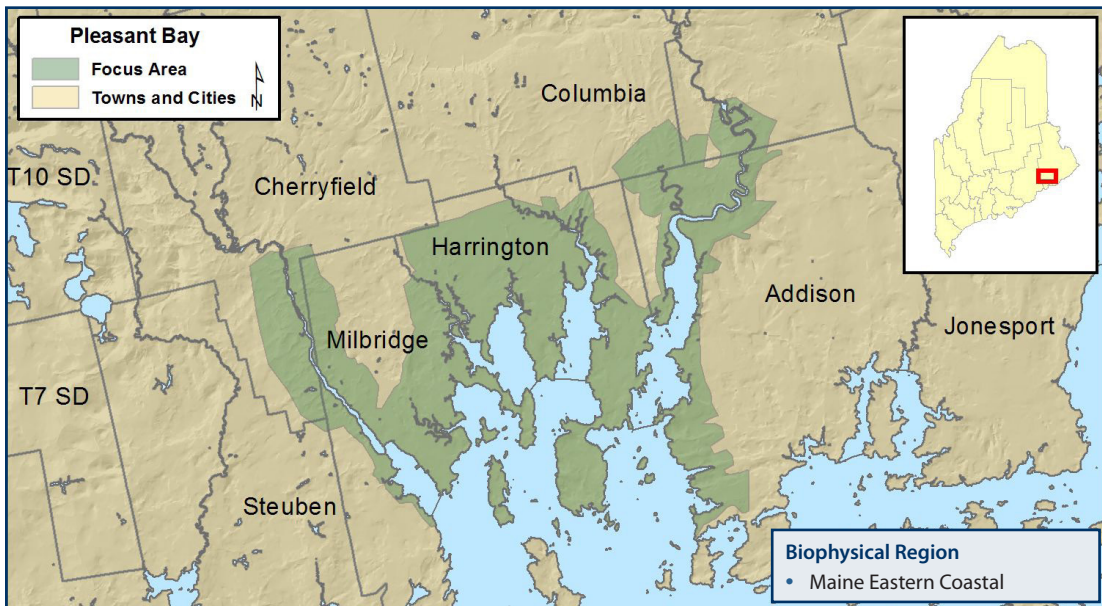
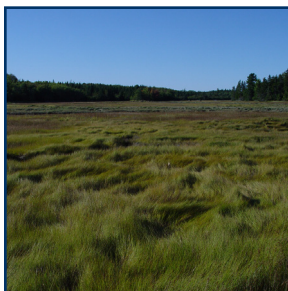


Pleasant Bay



WHY IS THIS AREA SIGNIFICANT?

The Pleasant Bay Focus Area encompasses the entire coastline, islands, and tidal estuaries of the greater Narraguagus-Pleasant Bay region, as well as the adjacent Harrington Heath. Both the Narraguagus and the Pleasant Rivers support numerous anadromous fish species, including wild Atlantic salmon. The extensive mudflats lining the river mouths and adjacent coves and coastal areas are staging areas for major concentrations of shorebirds during autumn migration, important habitat for wading birds and waterfowl and home to several rare species.

OPPORTUNITIES FOR CONSERVATION

- » Maintain and/or restore natural hydrologic regime.
- » Monitor and remove invasive plant populations.
- » 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.
- » 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.

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Rare Animals

- Bald Eagle
- Crowberry Blue
- Peregrine Falcon
- Atlantic Salmon

Rare Plants

- Salt Marsh Sedge

Rare and Exemplary Natural Communities

- Salt-hay Saltmarsh

Significant Wildlife Habitats

- Tidal Waterfowl and Wading Bird Habitat
- Inland Waterfowl and Wading Bird Habitat
- Shorebird Areas
- Seabird Nesting Islands

Public Access Opportunities

- Back Bay, Mill River, Carrying Place- MDIFW
- Downeast Sunrise Trail- MeDOT



Pleasant Bay, Rich Bard

FOCUS AREA OVERVIEW

The focus area includes three river drainages: the Narraguagus River, the Harrington River, and the Pleasant River. The Narraguagus River serves as the western margin of the focus area, and the Pleasant River and eastern shore of Pleasant Bay serve as the eastern margin. The Narraguagus and Pleasant are two of the eight rivers remaining in Maine that support wild populations of native Atlantic salmon.

Extensive mudflats line the river mouths and adjacent coves in the focus area. Together with the coastal areas these resources provide important staging areas for major concentrations of shorebirds during autumn migration and provide valuable habitat for numerous tidal wading bird and waterfowl species. Eelgrass and marine worm habitat is found throughout the Bay. Eelgrass beds serve as nursery, habitat, and feeding areas for many fish, waterfowl, wading birds, invertebrates, and other wildlife, including commercially valuable fish and shellfish.

