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A Guide to the Birds of the Hiawatha National Forest

including
Directions to Popular
Birding Spots

West Unit
Rapid River/Manistique
and Munising Ranger
Districts

Compiled by Dave Evers



A publication of
Wildlife Unlimited
of Delta County

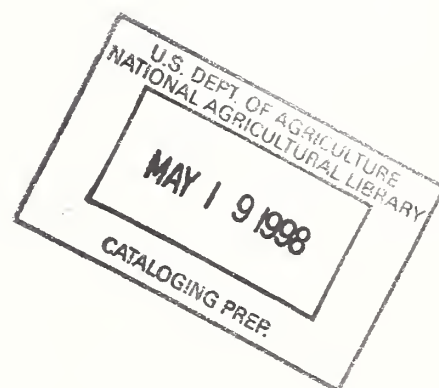
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General Description of Area and Avifauna

The Hiawatha National Forest is located in the Upper Peninsula of Michigan. At 46 and 47 degrees North latitudes, the vegetation is a transition between the eastern deciduous forest to the south and the boreal forest to the north. The glaciers that retreated 10,000 years ago left behind a variety of landforms: eskers, till plains, end moraines, bogs, and many inland lakes. These landforms provide different ecological conditions for the development of a diversity of plant communities. Tree species associated with boreal forest intermix with those associated with deciduous forest to create a great diversity of forest types including northern hardwood forest, upland pine forest, and lowland conifer forest. The Hiawatha National Forest also borders on three of the Great Lakes: Superior, Michigan, and Huron, which provide a great variety of shoreline habitats. The ecotone between the boreal and deciduous forests, the variety of geological landforms, as well as the proximity to the Great Lakes, create a number of different habitat types which translates into a high diversity of bird species and vast birding opportunities on the Forest. Over 263 bird species have been recorded on the Forest.



The avifauna of the Hiawatha National Forest consists largely of short distance and long distance migrants rather than resident bird species. A migration strategy permits birds to take advantage of an abundance of food in spring and summer precipitated by the flush of insects in this northern climate, and to avoid the limited food resources in the winter. Only a small number of bird species can survive the winter by exploiting items from the limited available food resources. Small rodents offer a food source for several owl species; these are either resident species such as the Barred Owl or visitors from the north such as the occasional Snowy Owl or Great Gray Owl. A number of finches (such as Evening Grosbeak, White-winged Crossbill, Red Crossbill, Pine Siskin and Pine Grosbeak) exploit conifer seed resources. Three woodpeckers (Downy, Hairy, and Black-backed) make it through the winter by feeding on dormant woodboring insects. Three Grouse species (Ruffed, Spruce, and Sharp-tailed) feed on aspen and birch catkins and on dormant buds.

The Hiawatha National Forest offers many different birding experiences that vary with habitat and season. Each of the four seasons provides unique birding opportunities. Within each season the chance of seeing a certain species is dependent on its abundance, period of activity, habitat preference, and observability (i.e. colors, size, vocalizations). Newly arriving waterfowl and shorebirds can be spotted on lakes well before the ice is gone, and many migrating species can be observed at peninsula points in early spring through late fall. Bogs, estuaries, inland lakes, rivers and streams, deciduous

forest, large openlands and pine savannas are some of the habitats the birder can explore.



Sharp - tailed Grouse

The number of breeding species (approximately 151) on the Forest varies among years depending on availability of food and habitat, weather, and chance. Some species such as the Sharp-tailed Grouse, Yellow Rail, Long-eared Owl, and Short-eared Owl are limited in their distribution on the Forest and in the Great Lakes Region. In some years it is questionable if they nest due to their low numbers. Other species which were formerly rare are now found in increasing numbers due to reintroductions or improved habitat conditions. Most are raptors (Bald Eagle, Osprey, Red-shouldered Hawk, Peregrine Falcon, and Merlin) recovering from the effects of organochlorines that were prevalent in the 1960s.

There are 71 recorded species of migrants that only pass through the Hiawatha National Forest in spring and fall in migration to their breeding areas. In nearly all cases these migrants breed north of the Hiawatha. The number of migrants recorded for the Hiawatha will increase over time as more birders add their observations of vagrant species (e.g. birds that reside elsewhere but are thrown off course now and then) to the list.

Forest Management and Bird Conservation

The avifauna is an integral part of a forest ecosystem. Although the ecological role of birds will likely never be fully appreciated, birds play an important role in keeping insect and rodent populations in check and in dispersing seed of different vegetation. As the growing pastime trends of bird feeding and bird watching indicate, birds are also an important recreational resource. Populations of bird species respond readily to changes in forest structure and composition brought about by natural processes such as forest succession and disturbance, and can therefore be used as indicators of human induced alterations brought about by forest management. Birds make good study subjects for the understanding of biological processes such as population growth, predation, and physiology and for that they have scientific value. They have also been the first indicators of adverse health effects of many environmental contaminants such as DDT and PCBs.

The conservation of bird species plays an important part in forest planning and management. Both occur within the context of environmental laws directing that diversity and long-term viability of species are taken into account. The National Forest Management

Act of 1976 (NFMA) requires every National Forest to develop a comprehensive land and resource management plan which displays the goals and objectives the Forest Service hopes to reach. These Forest Plans include standards and guidelines which, in part, respond to NFMA's mandate to provide for "diversity of plant and animal communities". Standards and guidelines also incorporate requirements of the Endangered Species Act of 1973, which provides special protection to endangered and threatened species, including species that are threatened in only part of their range. The National Environmental Policy Act of 1969 requires completion of an environmental assessment using public input for "major federal actions" such as development of Forest Plans, timber cutting, trail building, wildlife habitat improvement activities, etc.

Using direction provided by the Forest Plan, resource professionals strive to manage the Forest to achieve a variety of outputs, including timber, recreation opportunities, and fish and wildlife habitat. Forest management can affect bird populations in two major ways, by changing the vegetation structure within a habitat and by changing the spatial arrangement of habitat types. Birds respond to vegetation components such as snags, dying trees, open or closed forest canopy, and shrub layer because they need these components for nesting and foraging. Forest management changes the amount and/or spatial arrangement of certain components and subsequently may result in changes to bird species composition. Guidelines are written into Forest Plans to ensure that vegetation components known to be needed by some groups of wildlife are not lost. For example, snags and large trees are retained in forest stands because they are an important component for cavity nesting species. On a broader scale, forest planning and management also strive to provide a diversity of habitats by emphasizing different wildlife groups in different management areas to ensure that habitat for all wildlife species is provided at any given time.



American Bittern

In recent years concern has mounted over reported declines of certain groups of long distance neotropical migrant birds. These are species that travel thousands of miles from Mexico, the West Indies, Central America, and South America to breed in the Northern United States and Canada. Management of these migratory species is challenging because they can be impacted by factors on the wintering ground, breeding ground, or along the migratory route, and their whereabouts are not usually known. Although the exact factors affecting population changes in these bird species is unknown, tropical deforestation, forest fragmentation on the breeding ground, and loss of habitat along the migratory routes have been implicated as possible causes. On the breeding ground, forest fragmentation has been associated with an increase in predation and cowbird parasitism in agricultural and suburban landscapes. With much of the original eastern deciduous forest

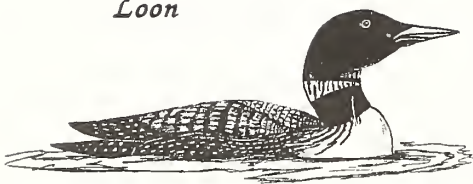
gone or fragmented, the Upper Peninsula's large tracts of unbroken forests could prove to be of regional importance for the conservation of many forest bird species.

An interagency program called "Partners in Flight" has also been established for the conservation of birds. This program provides the necessary coordination between different countries and regions for research and management of migratory species. As part of this coordinated management effort, Midwestern neotropical landbirds were ranked in a paper titled "Status of Neotropical Migrant Landbirds in the Midwest: Identifying Species of Management Concern" and was published in the September 1992 proceedings "Status and Management of Neotropical Migratory Birds" by Frank R. Thompson, Stephen J. Lewis, Janet Green, and David Ewert.

Birds of Particular Interest on the West Unit

The following species are birds that are rare, have special protection, or are of interest to the birding public. Some species are common and easy to see, such as the Common Raven. Others, such as the Yellow Rail take time and concentrated efforts and can usually only be found during certain times of the year. For each species, a general description about their status, seasonal occurrence, distribution, and habitat associations is provided. The best known observation sites on the West Unit are also given and are coupled with the Birding Spots section of this guide where relevant.

Loon



Common Loon (Federal Species of Management Concern and State Threatened)

This species is a common summer resident and spring/fall migrant. It may be found throughout the year on Lakes Superior and Michigan, but is very rare in winter. Breeding populations have declined dramatically since the 1980s when at least 16 lakes contained nesting pairs; only 4-5 nesting pairs are now known. Nonbreeding adults and subadults may be found on most interior lakes and along the Great Lakes shoreline from late April through mid-October.

Best Observation Sites: Interior - Little Round, Big Island, and Clear Lakes; Great Lakes shoreline - Munising Bay on Lake Superior and Ogontz Bay on Lake Michigan.

Double-crested Cormorant

This is Michigan's only breeding Pelicaniform. Populations of cormorants declined severely in the 1960s, believed to be primarily due to high levels of DDT and DDE in the Great Lakes. Populations began recovering in the 1970s and today the species is no

longer considered threatened in Michigan. Cormorants feed on small fish, which does not endear it to either commercial or sport fishermen. Although the species is known to feed on a variety of small fish (many of which are not game fish), the effects of cormorants on game fish populations has become a heated issue in recent years.

Best Observation Sites: Along Lakes Michigan and Superior. Good observation areas include Munising Bay, Little Bay de Noc, and Big Bay de Noc. Cormorants visit many inland lakes as well, including Moss, Big Island, and Pete's lakes.

American Bittern (Federal Species of Management Concern)

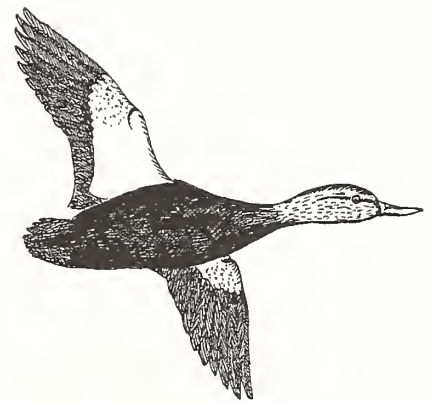
The American Bittern is a common summer resident and an uncommon spring/fall migrant. It is absent in winter. A bird of emergent and scrub-shrub wetland habitats, its diagnostic "thunder-pump" call is more often heard than seen. Individuals arrive in late April and call consistently through mid-June.

Best Observation Sites: Marshes along Forest Service Road (FR) 2236 are ideal; also check Scott's Marsh in Schoolcraft County (#12 Birding Spot), Nahma Marsh, and Marsh Lake in Delta County.

American Black Duck

A common summer and spring/fall migrant; rare in winter. Increasing hybridization with the Mallard is diluting its breeding population. There are notable declines in the Great Lakes. Breeding pairs prefer wooded lake shorelines. It is best distinguished from female or eclipse-plumaged mallards by its dark head and body, sharply contrasting with white wings and purplish wing patch bordered by black (mallards have two white wing bands bordering a purplish wing patch).

