperienced or ill-prepared.
- Basic emergency services are available on the island, but contacting rangers for assistance can be difficult. Emergency response and evacuation may take time, requiring you to rely on your own skills and equipment. Most private boaters on Lake Superior have radios and can contact park rangers in an emergency.
- Bring a good first aid kit, a sufficient supply of any needed medications, and clothing appropriate for the time of year.
- Boil or filter all surface water. Drink plenty of water. When dehydrated, you tire more quickly, don't think clearly, and are more prone to fall.
- **Weather and lake conditions can deteriorate quickly and unexpectedly. Hypothermia can occur any time of the year, especially near Lake Superior, where water and air temperatures are cool to cold year-round. Fog and waves can quickly create dangerous conditions for boaters, especially for paddlers.**
- Many people underestimate hiking travel times and overestimate their abilities. Plan shorter, realistic travel days; don't turn your wilderness trek into a forced march.

FISHING REGULATIONS

Species	Seasons	Minimum Size	Daily Possession Limit	Comment
Lake Trout, Rainbow Trout and Salmon Lake Superior	April 16 to October 31	15"	5 in any combination, but no more than 3 of any one species	*1 *2
Coaster Brook Trout Lake Superior	May 1 to Labor Day	N/A	Catch and release only in park's Lake Superior waters.	*1 See Greenstone article page 10 for details
Brook Trout Streams and Hidden Lake	Last Saturday in April to Labor Day	N/A	Catch and release only — No possession allowed	Artificial lures *3 and barbless hooks *4 only on all streams and on Hidden Lake See Greenstone article page 10 for details
Rainbow Trout Streams		7"	5 fish with no more than 3 fish over 15"	
Yellow Perch Lake Superior and Inland Lakes	April 16 to October 31	No minimum size	50	Recommend daily limit of 10
Northern Pike Lake Superior and Inland Lakes		24"	5 in any combination, but no more than 2 Northern Pike	Artificial lures only on interior lakes and streams**
Walleye Lake Superior and Inland Lakes	May 15 to October 31	15"		

For additional fish species, seasons, and creel limits, please review the Michigan Fishing Guide

*1 Park boundaries extend 4.5 miles out into Lake Superior from the outermost land areas of the park.
 *2 For additional trout/salmon fishing information, review the Michigan Fishing Guide.
 *3 Artificial lure means any lure or fly manufactured in imitation of, or as a substitute for natural bait. It is unlawful to use or possess live bait, dead or preserved bait, organic or processed food, or scented material on interior lakes or streams.
 *4 Only barbless hooks may be used for fishing the park's rivers, creeks, and streams, and Hidden Lake. Barbed hooks are allowed on all other inland lakes in the park.

Wilderness Use

Leave What You Find

Enjoy your discoveries and take them home via photographs, drawings, and memories. Natural objects of beauty or interest such as moose antlers, plants, driftwood, cultural or archeological resources, greenstones, agates, datolite and other minerals, including those found in Lake Superior must be left where they are so others can experience the same sense of discovery. Removing, possessing, or disturbing park resources is prohibited. This may seem like a harmless act, but the cumulative effect of many people doing the same can be quite damaging to park resources. Picking small quantities of berries and wild edibles for personal consumption is permitted.

Insects

Expect mosquitoes, black flies, gnats, and other insects to peak in June or July. During wet summers, mosquito populations can continue well into August. Bring insect repellent, netting, or other skin barriers. Refer to page 5, under “Virus Watch” for more details. Make sure your tent’s mosquito netting is in good repair and the zippers work. Dry summers will produce an abundance of yellow jackets. Bring an epinephrine kit if you or a member of your party is allergic to bee stings. For others, over-the-counter antihistamines may help counter minor swelling and itching.

Minimize Use of Fires

Campfires are permitted at only a handful of campgrounds. A backpacking stove is a must; these stoves are lightweight, dependable, easier to use, and less damaging to the park than wood fires. Twig-burning backpacking stoves are permitted. Where campfires are allowed, a metal fire ring is provided; never build your own ring. Gather only dead and down wood away from the camp area. Use small diameter wood no larger than an adult’s wrist, as this will burn completely and will eliminate the need to pack a hatchet or saw. Collect wood from a wide area and away from the immediate vicinity of camp. This keeps the camp area from becoming depleted of wood and potential nutrients. Do not break branches or strip bark from standing trees, live or dead. Resist the temptation to gather driftwood or wood from beaver dams or lodges. Do not import firewood; insects and pathogens from an infected wood source could devastate Isle Royale’s forests. Do not burn trash in any form. The fire should be kept small. Once finished, make sure the flames and coals are dead out and cold to the touch; double check before going to bed or leaving camp.

