

Bold Coast



Biophysical Region
• Maine Eastern Coastal

WHY IS THIS AREA SIGNIFICANT?

The Bold Coast Focus Area features a tremendous variety of natural communities such as coastal bogs, maritime forests, tall grass meadows, and rocky headlands within a distance of only 20 miles. The Focus Area has 2 animal and 3 plant species that are considered rare in Maine. The coastline in the Focus Area is especially rugged, and cliff-top trails provide dramatic ocean views. Carnivorous plants and other unusual species inhabit the bogs, fens, and forests of the Focus Area.

OPPORTUNITIES FOR CONSERVATION

- » Work with willing landowners to permanently protect remaining undeveloped areas.
- » Educate recreational users about the ecological and economic benefits provided by the Focus Area.
- » Seek ways to ensure the long-term persistence of peatlands that have not already been protected.
- » Mitigate the impact of climate change, which threatens the plant species associated with bogs and coastal headlands.

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

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Rare Animals

Yellow Rail
Crowberry Blue

Rare Plants

Northern Comandra
Dwarf Rattlesnake Root
Alpine Blueberry

Rare and Exemplary Natural Communities

Tall Grass Meadow
Coastal Headland Ecosystem
Coastal Plateau Bog Ecosystem
Downeast Maritime Shrubland
Maritime Slope Bog
Maritime Huckleberry Bog
Maritime Forest Ecosystem
Maritime Spruce–Fir Forest
Open Cedar Fen
Open Headland

Significant Wildlife Habitats

Tidal Wading Bird and Waterfowl Habitat
Inland Wading Bird and Waterfowl Habitat

Public Access Opportunities

- » Cutler Coast Ecological Reserve
- » Quoddy Head State Park



Maine Natural Areas Program

FOCUS AREA OVERVIEW

In a distance of less than 20 miles, the landscape from West Quoddy Head to Bold Coast Ecological Reserve features the highest density of coastal peatlands, rocky headlands, and maritime grasslands in Maine. Numerous ecologically significant sites lie within the Focus Area.

The following text describe a few of the areas surveyed in recent years, but it is not intended to be inclusive of all the ecological “hot spots” within this broad area.

West Quoddy Head

The easternmost point in Maine, Quoddy Head peninsula hosts several ecologically significant features such as the coastal plateau bog ecosystems of Quoddy Head Heath and Carrying Place Cove Bog. Located within Quoddy Head State Park, Quoddy Head Heath boasts a considerable diversity of species and natural communities in a relatively small area. The heath hosts an interesting series of bead-patterned pondlets and wet depressions in a wet central drainage. The rare crow-berry blue butterfly inhabits this peatland.

Although it is small, Carrying Place Cove Bog clearly displays the morphological and biological characteristics of a coastal plateau bog ecosystem. The dominant vegetation in the

bog is dwarf shrubs of black crowberry (*Empetrum nigrum*), leatherleaf (*Chamaedaphne calyculata*), baked apple-berry (*Rubus chamaemorus*) and Labrador tea (*Rhododendron groenlandicum*). It also supports well-developed lawns of deer-hair sedge (*Trichophorum cespitosum*) and outstanding examples of surface ponds on both the east and west shoulders of the peatland plateau. It is one of only a few peatlands in Maine that is subjected to tidal erosion.

An extensive rocky headland community, classified as a maritime shrubland, occurs along the immediate coastline. The exposed rocky headland includes patches of black crowberry and creeping juniper (*Juniperus horizontalis*) and a variety of hardy herbaceous species.

Hamilton Cove Area

In Lubec, several sites of ecological significance lie between the Dump Road and Hamilton Cove. Along the road, a large, tall grass meadow is dominated by green alder (*Alnus viridis*), speckled alder (*A. incana*), meadowsweet (*Spiraea alba*) and Labrador tea. This open, burned-over area, where charcoal has been found in several locations, has little soil development, and it is extremely patchy. Seepy areas with Canada bluejoint grass and *Sphagnum* mosses are interspersed with dry rock

outcrops supporting three toothed cinquefoil (*Sibbaldiaop-sis tridentata*) and dry-land grasses. Willows are frequent, including upland willow (*Salix humilis*) and balsam willow (*S. pyrifolia*). A few weedy, nonnative species occur here as well, including Morrow's honeysuckle (*Lonicera morrowii*).

Midway between the road and the rocky coast are two huckleberry–crowberry bogs and a plateau-bog sedge lawn, bordered on the seaward side by maritime spruce–fir forest. Together these three small peatlands form a coastal-plateau bog ecosystem. A red-maple lowland lies between the huckleberry–crowberry bogs. The bogs and maritime forest show signs of burning, probably at least 10 years ago. Two white spruce trees in the uplands were determined to be 90 and 95 years old.