Best Observation Sites: Petes and Grassy lakes and neighboring lakes within a 5-mile radius are areas of abundance. Also the Indian River and many small inland lakes.



American Black Duck

Mergansers

Three species of Mergansers (Common, Red-breasted, and Hooded) are all common in summer and during migration. Common Mergansers remain in winter on open water areas on Lakes Superior and Michigan. Common and Red-breasted Mergansers nest in tree cavities along wooded lakes and rivers. Smaller rivers, streams, and beaver ponds are preferred by Hoodeds. Common and Red-breasted Mergansers frequent the Great Lakes shoreline (particularly Lake Superior); the Red-breasted is usually restricted to these habitats for breeding.

Best Observation Sites: Check beaver ponds in June and July for female Hooded Mergansers with broods. Common and Red-breasted Mergansers can be commonly found around Grand Island

and in Munising Bay on Lake Superior (#11 Birding Spot), at Big Bay de Noc in Lake Michigan, and at the mouth of the Sturgeon River.

Ring-necked Duck

The most common duck found breeding on interior lakes prefers boggy situations but can be found on any sedge-dominated water body, usually surrounded by conifers. It migrates through the area from mid-April to mid-May. Large numbers can be found along the Great Lakes shorelines in October.

Best Observation Sites: During migration at Portage and Peninsula (#6 Birding Spot) Points. Broods can be seen on many of the small lakes on the Munising area.

Bald Eagle (Federal and State Threatened)

The Bald Eagle is a fairly common permanent resident. Breeding individuals usually remain within the Great Lakes Region throughout the winter. Young disperse into the southeastern U.S. Breeding pairs begin nesting in late March in large stick nests that can be reused for many years. Nests usually are at the edge of water and are prominent. Individuals are distributed throughout the Forest; pairs breed on inland lakes and the Great Lakes shoreline. Nesting pairs on Lakes Superior and Michigan produce fewer fledged young possibly due to higher contaminant loads in the prey.

Best Observation Sites: Whitefish River, Ogontz Bay on Lake Michigan and Munising Bay on Lake Superior are some of several locations to search.

Osprey (State Threatened)

This strict fish-eater is a common summer resident and spring/fall migrant; it is absent in winter. Breeding pairs frequent inland lakes and Great Lakes shoreline and are distributed throughout the Forest. The supercanopy nests are usually placed in dead trees in openings adjacent to water or in conifer swamps. Ospreys are typically seen hovering over water, searching for fish.

Best Observation Sites: AuTrain Lake, Whitefish and Fishdam river mouths, and Ogontz Bay on Lake Michigan are ideal.

Red-shouldered Hawk (Federal Species of Management Concern and State Threatened)

This species prefers extensive mature floodplains or forested wetlands interspersed with marshy openings. It also nests in northern hardwood forest. In southernmost Michigan the Red-shouldered Hawk has been displaced by the Red-Tailed Hawk. Highest populations of Red-shouldered Hawks occur in the northern Lower Peninsula. Because of its reclusiveness, the population status of this species is not well known for the Upper Peninsula. In recent years, new breeding pairs have been encountered on the Hiawatha through intensive woodland raptor surveys. This bird may be first seen in



Ring - neck Duck

late February or early March. Immature brown birds are commonly seen migrating into early June.

Best Observation Sites: Check Forest Road (FR) 2231 and listen for its loud screaming calls. Individuals can become very agitated near nest sites. Blue Jays sometimes imitate these calls.

Northern Goshawk

This is a secretive and uncommon permanent resident. Wintering individuals may shift south during winter prey shortages, although breeding pairs return in mid-March. This species prefers large, dense stands with little understory. On the Hiawatha National Forest, nesting pairs are most commonly found in northern hardwood forest. Nests and sites are reused and defended vigorously if approached by intruders. Primary prey might vary regionally but ruffed grouse and snowshoe hare could be important prey species. Populations of goshawk seem to fluctuate from year to year. These fluctuations are poorly understood because the species wanders over a large area. It is likely that population fluctuations could be due to changes in prey base.

Best Observation Sites: Extremely hard to find. Late March migrants may be found along Lake Michigan shoreline concentration points.



Northern Goshawk

Peregrine Falcon (Federally and State Endangered)

A rare but increasing summer resident and migrant; it is absent in winter. This raptor requires vast open spaces for foraging and cliffs for nesting. The species, although known to have nested along Lake Superior shores, had been extinct in Michigan for decades. In recent years, birds were hacked at Grand Island and some were released at Pictured Rocks National Lakeshore. A pair nested at Grand Island in 1995, and a nesting pair was also present in 1994 at Pictured Rocks National Lakeshore. These nesting occurrences could be an encouraging sign that the species is making a comeback.

Best Observation Sites: Around Munising Bay and Grand Island (#11 Birding Spot) in Lake Superior. Some migrating birds have been seen in September on the Stonington Peninsula.

Spruce Grouse

This is an extremely rare bird on the West Side (Rapid River/Manistique and Munising Ranger Districts) of the Hiawatha National Forest, although breeding populations are well known on the East Side (St. Ignace and Sault Ste. Marie Ranger Districts). This species is associated with boreal forest and areas where tall jack pine forest mixes with spruce-fir forest. It is a permanent resident and feeds exclusively on needles in winter. Spruce Grouse are extremely tame but hard to find outside the courtship season, during which males choose small openings within dense coniferous forest to attract females.

Best Observation Sites: Hard to find except during courtship from late April to mid-May. Best chance is near Wheelbarrow Lake in the spruce bogs or along the Haywire Trail (#13 Birding Spot). The species has also been reported in areas along FR 2235.

Sharp-tailed Grouse

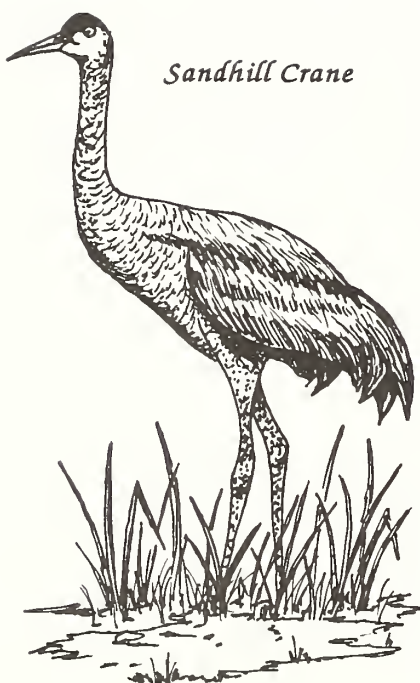
Sharp-tailed Grouse need large open areas. Breeding birds congregate on leks or dancing grounds in the spring. Leks are usually on knobs or uplands dominated by herbaceous growth adjacent to open or shrub dominated wetlands. Two different subspecies (prairie and bog) may exist in the Upper Peninsula. Populations of Sharp-tailed Grouse increased dramatically following widespread deforestation around the turn of the century. Since then, the recovery of logged forests, aggressive reforestation programs, and declining agricultural lands have left few large open areas needed by this species for leks and for nesting. Forest management strives to maintain this species by providing some permanent large open areas through active management. Temporary openings are also provided in areas of clearcut jack pine. Several lek areas exist on the Hiawatha National Forest.

Best Observation Sites: Best seen during courtship from late April to mid-May. Courtship begins before sunrise and lasts 2-3 hours. Search the 8-mile area (Schoolcraft County Road 449 just south of M-94) or the stump prairies south of Ready Lake during this time. In winter, grouse feed in upper aspen branches for tender buds and may also be seen in Scott's Marsh (#12 Birding Spot).

Yellow Rail (Federal Species of Management Concern and State Threatened)

This is a rare spring and summer breeding resident that is absent in winter. Its status is not fully known since it calls primarily at night from mid-May to mid-June. This rail is associated exclusively with extensive sedge meadows, specifically with the sedge *Carex lasiocarpa*. The invasion of woody growth or fluctuations in standing water cause Yellow Rails to vacate otherwise suitable areas. Its clicking call, similar to someone typing, is diagnostic and can carry for over a mile.

Best Observation Sites: There is high potential to observe this bird at Scott's Marsh (#12 Birding Spot) and in sedge meadows at the mouth of the Whitefish River. A breeding populations of 30-50 calling males is also located in nearby Seney National Wildlife Refuge.



Sandhill Crane

Sandhill Crane

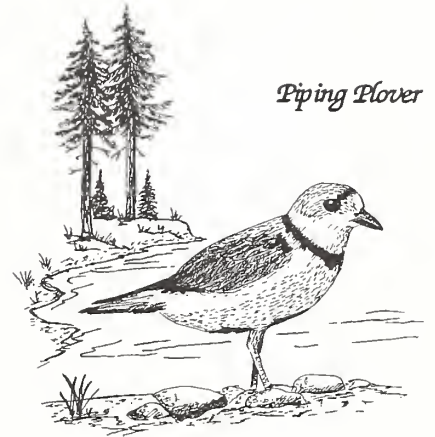
Sandhill Crane populations have been increasing steadily after being almost extirpated from Michigan. The species is commonly seen and heard in openlands on the Forest. It breeds in bogs on the Stonington Peninsula, around Ramsey and Lost lakes, and in

Scott's Marsh. The Upper Peninsula residents migrate south through Wisconsin and gather in the Jasper-Pulaski, Indiana area before returning to their wintering grounds in Georgia and Florida. Spring migration routes also swing west of Lake Michigan.

Best Observation Sites: Drive FR 2233 and 2235. The Ready Lake, 8-mile, and Ramsey Lake areas are good places to observe Sandhill Cranes. They are most vocal from late April through May but can be frequently heard calling into the summer. They begin congregating in September for their migration south.

Piping Plover (Federally and State Endangered)

Do not expect to find this highly endangered species on the West Side of the Forest. If found during any season report to a USFS field office. Less than 20 nesting pairs are left in the Great Lakes, all along the cobblestone-sand beaches of the eastern U.P. and northern Lower Peninsula. Piping Plovers are also found on the Atlantic Coast and Great Plains, but Great Lakes breeding populations cannot depend on outside recruitment.



Piping Plover

Upland Sandpiper (Federal Species of Management Concern)

This summer resident is associated with old fields, pasture and open grassland areas. It nests in loose colonies in open grasslands and stump prairies. While populations of Upland Sandpipers have declined in Southern Michigan, they have increased in the Upper Peninsula. The species is frequently encountered in large openings throughout the Forest.

Best Observation Sites: Large openings on the Stonington Peninsula, The Birch Farm (#7 Birding Spot) in Delta County, 8-mile area in Schoolcraft County, and stump prairies south of Ready Lake in Alger County contain nesting colonies.

Black Tern (Federal Species of Management Concern)

A breeding resident that prefers emergent wetlands bordering lakes. It will not typically use bog lakes unless emergent and/or submergent vegetation is present. Nesting colonies are relatively site faithful. Presence of terns in summer does not necessarily mean nesting occurs in the area.

Best Observation Sites: Search the mouth of the Rapid River, the mouth of the Ogontz River, and along much of the Lake Michigan shoreline; it is rare on the Lake Superior shoreline.

Barred Owl

A common and widely distributed permanent resident, the Barred Owl is found in most forested areas, although it prefers northern hardwoods. Its nest sites are in abandoned hawk and corvid nests and in large cavities in deciduous trees. This is the most typical owl found on forested lands. Its large wingspan makes it appear more formidable than expected.