Narraguagus Bay--Narraguagus River to the Harrington River

The mouth of the Narraguagus River from the town of Milbridge to the open bay is an area of extensive mudflats that

serve as good feeding habitat for shorebirds of all sizes. In addition several tiny islands and ledges, such as Long Point and Mitchell Point, provide roosting habitat for these birds. Back Bay is considered one of the better shorebird feeding areas. Birds that feed here may roost at Pinkham Island, a very important roosting site. The Mill River and Flat Bay also offer extensive mudflats that provide superb feeding especially for smaller shorebirds.

Just west of the town of Harrington, an approximately 120 acre coastal crowberry bog, known as Harrington Heath supports the state rare crowberry blue butterfly. The mouth of the Harrington River is nearly all mudflats at low tide, and hosts some shorebirds. West Carrying Place stands out as an important portion of the Harrington estuary because of its high use by medium sized shorebirds and black ducks in autumn.

Pleasant River Saltmarsh

At nearly 700 acres, the tidal marsh complex along the Pleasant River is the largest salt marsh ecosystem in the Eastern Coastal Region. It contains three distinct parts: the mainstem is the largest, the West Branch has the heaviest history of human use, and Dyer Cove is the smallest but perhaps least

disturbed.

The salt marshes along the lower portion of the river in Addison are bounded by meanders in the river and contain many small natural salt pannes (i.e., sparsely vegetated pools that fill at high tide). Vegetation is typical of salt marshes throughout coastal Maine. Saltmeadow cordgrass (*Spartina patens*) and saltmarsh cordgrass (*Spartina alterniflora*) share dominance, and black-grass (*Juncus gerardii*) is also abundant. Other common species include saltmarsh bulrush (*Bolboschoenus maritimus*), red fescue (*Festuca rubra*), common arrow-grass (*Triglochin maritimum*), and seaside plantain (*Plantago maritima*).

A substantial component of the marshes at the mouth of the Pleasant River and West Branch have been drained in the past. Several areas of marsh contain evidently raised levees about ten feet back from the riverbank. These levees consist of fine-grained sediments that support drier-site species typical of disturbed ground, such as quack grass (*Elymus repens*), and are the result of draining and ditching efforts that began in the 1700s and continued until the 1930s. These efforts, designed to improve the hay-growing capacity of the marsh, resulted in an elaborate system of ditches, dikes, and floodgates. The ditches and floodgates allowed freshwater to exit while restricting the entry of salt water, and the levees further provided a barrier against incoming tides.

Of 30 Downeast salt marshes surveyed for diurnal bird use by MDIFW in 1999, the Pleasant River salt marsh had by far the highest species richness, with 29 species detected. In addition to the wildlife value of the salt marsh proper, it is also noteworthy that Carrying Place Cove on the western portion of the lower reaches of the Pleasant River is perhaps the most important shorebird roosting site in the region especially on East Carrying Place Cove Island.

RARE AND EXEMPLARY NATURAL COMMUNITIES

Spartina Saltmarsh: These tidal marshes consist of expanses of saltmeadow cordgrass, smooth cordgrass, and/or black-grass. Shrubs are virtually absent, and the herbaceous cover is usually >85%. Much of the marsh is high marsh, where saltmeadow cordgrass forms meadows, and where black-grass may be dominant at slightly higher elevations. In the low marsh, along creeks or at elevations just below mean high water, smooth cordgrass is abundant. Salt pannes with abundant seashore saltgrass may dot the high marsh; goosetongue may also be locally common. Sea lavender and seaside goldenrod are often found at the upper tidal fringe. The dominant species typically form bands corresponding to tidal inundation zones.

Few of the larger saltmarshes in Maine are pristine, with some having been filled and nearly all ditched at one time or another. With wetland protection in recent decades many of those that remain are reverting to a more natural hydrologic regime. Many of the remaining high quality *Spartina* saltmarshes are on public land or private conservation land. Maintenance of

Ecological Services of the Focus Area

- Major migratory stopover, feeding, breeding and roosting area for myriad bird species.
- Supports eelgrass and associated eelgrass values.
- Nursery for juvenile fish and shellfish.
- Supports regional biodiversity by providing habitat for rare plants, animals, and natural communities.

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.
- Attracts tourism for wildlife observation, paddling, hunting, and angling.
- Scenic/viewshed
- Supports local marine resource industries.

appropriate wetland buffers can help reduce degradation that could result from adjacent land uses.

