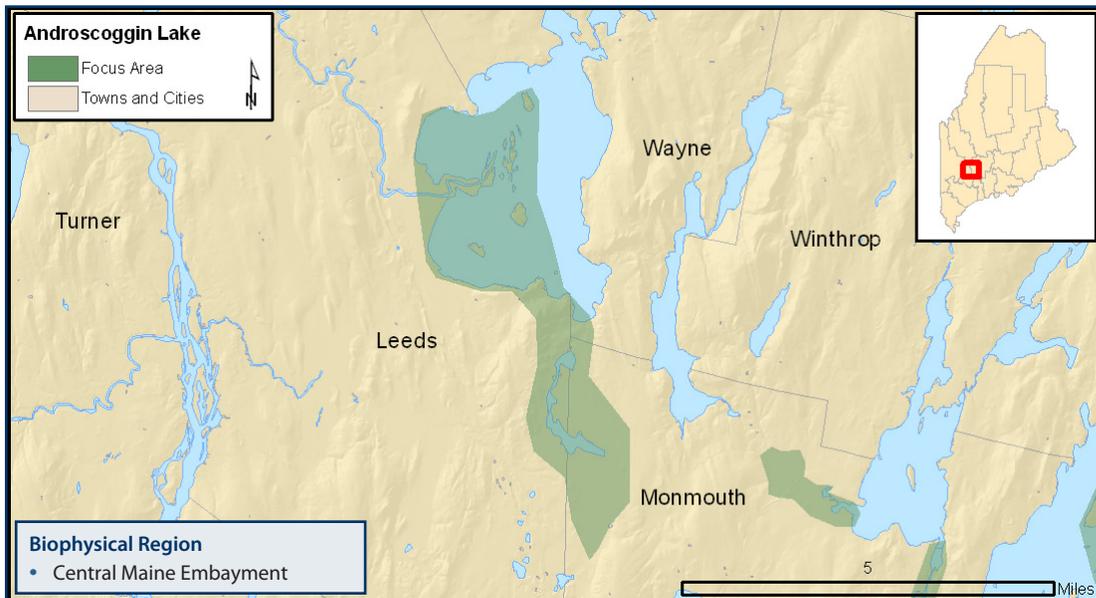
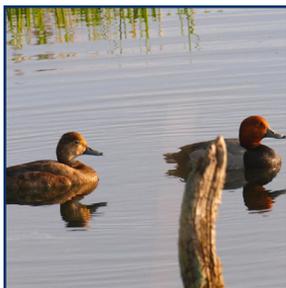


Androscoggin Lake



WHY IS THIS AREA SIGNIFICANT?

The western shore and islands of Androscoggin Lake support a diverse assemblage of rare species and exemplary natural communities. The most extensive areas are along and around the Dead River, which connects the lake to the Androscoggin River. The islands in Androscoggin Lake provide important nesting habitat for bald eagles, ospreys and great blue herons. Lothrop Islands black sand beaches are of geological interest and are also home to several rare plants.

OPPORTUNITIES FOR CONSERVATION

- » Educate recreational users about the ecological and economic benefits provided by the focus area.
- » Encourage best management practices for forestry, vegetation clearing, and soil disturbance activities near significant features.
- » Maintain natural hydrologic regime.
- » Monitor and remove invasive plant populations.
- » Maintain intact forested buffers along water bodies and wetlands.

For more conservation opportunities, visit the Beginning with Habitat Online Toolbox: www.beginningwithhabitat.org/toolbox/about_toolbox.html.

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Rare Animals

Bald Eagle

Rare Plants

Cat-tail Sedge
Dwarf Bulrush
Fall Fimbray
Indian Grass
New Jersey Tea

Rare and Exemplary Natural Communities

Outwash Plain Pondshore
Silver Maple Floodplain Forest
Unpatterned Fen Ecosystem

Significant Wildlife Habitats

Inland Wading Bird and Waterfowl Habitat
Deer Wintering Area

Public Access Opportunities

- State owned access to Androscoggin Lake is located on State Route 133



Androscoggin Lake, Maine Natural Areas Program

FOCUS AREA OVERVIEW

The Dead River, which connects the Androscoggin Lake to the Androscoggin River is bordered by an extensive hardwood floodplain forest. This floodplain features black gum (*Nyssa sylvatica*), a tree that is uncommon in Maine. The forest is a mosaic of intergrading types: classic mature silver maple forest with a sparse shrub layer and dense ferns, mid-successional red maple alluvial swamp, a riverbank levee with mature black gum, and areas of slightly higher elevation red oak floodplain forest. Most of the floodplain shows some evidence of cutting, and much of the area was grazed in the 1800s. On the shore south of the floodplain forest is an area of outwash plain pondshore vegetation. This very rare community type is mostly confined in Maine to York and southern Oxford Counties, typically on sandy pondshores where the water level is not regulated and rises and falls during the season. Because the hydrology of Androscoggin Lake is somewhat different, with a spillway that somewhat limits the lowering of water levels, the pondshore community here lacks the classic strong zonation of other known examples in Maine; however, it does contain many of the characteristic species, including two rare plants.

