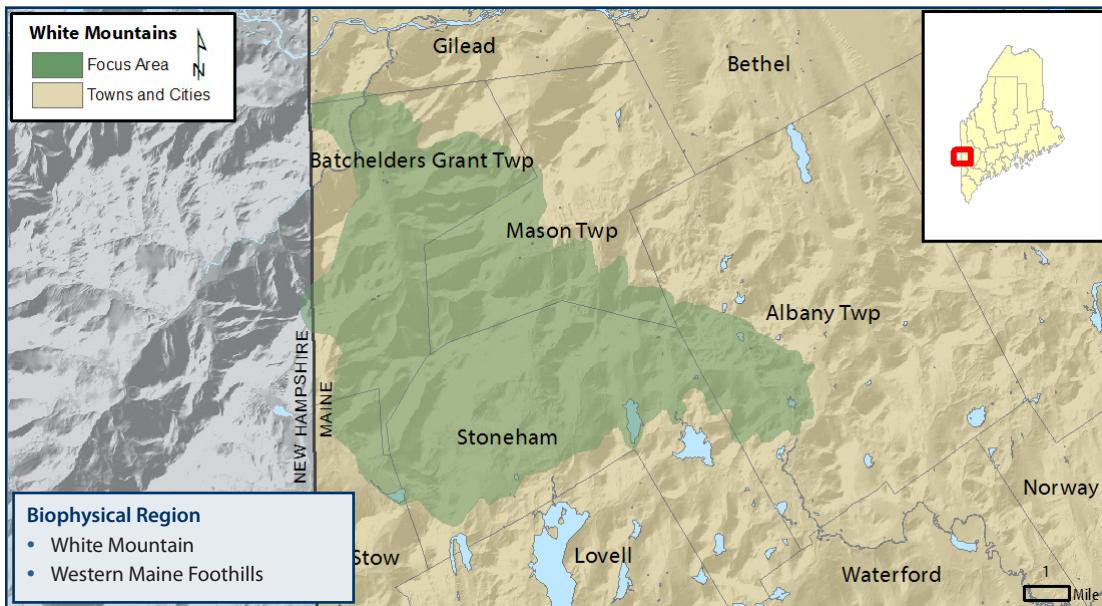
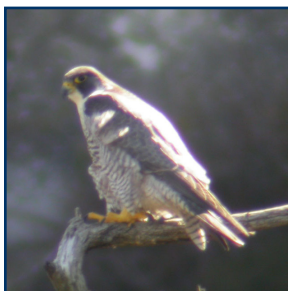
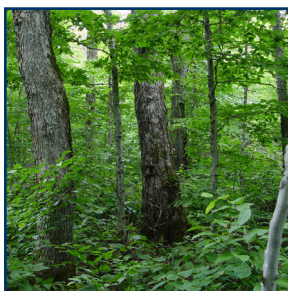
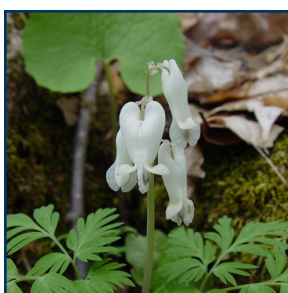


White Mountains



WHY IS THIS AREA SIGNIFICANT?

The extensive forested ecosystems at a variety of elevations in the large White Mountains Focus Area include an unusual array of different high quality rare and exemplary natural communities, as well as a tremendous diversity of rare plants typical of enriched forests. The very large roadless area is important habitat for a wide variety of animal species, including wide ranging species and several rare, threatened or endangered species found in few other locations in Maine. Much of the Focus Area is owned by the U.S. Forest Service and provides tremendous recreational resources as part of the White Mountain National Forest.

OPPORTUNITIES FOR CONSERVATION

- » Maintain enhanced riparian buffers.
- » Minimize recreational impacts to sensitive areas through careful siting of trails, monitoring for overuse, and education to minimize on and off-trail impacts.
- » Protect sensitive natural features through careful management planning on conserved lands.
- » Restore natural stream structure and habitat and maintain aquatic connectivity.

