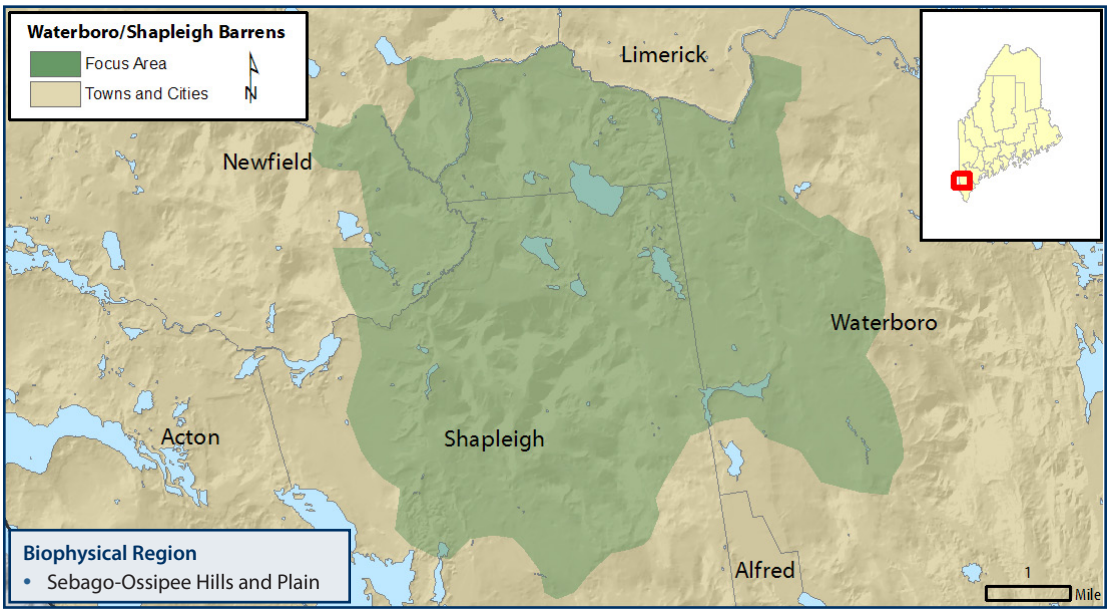
Beginning with HABITAT

Focus Areas of Statewide Ecological Significance

Waterboro / Shapleigh Barrens



WHY IS THIS AREA SIGNIFICANT?

Excellent examples of pitch pine-scrub oak barrens, a rapidly declining natural community, extend over very large areas in the Waterboro / Shapleigh Barrens Focus Area. The barrens support a rich array of rare invertebrate species that depend on pitch pine and/or scrub oak as larval hosts. In addition, the numerous wetlands and riparian areas at Waterboro Barrens contribute to the ecological diversity of the region and support several rare and exemplary natural communities and well as rare turtles and other rare animal species.

OPPORTUNITIES FOR CONSERVATION

- Work with willing landowners to permanently protect remaining undeveloped areas.
- Encourage town planners to improve approaches to development that may impact Focus Area functions.
- Use prescribed burns and timber harvest techniques to maintain natural communities and rare species.
- Educate recreational users about the ecological and economic benefits provided by the Focus Area.
- Limit use of pesticides, especially aerial spraying.
- Monitor for and remove invasive species.
- Encourage enhanced riparian buffers.

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

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Rare Animals

Similar Underwing
Barrens Chaetaglaea
Sleepy Duskywing
The Buckmoth
Barrens Itame
Southern Pine Sphinx
Twilight Moth
Edwards' Hairstreak
Southern Cloudywing
Ringed Boghaunter
Acadian Swordgrass Moth
Pine Barrens Zanclognatha
New England Cottontail
Ribbon Snake
Red-Winged Swallow
Oblique Zale
Pine Barrens Zale
Comet Darner
Spatterdock Darner
Coral Hairstreak
Broad Sallow
Northern Black Racer
Wood Turtle
Blanding's Turtle

Rare Plants

Missouri Rockcress
Ebony Spleenwort
Dwarf Dandelion
Upright Bindweed
Dry Land Sedge
Fogg's Goosefoot
Spotted Wintergreen
Narrow-Leaved Goldenrod
Fern-leaved False Foxglove
Clammy Azalea
Spicebush
Small Whorled Pogonia
Smooth Winterberry Holly
Rattlesnake Hawkweed
Bottlebrush Grass
Autumn Coralroot