Best Observation Sites: FR Roads 2229 and 2236 may provide views of this owl especially if you imitate the “who-cook-for-you” call. Also commonly heard on the Stonington Peninsula and in the hardwood forest around Petes, Corner, and Triangle lakes.

Northern Saw-whet Owl

The breeding status of this owl is hard to determine unless night-time surveys are made when males arrive on territory in late March; males will regularly call through early May if they are unpaired. Surveys on the Sault Ste. Marie and St. Ignace Ranger Districts indicate it is common and widely distributed in a wide variety of habitats, including jack pine plains, clearcut edges, northern and mixed hardwoods, and spruce-fir swamps. Surveys on the West Side have found birds in aspen stands and in spruce-fir stands.

Best Observation Sites: Check Peninsula Point (#6 Birding Spot) during spring (mid-April through May) and fall (mid-September to late October) migration. The species has also been heard along Forest Roads 2231, 2235, and 2233.

Black-backed Woodpecker

This rare, secretive, and wandering species is typically associated with spruce bogs, jack pine plains, and cutover or burned conifer stands. Individuals are highly mobile and rarely remain in an area unless nesting. Newly burned areas can provide suitable year-round habitat for several years, depending on the extent of beetle and other insect infestations.

Best Observation Sites: In 1990, approximately 1 square mile of jack pine forest burned just east of Rapid River (along U.S. 2). Within a month, black-backed woodpeckers responded to this newly created habitat and by September at least 19 individuals were present. During the next 3 years, several nesting pairs were confirmed. It is a permanent resident, although individuals wander extensively. It may also be found in the dead and dying timber within beaver-flooded areas along the Haywire Trail (#13 Birding Spot). Black-backed Woodpeckers are sometimes observed in mature cedar swamps in the winter along FR 2236.



Pileated Woodpecker

Pileated Woodpecker

This crow-sized woodpecker is a permanent resident and is common throughout the Hiawatha. For nesting, the Pileated Woodpecker is associated with older forest with large snags and trees that can accommodate its large nest cavity. In winter it is often observed in cedar and lowland mixed forest. Listen for its penetrating, flicker-like call. It is frequently seen flying across roads or fields and can be separated at a distance from other large birds by its undulating flight.

Best Observation Sites: Occasionally found nesting in older northern hardwood forest but also in mature aspen stands. Feeds

regularly at the base of live and dead trees. Look for its characteristic large, rectangular feeding cavities. Productive sites will encourage daily returns for 1-2 weeks. Pileated Woodpecker nests have been encountered in northern hardwood forests around Petes Lake in Schoolcraft County. In winter, they are often encountered in mature lowland conifer forest with a component of old aspen and paper birch.

Olive-sided Flycatcher

Preferred habitats of the Olive-sided Flycatcher are open spruce-tamarack bogs, wet openings, and upland pine clearcuts. This migrant arrives in late May and will regularly announce its territory at the top of a conspicuous snag. It overwinters in northern and central South America and is one of the latest spring migrants and the earliest fall migrants in the Forest.

Best Observation Sites: Listen for this songbird's clear "Quick-three-beers" whistle along the Haywire Trail (#13 Birding Spot).



Olive - sided Flycatcher

Gray Jay

A species representative of the northern forests, its southern range borders the Upper Peninsula. This jay is a regular resident of much of the Upper Peninsula but becomes rare in the central parts, including the West Side of the Hiawatha. It depends on conifer habitats such as spruce-tamarack bogs, northern white cedar swamps, and jack pine plains. Although much more likely to be found in winter, nesting pairs may be present in some years. Eggs may be laid as early as March. The black-plumaged young roam with the parents by May. Family groups commonly follow river corridors.

Best Observation Sites: In winter, dispersing jays may frequent suet feeders or roadsides searching for roadkills. Past observations include the northern white cedar stands along FR 2231 and FR 2236 (west of the West Branch of the Whitefish River); also check Scott's Marsh (#12 Birding Spot) and mixed conifer forest around the Ramsey and Lost lakes areas.

Common Raven

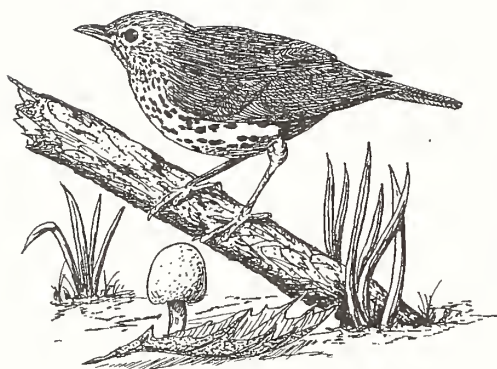
This highly visible, permanent resident is increasing through the Upper Peninsula. At one time, lumbering practices had significantly reduced its breeding population. Now, prevalent food supplies from roadkills and human garbage has allowed a possibly higher-than-historical local population. Ravens are commonly found along highways throughout the year and can be distinguished by the similar American Crow by their larger size and hoarser call. When taking flight from the ground, crows take flight immediately, while ravens take a couple of hops to gain flight.

Best Observation Sites: It has a ubiquitous distribution and may be best observed in winter while feeding on roadkill deer carcasses. It is much more secretive during the nesting season.

Boreal Chickadee

This is a very rare bird on the forest; it is found more regularly on the East Side, north of Trout Lake in Mackinac County. It prefers closed spruce-fir forests interspersed with aspen or birch stands; it also frequents jack pine plains. This permanent resident will form flocks in late spring/early summer and in the fall as individuals disperse. It is typically found in mixed flocks with Black-capped Chickadees, but can usually be found by its more nasal calls and its habit of using the tops of trees or prominent branches.

Best Observation Sites: Relatively unknown; the Michigan Breeding Bird Atlas indicates occurrences of probable and confirmed breeding south of Munising. It is found in the spruce forests near Wheelbarrow Lake and along the Haywire Trail (#13 Birding Spot).



Wood Thrush

Wood Thrush

The Wood Thrush is most frequently encountered in moist older deciduous woods. The beautiful, flute-like “ee-oh-lay” song of this species is characteristic. Populations of the Wood Thrush may be expanding northward although the species is still more common in the Lower Peninsula.

Best Observation Sites: Fairly common around the Clear Lake area. Commonly encountered in the hardwood forest around Corner and Bass lakes in Schoolcraft County.

Swainson's Thrush

This long distance, neotropical migrant returns in mid-May and establishes territories throughout the Upper Peninsula. Although in Canada the species is associated with boreal forest, on the Hiawatha National Forest it is often encountered in northern hardwood forest with a hemlock component. The Michigan Breeding Bird Atlas shows the highest densities of Swainson's to be in the central Upper Peninsula. Most individuals begin migration in August on their way to their Central and South American wintering grounds.

Best Observation Sites: Encountered throughout the Forest, but check older northern hardwood forest on Grand Island, around Petes and Grassy lakes in Alger County and Triangle and Bass lakes in Schoolcraft County.

Golden-winged Warbler (Federal Species of Management Concern)

Even though this is a bird of common, successional habitats such as willow and alder thickets, riparian zones, young aspen stands, and old clearcuts, it is one of the highest rated species by the Midwest Partners in Flight group. Regional population trends are downward and it is now rare in the southern Lower Peninsula. Its range is

expanding northward and it is becoming more widespread in the Upper Peninsula (particularly in the western half) and the Forest. Hybridization and competition with the more aggressive Blue-winged Warbler are driving the changes in distribution for the Golden-winged Warbler. It arrives on its Michigan breeding grounds in early to mid-May and remains until August. This neotropical migrant overwinters from Mexico's Yucatan Peninsula south through Central America to Columbia and northern Venezuela.

Best Observation Sites: Listen for its buzzy song at Scott's Marsh (#12 Birding Spot) and in the Dunklee area in Alger County.

Northern Parula

This species is associated with northern coniferous forest containing *Usnea* moss with which it builds its nest. Bird surveys have encountered the Northern Parula in wet boggy spots in northern hardwood forest. These wet spots sometimes include northern cedar and hemlock and have a more open canopy than the surrounding hardwoods. This Central American - West Indian species is found in the Forest for four months (mid-May to mid-September). It is rare on the Forest and is mainly distributed along the Lake Superior shoreline.

Best Observation Sites: Listen for its ascending buzzy song along the shore at Munising Bay and in wet areas along FR 2231 and FR 2236 .



Northern Parula

Black-throated Blue Warbler

This neotropical migrant requires northern hardwood forests with a thick undergrowth of coniferous or deciduous woody vegetation. This fairly common warbler primarily occurs in the northern part of the Forest and prefers mesic deciduous forest dominated by sugar maple, sometimes in nearly homogeneous stands, but usually mixed with white and yellow birch, red maple, American beech, and aspen. The Black-throated Blue Warbler arrives on its Upper Peninsula nesting areas in mid-May and its buzzy "zur zur zrrreeee" can be heard into mid-September. It overwinters nearly exclusively in the West Indies.

Best Observation Sites: Mature forest stands with a well developed shrub layer around Corner Lake, Bass Lake, and Pete's Lake in Schoolcraft County, and around Round Lake in Delta County.

Blackburnian Warbler

Like many warblers, this is a species of mixed forests. It is an indicator of mature coniferous forests and is most commonly encountered in hemlock dominated northern hardwood stands. Mature mesic stands dominated by eastern hemlock, white spruce, white pine, and balsam fir are also used. It arrives in mid-May and most individuals are en route to their wintering grounds by mid-

September. This warbler overwinters from Costa Rica south to northwestern South America.

Best Observation Sites: Its step up buzzy “zip zip zip titt tseeeee” can be heard from the tallest conifers at the intersection of County Road 440 and Forest Highway 13 as well as other areas with mature conifers. Frequently heard in hemlock stands around Petes Lake, Grassy Lake and Triangle Lake.



Cerulean Warbler

Cerulean Warbler

This primarily southern Michigan species is rated the third highest species of concern on the list of neotropical migrants developed by the Midwest Partners in Flight group (only the Kirtland’s and Bachman’s warblers, which are both federally endangered, were higher). It is characteristic of extensive stands of mature deciduous bottomland and swamp forests, but does use drier sites sometimes with a mixture of conifers. The Michigan Breeding Bird Atlas confirmed breeding in one site (southeastern Marquette County) and possible or probable breeding in 5 other blocks. This warbler returns by late May and apparently departs by early September to its wintering grounds in the undisturbed montane forests in northern South America.

Best Observation Sites: Mature upland or lowland areas, especially in Alger County.

Connecticut Warbler

This fairly rare species has a limited breeding and winter range, although human-related threats to its breeding range are minimal. Its habitat preferences are varied and include dry deciduous forests such as aspen stands, dry coniferous areas usually comprised of jack pine, mesic mixed stands of spruce-fir and aspen, and wet coniferous forest of spruce and tamarack. Deciduous clearcuts are also used. This is a very late spring arrival, sometimes not arriving on territory until early June and leaving the Upper Peninsula by mid-September. It overwinters in northern South America.

Best Observation Sites: The Michigan Breeding Bird Atlas shows less than a half dozen summer sightings from 1983 to 1989. Individuals appear to habitually use different territories between years; it’s rare to find a location that’s continuously used. Check the Haywire Trail (#13 Birding Spot). It can be found regularly in the eastern unit of the Forest on FR 3344, north of Trout Lake.

Clay-colored Sparrow

This primarily western species is a fairly common and widespread northern Michigan summer resident. It arrives in mid-April and remains into early November. It can be found in dry or wet openings scattered with cherry, willows, or pines. Young, open pine plantations or clearcuts can harbor this species. It winters in southern Texas, Mexico, and parts of Central America.

