

REPORT on

**MANITOU ISLAND
BIRD SURVEY – 2002**

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ABSTRACT

A group of observers visited Manitou Island in Lake Superior four times in 2002 to document the birds there. One hundred twenty-five species of birds were seen throughout the year. A massive migration of raptors was observed during early May. During the three day visit in May, over 700 raptors were seen on the island and a few were observed apparently crossing Lake Superior to the east and northeast from Manitou. The great majority of raptors seen in May were Sharp-shinned Hawks. During June, over 500 raptors, mostly immature Broad-winged Hawks, were seen soaring over the island. During two trips during the breeding season, using Michigan Breeding Bird Atlas standards, 12 species were Confirmed breeders, 7 were Probable and 72 were Possible. The most common summer birds were Winter Wren, Nashville Warbler, and Cedar Waxwing. In both May and September a large migration of waterbirds moved past the island. A number of vagrants were seen including Black Vulture, Northern Mockingbird, Swainson's Hawk, Red-headed Woodpecker, and Yellow-billed Cuckoo.

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METHODS

To survey the birds of Manitou Island, we sent observers to the island for four multiple day visits. We made three-day visits in May, June and July and a two and one half day visit in September. In all cases, we traveled in a boat out of Copper Harbor. In May, June and July, we hired the *Equinox*, a 41' charter boat to carry the observers, their gear and canoes. The September trip was made in a 17' boat. In May, we had five observers, in June we had four, in July we had two, and in September we had three. The U.S. Coast Guard gave us permission and a key to use the lighthouse at the east end of Manitou for all four visits. We used the lighthouse tower as a viewing platform, especially during the May visit which concentrated on raptors. We occasionally used the lighthouse building as a shelter during bad weather but no one stayed overnight in it. The observers camped in tents at six locations on the island during the four visits. The observation methods differed during the four visits due to the different priorities of each visit.

May visit - During the May visit, the top priority was documenting the migration of raptors to and from the island. Secondary priorities were recording the movement of waterbirds past the island and recording any birds present on the island. To achieve these goals, we stationed teams of observers at each end of the island, two people at the west end and three at the east end. The primary technique was stationary counts. We generally had observers in place at each end of the island between the hours of 8:00AM and 3:30PM. They recorded the number and species of all birds seen with special attention on raptors. The west end team kept separate counts for birds coming east from the Keweenaw and birds returning westward to it. The east end team kept a count of all raptors seen and kept notes on the behavior and flight direction of those birds, i.e., - was the bird milling around near the lighthouse? Was it leaving the island and flying across Lake Superior to the east or northeast? Was the bird actively hunting? Was it soaring over the main body of the island? Did the bird fly from the main body of the island out to the lighthouse and turn around and return the way it came? When raptors were seen flying away from the island out over the lake, their flight paths were recorded on pre-printed maps. Migrating waterbirds were also seen from the two stationary counts and the species, numbers and general flight directions were recorded for those birds. A few hikes were made, generally along shorelines, and birds were recorded as found along those hikes. Some observations were made unintentionally.

A. Woodcock were heard displaying after observers had retired to their tents. May dates - 4th - 7th

June and July visits - The priority for the June and July visits was to record breeding birds. Two methods were used to gather data on Manitou's breeding birds. During the June visit, one observer completed a set of 22 ten minute point counts at predetermined points scattered across the island. The second method was simply moving around and recording all birds seen and heard. Though the island proved to be extremely difficult to walk around on, we made an effort to move through the whole island.

In June we logged 33.4 observer party miles and in July we logged 27.8. Canoes were used during both the June and July visits. Generally, they were used to move the observers to different areas of the island, but they were also used on Perch Lake for observation purposes. A total of 5.75 miles were logged by canoe during the two summer visits. In July, a one hour night-time hike was made into the interior of the island to listen for owls.

June dates 17th - 20th July dates 13th - 16th

September Visit - There were two priorities for the September visit. One, to record waterbird migration past the island. Two, to record all birds seen on the island. The waterbirds were monitored by a stationary count near the lighthouse. The hours of observation were somewhat erratic due to the volatile weather. The stationary count also recorded numerous passerine, raptor, and shorebird species that happened to pass by the count site. A total of 5.7 observer party miles were recorded during the September visit. September visit dates - 8th - 10th

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RESULTS

Over the four visits we put in 478 observer hours and recorded 125 species of birds. During the May visit, the west end crew recorded 708 raptors and the east end crew recorded 702. Eighteen species of waterbirds were seen passing by the island during the May visit (observers at each end) and seven waterbird species were seen during the September visit (observers at east end only). The list of breeding birds includes 72 species as Possible, 7 as Probable and 12 as Confirmed. (Using the Michigan Breeding Bird Atlas standards) Nests of four species were found. A Bald Eagle nest was found in an aspen tree near the north shore of Fisherman=s Bay. A Cedar Waxwing was observed building a nest near the west end of the island in July. A Red-breasted Merganser was flushed off a nest near a cliff edge near the east end in July. A Belted Kingfisher was observed entering a nest hole along the southwest shoreline in June and July.

Below is a listing of lists of our results:

(These are found after the Discussion and Conclusion sections)

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DISCUSSION

General

Due to its unique location, I believe that if Manitou was birded as frequently as the mainland it would have one of the largest bird lists in the state. Our total species list for 2002 reached 125. During the spring and fall especially we found a number of vagrants. The rarest bird seen during our survey was surely the Black Vulture that was observed soaring with Turkey Vultures and hawks on 16 July. During the September visit, different groups of shorebirds would alight briefly on the rocky points near the lighthouse and then move on. During that same period, a single Rock Dove flew in from the west, landed on the lighthouse roof for 5 minutes and returned the way it had come. Earlier that day a few dozen small passerines were observed coming into Manitou over Lake Superior from the NE. One of those inbound passerines was clearly a cuckoo and later that day both Black-billed and Yellow-billed Cuckoos were seen on the island. A single Red-headed Woodpecker was seen in September. During the June visit, a single female Bobolink was seen in the tiny yard of the lighthouse. During the May visit, a Swainson's Hawk was seen. Dr. Norman Wood of the University of Michigan collected a Swainson's during his 1931 visit to Manitou and one or two have been seen in recent years at Brockway Mountain in the Keweenaw.

As expected, a significant movement of waterbirds passed by Manitou during the May and September visits. Species flying past included, Red-throated Loon, Common Loon, Horned Grebe, Red-necked Grebe, Double-crested Cormorant, Canada Goose, Mallard, Blue-winged Teal, Gadwall, American Wigeon, Lesser and Greater Scaup, White-winged Scoter, Long-tailed Duck, Bufflehead, Common Goldeneye, Red-breasted and Common Merganser. During a two hour period on 10 September over two hundred Red-necked Grebes flew southeast past the east end of Manitou.