Rare and Exemplary Natural Communities

Pocket Swamp
Red Maple Swamp
Outwash Plain Pondshore
Oak – Pine Woodland
Pitch Pine-Scrub Oak Barren
Oak – Ash Woodland
White Oak – Red Oak Forest
Tall Sedge Fen

Significant Wildlife Habitats

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

Shapleigh Barrens, Meg Sine

FOCUS AREA OVERVIEW

The Waterboro/Shapleigh Barrens Focus Area is a large geographic area covering approximately 18,000 acres. It includes a wide array of rare and exemplary natural communities, and rare plant and animal species. Many of these sensitive natural features are located at multiple sites within the Focus Area. Of greatest significance are the pitch pine-scrub oak barrens that extend over vast acreages in both the Waterboro Barrens and Shapleigh Barrens. Pitch pine-scrub oak barrens have rapidly declined in the last century. This rare natural community type provides habitat to a wide variety of invertebrates and other species, a number of which are rare. Waterboro Barrens is considered the best and largest example of pitch pine-scrub oak barrens in Maine. Some of the factors contributing to Waterboro Barren's importance include at least 3,000 acres of pine barrens vegetation, a large number of rare invertebrate species, minimal degradation and fragmentation, and its proximity to Shapleigh Barrens. Shapleigh Barrens is also relatively large at 1,170 acres. It lies in part within the Vernon Walker Wildlife Management Area owned and managed by the Maine Department of Inland Fisheries and Wildlife (MDIFW). However, only half of Shapleigh Barrens is currently protected, and the majority of the pitch pine-scrub oak habitat that is unprotected lies along Route 11, a major north-south highway along which development is expanding.

Although Waterboro Barrens and Shapleigh Barrens lie within three miles of one another, it is unknown how much of an influence their proximity has on rare animal movements. Pockets of pine barrens habitat exist on the land owned by the Town of Shapleigh and other private landowners along Rt. 11, between the two larger barrens, and likely facilitates population movements between the two sites.

The pitch pine-scrub oak barrens in Waterboro and Shapleigh grow on droughty, nutrient poor glacial outwash derived soils. Poor soils and cold pockets create harsh growing conditions that limit the number of plant species that can tolerate this environment. However, at Waterboro Barrens, the presence of numerous wetlands and riparian areas interspersed with the barrens vegetation increase species and community diversity. Most noteworthy are Round Pond and Little Teeny Poverty Pond, both of which support rare outwash plain pond shore natural communities.

RARE AND EXEMPLARY NATURAL COMMUNITIES

Pitch Pine-Scrub Oak Barrens: Woodlands on sandy outwash with patchy vegetation in which pitch pine is the canopy dominant. In openings, a dense shrub/sapling layer of scrub oak and/or gray birch is typical. The low layer of heath shrubs

is dominated by lowbush blueberry, with bracken fern and woodland sedge as characteristic herbs. Mosses are virtually absent. Soils tend to be excessively drained and accumulate very little organic matter.

Three-way Sedge-Goldenrod Outwash Plain Pondshore: This community is made up of concentric zones of different herbs around shallow, sandy-bottomed ponds in outwash plains, whose shores are inundated for part of the growing season and exposed for part of the growing season. A band of shrubs (e.g. highbush blueberry, maleberry, buttonbush, leatherleaf) is typical at the upland edge. The next lower zone is dominated by narrow-leaved goldenrod and three-way sedge; golden-pert and meadow beauty are characteristic. The lowest zone, exposed less frequently than those above, is dominated by pipewort and spikerush.

Red Oak - White Oak Forest: Deciduous forests dominated by red oak with white oak as a canopy associate. White pine is occasionally present, but conifers comprise only a small proportion (<20%) of the canopy. Sugar maple and beech may be present in minor amounts. Shrubs occur as well-spaced patches; typical species include striped maple, ironwood, and maple-leaved viburnum. The forest floor is characterized by low heath shrubs, such as lowbush blueberry; common herbs include woodland sedge, bracken fern, whorled loosestrife, and Canada mayflower. Bryoids are very sparse. Typically occurs on well-drained gentle slopes of somewhat sheltered sites below 600' elevation.