Best Observation Sites: Listen for the low, deliberate buzzy call at Birch Farm (#7 Birding Spot); also in wet openland with shrub encroachment on the Stonington Peninsula in the area of the Stonington Community Hall.

Grasshopper Sparrow (Federal Species of Management Concern)

Probably limited to the southernmost parts of the Forest. It prefers short or tall grasslands with orchard grass, alfalfa, and clover. It returns in late April from its southern U.S.-Mexico wintering grounds. Most birds leave Michigan by late October.

Best Observation Sites: Regularly found at Birch Farm (#7 Birding Spot) and in old fields and pastures on the Stonington Peninsula.

Le Conte's Sparrow

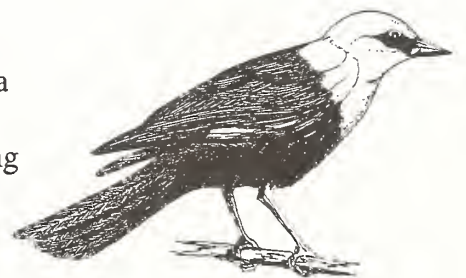
This is a species of strict habitat requirements. It is typically associated with extensive emergent wetlands of grass, sedge, and rush. In the Seney National Wildlife Refuge dozens of singing males are found in a several square mile expanse of herbaceous vegetation with minimal woody vegetation. This habitat type continues west into the forest. This sparrow also occurs sporadically in upland, short-grass areas such as pastures and hayfields. It arrives on the breeding grounds in late April and early May. Autumn migration begins in September, peaking in late September and early October. Migrants overwinter in the southern U.S. with highest winter densities in the southeastern Great Plains.

Best Observation Sites: The song of the Le Conte's Sparrow is very insect-like, and although it can be heard at quite a distance, it can be easily overlooked. It's best heard at night and could be considered a nocturnal singer. Listen in Scott's Marsh (#12 Birding Spot) or check some of the open areas along Haywire Trail (#13 Birding Spot). The species has also been encountered at Birch Farm and in pasture lands on the Stonington Peninsula.

Yellow-headed Blackbird

Primarily a western species, it has colonized some southern Michigan marshes, and is found in parts of the Upper Peninsula. This is a bird of cattail marshes, rarely found in any other habitat in Michigan. It arrives in early April and departs by early October, wintering chiefly in the southwestern U.S.

Best Observation Sites: A colony resides at the mouth of the Whitefish River, near the town of Rapid River (#1 Birding Spot). Another colony is at Portage Point, south of Escanaba (#3 Birding Spot).



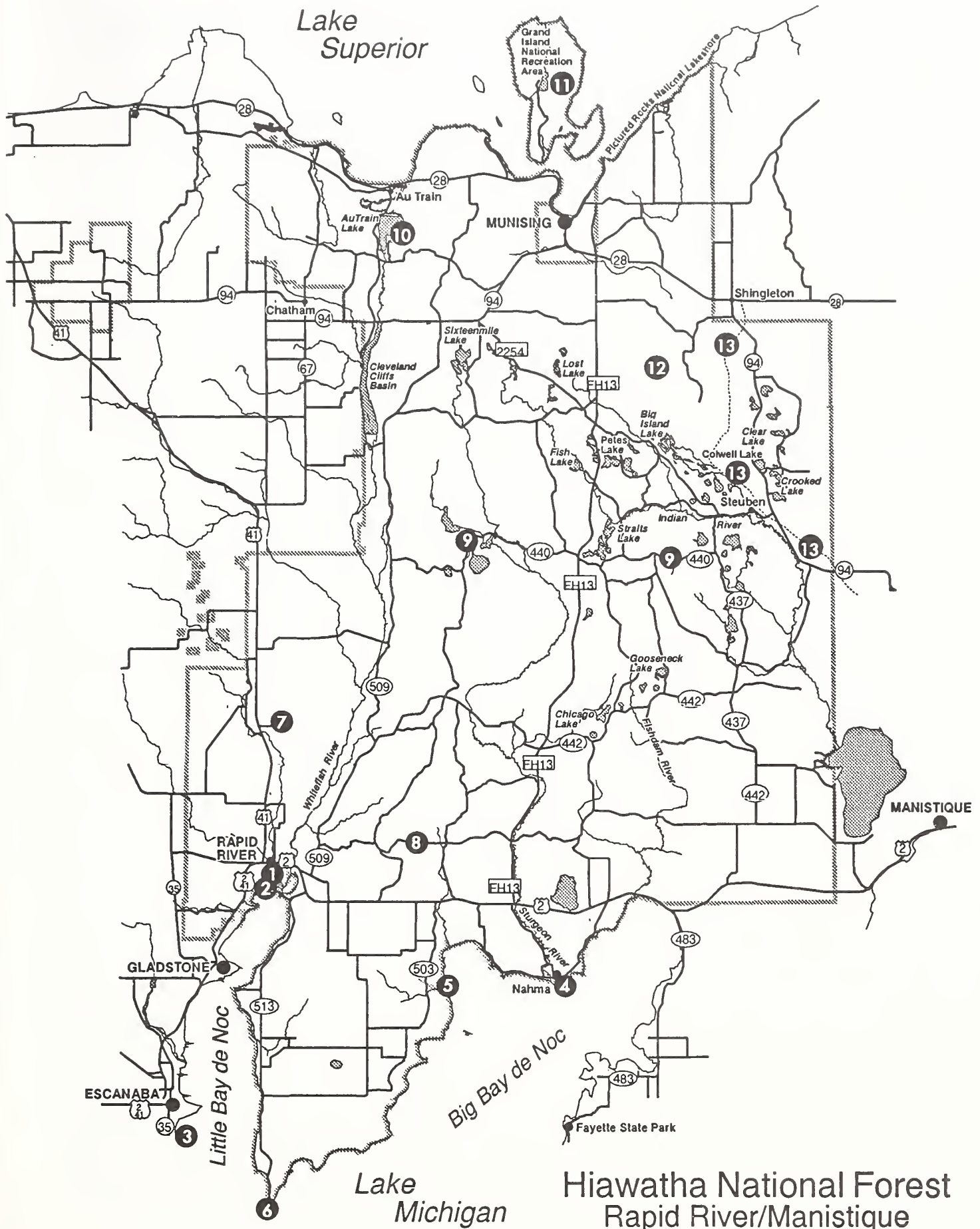
*Yellow - headed
Blackbird*

Birding Spots



There are many habitats and places to enjoy birding on or near the Forest. The following are just a sample of different habitat types where a diversity of species (including some uncommon ones) are likely to be encountered. The first 9 locations are primarily found in Delta County at the south end of the Forest. Numbers 1 through 6 showcase the diversity of waterbird species of northern Lake Michigan. These birding spots have easy access and are at the junctions of riverine habitats, within tracts of emergent wetland, or in areas that concentrate migrants. Number 7 is a good example of a grassland or open field bird community in the Forest's west unit. Numbers 8 and 9 provide observation opportunities for forest interior and boreal forest species. Birding spots 10 through 13 are in Alger and Schoolcraft County. Two sites, Scott's Marsh and the Haywire Trail may best represent the avian boreal community for this part of the Forest.

1. Mouth of the Whitefish River (T41N, R21W, Section 28). Take U.S. Hwy 2 east from Rapid River for approximately 3/4 mile and turn right (before crossing the river). A colony of Yellow-headed Blackbirds is found here along with spring and fall migrations of waterfowl. Yellow Rails have been reported in some years.
2. Rapid River Boat Launch (T41N, R21W, Section 32). Travel south of Rapid River for less than one mile to a public boat ramp. This is where the Whitefish, Rapid, and Tacoosh Rivers all flow into Little Bay de Noc and it is an attractive location for fish-eating birds. Look for Double-crested Cormorant; Mergansers; Horned Grebe (migration); Green-backed Heron (rare in the U.P.); Osprey; Bald Eagle; Caspian, Common, and Black Terns; and Purple Martins. Also watch for Yellow-headed Blackbirds. A walk along the railroad tracks might also yield a shrike.
3. Portage Point (T38N R22W, Section 7). Travel south of Escanaba on Route 35 past the Delta County Airport and turn left (east) onto Route 34 to the public boat ramp. Park and walk the gated road through the emergent marshes to the end. This is state owned land. Waterfowl abound here in migration and in summer. Look for Northern Pintail, American Wigeon, American Black Duck, Mallard, Gadwall, Green and Blue-winged Teal, and all three mergansers in the summer. Also found here is Pied-billed Grebe, American Bittern, Least Bittern (one of the only colonies in the Upper Peninsula), Black-crowned Night-heron, Virginia Rail, Marsh Wren, and Yellow-headed Blackbird. During migration, Tundra Swans, shorebirds

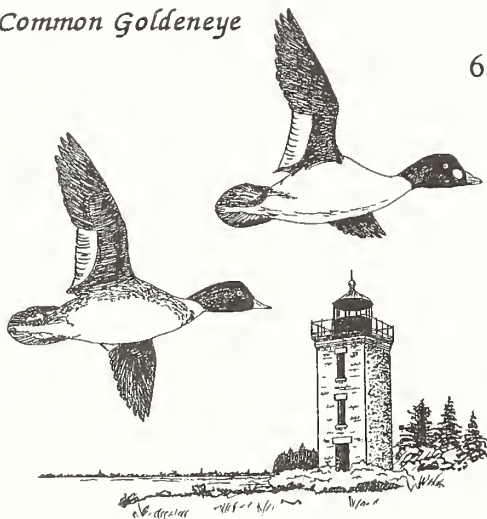


Hiawatha National Forest
 Rapid River/Manistique
 Munising Ranger Districts

such as Willet and Wilson's Phalarope, and a variety of songbirds can be found in the early 1980s, a pair of Little Gulls nested at the Point.

4. Mouth of the Sturgeon River (T40N R19W Sections 21 and 28). Take U.S. 2 west from Manistique for approximately 20 miles, turn left (south) at Nahma Junction on Route 497 and travel south for 4 miles to Nahma and continue to Boat Ramp. During migration look for Horned Grebe and diving ducks such as White-winged Scoters, Bufflehead, Common Goldeneye, and Scaup. In summer, Pied-billed Grebe, Common Loon (nonbreeders), Double-crested Cormorant, and all three mergansers are present. In the nearby marsh and ponds look for American Bittern, Sandhill Crane, Northern Harrier, and LeConte's Sparrow. The Sturgeon River is protected by the Wild and Scenic Rivers Act and the mouth area includes several southern plant species including Butternut and Silver Maple.
5. Ogontz Bay Boat Launch (T40N R20W Section 28). Take U.S. 2 east of Rapid River for approximately 10 miles and turn right (south) on Route 503 and travel south for 4 miles and turn left (east) for 1 mile ending at the Boat Launch. Between spring and fall look for water associated birds such as Common Loon, Bald Eagle, Osprey, Black Tern, Redheads, Lesser Scaup, and Greater Scaup, and shorebirds; Lincoln's and LeConte's sparrows are in nearby wetlands. A Great Blue Heron nesting colony resides on nearby Round Island.