We failed to find any owls on the island despite several hours of night-time effort. The only owl recorded was a dead Saw-whet Owl found in one of the buildings of the lighthouse complex. We found a large stick nest in July that had whitewash and a large pellet underneath it. About 30 yards from the nest I found a large collection of bones, assumed to be Snowshoe Hares, and two large eggshells. The egg shells appeared to be Herring Gull eggs. The nearest place where Herring Gulls breed would be Gull Rock over 2 mile to the west of the bone pile. This nest could have been used by a Great Horned Owl.

Spring Raptors

Dr. Norman Wood in a 1932 article* said this about raptors at Manitou Island, AFrom April 25 to May 6 thousands arrived at Manitou Island. Many rested there, but some kept on across to Canada without a stop, a flight of seventy-five miles or more.@ This statement is perhaps the best starting point for thinking about our own raptor study at Manitou. It is a bold statement about a very large migration of raptors across Lake Superior using Manitou Island as their jumping off point. Unfortunately, Dr. Wood gives very few details in his article about just what he saw that spring. Which species were most common? Which direction did they fly - north? northeast? east? Did they use thermals on Manitou to gain maximum elevation to begin their crossing? Did they just head across with flapping flight? Did they show a preference for south winds? west winds? The May visit of our Manitou survey was intended to begin to fill in the details that Dr. Wood apparently never recorded. Though a three day visit during a single spring obviously cannot provide a lot of details, we did learn a few things.

* Wood, N. 1932 Birds of Keweenaw Point, Michigan
Papers of the Michigan Academy of Science, Arts, and Letters, Vol. 17

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DISCUSSION continued

We ferried across to Manitou on May 4th and began our observations on May 5th. Unfortunately, the 4th was a day of brisk west winds and massive raptor migration in the Keweenaw. Observers on Brockway Mountain saw many hundreds of raptors pass that day (Brockway observers took no counts that day, they just enjoyed the show). We have no way of knowing how many crossed over to Manitou on the 4th but I suspect that several hundred did so. As the observer at the west end of Manitou, the end closest to the mainland Keweenaw, I was in position to record any movement of raptors to and from the Keweenaw. That first day had light winds out of the south and then southeast. Only 49 raptors were recorded eastbound from the Keweenaw that day but 425 were seen heading west back to the Keweenaw. Most of those westbound birds were in one huge flock that was classified as unidentified buteos. I believe that most of those birds were Broad-winged Hawks that rode the west winds over to Manitou the day before. Finding that Manitou presented no easy route north, they returned en masse to the Keweenaw at the first opportunity. But, of all raptor species seen in the Keweenaw, Broad-wings are probably the least likely to make large water crossings. It is interesting to speculate about what an observer on the east end of Manitou would have seen on May 4th. Were there Sharp-shins, Rough-legs and falcons making the crossing to Michipicoten Island that day? At the east end the observer recorded a total of 164 raptors on the 5th. A large number of those birds approached the east end and then turned back west, at or only slightly past the eastern tip of the island. He did see 11 Sharp-shins, 1 Coopers Hawk, 2 Rough-legs and 1 large falcon heading east and northeast with no apparent return to Manitou. We cannot of course say those birds crossed the lake to Canada, but it is quite possible that they did. In the end, our project can never **prove** that raptors cross to Canada from Manitou. All we can do is record the various birds that we see apparently doing so. Over the three day visit, roughly 700 raptors were recorded at each end of the island. Over 50 raptors were observed leaving Manitou heading east, northeast or north without an obvious return. How many would have been seen on the 4th of May? Another interesting observation was the numbers of Sharp-shins that kept coming to Manitou from the Keweenaw in spite of headwinds. The second day of our visit had fairly constant winds from the northeast and north at speeds of 5 to 15 mph. At the west end, a total of 164 eastbound raptors were recorded that day and only 15 westbound. 121 of those east bound birds were Sharp-shins and a further 19 were unidentified accipiters. Most raptors seen making the crossing into the wind, kept quite low to the water, often within three feet of it. Sharp-shins were by far the most numerous raptors seen on Manitou during the spring.

On the last day of the June visit, we observed an estimated 500 raptors soaring over the island. The great majority of those birds were immature Broad-winged Hawks with a few Sharp-shins, Red-tails and Turkey Vultures. Were these very late migrants or just birds hanging around the Keweenaw?

Breeding Birds - General

There were two species that were obviously the most abundant summer birds on Manitou. Those were Winter Wren and Nashville Warbler. Winter Wrens were recorded on 21 of 22 point counts done in June and Nashville= were recorded on 19. It was impossible to find a spot on the island where one could not hear one or both of these birds songs. Cedar Waxwings were quite abundant during the July visit. They either became more abundant or just more obvious between the June and July visits. Common Loons were seen during all four visits. A special effort was made to watch for evidence of breeding on Perch Lake during the June visit, but none was found. In September, two adults and one immature loon were seen feeding on Fishermans= Bay. It is possible that these birds nested on Manitou.

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DISCUSSION *continued*

Breeding Birds - Warblers

The breeding bird portion of our survey produced a few surprises. We recorded 91 species on the breeding bird list, of which two singing Blackpoll Warblers were the most interesting find. During the visit in late June, we observed single singing male Blackpoll Warblers in two separate areas on the island. It is quite probable that these were just two very late migrants, but the habitat seemed reasonable for that species. Both birds were found within 100 yards of Lake Superior which may have kept the microclimate cooler than the interior of the island and thus similar to that of this species' normal breeding range. We made significant effort to relocate those birds in July, with no success. A single singing male Wilson's Warbler was observed during the June visit and during the July visit a song was heard that could have been a Wilson's Warbler, but no further breeding evidence was found. Two singing Tennessee Warblers were found on the July visit as well as two non-singing birds. No Tennessee's were observed during the June visit. The observational effort, hours and locations, are not likely factors in this difference between June and July Tennessee sightings. It is rather odd that the same observers in many of the same locations found no singing Tennessee's during the June visit. Dr. Laurence Binford, a Keweenaw based ornithologist suggests that the July Tennessee's are birds that have moved south to the Keweenaw area after not finding mates further north and are probably not successful breeders. No female Tennessee's were ever seen. Some of the Tennessee's did respond aggressively to tape playbacks.

Breeding Birds - Woodpeckers

During the two breeding season visits, there were no observations of any woodpeckers. In June, we had four observers on the island for three days and in July we had two observers for three days, yet there was not a single visual or auditory observation of any woodpeckers. This on a 1000 acre island that is about 98% forested. It seems quite possible that the apparent lack of woodpeckers is the result of the very large numbers of raptors in the spring and early summer. In three days in May, we observed over 500 Sharp-shinned Hawks on the island. There were woodpecker sightings on the May visit and during the September visit. Indeed, there were a surprising number of N. Flickers seen in May. Seventy-two Flickers were seen leaving Manitou, heading for the Keweenaw during the May visit and many, many Flickers remained on the island. Given the extraordinary numbers of raptors on Manitou during the spring and early summer it seems likely that almost all woodpeckers present on Manitou in the spring are killed and those that survive are abnormally quiet and inconspicuous in behavior. The presence of so many N. Flickers on Manitou in the spring of 2002 is in itself rather interesting. Were they a fluke or is Manitou part of some concentrated migratory pathway for N. Flickers?