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

Photo credits, top to bottom: Maine Natural Areas Program (top 3 photos) Jonathan Mays, Paul Cyr

Rare Animals

- Golden Eagle
- Peregrine Falcon
- Spring Salamander
- White Mountain Tiger Beetle

Rare Plants

- American Ginseng
- Douglas' Knotweed
- Mountain Sandwort
- Nodding Pogonia
- Pale Jewel-weed
- Small Whorled Pogonia
- Pubescent sedge
- Goldie's Wood-fern
- Squirrel-corn
- Wild Leek

Rare and Exemplary Natural Communities

- Enriched Northern Hardwoods Forest
- Hemlock Forest
- Lower-elevation Spruce - Fir Forest
- Mid-elevation Bald
- Northern Hardwoods Forest
- Oak - Northern Hardwoods Forest
- Oak - Pine Woodland
- Red Pine Woodland
- Rocky Summit Heath
- Spruce - Pine Woodland

Significant Wildlife Habitats

- Inland Wading Bird and Waterfowl
- Deer Wintering Area



Mountain summit natural communities, Maine Natural Areas Program

FOCUS AREA OVERVIEW

The White Mountains Focus Area covers an area of approximately 37,000 acres and is significant for its extensive forested ecosystems at a range of elevations including some high elevation forests. As a result there are several types of rare alpine, subalpine, and forested natural communities within the focus area that make the area stand out in both the region and in the state. The U.S. Forest Service owns much of the land within this focus area, and has designated significant portions as either Wilderness Areas or Restricted Use Areas, the latter of which restricts motorized recreation and timber harvest. Much of the remaining portions of the land are held by private landowners.

RARE AND EXEMPLARY NATURAL COMMUNITIES

An unusual array of rare and high quality common natural communities occurs within the focus area. The dominant matrix forest types within the focus area are either northern hardwood forests or coniferous forests depending on the elevation and site characteristics. At mid-elevations, northern hardwood forests such as **Beech-Birch-Maple Forest** predominate whereas at lower elevations where conditions are moist **Spruce-Fir Broom Moss Forests** are more common. Although

it is the matrix forest type in Maine, the Beech-Birch-Maple Forest southwest of Speckled Mountain is one of the nicer examples known in the state, with trees over 150 years old. The hardwood forest extends down along the stream valley of Bickford Brook. A band of calcareous bedrock in the eastern half of the focus area has created the rich soil conditions needed for a **Maple-Basswood-Ash Forest**, an uncommon forest type that supports multiple rare plant species including **three bird's orchid** (*Triphora trianthophora*) and **American ginseng** (*Panax quinquefolius*).

At lower drier locations, mixed forests consisting of **Red Oak-Northern Hardwoods-White Pine Forests** are more common. In dry, south-facing slopes or near summits at lower elevations **Oak-Pine Woodland** communities are fairly common in this focus area and at least one **Red Pine Woodland** community has also been documented. Less than a dozen Red Pine Woodlands have been documented in Maine and the example in the White Mountains is one of only a couple that have been found in this region of the state. Red Pine Woodlands are open canopy woodlands dominated primarily by red pine (*Pinus resinosa*). Areas of exposed bedrock are common, and dry site lichens including reindeer moss occur on the bedrock and

areas with very thin soils. This community type is frequently a result of past fire, and this site may have fire disturbance origins. This community type may include rare moths such as the oblique zale, pine sphinx, and pine pinion, that utilize hard pines as larval host plants, but surveys would be needed to determine if any of these species occur at this site.

The open-grown **Crowberry-Bilberry Summit Bald** community is found on some mountain summits, where windswept bare rock is interspersed with thin pockets of soil, which occur in depressions in the bedrock, along with stunted shrubs and other vegetation. With less than ten known occurrences in the state, management and protection of this community are very important. These fragile summit balds are easily damaged by overuse, particularly by motorized vehicles including ATV's and snowmobiles, but they may also be impacted by excessive trampling by hikers.

