

Roque Bluffs

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Description:

The Roque Bluffs focus area features an interesting array of intact peatlands and tidal marsh in close proximity to one another. This area, which includes Englishman River Marsh, the Black Head Bogs, Hanscom Heath, and Great Cove Heath, is generally in excellent condition. The peatlands are scattered to the east and west of the major feature of this focus area—the extensive Englishman River tidal marsh.

Englishman River Marsh

The most interesting feature of the Englishman River tidal marsh is the extensive mixing zone where freshwater marsh converges with salt marsh. The resulting “brackish tidal marsh” supports an interesting assemblage of plant species with characteristics of both freshwater and saltwater tidal marshes. The total area of the Englishman River Marsh is roughly 230 acres, making it one of the larger tidal marshes in the Downeast Region. The size, species composition, lack of recent human disturbance (i.e., within the last 60 years), and intact surroundings of this marsh indicate that it is of statewide significance.



Englishman River Marsh

The salt marsh near the River's mouth is most extensive on the west side of the river and is largely dominated by saltwater cordgrass (*Spartina alterniflora*) lower down in the intertidal zone and saltmeadow cordgrass (*Spartina patens*) and black-grass (*Juncus gerardii*) more abundant in the mid-tide zone. Patches of mixed graminoid-forb salt marsh, characterized by seaside plantain (*Plantago maritima*) and salt marsh arrow grass (*Triglochin maritimum*), occur interspersed among the mid and higher tide zones.

The brackish tidal marsh that lies about two miles upstream is transitional between upstream fresh meadows and downstream salt marshes. It is composed primarily of hedge bindweed (*Convolvulus sepium*) and the sedge *Carex paleacea*. Red fescue (*Festuca rubra*), wire rush (*Juncus arcticus*), New York aster (*Aster novi-belgii*) and silverweed (*Argentina anserina*) are also common. At this point in the river, the tidal range appears to be a few feet. Plants characteristic of slow-moving freshwater include yellow water-lily (*Nuphar variegata*), perfoliate

pondweed (*Potamogeton perfoliatus*), common arrowhead (*Sagittaria latifolia*), water-parsnip (*Sium suave*) and river horsetail (*Equisetum fluviatile*). The banks of the channel are lined by Canada bluejoint grass (*Calamagrostis canadensis*).

Two rare plants are found along the Englishman River Marsh: a population of saltmarsh sedge (*Carex recta*) in the upper fresh/brackish part of the marsh, and Gaspé arrow-grass (*Triglochin gaspense*) in the lower salt flats. There are fewer than ten locations of each species currently known in Maine. In fact, Gaspé arrow-grass had not been documented in the United States in over 40 years. It is at the southwestern edge of its range in Maine, and only a few known locations exist in Washington County.

Of 30 Downeast salt marshes surveyed for diurnal bird use by MDIFW in 1999, the Englishman River Marsh was second only to the Pleasant River Marsh in species richness, with 22 species detected (Weik et al, 2001).

Black Head Bogs

The Black Head Bogs are three 10 to 20-acre maritime huckleberry-crowberry bogs between Mack Cove and Roque Bluffs Road. The bog on the south side of the road is dominated by black crowberry (*Emetrum nigrum*) and sheep laurel (*Kalmia angustifolia*). Also common in the herb layer are tufted club-rush (*Trichophorum cespitosum*), Labrador tea (*Rhododendron groenlandicum*), leatherleaf (*Chamaedaphne calyculata*), baked apple-berry (*Rubus chamaemorus*) and black spruce (*Picea mariana*). Although these small peatlands have the requisite plant species, they lack the morphology (e.g., a clear marginal slope) to be considered a Coastal Plateau Bog ecosystem.

Hanscom Heath

This 49 acre peatland consists of a 23-acre forested black spruce lagg and a 26-acre open maritime huckleberry-crowberry bog. Within the huckleberry-crowberry bog, there are two zones. The outer portion is primarily heath shrubs, with scattered black spruce and larch. Sheep laurel, Labrador tea, and leatherleaf are the most common species here. The inner portion of the bog (~15 acres) is slightly raised, and characterized black crowberry. The diversity in this bog is quite high, including species such as grass-pink (*Calapogon tuberosus*), dwarf huckleberry (*Gaylussacia dumosa*), mountain holly (*Nemopanthus mucronatus*) and baked apple-berry. Aside from a road abutting one end, there are no signs of disturbance.



Baked apple-berry (*Rubus chamaemorus*)

Great Cove Heath

This 85-acre coastal plateau bog has vegetation characteristics similar to those described above for the Black Head Bogs and Hanscom Heath. The most common species are sheep laurel, black crowberry, and leatherleaf, with baked apple-berry and deer-hair sedge also frequent. The perceptible marginal slope and raised surface distinguish this peatland from other similar bogs in Roque Bluffs.

Rare Species and Exemplary Natural Community Table for Roque Bluffs:

Common Name	Latin Name	S-RANK	G-RANK	State Status
<i>Exemplary Natural Communities</i>				
Coastal Plateau Bog Ecosystem		S3	N/A	N/A
Maritime Huckleberry Bog		S3	N/A	N/A
Brackish Tidal Marsh		S3	N/A	N/A
<i>Rare Plants</i>				
Saltmarsh sedge	<i>Carex recta</i>	S1	G4	T
Gaspe arrow-grass	<i>Triglochin gaspense</i>	S1	G3	PE
Coast-blite goosefoot (historic)	<i>Chenopodium rubrum</i>	S1	G5	T
<i>Rare Animals</i>				
Crowberry blue	<i>Lycaeides idas empetri</i>	S2	G5	SC

Other Habitats Mapped by MDIFW:

Tidal Waterfowl / Wading Bird Habitat

Freshwater Waterfowl / Wading Bird Habitat

Shorebird Feeding and Roosting Areas

Conservation Considerations:

- The most noteworthy aspect of the Englishman River Marsh is the broad area of mixing between salt water and fresh water. Consequently, any impoundment or alteration of the freshwater inflow would degrade this brackish tidal marsh.
- In 2000 MNAP staff encountered two people collecting sweet grass (*Hierochloe odorata*) for basket-making in the Englishman River Marsh. On the relatively small scale this was occurring, this commercial activity is probably not a significant threat to the marsh.
- There are no evident signs of former ditching or draining of the Englishman River Marsh; most other sizable tidal marshes in coastal Maine have been ditched in the past.
- Although a few invasive species occur on the periphery of the Englishman River Marsh, it is largely devoid of aggressive plants such as common reed (*Phragmites australis*) and purple loosestrife (*Lythrum salicaria*) that have colonized other disturbed brackish and fresh marshes in the northeast.
- In general, threats to peatlands include peat mining, cranberry harvesting, timber harvest around the forested perimeters, and development of surrounding uplands.
- Great Cove Heath is used by a botany professor from the University of Maine for field trips. A few trails have been worn in the bog on the south side, near the Roque Bluffs Road, from this use.

Protection Status

The Maine Bureau of Parks and Lands owns ~320 acres at Roque Bluffs State Park. The Englishman River Marsh and other coastal bogs in the area are within private non-industrial ownership, primarily just a few large parcels.