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CONCLUSIONS

Such a short project makes it difficult to make any substantial conclusions but a couple things do seem clear. Manitou Island does seem to be visited by a very large number of species each year. Its location near the middle of Lake Superior and just off the tip of the Keweenaw peninsula bring it an impressive variety and volume of migrants, both land and waterbirds.

Manitou Island is surely the site of a major spring raptor migration. Our group saw over 700 raptors in just three days in May. It seems very likely from our observations that some raptors cross to Canada from Manitou. But to make any statements about what percentage of raptors that reach Manitou continue across to Canada would be unwise. We just haven't collected enough data to even guess.

The results of the breeding season portion of our survey are mostly what one would have expected in terms of which species were found. There seems to be some evidence of a reduced number of species compared to the mainland Keweenaw. Finding Wilson's Warbler and Blackpoll Warblers in late June makes it tempting to suspect that they may breed there, but a single year's observations can't be stretched into any real conclusions.

RECOMMENDATIONS

More study.

The findings of the Blackpolls and Wilson's may have been one year flukes, maybe they were not.

If woodpecker observations were again zero during a second year of breeding visits it would perhaps show Manitou Island as a true population sink for those species.

The three day visit during spring raptor migration documented the large numbers of raptors that move to and from Manitou but more extensive monitoring would fill in the details that Dr. Wood never gave.

ACKNOWLEDGMENTS

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BIRDS OBSERVED AT MANITOU ISLAND

	MAY	JUNE	JULY	SEPT		MAY	JUNE	JUL	SEPT
Red-throated Loon	X				Greater Yellowlegs				X
Common Loon	X	X	X	X	Spotted Sandpiper	X	X	X	X
Red-necked Grebe	X			X	Sanderling				X
Horned Grebe	X				Common Snipe	X			
D.C. Cormorant	X	X	X	X	American Woodcock	X	X	X	
Great Blue Heron		X		X	Ring-billed Gull	X	X	X	X
Black Vulture			X		Herring Gull	X	X	X	X
Turkey Vulture	X	X	X		Rock Dove				X
Canada Goose	X	X	X	X	Mourning Dove			X	
Wood Duck	X	X			Black-billed Cuckoo				X
Green-winged Teal	X		X		Yellow-billed Cuckoo				X
Black Duck		X			C. Nighthawk		X		
Mallard	X	X	X		Whippoorwill		X		
Blue-winged Teal		X			Ruby-throated Humming		X		
Gadwall	X				Belted Kingfisher	X	X	X	X
American Wigeon	X				Red-headed Woodpecker				X
Lesser Scaup	X				Downy Woodpecker	X			X
Greater Scaup	X				Black-backed Woodpecker				X
W.W. Scoter				X	Northern Flicker	X			X
Long-tailed Duck	X				Eastern Wood Pewee		X		
Bufflehead	X				Empidonax Flycatcher	X			X
Common Goldeneye	X				Yellow-bellied Flycatcher		X	X	
Common Merganser	X	X	X	X	Alder Flycatcher		X	X	
Red-breasted Merganser	X	X	X	X	Least Flycatcher		X	X	
Osprey		X			Eastern Phoebe				X
Bald Eagle	X	X	X	X	Great Crested Flycatcher		X		
Northern Harrier	X			X	Blue-headed Vireo		X		X
Sharp-shinned Hawk	X	X	X		Red-eyed Vireo		X	X	X
Coopers Hawk	X				Blue Jay	X	X	X	X
Red-shouldered Hawk	X				American Crow	X	X	X	X
Broadwinged Hawk	X	X	X	X	Common Raven	X	X		X
Swainson=s Hawk	X				Tree Swallow	X	X	X	
Red-tailed Hawk	X	X	X		Cliff Swallow		X	X	
Rough-legged Hawk	X				Barn Swallow		X		
American Kestrel	X	X			Black-capped Chickadee	X	X	X	X
Merlin	X	X	X	X	Boreal Chickadee		X		
Peregrine Falcon	X	X	X	X	Red-breasted Nuthatch	X	X	X	X
Sandhill Crane	X				Brown Creeper	X	X	X	
Semipalmated Plover				X	Winter Wren	X	X	X	X
Killdeer		X			Golden-crowned Kinglet	X	X	X	X

	MAY	JUNE	JUL	SEPT
Ruby-crowned Kinglet	X			
Veery		X	X	
Swainson=s Thrush		X	X	X
Hermit Thrush		X		
American Robin	X	X	X	X
Gray Catbird		X		
Northern Mockingbird	X			
Cedar Waxwing		X	X	X
Tennessee Warbler			X	
Orange-crowned Warbler	X			
Nashville Warbler		X	X	X
Northern Parula		X		
Chestnut-sided Warbler		X		
Magnolia Warbler		X	X	X
Yellow-rumped Warbler	X	X	X	X
Black-throated Green Warb		X	X	X
Blackburnian Warbler		X		
Palm Warbler	X			X
Blackpoll Warbler		X		
Black and White Warbler		X	X	
American Redstart		X	X	X
Ovenbird		X	X	X
Northern Waterthrush		X		
Mourning Warbler		X		
Common Yellowthroat		X		X
Wilson=s Warbler		X		X
Canada Warbler		X		
American Tree Sparrow	X			
Chipping Sparrow	X	X	X	
Clay-colored Sparrow				X
Savannah Sparrow	X			X
Song Sparrow	X	X	X	X
Lincoln=s Sparrow		X		X
Swamp Sparrow	X	X	X	
White-throated Sparrow	X	X	X	X
Dark-eyed Junco	X			X
Rose-breasted Grosbeak				X
Bobolink		X		
Rusty Blackbird	X			
Brewer=s Blackbird	X			
Common Grackle	X			
White-winged Crossbill			X	X

Pine Siskin
American Goldfinch
Evening Grosbeak
Saw-whet Owl (dead)

Total Species - 125

MAY	JUNE	JULY	SEPT
X	X	X	
	X		
	X		
X			

MANITOU ISLAND - ANNOTATED SPECIES LIST - 2002

Red-throated Loon - Seen only in May. A small number flew by each end of the island going NW.

Common Loon - Seen on all four visits. Perch Lake was checked for breeding loons - none were found. Up to 4 loons were seen around Manitou throughout the summer and fall. A pair with one young was seen on Fishermans Bay in early Sept. Those could have been Manitou breeders or migrants.

Horned Grebe - Seen only in May.

Red-necked Grebe - A small number were seen in May and quite a few in Sept. On Sept. 10th, 310 individuals passed by the eastern tip in the early afternoon. The birds came from the west and appeared to head ESE.

Double-crested Cormorant - A small number were seen around the island on all four visits. On the Sept visit, while passing by the south side of Gull Rock we flushed a flock of about 40 from the water. We were never able to get ashore on Gull Rock during the survey, so we are uncertain if cormorants nest there.