Canoeing/Kayaking

Lake Superior is well known for its cold temperatures, fog, and sudden squalls that can generate waves that could easily swamp a canoe. This along with scarce outer shore landing sites adds to the potential danger. Small, open vessels are discouraged from entering these cold treacherous waters and are encouraged to use the numerous miles of waterways that the inland lakes provide.

Canoeists and kayakers should be familiar with weather patterns and consult the Marine Forecast at ranger stations before embarking. Be prepared to adjust your schedule to the weather. A portable marine radio is recommended.

Portages – Canoe routes and portages are on the northeast half of the Island. Portages are marked with a letter “P” on a post.

PFD – Every canoeist and kayaker must have a U.S. Coast Guard approved personal flotation device. Wear it; your life may depend on it.

Boat Rental – Canoe, kayak, and motorboat rentals are available at Windigo and Rock Harbor. For more information contact the Rock Harbor Lodge. (refer to page 2).

Loons

Isle Royale National Park is the summer home for over 100 nesting pairs of Common Loons, supporting the only known population which still breeds on Great Lakes waters. These birds nest on land very close to the shoreline, making them highly susceptible to human disturbance. An adult loon who tremolos (the laughing call) is sending a message that you are too close. From mid-May through July 15 (loon nesting season) visitors are to stay at least 150 feet away from islands. Additional areas may be closed due to loon nesting, please check at the visitor centers for updated information.

Non-Native Species

Isle Royale waters, like all Lake Superior waters, face a growing threat from the invasion of non-native species. Once species like sea lamprey, zebra mussels, or spiny water fleas enter an area, they out-compete native species, causing large-scale changes in the ecosystem.

Two invasive species, the sea lamprey and the spiny water flea, have already established a presence in Isle Royale waters. The spiny water flea presently is found only in Lake Superior. The park is concerned it may enter the inland lakes. Once established, its spines harm predator fish and they disrupt the zooplankton population, the basic food source for many fish species.

Zebra mussels have not established a presence in Isle Royale. Their potential to cause catastrophic problems cannot be overstated. If zebra mussels were to enter the inland lakes it is estimated they would cover nearly every habitable surface on an inland lake floor within two years.

What can you do to stop the spread?

Boaters

Drain live wells and bilge on land - remove transom water, lake water, and unwanted bait from your boat - wash equipment with warm water and use a high-pressure sprayer or wait five days before launching for Isle Royale.

Backpackers

Prior to departure, clean your camping gear, clothing, and boots.

Canoeists and Kayakers

Remove weeds, algae, and other plant and animal materials from your boat - dry vessels a day before island departure - clean and dry watercraft when moving from Lake Superior waters to inland lakes.

Anglers

Clean fishing gear before island departure - When moving from Lake Superior to inland lakes, clean gear and change line spools.

Divers

Wash all dive gear in warm chlorinated tap water - Disinfect your wetsuit with a special-purpose shampoo - dry all dive gear and wetsuit for seven days before island departure.

For additional information on invasive non-native species and the preventative measures that you can take - request the park’s brochure “Aquatic Invaders: Stop the Spread & Spread the Word.” Also available online at www.irnha.org.

Wheeled Vehicles/Devices

Wheeled vehicles (except for wheelchairs) or other mechanical forms of transportation are not allowed on trails. This includes bicycles and portaging devices.

Weapons, Traps, & Nets

The use or possession of weapons, traps, and nets is prohibited. Weapons include any implements designed to discharge a projectile or missile in the air or water. Fireworks are prohibited.

Pets

Dogs, cats, and other pets are not allowed. This includes pets on boats within the park boundaries, which extend 4 1/2 miles into Lake Superior from the outermost land areas of the park. Visitors bringing pets to Isle Royale will be required to leave immediately. Pets disturb wildlife and can transmit diseases, particularly to wolves. Special conditions apply to guide dogs. Please contact the park for further information.

Boating

All boaters staying overnight at anchor, at docks, or in campgrounds must first obtain a camping permit. Lake Superior offers challenging and often dangerous weather in the form of dense fog, high winds, waves, and thunderstorms. Combine this with rocky reefs, limited safe harbors, and Isle Royale’s remoteness, and it pays for you, your crew, and your boat to be shipshape. For additional information on boating and trip planning please request the park’s Isle Royale Boating Guide. In addition to Houghton, Rock Harbor, and Windigo, boaters may obtain Isle Royale camping permits and pay user fees at the U. S. Forest Service Ranger Station in Grand Marais, Minnesota.

Restricted Water Activities – Water skiing and personal watercraft including vessels commonly referred to as jet skis, waverunners, sea-doo’s, wet bikes, or surf jets are prohibited. Since all of the park’s inland lakes are located within designated Wilderness, they can only be explored by paddling. Vessels with motors (even if not in use) are prohibited on inland lakes and streams.