Mixed Tall Sedge Fen: This community is made up of expanses of tall grasses and sedges growing on peat soils. Slender sedge is typically dominant, and beaked sedge and lake-bank sedge are also characteristic; bluejoint grass is often present in small amounts. The herb layer is continuous, and most shrubs are less than one meter tall except for an occasional alder or meadowsweet. Dwarf shrubs are always less abundant than the herbaceous plants. The moss layer is in inverse proportion to the amount of standing water. This community is generally found on peaty deposits adjacent to open water; sometimes a floating mat.

Red Maple-Sensitive Fern Swamp: Red maple dominates the somewhat open to nearly closed forest canopy of this swamp. Balsam fir, red spruce, or northern white cedar may be common associates, but are less common than red maple. Winterberry is typical in the patchy shrub layer, and bluejoint grass and sensitive fern are characteristic herbs. This community occurs on mineral soils, or well-decomposed organic material over mineral soil, in small basins, as narrow ribbons along drainage channels, or on floodplains of medium-sized streams to small rivers.

Ecological Services of the Focus Area
- Supports diverse species and natural communities and contributes to regional biodiversity
- Protects water quality

Economic Contributions of the Focus Area
- Attracts residents and visitors by providing recreational opportunities such as hiking, camping, and wildlife watching
- Scenic landscape raises local property values.

Ironwood – oak – ash woodlands: This community typically has open canopies that allow an abundance of light to reach the understory and ground layer. Ironwood and red oak are the most common trees with white ash, basswood, sugar maple, white pine, and red cedar all as infrequent associates. Poor growing conditions due to droughty soils and/or possibly past fires have helped to keep the trees in this habitat type spread out and stunted. The herb layer features plant species typical of moderately enriched sites, such as herb Robert, hepatica, and wild licorice. Vegetation may be patchy, developing in pockets among the rocks, or more continuous along upper slopes and ridges. In general, these the ironwood - oak - ash woodlands sites have not been harvested for timber, most likely due of the poor quality of the trees and/or the steepness of slopes where they occur.

Hemlock - Hardwood Pocket Swamp: Forested wetlands that can be deciduous or mixed and occur as small depressions within an upland landscape. Red maple almost always dominates the canopy and occurs with hemlock and/or black gum. Black gum is an uncommon tree in Maine and is a good indicator of this community. Shrubs may be locally dense and include highbush blueberry and winterberry. The herb layer is variable in extent, and often features large clumps of ferns. Pocket swamps typically occur in small isolated basins, sometimes perched on the sides of gentle hills, with a seasonal high water table. The soil may dry out during the summer, or pools of water may remain among the forested hummocks. Often these basins have no surface outlet, or they may drain only at high water. Soils are acidic, usually with a thin peat layer over mineral soil, occasionally with deeper peat. These wetlands may occur as small patches (typically < 3 acres) in otherwise well-drained, forested uplands.

RARE SPECIES

The Waterboro/Shapleigh Barrens Focus Area provides habitat to a rich diversity of **invertebrate species**, many of which are rare in Maine. Sampling for all species of moths and butterflies at Waterboro Barrens alone yielded 364 species – a diversity that exceeds the total number of breeding bird species statewide! At this time, 19 state rare species of moths, butterflies and dragonflies have been documented in the Focus Area.

Many of the invertebrate species found in the Waterboro/Shapleigh Barrens are highly dependant on the plant species specific to the pitch pine-scrub oak barrens and associated habitat types. Some of these plant-larvae relationships can be quite complex. For example, the caterpillars of the state Endangered **Edwards hairstreak butterfly** (*Satyrium edwardsii)* have been known to hide during the day in ant nests at the base of its host tree- scrub oak. In return for the protection provided to the caterpillar, the ants feed on sugary secretions produced by the caterpillars.

Loss of pine barren habitats to commercial and residential development in Maine is a great threat to these rare invertebrate species. There are only a few remaining pitch pine-scrub oak barrens in the state. Formerly extending farther north along the coast, pine barrens have been reduced to less than half of their historic acreage. Land development, sand and gravel extraction, timber harvesting, and fire suppression all contributed to the loss of pine barrens and to the loss of suitable habitat for these species.