Great Blue Heron - Seen during the June and Sept. visits. Was seen once feeding on Perch Lake. Twice seen flying from the island out over the lake to the ESE or SE. The birds disappeared from view. About a half an hour later they were seen returning to the island from the direction they had disappeared. At 5:00PM on Sept 9th, a heron appeared far off to the N. It came on south, riding a strong N wind, passed over the lighthouse yard giving no indication of wanting to land. It kept going steady and high, making very good speed and soon disappeared to the south.

Black Vulture - One was seen for about 5 minutes as it soared along the N shore of Fisherman=s Bay on July 16th in the company of Turkey Vultures and one immature Red-tailed Hawk..

Turkey Vulture - Seen during the May, June and July visits. Maximum number was 11, seen soaring over the center of the island in July. Breeding is possible but seems unlikely due to the absence of large mammals.

Canada Goose - Seen during all four visits. Migrant flocks were seen passing over in May and Sept. A flock of 12 were hanging around the lighthouse area in July. Breeding is possible.

Wood Duck- Seen during the May and June visits. Breeding is possible but seems unlikely.

Green-winged Teal - Seen during the May and July visits. Breeding is possible.

Black Duck - Seen during the June visit. Breeding is possible.

Mallard - Seen during the May, June and July visits. Breeding is possible.

Blue-winged Teal - Seen during the June visit. Breeding is possible but seems unlikely.

Gadwall - Seen during the May visit. Breeding is possible but seems unlikely.

American Wigeon - Seen during the May visit. Breeding is possible but seems unlikely.

Lesser Scaup - A few seen migrating past the island during the May visit.

Greater Scaup - A few seen migrating past the island during the May visit.

White-winged Scoter - A few seen migrating past the east end of the island during the Sept. visit.

Long-tailed Duck - A few seen migrating past the island during the May visit.

MANITOU ISLAND - ANNOTATED SPECIES LIST - 2002

Bufflehead - In May, a few were seen migrating past the island and some were seen on Perch Lake.

Common Goldeneye - Seen only during the May visit.

Common Merganser - Seen on all four visits. Females with small young were seen during the June visit. One brood was seen in Fisherman=s Bay and the other was seen along the NW shoreline of the island.

Red-breasted Merganser - Seen on all four visits. A female was spooked off her nest during the July visit. The nest contained 9 eggs and was placed under thick Yew about 10 feet from the cliff edge in Section 15.

Osprey - Only one individual was seen. It was seen from the lighthouse tower as it flew over the island.

Bald Eagle - Seen during all four visits. Up to 3 or 4 individuals were seen. A nest was found in a large aspen tree during the May visit. During the June visit one large apparently healthy young bird was seen on the nest. The nest is about 30 yards from the shoreline in the extreme NE corner of Section 21, on the north shore of Fisherman=s Bay.

Northern Harrier - Seen during the May and Sept. visits. While there is a small amount of nesting habitat around Perch Lake, there is not enough hunting habitat for breeding. Harriers were seen during both visits, leaving the island heading E, SE or NE. Most seemed to return.

Sharp-shinned Hawk - Seen during the May, June and July visits. During the May visit, Sharpshins were by far the most abundant raptor. During the three day May visit, 160 Sharpshins were seen coming to Manitou from the Keweenaw. At the east end of the island, 520 Sharpshins were seen during the three days. That number of 520 is the sum of daily totals and as such could be inflated by birds hanging around and being counted repeatedly over the three days. Some Sharpshins were seen heading E and NE across Lake Superior. No breeding evidence was found but it does seem likely that Sharp-shins are breeding on Manitou.

Cooper=s Hawk - A couple of Coopers were seen during the May visit.

Goshawk - Only one Goshawk was seen. It was an immature seen during the Sept visit.

Swainson=s Hawk - A single Swainson=s was seen on two days during the May visit.

Red-shouldered Hawk - Five were seen during the May visit.

Broad-winged Hawk - Seen during all four visits. During the June visit over 400 immature Broad-wings were seen kettleing over the north central part of the island. A possible breeder.

Red-tailed Hawk - Seen during the May, June and July visits. 27 were seen during the May visit. A possible breeder. There are hares on the island and much of the forest is very open due to blowdown.

Rough-legged Hawk - Seen only during the May visit. Some were seen attempting to cross the lake to the NE and E.

American Kestrel - Seen on the May and June visits.

Merlin - Seen on all four visits. Probable breeder. Female seen along the NW shoreline in June was very vocal and active in reacting to observers presence.

Peregrine Falcon - Seen on all four visits. Only one individual was seen during each of the last three visits and five were seen during the May visit.

Sandhill Crane - One small flock was seen in flight over the island during the May visit.

MANITOU ISLAND - ANNOTATED SPECIES LIST - 2002

Killdeer - Seen only during the June visit.

Semipalmated Plover - Four were seen on rocks near lighthouse in Sept.

Greater Yellowlegs - One was seen on cobble beach of Fisherman=s Bay in Sept.

Spotted Sandpiper - Seen on all four visits. Technically it rated only as a Possible breeder but I believe that it is probable that it bred on the island this year. Up to 5 were seen on July visit.

Sanderling - One was seen on the rocks at the lighthouse in Sept.

Common Snipe - Seen only during the May visit. The habitat around Perch Lake seems good for them.

American Woodcock - Seen on the May, June and July visits. Confirmed breeder. A female with one young was found in June. Two or three males were >peenting= along the lighthouse/dock trail in May. During the July visit, three or four individuals flew into and out of a open bog area at dusk.

Ring-billed Gull - Seen on all four visits.

Herring Gull - Seen on all four visits. More numerous than Ringbills, but often times only a dozen or so were seen all day. During the Sept visit up to about 40 were seen in rough weather near the light. No evidence of breeding on Manitou was seen. We suspect breeding on Gull Rock but we couldn=t get there to check.

Rock Dove - One bird flying from the west, arrived at the eastern tip and perched on top of the lighthouse keepers house for about 5 minutes then left the way it had come. This happened in rough weather in Sept.

Mourning Dove - Two birds were observed during the June visit. One was heard in the forest along the SW shoreline and the other was flushed from a small grassy area along cliff SW of lighthouse yard.

Black-billed Cuckoo - One bird seen during Sept. trip. One cuckoo species was seen flying onto Manitou from well out over the lake to the NE. It was chased by a Merlin for the last 150 yards of its crossing.

Yellow-billed Cuckoo - Two birds seen during Sept. trip.

Common Nighthawk - Seen only during June visit.

Whippoorwill - Three birds heard calling around Fisherman=s Bay during June visit.

Ruby-throated Hummingbird - One bird seen during June visit.

Belted Kingfisher - Seen during all four visits. Seemed to forage almost exclusively on Perch Lake. Only two birds seen. Breeding confirmed by watching adult bring food to nest hole in sand bank along SW shore in July.

Red-headed Woodpecker - One bird was present around lighthouse for two days in Sept.

Downy Woodpecker - One bird was seen in May. None were seen or heard during the June and July visits. Several were heard and seen during the Sept visit.

Black-backed Woodpecker - A male was seen in a boggy area in Section 16 in Sept.