Portable Generators, Electronic and Motorized Devices – Operation of electronic and motorized devices such as stereos, televisions, radios tuned to commercial stations and portable generators is not permitted except in developed and open-water motorized zones. Developed areas include the Windigo and Rock Harbor developed areas, and the Mott Island Headquarters area. Open water motorized zones include Lake Superior waters outside of designated “quiet/no wake waters”. **On-Board Generators** – The operation or use of permanently installed (by the boat manufacturer) on-board vessel generators is allowed between 6:00 a.m. and 10:00 p.m. in developed zones and at the following docks: Beaver Island, Belle Isle, Caribou Island, Grace Island, Hay Bay, Malone Bay, Rock Harbor, and Windigo. On-board generators may not be operated or used at the following public docks: Birch Island, Chippewa Harbor, Daisy Farm, Duncan Bay, Duncan Narrows, McCargoe Cove, Merritt Lane, Moskey Basin, Siskiwit Bay, Three Mile, Todd Harbor, and Tookers Island. Vessels at anchor within Quiet/No Wake Zones may operate on-board generators between 6:00 a.m. and 10:00 p.m., except when anchored within 1/4-mile of a designated park campground.

Quiet/No Wake Zones – These zones promote a quality visitor experience by providing relatively tranquil, natural marine surroundings. Within the zone, vessels must not exceed 5 mph or create a wake. In flat, calm water, this means not making a wake or traveling no faster than 5 mph. In a one foot sea, a boat could travel up to a speed that would create a one foot wake. Quiet/No Wake Zones include specified areas near Todd Harbor, Johns Island, Barnum/Washington Islands, Hay Bay, Wright Island, Malone Bay, Chippewa Harbor, Conglomerate Bay, Moskey Basin, Lorelei Lane, Tobin Harbor, Merritt Lane, Passage Island, Duncan Bay, Five Finger Bay, Lane Cove, Robinson Bay, Pickerel Cove, Belle Harbor, Crystal Cove, and McCargoe Cove. Consult boater’s maps and brochures available at Park Visitor Centers and on-board the *Ranger III* for specific information.

Alcohol Ban – Open containers of alcohol are prohibited in campgrounds, on docks, and onboard docked vessels at both Siskiwit Bay and McCargoe Cove.

Pollution Prevention – Head pump-out service is available at Windigo and Rock Harbor when the concession operation is open. Federal regulations prohibit the discharge of any waste, including gray water, into park waters. Vessels carrying spare fuel in portable containers must use legally approved containers. Fuel may not be stored on docks.

Customs – All vessels arriving from Canada (U.S. or Canadian) must clear U.S. customs at Windigo or Rock Harbor Ranger Stations.

Divers – Please refer to your dive permit regulations concerning compressor use.

Fuel – Gasoline is sold from Mid-June to early September at Windigo; gasoline and diesel fuel are sold from Mid-May to Mid-September at Rock Harbor. Diesel fuel is not available at Windigo. Early and late season service or fuel may be obtained at Windigo and Mott Island if personnel are available.

Greg Blust

Houghton District Interpreter

Woodland Caribou and Lynx at Isle Royale

Isle Royale is known internationally for its wolves and moose. But moose and wolves form only the most recent pairing in the large mammalian predator-prey relationships that have occurred on Isle Royale. Moose probably arrived between 1890 and 1905, with wolves colonizing the park in the late 1940s. Previously, the largest mammal on Isle Royale was the woodland caribou and its main predator was the lynx.



Woodland Caribou

Today, small populations of caribou exist as far south as some of the Canadian islands in Lake Superior. Isle Royale's caribou population may once have numbered as many as 400. Caribou on Isle Royale probably fed on lichens, mosses and leafy vegetation such as thimbleberry and Canada dogwood, instead of the woody species preferred by moose.

Lynx once ranged as far south as Michigan's Upper Peninsula. Unlike wolves, lynx establish individual territories and are solitary hunters, except for example, when a female is teaching her offspring to stalk snowshoe hare, a favorite food. Lynx numbers appear to follow the highs and lows of snowshoe hare population cycles and the Isle Royale population likely exceeded 50 individuals during times of plentiful prey. Their predation on caribou would have focused on young calves, vulnerable due to their small size and lack of parental protection. (Caribou use passive survival strategies such as hiding calves, instead of actively defending their young against attack, as moose do against wolves).

What befell these two established species at Isle Royale? Caribou

were certainly killed by their predators, lynx and coyote; but were also a ready food source for mining and fishing communities and were likely over-hunted. In addition, large portions of the island were burned in the 1800s to uncover possible mineral deposits, changing the forest composition from mature stands (preferred by caribou), to early successional stages. The moose thrived in this open habitat and possibly provided some competition for food. Finally, the Isle Royale population may have depended on occasional migration of new animals. Mainland caribou numbers also plummeted at this time, reducing the opportunity to reinvigorate the island population. After 1929, no caribou were seen on Isle Royale.

