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Windigo Ranger Station
Isle Royale National Park
Grand Portage, Minnesota
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Editor
Nature Magazine
American Nature Association
1214 16th Street, N. W.
Washington, D. C.

Dear Sir:

Upon the recommendation of the Director's Office of the National Park Service, I am submitting the attached manuscript, "Wolf on Isle Royale, Observations by a Ranger", to you for consideration for publication in Nature Magazine.

Attached also are three 8 X 10 enlargements made from 35 mm Kodachromes. I am sorry not to have available at this writing more suitable pictorial material. The park files contain many excellent scenic views of Isle Royale, and I personally have a good collection of 35 mm Kodachromes any of which would be available for your use to illustrate this article.

Very truly yours,

D. Robert Hakala
Park Ranger
Isle Royale National Park

WOLF ON ISLE ROYALE:
Observations by a Ranger

The condition of the ice in Siskiwit Bay was quite important to Jim and I. We had arrived at Isle Royale, that insular national park in Lake Superior, only a few days previously, on February 17, 1952, and had been able to land on the ice in front of camp. It did not appear now that the ice was going to hold out long. High seas pouring in from the east alternating with winds from the west was causing the ice to break up along the buffeted margin and then flow out into the open lake. Conditions in the woods were little better. In the soft deep snow we sank a foot, even with snowshoes. We had many miles to cover in the month we would remain on Isle Royale for a moose browse and wildlife study. Safe ice along shore would speed our travel to Hay Bay and Crow Point, and, we hoped, Rock Harbor 35 miles away. The elements weren't with us though, for already all the ice was gone out along the north shore of Siskiwit Bay. Piece by piece the remainder of the ice separated and slowly drifted out into the gently undulating lake.

The process of lake reclaiming the ice so absorbed our interest, as we wandered near the margin, that we failed to note the appearance on the ice between ourselves and camp of four gaunt wolves. Even when we turned to return to shore nearly a mile away we might not have quickly picked them out from the shadows of backlighted uptilted ice cakes, piled up during storms of earlier winter, except that the wolves were moving at a lope across our trail. "Four of them!", we exclaimed almost simultaneously. With our binoculars we discerned the big lobe up forward followed by the female and finally two yearling pups - all strung out, 50 to 100 feet apart. Their only interest in us was to get away as fast and directly as possible.

But wait! One of the pups has slowed to a trot, now a walk - and darned if he's not sitting down for a fiver. Here we observed a bit of family drama. The mother wolf immediately sensed the laggard. She stopped, turned back, and paused near her tired offspring. Then the two headed again toward shore - on a shortcut, followed by the other pup and the father wolf who had also returned, keeping the family together. We lost sight of them when they reached the wooded shore, and were not to see any of them again during our month's sojourn on the island.

Wolf on Isle Royale! During the past several years the subject had been chewed around many a proverbial pot-bellied stove by park rangers, wilderness enthusiasts, and sporting club conservationists; but without a dropping of evidence that they might be present.

Certainly the adult wolves of the pack we observed on the ice were in the park last winter, producing their litter in the spring. Possibly they arrived on the island during the winter of 1950-51 crossing from the north shore on the ice which is known to have extended across the 15 mile channel that winter. Reaching back further, I know that a wolf or wolves were on Isle Royale at least a year previous to that. Let's resume the record of Isle Royale wolves with the initial observation, in the fall of 1950.

After a light November snowfall my wife Jean and I were taking a hike to the Greenstone Ridge in the vicinity of the Ojibway Fire Lookout tower, returning to Rock Harbor along the McCargo Cove Trail. The day was superb, the weather crisp, and tramping the woods an exhilarating adventure. The tracks of rabbit, squirrel, sharp-tail grouse and coyote were everywhere showing that park wildlife also was testing the new season. About a half mile from the harbor, after crossing a black spruce-tamarack swamp, I noted along the trail ahead of us a set of tracks larger than those of any coyote I had seen before. I had no tape with me but, conveniently, my closed hand folded at the second joint just fit into the track. Now, I've a small hand, but at that the track came to $3 \frac{3}{4} \times 4 \frac{1}{4}$ inches. The pace was about 24 inches, and I noted the tracks to be somewhat staggered, like those of a man. While Jean also observed the tracks, I did not say what I thought had made them since, first, we were scheduled to remain on the island for the winter (a plan which subsequently fell through) and, secondly, Jean's a city girl adapting herself to northwoods living; so I did not choose to give her reason for alarm.

We left the island shortly after to winter on the mainland. I did not dismiss the experience from my mind, however, but rather to definitely record my next wolf track observation, I purchased a supply of quick drying plaster of paris.

Strangely enough, no wolf observations of any kind were reported during the entire year 1961. The island was abandoned the winter - until April (1962) when National Park Service personnel returned to open the park for the ensuing travel season.