MANITOU ISLAND - ANNOTATED SPECIES LIST - 2002

Northern Flicker - During the May visit a large number of Flickers were present on the island. During the three days 72 were seen leaving Manitou heading for the Keweenaw. There were still plenty of Flickers on the island. They were seen foraging on the shoreline rocks as well as in the trees. During the June and July visits not a single Flicker was seen or heard. During the Sept visit a few Flickers were present again.

Eastern Wood Pewee - One bird was heard on a point count in June.

Yellow-bellied Flycatcher - Observed during the June and July visits. Seems fairly widespread across the island but uncommon. Possible breeder.

Alder Flycatcher - Seen during the June and July visits. Fairly widespread. Possible breeder.

Least Flycatcher - Seen during the June and July visits. Very uncommon. Only two or three observed, but those were singing. Possible breeder.

Eastern Phoebe - One seen during Sept trip.

Great Crested Flycatcher - One seen during June visit, not singing.

Blue-headed Vireo - Seen and heard during the June and Sept. visits. Very uncommon.

Red-eyed Vireo - Seen during the June, July and Sept. visits. Probable breeder. Fairly common.

Blue Jay - Seen during all four visits. Fairly common. A flock of up to 15 were seen during the June and July visits. Possible breeder.

American Crow - Seen during all four visits. Fairly common and widespread. Possible breeder. During the May visit the observer at the west end saw a few crows making regular flights to and from the mainland.

Common Raven - Seen during the May, June and Sept visits. Very uncommon.

Tree Swallow - Seen during the May, June and July visits. Rare.

Cliff Swallow - Seen during the June and July visits. Rare.

Barn Swallow - Seen during the June visit. Rare.

Black-capped Chickadee - Seen during all four visits. Confirmed breeder. Fairly common.

Boreal Chickadee - Two birds were seen during the June visit. There are significant acres of Black Spruce bog that would be suitable nesting habitat for this species.

Red-breasted Nuthatch - Seen during all four visits. Fairly common. Possible breeder.

Brown Creeper - Seen during the May, June and July visits. Possible breeder.

Winter Wren - Seen during all four visits. Perhaps the most abundant bird on the island in summer. Probable breeder. Some point counts had three singing wrens within hearing. Found on 21 of 22 point counts.

Golden-crowned Kinglet - Seen during all four visits. Fairly common. Probable breeder.

MANITOU ISLAND - ANNOTATED SPECIES LIST - 2002

Ruby-crowned Kinglet - Seen only during May visit. Rare.

Veery - Seen during the June and July visit. Uncommon.

Swainson's Thrush - Seen during the June, July and Sept. visits. Confirmed breeder. The most common thrush on the island.

Hermit Thrush - Heard on the June visit. Rare.

American Robin - Seen on all four visits. Possible Breeder. Uncommon.

Gray Catbird - Only one bird observed, during the June visit, not singing.

Northern Mockingbird - One bird was seen during the May visit. It was leaving the island from the western tip, heading for the Keweenaw.

Cedar Waxwing - Seen on the June, July and Sept. visits. Confirmed breeder. Abundant and widespread. Seemed more abundant during the July visit than when the point counts were done in June.

Tennessee Warbler - Seen only during the July visit, when several singing males were found.

Orange-crowned Warbler - Only seen during the May visit.

Nashville Warbler - Seen during the June, July and Sept. visits. Abundant, probably as abundant as the Winter Wren. Found on 19 of 22 point counts in June. Probable breeder.

Northern Parula - Seen only during the June visit. Rare, though most of the island seems to provide excellent habitat for this species.

Chestnut-sided Warbler - Seen only during the June visit. Uncommon.

Magnolia Warbler - Seen during the June, July and Sept. visits. Fairly common. Confirmed breeder.

Yellow-rumped Warbler - Seen during all four visits. Very common and widespread. Confirmed breeder.

Black-throated Green Warbler - Seen during the June, July and Sept visits. Fairly common.

Blackburnian Warbler - Seen only during the June visit. Rare.

Palm Warbler - Seen during the May and Sept. visits.

Blackpoll Warbler - Seen during the June visit. Two singing males were found during the June visit, on opposite sides of the island. Significant follow-up effort was made during the July visit to confirm breeding, but the birds were not observed.

Black & White Warbler - Seen during the June and July visits. Fairly common.

American Redstart - Seen during the June, July and Sept. visits. Very common and widespread. Confirmed breeder.

Ovenbird - Seen during the June, July and Sept. visits. Uncommon.

Northern Waterthrush - A few individuals were seen during the June visit.

MANITOU ISLAND - ANNOTATED SPECIES LIST - 2002

Mourning Warbler - A few singing males were observed during the June visit.

Common Yellowthroat - Seen during the June and Sept. visits. Only one individual, a singing male, was seen during the June visit. There seems to be a lot of suitable habitat on the island for this species.

Wilson=s Warbler - Seen during the June and Sept. visits. During June one singing male was found. During the July visit, a song was heard that may have been a Wilsons.

Canada Warbler - One singing male observed during June visit.

American Tree Sparrow - Seen only during the May visit.

Chipping Sparrow - Seen during the June, July and Sept. visits. Rare.

Clay-colored Sparrow - Seen only during Sept. visit.

Savannah Sparrow - Seen during the June and Sept. visits. Rare.

Song Sparrow - Seen during all four visits. Uncommon. Possible breeder.

Lincoln=s Sparrow - Only one bird was seen, during the June visit.

Swamp Sparrow - Seen during the May, June, and July visits. Rare.

White-throated Sparrow - Seen during all four visits. Very common and widespread. Confirmed breeder.

Dark-eyed Junco - Seen during the May and Sept. visits.

Rose-breasted Grosbeak - Seen only during the Sept. visit.

Bobolink - One female was seen near the lighthouse during the June visit.

Rusty Blackbird - Seen only during the May visit.

Brewer=s Blackbird - Seen only during the May visit.

Common Grackle - Seen only during the May visit.

White-winged Crossbill - Seen during the July and Sept. visits. Rare.

Pine Siskin - Seen during the May, June and July visits. Uncommon.

American Goldfinch - Seen only during the June visit. Rare.

Evening Grosbeak - Seen only during the June visit. Rare.

MANITOU ISLAND BIRD SURVEY - 2002

BREEDING BIRDS CONFIRMATIONS AND PROBABLE=S

CONFIRMATIONS

R.B. Merganser	16 July	Nest with 9 eggs	Section 15
C. Merganser	18 June	Female with young	Section 21
C. Merganser	19 June	Female with young	Section 17
Bald Eagle	June	Nest with 1 young *	Section 21
A. Woodcock	18 June	Female with 1 young	Section 21
Belted Kingfisher	13 July	Adult carrying food / nest hole	Section 20
B.C. Chickadee	14 July	Adults feeding short tailed young	Section 16
Swainson=s Thrush	15 July	Adult with 1 bob-tailed young	Section 21
Cedar Waxwing	14 July	Adult building nest	Section 20
Yellow-rumped Warbler	16 July	Male - distraction display	Section 16
Magnolia Warbler	16 July	Female carrying food	Section 15
A. Redstart	16 July	Female carrying food	Section 16
W.T. Sparrow	14 July	1 Bob-tailed young	Section 16

All sections are in Township 58 North and Range 26 West in Keweenaw County

* - nest seemed abandoned when observed on 15 July (fledged or dead?)
Or was the young eagle up higher in the branches and present but unseen?

