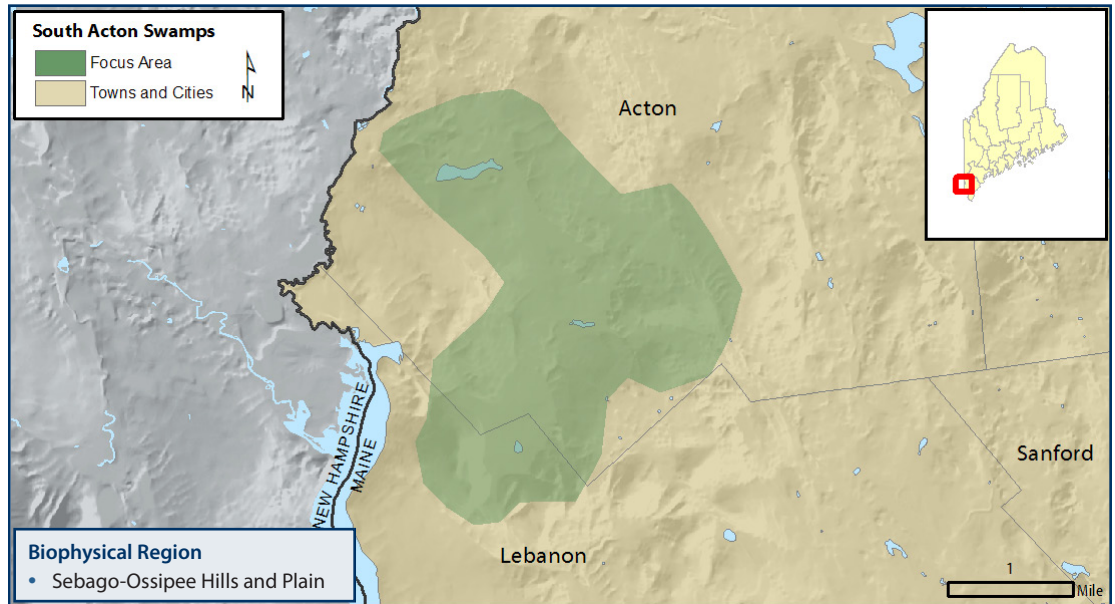


South Acton Swamps



WHY IS THIS AREA SIGNIFICANT?

The series of broad basins supporting forested wetlands, peatlands, marshes and open water systems surrounded by forested hillsides in the South Acton Swamps Focus Area sustain a wide diversity of plant and animal habitats including ecosystems and natural communities of statewide significance, rare plant and rare animal species.

OPPORTUNITIES FOR CONSERVATION

- » Work with willing landowners to permanently protect the significant features in the Focus Area.
- » Maintain enhanced riparian buffers.
- » Encourage best management practices for forestry activities near wetlands, water bodies and significant features.
- » Maintain the natural hydrology by avoiding drainage or impoundment of the wetlands, streams or adjacent water bodies.

Refer to the Beginning with Habitat Online Toolbox for more conservation opportunities: www.beginningwith-habitat.org/toolbox/about_toolbox.html
Beginning with Habitat Online Toolbox: www.beginningwithhabitat.org/toolbox/about_toolbox.html.

Rare Animals

Blanding's Turtles
Wood Turtle
Ribbon Snake

Rare Plants

Small whorled-pogonia
Spotted Wintergreen
Swamp Saxifrage

Rare and Exemplary Natural Communities

Grassy Shrub Marsh
Streamshore Ecosystem
Unpatterned Fen Ecosystem

Significant Wildlife Habitats

Inland Wading Bird and Waterfowl Habitat
Significant Vernal Pool
Deer Wintering Area



South Acton Swamps Black Pond Fen, Maine Natural Areas Program

FOCUS AREA OVERVIEW

The South Acton Swamps Focus Area covers approximately 3,600 acres and is a series of moderately broad basins surrounded by gentle to steep forested hillsides. The basins have approximately 250 acres of forested wetlands along with a number of marshes and open water systems. All together the various upland forest types and the variety of wetlands create a landscape with several exemplary ecosystems /natural communities and a wide diversity of plant and animal habitats. Within the site there are three local watersheds, two of which drain directly west into the Salmon Falls River, and a third, to the east, that drains into the Little River and eventually into the Salmon Falls River well to the south. One prominent feature is the Black Pond wetland mosaic, an area with forested swamp, shrub swamp, sedge meadows, streams, and a small bog pond with peatland vegetation around its margin. These wetlands are surrounded by relatively steeply sloped forested hills, the primary historic use of which has probably been limited to timber harvest due to steepness of slope. To the north, in a separate local watershed, there is a small lake – marsh formation that is fed by a narrow, mile long forested wetland. To the east, in another distinct local watershed, is a broad ~60 acre marsh and shrub swamp.

