Saco Heath Focus Area

Saco, Maine

Description:

Saco Heath is the southern-most coalesced domed bog in Maine, perhaps the southernmost of the boreal domed bogs. The heath and adjacent forest cover over 1000 acres and include a mosaic of habitat types with most of the acreage as forested bog, wooded shrub heath, and shrub heath. Two exemplary natural communities, Atlantic white cedar bog and pitch pine bog also occur here. Atlantic white cedar reaches the northern limit of its range in southern Maine and is considered rare. It is declining throughout its range due to land use conversion and timber harvesting. Saco Heath is the only known site where Atlantic white cedar occurs in a domed bog ecosystem north of the pocosins of the Carolinas. Saco Heath is one of only four sites in the state known to support a population of the Endangered Hessel's hairstreak butterfly. The larvae of this rare butterfly subsist solely on Atlantic white cedar leaves. The bog elfin, another rare butterfly, is also known from the heath, where the larvae of this species feed exclusively on the needles of black spruce. Several rare species of sedge have been found in the heath including Long's bulrush and Wiegand's sedge. The forested wetland surrounding the heath supports a few black gum trees, another southern species at the northern limit of its range in Maine.

Saco Heath (picture from MNAP files)

A series of ponds form a flowage along the central section of the heath where the two peat domes meet. Atlantic white cedar is abundant on the northwestern raised portions of the

peatland, along with white pine, black spruce, and tamarack. Shrub heath vegetation, such as Labrador tea, sheep laurel, bog laurel, leatherleaf, rhodora, and dwarf huckleberry, dominates the understory. To the southeast, the peatland slopes noticeably downwards where scattered patches of pitch pine dot the open heath and the upland edges. Atlantic white cedar trees become less abundant and smaller as shrub-heath dominance increases. Bands of shrub-heath vegetation consisting of rhodora shrub-heath, sedge meadow/shrub-heath, and shrub-heath/moss-lawn occur along the eastern boundary of the heath.

The forest surrounding the heath ranges from swamp hardwood forest to mixed conifer-hardwood forest. Pockets of *Sphagnum* moss are often found in depressions within the swamp forests. Common trees include hemlock, white pine, red oak, beech, gray birch, yellow birch, red maple, and sugar maple.

Rare Species/Natural Community Table for Saco Heath:

Common Name	Latin Name	Status	S-Rank	G-Rank
Exemplary Natural Communities				
Level Bog Ecosystem		n/a	S4	no rank
Atlantic White Cedar Bog		n/a	S1	G3G4
Pitch Pine Bog		n/a	S1S2	G3G5
Rare Plants				
Atlantic White Cedar	*Chamaecyparis thyoides*	SC	S2	G4
Long's Bulrush	*Scirpus longii*	T	S1	G2
Smooth winterberry	*Ilex laevigata*	SC	S2	G5
Wiegand's Sedge	*Carex wiegandii*	SC	S3	G3
Wild Ginger	*Asarum canadense*	T	S1S2	G5
Rare Animals				
Hessel's Hairstreak Butterfly	*Mitoura hesseli*	E	S1	G3/G4
Bog Elfin Butterfly	*Incisalia lanoraieensis*	SC	S3	G3

*see last page for explanation of ranks

Other Resources Mapped by MDIFW:
Deer Wintering Area

Conservation Considerations :

- Natural communities still occurring on the uplands adjacent to the heath should be conserved as part of the greater heath ecosystem. Long term preservation of the biodiversity of a high value natural area such as Saco Heath will be best affected by retaining as much of the surrounding natural landscape as possible.
- The integrity of the heath and the processes and life forms it supports are dependent on the maintenance of the current hydrology of the site. Intensive timber harvesting, vegetation clearing, soil disturbance, or development on adjacent uplands can result in greater runoff, sedimentation, and other non-point sources of pollution. Logging of the uplands may also open new avenues for ATV traffic along the margin of the heath. Future management activity should avoid additional impacts to the heath's hydrology.
- Harvesting of Atlantic white cedar has occurred in some parts of the heath in the past. While proper harvesting will promote cedar regeneration, improper harvesting, draining, and ditching will lead to the displacement of cedar by other species. Operating harvesting machinery on the heath can lead to compaction of the peat and alterations in drainage patterns. Retaining a large healthy cedar population is critical to the survival of Hessel's hairstreak butterfly at the heath.
- Development around the heath is concentrated along the major roads and in small subdivisions located off of Jenkins Road and Buxton Road. If this same trend continues along Flag Pond Road and Heath Road, the heath will eventually become an island of habitat. There may be implications for large mammals such as moose, coyote, and bear which are known to utilize Saco Heath. Movements of these species to and from the heath may become restricted, and the species may be viewed as a nuisance if interactions with humans increase. In addition, unrestrained pets such as dogs and cats, may have an impact on the movements of animals and may directly prey upon small mammals and birds nesting on the ground and within the shrub layer. As the number of homes adjacent to the heath continues to grow there will be other conservation considerations including the effects of increased groundwater withdrawal and water quality degradation through pollution from storm water runoff and private sewage systems.
- Vehicle use is a potential threat even on those areas that are currently protected. Although most of the vehicle use occurs on the adjacent uplands, there are several areas where vehicles (mostly ATVs and snowmobiles) drive directly on the heath mat. Rutting and linear depressions where the peat has been compacted can affect local surface hydrology. In addition, vehicles can cause direct destruction of the vegetation.
- Aerial spraying of broad spectrum pesticides (e.g. for gypsy moth control or mosquito control) should be avoided over the heath or the adjacent upland buffer to minimize incidental impacts to rare butterflies and invertebrates occupying the heath.

Protection Status:

The Saco Heath focus area includes substantial conservation ownership by The Nature Conservancy. However, most of the conservation ownership is of the core of the heath and the majority of the uplands and forested wetlands buffering the heath are in non-conservation private ownership.

STATE RARITY RANKS

S1 Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.

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.

Note: **State Ranks** are determined by the Maine Natural Areas Program.

GLOBAL RARITY RANKS

G1 Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.

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.

Note: **Global Ranks** are determined by The Nature Conservancy.

STATE LEGAL STATUS FOR PLANTS

Note: State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's endangered and threatened plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

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 considered Threatened or Endangered.

Visit our web site for more information on rare, threatened and endangered species!
http://www.state.me.us/doc/nrimc/mnap/factsheets/mnapfact.htm