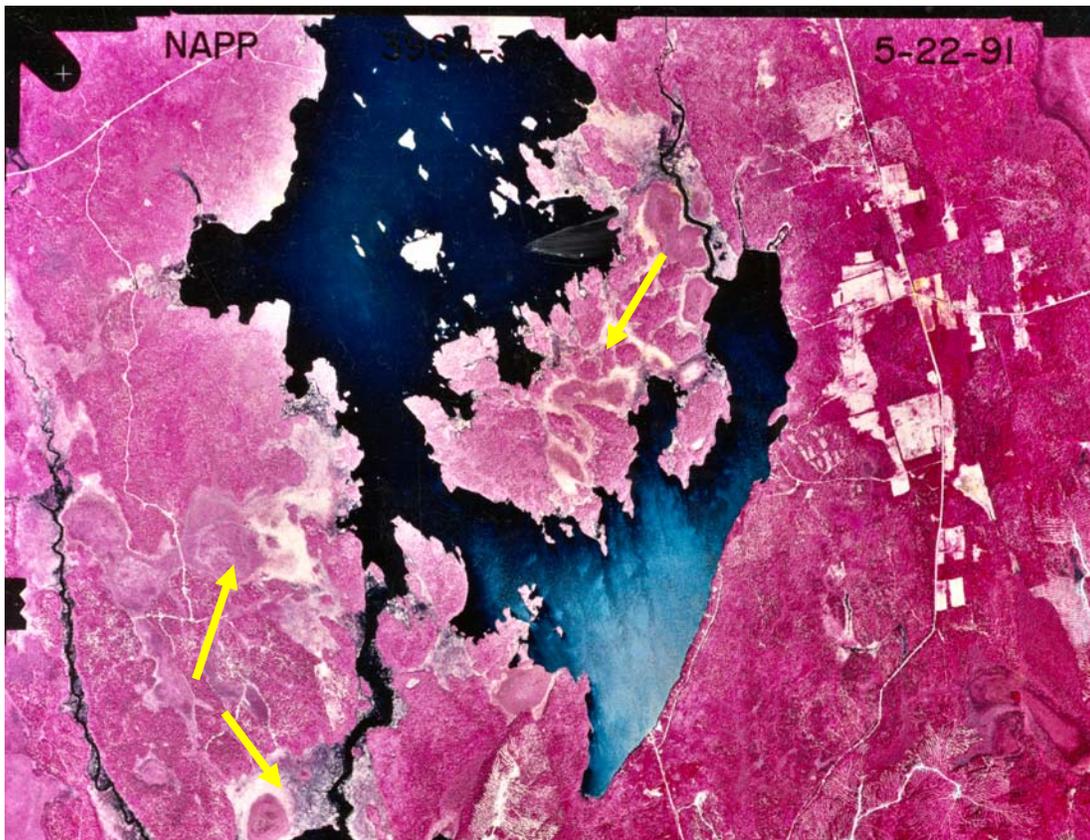


Maine River Wetland Complex

Alexander, Crawford & Princeton, Maine

Description:

An enormous wetland complex encompassing numerous natural community types extends in a broad mosaic from Pocomoonshine Lake south along the Maine River to Crawford Lake. The Middle Ground Peatlands in Pocomoonshine Lake are alone over 600 acres. Together with additional areas extending south toward Crawford Lake and west along Allen Stream in Township 21, these wetlands form a 4,200 acre peatland network -- one of the largest wetland complexes in the Eastern Interior Eco-Region of Maine.



Color infra-red aerial photo of Pocomoonshine Lake 1991 Arrows indicate major wetland areas.

Peatland ecosystems include unpatterned open basin fens and level bogs. Within these peatlands, finer-scale natural community types include mixed tall sedge fen (the most abundant type), sweetgale mixed shrub fen, leatherleaf boggy fen, dwarf shrub bog, and bog moss lawn, as well as small upland islands supporting red spruce- mixed conifer woodland. In general, the three “fen” types are closer and hydrologically connected to the lakeshore, while the “bogs” -- dwarf shrub bog and moss bog lawn -- are further isolated from the lakeshore. These natural community types grade into one another in a manner that makes it difficult to define their distinct boundaries on the ground; their approximate boundaries are most accurately delineated through air photos.