What became of the lynx? Trapping by island residents and a series of game wardens had a significant impact. Isle Royale's lynx population may have hit numbers too low to be sustainable as a result of over-trapping during a naturally low population cycle. Lynx virtually disappeared from the park by the late 1930s, with occasional isolated sightings in the following decades.

It is unlikely that a significant population of either caribou or lynx would naturally reestablish itself at the park. For now moose and wolves remain the dominant large mammals at Isle Royale. However, long term predictions are hard to make, and perhaps the cycle will someday shift again in favor of lynx and caribou.

Jean Battle
Chief, Natural Resource Management Division



Lynx

(Photo by R&C Photography, Ron Taylor)

The Unique Opportunities of Wilderness Research

Conducting research on the wolves and moose of Isle Royale, like any research conducted in any wilderness, presents complex challenges. Obvious challenges arise from remoteness and limited transportation. More important challenges arise from a shared vision about how research should be conducted in a wilderness landscape (specifically, federally-designated Wilderness areas). This vision is motivated by a deep sense of caring and respect for wilderness.

Organisms being studied should be handled in the most non-invasive manner possible. Isle Royale research has relied on live-capturing and handling wolves to collect genetic samples and radio-collar animals. Insight derived from these methods has been and

continues to be tremendously important. But researchers are motivated to utilize less invasive techniques; this study is at the forefront of developing ways to collect genetic samples through feces, which can be collected from trails and for radio-collaring wolves without handling them.

The overall impact of the research should be as minimal as possible. Experimental manipulation is generally not permitted within Wilderness areas. This represents a great challenge because many scientists and funding agencies believe that the best and most informative science requires experimental manipulation. This perspective arises from the attitude that the purpose of science is to predict and control. But sci-

ence has another purpose, to generate a sense of wonder about nature and to interpret connections between its various parts. Wilderness research demonstrates the value of this view of science. Through careful observation, without experimental manipulation, Isle Royale research has created a tremendous sense of wonderment about wolves and moose for many people.

No research is completely non-invasive and without any impact. Consequently, the quality of wilderness research is also judged by asking questions: Is the impact and invasiveness of the research worth the knowledge gained? Can the same research be done elsewhere? Judging research by questions like these reflects deep care and

respect for wilderness. Such judgment also elevates the overall quality of insights gained from wilderness research.

While wilderness presents a challenge to research, wilderness also presents a special opportunity for research to be conducted with low invasiveness, low impact, and high quality. Because of its vision, wilderness research contributes to an enhanced overall relationship between human society and the rest of nature. Consider these ideas and judge them for yourself the next time you learn something from research conducted in a federally-designated Wilderness.

Dr. John Vucetich
Research Assistant Professor, Michigan Technological University



Rolf Peterson at Winter Study



Candy Peterson recording bones

Fishing at Isle Royale

A Michigan fishing license is required for fishing in Lake Superior, including narrow bays and harbors, and when transporting fish from the island to the mainland. If you are under 17 years of age, you may fish without a license. Licenses are not required to fish on the inland waters of Isle Royale; possession limits are the same as those set by the State of Michigan. Also see additional information on this page regarding

special 2005 brook trout regulations. Anglers should refer to the Michigan fishing regulations for possession limits and detailed license requirements for Lake Superior (also see the chart on page 7 for a brief guide to regulations). Only 24-hour licenses are available on the island and only when concession services are open. You may purchase a Michigan fishing license online at www.michigan.gov/dnr.

Fishery Conservation

With its multitude of islands and bays on Lake Superior, as well as several lakes and streams on the interior of the island, Isle Royale provides many opportunities for outstanding recreational fishing for wild, native fish. How can you help to conserve and minimize damage to the Isle Royale fishery?

- Catch only what you plan to keep or eat. Catch and release, while encouraged, can be damaging and very stressful on fish.
- Know the minimum size of fish so that if they are too small they can be quickly released.
- Release larger fish and keep medium size fish to insure future productivity. Larger, more mature fish produce more offspring than smaller fish.
- Instead of killing trophy fish, consider a modern graphite mount produced from a picture of the fish.
- Return fish to the water as soon as possible. While unhooking them, keep fish in the water as much as possible.
- If fishing from shore, try to remove hooks while the fish are in the water; don't drag them up on the bank.
- Try not to handle fish, but if you need to, do so with a wet hand. Release handled fish gently by allowing them to swim from your hands rather than throwing them back into the water.
- Do not squeeze the fish or place fingers in the gills, since a torn gill can cause the fish to bleed to death.
- Remove the hook gently. Pliers work best. Cut the line near the hook if a fish is deeply hooked. A steel hook will decompose in time.
- Use only artificial lures (required in inland waters) as exotic species can accidentally be introduced by using live bait and live bait are often swallowed deeper resulting in more damage to fish.
- Use single, barbless hooks or bend down the barbs on the hooks. Using larger spoons when fishing for larger fish such as Northern Pike will help prevent catching undersize fish.
- If moving from Lake Superior to an inland lake, change to a different spool of line. This will help prevent spread of the spiny water-flea, an exotic aquatic invertebrate that competes with juvenile fish for food. It has been found in Lake Superior waters of the park but is not yet documented in inland waters. Spiny water fleas can adhere to fishing line and be easily spread to other bodies of water.