Another rare species found in the Waterboro pine barrens is the **black racer** *(Coluber constrictor constrictor)*, a state Endangered snake. Black racers are the largest and fastest snakes in Maine and may attain lengths of 6 feet. Open grasslands, sandy barrens, power line rights-of-way, orchards, old buildings, and rocky ridges seem to be preferred habitats for this species. Already ecologically stressed by cold winters and short growing seasons at the northern edge of their range in Maine, racers are now faced with additional threats to their habitat. Although they were common as far north as Cobbosseecontee Lake in the 1930's, they are now rare and their range is limited to York, Cumberland and southern Oxford counties. This species' numbers and range have declined drastically as agricultural land has reverted to forestland or has been developed and habitat fragmentation has resulted in increasingly small patches that can no longer support viable populations of snakes. Increased road density and traffic volumes may be an additional threat to this wide-ranging snake. Protection of large blocks of unfragmented, early successional habitat is probably the most important means of conserving this species in the state.

Numerous wetlands, including **vernal pools** are scattered throughout the Waterboro/Shapleigh Focus Area and interspersed with pine barrens. 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, grey tree frogs, and other common amphibians, as well as by several rare species. The amphibians and aquatic invertebrates that are dependent on these ponds for survival are an important food resource for other more conspicuous 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 on the pool bottom.

Top left: Edward's Hairstreak, Philip DeMaynadier
Top right: Ringed boghunter B. Nikula;
Bottom: Blandings Turtle, Jonathan Mays

The vernal pools, other wetlands and uplands in this Focus Area support the state endangered **Blanding's turtle** (*Emydoidea blandingii)* and the special concern **wood turtle** *(Clemmys insculpta)*. Blanding's turtles are most frequently associated with complexes of small, acidic wetlands and vernal pools in large, intact forested landscapes. They also use shrub swamps, forested swamps, small streams, and emergent marshes. Although these turtles spend most of their time in the water, they readily travel overland between wetlands during the spring and summer months. Blanding's turtles are generally found only in the southern most part of the state where

increasing development contributes to loss of habitat, habitat fragmentation, and road kill. Wood turtles use streams, rivers, and vernal pools as well as riparian forests, and though rare, are more widely distributed around the state. Upland habitats are critical for both types of turtles for basking, aestivating (a period of late summer inactivity), nesting, and as travel corridors between wetlands.

Blanding's and wood turtles have evolved relatively long adult life spans to offset the long time it takes to reach reproductive maturity (15 yrs or more) and to offset high levels of nest and juvenile mortality. Because of this unusual life history, Blanding's and wood 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 extremely 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.

A globally rare dragonfly, the **ringed boghaunter** *(Williamsonia lintneri)*, has also been documented within the Waterboro Barrens. This state Threatened dragonfly depends on small acidic pocket swamps and vernal pools to complete its life cycle. The ringed boghaunter is among the earliest flying dragonflies in the state, with adult emergence occurring in early May. Reproductive sites are typically where patches of "Sphagnum soup" are interspersed with sedges, ferns, or shrubs. Although portions of these wetlands dry up during summer months, some permanent open water generally persists. Adult dragonflies typically frequent upland forested areas up to several hundred feet from their natal wetland to bask and forage before returning to breed.

The wetlands and open water areas associated with the many ponds and brooks in the Focus Area also provide important **Inland Waterfowl and Wading Bird Habitat**. These areas provide undisturbed nesting habitat and feeding areas and are essential for maintaining viable waterfowl and wading bird populations. Several **Deer Wintering Areas** have also been identified in the Focus Area. Deer congregate in wintering areas which provide reduced snow depths, ample food and protection from wind.

CONSERVATION CONSIDERATIONS

» Until recently, fire suppression has been one of the most serious sources of stress at Waterboro Barrens. Natural disturbance, particularly fire, is important for maintaining healthy pine barren communities. However, after the last great fire in 1947, suppression of wildfire eliminated this important natural disturbance at Waterboro Barrens. Without the reintroduction of fire or some equivalent vegetation management program, pine barrens community types would likely succeed to more mesic forest types dominated by red and white oak, and white pine with only those sites that are the most xeric or frost prone maintaining pine barrens habitat. A loss of pine barrens community types would lead to a loss of habitat for many rare pine barrens dependent fauna. The Nature Conservancy is now conducting perscribed burns at Waterboro Barrens to mimic the natural distrubance needed to maintain health pine barren communities and their associated wildlife.

