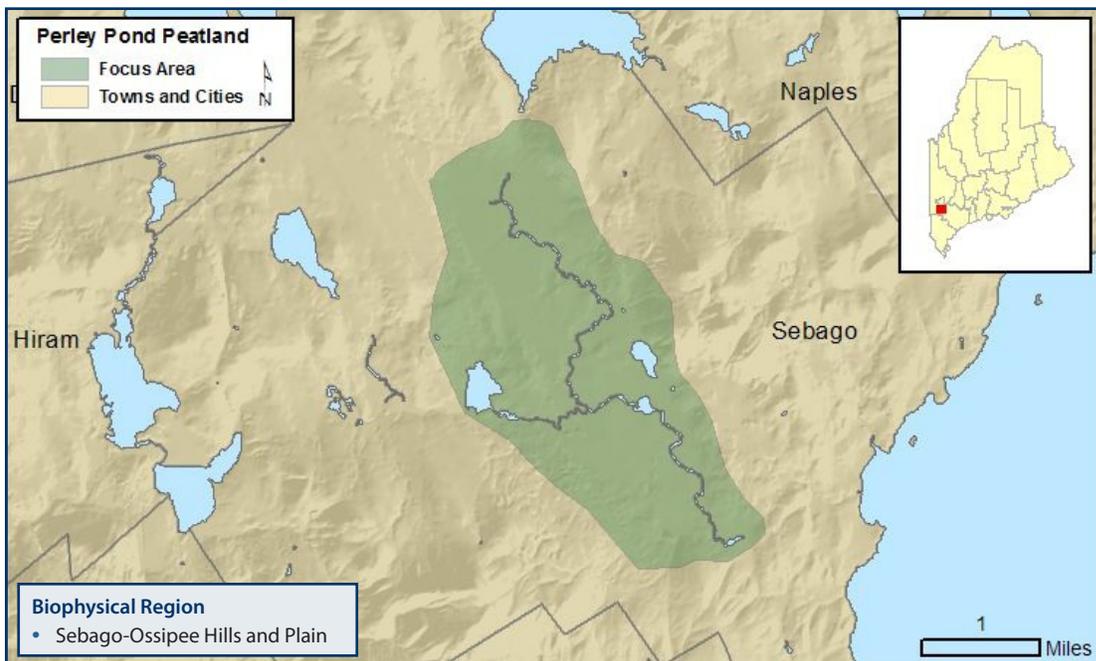


Perley Pond Peatland



WHY IS THIS AREA SIGNIFICANT?

Notable features of the Perley Pond Peatland Focus Area include Perley Pond, Mariner Pond, Mariner Mountain, a large, high quality example of an unpatterned fen ecosystem, and areas of both pitch pine bog and leatherleaf bog. In addition, the Focus Area supports two rare invertebrate species and extensive Inland Wadingbird and Waterfowl Habitat.

OPPORTUNITIES FOR CONSERVATION

- » Work with willing landowners to permanently protect remaining unprotected significant features in the Focus Area.
- » Encourage town planners to improve approaches to development that may impact Focus Area functions.
- » Maintain enhanced riparian buffers to protect natural communities, rare species, and wetland integrity.
- » Encourage best management practices for forestry, vegetation clearing and soil disturbance.
- » Maintain natural hydrology.
- » Educate recreational users about the ecological and economic benefits provided by the Focus Area.

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

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Rare Animals

Common Sanddragon
Scarlet Bluet

Rare and Exemplary Natural Communities

Unpatterned Fen Ecosystem
Leatherleaf Boggy Fen
Pitch Pine Bog

Significant Wildlife Habitats

Inland Wading Bird and Waterfowl Habitat

Public Access Opportunities

- » MDIFW Northwest River Wildlife Management Area



Perley Pond Peatland, Maine Natural Areas Program

FOCUS AREA OVERVIEW

The Perley Pond Peatland Focus Area covers approximately 3,700 acres and includes most of the Northwest River and its tributaries from Peabody Pond southward. It is roughly bordered on the west side by Route 107. Folley Road, a secondary road, bisects the Focus Area into southern and northern sections. Prominent features include Perley Pond, Mariner Pond, Mariner Mountain and the large peatland ecosystem along the Northwest River. Most of the Focus Area consists of a lowland basin, but it includes some steep slopes on its eastern margin including one that abuts Perley Pond. Most of the upland forests are intact except for recent selective cutting in the lowlands west of the Northwest River in the southwestern section of the Focus Area.

Significant features that have been documented from the Focus Area include an exemplary ecosystem, pitch pine bog, leatherleaf bog, and two rare invertebrate species. Additionally, the area includes extensive Inland Wadingbird and Waterfowl Habitat.

NATURAL COMMUNITIES

A high quality **unpatterned fen ecosystem**, which occupies more than 600 acres, has been documented along the shores of Perley Pond and the Northwest River. This acidic peatland ecosystem occurs in deposits of glacio-fluvial sand and gravel.

Ground or surface water from adjacent uplands provides some nutrient input into this system. The ecosystem encompasses a wide variety of natural communities including sedge-leatherleaf fen lawn, dwarf shrub bog, spruce-larch wooded bog, red maple wooded swamp, sweetgale mixed shrub fen, and tussock sedge meadow. Dwarf shrub bog is the most abundant of these community types within the ecosystem. Overall, the flora is highly diverse given the moderate size and acidic conditions of the wetland complex. This is a high quality example of an unpatterned fen because of its excellent condition and high floristic diversity.