Disposal of Fish Remains

At Rock Harbor, please use the fish cleaning station. At other locations, the preferred method is to dump remains chopped up into pieces 4" or less in deep (50' or deeper) water. This reduces the unsightly remains and odors around campgrounds and the unnaturally large gathering of gulls at these sites. At inland lakes where water may be much shallower than 50', clean fish away from campsites and place remains on shore at least 100' away from the campground, between the waterline and the vegetation line. Please do not clean fish directly on docks. Do not throw remains in shallow water near shore or throw remains to gulls.

Transporting Fish to the Mainland

You are allowed only one day's catch in your possession. While the license holder remains on the Island, Michigan Department of Natural Resources (DNR) allows those with DNR permits to ship legally-taken fish on the *Ranger III*, *Isle Royale Queen IV*, *Wenonah*, *Voyageur II* and the seaplane. This one-time per year permit covers up to a single day's catch limit. Fish must be claimed when the ferry service arrives at their destination. Permits may be obtained by writing: Department of Natural Resources, 427 U.S. 41 North, Baraga, Michigan 49908-9627 or calling (906) 353-6651.

Fishermen returning on the *Ranger III* must check in their fish with the ship's purser. Fish cannot be transported in coolers on private boats onboard the *Ranger III*.

Fish Consumption Advisory

Contaminants discovered in the Park ecosystem remind us that although Isle Royale is remote, it is part of a global system. Ongoing research in six inland lakes (Sargent, Siskiwit, Eva, Shesheeb, Wagejo, and Anglemorm) shows fish with mercury levels exceeding the State of Michigan fish consumption advisories.

For information on fish consumption advisories check with park staff or visit the Michigan Department of Community Health website at: <http://www.michigan.gov/mdch>

Jay Glase, Fishery Biologist, and Larry Kangas, Chief, Law Enforcement Division

Why New Brook Trout Regulations at Isle Royale?

Due to incredible popularity and historic over-harvest, coaster brook trout numbers at Isle Royale have been declining for several years. Recent surveys indicate populations are dangerously low and may be at risk of disappearing unless they have more protection.

- The Tobin Harbor population of adult brook trout may be **less than 150 fish**.
- The Siskiwit Bay population, despite 5 years of regular stocking, is probably even lower than at Tobin Harbor.

Due to these low numbers, NPS and the Michigan DNR are implementing protective regulations at Isle Royale beginning this year (2005) in order to help with the recovery of this once common fish.

Lake Superior Waters (extend 4.5 miles out from the island)

Catch and release only for all brook trout, including all bays and harbors.

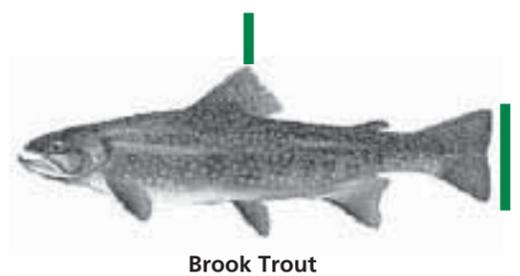
Inland Waters

Catch and release only in all streams and Hidden Lake.

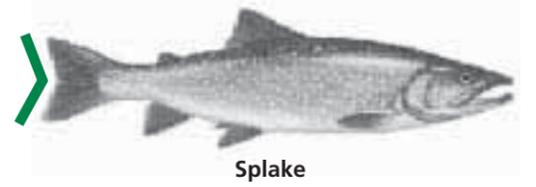
Artificial lures and barbless hooks only in all streams and Hidden Lake.

You can help

by knowing the regulations and how to identify brook trout. The nearly square tail and wormlike pattern on the back and dorsal (top) fin of a brook trout are usually a good way to distinguish it from lake trout and splake. If you're uncertain about the species you catch, return it to the water.



Brook Trout



Splake



Lake Trout

(Images from LandBigFish.com)

Rock Harbor Lodge and Windigo Store

Lodge Rooms

Sixty rooms are available; each accommodates four and offers private bath.