Public Access Opportunities
- Little Ossipee River WMA, IFW
- Vern Walker WMA, IFW
- Shapleigh Woods Preserve, TNC
- Waterboro Barrens Preserve, TNC

» Of all the sources of stress at Waterboro Barrens, residential development results in the most permanent degradation. The scattering of small ponds and lakes throughout the site has resulted in the development of numerous seasonal cottages and lakefront communities. While Waterboro Barrens is relatively intact, with development most severe around its margins, increased development to the west will result in a loss of connectivity with Shapleigh Barrens. Development will also result in increased road construction and fragmentation which has a negative impact on the movements of animals. While non-native species are not a current stress on the system, there is an increased likelihood that exotics may play a role at Waterboro and Shapleigh Barrens as development increases. Frequently, trails and roads are avenues for the dispersal of exotic weeds.

» Many neighbors have dogs and cats that roam freely and will have an impact on the survival and movement of wildlife. Ground nesting birds are particularly vulnerable, and an increase in domestic animals may lead to a decrease in regionally rare populations of whip-poor-wills and common nighthawks. Many people who live in neighboring developments use the preserve and Vernon Walker Wildlife Management Area for recreation, including uses that are illegal and incompatible with the purpose of the site (e.g. dumping, off trail use by ORV's, camping, etc.).

» The large number of permanent and seasonal dwellings at

the margins of the preserve could be vulnerable in the event of a wildfire. In addition, activities near these dwellings may contribute to an increase in the number of fires ignited. There have been four wildfires on or near the preserve. In each case, the fires were extinguished by local fire departments before they got out of control, and each was restricted to less than five acres.

» There currently is one active gravel mine within this site. However, gravel deposits are extensive within Waterboro Barrens and the surrounding area. Although the gravel industry is currently booming, several towns in the area, including Waterboro, have tried to place a moratorium on future gravel mines until further study of the impacts of mining on the quality of life can be assessed. Mining has a direct negative impact through permanent loss of habitat, as well as potentially impacting stream sedimentation and water quality. In some cases, restoration of abandoned gravel pits may be possible but the feasibility of such projects may be restrictive.

» Intensive timber management can lead to increased fragmentation and isolation of habitat patches and conversion to other forest types. However, forestry, applied properly within pitch pine habitats may actually help regenerate some barrens community types. There is evidence that past timber management at Waterboro Barrens and Ossipee Pine Barrens were instrumental in perpetuating pitch pine stands. Strip cuts completed in the late 1980s at Vernon Walker Wildlife Management Area succeeded in promoting early successional pitch pine community types.

» The integrity of wetlands and aquatic systems including all the processes and life forms they support are dependent on the maintenance of the current hydrology and water quality of these systems. 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 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.

» No activities should be permitted that could lead to the loss or degradation of rare turtle or dragonfly 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 target wetlands with known rare animal populations. All wetlands, regardless of size, within ¼ mile of mapped rare turtle populations should also be considered potential habitat for these mobile species, protected from direct impacts, and buffered by forested upland. Impervious surfaces such as yards, buildings, and roads should be minimized in the upland landscape within ¼ mile of these turtle wetlands. Natural forest habitat should predominate the landscape. Intensive developments that concentrate human populations within ¼ mile of turtle and dragonfly wetlands should be avoided including subdivisions and service centers. Towns should strive to maintain important habitat areas identified by MDIFW in a low density, rural setting by identifying important habitat areas in comprehensive plans and zoning accordingly.

» The large concentration of oak in the Waterboro / Shapleigh Barrens Focus Area helps to support a population of gypsy moths- an introduced pest restricted to southern Maine. Periodically, gypsy moths are capable of attaining outbreak population levels, defoliating a large proportion of scrub oak and other species. During an outbreak period, several thousand acres may be sprayed with BT (Bacillus thuringensis) from the air to help control gypsy moth populations. While BT is believed to pose no threat to higher organisms, it is NOT host specific within the order Lepidoptera and thus poses a potentially severe threat to the area's rare butterfly and moth species. For this reason, and following consultation with Department of Inland Fisheries and Wildlife biologists, wide buffers should be flown around sections of pitch pine barrens hosting known occurrences of rare butterflies and moths when spraying pesticides for control of gypsy moths and other pests.

» 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.

» 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.

