

Bold Coast

Cutler, Lubec, and Trescott Township

Description:

The landscape extending from West Quoddy Head to Cutler Ecological Reserve, within a distance of less than 20 miles, encompasses the highest density of coastal peatlands, rocky headlands, and maritime grasslands in Maine. Numerous ecologically significant sites fall within this area. The text below describes a few of the areas surveyed in recent years and is not intended to be inclusive of all the ecological “hot spots” within this broad area.



Cutler Coast Ecological Reserve

West Quoddy Head

The easternmost point in Maine, Quoddy Head peninsula hosts several ecologically significant features such as the coastal plateau bog ecosystems at Quoddy Head Heath and Carrying Place Cove Bog. Quoddy Head Heath, within the State Park, has considerable community and species diversity 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 crowberry blue butterfly inhabits this peatland.

Though small in size, 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

Several areas of ecological significance are found between the Dump Road and Hamilton Cove in Lubec. A large tall grass meadow occurs along the road. It is dominated by green alder (*Alnus viridis*) and speckled alder (*A. incana*), meadowsweet (*Spiraea alba*) and Labrador tea (*Rhododendron groenlandicum*). This open, burned-over area (charcoal was 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 (*Sibbaldiaopsis tridentata*) and dry-land grasses. Willows are frequent, including upland willow (*Salix humilis*) and balsam willow (*S. pyrifolia*). A few weedy, non-native 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 nearby larger 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. Both the bogs and the maritime forest show signs of burning, probably at least 10 years ago. Two upland white spruce trees were aged at 90 and 95 years.

At the coastline, an exemplary coastal headland ecosystem is comprised of three different vegetation types. Closest to the water is an open headland, with scattered and patchy vegetation growing in the cracks of rocks. Near the top of the steep, 35-foot cliffs, several small patches (mostly just a few square meters each) of crowberry-bayberry headland occur where soil development allows. This headland vegetation is dominated by black crowberry (*Empetrum nigrum*) and creeping juniper (*Juniperus horizontalis*). The southeastern promontory was heavily burned and supports a larger (a few acres) maritime shrubland community. A tent platform sits at the top of this promontory, with sweeping views to the south and east. Overall, this property (owned by Maine Coast Heritage Trust) has an interesting aggregation of coastal peatlands, fire dependant barrens, and coastal headlands all 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. About 1/2 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 grass and raspberries. A few species found more typically in moist woods habitats occur here, like interrupted fern (*Osmunda claytoniana*) and cinnamon fern (*O. cinnamomea*), 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.

Rare Species and Exemplary Natural Community Table for the Bold Coast

Common Name	Latin Name	S-RANK	G-RANK	State Status
<i>Exemplary Natural Communities</i>				
Tall Grass Meadow		S3	N/A	N/A
Coastal Plateau Bog Ecosystem		S3	N/A	N/A
Coastal Headlands Ecosystem		S4	N/A	N/A
Maritime Spruce-Fir Forest		S4	N/A	N/A
Downeast Maritime Shrubland		S3	N/A	N/A
Maritime Huckleberry Bog		S3	N/A	N/A
Maritime Slope Bog		S2	N/A	N/A
Open Headland		S4	N/A	N/A
Dwarf Shrub Bog		S4	N/A	N/A
<i>Rare Plants</i>				
Alpine blueberry	<i>Vaccinium boreale</i>	S3	G4	T
Northern yarrow	<i>Achillea millifolium</i> var. <i>borealis</i>	S1	G5T?	SC
Northern comandra (specific location not known)	<i>Geocaulon lividum</i>	S2	G5	SC
Sheathed sedge (historic)	<i>Carex vaginata</i>	S2	G5	SC
Dwarf rattlesnake root (historic)	<i>Prenanthes nana</i>	S1	G5	E
<i>Rare Animals</i>				
Crowberry blue	<i>Lycaeides idas empetri</i>	S2	G5	SC
Yellow rail	<i>Coturnicops noveboracensis</i>	SPB	G4	SC

Other Habitats Mapped by MDIFW:

Tidal Waterfowl /Wading Bird Habitat
 Freshwater Wading Bird/Waterfowl Habitat
 Shorebird Feeding and Roosting Areas

Conservation Considerations:

- In general, threats to peatlands include peat mining, cranberry harvesting, timber harvest around the forested perimeters, and development. Many of the peatlands have been protected by the state or land trusts, but a few remain in private ownership.
- The most likely threat to coastal headland ecosystems is residential development. 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 this 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 region's burning is natural versus anthropogenic.
- Over the long term, global warming may further endanger the boreal/maritime habitats and plant species associated with coastal plateau bogs and coastal headlands.

Protection Status

The largest conservation lands within this area are owned and managed by the State Bureau of Parks and Lands. The 512 acre Quoddy Head unit is managed as a State Park, and the Cutler unit is managed as a Public Reserved Land. Ecological reserves totaling 5,216 acres (a 3,489 inland reserve and a 1,727 coastal reserve) have recently been designated on the Cutler unit. Other significant conservation lands within this area are owned by the Maine Coast Heritage Trust such as Hamilton Cove.