PROBABLE=S

Merlin	19 June	Female - agitated behavior	Section 17
Red-eyed Vireo	18 June	Over 5 singing males	
Winter Wren	18 June	Over 5 singing males	
Golden-crowned Kinglet	20 June	Five singing males	Section 16
Nashville Warbler	18 June	Over 5 singing males	
Black-throated Green Warbler	14 July	Five singing males	
Alder Flycatcher	18 & 19 June	Six singing males	Section 21

Of the >Probables= listed above all can be attributed to specific MBBA blocks except the B.T. Green Warbler. In that case the five singing males were spread over two atlas blocks.

The Alder Flycatcher listed above as Probable did not technically meet the MBBA standards because the singing males were recorded over a two day period. The author consulted with Ray Adams of the MBBA who felt that because the singing males were recorded at point counts that they could count as Probable, even though they were recorded over two days instead of one.

MANITOU ISLAND BIRD SURVEY - 2002

EAST END - RAPTOR COUNTS

	5 MAY	6 MAY	7 MAY	TOTAL
SHARP-SHINNED HAWK	112	120	288	520
COOPERS HAWK	2	0	0	2
A. KESTREL	2	25	16	43
MERLIN	0	0	2	2
PEREGRINE FALCON	0	3	2	5
UNIDENTIFIED FALCON	2	4	4	10
NORTHERN HARRIER	1	8	1	10
BALD EAGLE	2	0	3	5
RED-SHOULDERED HAWK	3	0	2	5
BROAD-WINGED HAWK	1	0	0	1
SWAINSON=S HAWK	1	0	0	1
REDDTAILED HAWK	12	0	15	27
ROUGH-LEGGED HAWK	15	4	10	29
UNIDENTIFIED BUTEO	4	3	10	17
TURKEY VULTURE	0	0	5	5
UNIDENTIFIED RAPTOR	7	3	10	20
TOTAL	164	170	368	702

MANITOU ISLAND BIRD SURVEY B 2002
WEST END C RAPTOR COUNTS
ALL DAYS - 5, 6, 7 MAY

	EAST	WEST	
BOUND	BOUND	TOTAL	
SHARP-SHINNED HAWK	160	56	216
COOPERS HAWK	1	0	1
UNIDENTIFIED ACCIPITER	34	4	38
A. KESTREL	12	3	15
UNIDENTIFIED FALCON	8	1	9
NORTHERN HARRIER	4	8	12
BALD EAGLE	3	6	9
BROAD-WINGED HAWK	0	36	36
REDDTAILED HAWK	1	6	7
ROUGH-LEGGED HAWK	4	4	8
UNIDENTIFIED BUTEO	0	332	332
TURKEY VULTURE	1	0	1
UNIDENTIFIED RAPTOR	11	15	26
TOTAL	239	471	710

SUNDAY 5 MAY

Observation Period - 8:40AM to 3:45PM

Winds - south and southeast

SHARPSHINNED HAWK	21	32	53
COOPERS HAWK	1	0	1
UNIDENTIFIED ACCIPITER	15	0	15
A. KESTREL	0	0	0
UNIDENTIFIED FALCON	1	0	1
NORTHERN HARRIER	1	2	3
BALD EAGLE	1	5	6
BROAD-WINGED HAWK	0	36	36
REDDTAILED HAWK	1	6	7
ROUGH-LEGGED HAWK	1	3	4
UNIDENTIFIED BUTEO	0	331	331
TURKEY VULTURE	0	0	0
UNIDENTIFIED RAPTOR	7	10	17
TOTAL	49	425	474

MANITOU ISLAND BIRD SURVEY B 2002
WEST END C RAPTOR COUNTS
MONDAY 6 MAY

Observation Period - 8:00AM to 3:00PM
Winds - Northeast

	EAST	WEST	
	BOUND	BOUND	TOTAL
SHARPSHINNED HAWK	121	4	125
COOPERS HAWK	0	0	0
UNIDENTIFIED ACCIPITER	19	1	20
A. KESTREL	10	3	13
UNIDENTIFIED FALCON	6	1	7
NORTHERN HARRIER	3	4	7
BALD EAGLE	1	0	1
BROAD-WINGED HAWK	0	0	0
REDDTAILED HAWK	1	0	1
ROUGH-LEGGED HAWK	3	1	4
UNIDENTIFIED BUTEO	0	1	1
TURKEY VULTURE	0	0	0
UNIDENTIFIED RAPTOR	0	0	0
TOTAL	164	15	179

Observation Period - 7:30AM to 12:30PM

TUESDAY 7 MAY

Winds - North

SHARPSHINNED HAWK	18	20	38
COOPERS HAWK	0	0	0
UNIDENTIFIED ACCIPITER	0	3	3
A. KESTREL	2	0	2
UNIDENTIFIED FALCON	1	0	1
NORTHERN HARRIER	1	2	3
BALD EAGLE	1	1	2
BROAD-WINGED HAWK	0	0	0
REDDTAILED HAWK	0	0	0
ROUGH-LEGGED HAWK	0	0	0
UNIDENTIFIED BUTEO	0	0	0
TURKEY VULTURE	1	0	1
UNIDENTIFIED RAPTOR	4	5	9
TOTAL	28	31	59

MANITOU ISLAND BIRD SURVEY - 2002

MOST ABUNDANT RAPTORS AT WEST END

UNIDENTIFIED BUTEO	332	-- These birds were almost certainly Broad-winged Hawks.
SHARP-SHINNED HAWK	216	
BROAD-WINGED HAWK	36	
AMERICAN KESTREL	15	
NORTHERN HARRIER	12	
BALD EAGLE	9	
ROUGH-LEGGED HAWK	8	
RED-TAILED HAWK	7	

MOST ABUNDANT RAPTORS AT EAST END

SHARP-SHINNED HAWK	520
A. KESTREL	43
ROUGH-LEGGED HAWK	29
REDDTAILED HAWK	27
NORTHERN HARRIER	10
RED-SHOULDERED HAWK	5
BALD EAGLE	5
TURKEY VULTURE	5
PEREGRINE FALCON	5

MANITOU ISLAND BIRD SURVEY - 2002

EAST END B WATERBIRDS

	6 MAY	7 MAY	TOTAL
COMMON LOON	42	95	137
RED-THROATED LOON	4	0	4
RED-NECKED GREBE	45	26	71
D.C. CORMORANT	1	3	4
GADWALL	2	0	2
MALLARD	1	0	1
TEAL SPECIES	24	0	24
GREATER SCAUP	19	0	19
LESSER SCAUP	5	2	7
SCAUP SPECIES	10	0	10
LONG-TAILED DUCK	3	0	3
BUFFLEHEAD	10	7	17
C. GOLDENEYE	15	6	21
RED-BREASTED MERGANSER	66	26	92
MERGANSER SPECIES	20	15	35
UNIDENTIFIED DUCK	196	54	250
TOTALS	463	234	697

MANITOU ISLAND BIRD SURVEY - 2002

SEPTEMBER WATERBIRD COUNTS

September 9th - Hours 7 - 9:10AM and 3:10 - 6:40PM

Unidentified Waterbird	2
Common Loon	8
Red-necked Grebe	2
Canada Goose	27

September 10th - Hours 6:40 - 9:40AM and 11:45AM - 5:10PM

Unidentified Waterbird	65
Common Loon	6
Red-necked Grebe	320
White-winged Scoter	8

The weather in the early morning of the 10th was rather rainy and unsuitable for migration flights. About noon the weather cleared and the North winds continued.