» This area includes Significant Wildlife Habitat (Significant Vernal Pools, Inland Waterfowl and Wading Bird Habitat, Deer Wintering Areas). 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
Animals	Acadian Swordgrass Moth	*Xylena thoracica*	SC	S3	G4
	Barrens Chaetaglaea	*Chaetaglaea tremula*	SC	S2S3	G5
	Barrens Itame	*Itame sp. 1 nr. inextricata*	SC	S1	G3G4
	Broad Sallow	*Xylotype capax*	SC	S3	G4
	Edwards' Hairstreak	*Satyrium edwardsii*	E	S1	G4
	New England Cottontail	*Sylvilagus transitionalis*	E	S2	G3
	Northern Black Racer	*Coluber constrictor constrictor*	E	S2	G5T5
	Oblique Zale	*Zale obliqua*	SC	S1?	G5
	Pine Barrens Zale	*Zale sp. 1 nr. lunifera*	SC	S1	G3G4
	Pine Barrens Zanclognatha	*Zanclognatha martha*	T	S1	G4
	Blanding's Turtle	*Emydoidea blandingii*	E	S2	G4
	Wood Turtle	*Clemmys insculpta*	SC	S4	G4
	Red-winged Sallow	*Xystopeplus rufago*	SC	S1S3	G5
	Ribbon Snake	*Thamnophis sauritus*	SC	S3	G5
	Ringed Boghaunter	*Williamsonia lintneri*	T	S1	G3
	Similar Underwing	*Catocala similis*	SC	S2S3	G5
	Sleepy Duskywing	*Erynnis brizo brizo*	T	S2	G5T5
	Southern Cloudywing	*Thorybes bathyllus*	SC	SNA	G5
	Southern Pine Sphinx	*Lapara coniferarum*	SC	S2S3	G5
	The Buckmoth	*Hemileuca maia maia*	SC	S1	G5T5
	Twilight Moth	*Lycia rachelae*	T	S1	G4
Plants	Autumn Coral-root	*Corallorhiza odontorhiza*	E	S1	G5
	Bottlebrush Grass	*Elymus hystrix*	SC	S3	G5
	Clammy Azalea	*Rhododendron viscosum*	E	S1	G5
	Dry Land Sedge	*Carex siccata*	SC	S2	G5
	Dwarf Dandelion	*Krigia virginica*	T	S1	G5
	Ebony Spleenwort	*Asplenium platyneuron*	SC	S2	G5
	Fern-leaved False Foxglove	*Aureolaria pedicularia*	SC	S3	G5
	Fogg's Goosefoot	*Chenopodium foggii*	SC	S1	G3Q
	Missouri Rockcress	*Arabis missouriensis*	T	S1	G5?Q
	Narrow-leaved Goldenrod	*Euthamia tenuifolia var. tenuifolia*	T	S2	G5
	Rattlesnake Hawkweed	*Hieracium venosum var. nudicaule*	E	S1	G5T4Q
	Small Whorled Pogonia	*Isotria medeoloides*	E	S2	G2
	Smooth Winterberry Holly	*Ilex laevigata*	SC	S3	G5

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Plants	Spicebush	*Lindera benzoin*	SC	S3	G5
	Spotted Wintergreen	*Chimaphila maculata*	E	S2	G5
	Swamp Saxifrage	*Saxifraga pensylvanica*	SC	S3	G5
	Upright Bindweed	*Calystegia spithamaea*	T	S2	G4G5
Natural Communities	Oak - Ash Woodland	*Ironwood - oak - ash woodland*		S3	G3G5
	Oak - Pine Woodland	*Oak - pine woodland*		S4	G3G5
	Outwash Plain Pondshore	*Three-way sedge - goldenrod outwash plain pond-shore*		S1	G2G3
	Pitch Pine - Scrub Oak Barren	*Pitch pine - scrub oak barren*		S2	G2
	Pocket Swamp	*Hemlock - hardwood pocket swamp*		S2	G5
	Red Maple Swamp	*Red maple - sensitive fern swamp*		S4	G3G5
	Spruce - Fir Wet Flat	*Spruce - fir - cinnamon fern forest*		S4	GNR
	Tall Sedge Fen	*Mixed tall sedge fen*		S4	G4G5
	White Oak - Red Oak Forest	*White oak - red oak forest*		S3	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.