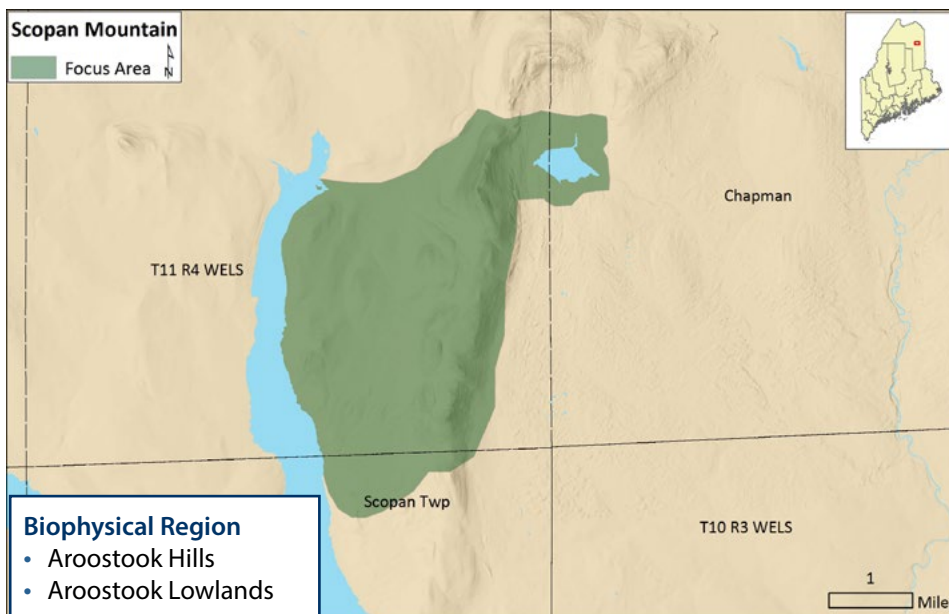
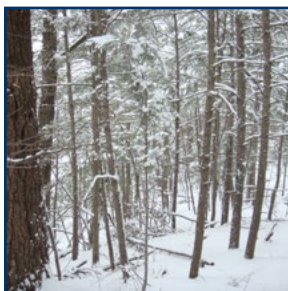
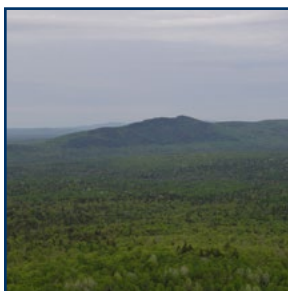


# Scopan Mountain



### Biophysical Region

- Aroostook Hills
- Aroostook Lowlands

### WHY IS THIS AREA SIGNIFICANT?

The Scopan Mountain Focus Area is located on the eastern shore of Scopan Lake, southwest of Presque Isle in Aroostook County. This site encompasses 6,700 acres of forest, wetlands, and lake shore, 95% of which is included in the Scopan Lake Public Reserve Unit, managed by Maine's Bureau of Public Lands (BPL). Among the large tracts of mature forest in this focus area are an exemplary ecosystem and three rare or exemplary natural communities. Though the area includes relatively small amounts of wetlands, the wetlands that are found here provide exceptional wildlife habitat value, including about 500 acres of Significant Wildlife Habitat for wading birds and waterfowl. The focus area also includes large areas of pristine shoreland, or riparian habitat, that is vital to a wide array of wildlife species.

### OPPORTUNITIES FOR CONSERVATION

- » Protect sensitive natural features through careful management planning on state-owned lands.
- » Work with landowners to encourage sustainable forest management practices on adjacent privately owned forest lands.
- » Manage ATV use to minimize impacts on natural resources.

For more conservation opportunities, visit the Beginning with Habitat Online Toolbox: [www.beginningwithhabitat.org/toolbox/about\\_toolbox.html](http://www.beginningwithhabitat.org/toolbox/about_toolbox.html).

### Rare Animals

None Documented

### Rare Plants

Goldie's Wood-fern

### Rare and Exemplary Natural Communities

Enriched Northern Hardwoods Forest  
Hemlock Forest  
Spruce-Fir-Northern Hardwoods Ecosystem  
Spruce-Northern Hardwoods Forest

