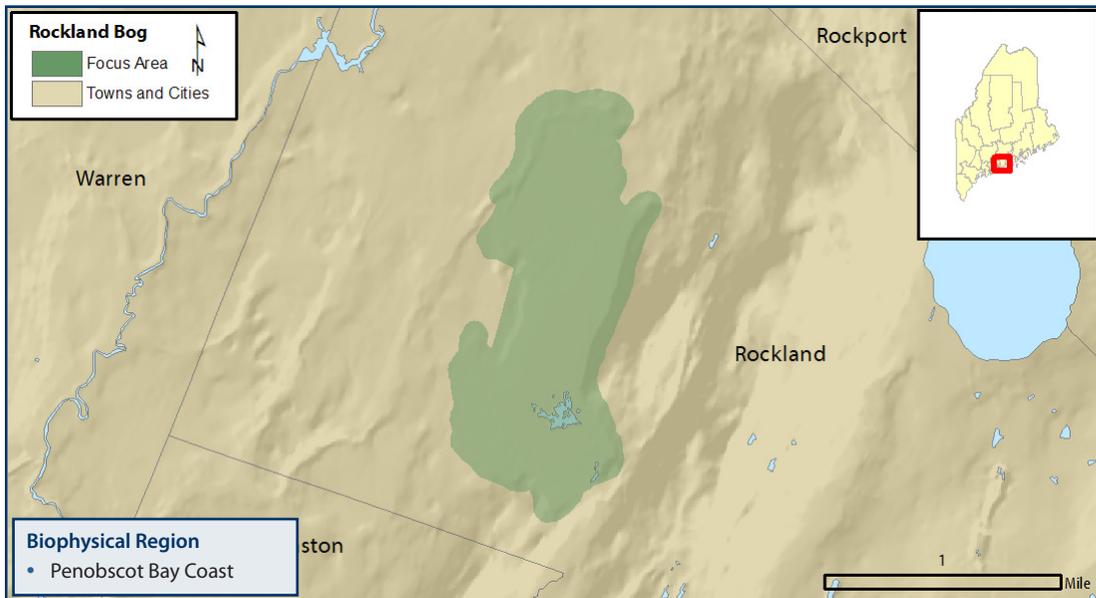
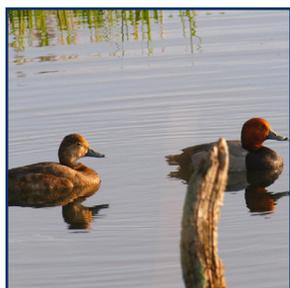


# Rockland Bog



## WHY IS THIS AREA SIGNIFICANT?

At nearly 700 acres, Rockland Bog is the largest peatland complex in Mid-Coast Maine. Also known as Oyster River Bog, the Rockland Bog lies within a relatively undeveloped landscape of sparse residential lands to the east and undeveloped lands to the west. It has long been recognized as a unique area by local naturalists.

## 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.
- » Monitor and remove invasive plant populations.
- » Work with willing landowners to permanently protect undeveloped areas and significant features.
- » Maintain intact forested buffers along water bodies and wetlands.
- » Work with landowners to encourage sustainable forest management practices on remaining privately owned forest lands.

For more conservation opportunities, visit the Beginning with Habitat Online Toolbox: [www.beginningwithhabitat.org/toolbox/about\\_toolbox.html](http://www.beginningwithhabitat.org/toolbox/about_toolbox.html).

*Photo credits, top to bottom: Maine Natural Areas Program, Georges River Land Trust, Georges River Land Trust, B. Nikula, Paul Cyr*

## Rare Animals

Citrine Forktail

## Rare and Exemplary Natural Communities

Unpatterned Fen Ecosystem

## Significant Wildlife Habitats

Inland Wading Bird and Waterfowl  
Deer Wintering Area



Rockland Bog, Georges River Land Trust

## FOCUS AREA OVERVIEW

The Rockland Bog contains several different vegetation types. Based on data collected by University of Maine in the 1980's, the largest of these types is a red maple swamp, estimated to cover roughly 30% of the wetland -- mostly at the northern end. In descending order of size, the other types are dwarf shrub bog, black spruce forested bog, sweet gale shrub fen, and sedge fen.

In a 1999 field survey to the site, ecologists noted a beaver lodge, old dams, channeled water, and an open water pond created by beaver activity. Characteristic pond species included fragrant water-lily (*Nymphaea odorata*) and cow-lily (*Nuphar variegata*). Recent beaver activity appears to have increased the area of sedge fen, dominated by slender sedge (*Carex lasiocarpa*), beaked sedge (*C. utriculata*), silvery sedge (*C. canescens*), and tussock sedge (*Carex stricta*).

Several botanical features are unique to the bog. It contains a small area (a few acres) of plants characteristic of bogs further Downeast --- tufted club-rush (*Trichophorum cespitosum*) and dwarf huckleberry (*Gaylussacia dumosa*). It also supports a large population of the dragon's mouth orchid (*Arethusa bulbosa*), considered uncommon to rare (but not state-listed)

in Maine. Two rare species, Moonwort (*Botrychium lunaria*) and Netted Chain Fern (*Woodwardia areolata*), were documented in the bog in the 1980's, but have not been located in recent surveys.