CHARACTERISTIC SPECIES

Many of the forests in this focus area show some degree of nutrient enrichment and this helps account for the presence of several rare plant species that favor rich forests, such as **squirrel corn** (*Dicentra canadensis*), **Goldie's wood-fern** (*Dryopteris goldiana*), **pale jewelweed** (*Impatiens pallida*), and **American ginseng** (*Panax quinquefolius*). Several populations of the rare **three bird's orchid** (*Triphora trianthophora*) occur within the forests of this focus area. Several rare plant species typically associated with dry, open summits also are found within the focus area, these include **mountain sandwort** (*Minuartia groenlandica*), **silverling** (*Paronychia argyrocoma*), and **Douglas' knotweed** (*Polygonum douglasii*). These alpine plants occur in only a handful of scattered high elevation locations across the state and the multiple summits of the White Mountains region represent a significant portion of their actual and potential habitat, and therefore a prime opportunity for their protection.

The large, diverse, and relatively intact forests of this focus area are free of major roadways and therefore provide excellent habitat for a number of wide-ranging mammal species such as moose, bear, and bobcat. These species, because they typically have large home ranges and utilize a variety of habitat types, can be considered as umbrella species. Their presence in this focus area suggests that many other animal species with smaller home ranges are also likely to be found here as well.

The White Mountains Focus Area provides habitat for several rare animal species. **Spring salamanders** (*Gyrinophilus porphyriticus*) have been documented in two locations along Evans Brook. Spring salamanders, a species of special concern in Maine, live in or around clear, cool waters that are high in oxygen, such as streams or springs in wooded areas. Adults are found both in water and on land, and they seek refuge in cavities along stream banks, or under rocks. They are highly sensitive to environmental stresses such as temperature change or stream siltation. Deforestation is the leading cause of popula-

Ecological Services of the Focus Area

- Provides water quality protection for several headwater streams.
- Serves as an important large block of undeveloped habitat for a wide range of species including rare plants, waterfowl, wading birds, moose, deer, and other wildlife.
- Is an important component of regional biodiversity by providing habitat for rare plants, animals, and communities.

Economic Contributions of the Focus Area

- Serves as a valuable recreational resource for local residents.
- Attracts tourism for hiking, biking, skiing, snowmobiling, and wildlife observation.
- Provides scenic vistas that raise property values.
- Protects water quality of downstream resources.



Paul Cyr

tion declines for the spring salamander.

Two rare bird species that tend to nest on alpine cliffs and ledges, the **golden eagle** (*Aquila chrysaetus*) and the **peregrine falcon** (*Falco peregrinus*), have also been documented to breed in some of the higher elevations in this focus area.

The golden eagle is Maine's rarest breeding bird. For many years, only a single pair nested in the state. Golden eagles are traditionally associated with rugged topography and open country. Historically, shooting, trapping, and poisoning

reduced golden eagle numbers. Environmental contaminants, especially DDT, caused reproductive impairment during the post-World War II era. Marginal habitat conditions (lack of food, open space for hunting prey) now limit golden eagles in the East. Counts of migrating golden eagles in the East, however, indicate that the Eastern population is slowly increasing.

Like golden eagles, increased use of pesticides after World War II caused drastic declines in peregrine falcon populations. Although once broadly distributed in North America, they were extirpated throughout much of their historic range including the eastern United States. Maine has joined other states in a large-scale peregrine falcon reintroduction program. Young, captive-reared peregrines were slowly released at former nest sites in a process called “hacking.” Reintroduced peregrines have been successful in Maine as well as in New Hampshire, Vermont, and New York. With recovery of the species nationwide, the peregrine falcon was taken off the federal endangered species list in 1999, but its breeding population remains listed as endangered on the Maine list, as its numbers here are still low. Peregrine falcons have been documented nesting at three different sites on the eastern and western ends of the focus area within the last 5-6 years.

Several **Inland Waterfowl and Wading Bird Habitats** have also been mapped in the focus area along the many streams and wetlands. These areas provide undisturbed nesting habitat and undisturbed, uncontaminated feeding areas and are essential for maintaining viable waterfowl and wading bird populations. **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. Most of the small streams in the focus area support wild **brook trout**.