The islands in Androscoggin Lake are also of interest. Lothrop Island is well known as an eagle nesting area (since at least the

1960s). As declines in Maine eagle population continued in the 1960s and 1970s, it was the last site occupied in Androscoggin County and the entire Androscoggin River watershed when it too became vacant after 1972. After a 17-year absence in the region, nesting eagles reoccupied Lothrop Island in 1990—the first setting to re-attract eagles in Androscoggin County and the entire Androscoggin River watershed. It has been regularly used by nesting eagles since, and boasts productivity higher than the statewide average. Herons and osprey also nest on the island: at one time, there were more than 40 pairs of great blue herons and up to three osprey nests. Their numbers have diminished somewhat since the eagles' return, but the site remains one of the best assemblages of these three birds in Maine. Elsewhere on the lake, ospreys and herons have also nested on Norris Island, Blodgett Island, Androscoggin Island, and Philbrook Head. The Dead River outlet of the lake is a key foraging area for all of these species.

Androscoggin Lake is the only place in the state where the cat-tail sedge, *Carex typhina*, has been collected, but the exact location is not known and the record dates from 1940.

South of the lake itself is high-quality stream-wetland complex

along Bog Brook. This large peatland (about 900 acres) has formed in the basin around Bog Brook, which flows generally northward through the fen. Parts near the stream have been flooded during periods of unknown duration; there are extensive streamside meadow with mixed tall sedge fen vegetation. Farther back from the stream, the peatland surface rises slightly and the vegetation changes to shrub-heath fen or mixed wooded fen. The peripheral parts of the peatland are vegetated mostly by red maple woodland fen, with considerable black spruce and northern white cedar mixed in. Peat depths average about 2 m.

West of the peatland, at the Curtis Homestead Conservation Area, a few small individuals of sassafras (*Sassafras albidum*) were recently found. Sassafras is very common, even somewhat weedy, south of Maine, but it is very rare in the state. This location is in fact a significant northward range extension for this plant, and it will be interesting to see if the plants develop into a reproducing population.

The large wetlands and areas of open water associated to Lothrop and Androscoggin Islands and Bog Brook provide significant habitat for inland waterfowl and wading birds. These areas provide undisturbed nesting habitat and undisturbed, uncontaminated feeding areas and are essential for maintaining viable waterfowl and wading bird populations.

Principal fisheries in Androscoggin Lake include brown trout, largemouth bass, chain pickerel, smallmouth bass, white perch and yellow perch. Invasive species including black crappie, northern pike, are present in the lake as well.

RARE AND EXEMPLARY NATURAL COMMUNITIES

Silver maple floodplain forest: These forests are dominated by silver maple (>60% cover). Associates include red maple and American elm (up to 30% cover) or, in a few locations, bur oak (up to 25% cover). Widely spaced trees, many with multiple trunks, give a park like feeling. The understory is open and shrubs are sparse. Musclewood may be present and is a good indicator. The lush carpet of herbs changes from spring ephemerals such as trout lilies and bloodroot to dense fern cover in summer. Bryoid cover is minor. Some forests have a berm adjacent to the river channel, and herbaceous species composition here is different from the lower elevation interior of the floodplain.

Although a number of sites have been cleared or pastured in the past, current shoreland regulations provide increased protection to a number of these sites. Exotic plant species such as Japanese knotweed, which may displace those native to our area, also represent a threat to the integrity of these forests and have degraded some Maine examples. Several of the known examples are formally protected from conversion. Northern waterthrush, barred owl, belted kingfisher, bank swallow, and green heron are associates of this community type. In the southern part of the state, the Louisiana water-

Ecological Services of the Focus Area

- Provides nutrient export
- Provides high quality habitat for waterfowl, wading birds, deer, moose, and other wildlife.