Common Goldeneye



6. Peninsula Point (T38N R22W Section 24). Take U.S. 2 east of Rapid River and turn right (south) after 2 miles on County Road 513 for approximately 16 miles to the picnic area. This is an ideal birding area during spring and fall migration. Waterfowl include Green- and Blue-winged Teal, Northern Pintail, Northern Shoveler, Gadwall, American Wigeon, Canvasback, Redhead, Ring-necked Duck, Greater and Lesser Scaup, and Common Goldeneye; all migrate in large numbers in spring and fall. Rarer waterbird migrants include Red-necked Grebe, Oldsquaw, and Jaegers (early fall). Also look for all 3 scoters; Peregrine Falcon; Merlin; Glaucous Gull; Northern Saw-whet, Boreal (rare in fall), and Long-eared Owls, and a wide diversity of warblers such as Cape May, Cerulean, Magnolia, Pine, Palm, Blackpoll, and Bay-breasted.
7. Birch Farm (T42N R22W Sections 9 and 16). Take U.S. 41 north of Rapid River for 7 miles and turn right (east) on I-13 for 2 miles and follow roads around in the openings. This area has a wide variety of grassland species including Sharp-tailed Grouse; Red-tailed Hawk; Northern Harrier; American Kestrel; Upland

Sandpiper; Eastern Bluebird; sparrows including Grasshopper, Clay-colored, Field, Vesper, and Savannah; Brewer's Blackbird, Bobolink, and Eastern Meadowlark. In winter and early spring look for Horned Lark, American Tree Sparrow, Lapland Longspur, and Snow Bunting.

8. Forest Road 2231 from FR 2235 to FR 2233 (approximately a 3-mile stretch in T41N R20W Sections 14-20). Take U.S. 2 east from Rapid River for approximately 6 miles and turn left (north) at Ensign onto FR 2235 for approximately 3 miles and then turn right (east) onto FR 2231. This is a great owl area; look and listen for Great Horned, Barred, Long-eared, and Northern Saw-whet Owls. Also look for Red-shouldered Hawk, Sandhill Crane, Ruffed Grouse, Wild Turkey, Pileated Woodpecker, and songbirds including Gray Jay, thrushes, and warblers.
9. County Road 440 from FR 2235 to County Road 437 (approximately a 15-mile stretch in T43N R18, 19, 20W in many sections). From Manistique, take M-94 north approximately 21 miles to County Road 437 and turn west (left) and follow for 5 miles (be sure to take a left on the first fork and left again on the second fork) to County Road 440 and turn west (right). This intersection is at the northeast end of Foote Lake. This area provides good opportunities to view the many wood warblers in the Forest, including forest dwellers like the Pine, Magnolia, Chestnut-sided, Black-and-White, Black-throated Blue, Black-throated Green, Blackburnian, Nashville, Ovenbird, American Redstart, Yellow-rumped, Cerulean, and Tennessee (during some years), and Yellow, Common Yellowthroat, Mourning, Canada, and Northern Waterthrush in the scrub-shrub wetlands. Also look for Northern Goshawk, Broad-winged Hawk, Red-shouldered Hawk, and thrushes including Swainson's, Wood, Hermit, and Veery.
10. Au Train Lake (T46N R20W Section 8). From Munising follow M-28 west for 10 miles to the village of Au Train. From there, turn south (left) on County Road H-03 for 6 miles along the west shore of Au Train Lake to FR 2276. Turn east (left) and follow the signs to the Au Train Campground on Au Train Lake. There are two specific birding spots to explore. Go to campsite 11 and use the viewing platform that overlooks a shallow bay and an extensive marsh. Look for Common Loon, American Bittern, Great Blue Heron, Bald Eagle, shorebirds (especially during migration), and waterfowl.

The other site is a 2-mile walk on the Hiawatha National Forest's "Songbird Trail" that begins at this platform. An interpretive kit (cassette and player, identification pamphlet, and



*Red - shouldered
Hawk*

binoculars) is available to rent for a nominal fee at the A and L Grocery, Au Train Grocery, or the Friends and Food Restaurant in AuTrain. Along the trail listen for the Brown Creeper, Ruby-crowned Kinglet, Connecticut Warbler, Blackburnian Warbler, and Northern Waterthrush.



Peregrine Falcon

11. Grand Island (T47,48N R19W many sections). From Munising take the boat tour to Grand Island; times, prices, and reservations can be made by calling 906-387-2379. Bring your trail bikes; this is by far the best way to tour the island. You will probably see Common Loon, Osprey, all three mergansers, Common Tern, many gulls (mostly Herring or Ring-billed), Belted Kingfisher, and Cliff and Northern Rough-winged Swallows. In early spring or late fall look for Glaucous Gull. Bonaparte's Gulls are present in May and from August into October. Peregrine Falcons were released on cliffs at the island's northwest side in the summers of 1992 and 1993. Since then, falcons have been seen on the island and the adjacent mainland.
12. Scott's Marsh (T45N R18W Sections 23 and 26). From Munising drive southeast on M-28 for 3 miles to Wetmore and turn south (right) onto County Road H-13. Continue south for 6.5 miles to FR 2253 and turn east (left) and follow for 4.5 miles to the trailhead and parking area (in front of a gate). The trail will take you into the heart of this 5,000-acre sedge meadow community. In migration look for Tundra Swan, Snow Goose, Northern Pintail, American Wigeon, yellowlegs, and Snow Bunting. During the breeding season you are likely to find Great Blue Heron, American Bittern, Black-crowned Night Heron (possibly), Bald Eagle, Osprey, Northern Harrier, Sora, and Yellow Rail in the open marsh or adjacent pools. Songbirds include Marsh and Sedge Wrens, Golden-winged and Chestnut-sided Warblers, and Lincoln's and Le Conte's Sparrows. Sharp-tailed Grouse use these large openings and may be best observed while feeding on aspen buds in winter. Gray Jays and both waxwings are also in the area. Rarities such as the Harlequin Duck, Golden Eagle, and Great Gray Owl have been found here.
13. Haywire Trail (T45N R17W Sections 5,7,8,18). From Munising go east along M-28 to the town of Shingleton and turn south (right) onto M-94. Drive south for 1.7 miles to the Haywire Snowmobile and ORV trail that follows an old railroad bed. The first 1.2 miles can be driven and there is a turnaround 1.2 miles from the M-94 intersection. The habitat surrounding the trail is dominated by spruce and tamarack and dotted by pockets of alder thickets and numerous beaver floodings with dead and dying swamp conifers. The trail crosses the Stutts

River. Along this riparian area and nearby look for Spruce Grouse; Black-backed Woodpecker; Gray Jay; Boreal Chickadee; Olive-sided, Yellow-bellied, and Alder Flycatchers; Golden-crowned Kinglet; many warblers including Tennessee, Bay-breasted, and Connecticut; and Red- and White-winged Crossbills.

Birds and Their Habitats

Birds are dependent on their environment, selecting habitat where they can find food and shelter. The physiological needs of birds change seasonally so the same bird species could require different habitats during different seasons. Some bird species find their requirements in small areas enclosed within one vegetative community; others need large areas that include different vegetative communities. Bird species show physiological and morphological adaptations to the habitats. Some bird species are restricted to very narrow ranges of environmental conditions while others can survive almost everywhere. Although each bird species is independently distributed from others, different bird species can meet their physiological needs in the same vegetative community. An assembly of bird species in one habitat type is often referred to as a bird community. Subtle differences in vegetation structure and microclimate sometimes determine whether or not a bird species will be present in a certain habitat. Some warbler species, for example, are found in deciduous forest with a well-developed shrub layer; others might need a more open canopy and so on.

A spreadsheet of the bird-habitat associations for the entire forest and for all species is provided in alphabetical order in Appendix I. Habitats have been divided into 20 categories. The list of species follows the "Breeding Birds of Central Upper Michigan: A Field Checklist", which was compiled by the U.S. Forest Service, National Park Service, and U.S. Fish and Wildlife Service. This listing is for species known to have occurred in the central Upper Peninsula, which also includes areas east of the Western Unit of the Hiawatha National Forest, such as Seney National Wildlife Refuge and Pictured Rocks National Lakeshore.

The bird-habitat association matrix and other references are adapted with minor modifications from "Wildlife in The Upper Great Lakes Region: A Community Profile". This is from a publication by Janine M. Benyus, Richard R. Buech, and Mark D. Nelson was published by the U.S. Forest Service's North Central Forest Experiment Station in 1992. Their designations of bird-habitat associations are generalized for the entire Upper Great Lakes Region but do represent the requirements and preferred habitats of birds on the Hiawatha National Forest.

The species list, habitat associations, abundance, seasonality, and versatility have been fully adapted for the west unit of the Hiawatha National Forest.

The general abundance (ABN) of the 263 listed birds are also included. The abundance rating is only given for the shown season of presence. In many cases a species' abundance is different in migration than during the breeding season. For example, the Rusty Blackbird is an uncommon to rare summer resident. However, during migration, it may become extremely common as it gathers in flocks with other blackbirds. Abundance ratings for migrants also are generalized since spring and fall migration numbers can dramatically differ. Waterfowl and songbirds are far fewer in number compared to fall abundance, which is expected since a large cohort of young-of-the-year are well represented in fall migration. Migration corridors can change seasonally, however. Fall numbers of Lake Superior migrating Red-necked Grebes are far higher in the fall than would be expected by observing the spring migration. On the other hand, you are more likely to see a Red-throated Loon in the spring. Harris' Sparrows are strictly fall migrants through the area.

Only three categories are used since quantitative data are lacking for more precise abundance figures:

Common (c) = present in good numbers in suitable habitats. Individuals can usually be seen if you know where to look.

Uncommon (u) = present, but in lower numbers due to range limits, large territories, specific habitat requirements, or other factors. Usually more difficult to find because there are fewer individuals per acre.

Occasional (o) = may not occur every year, but because of proximity to their regular range, individuals can be expected to wander into the region during some years, e.g., at intervals during periods of severe weather or food shortages. Some species have the added "v" following their name which indicates they are a vagrant and are much more unlikely to be found than other species in this category.

Season of use (SEA) has been included in the matrix and has the following designations:

P = permanent year-round resident
S = summer resident (breeding)
M = migrant (present spring and fall)
W = winter resident

The versatility (VER) score for each species is simply the total number of habitats that it uses. The more habitats that a species uses, the more versatile it is: the fewer habitats it uses, the less versatile it is.

Habitat Types

Much of the following text regarding habitat descriptions is from Benyus, J.M., R.R. Buech, and M.D. Nelson. 1992. Wildlife of the Upper Great Lakes Region: a community profile. Res. Pap. NC-301. St. Paul, MN: U.S. Dept. Agric., For. Serv., N. Central For. Exp. Sta. 27pp. The three letter codes shown after the habitat type labels follow those used for the heading on the bird-habitat associations matrix.

Only a listing of representative breeding species follows the habitat description; migrants are usually less specific in their habitat preferences. A bird is listed in the habitat that it is most likely to be observed. Habitat generalists have high versatility scores (e.g. American Crow, Blue Jay, Black-capped Chickadee, American Robin) and habitat specialists have low versatility scores (e.g. Yellow Rail, Upland Sandpiper). The listing of birds by habitat is in phylogenetic order according to the standards set by the American Ornithologists' Union.