RARE AND EXEMPLARY NATURAL COMMUNITIES

Black Pond Fen, located in the southern portions of the Focus Area is considered an **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. The peat soil is moderately well to well decomposed and of variable thickness. The vegetation consists predominantly of sedges, grasses, reeds, and sphagnum. Bog communities, dominated by heath shrubs, may be present; though fen and bog vegetation may co-occur, in a fen ecosystem the former is more extensive.

The headwaters of the Little River are also considered a good example of a **streamshore ecosystem**. A streamshore ecosystem is a group of communities bordering and directly influenced by the open-water portion of a stream (first-order through third or fourth-order). It includes vegetated aquatic communities as well as the emergent and bordering communities. Most communities are palustrine; streams are generally too small to exert many disturbance effects on adjacent terrestrial areas.

An excellent example of a **grassy shrub marsh** occurs at the

headwaters of the Little River. This community is a heterogeneous wetland type in which herbs and shrubs occur in various assemblages. A typical example is dominated by herbs including mostly grasses and sedges, and often has a sparse shrub layer containing meadowsweet or hardhack. Bluejoint grass is frequent, although any of a variety of graminoids may be prominent at different sites. Three-way sedge and yellow loosestrife are indicators. A variant in southern Maine has buttonbush as a prominent shrub. This community type typically occurs on mineral soils that are flooded early in the growing season and remain saturated throughout the season.

CHARACTERISTIC SPECIES

The larger wetlands and open water areas in the Focus Area provide important **Inland Waterfowl and Wading Bird Habitat**. These areas provide undisturbed nesting habitat and undisturbed, uncontaminated feeding areas and are essential for maintaining viable waterfowl and wading bird populations. A large **Deer Wintering Area** has also been identified in the forest surrounding Black Pond Fen. Deer congregate in wintering areas which provide reduced snow depths, ample food and protection from wind. The outlet of Black Pond and the headwaters to the Little River both support wild **brook trout**, in important fishery resource as well.

The Focus Area includes several **vernal pools**. Vernal pools are ephemeral wetlands that typically fill with water from snow melt and spring run-off and often dry out over the course of the summer. They offer critical breeding habitat for some species of amphibians and invertebrates such as wood frogs, spotted and blue-spotted salamanders, and fairy shrimp. The seasonal nature of the temporary pools maintains a fishless environment conducive to the successful breeding of these animals. Vernal pools are also used as feeding and breeding habitat by many other animals such as spring peepers, gray tree frogs, and other common amphibians, as well as several rare species. The amphibians and aquatic invertebrates that are dependent on these ponds for survival are an important food resource for other forest dwellers such as turtles, snakes, birds, and small mammals. The vegetated condition of vernal pools varies from completely vegetated, usually with sedges, grasses, ferns, and scattered shrubs, to non-vegetated, with only dead leaves carpeting the pool bottom.

The wetlands and uplands in this Focus Area also support rare turtle species, including Blanding's and wood turtles. **Blanding's turtles** (state Endangered) are most frequently associated with complexes of small, acidic wetlands and vernal pools in large, intact forested landscapes. They also use small streams, shrub swamps, and wet meadows which are plentiful on the South Acton Swamps Focus Area. Although these turtles spend most of their time in the water, they readily travel overland between wetlands during the spring and summer months. Upland habitats are critical for basking, aestivating (a period of late summer inactivity), nesting, and as travel corri-

Ecological Services of the Focus Area

- Provides high quality habitat for wildlife
- Wetlands purify and regulate the flow of water entering the Salmon Falls and Little Rivers and contribute to the ecological integrity of these systems
- Contributes to regional biodiversity

Economic Contributions of the Focus Area

- Provides valuable recreational resources
- Contributes to recreational value of the Salmon Falls and Little Rivers by protecting water quality, fisheries, and wildlife habitat
- Provides wildlife habitat for a number of game species important to Maine's rural economy.

dors between wetlands. **Wood turtles** (Special Concern) are a more terrestrial species than Blanding's turtles, however, they are also closely associated with rivers and streams.