Housekeeping Rooms

Twenty duplex cottages accommodate six and are furnished with utensils, dishware, private bath, double bed and two bunk beds.

Gift Shop and Dockside Store

Gift Shop offers handcrafted gifts, apparel, photo supplies, postcards, souvenirs, daily fishing licenses, and tackle. The store offers groceries, freeze dried foods, fishing tackle, stove fuel, camping, hiking, and boating accessories, showers, laundry facilities, and sundries.

Lodge Dining Room & Greenstone Grill

Hearty meals, including fresh Lake Trout. Visitors welcome for breakfast, lunch, and dinner. Greenstone Grill open daily.

Marina and Water Taxi

Offers 450 feet of dock space in Rock Harbor, accommodating boats up to 65 feet. Electrical, fresh water hook-up, sewage pump-out, gasoline, and diesel fuel, motorboat, canoe, and kayak rental available. Water taxi service drops off or picks-up visitors, canoes, or kayaks at many island docks.



Fishing Charters and Sightseeing

Charters are fully equipped. For details on sightseeing trips refer to page 4.

Windigo Store and Marina

Offers groceries, cold sandwiches, camping supplies, stove fuel, daily fishing licenses and tackle, gifts and photo supplies. The marina offers gasoline, pump-out service, and motorboat, canoe and kayak rental. Shower and laundry facilities available.

The cost for utilities on Isle Royale is much higher than on the mainland. A utility surcharge of 24% will be added to the cost of all goods and services.

Contact Information – page 2
Rate Information — page 11

Transportation Services

FROM GRAND PORTAGE, MINNESOTA



VOYAGEUR II

Grand Portage to Windigo - 2 hours one-way, Windigo to Rock Harbor - 5 hours one-way, concession operated, 60 ft. vessel

SCHEDULE (Central Daylight Time)

■ Grand Portage to Rock Harbor via Windigo/McCargoe Cove/Belle Isle

5/7 Sat 8:00 a.m.
5/11 thru 9/17 M, W & Sat 8:00 a.m.
9/21 thru 10/22 W & Sat 8:00 a.m.

■ Rock Harbor to Grand Portage via Daisy Farm/Chippewa Harbor/Malone Bay/Windigo

5/8 Sun. 8:00 a.m.
(9:00 a.m. EDT)
5/12 thru 9/18 Tue, Th, & Sun 8:00 a.m.
(9:00 a.m. EDT)

9/22 thru 10/23 Th & Sun 8:00 a.m.
(9:00 a.m. EDT)

FARES ONE-WAY

Grand Portage to Windigo \$53.00

Grand Portage to McCargoe Cove/Belle Isle/Rock Harbor/Daisy Farm/Chippewa Harbor/Malone Bay 62.00

Windigo to McCargoe Cove 35.00

Windigo to Rock Harbor 47.00

McCargoe Cove/Belle Isle to Rock Harbor 35.00

Rock Harbor to Daisy Farm/Chippewa Harbor/Malone Bay or in between 35.00

Rock Harbor/Daisy Farm to Windigo 47.00

Chippewa Harbor/Malone Bay to Windigo 35.00

Children (4 thru 11) 34.00

Children (3 and under) FREE

Regular Canoes, Single Kayaks 28.00

Large Single, Tandem Kayaks 32.00

Large Tandem, Triple Kayaks Call for rate

Outboard Motors (empty of fuel) 16.00 - 32.00

Fuel Tanks for Outboard Motors (empty of fuel) 5.00

Air Tanks (each) 9.00

40 lbs. Gear per passenger FREE

Additional freight after 40 lbs. \$28.00/100 lb.

RESERVATIONS

Full payment required for confirmed reservation. Refund, minus 15% if cancellation is made three full days prior to departure time. National Park User Fee payable at time of ticket purchase. Major credit cards accepted.

MISCELLANEOUS

Parking fee • Hot coffee available • Freight shipments must be arranged in advance

• Fishing poles must be in protective cases • Hard gear must be in securely closed packs.

FOR INFORMATION OR RESERVATIONS CONTACT

Grand Portage - Isle Royale Transportation Line, Inc.

1507 N. First Street, Superior, WI 54880

Phone: (715) 392-2100

Fax: (715) 392-5586

E-mail: Stuart@Grand-Isle-Royale.com

Website: www.GRAND-ISLE-ROYALE.com

FROM GRAND PORTAGE, MINNESOTA



WENONAH

3 hours one-way, concession operated, 63 ft. vessel

SCHEDULE (Central Daylight Time)

June 18 thru September 18

■ Grand Portage to Windigo daily 9:30 a.m.

