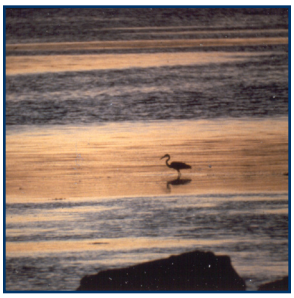
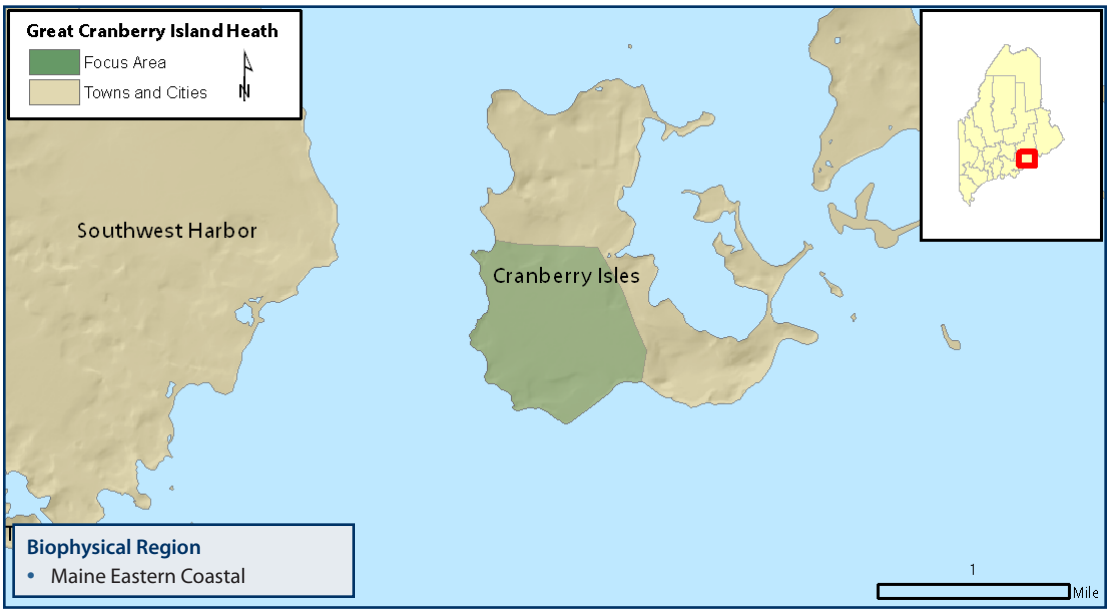
Beginning with HABITAT

Focus Areas of Statewide Ecological Significance

Great Cranberry Island Heath





WHY IS THIS AREA SIGNIFICANT?

This focus area consists chiefly of a Coastal Plateau Bog Ecosystem in outstanding condition. The Coastal Plateau Bog Ecosystem at Great Cranberry Island is at the southern geographic limit of this ecosystem type, and because of its excellent condition, it is one of the best examples in Maine.

Rare and Exemplary Natural Communities
Coastal Plateau Bog Ecosystem

Significant Wildlife Habitats
Tidal Wading Bird and Waterfowl Habitat

OPPORTUNITIES FOR CONSERVATION

- Work with willing landowners to secure permanent conservation status for unprotected significant features in the focus area.
- Educate recreational users about the ecological and economic benefits provided by the focus area.
- Encourage best management practices for forestry, vegetation clearing, and soil disturbance activities near significant features.
- Encourage landowners to maintain enhanced riparian buffers.
- Identify and restore tidal restrictions and undersized culverts.
- Monitor and remove invasive plant populations.

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 photo), Maine Department of Inland Fisheries and Wildlife (bottom 4 photos)

Baked apple-berry is abundant in the Coastal Plateau Bog Ecosystem found at Great Cranberry Island Heath, Maine Natural Areas Program

FOCUS AREA OVERVIEW

The Great Cranberry Island Heath Focus Area is located on the southwestern portion of Great Cranberry Island and consists chiefly of a 175-acre Coastal Plateau Bog Ecosystem in outstanding condition. Though some other coastal bog systems in Downeast Maine are larger or more dramatic, the location of Great Cranberry Island Heath at the southern geographic limit of this ecosystem type, coupled with its excellent condition, make it one of the best examples in Maine.

The peatland occupies a shallow sand- and gravel-surfaced basin and is bordered by small hills. It appears to drain westerly and southwesterly to the sea via two low corridors between hills.