Accompanying the regular Isle Royale National Park personnel on the season's initial trip to the island was James Cole, Biologist from the National Park Service regional office in Omaha, Nebraska, who was to engage primarily in moose browse studies. Shortly after arriving, Mr. Cole (Jim from hereon out) observed wolf tracks, and without his having mentioned the fact, Johnnie Williamson, one of the crewmembers of the park vessel RANGER II, discovered the same tracks on the trail to Ojibway Tower, within a quarter mile of my observation a year and a half previous. Jim and I visited and made a record of this observation, then proceeded on to the trail to Lake Richie. Along this trail, which passes by much swampy ground, numerous wolf-like tracks were again discovered; numerous droppings over an inch in diameter and a foot in length were also noted, casting aside any doubts as to the animal's identity. We took several measurements of stride and track size, and made collections of droppings.

A few days later Jim proceeded on to Siskiwit Bay for the remainder of his browse studies and I to my ranger station at Windigo on Washington Harbor. On May 7, here again Johnnie Williamson, while trout fishing, noted wolf-like tracks, these at a moose wallow on Washington Creek. That evening after work I gathered my plaster under one arm, spoon, bowl and camera under the other and headed for the wallow. Fine track impressions were seen on the Windigo Mine Trail in pliable soil. I poured casts of these and then of several deep impressions in wet sand along the river. In wet sand one track measured $4 \times 4 \frac{1}{2}$ inches, and others on firmer ground $3 \frac{1}{4} \times 4 \frac{1}{2}$ inches. The longest pace measured was 26 inches, others in one series 26, 23, and 22 inches. The animals here, more than one apparent from the presence also of smaller tracks, appeared to be walking or idling about the vicinity of the wallow.

Three of these casts were turned over to Jim Cole to substantiate our findings. One of these ended up at the National Museum in Washington, D. C. where it was definitely identified as wolf. There now remained no disputing the presence of wolves on Isle Royale, but as yet no one had actually seen the animals. Not until October 2, 1952.

On that date I was making a trip to Feldtman Fire Lookout Tower to close it for the season, and to make general inspection of trails, buildings, and facilities there and enroute. My route led from Windigo six miles through hardwood forests along the Greenstone Ridge Trail to the Siskiwit Junction; down this trail past the abandoned Island Mine to Siskiwit Bay; along the gravel and sand beach of the bay, crossing the Big Siskiwit River to an abandoned CCC camp; and up the trail five and a half miles farther to Feldtman Tower and cabin. The weather was typical of fall, windy, cool, and threatening. Fall coloration was at its magnificent peak with reds, yellows and every intermediate shade and hue decorating the trailside. Few leaves had as yet fallen so the going was relatively quiet. I "holed up" at the Siskiwit patrol cabin for the night and resumed the patrol in the brisk, cool morning of October 2.

Two wolf droppings had been noted on the trail in the hardwoods, both containing moose hair and bone. Just below the Island Mine a cow moose with this spring's calf was observed resting and watching me warily, this about 8:30 A.M. A little further on a magnificent bull and homely-as-usual cow, both also rested and idly browsed, approximately 75 yards from me. In the still morning air this pair did not detect my presence until after I had watched them for about five minutes. It was the bull that first held his head high and stared in my direction. The cow, noting his anxiety, retreated up a hill a way and then directed her eyes, ears and nose in my general direction. Perhaps they heard my scratchy fountain pen or saw my giant binocular eyes. When, after about ten minutes, I continued on my way, both animals remained quiet, thinking probably that their presence had not been detected.

The trail passed through a second growth white birch stand with a dense ground cover of thimbleberry. For a stretch, on either side, of the trail, a tangle of alders flourished in swampy ground which would hinder the passage of any animal. The moose which I had already seen had alerted me so that my binoculars were instantly available and my eyes acute to catch any movement. Approaching a gradual curve on the thimbleberry bordered trail, I was startled by two dark backs floating up the trail toward me over the level of the thimbleberry tops. Stopping immediately, I had the binoculars on them. In a matter of seconds, at 40 yards, they hove into full view, halted at sight of me, and without faltering diverged from the trail at a trotting pace, one to either side, showing a full grey-to-black broadside with lighter underparts before disappearing in the brush.

Large for a coyote, I thought; though the second animal, presumably the female, was considerably smaller than the first. The thimbleberry over which I had observed them measured 30 inches which would make the larger animal around 32 inches in height. The head and back were husky in appearance, the ears upright, the tail long and coarse. I was hesitant to accept my own conclusion of wolf identity, so I searched for tracks along the trail over which they had come. This is what I found: two measureable tracks $3 \frac{1}{4} \times 4 \frac{1}{4}$; another $3 \frac{1}{2} \times 4 \frac{1}{4}$; and another $3 \frac{1}{2} \times 4 \frac{1}{4}$. No smaller tracks were discernible in the soft damp ground examined.