■ Windigo to Grand Portage daily 3:00 p.m. (4:00 p.m. EDT)

5/16 thru 6/3 M & F

6/4 thru 6/30 M, T, Th, F, Sat

7/1 thru 7/31 M, T, Th, F, Sat, Sun

8/1 thru 9/4 Every Day

9/5 thru 9/30 M & F

FARES ONE-WAY

Adults \$38.00

Children (4 thru 11 years) 20.00

Children (3 and under) FREE

Regular Canoes/Single Kayaks 28.00

Large Single, Tandem Kayaks 32.00

Large Tandem, Triple Kayaks Call for rate

Outboard Motors (empty of fuel) 16.00 - 32.00

Fuel Tanks for Outboard Motors (empty of fuel) 5.00

Air Tanks (each) 9.00

40 lbs. Gear per passenger FREE

Additional freight after 40 lbs. \$28.00/100 lb.

SAME DAY ROUND-TRIP

Adults \$42.00

Children (4 thru 11 years) 20.00

Children (3 and under) FREE

RESERVATIONS

Full payment required for confirmed reservation. Refund, minus 15% if cancellation is made three full days prior to departure time. National Park User Fee payable at time of ticket purchase. Major credit cards accepted.

MISCELLANEOUS

Parking fee • Hot coffee available • Limited snacks • Sightseeing en route • Fishing poles must be in protective cases • Hard gear must be in securely closed packs.

FOR INFORMATION OR RESERVATIONS CONTACT

Grand Portage-Isle Royale Transportation Line, Inc.

1507 N. First Street, Superior, WI 54880

Phone: (715) 392-2100

Fax: (715) 392-5586

E-mail: Stuart@Grand-Isle-Royale.com

Website: www.GRAND-ISLE-ROYALE.com

FROM COPPER HARBOR, MICHIGAN



ISLE ROYALE QUEEN IV

3 hours one-way, concession operated, 100 ft., 100 passenger vessel

SCHEDULE (Eastern Daylight Time)

■ Copper Harbor 8:00 a.m.

■ Rock Harbor 3:00 p.m.

5/16 thru 6/3 M & F

6/4 thru 6/30 M, T, Th, F, Sat

7/1 thru 7/31 M, T, Th, F, Sat, Sun

8/1 thru 9/4 Every Day

9/5 thru 9/30 M & F

FARES ONE-WAY

Adults (7/15 thru 8/15) \$58.00

Children (1 thru 11) (7/15 thru 8/15) 29.00

Adults \$50.00

Children (1 thru 11 years) 25.00

Infants (under 1 year) FREE

Canoes, Kayaks, Folding Boats 25.00

Tandem Kayaks 35.00

Motors (under 5 hp) 5.00

Motors (5 hp and over) 15.00

Air Tanks (each) 5.00

100 lbs. gear per person FREE

101 - 199 lbs. gear per person 15.00

200 - 299 lbs. gear per person 20.00

RESERVATIONS

A full-fare deposit is required for each reservation. All canoes and kayaks require advance reservations. Most credit cards accepted.

CANCELLATIONS

There is no refund if canceled less than 3 days before sailing. Cancellations received with more than 3 days notice will be sent an 85% refund. If canceling a group of 10 or more, two weeks notice is required.

MISCELLANEOUS

Free parking • Limited snacks • Freight, canoes, etc. carried for our passengers only • Due to weight restrictions, luggage limited to 75 lbs. per passenger • Phone and letter reservations only • Email and faxes are for information requests only • The \$4 per day National Park User Fee is collected on the Queen IV as she sails to Isle Royale and is payable in cash, check, or money order only. Motor Boaters be advised that the Queen IV is presently not equipped to carry motor boats. Boaters should contact the Ranger III for passage.

FOR INFORMATION OR RESERVATIONS CONTACT

The Isle Royale Line, Inc.

P.O. Box 24, Copper Harbor, MI 49918

Phone: (906) 289-4437

Fax: (906) 289-4952

E-mail: Captaink@pasty.net

Website: www.isleroyale.com

FROM HOUGHTON, MICHIGAN



RANGER III

6 hours one-way, National Park Service operated, 165 ft., 128 passenger vessel

SCHEDULE (Eastern Daylight Time)

May 31 thru September 10

■ Houghton to Rock Harbor Tues. & Fri. 9:00 a.m.

■ Rock Harbor to Houghton Wed. & Sat. 9:00 a.m.

FARES ONE-WAY

Adults \$52.00

Children (1 thru 11 years) 24.00

Infants (under 1 year) FREE

Boat (less than 18') 80.00

Boat (18' to 20'00") 130.00

Disabled Boat (20'01" to 26'00") 350.00

Canoes/Kayaks 21.00

Canoes/Kayaks over 20'00" or over 90 lbs. 55.00

Outboard Motor 15.00

100 lbs. gear per passenger FREE

Additional freight after 100 lbs. \$8.40/100wt.