### Significant Wildlife Habitats

Inland Waterfowl and Wading Bird Habitat

### Public Access Opportunities

- Scopan Public Reserve Land, BPL



*Scopan Mountain - North, Mature Hardwoods, Maine Natural Areas Program*

## FOCUS AREA OVERVIEW

This Focus Area includes 6,700 mostly forested acres along the eastern shore of Scopan Lake, including most of Scopan Mountain. Scopan Mountain is a long, north-south oriented ridge that rises about 800 feet above the lake. An exemplary spruce - fir - northern hardwoods forest ecosystem stretches across most of the top and upper slopes of the mountain. This area shows relatively little evidence of past management and is characterized by late successional stands of northern hardwoods, mixed spruce - northern hardwoods, and spruce forest. At least one area within this ecosystem apparently burned within the last century, generating an almost pure stand of red spruce. Also within the spruce-fir-northern hardwoods ecosystem, toward the northern end of the mountain, is an exemplary hemlock forest community. It qualifies as an exemplary community because of its mature age, its size (77 acres), and its landscape context, within a relatively intact ecosystem. A representative old tree within the stand was aged to 345 years.

Two exemplary natural communities occur between the mountain and the shores of Scopan Lake. An exemplary stand of the rare enriched northern hardwoods forest community is found at the foot of the mountain, below Scopan Knob. This rich, seepy site is known as "Fern Grotto" because of its

abundance and diversity of ferns. The site supports a large population of the rare Goldie's wood-fern, along with several other uncommon ferns including maidenhair fern, and Braun's hollyfern. An exemplary late successional spruce-northern hardwoods forest community occurs on the slope immediately adjacent to the northeast shore of the Lake. The stand is a nearly linear feature, following the shore of the lake for approximately two and a half miles and averaging about 1,000 feet in width. This stand exhibits several features characteristic of late successional forests, including big trees, large downed woody debris, and trees with copious amounts of lichen and moss species associated with older forests.

The Focus Area extends eastward to include Alder Lake, the surrounding wetlands, and associated riparian forest. The wetlands around Alder Lake are ranked as Significant Wildlife Habitat for waterfowl and wading birds, including 374 acres of the highest value habitat. Both Alder Lake and Scopan Lake support recreational fisheries. Among the fish found in Scopan Lake are brook trout, brown trout, and landlocked salmon. Most of the Focus Area, excluding much of Alder Lake and the surrounding habitat, is contained within the state-owned Scopan Public Reserve Land. Public Reserve Lands are

managed for multiple uses, including timber management, motorized and non-motorized recreation, and natural resource protection.

### RARE AND EXEMPLARY NATURAL COMMUNITIES

The **spruce – fir – northern hardwoods forest ecosystem** can encompass a variety of upland forest community types, including conifer, hardwood, and mixed forest types. Red spruce and balsam fir are the most widespread conifers, which intergrade with a mixture of northern hardwood species. Conifer-dominated communities are typically found in the lowlands or at the highest elevations, while hardwood types are more common on mid-elevation slopes and ridgelines. This ecosystem occurs throughout the northern half of Maine, but large, intact examples are rare. A large, exemplary occurrence of this ecosystem has been documented over much of the upper part of Scopan Mountain.

The **spruce-northern hardwoods forest** is one of the matrix forest types of Maine. It is found across large swaths of Maine, especially in northern and eastern regions and the western mountains. The dominant trees are red spruce and a mixture of hardwoods that may include yellow birch, sugar maple, red maple, and beech. This community also commonly includes paper birch, balsam fir, and sometimes scattered large white pines. Striped maple is a frequent component of the shrub layer, along with varied shrubs and saplings. Common herbs include wood ferns, northern wood-sorrel, and starflower. This community provides nesting habitat for many songbird species, forest raptors and upland gamebirds.

Although this community is widespread, it has been heavily impacted by forestry because of its capacity to produce high value timber. It is thought that this type was more common in pre-settlement times, before selective harvesting of spruce converted many stands into northern hardwood forests. The exemplary spruce northern hardwood forest identified in this Focus Area runs along the slope adjacent to the northeastern shore of Scopan Lake. This community is dominated by mature hardwoods and spruce and includes many elements characteristic of older or late successional forest, such as many fallen logs and specific lichens and mosses growing on the trees.

**Hemlock forests** are found throughout Maine, most commonly on slopes and in ravines. This community is defined by the dominance of eastern hemlock in the canopy. Other tree species that may be common in the canopy include red spruce, yellow birch, red maple, and sugar maple. Because the hemlock canopy creates such dense shade, the understory is often sparse. It typically includes small conifers, as well as scattered individuals of typical upland conifer forest plants such as Canada mayflower, starflower, Indian cucumber-root, partridgeberry, wild sarsaparilla, and wintergreen. Demand in the 1700s -1800s for hemlock considerably reduced mature,

#### Ecological Services of the Focus Area

- Supports regional biodiversity by providing habitat for rare plants and natural communities.
- Buffers and protects water quality of Squa Pan and Alder Lakes.
- High quality habitat for waterfowl, wading birds, and forest wildlife.
- Contributes to water quality and ecological integrity of Aroostook River.