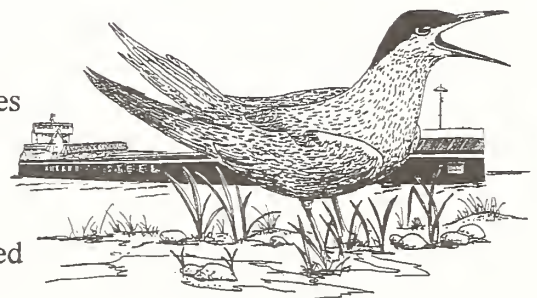
Many habitat generalists are most readily found around human habitations and are now strongly associated with requiring buildings or other structures. This habitat type is not included in the bird-habitat association matrix. Representative breeding species include Turkey Vulture, Rock Dove, Common Nighthawk, Chimney Swift, Barn Swallow, Cliff Swallow, House Wren, European Starling, Common Grackle, House Finch, and House Sparrow.

AQUATIC

Lake (LAK) — A body of permanent water more than 10 acres in size, and usually more than 6 feet deep. This habitat includes the Great Lakes shorelines as well as inland water bodies. Those usually associated with only the Great Lakes shorelines are followed by the acronym GL. This habitat type also includes beaches and mudflats.

Birds: Common Loon, Double-crested Cormorant (GL), Mute Swan (GL), Canada Goose, American Black Duck, Green-winged Teal, Ring-necked Duck, Red-breasted Merganser (GL), Bald Eagle, Osprey, Peregrine Falcon (GL), Herring Gull, Ring-billed Gull, Caspian Tern (GL), Common Tern (GL), and Purple Martin.

Common Tern



Pond (PON) — A body of permanent water less than 10 acres in size and usually less than 6 feet deep.

Birds: Pied-billed Grebe, Great Blue Heron, Green Heron, Wood Duck, Mallard, Blue-winged Teal, Hooded Merganser, American Coot, Black Tern, and Forster's Tern.

Belted Kingfisher



River and Stream (RIV) — A body of permanent flowing water; includes open water, the bed, the banks, and the vegetated areas along the banks.

Birds: Common Goldeneye, Common Merganser, Spotted Sandpiper, Belted Kingfisher, Bank Swallow, and Northern Rough-winged Swallow.

WETLANDS

Marsh (MRS) — A shallow basin with 6 inches to 3 feet of standing water throughout much of the year. It is vegetated nearly shore-to-shore with herbaceous aquatic plants, persistent and nonpersistent, including cattails, bulrushes, pondweeds, water lilies, and wild rice.

Birds: American Bittern, Least Bittern, Northern Harrier, Virginia Rail, Sora, Common Snipe, Marsh Wren, Red-winged Blackbird, and Yellow-headed Blackbird.

Sedge Meadow (SED) — A saturated alkaline peatland covered mostly by sedges and fed by minerals washing in from the surrounding lands. The surface is at or only slightly above the water table. Open pools of water are common in spring because of flooding.

Birds: Yellow Rail, Sedge Wren, and Le Conte's Sparrow.

Shrub Swamp (SHR) — A wetland thicket dominated by 10- to 15-foot tall alder and willow shrubs, and underlain with wet muck soil. There are often streams trickling through the swamp, and it is occasionally flooded.

Birds: American Woodcock, Gray Catbird, Alder Flycatcher, Willow Flycatcher, Wilson's Warbler, Yellow Warbler, Mourning Warbler, Common Yellowthroat, and Song Sparrow.

Bog (BOG) — A mat of wet, nutrient-poor, acidic peat topped with sphagnum moss and ericaceous plants and shrubs. A bog is a closed system, with no streams feeding in or out. Often, a dark pool of stagnant water will be in the center.

Birds: Sandhill Crane, Tree Swallow, Swamp Sparrow, and Rusty Blackbird.

OPENINGS

Small Grass Opening (OPE) — An upland opening 1 to a few tens of acres in size, covered by a layer of permanent sod and containing few or no trees.

Birds: American Robin, Chipping Sparrow, Common Grackle, and Brown-headed Cowbird, Song Sparrow, Common Yellowthroat, Indigo Bunting.

Large Opening (LOP) — An upland opening larger than 200 acres and up to several square miles, covered by a permanent layer of sod and containing few or no trees.

Birds: Sharp-tailed Grouse, Killdeer, Upland Sandpiper, Red-tailed Hawk, American Kestrel, Short-eared Owl, Eastern Kingbird, Eastern Bluebird, Horned Lark, Field Sparrow, Vesper Sparrow, Savannah Sparrow, Grasshopper Sparrow, Eastern Meadowlark, and Brewer's Blackbird.

Shrub-sapling Opening (SAP) — An upland opening with a dense shrub layer and a well-developed herbaceous layer. This is a regenerating forest, coming in 3 to 12 years after logging, fire, or other disturbance.

Birds: Black-billed Cuckoo, Brown Thrasher, Cedar Waxwing, Chestnut-sided Warbler, Golden-winged Warbler, Northern Cardinal, Indigo Bunting, Rufous-sided Towhee, Clay-colored Sparrow, American Goldfinch.



*Golden - winged
Warbler*

UPLAND FORESTS

Young Upland Deciduous Forest (YUD) — A 12- to 30-year-old forest with closely spaced, pole-sized trees 10 to 30 or more feet tall, and a variable shrub and herbaceous layer. Aspen, birch, northern hardwoods, and oaks are found in various combinations, with few or no conifers.

Birds: Ruffed Grouse, Mourning Dove, Yellow-billed Cuckoo, Blue Jay, Least Flycatcher, Tufted Titmouse, Veery, Warbling Vireo, American Redstart, and Rose-breasted Grosbeak.

Mature Upland Deciduous Forest (MUD) — A closed-canopy forest with trees more than 30 years old, an overstory 30 or more feet tall, and a variable shrub and herbaceous layer. Characteristic species include aspens, birches, and northern hardwoods (especially sugar maple). Old stands with broken or uneven canopies may have well-developed underlayers, downed logs, and standing snags with cavities.



Ovenbird

Birds: Cooper's Hawk, Wild Turkey, Great Horned Owl, Whip-poor-will, Red-headed Woodpecker, Eastern Wood Pewee, Great Crested Flycatcher, Wood Thrush, Philadelphia Vireo, Red-eyed Vireo, Black-throated Blue Warbler, Ovenbird, Scarlet Tanager, and Northern Oriole.

Young Upland Coniferous Forest (YUC) — A 12-to 30-year-old forest densely populated with trees that are 10 to 30 feet tall. In some places, the shade is so intense that shrubs and ground plants are sparse. More often, these stands will have a savanna appearance, with numerous small openings interrupting the tree coverage. Characteristic species include jack pine and oak in combination, and less frequently, red pine, white pine, white spruce, and balsam fir.

Birds: Long-eared Owl, Hermit Thrush, Bay-breasted Warbler, Nashville Warbler, Yellow-rumped Warbler, Pine Siskin, and Purple Finch.

Mature Upland Coniferous Forest (MUC) — A closed-canopy forest with trees older than 30 years, an overstory taller than 30 feet, and a sparse shrub and herbaceous layer. Old stands with uneven or broken canopies may have well-developed underlayers. Characteristic species include balsam fir, usually in combination with white spruce, and red pine, white pine, and jack pine.

Birds: Merlin, Northern Saw-whet Owl, Red-breasted Nuthatch, Golden-crowned Kinglet, Solitary Vireo, Pine Warbler, and Red Crossbill.

Young Upland Mixed Forest (YUM) — A 12- to 30-year-old forest with closely spaced, pole-sized trees that are 10 to 30 feet tall, and a variable shrub and herbaceous layer. These stands may include

jack pine, red pine, or white pine in combination with deciduous species such as paper birch and red oak.

Birds: Broad-winged Hawk, American Crow, Northern Flicker, Downy Woodpecker, Yellow-bellied Sapsucker, Black-capped Chickadee, Least Flycatcher, Swainson's Thrush, Yellow-throated Vireo, Black-throated Green Warbler, Tennessee Warbler, Magnolia Warbler, Connecticut Warbler, and Dark-eyed Junco.

Mature Upland Mixed Forest (MUM) — A mixture of deciduous and coniferous trees growing together, with trees older than 30 years, an overstory more than 30 feet tall, and a variable shrub and herbaceous layer. Old stands with broken or uneven canopies may have well-developed underlayers, downed logs, and standing snags with cavities. Characteristic species include white spruce, balsam fir, red pine, white pine, jack pine, sugar maple, eastern hemlock, paper birch, and American beech.

Birds: Northern Goshawk, Pileated Woodpecker, Hairy Woodpecker, Common Raven, Blackburnian Warbler, and Northern Parula.

LOWLAND FORESTS

Semi-open Lowland Coniferous Forest (OLC) — A bog that has begun to fill in with scattered clumps of tamaracks and black spruces, usually less than 20 feet tall. The surface is carpeted with a dense, low-lying layer of ericaceous shrubs, sphagnum moss, and wildflowers. It is often wet because the surface is at or close to the water table.

Birds: Olive-sided Flycatcher, Palm Warbler, White-throated Sparrow, and Lincoln's Sparrow.

Closed-canopy Lowland Coniferous Forest (CLC) — A dense forest of closely spaced trees up to 60 feet high, growing atop an unstable carpet of mosses. The shrub layer is usually sparse due to the heavy shade. Characteristic species include black spruce, tamarack, northern white-cedar, and balsam fir.

Birds: Spruce Grouse, Sharp-shinned Hawk, Black-backed Woodpecker, Yellow-bellied Flycatcher, Gray Jay, Boreal Chickadee, Winter Wren, Ruby-crowned Kinglet, Cape May Warbler, Evening Grosbeak, and White-winged Crossbill.



Evening Grosbeak

Young Lowland Deciduous Forest (YLD) — A 12- to 30-year-old forest with pole-sized trees 10 to 30 feet tall and a variable

*White-breasted
Nuthatch*



shrub and herbaceous layer. The soil is muck or peat and may be covered with water during parts of the year. Characteristic species include black ash, red maple, balsam poplar, and speckled alder.

Birds: Black-and-White Warbler, Northern Waterthrush, and Canada Warbler.

Mature Lowland Deciduous Forest (MLD) — Closed-canopy forest with trees older than 30 years, an overstory taller than 30 feet, and a variable shrub and herbaceous layer. The soil is muck or peat and may be covered with water during parts of the year. Typically, a stream or river runs through the forest. Characteristic species include red maple, black ash, and a few American elms.

Birds: Red-shouldered Hawk, Barred Owl, White-breasted Nuthatch, Brown Creeper, Blue-gray Gnatcatcher, and Cerulean Warbler.

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Appendix I

Bird-Habitat Associations Matrix

See pages 21-28 for
detailed descriptions
of abbreviations.

