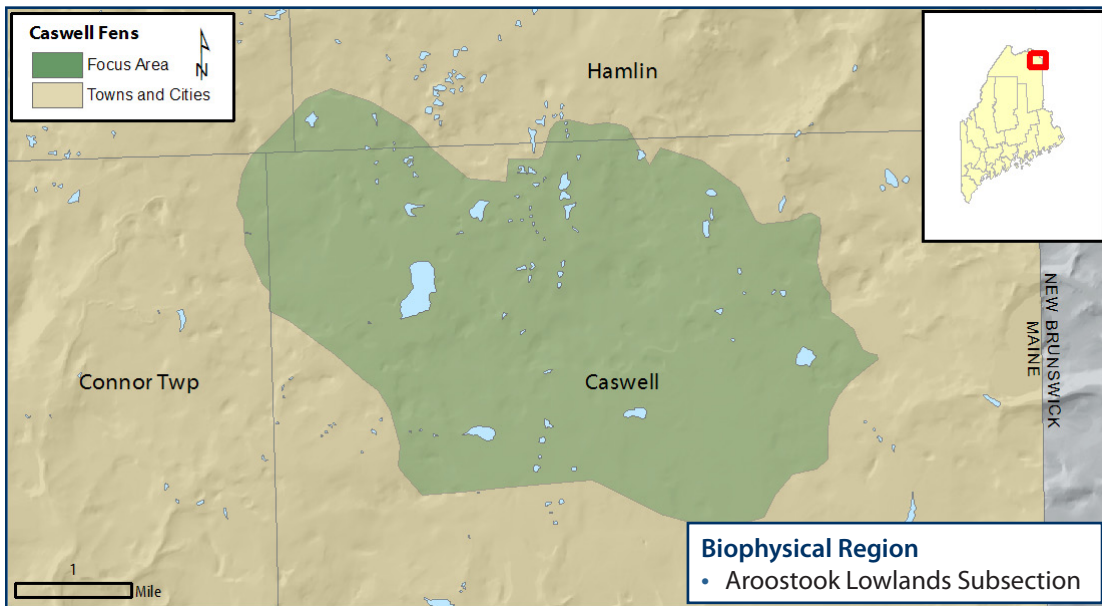


Caswell Fens



WHY IS THIS AREA SIGNIFICANT?

The Caswell Fens Focus Area is a low relief, forested landscape in the northeast most corner of the state with an unusually high concentration of wetlands. Wetlands occurring here include a wide diversity of types ranging from numerous small beaver impounded meadows and pools to a handful of 100+ acre open fens. The largest wetlands, Orchard Bog and Deer Lake Fen, are exemplary peatland ecosystems. The large number and variety of wetlands on this undeveloped forested landscape provides a significant amount of high value wildlife habitat.

OPPORTUNITIES FOR CONSERVATION

- » Encourage best management practices for forestry, vegetation clearing, and soil disturbance activities near significant features to maintain ecological functions and values, habitat connectivity for wildlife, hydrologic processes, and watershed protection.
- » Maintain intact forested buffers along water bodies and wetlands to protect water quality and provide valuable riparian habitat for wildlife.
- » Educate recreational users about the ecological and economic benefits provided by the Focus Area.
- » Protect sensitive natural features through careful management planning on conserved lands.

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

Rare Animals

None Documented

Rare Plants

Blueleaf Sedge
Moor Rush
Swamp Birch

Rare and Exemplary Natural Communities

Dwarf Shrub Bog
Low Sedge Fen
Patterned Fen Ecosystem
Sedge-Heath Fen

Significant Wildlife Habitats

Inland Waterfowl and Wading Bird Habitat



Deer Lake Fen, Maine Natural Areas Program

FOCUS AREA OVERVIEW

Both Deer Lake Fen and Orchard Bog, located in the Caswell Fen Focus Area, are examples of **Patterned Fen Ecosystems**. Patterned fens are floristically similar to unpatterned fens, but are typically found on weak slopes and feature low, roughly parallel to anastomosing, peat ridges (strings) alternating with wet hollows or shallow pools (flarks). The strings and flarks are oriented across the major slope of the peatland and at right angles to the direction of water movement. Groundwater chemistry determines whether acidic or circumneutral fen communities predominate. In some peatland systems, patterning, also known as ribbing, only occupies a portion of the ecosystem.