At the coastline, the exemplary coastal-headland ecosystem is composed of three different vegetation types. Closest to the water is an open headland with scattered and patchy vegetation growing in the cracks of rocks. Along the top of the steep, 35-foot cliffs, several small patches of crowberry–bayberry headland occur where soil development allows. Each patch typically covers a few square meters. This headland vegetation is dominated by black crowberry (*Empetrum nigrum*) and creeping juniper. The southeastern promontory was heavily burned and supports a larger maritime shrubland community. A tent platform sits at the top of this promontory, providing sweeping views to the south and east. Overall, this property, which is owned by Maine Coast Heritage Trust, has an interesting aggregation of coastal peatlands, fire-dependent barrens, and coastal headlands in close proximity to each other.

Cutler Grasslands

Like the bluejoint meadows and alder–mixed shrub thicket barrens at nearby Hamilton Cove, the early successional grasslands and alder barrens in Cutler are an interesting association of dry, barren outcrops and hydric vegetation pockets over shallow bedrock. Such associations of xeric and hydric post-burn barrens are rare elsewhere in Maine. One such example of this grassland system occurs at Bog Brook, on the east side of the state property. A low streamside wetland is dominated by beaked sedge (*Carex utriculata*), tussock sedge (*Carex stricta*), Canada bluejoint grass (*Calamagrostis canadensis*), and meadowsweet (*Spiraea alba*) on saturated mineral soils. Approximately a half-mile upstream from the road crossing, the brook opens into a one-acre beaver pond. Steep slopes on either side of this wetland are characterized by exposed ledge outcrops and moist seeps. The tree layer is about 20% and is composed of white spruce (*Picea glauca*), red maple (*Acer rubrum*), and quaking aspen (*Populus tremuloides*). Bebb's willow (*Salix bebbiana*) and green alder (*Alnus viridis*) dominate the shrub layer. Dominants in the herb layer are Canada bluejoint

Ecological Services of the Focus Area

- Supports high diversity of species and natural communities

Economic Contributions of the Focus Area

- Tourist destination
- Provides local residents and visitors with recreational opportunities such as hiking, camping, and wildlife watching
- Provides opportunities for research and education

grass and raspberries. A few species found more typically in moist woods habitats occur here, such as interrupted fern (*Osmunda claytoniana*) and cinnamon fern (*O. cinnamomea*), which are interspersed with black crowberry, weedy outcrop species such as sheep sorrel (*Rumex acetosella*), and the grass *Poa compressa*. The gravelly, sandy loam contains abundant charcoal in the top few centimeters, indicating relatively recent burning.

CONSERVATION CONSIDERATIONS

- » In general, threats to peatlands include peat mining, cranberry harvesting, timber harvest around the forested perimeters, and development. Many of the peatlands in the Bold Coast Focus Area have been protected by the state or land trusts, but a few remain in private ownership.
- » Residential development is the most likely threat to coastal headland ecosystems in the Focus Area. While development is unlikely on the immediate steep coastline, the maritime shrublands and maritime spruce–fir forests that form a continuum extending inland from the shore are very vulnerable.
- » Many of the habitats of concern in the Focus Area, particularly the bluejoint and alder barrens, are fire-adapted communities. More research is needed to determine the natural fire frequency of the region and to ascertain how much of the burning is natural versus anthropogenic.
- » Over the long term, climate change may endanger boreal/maritime habitats and plant species of the coastal plateau bogs and coastal headlands in the Focus Area.
- » This Focus Area includes the Bold Coast Ecological Reserve. Research and education are actively encouraged on all state Ecological Reserves. The state has developed a long term ecological monitoring program for Reserves and seeks opportunities to promote research efforts that complement its monitoring program.

RARE SPECIES AND EXEMPLARY NATURAL COMMUNITIES OF THE FOCUS AREA

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Animals	Yellow Rail	<i>Coturnicops noveboracensis</i>	SC	n/a	G4
	Crowberry Blue	<i>Lycaeides idas empetri</i>	SC	S2	G5
Plants	Northern Comandra	<i>Geocaulon lividum</i>	SC	S3	G5
	Dwarf Rattlesnake Root	<i>Prenanthes nana</i>	E	S1	G5
	Alpine Blueberry	<i>Vaccinium boreale</i>	SC	S2	G4
Natural Communities	Tall Grass Meadow	Bluejoint Meadow		S3	G4G5
	Coastal Headland Ecosystem	Coastal Headland Ecosystem		S4	n/a
	Coastal Plateau Bog Ecosystem	Coastal Plateau Bog Ecosystem		S3	n/a
	Downeast Maritime Shrubland	Crowberry–Bayberry Headland		S3	n/a
	Maritime Slope Bog	Heath–Crowberry Maritime Slope Bog		S2	G3G5
	Maritime Huckleberry Bog	Huckleberry–Crowberry Bog		S3	G3G5
	Maritime Forest Ecosystem	Maritime Forest Ecosystem		S4	n/a
	Maritime Spruce–Fir Forest	Maritime Spruce–Fir Forest		S4	G4G5
	Open Cedar Fen	Northern White Cedar Woodland Fen		S4	n/a
	Open Headland	Seaside Goldenrod–Goosetongue Open Headland		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.