Blanding's and wood turtles have evolved relatively long adult life spans to offset the long time it takes to reach reproductive maturity (15 or more years) and to offset high levels of nest and juvenile mortality. Because of this unusual life history, these turtle populations are at low densities, and thus populations are extremely vulnerable to any human sources of adult mortality. Road mortality and collecting for pets, for example, can be deleterious as the attrition of just a few individuals every year can lead to the long-term decline and extinction of a local population. The secondary effects of human development – increased predators (e.g., dogs, cats, raccoon, skunks), water, light, and noise pollution, filling of small wetlands, and blocking upland travel corridors (roads, rail beds, yards) – also impact populations.

The wetlands of the Focus Area also provide habitat for the **ribbon snake**, a species of Special Concern in Maine. Ribbon snakes are semi-aquatic snakes that frequent bogs, shrub swamps, forested wetlands, wet meadows, streams, and pond/lake edges. They prefer the periphery of these areas where vegetation and supplies of amphibians are abundant. Most of Maine's ribbon snake population occurs in southern and south-central Maine. Due to the high rates of development in these areas, this species are also vulnerable to habitat loss, fragmentation, and degradation of their habitats. The wetland-upland ecology of this snake puts it at further risk due to inadequate regulations protecting riparian and upland habitat around smaller wetlands.

A populations of, **small-whorled pogonia** (state Endangered) has been documented within the Focus Area. Small whorled pogonia typically occurs in mid-successional mixed woods with sparse shrub and herb layers and thick leaf litter. It often occurs near intermittent streamlets or where a hardpan impedes water percolation into the soil. Associated understory plants include Indian cucumber-root, New York fern, partridge berry, and rattlesnake plantain.

CONSERVATION CONSIDERATIONS

- » The integrity of wetlands and the processes and life forms they support including rare plants and animals are dependent on the maintenance of the current hydrology and water quality 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.
- » No activities should be permitted that could lead to the loss or degradation of rare animal wetlands including filling, dredging, sedimentation, or changing of hydrology unless the activity is approved by MDIFW.
- » A minimum 250-foot forested buffer zone should be maintained around target wetlands with known rare animal locations. All wetlands, regardless of size, within 1/4 mile of mapped turtle locations should be considered potential habitat for this wide ranging species, and protected from direct impacts, and buffered by forested upland;
- » Impervious surfaces such as yards, buildings, parking lots, and roads should be minimized in the upland landscape within 1/4 mile of rare animal wetlands. Natural forest habitat should predominate the landscape.
- » Water crossing structure (culverts, bridges) repair, maintenance and installation projects should follow guidelines for aquatic species passage in order to avoid further fragmentation of aquatic and riparian habitats.
- » Less pervasive is degradation from incidental uses related to the increasing residential development in the area. Upland buffers can also 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 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.

- » Low-intensity cutting (single tree or small group selection, firewood harvest) is likely compatible with sensitive features as long as operators avoid wetlands. Winter harvests are recommended to minimize impacts to rare plants, animals, and wetland systems. Close adherence to Best Management Practices for forestry activities near wetlands and vernal pools (available from Maine Audubon Society at 207-781-6180 ext. 222 or bwilson@maineaudubon.org) will ensure the protection of wetland habitats and the amphibian food source they supply.
- » Conservation planning for upland features should include setting some areas aside from timber harvesting to allow for the development of some unmanaged forest ecosystems.
- » 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>.
- » This area includes Significant Wildlife Habitat for wintering deer and wading birds and waterfowl. Land managers should follow best management practices in and around 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
Plants	Blanding's Turtle	<i>Emys blandingii</i>	E	S2	G4
	Ribbon Snake	<i>Thamnophis sauritus</i>	SC	S3	G4
	Wood Turtle	<i>Glyptemys insculpta</i>	SC	S4	G4
	Small Whorled Pogonia	<i>Isotria medeoloides</i>	E	S2	G2
	Swamp Saxifrage	<i>Saxifraga pensylvanica</i>	SC	S3	G5
	Spotted Wintergreen	<i>Chimaphila maculata</i>	E	S2	G5
Natural Communities					
	Grassy Shrub Marsh	Mixed graminoid - shrub marsh		S5	GNR
	Streamshore Ecosystem	Streamshore ecosystem		S4	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.