GROUP RATES ONE-WAY

(A party of seven or more)

Adults \$45.00

Children (1 thru 11 years) \$21.00

RESERVATIONS

Full payment required for each reservation. Major credit cards accepted. Reservations accepted on or after January 2.

CANCELLATIONS

Refunds, minus a 15% processing fee, if cancellation is received 14 days prior to sailing and tickets are returned. No refund within 14 days of sailing.

AMENITIES

Largest of the ships • Crew of 9 • Two decks for passenger use • Three staterooms available

• Free parking • Ranger III Grill • Interpretive Programs • Backcountry Permits issued onboard • Four lounges • Handicap Accessible Bathroom • National Park User Fee collected on morning of departure.

FOR INFORMATION OR RESERVATIONS CONTACT

Isle Royale National Park

800 East Lakeshore Drive

Houghton, MI 49931-1869

Phone: (906) 482-0984

Fax: (906) 482-8753

E-mail: ISRO_Ranger3Reserve@nps.gov

Website: www.nps.gov/isro

FROM HOUGHTON, MICHIGAN



SEAPLANE

30 minutes one-way, concession operated

Air service to Isle Royale operates from the Houghton County Airport from May 18 through September 17. Flights daily except Sunday and some Wednesdays, weather permitting. The seaplane accommodates up to four persons. Baggage is limited to 50 pounds per person. The plane cannot carry stove fuel. Selected fuels are available upon arrival at the Park.

FARES

\$240.00 round-trip per person

\$170.00 one-way per person

FOR INFORMATION OR RESERVATIONS CONTACT

Royale Air Service, Inc.

P.O. Box 15184

Duluth, MN 55815

Phone: (218) 721-0405

(877) 359-4753

Fax: (218) 721-0409

(877) 359-4754

E-mail: Royaleairservice@aol.com

Website: www.royaleairservice.com

WATER TRANSPORTATION ON THE ISLAND

VOYAGEUR II

During its clockwise circumnavigation of the Island, the *Voyageur II* provides drop-off and pick-up services at several areas. Please refer to their schedule and rates.

ROCK HARBOR LODGE WATER TAXI

Provides drop-off and pick-up services between Rock Harbor and McCargoe Cove on the north shore and Rock Harbor and Malone Bay on the south shore. For contact information refer to page 2.

GENERAL INFORMATION

- No alcohol consumption on passenger ferries.
- Pets and wheeled devices are not allowed.
- Wheelchairs are allowed.
- Stove fuel can be carried in approved containers on ferries, but not on the seaplane.
- Lake Superior weather is cool throughout the year; for comfort bring a warm jacket.

Isle Royale's Recreation Fee Demonstration Program

Fee Categories	Rate and Explanation
Daily User Fee	\$4.00 per person per day. Children 11 and under are exempt from the fee.
(Optional): Individual Season Pass	\$50.00 This pass is valid from April 16 through October 31 of the year indicated. The pass covers the User Fee for the person whose signature appears on the pass.
(Optional): Season Boat Rider Pass	\$150.00 This pass is valid from April 16 through October 31 of the year indicated. The pass covers the User Fee for all persons onboard, when affixed to the private boat. When camping, the pass is only valid for passengers included in and following the itinerary of the vessel.

Rock Harbor Lodge

American Plan Rooms (includes room and all meals)	
July 15 thru Aug 15	June 7 thru July 14 and Aug. 16 thru Sept. 9
2 Adults - \$319.00 per night	2 Adults - \$276.00 per night
addl Adult add \$107.00 per night	addl Adult add \$96.00 per night
addl Child add \$51.00 per night	addl Child add \$48.00 per night
European Plan Rooms (meals not included in room rates)	
July 15 thru Aug 15	June 7 thru July 14 and Aug. 16 thru Sept. 9
2 Adults - \$212.00 per night	2 Adults - 170.00 per night
addl Adult add \$50.00 per night	addl Adult add \$40.00 per night
addl Child add \$16.00 per night	addl Child add \$11.00 per night
Housekeeping Cottages (meals not included in rates)	
July 15 thru Aug 15	May 27 thru July 14 and Aug. 16 thru Sept. 9
\$206.00 per night, dbl occupancy	\$165.00 per night dbl, occupancy
addl person add \$43.00 per night	addl person add \$35.00 per night
Dates of Operation	
Windigo Store	6/7 thru 9/11
Lodge Dining Room and Greenstone Grill	6/7 thru 9/9
Water Taxi and Marine Services, Boat, Canoe, and Kayak Rental	5/27 thru 9/9
Children - 11 years old and under	
2005 rates include sales tax and a 24% utility surcharge	
Rates are subject to change with the prior approval of the National Park Service.	