MANITOU ISLAND BIRD SURVEY - 2002

POINT COUNT RESULTS

SPECIES	# OF COUNTS	TOTAL INDIVIDUALS
Winter Wren	21	35
Nashville Warbler	19	33
White-throated Sparrow	12	16
American Crow φ	10	13
Yellow-rumped Warbler	7	8
Red-eyed Vireo	6	7
Alder Flycatcher	4	6
Magnolia Warbler	5	6
Golden-crowned Kinglet	3	5
Black-capped Chickadee	4	5
Swainson=s Thrush	3	4
Red-breasted Nuthatch	4	4
American Redstart	3	4
Common Loon *	2	3
Yellow-bellied Flycatcher	3	3
Blue Jay	2	3
Mourning Warbler	2	2
Black and White Warbler	2	2
Black-throated Green Warbler	2	2
Least Flycatcher	2	2
Ovenbird	1	1
Ruby-throated Hummingbird	1	1
Veery	1	1
Northern Parula	1	1
Pine Siskin	1	1
Eastern Wood-Pewee	1	1
Song Sparrow	1	1
Brown Creeper	1	1
Common Yellowthroat	1	1
Blue-headed Vireo	1	1
Cedar Waxwing	1	1
Evening Grosbeak	1	1

This list contains all birds seen on any of the 22 point counts performed on Manitou Island on the 18th, 19th, and 20th of June 2002 by Joseph Youngman.

φ - Due to their loud calls and extensive movements, American Crows were probably over counted.

* - Common Loons were either flying over or heard only.

MANITOU ISLAND BIRD SURVEY - 2002

POINT COUNT LOCATIONS

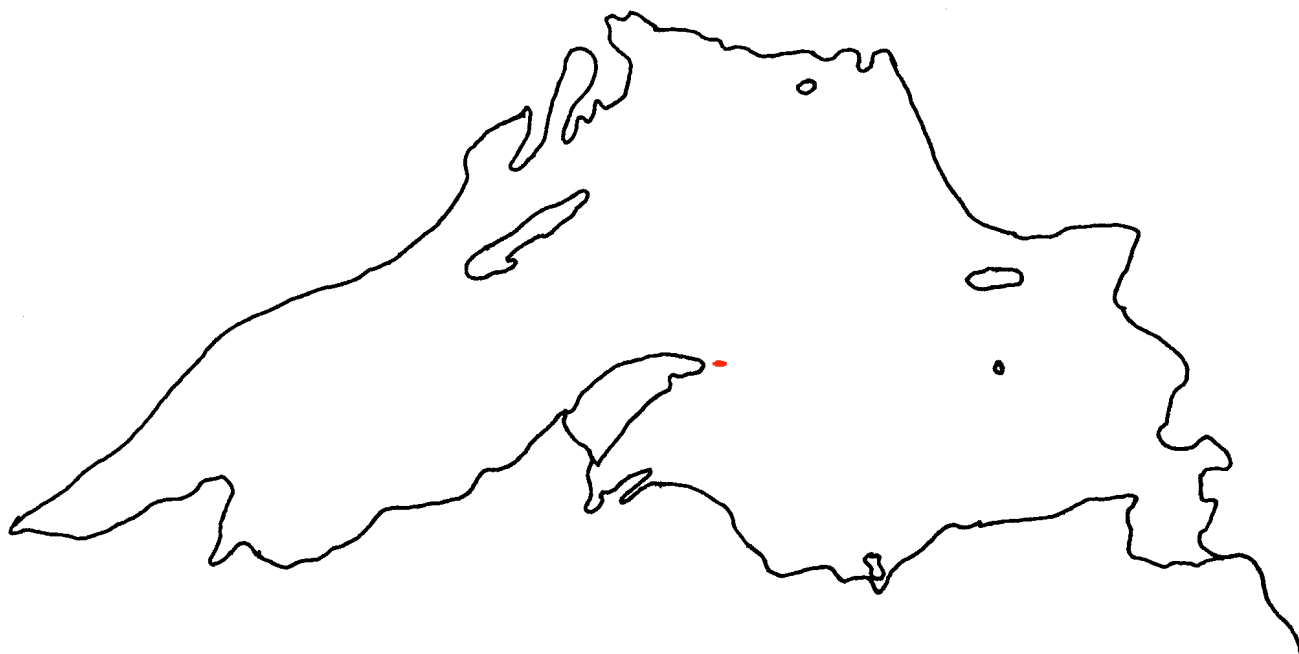
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Point Count #2	47° 24' 42	87° 36' 19	Point Count #13	47° 25' 15
Point Count #3	47° 24' 34	87° 36' 09	Point Count #14	47° 25' 29
Point Count #4	47° 24' 34	87° 36' 27	Point Count #15	47° 25' 15
Point Count #5	47° 24' 42	87° 36' 37	Point Count #16	47° 25' 15
Point Count #6	47° 24' 34	87° 36' 45	Point Count #17	47° 25' 03
Point Count #7	47° 24' 34	87° 37' 02	Point Count #18	47° 25' 15
Point Count #8	47° 24' 42	87° 37' 12	Point Count #19	47° 25' 15
Point Count #9	47° 24' 48	87° 37' 02	Point Count #20	47° 25' 15
Point Count #10	47° 24' 54	87° 37' 12	Point Count #21	47° 25' 05
Point Count #11	47° 24' 53	87° 37' 32	Point Count #22	47° 25' 07