The **Pitch Pine Bog** natural community is a sparsely forested wetland in which the dominant tree is pitch pine. The shrub layer indicates the more southerly affinities of this type, with maleberry and highbush blueberry common along with the standard bog shrubs of huckleberry and mountain holly. The herb layer may be dense heath shrubs, especially leatherleaf, or it may be more sparse. Peat mosses cover the ground and form the substrate. This acidic habitat occurs in shallow basins on the coastal plain. Peat may be shallow, over sandy mineral soil, or deep as is typical of some other types of peatlands.

Areas of **leatherleaf boggy fen** occur in the open wetlands along much of the corridor of the Northwest River within the

Focus Area. Leatherleaf boggy fen is characterized by peatland vegetation dominated by leatherleaf mixed with other low heath shrubs, mostly growing less than one meter tall. Grass and sedge species cover is usually less than 30%. Typical bog plants like pitcher plants, sundews, and small cranberry are scattered on the sphagnum substrate. Trees, if present at all, are less than 15% total cover. This type is commonly found in bogs and nutrient-poor fens, usually in settings where groundwater contact is maintained. The substrate is sphagnum peat.

CHARACTERISTIC SPECIES

A globally rare damselfly, the **scarlet bluet**, has been documented in Perley Pond. This species inhabits relatively undisturbed pondshores with abundant aquatic emergent vegetation. Additionally, the **common sanddragon**, a dragonfly species of Special Concern in Maine, has been documented in Peabody Pond near the outlet of the Northwest River. Both species reach the northern limit of their geographic range in southern Maine.

The entire peatland ecosystem and additional streamside wetlands are designated as important **Inland Wadingbird and Waterfowl Habitat** by the Department of Inland Fisheries and Wildlife. This Significant Wildlife Habitat type provides nesting, feeding and brooding sites for a wide variety of bird species.

CONSERVATION CONSIDERATIONS

- » The integrity of wetlands and the processes and life forms they support are dependent on the maintenance of the current hydrology of the site. Intensive timber harvesting, vegetation clearing, soil disturbance, new roads, and development on buffering uplands can result in greater runoff, sedimentation, and other non-point sources of pollution. Improperly sized crossing structures such as culverts can impede movement of fish and aquatic invertebrates effectively fragmenting local aquatic ecosystems and ultimately leading to local extirpation of some species. Future management activity should avoid additional impacts to the site's hydrology.
- » Less pervasive is degradation from incidental uses related to increasing residential development in the area. Riparian buffers can play a major role in protection here. Care needs to be taken that ORV's stay on existing trails and remain out of all wetlands when the ground is not frozen. Existing roads and trails should be reviewed with particular recreation and access needs in mind, and trails closed if they run counter to protection needs. Fragmenting features should be minimized where possible.
- » No activities should be permitted that could lead to the loss or degradation of wetlands including filling, dredging, sedimentation, changing hydrology unless the activity is approved by MDIFW.
- » A minimum 250-foot forested buffer zone should be maintained around ponds with known rare animal locations.
- » Impervious surfaces, yards, buildings and roads should

Ecological Services of the Focus Area

- Provides high quality habitat for waterfowl, wading birds, and other wildlife.
- Protects water quality and ecological integrity of Sebago Lake.
- Retains floodwaters

Economic Contributions of the Focus Area

- Recharges groundwater
- Serves as a valuable recreational resource for local residents

comprise no more than 20% of the landscape within 1/4 mile of rare animal wetlands. Natural forest habitat should predominate the landscape.

- » Towns should strive to maintain important habitat areas identified by MDIFW in low density, rural settings by identifying important habitat areas in comprehensive plans and zoning accordingly.
- » Low-intensity cutting (single tree or small group selection, firewood harvest) within riparian buffers is likely compatible as long as operators avoid wetlands. Winter harvests are recommended to minimize impacts to rare animals and wetland condition. Close adherence to Best Management Practices for forestry activities near vernal pools (available from Maine Audubon Society at 207-781-6180 ext. 222 or bwilson@maineaudubon.org) will generally ensure the protection of all major wetland habitats.
- » This area includes Significant Wildlife Habitat. Land managers should follow best management practices in and around wetlands, shoreland areas, 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.
- » With expected changes in climate over the next century, plant and wildlife species will shift their ranges. Maintaining landscape connections between undeveloped habitats will provide an important safety net for biodiversity as species adjust their ranges to future climate conditions.
- » 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>.

RARE SPECIES AND EXEMPLARY NATURAL COMMUNITIES OF THE FOCUS AREA

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Animals	Common Sanddragon	<i>Progomphus obscurus</i>	SC	S1S2	G5
	Scarlet Bluet	<i>Enallagma pictum</i>	SC	S2	G3
Natural Communities	Unpatterned Fen Ecosystem	Unpatterned Fen Ecosystem		S4	Not ranked
	Leatherleaf Boggy Fen	Leatherleaf Bog		S4	G5
	Pitch Pine Bog	Pitch Pine Bog		S2	G3G5

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) or because some aspect of its biology makes it especially vulnerable to extirpation.
- 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.