LIST	NAME	LAKE	LAK	PON	RIV	MRS	SED	SHR	BOG	OPE	FLD	SAP	YUD	MUD	YUC	MUC	YUM	MUM	OLC	CLC	YLD	MILD	ABN	SEA	VER		
	Alder Flycatcher	Empidonax alutorum						X	X														c	s	2		
	American Bittern	Botaurus lentiginosus				X	X	X																c	s	3	
	American Black Duck	Anas rubripes	X	X	X	X	X	X		X														u	s	6	
	American Coot	Fulica americana	X	X	X	X	X	X																u	s	3	
	American Crow	Corvus brachyrhynchos						X	X						X	X	X					X	c	p	10		
	American Goldfinch	Carduelis tristis						X	X															c	s	4	
	American Kestrel	Falco sparverius						X	X															c	s	4	
	American Pipit	Anthus spinoletta					X	X																u	m	3	
	American Redstart	Setophaga ruticilla						X	X															u	s	7	
	American Robin	Turdus migratorius						X	X															c	s	10	
	American Tree Sparrow	Spizella arborea						X	X															c	w	4	
	American White Pelican - v	Pelecanus erythrorhynchos	X					X	X															o	m	1	
	American Wigeon	Anas americana	X	X			X	X																u	m	4	
	American Woodcock	Scolopax minor						X	X															c	s	5	
	Baird's Sandpiper	Calidris bairdii	X	X			X	X																u	m	4	
	Bald Eagle	Haliaeetus leucocephalus	X					X	X															u	s	4	
	Bank Swallow	Riparia riparia	X	X	X	X	X	X																c	s	6	
	Barn Swallow	Hirundo rustica	X	X	X	X	X	X																c	s	6	
	Barred Owl	Strix varia						X	X															X	c	p	6
	Barrow's Goldeneye - v	Bucephala islandica	X					X	X															o	m	1	
	Bay-breasted Warbler	Dendroica castanea						X	X															u	s	3	
	Belted Kingfisher	Ceryle alcyon	X	X	X	X	X	X																c	s	4	
	Black Scoter	Melanitta nigra	X	X	X	X	X	X																o	m	1	
	Black Tern	Chlidonias niger						X	X															u	s	4	
	Black-and-white Warbler	Minioilta varia						X	X															X	c	s	8
	Black-backed Woodpecker	Picoides arcticus						X	X															u	p	4	
	Black-bellied Plover	Pluvialis squatarola	X	X	X	X	X	X																u	m	4	
	Black-billed Cuckoo	Coccyzus erythrophthalmus						X	X															X	c	s	7
	Black-capped Chickadee	Parus atricapillus						X	X															X	c	p	12
	Black-crowned Night-Heron	Nycticorax nycticorax						X	X															u	s	1	
	Black-throated Blue Warbler	Dendroica caerulescens						X	X															u	s	6	
	Black-throated Green Warbler	Dendroica virens						X	X															c	s	3	
	Blackburnian Warbler	Dendroica fusca						X	X															c	s	3	
	Blue Jay	Cyanocitta cristata						X	X															u	m	3	
	Blue-gray Gnatcatcher	Polioptila caerulea						X	X															X	c	p	12
	Blue-winged Teal	Anas discors						X	X															o	s	9	
	Bobolink	Dolichonyx oryzivorus						X	X															c	s	6	
	Bohemian Waxwing	Bombacilla garrulus						X	X															c	s	3	
	Bonaparte's Gull	Larus philadelphia	X					X	X															u	w	2	
	Boreal Chickadee	Parus hudsonicus						X	X															u	m	1	
	Boreal Owl - v	Aegolius funereus						X	X															u	p	5	
	Brant - v	Branta bernicla						X	X															o	w	5	
	Brewer's Blackbird	Euphagus cyanocephalus						X	X															o	m	1	
	Broad-winged Hawk	Buteo platypterus						X	X															u	s	2	
	Brown Creeper	Certhia americana						X	X															X	c	s	6
	Brown Thrasher	Toxostoma rufum						X	X															X	c	s	5
								X	X															u	s	3	

LIST	NAME	LAKE	LAK	PON	RIV	MRS	SED	SHR	BOG	OPE	FLD	SAP	YUD	MUD	YUC	MUC	YUM	MUM	OILC	CLC	YLD	MILD	ABN	SEA	VER	
	Brown-headed Cowbird	Molothrus ater								X	X	X	X	X	X	X				X			c	s	9	
	Buff-breasted Sandpiper	Tryngites subruficollis									X												o	m	1	
	Bufflehead	Bucephala albeola	X	X																			c	m	2	
	Canada Goose	Bramia canadensis	X	X							X												c	s	4	
	Canada Warbler	Wilsonia canadensis							X			X				X					X		c	s	8	
	CanVASback	Aythya vallisneria	X	X									X										u	m	3	
	Cape May Warbler	Dendroica tigrina													X					X			u	s	3	
	Caspian Tern	Sterna caspia	X																				u	s	1	
	Cedar Waxwing	Bombus cedrorum							X		X	X	X	X	X	X	X	X	X	X	X		c	s	8	
	Cerulean Warbler	Dendroica cerulea										X									X		u	s	3	
	Chestnut-sided Warbler	Dendroica pensylvanica							X		X	X	X	X	X	X	X	X	X	X	X		c	s	4	
	Chimney Swift	Chaetura pelagica								X													c	s	5	
	Chipping Sparrow	Spizella passerina								X					X					X			c	s	6	
	Clay-colored Sparrow	Spizella pallida								X													u	s	3	
	Cliff Swallow	Hirundo pyrrhonota	X	X	X	X	X																c	s	6	
	Common Goldeneye	Bucephala clangula	X	X	X	X	X							X						X			u	s	6	
	Common Grackle	Quiscalus quiscula							X		X				X								c	s	7	
	Common Loon	Gavia immer	X	X	X	X	X																c	s	2	
	Common Merganser	Mergus merganser	X	X	X	X	X																c	s	4	
	Common Moorhen	Gallinula chloropus					X																o	m	2	
	Common Nighthawk	Chordeiles minor							X														c	s	2	
	Common Raven	Corvus corax							X	X	X	X	X	X	X	X	X	X	X	X	X		c	p	9	
	Common Redpoll	Carduelis flammea						X	X	X	X	X	X	X	X	X	X	X	X	X	X		u	w	6	
	Common Snipe	Gallinago gallinago						X	X	X	X	X	X	X	X	X	X	X	X	X	X		c	s	6	
	Common Tern	Sterna hirundo	X	X	X	X	X																c	s	2	
	Common Yellowthroat	Geothlypis trichas							X											X			c	s	5	
	Connecticut Warbler	Oporornis agilis							X	X	X	X	X	X	X	X	X	X	X	X	X		u	s	7	
	Cooper's Hawk	Accipiter cooperii								X													u	s	6	
	Dark-eyed Junco	Junco hyemalis								X					X								c	s	4	
	Double-crested Cormorant	Phalacrocorax auritus	X										X										X	c	s	3
	Downy Woodpecker	Picoides pubescens											X	X	X	X	X	X	X	X	X		u	c	p	7
	Dunlin	Calidris alpina	X	X	X	X	X																u	m	4	
	Eastern Bluebird	Sialia sialis									X	X											c	s	2	
	Eastern Kingbird	Tyrannus tyrannus								X	X	X	X	X	X	X	X	X	X	X	X		c	s	5	
	Eastern Meadowlark	Sturnella magna							X														c	s	1	
	Eastern Screech-Owl - v.	Otus asio								X					X								u	p	4	
	Eastern Wood-Pewee	Contopus virens											X	X	X	X	X	X	X	X	X		X	c	s	3
	European Starling	Sturnus vulgaris								X	X	X	X	X	X	X	X	X	X	X	X		X	c	p	6
	Evening Grosbeak	Coccothraustes vespertinus													X						X		c	p	4	
	Field Sparrow	Spizella pusilla								X	X	X	X	X	X	X	X	X	X	X	X		u	s	3	
	Forster's Tern	Sterna forsteri	X								X	X	X	X	X	X	X	X	X	X	X		u	m	1	
	Fox Sparrow	Passerella iliaca								X													u	m	5	
	Franklin's Gull - v	Larus pipixcan	X						X														o	m	2	
	Gadwall	Anas strepera																					u	m	1	
	Glaucous Gull	Larus hyperboreus	X																				u	w	1	
	Golden Eagle	Aquila chrysaetos								X	X												u	m	2	
	Golden-crowned Kinglet	Regulus satrapa													X					X			c	s	4	

LIST	NAME	LAKE	LAK	PO	RIV	MRS	SED	SHR	BOG	OP	FLD	SAP	YUD	MUD	YUC	MUC	YUM	MUM	OLC	CLC	YLD	MILD	ABN	SEA	VER
	Golden-winged Warbler	Vermivora chrysoptera								X	X	X	X										u	s	4
	Grasshopper Sparrow	Ammodramus savannarum								X	X												u	s	2
	Gray Catbird	Dumetella carolinensis						X		X	X	X			X	X	X	X	X	X	X		c	s	6
	Gray Jay	Perisoreus canadensis													X	X							u	p	4
	Gray-cheeked Thrush	Catharus minimus													X	X							u	m	5
	Great Black-backed Gull	Larus marinus	X												X	X							o	m	1
	Great Blue Heron	Ardea herodias	X	X	X	X	X								X	X						X	c	s	8
	Great Crested Flycatcher	Myiarchus cinerascens													X	X						X	c	s	3
	Great Egret - v	Casmerodius albus													X	X							o	m	1
	Great Gray Owl - v	Strix nebulosa						X	X	X	X	X	X	X	X	X	X	X	X	X	X		o	w	5
	Great Horned Owl	Bubo virginianus						X	X	X	X	X	X	X	X	X	X	X	X	X	X		u	m	13
	Greater Scaup	Aythya marila	X																				u	m	1
	G. White-fronted Goose - v	Anser albifrons	X	X	X	X	X			X	X												o	m	5
	Greater Yellowlegs	Tringa melanoleuca	X												X	X							c	m	3
	Green Heron	Butorides striatus	X	X	X	X	X								X	X							u	s	3
	Green-winged Teal	Anas crecca	X												X	X							u	s	5
	Hairy Woodpecker	Picoides villosus									X	X	X	X								X	c	p	4
	Harlequin Duck - v	Histrionicus histrionicus	X												X	X							o	m	2
	Harris' Sparrow - v	Zonotrichia querula						X		X	X	X	X	X	X	X							u	m	2
	Hermit Thrush	Catharus guttatus													X	X							c	s	6
	Herring Gull	Larus argentatus	X												X	X							c	p	2
	Hoary Redpoll - v	Carduelis hornemanni						X	X	X	X				X	X							o	w	4
	Hooded Merganser	Lophodytes cucullatus	X	X	X	X	X								X	X						X	u	s	7
	Hooded Warbler - v	Wilsonia citrina													X	X						X	o	s	3
	Horned Grebe	Podiceps auritus	X	X	X	X	X																u	m	3
	Horned Lark	Eremophila alpestris									X												c	s	1
	House Finch	Carpodacus mexicanus									X	X	X	X									c	s	3
	House Sparrow	Passer domesticus								X	X	X	X	X									c	p	2
	House Wren	Troglodytes aedon								X	X	X	X	X								X	u	s	4
	Hudsonian Godwit - v	Limosa haemastica	X	X	X	X	X																o	m	4
	Indigo Bunting	Passerina cyanea						X		X	X	X	X	X									c	s	3
	Killdeer	Charadrius vociferus									X												c	s	1
	King Eider - v	Somateria spectabilis	X												X	X							o	m	1
	Lapland Longspur	Calcarius lapponicus								X	X	X	X	X									c	m	3
	Lark Sparrow - v	Chondestes grammacus								X	X	X	X	X									o	s	1
	Le Conte's Sparrow	Ammodramus leconteii								X	X	X	X	X									u	s	5
	Least Bittern	Ixobrychus exilis													X	X							u	s	1
	Least Flycatcher	Empidonax minimus									X	X	X	X									c	s	3
	Least Sandpiper	Calidris minutilla	X	X	X	X	X								X	X							u	m	4
	Lesser Golden-Plover	Pluvialis dominica	X	X	X	X	X			X	X	X	X	X									o	m	5
	Lesser Scaup	Aythya affinis	X	X	X	X	X								X	X							c	m	3
	Lesser Yellowlegs	Tringa flavipes	X												X	X							c	m	3
	Lincoln's Sparrow	Melospiza lincolni								X	X	X	X	X								X	u	s	5
	Little Gull - v	Larus minutus	X												X	X							o	m	1
	Loggerhead Shrike - v	Lanius ludovicianus								X	X	X	X	X									u	s	3
	Long-billed Dowitcher - v	Limnodromus scolopaceus	X	X	X	X	X								X	X							o	m	3
	Long-eared Owl	Asio otus						X	X	X	X	X	X	X									u	s	#