Economic Contributions of the Focus Area

- Provides a scenic viewshed
- Recharges groundwater
- Contributes to the water supply
- Provides opportunity for recreational boating and fishing



Androscoggin Lake shore, Maine Natural Areas Program

thrush and yellow-throated vireo are likely associates if the canopy is closed or nearly so. Rare turtles like wood, spotted, and Blanding's turtles may feed on amphibian egg masses present in isolated pools within such forests. Wood turtles overwinter in river channels and forage in floodplain forests. The silver-haired bat often roosts in riparian habitats in trees with loose bark.

Outwash plain pondshore: This community consists of concentric zones of different herbs around a central pond. A band of shrubs (highbush blueberry, maleberry, buttonbush, leatherleaf) is typical at the upland/pondshore edge. Moving pondward, the next zone is dominated by narrow-leaved goldenrod and three-way sedge, with patches of flat-sedge and brown-fruited rush. In a narrow band at the top of this zone,

golden pert and meadow beauty are characteristic and may form dense patches. The next zone, exposed less frequently and for a shorter time, is dominated by pipewort and spikerushes. There is no well developed bryoid layer.

This extremely rare natural community is under pressure from adjacent land uses and recreational impacts. The periphery of several sites has been developed or converted to other uses. At the few known sites on conservation lands, the major recreational impact is off-road vehicle use. At low water, ATV use has significantly altered the vegetation at some sites. Hydrologic integrity is also a concern; as water use increases from neighboring homes and businesses, aquifer drawdowns could impair these water dependent systems and lead to vegetational changes.

These outwash plain pondshores provide excellent foraging habitat for the ribbon snake. The pondshores also provide habitat for the big bluet, a rare damselfly. Other more wide-ranging rare insects are likely to be found in this community, although not known from this site. At sites close to the coast, this community may also provide important feeding habitat for rare wading birds such as the little blue heron.

CHARACTERISTIC SPECIES

New Jersey Tea (*Ceanothus americanus*) is a shrub with alternately arranged, ovate, finely toothed leaves, 2-8 cm long, and with 3 prominent veins of the leaf blades. It grows from a deep reddish root, and its small white flowers occur in oblong clusters. The petals have a conspicuous narrow basal portion (called a claw). This shrub occurs in dry, semi-open conditions; suitable habitat is sometimes provided by artificial habitats such as roadsides. Persistence of the plant can apparently be compatible with maintenance of these habitats, but maintenance activities should be planned with the species in mind where possible.

Fall Fimbr (*Fimbristylis autumnalis*) is a tiny sedge that is easily overlooked. It grows in clusters or mats of plants 5-8 cm tall. Leaves are thread-like. The fruiting heads (spikes) are small (3-7 mm long) and egg-shaped and borne in clusters atop the short stems. *Fimbristylis autumnalis* could be confused with small individuals of the related *Bulbostylis capillaries*. In Maine, *Fimbristylis* grows in sandy wet soils of pondshores where the water level drops over the summer (Outwash Plain Pondshores). It is typically found growing beneath the canopy of other herbaceous plants such as *Juncus pelocarpus*, *Dulichium arundinaceum*, and *Euthamia tenuifolia* (formerly *Solidago tenuifolia*). It is not known to occur in shrubby or wooded parts of wetlands. Heavy all-terrain vehicle use of the sandy habitats where this occurs has degraded the habitat in some locations and continued use will be detrimental to the plant populations.



Indian Grass, Maine Natural Areas Program

Dwarf Bullrush (*Lipocarpa micrantha*) resembles the closely related bull-rushes (*Schoenoplectus spp.*), but as indicated by its name, is dwarfed, reaching 15 cm high at most, with drooping, narrow leaves. The spikes, 2-3 per stem, are 2-6 mm long, oval, covered with brown scales, and appear to emerge from the side of the stem because one of the bracts is erect and resembles a continuation of the stem. Also superficially similar is the sedge *Fimbristylis autumnalis*, which has small (3-7 mm long), egg-shaped fruiting heads (spikes) but lacks the leaf-like bract of dwarf bulrush. Like fall fimbr, heavy recreational use of the sandy habitats where this occurs has degraded the habitat in some locations and continued use will be detrimental to the plant populations.

Indian grass (*Sorghastrum nutans*) grows to a height of 1-2.5 m in loose tufts. The blades are 5-10 mm wide tapering to a narrow base. The golden panicle is 10-30 cm long and rather narrow with many branches. The spikelets are 6-8 mm long with awns of 1-1.5 cm. The florets, borne in pairs, are distinctive. One flower (sessile) is bisexual and will produce fruit. The second flower is represented only by a silky-pubescent pedicel. This species of grass is an important component of the tall-grass prairies in the Great Plains. In Maine, it has been documented from very few rivershores and lakeshores. Known populations are small and subject to the vagaries of small populations like random fluctuations or localized disturbance events.

