

Bauneg Beg Mountain Focus Area

North Berwick, Lebanon, & Sanford, Maine

Description:

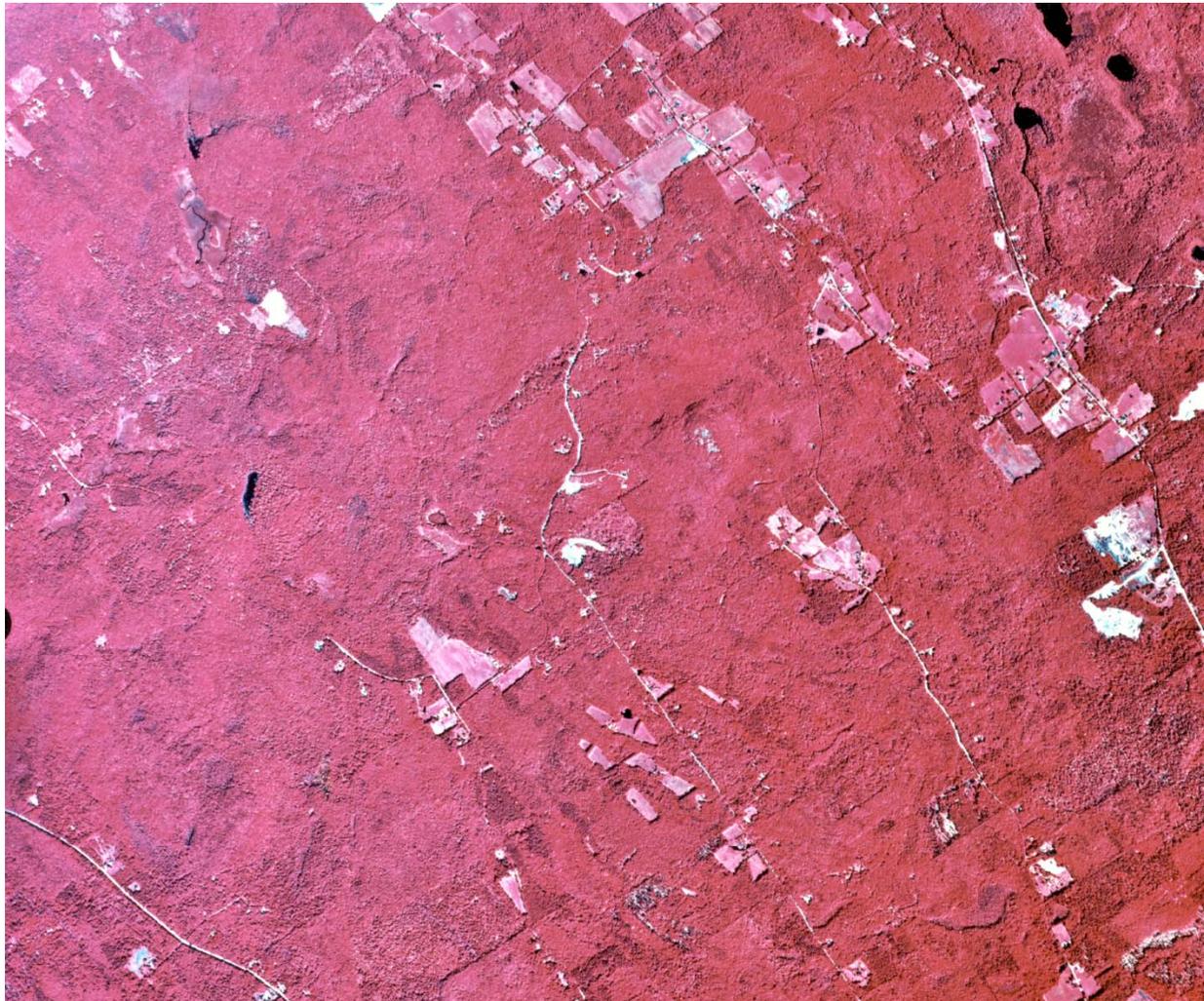
The Bauneg Beg Mountain Focus Area includes low rolling forested hills, broad stream valleys, and numerous swamps of varying sizes. Forests on the uplands are dominated in some areas by second growth red oak mixed with beech and sugar maple, or in other areas mixed with white pine or hemlock. Forested swamps are dominated by various combinations of red maple, hemlock, and yellow birch. Tall shrubs such as alder, high bush blueberry, winterberry and mountain holly dominate the cover in some of the more open wetlands. Larger wetlands tend to occur in stream basins where local geology has impeded drainage. Smaller wetlands and vernal pools are scattered over the landscape occurring both in well defined stream drainages and in isolated locations perched on hillsides. Portions of the area were historically cleared for agriculture but have mostly returned to forest. The primary use of the area today is for timber harvest and much of the forest is in some stage of recovery from previous past harvest activities.