Dominant plants in these natural communities are characteristic of riverine, lacustrine, and emergent systems in the region. Rush beds of bayonet rush (*Juncus militaris*) border

Pocomoonshine Lake, Crawford Lake, and the Maine River. Inland from the lakeshore these marshes grade into mixed tall sedge fens dominated by slender sedge (*Carex lasiocarpa*). Other common species include sweet gale (*Myrica gale*), three-way sedge (*Dulichium arundinaceum*) and brown-fruited rush (*Juncus pelocarpus*). Sweetgale mixed shrub fen vegetation continues to the north of Crawford Lake, where additional plants include buttonbush (*Cephalanthus occidentalis*), the sedges *Carex utriculata* and *Carex lacustris*, arrowhead (*Sagittaria latifolia*), meadowsweet (*Spiraea alba*), winterberry (*Ilex verticillata*), blue flag (*Iris versicolor*), bog willow (*Salix pedicellaris*) and swamp candles (*Lysimachia terrestris*). Patches dominated by few-seeded sedge (*Carex oligosperma*), leatherleaf (*Chamaedaphne calyculata*) and large cranberry (*Vaccinium macrocarpon*) are frequent within the leatherleaf boggy fens. Also scattered throughout the fens are small open pools and bog moss lawn vegetation that support white beak-rush (*Rhynchospora alba*), round-leaved sundew (*Drosera rotundifolia*), naked bladderwort (*Utricularia cornuta*), spatula-leaved sundew (*Drosera intermedia*), tawny cotton grass (*Eriophorum virginicum*), three-way sedge, and brown-fruited rush.

On the west side of Crawford Lake, extending inland from the sedge-dominated fens, is a ~275 acre level bog ecosystem. The slope of the bog is approximately 5% and it rises more than eight feet from the sedge fens. White pine (*Pinus strobus*) and black spruce (*Picea mariana*) are scattered sparingly throughout the bog. Black huckleberry (*Gaylussacia baccata*) is the dominant shrub, while Labrador tea (*Rhododendron groenlandicum*), sheep laurel (*Kalmia angustifolia*) and leatherleaf are also abundant. Other frequent plants include rhodora (*Rhododendron canadense*), bog rosemary (*Andromeda polifolia*) and mountain holly (*Nemopanthus mucronatus*).

Upland forests within this focus area are mid-successional coniferous and mixed hardwood stands. Within the isolated upland "islands" of the Middle Ground of Pocomoonshine Lake, white pine, red spruce (*Picea rubens*), red maple (*Acer rubrum*), and quaking aspen (*Populus tremuloides*) are common in the tree layer, with northern red oak (*Quercus rubra*) present in lesser amounts. The shrub and herb layers are quite sparse; species found include lowbush blueberry (*Vaccinium angustifolium*), northern running-pine (*Diphasiastrum complanatum*), striped maple (*Acer pensylvanicum*) and juniper (*Juniperus communis*). Soils are somewhat stony, well-drained fine sandy loams, and some areas show evidence of past burning.



Black tern

Along the west shore of Crawford Lake, over 50 plants of the rare water awlwort (*Subularia aquatica*) were found beneath a foot of water on gravelly substrate. Associated plants included pipewort (*Eriocaulon aquaticum*), water lobelia (*Lobelia dortmanna*) and little floating hearts (*Nymphoides cordata*). This plant likely occurs in many areas of the lake where there is appropriate substrate.

The extensive wetlands and floating peat mats provide excellent waterfowl and wading bird habitat as well as ideal nesting habitat for the rare black tern (*Chlidonias niger*), documented from Mud Lake in 1996.

Rare Species and Exemplary Natural Community Table for Maine River Wetland Complex

Common Name	Latin Name	S-RANK	G-RANK	Status
<i>Exemplary Natural Communities</i>				
Huckleberry-Crowberry Bog		S3	N/A	N/A
Dwarf Shrub Bog		S4	N/A	N/A
Level Bog Ecosystem		S4	N/A	N/A
Unpatterned Fen Ecosystem		S4	N/A	N/A
<i>Rare Plants</i>				
Water awlwort	<i>Subularia aquatica</i>	S2	G5	SC
<i>Rare Animals</i>				
Black Tern	<i>Chlidonia niger</i>	S2B	G4	SE
Bald eagle	<i>Haliaeetus leucocephalus</i>	S2	G4	ST

Other Habitats Mapped by MDIFW:

Waterfowl / Wading Bird Habitat
 Bald Eagle Essential Habitat

Conservation Considerations:

- Most of the peatland complex is non-forested, and significant impacts from forestry activities in these open peatlands are unlikely. Some wetland areas supporting merchantable black spruce and northern white cedar are interspersed among the open peatlands. Cedar stands in particular are sensitive to timber harvesting, and they should be avoided entirely or harvested only on frozen ground, retaining at least two-thirds canopy closure.
- Around lakeshores and rivershores, implementation of standard Best Management Practices and conformance with LURC shoreland zoning standards should ensure that the peatland remains intact and pristine.
- Emergent wetlands are very susceptible to infestation from invasive species such as purple loosestrife (*Lythrum salicaria*). At this time, no invasive species have been observed, but if loosestrife is discovered it should be noted and promptly removed.
- Although Crawford Lake is impounded at its outlet (the East Machias River), based on the topography of the area it does not appear that the small dam has significantly altered the vegetation adjacent to the lake.
- In general, threats to these peatlands include peat mining, cranberry harvesting, timber harvest around the forested perimeters, and development.

Protection Status:

Nearly all of this area is in private ownership.