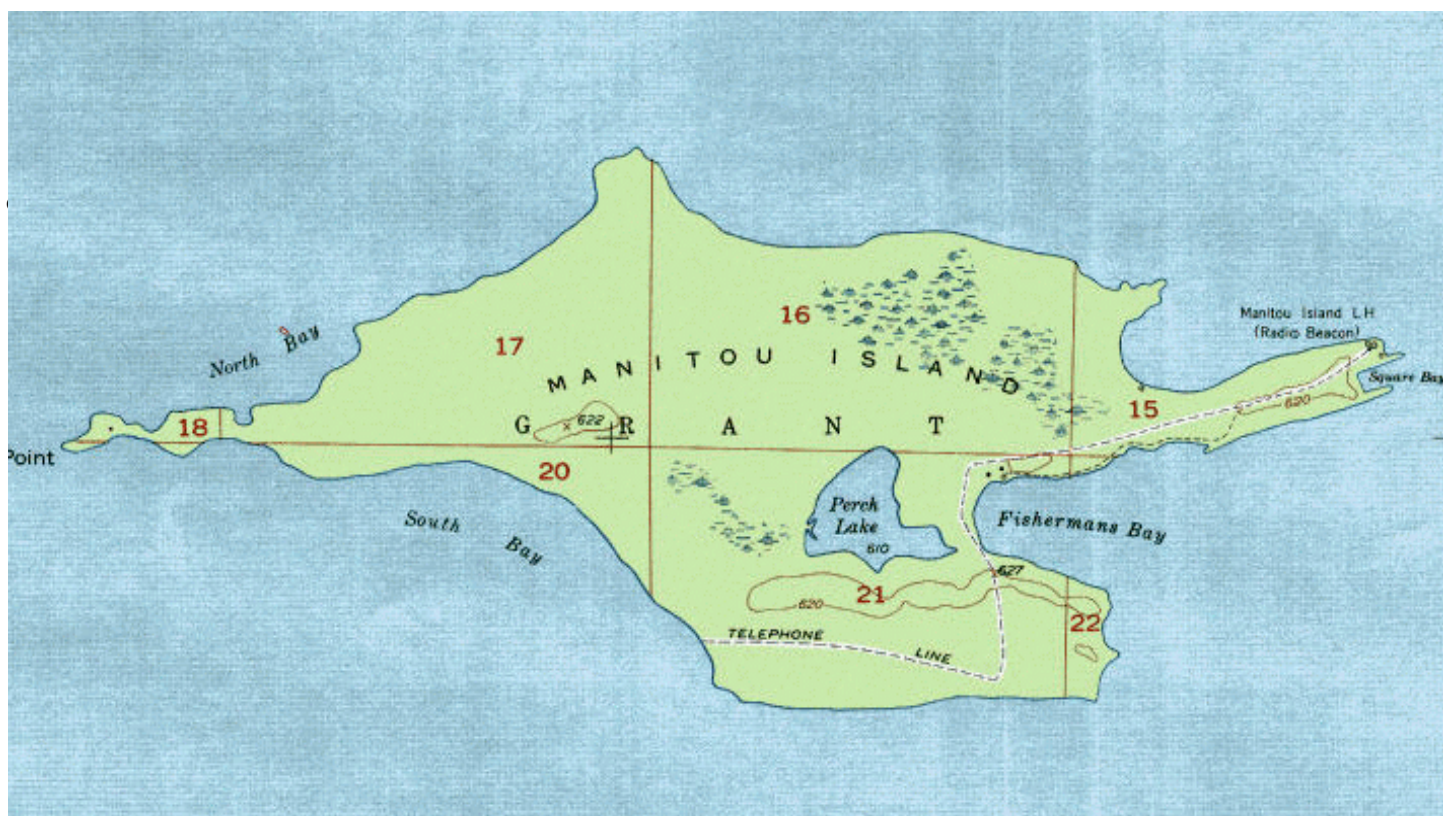
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MANITOU ISLAND IN LAKE SUPERIOR

Manitou lies three miles east of the eastern tip of the Keweenaw Peninsula. From Manitou, Isle Royale lies 60 miles to the NW, Michipicoten Island lies 76 miles to the ENE.



MANITOU ISLAND BIRD SURVEY - 2002



OBSERVERS ON EACH VISIT TO MANITOU

May Visit 4th - 7th
Heidi Anderson
Joseph Kaplan
Marj Krumm
Ray Krumm
Joseph Youngman

June Visit 17th - 20th
Joseph Kaplan
Jake Musser
Keren Tischler
Joseph Youngman

July Visit 13th - 16th
Jake Musser
Joseph Youngman

September Visit 8th - 10th
Ray Krumm
Greg Kudray
Joseph Youngman

All observers donated their time for this project.

MANITOU ISLAND BIRD SURVEY

TOTAL EXPENSES for 2002

January	84.74	Motorola FRS radios (4)
February	179.53	Hummingbird VHF Radios (2)
March	20.35	AA Batteries (16)
March	69.94	Color and B&W Printer Ink
March	16.92	Antenna Adaptors for VHF Radios
April	9.96	Color Print Film (2 Rolls)
April 28.49	AA Batteries (48)	
May	400.00	Charter Boat - Transportation to Island
June	400.00	Charter Boat - Transportation to Island
July	400.00	Charter Boat - Transportation to Island
August 23.00	Film Developing	
August	18.19	Roll of slide film and developing
September	20.00	Videotape
September	100.00	2 nd Charter Boat - Transportation to Island
October	100.00	Satellite Photo CD=s
October	25.42	Computer Zip Discs and pens

Actual Expenses - 1896.54

Projected Budget - 1,800

The funding sources for the Manitou Island Bird Survey for 2002 were

- MDNR Non-game Heritage Grant
- Copper Country Audubon Club
- Michigan Breeding Bird Atlas II

MANITOU ISLAND BIRD SURVEY - 2002

PROMOTIONS

In early June, I wrote a press release for our project (see next page). I distributed that release to The Daily Mining Gazette newspaper in Houghton, WGGL - FM in Houghton and WNMU-FM in Marquette.

Throughout the year I posted updates about the Manitou Island Bird Survey on the Message Board at the Copper Country Sightings Page on the web. http://www.northbirding.com/forums/cc/thread_open.html

In October, I gave a PowerPoint type presentation to the Copper Country Audubon Club at the Forestry Building at MTU.

In December, I am scheduled to give a presentation to the Marquette chapter of the Audubon club. In these presentations, I mention all funding sources for the Manitou Island Bird Survey including the MDNR Heritage Grant.

7 JUNE 2002
PRESS RELEASE

MANITOU ISLAND BIRD SURVEY

Four Keweenaw bird people are working on a project to document the birds of Manitou Island. Manitou Island is a 1000 acre island lying three miles east of the tip of the Keweenaw peninsula. A three day trip was made in early May to check on the spring raptor migration and the plan includes three more three day visits spread throughout the summer and fall. Two summer visits in June and July will attempt to document the breeding birds. A state-wide breeding bird atlas project has just gotten underway and the Manitou project will be the first time anyone has studied the breeding birds there. The last visit, planned for September, would document the large numbers of waterbirds that fly past Manitou as well as hawk and songbird migration. The plan calls for the team and their gear to be ferried out to the island by a large charter boat from Copper Harbor. The observers are all donating their time but some funding was needed to hire the charter boat. Funding for the project comes from Copper Country Audubon Club, Michigan Breeding Bird Atlas and a Michigan DNR Non-Game Wildlife Grant. The project was made possible by citizens who contributed to the Non-Game Wildlife Fund on the Michigan income tax form or by a direct donation to the Fund.

Contact person for this project

Joseph Youngman
Chassell, Michigan
523-4416