Red maple wooded fen from MNAP files

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, yellow 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 rare species such as Blanding's turtle (Endangered). 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. Non-vegetated pools can be just as important for amphibians as those with plant cover.



Color infrared aerial photo of Bauneg Beg Mountain focus area (1991)

The wetlands and uplands on the west side of the focus area support the state endangered Blanding's turtle. 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 an on-going loss of individuals to road kill. Blanding's turtles 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, forested swamps, wet meadows, 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. Upland habitats are also critical for basking, aestivating (a period of late summer inactivity), and nesting.

Blanding's 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 mortality. Because of this unusual life history, Blanding's turtle populations occur at low densities, and thus populations are highly 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 predator populations (e.g., dogs, raccoon, skunks), water pollution, filling of small wetlands, and blocking upland travel corridors (roads, rail beds, yards) – also limit populations. Blanding's turtles are strictly protected from take (collecting, possession, or killing) by the Maine Endangered Species Act.



Blanding's turtle



Small whorled pogonia

The largest wetland within the focus area has been documented as a Red Maple Wooded Fen Natural Community. This habitat type is characterized by partly forested peatlands in which red maple dominates, or is co-dominant with larch or black spruce. The shrub layer is locally dense, with small trees and thickets of winterberry, mountain holly, highbush blueberry, or maleberry. The moss layer is extensive and dominated by sphagnum mosses. This habitat occurs in low basins at low elevations in areas with saturated peat soils that may be up to 50 cm deep.

One of the eastern United States rarest orchids, small whorled pogonia, is known from 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.

Swamp saxifrage, a plant species of concern, has been documented from a wetland at this site. In Maine this plant is only found in the extreme southern part of the state. It typically occurs in the herbaceous layer of deciduous-forested wetlands, shrub swamps, and wet meadows. Common associates include alder, red maple, sensitive fern, and sedges. This species is at the

northern edge of its range in southern Maine, some populations have been declining, and it is vulnerable to human activity.

Rare Species Table for Bauneg Beg Mountain Focus Area:

Common Name	Scientific Name	Status	S-Rank	G-Rank
Natural Communities				
Red Maple Fen	Red Maple Wooded Fen		S4	
Rare Plants				
Small Whorled Pogonia	<i>Isotria medeoloides</i>	E	S2	G2
Low Spike Moss	<i>Selaginella selaginoides</i>	T	S1	G5
Swamp Saxifrage	<i>Saxifraga pensylvanica</i>	T	S2	G5
Rare Animals				
Blanding's Turtle	<i>Emydoidea blandingii</i>	E	S2	G4

Other Resources Mapped by MDIFW:

Deer Wintering Area

Wading Bird / Waterfowl Habitat

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 that can degrade the high quality natural systems that occur here.
- Areas supporting small whorled pogonia populations should be carefully managed to avoid disturbance to the fragile plants as well as the soil they grow in. Selective timber harvest conducted during periods when the ground is frozen may be compatible with the continued persistence of this species as long as it does not directly impact the area occupied by the plants. A qualified biologist should be consulted prior to timber harvesting in the vicinity of small whorled pogonia populations. Consultation should include walking the site with a forester and marking the areas supporting the plant with surveyors flagging. Residential and agricultural development are not compatible with this species.
- No activities should be permitted that could lead to the loss or degradation of turtle 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 Blanding's turtle locations. All wetlands, regardless of size, within 1/4 mile of

mapped Blanding's 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 turtle wetlands. Natural forest habitat should predominate the landscape. Intensive developments that concentrate human populations and road traffic within 1/4 mile of turtle wetlands should be avoided including subdivisions and service centers.
- 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 vernal pools (see Forestry Endangered and Threatened Species Guide) 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.

Protection Status:

The Great Works Land Trust owns a parcel on the higher elevations of Bauneg Beg Mountain, otherwise there is no known conservation ownership within the focus area.

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>