RARE AND EXEMPLARY NATURAL COMMUNITIES

The **Coastal Plateau Bog Ecosystem** exhibits characteristic zonation that includes a well-developed black crowberry (*Empetrum nigrum*) community with abundant baked apple-berry (*Rubus chamaemorus*) and lawns of deer-hair sedge (*Trichophorum cespitosum*). Black crowberry, baked apple-berry, and deer hair sedge are all characteristic plants of coastal bogs in Downeast Maine. Common juniper (*Juniperus communis*) and islands of black spruce (*Picea mariana*) are locally abundant in the bog. Only a relatively small central area of the bog is raised and it lacks the steep marginal slopes characteristic of some coastal bogs. The raised area consists of shrub-heath and wooded shrub-heath dominated by black spruce, dwarf huckleberry (*Gaylussacia dumosa*), and peat moss (*Sphagnum fuscum*). On its northern slope the raised plateau is more heavily wooded with black spruce and on its other sides it slopes down to moss-lawn/sedge/shrub-heath fen. The south side of the western drainage corridor consists of a very wet open fen with abundant white beak-rush (*Rhyncopsora alba*). A different peat moss, *Sphagnum pulchrum*, is the dominant moss in this wet fen. The peripheral margins of the peatland are sparsely wooded with black spruce. Peat depths range from 5.5 meters in the raised plateau area to 2-3 meters in the open fen areas and shallower in the peripheral wooded fens.

CHARACTERISTIC SPECIES

The coastal shores adjacent to Great Cranberry Island Heath have been mapped as **Tidal Waterfowl and Wading Bird Habitat**. These areas provide undisturbed nesting habitat and undisturbed, uncontaminated feeding areas and are essential for maintaining viable waterfowl and wading bird populations.

CONSERVATION CONSIDERATIONS

» In general, threats to peatlands include peat mining, cranberry harvesting, timber harvest around the forest perimeters, and development.

» The ecological integrity of peatlands, including all the processes and life forms they support, is 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.

» 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.

» 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.

» An adequate buffer should be retained between timber harvest areas and the wetlands. Because different species can have different buffering requirements, better protection will be afforded to the collective wetland plants and animals when larger buffers are used. Any timber harvesting within and adjacent to wetlands should be implemented with strict adherence to state or local Shoreland Zoning guidelines, the Maine Natural Resources Protection Act, and Maine Forest Service Best Management Practices.

» Disturbances to soils and natural vegetation in or adjacent to peatland systems can create opportunities for colonization by invasive plant species. Local groups with an interest in peatland systems should be made aware of the potential threat of invasive plants and keep an eye out for them before they become well established. Notably, common reed (*Phragmites australis*) and purple loosestrife (*Lythrum salicaria*) may pose future threats to this peatland system.

» Eelgrass is sensitive to losses due to disease, storms, pollution, nutrient enrichment, dredging, shellfishing, ice damage, propeller damage, sediments, runoff, jet skis, and inboard and outboard motors. Because of its important ecological functions, loss of eelgrass beds can result in reduced fish and wildlife populations, degraded water quality, and increased shoreline erosion.

Ecological Services of the Focus Area

- Nutrient export for marine food webs
- Cleanses water running off land prior to discharge into ocean
- Provides nursery habitat for juvenile fish and shellfish

Economic Contributions of the Focus Area

- Contributes to recreational value of the area, including nearby coastal areas, by protecting water quality, fisheries, and wildlife habitat.
- Provides scenic vistas that raise property values.
- Valuable open space for local residents.

» If there is heavy use of the area by Off Road Vehicles (ORV's) care needs to be taken that ORV's stay on existing trails and remain out of all wetlands. Existing roads and trails should be reviewed with specific recreation and access needs in mind, and trails closed if they run counter to protection needs.

» With expected changes in climate over the next century, coastal and northern natural areas may become more valuable as refuges for native species and communities. Protecting healthy wetland systems such as these in northern Maine may provide an important safety net for biodiversity as species adjust their ranges to future climate conditions.

» Current projections suggest sea level will rise at least 2 feet in the next century due to changing climate and warming temperatures. As sea levels rise, coastal habitats will begin to migrate inland. In areas where this inland migration is blocked by development these habitats will be lost. Conservation of low-lying, undeveloped uplands where coastal marshes, beaches, and other intertidal natural communities can migrate inland with sea level rise should be promoted.

RARE SPECIES AND EXEMPLARY NATURAL COMMUNITIES OF THE FOCUS AREA

Natural Communities

Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Coastal Plateau Bog Ecosystem	Coastal plateau bog ecosystem		S3	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.