#### Economic Contributions of the Focus Area

- Attracts tourism for hiking, skiing, wildlife observation, paddling, hunting, and angling.
- Provides scenic vistas that raise property values.
- Provides valuable open space for local residents.
- Managed lands provide long-term supply of timber for harvest.
- Scopan Lake is an important local recreational resource for boating and fishing.

undisturbed examples of this type, but poor market conditions more recently have caused hemlock to be left in partial harvests; many of these legacy trees are quite old. The hemlock woolly adelgid is a serious threat to this community in the southern part of the state. Hemlock forests may be used as nesting habitat by a number of coniferous forest specialist bird species, such as the yellow-bellied flycatcher, black-throated green warbler, Blackburnian warbler, red crossbill, and northern parula. A small stand of hemlock forest exhibiting late successional or old growth characteristics has been identified near the northern end of the Scopan Mountain ridge, just west of the ridge top.

The **enriched northern hardwoods forest**, or “cove” forest is a rare forest community dominated by sugar maple, with beech and/or yellow birch also common. Basswood and white ash are good indicators of this community, though they are not always present and not necessarily abundant. The shrub layer is sparse, but the herb layer is lush and diverse. Many rare herbs are found in this community. As the name suggests, enriched northern hardwoods forests occur where soils are nutrient rich, such as over calcium-rich bedrock, or where nutrients accumulate, on concave hillsides or slope bases. Herb species that typically occur on rich sites include maiden hair fern, blue cohosh, Dutchman’s breeches, and silvery spleenwort. This community and its habitat tend to occur in small patches within larger northern hardwood forests. In this Focus Area,

an exemplary stand of this type occurs at the foot of Scopan Mountain, between Scopan Knob and the lake. This area, known as “Fern Grotto” for its large stands of ferns (including the rare Goldie’s wood-fern), contains numerous seeps and shows signs of enriched soils.

### CHARACTERISTIC SPECIES

**Goldie’s wood-fern** (*Dryopteris goldiana*) is a large fern with numerous, distinctive fronds. The leaflets do not begin until halfway up each leaf stalk, and the lower leaf stalks are covered with large brown scales. This fern is typically found in rich hardwood forests, often on calcareous soils with pH near neutral. It tends to occur on cool, moist sites where the understory is relatively open. Goldie’s wood-fern is rare in Maine, most likely because its habitat of enriched hardwood forest is rare. This plant is listed as a Special Concern species in Maine. A large stand of this fern occurs along the seeps and drainages within the exemplary enriched northern hardwoods forest at the Fern Grotto site.

### 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



Maiden hair Fern and Blue Cohosh, Maine Natural Areas Program

systems in which these features occur. This can be achieved through management planning on state-owned lands and encouraging sustainable forest management on surrounding actively managed private lands. Where late successional and old growth stands remain, these should be conserved when possible. Additional areas should also be set aside from timber harvests to allow for the development of some unmanaged forests.

- » The effects of timber harvesting on the rare Goldie’s wood-fern are unknown, but management activities that open up the forest canopy substantially are not recommended near this plant. Management planning for this area should be done in consultation with the Maine Natural Areas Program (MNAP) to ensure the conservation of this rare species and its habitat.
- » 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. Much of the valuable shoreland and wetland habitat surrounding Alder Lake occurs on private land. Maintaining wide forested buffers between the wetlands and nearby development will help to protect the habitat quality and function of the wetlands.
- » This area includes Significant Wildlife Habitat for waterfowl and wading birds. Both state land managers and private landowners should follow best management practices with respect to forestry activities in and around wetlands, shoreland areas, and Significant Wildlife Habitat.
- » With expected changes in climate over the next century, remote northern natural areas may become more valuable as refuges for native species and communities. Protecting healthy forest systems such as these in northern Maine may provide an important safety net for biodiversity as species adjust their ranges to future climate conditions.
- » 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.

**RARE SPECIES AND EXEMPLARY NATURAL COMMUNITIES OF THE FOCUS AREA**

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Animals	None Documented				
Plants	Goldie's Wood-fern	<i>Dryopteris goldiana</i>	SC	S2	G4
Natural Communities	Enriched Northern Hardwoods Forest	Maple - basswood - ash forest		S3	GNR
	Hemlock Forest	Hemlock forest		S4	G4G5
	Spruce - Fir - Northern Hardwoods Ecosystem	Spruce - fir - northern hardwoods ecosystem		S4	GNR
	Spruce - Northern Hardwoods Forest	Spruce - northern hardwoods forest		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.