CONSERVATION CONSIDERATIONS

- » Preserving the natural communities and other sensitive features within the focus area will be best achieved by working to conserve the integrity of the larger natural systems in which these features occur. Conserving the larger systems will help ensure that both common and rare natural features will persist on the landscape in this part of the state.
- » Conservation planning for upland features should include setting some areas aside from timber harvests to allow for the development of some unmanaged forests.
- » Alpine and subalpine natural communities in this focus area are vulnerable to damage from over use, particularly from motorized vehicles including ATV's and snowmobiles. We strongly suggest prohibiting the use of any motorized vehicles anywhere on the exposed summits of mountains. Use

of motorized vehicles may be appropriate for areas on the lower slopes of the mountain but caution should be taken to locate them in a way that does not tempt riders to ride to the summit.

- » Care should be taken to avoid locations of rare plants when locating trails on summits. The Maine Natural Areas Program should be consulted to ensure that the rare plants are avoided if and when trails are formally designated across mountain summits.
- » This area includes Significant Wildlife Habitat for wading birds and waterfowl and wintering deer. Land managers should follow best management practices with respect to forestry activities in and around wetlands, shoreland areas, and Significant Wildlife Habitat. Contact MDIFW for more information.

Public Access Opportunities

- White Mountain National Forest

RARE SPECIES AND EXEMPLARY NATURAL COMMUNITIES OF THE FOCUS AREA

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Animals	Golden Eagle	<i>Aquila chrysaetos</i>	E	S1B,S1N	G5
	Peregrine Falcon	<i>Falco peregrinus</i>	E	S1S2N,S2B	G4
	Spring Salamander	<i>Gyrinophilus porphyriticus</i>	SC	S3	G5
	White Mountain Tiger Beetle	<i>Cicindela ancocisconensis</i>	SC	SNR	G3
Plants	American Ginseng	<i>Panax quinquefolius</i>	E	S3	G3G4
	Douglas' Knotweed	<i>Polygonum douglasii</i>	SC	S2	G5
	Goldie's Wood-fern	<i>Dryopteris goldiana</i>	SC	S2	G4
	Mountain Sandwort	<i>Minuartia groenlandica</i>	SC	S3	G5
	Nodding Pogonia	<i>Triphora trianthophora</i>	T	S2	G3G4
	Pale Jewel-weed	<i>Impatiens pallida</i>	SC	S2	G5
	Pubescent sedge	<i>Carex hirtifolia</i>	SC	S2	G5
	Silverling	<i>Paronychia argyrocoma</i>	T	S1	G4
	Small Whorled Pogonia	<i>Isotria medeoloides</i>	E	S2	G2
	Squirrel-corn	<i>Dicentra canadensis</i>	T	S1	G5
	Tall White Violet	<i>Viola canadensis</i>	E	S1	G5
	Wild Leek	<i>Allium tricoccum</i>	SC	S3	G5
Natural Communities	Enriched Northern Hardwoods Forest	Maple - basswood - ash forest		S3	GNR
	Hemlock Forest	Hemlock forest		S4	G4G5
	Lower-elevation Spruce - Fir Forest	Spruce - fir - broom-moss forest		S4	GNR
	Mid-elevation Bald	Crowberry - bilberry summit bald		S3	G2G3
	Northern Hardwoods Forest	Beech - birch - maple forest		S4	G3G5
	Oak - Northern Hardwoods Forest	Red oak - northern hardwoods - white pine forest		S4	GNR
	Oak - Pine Woodland	Oak - pine woodland		S4	G3G5
	Red Pine Woodland	Red pine woodland		S3	G3G5
	Rocky Summit Heath	Rocky Summit Heath		S4	GNR
	Spruce - Fir Krummholz	Spruce - fir - birch krummholz		S3	GNR
	Spruce - Pine Woodland	Red spruce - mixed conifer woodland		S4	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).
- 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.