Bald eagles (*Haliaeetus leucocephalus*) were nearly extirpated because of widespread use of environmental contaminants that caused eggshell thinning and impaired reproductive success. With bans on the use of these contaminants and habitat

protection measures, bald eagles have made a tremendous recovery. In 2009 they were removed from the state Endangered Species list. They remain listed as Special Concern. Bald eagles and their nests are protected by the U.S. Fish and Wildlife Service under the Bald and Golden Eagle Protection Act.

CONSERVATION CONSIDERATIONS

- » Appropriate conservation strategies include tree growth and open space treatments, conservation easements and fee ownership.
- » Lands where timber harvest or development continues should include effective buffers around all wetlands and shorelines. While different species can have different buffering requirements, wider buffers provide better protection for riparian and wetland-dependent species. The state minimum shoreland zoning standards specify a minimum 75' buffer in which very little harvest or clearing is allowed, with less stringent restrictions within 250' of the wetland border. Better protection will be afforded to the wetlands and ponds if as little alteration as possible occurs within 250' of the wetland/upland border. Any timber harvesting within and adjacent to wetlands or adjacent to ponds should be implemented with strict adherence to Shoreland Zoning guidelines and Maine Forest Service Best Management Practices.
- » Improperly sized culverts and other stream crossing structures can impede movement of fish and aquatic invertebrates effectively fragmenting local aquatic ecosystems and ultimately leading to local extirpation of some species. Future management should maintain or restore the sites natural hydrology.
- » Invasive plants and aquatic organisms have become an increasing problem in Maine and a threat to the state's natural communities. Disturbances to soils and natural vegetation and introductions of non-native species to terrestrial and aquatic habitats can create opportunities for colonization. Landowners and local conservation groups should be made aware of the potential threat of invasive species, of methods to limit establishment, and/or of appropriate techniques for removal. For more information on invasive plants visit: <http://www.maine.gov/doc/nrimc/mnap/features/invasives.htm>. Monitoring for invasive exotic plants such as barberry and Japanese knotweed (two species that have been known to degrade floodplain forests), and for purple loosestrife in the open wetlands, would help identify problems as soon as they arise, when control might be possible.
- » This area includes Significant Wildlife Habitat. Land managers should follow best management practices with respect to forestry activities in and around wetlands, shoreland ar-

eas, and Significant Wildlife Habitat. Vegetation removal, soil disturbance and construction activities may require a permit under the Natural Resources Protection Act. Contact MDIFW for more information.

RARE SPECIES AND EXEMPLARY NATURAL COMMUNITIES OF THE FOCUS AREA

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Animals	Bald Eagle	<i>Haliaeetus leucocephalus</i>	SC	S4B,S4N	G5
	Cat-tail Sedge	<i>Carex typhina</i>	E	S1	G5
	Dwarf Bulrush	<i>Lipocarpa micrantha</i>	T	S1	G5
Plants	Fall Fimbry	<i>Fimbristylis autumnalis</i>	T	S2S3	G5
	Indian Grass	<i>Sorghastrum nutans</i>	E	S1	G5
	New Jersey Tea	<i>Ceanothus americanus</i>	T	S1S2	G5
Natural Communities	Outwash Plain Pondshore	Three-way sedge - goldenrod outwash plain pondshore		S1	G2G3
	Silver Maple Floodplain Forest	Silver maple floodplain forest		S3	GNR
	Unpatterned Fen Ecosystem	Unpatterned fen ecosystem		S4	GNR

State Status*

- E** Endangered: Rare and in danger of being lost from the state in the foreseeable future, or federally listed as Endangered.
- T** Threatened: Rare and, with further decline, could become endangered; or federally listed as Threatened.
- SC** Special Concern: Rare in Maine, based on available information, but not sufficiently rare to be Threatened or Endangered.

*State status rankings are not assigned to natural communities.

State Rarity Rank

- S1** Critically imperiled in Maine because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres).
- S2** Imperiled in Maine because of rarity (6–20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- S3** Rare in Maine (on the order of 20–100 occurrences).
- S4** Apparently secure in Maine.
- S5** Demonstrably secure in Maine.

Global Rarity Rank

- G1** Critically imperiled globally because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation.
- G2** Globally imperiled because of rarity (6–20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- G3** Globally rare (on the order of 20–100 occurrences).
- G4** Apparently secure globally.
- G5** Demonstrably secure globally.