When I reached Siskiwit Bay and began to follow the gravel and sand beach around to camp, wolf tracks became more common. Many large and some smaller ones were seen in the firm damp sand. The largest, observed near Senter Point, measured $4 \times 5 \frac{1}{4}$ inches. Not coyote these, certainly, nor those measuring $3 \frac{1}{4} \times 4 \frac{1}{4}$ or anywhere near it.

Moose tracks were also frequent along Siskiwit beaches. I observed one bull at Senter Point, and another ambling ahead of me on the beach a little further on, both in magnificent prime and wearing handsome racks. Much beaver sign was also in evidence along the shore near the Siskiwit River. This area is likely beaver habitat since Siskiwit Bay's entire landward width, extending many miles into the interior, is swampy. Fresh cuttings of alder and white birch had been dragged to the harbor, then towed to the river where a big feed pile was in process of accumulation. At one place, a tributary drainage had been dammed within 30 feet of the harbor and a fine pond formed around a large house indicating residence of many years. In such places as this, where brush was dragged overland by the beaver, wolf tracks told a story of stalking. In other places on the beach, wolf tracks of many sizes overlapped one another, heading in every direction, changing direction quickly, running, walking, stopping; as though here a whole pack had been having a romping good time. Moose (only walking tracks noted) had also passed along this stretch of beach, apparently indifferent to the presence of tracks of their major predator.

Observations have just begun at Isle Royale on this, probably the most imposing predator-prey relationship on the North American continent. While numbers of wolf-like droppings have been found containing moose hair and bone, how many of these may have resulted from feeding upon animals dead of other causes. Obviously all animals die sometimes. Take, for example, the carcass of a mature bull moose which scavenging ravens pointed out to me about a mile west of Siskiwit Bay on this same trip. The animal had been dead about a week, I guessed, for while the carcass was loaded with maggots, the hide was still firm, the hoofs tight. The animal's muzzle had been eaten; a gaping hole extended from the lower neck to the chest cavity; a six inch gash back of the right ear had obviously been eaten into by some carnivore; and the upper hind quarter and loin was eaten away into the abdomen. No teeth marks such as would appear on an animal hunted down by wolves were evident anywhere on the exposed parts of the animal which lay on its left side, legs extended. The antlers suggested death may have resulted from a fight with another bull. Several tines were chipped off near the tips and one terminal tine was badly shattered, a split over an inch long extending to the blade. In any event, the point is that such an animal, probably dead of causes other than predation, none the less can result in a good number of droppings containing moose hair and bone.

Our winter study, during which we observed about 70 moose while covering some 150 miles of country, revealed no evidence of wolf predation on moose. In fact, whenever we observed fresh wolf and moose tracks together, each was going in a different direction. This does not mean that wolves don't take moose - when the advantage is theirs. The old gray cow observed in the hardwoods on the Greenstone Ridge, which was reluctant to leave her dung insulated bed at our approach, is a likely example of imminent wolf fodder. But while we were on the island, the wolves patrolled the beaches for fish, hunted the swamps for rabbits, and followed the streams for beaver. We once heard them on the hunt in the depths of Siskiwit swamp as they howled while on the trail of a luckless rabbit. The sound would tingle your blood; it was beautiful in a wild way, particularly the rich baritone of the lobo, easily distinguished in the family chorus.

So Isle Royale has at least four wolves. In addition Jim and I noted a single track in several places during our winter travels. Then too there may have been others at the far northeast end of Isle Royale, which we were unable to investigate. How many wolves can 230 square miles of island wilderness support? Probably an opportunity unduplicated in the world is unfolding at Isle Royale to learn much about both wolf and moose. As a National Park, with well-preserved primeval conditions, Isle Royale provides absolute sanctuary for all native wildlife and serves as an ideal natural laboratory for the observation of nature's processes.

"Four of them". The observation of the family wolf pack on Siskiwit Bay that bright clear exhilarating day thrilled me to some aboriginal core. In our highly advanced civilization it is not often that one has the opportunity to observe the summit of the biological pyramid, unless that dominant hunter is man. This one family of four wolves is a reason, in nature's scheme, for the tender stems of willow and balsam and the hundreds of rabbits that feed on these; or, in another pyramid, the nourishing bark of poplar and mountain ash utilized by beaver; or, the tons of twigs of balsam birch, dogwood and maple sustaining moose. These animals and plants, among hundreds of others inseparably connected in a biological network, serve to sustain those which preys upon them, which in turn are restrained from reaching destructive numbers by other natural controls, as supply of food and changing environment. As we watched the wolves lope away I felt no concern for Isle Royale's moose herd, or its beaver, or its rabbit. Each of these has been part of the same biotic community; each has been continually faced with enemies of many kinds; each has preyed upon living organisms in a lower more populous level; and each has survived and developed the stronger for the competition. Should Isle Royale's area be adequate to comprise a total environment for wolf, moose and associated wildlife, little concern for the welfare of this primeval condition need be felt by all-modifying man.