Patterning is found in several parts of the Deer Lake Fen ecosystem and is intermingled with broad areas of open and lightly forested unpatterned fen. Deer Lake Fen supports a number of exemplary natural communities, though none are mapped independently. For descriptive purposes, the fen can be divided into north and south lobes. Despite a broad hydrologic connection, the two lobes have different plant communities. The north lobe has a large well developed area of **Sheep Laurel - Dwarf Shrub Bog** on its east side and an extensive area of **Low Sedge - Buckbean Fen Lawn** on its west side. The south

lobe is almost entirely Sedge - Leatherleaf Fen Lawn, with a smaller area of Low Sedge - Buckbean Fen Lawn in the southwest corner, an area that can be seen on air photos as having a distinctive water flow pattern. Forested areas bordering the open fens are mostly spruce - larch swamps that are narrow transition zones to the adjacent uplands. Drainage channels along stream corridors are lined with thick alder cover.

Orchard Bog, like Deer Lake Fen, is made of several separate basins or lobes that are hydrologically connected via broad wetland corridors. A large part of the site occurs adjacent to Big Black Brook Lake, and a second large area occurs to the west and includes a large area of patterned fen. The patterned fen at Orchard Bog is one of the best examples of this peatland type in Maine. Also like Deer Lake Fen, Orchard Bog is made up of a number of natural communities. The two most common types are Sheep Laurel - Dwarf Shrub Bog and Sedge - Leatherleaf Fen Lawn. Other types such as spruce - larch wooded bog, alder thicket, and low sedge - buckbean fen lawn are present but less common or in small patches. No rare plant occurrences are currently known from Orchard Bog though there is good habitat. More rare plant survey work is needed at this site. Like some of Maine's largest bogs, Orchard

Bog drains into more than one watershed. It drains into the St. John River to the north via Martin Brook and to the Aroostook River to the south via Black Brook and eventually the Madawaska River.

CHARACTERISTIC SPECIES

The south lobe of Deer Lake Fen supports good size populations of three rare plant species including **swamp birch** (*Betula pumila*), **moor rush** (*Juncus stygius ssp. americanus*), and **blue-leaved sedge** (*Carex rostrata*). Swamp birch occurs mixed with low growing shrubs and sedges near an edge of the open fen, and moor rush and blue-leaved sedge occur in the small area of Low Sedge - Buckbean Fen Lawn that occurs in this fen.

The wetlands within and surrounding both Deer Lake Fen and Orchard Bog represent hundreds of acres of significant **Inland Waterfowl and Wading Bird Habitat**. Numerous small ponds and waterways are linked together between the wetlands creating a network of habitat that adds important wildlife value to the Caswell Fens Focus Area.

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.
- » 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.
- » Towns should strive to protect Inland Waterfowl and Wad-

Ecological Services of the Focus Area

- Provides high quality habitat for waterfowl, wading birds, and other wildlife
- Is an important component of regional biodiversity
- Retains sediments and nutrients

Economic Contributions of the Focus Area

- Provides a scenic viewshed
- Supports valuable brook trout, and other cold water fisheries
- Valuable open space for local residents.

ing Bird Habitat (IWWH) areas identified by MDIFW in low density, rural settings by identifying IWWH areas in comprehensive plans and zoning accordingly. These areas are protected as Significant Wildlife Habitat under the Natural Resources Protection Act.

- » 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.
- » 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.



Larch, Maine Natural Areas Program

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	Blueleaf Sedge	<i>Carex rostrata</i>	SC	S2	G5
	Moor Rush	<i>Juncus stygius ssp. americanus</i>	SC	S2	G5T5
	Swamp Birch	<i>Betula pumila</i>	SC	S2S3	G5
Natural Communities					
	Dwarf Shrub Bog	<i>Sheep laurel dwarf shrub bog</i>		S4	G5
	Low Sedge Fen	<i>Low sedge - buckbean fen lawn</i>		S3	GNR
	Patterned Fen Ecosystem	<i>Patterned fen ecosystem</i>		S3	GNR
	Sedge - Heath Fen	<i>Sedge - leatherleaf fen lawn</i>		S4	G4G5

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) or because some aspect of its biology makes it especially vulnerable to extirpation.
- 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.