LIST	NAME	LAKE	LAK	PON	RIV	MRS	SED	SHR	BOG	OPF	FLD	SAP	YUD	MUD	YUC	MUC	YUM	MUM	OLC	CLC	YLD	MLD	ABN	SEA	VER		
	Magnolia Warbler	Dendroica magnolia										X			X					X				c	s	5	
	Mallard	Anas platyrhynchos	X	X	X	X	X	X	X	X	X														c	s	7
	Marsh Wren	Limosa fedoa	X	X		X																			o	m	5
	Merrin	Cistothorus palustris						X		X															u	s	1
	Mourning Dove	Falco columbarius								X					X										u	s	4
	Mourning Warbler	Zenaidura macroura								X					X										c	s	5
	Mute Swan	Oporornis phalaenoptera	X			X				X															c	s	4
	Nashville Warbler	Cygnus olor																							u	s	2
	Northern Cardinal	Vermivora ruficapilla						X							X										c	s	8
	Northern Flicker	Cardinalis cardinalis								X					X										u	p	2
	Northern Goshawk	Colaptes auratus						X							X										c	s	5
	Northern Harrier	Accipiter gentilis								X					X										u	p	4
	Northern Hawk-Owl	Circus cyaneus				X	X			X															c	s	4
	Northern Mockingbird	Sumia ulula						X		X															o	w	4
	Northern Oriole	Mimus polyglottos								X															o	m	2
	Northern Parula	Icterus galbula									X				X										c	s	2
	Northern Pintail	Parula americana													X										u	s	4
	N. Rough-winged Swallow	Anas acuta				X																			u	m	1
	Northern Saw-whet Owl - v	Stelgidopteryx serripennis	X	X	X					X															u	s	5
	Northern Shoveler	Aegolius acadicus								X					X										u	s	12
	Northern Shrike	Anas clypeata				X																			u	m	1
	Northern Waterthrush	Lanius excubitor								X															u	w	4
	Oldsquaw	Seiurus noveboracensis						X	X																c	s	4
	Orange-crowned Warbler	Clangula hyemalis																							u	m	1
	Osprey	Contopus borealis						X		X					X										u	s	2
	Ovenbird	Vermivora celata								X															u	m	5
	Palm Warbler	Pandion haliaetus				X	X								X										c	s	6
	Pectoral Sandpiper	Seiurus aurocapillus								X					X										c	s	5
	Peregrine Falcon	Dendroica palmarum						X	X																u	s	4
	Philadelphia Vireo	Calidris melanotos	X	X	X					X															u	m	4
	Pied-billed Grebe	Falco peregrinus								X															u	s	5
	Pileated Woodpecker	Vireo philadelphicus								X					X										u	s	4
	Pine Grosbeak	Podilymbus podiceps				X				X															c	s	3
	Pine Warbler	Dryocopus pileatus								X															c	s	4
	Piping Plover - v	Pipilo erythrophthalmus																							u	w	6
	Prairie Warbler - v	Pipilo maculatus								X					X										u	s	14
	Purple Finch	Carduelis pinus						X		X					X										c	s	1
	Purple Martin	Dendroica pinus								X															c	s	1
	Red Crossbill	Charadrius melanotos																							o	s	1
	Red-headed Woodpecker	Dendroica discolor								X															o	m	1
	Red-breasted Merganser	Carpodacus purpureus								X					X										c	s	5
	Red-eyed Vireo	Progne subis						X																	c	s	6
	Red-eyed Woodpecker	Loxia curvirostra								X															u	p	4
	Red-breasted Nuthatch	Melanerpes erythrocephalus								X															u	s	4
	Red-crowned Vireo	Mergus serrator																							c	s	4
	Red-headed Woodpecker	Sitta canadensis								X					X										c	p	3
		Vireo olivaceus								X					X										c	s	7
		Melanerpes erythrocephalus								X					X										u	s	3

LIST	NAME	LAKE	LAK	PON	RIV	MRS	SED	SHR	BOG	OPE	FLD	SAP	YUD	MUD	YUC	MUC	YUM	YUM	MUM	OLC	CLC	YLD	MLD	ABN	SEA	VER			
	Red-necked Grebe	Podiceps griseogen	X	X	X																				c	m	3		
	Red-necked Phalarope - v	Phalaropus lobatus	X	X	X																					o	m	3	
	Red-shouldered Hawk	Buteo lineatus						X						X										X	u	c	s	4	
	Red-tailed Hawk	Buteo jamaicensis					X								X										u	c	s	7	
	Red-throated Loon	Gavia stellata	X										X												u	c	s	1	
	Red-winged Blackbird	Agelaius phoeniceus	X	X	X																				c	s	7		
	Redhead	Aythya americana	X	X	X																				u	c	s	3	
	Ring-billed Gull	Larus delawarensis	X	X	X																				c	s	3		
	Ring-necked Duck	Aythya collaris	X	X	X																				c	s	7		
	Rock Dove	Columba livia																							u	c	s	2	
	Rose-breasted Grosbeak	Pheucticus ludovicianus																							X	c	s	6	
	Rough-legged Hawk	Buteo lagopus																							u	c	s	2	
	Ruby-crowned Kinglet	Regulus calendula																							X	c	s	5	
	Ruby-throated Hummingbird	Archilochus colubris																							c	s	3		
	Ruddy Duck	Oxyura jamaicensis	X	X	X																				u	c	s	3	
	Ruddy Turnstone	Arenaria interpres	X	X	X																				u	c	s	3	
	Ruffed Grouse	Bonasa umbellus																							c	s	7		
	Rufous-sided Towhee	Pipilo erythrophthalmus																							u	c	s	4	
	Rusty Blackbird	Euphagus carolinus																							u	c	s	9	
	Sanderling	Calidris alba	X																						X	u	c	s	1
	Sandhill Crane	Grus canadensis																							u	c	s	4	
	Savannah Sparrow	Passerculus sandwichensis																							c	s	2		
	Scarlet Tanager	Piranga olivacea																							X	c	s	3	
	Sedge Wren	Cistothorus platensis																							u	c	s	3	
	Semipalmated Plover	Charadrius semipalmatus	X	X	X																				u	c	s	5	
	Semipalmated Sandpiper	Calidris pusilla	X	X	X																				u	c	s	3	
	Sharp-shinned Hawk	Accipiter striatus																							X	u	c	s	5
	Sharp-tailed Grouse	Tympanuchus phasianellus																								u	c	s	4
	Short-billed Dowitcher	Limodromus griseus	X	X	X																				u	c	s	3	
	Short-eared Owl	Asio flammeus																							u	c	s	3	
	Snow Bunting	Plectrophenax nivalis																							u	c	s	1	
	Snow Goose	Chen caerulescens	X																						u	c	s	2	
	Snowy Owl	Nyctea scandiaca																							u	c	s	3	
	Solitary Sandpiper	Tringa solitaria	X																						c	s	2		
	Solitary Vireo	Vireo solitarius																							X	c	s	3	
	Song Sparrow	Melospiza melodia																							c	s	6		
	Sora	Porzana carolina																							u	c	s	2	
	Spotted Sandpiper	Actitis macularia	X	X	X																				c	s	3		
	Spruce Grouse	Dendragapus canadensis																							u	c	s	4	
	Stilt Sandpiper	Calidris himantopus																							u	c	s	2	
	Surf Scoter	Melanitta perspicillata	X																						o	c	s	1	
	Swainson's Thrush	Catharus ustulatus																							X	c	s	7	
	Swamp Sparrow	Melospiza georgiana																							c	s	4		
	Tennessee Warbler	Vermivora peregrina																							u	c	s	9	
	Three-toed Woodpecker - v	Picoides tridactylus																							o	c	s	2	
	Tree Swallow	Lachycineta bicolor	X	X	X																				c	s	9		
	Tufted Titmouse - v	Parus bicolor																							X	o	c	s	6

LIST	NAME	LAKE	LAK	PON	RIV	MRS	SED	SHR	BOG	OPF	FLD	SAP	YUD	MUD	YUC	MUC	YUM	MUM	OLC	CLC	YLD	MILD	ABN	SEA	VER	
	Tundra Swan	Cygnus columbianus	X	X		X																	u	m	3	
	Turkey Vulture	Cathartes aura								X	X	X	X	X	X								u	s	6	
	Upland Sandpiper	Barrtramia longicauda									X												u	s	1	
	Veery	Catharus fuscescens					X										X					X	e	s	8	
	Vesper Sparrow	Pooecetes gramineus								X													c	s	1	
	Virginia Rail	Rallus limicola				X	X																u	s	2	
	Warbling Vireo	Vireo gilvus								X	X											X	u	s	3	
	Western Grebe - v	Aechmophorus occidentalis	X	X		X																	o	m	3	
	Western Kingbird - v	Tyrannus verticalis						X	X														o	m	3	
	Western Meadowlark - v	Sturnella neglecta						X															o	m	1	
	White-poor-will	Caprimulgus vociferus							X														u	s	2	
	White-breasted Nuthatch	Sitta carolinensis								X	X						X					X	c	p	5	
	White-crowned Sparrow	Zonotrichia leucophrys						X															u	m	4	
	White-rumped Sandpiper	Calidris fuscicollis	X			X									X	X							o	m	2	
	White-throated Sparrow	Zonotrichia albicollis						X							X	X							c	s	4	
	White-winged Crossbill	Loxia leucoptera													X	X							u	s	4	
	White-winged Scoter	Melanitta fusca						X															u	m	1	
	Wild Turkey	Meleagris gallopavo							X								X						u	p	5	
	Willet - v	Caotrophorus semipalmatus	X			X																	o	m	2	
	Willow Flycatcher	Empidonax traillii						X	X													X	u	s	5	
	Wilson's Phalarope	Phalaropus tricolor	X	X		X																	o	m	3	
	Wilson's Warbler	Wilson's pusilla						X	X														u	s	3	
	Winter Wren	Troglodytes troglodytes													X	X							u	s	4	
	Wood Duck	Aix sponsa	X	X	X	X		X						X	X								u	c	s	8
	Wood Thrush	Hylocichla mustelina												X	X								X	u	s	3
	Yellow Rail	Corumisops noveboracensis																					u	s	1	
	Yellow Warbler	Dendroica petechia						X															c	s	2	
	Yellow-bellied Flycatcher	Empidonax flaviventris								X							X						u	s	3	
	Yellow-bellied Sapsucker	Sphyrapicus varius								X	X						X						u	c	s	4
	Yellow-billed Cuckoo	Coccyzus americanus								X	X												X	u	s	5
	Yellow-headed Blackbird	Xanthocephalus xanthocephalus				X	X			X	X												u	s	4	
	Yellow-rumped Warbler	Dendroica coronata								X							X						e	s	6	
	Yellow-throated Vireo	Vireo flavifrons								X	X						X						u	s	7	

v = vaerant, species that are not annually observed and cannot be expected at designated habitats or time periods

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