The Rockland bog provides important habitat for **inland wading birds and waterfowl**. A rare damselfly, **citrine forktail** (*Ischnura hastata*), has also been documented using the bog.

## RARE AND EXEMPLARY NATURAL COMMUNITIES

**Unpatterned Fen Ecosystem:** Fens are peatlands in which groundwater or water from adjacent uplands moves through the area. As a result, plants are exposed to more nutrients, and the vegetation is typically different and more diverse than that of bogs. Peat is moderately- to well-decomposed and of variable thickness. The vegetation consists predominantly of sedges, grasses, reeds, and Sphagnum mosses. Bog communities, dominated by heath shrubs, may be present; but though fen and bog vegetation may co-occur, in a fen ecosystem the former is more extensive. This type is broadly defined geographically: in very few locations in southern Maine one may find an Atlantic White Cedar Bog community as a constituent, but far more common statewide would be the Northern White

Cedar Woodland Fen community.

### CHARACTERISTIC RARE SPECIES

**Citrine forktail** (*Ischnura hastata*), listed as Special Concern in Maine, is the smallest damselfly in North America at less than 25 mm. It can be found around heavily vegetated ponds, lakes and other bodies of water.

### CONSERVATION CONSIDERATIONS

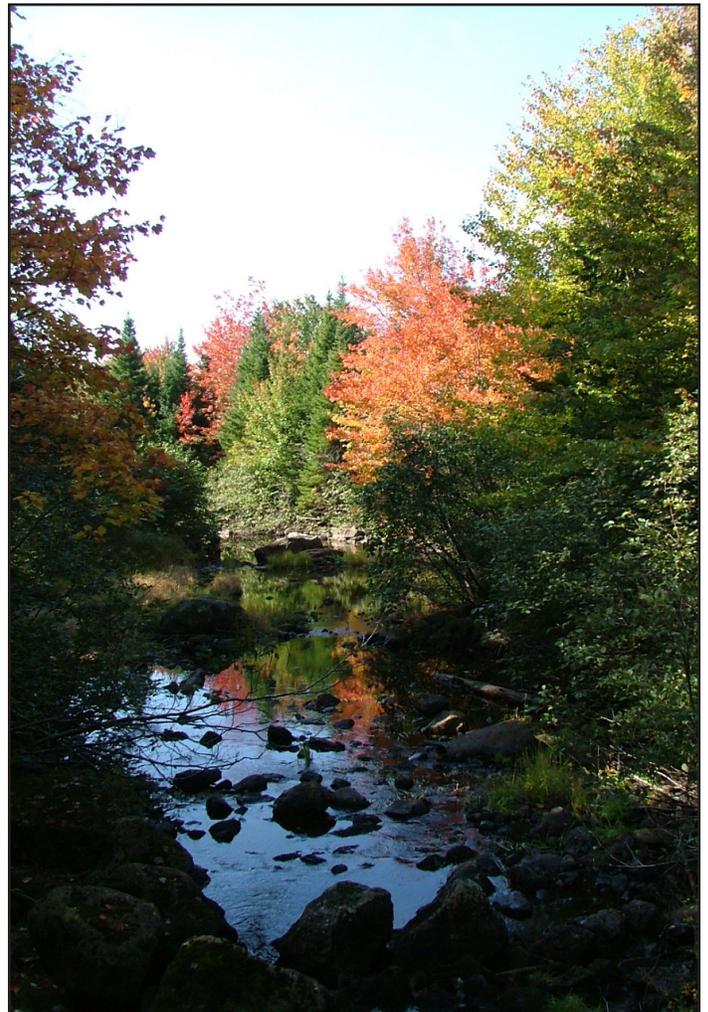
- » Threats to these systems include hydrologic alteration (from changes in water flow or impoundment of waterways), development of adjacent uplands and associated water quality impacts, invasive species such as purple loosestrife, and poor timber harvesting practices.
- » With regard to timber harvesting, strict adherence to Shoreland Zoning guidelines and Maine Forest Service Best Management Practices should help to ensure that the bog remains intact. Ideally, however, large areas of the wetland could be set aside in forever wild condition.
- » 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>.
- » 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.
- » The moonwort occurs in only three other locations in Maine. It was last seen in Rockland Bog in 1986 but was not re-located in 1999. The netted chain fern was last observed in the area in 1917, and it has not been documented anywhere within Maine in the last 20 years. Further surveys should be conducted to re-locate both of these species.
- » Appropriate conservation strategies include open space tax treatment, conservation easement, and fee ownership.
- » This area includes Significant Wildlife Habitat. Land managers should follow best management practices with respect to construction and forestry activities in and around wetlands, shoreland areas, and Significant Wildlife Habitat. Contact MDIFW for more information.

### Ecological Services of the Focus Area

- High quality habitat for waterfowl, wading birds, deer, and other wildlife.
- Supports regional biodiversity by providing habitat for rare species and natural communities.

### Economic Contributions of the Focus Area

- Provides high value forest products that support the regional economy.
- Attracts tourism for wildlife observation, paddling, hiking, hunting, and angling.



Oyster River, Georges River Land Trust

**RARE SPECIES AND EXEMPLARY NATURAL COMMUNITIES OF THE FOCUS AREA**

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Animals	Citrine Forktail	<i>Ischnura hastata</i>	SC	S1S2	G5
Natural Communities	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.