Throughout the Maine coast, saltmarshes are important nesting habitat for Nelson's sharp-tailed sparrow, seaside sparrow, and the rare saltmarsh sharp-tailed sparrow. These wetlands also provide foraging habitat for a large number of wadingbirds and shorebirds, including rare species such as the laughing gull, black-crowned night-heron, and least tern. The big bluet, a rare damselfly, inhabits saltmarsh ponds with emergent vegetation in southern Maine.

CHARACTERISTIC SPECIES

The Pleasant Bay Focus Area has tremendous concentrations of Tidal Waterfowl and Wading Bird Habitat as well as Shorebird Areas. **Tidal Waterfowl and Wading Bird Habitats** provide undisturbed nesting habitat and undisturbed, uncontaminated feeding areas and are essential for maintaining viable waterfowl and wading bird populations. **Shorebird Areas** are important feeding and resting stop over sites for shorebirds on their long migrations.

Bald eagles (*Haliaeetus leucocephalus*) are a common site throughout Pleasant Bay. Bald eagles were nearly extirpated because of widespread use of environmental contaminants that caused eggshell thinning and impaired reproductive success. With bans on the use of these contaminants and habitat protection measures, bald eagles have made a tremendous recovery. In 2009 they were removed from the state Endangered

Species list. They remain listed as Special Concern.

Like bald eagles, **peregrine falcons** (*Falco peregrinus*) were nearly extirpated throughout much of their historic range due to the use of pesticides and other environmental contaminants. Maine has joined other states in a large-scale peregrine falcon reintroduction program. Young, captive-reared peregrines were slowly released at former nest sites in a process called “hacking.” Reintroduced peregrines have been successful in Maine as well as in New Hampshire, Vermont, and New York. With recovery of the species nationwide, the peregrine falcon was taken off the federal endangered species list in 1999, but its breeding population remains listed as endangered on the Maine list, as its numbers here are still low. Peregrine falcons nest on some of the coastal cliffs in the Pleasant Bay Focus Area.

The Pleasant and Narraguagus Rivers support **Atlantic salmon** (*Salmo salar*). Atlantic salmon are an anadromous species, spending most of their adult life at sea, returning to their natal freshwater rivers to spawn. They require free flowing, cool, clear rivers to migrate to suitable spawning and nursery habitats found in upper river reaches. Populations of Atlantic salmon dramatically declined as culverts and dams blocked fish passage and water quality declines in streams and rivers limited habitat quality. Wild Atlantic salmon are listed as a Federally Endangered species in eight rivers in the State of Maine, including the Pleasant and Narraguagus.

Crowberry blue (*Plebejus idas empetri*) has been documented in Harrington Heath. Crowberry blue is a rare butterfly found in openings in mixed evergreen forests, bogs, wet meadows, seeps. It uses plants in the heath family as a caterpillar host.

High value **brook trout fisheries** are present in Knowles and Batson Meadow Brooks. High value **anadromous smelt spawning habitat** is also present in Batson Meadow and Smelt Brooks.

CONSERVATION CONSIDERATIONS

- » Much of this large salt marsh has been altered in the past, although natural recovery has occurred over the last 70 years. Sections of this marsh may be good candidates for salt marsh restoration, including plugging of the ditches, restoration of tidal flow, and creation of salt pannes.
- » Although a few invasive species occur on the periphery of the marsh, it is largely devoid of aggressive plants such as common reed (*Phragmites australis*) that have colonized other disturbed salt marshes in the northeast. Local groups with an interest in the marsh should be made aware of the potential threat of invasive plants and keep an eye out for them before they become well established.
- » 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.
- » Eagles are extremely sensitive to disturbance during their nesting season. Any activities near their nests or within their nesting territory during this period may cause nest failure or may even cause adults to abandon the nest. In general it is recommended that a 330-foot radius be left undisturbed buffer around an eagle nest during any kind of land-clearing or timber harvest activity. Habitat protection within ¼ mile radius of a nesting site is another significant measure that can help support nesting eagles. Consult with a MDIFW biologist prior to planning any activity that may disturb the forest around an eagle nest.
- » Marine worm landings have declined dramatically. In 1950, an average tide would yield 4,000 worms, but today that average is about 550 worms, often forcing diggers to take smaller worms that have not yet reproduced. Marine worms are sensitive to losses from pollution and dredging. Licensing is required for digging marine worms.
- » This area includes Significant Wildlife Habitat for waterfowl and wading birds and shorebirds. Both land managers and private landowners should follow best management practices with respect to forestry activities in and around wetlands, shoreland areas, and Significant Wildlife Habitat. Maintaining wide forested buffers along all lakes, rivers, streams, and wetlands will provide valuable riparian habitat for many wildlife species. Consult with a MDIFW biologist prior to planning any activity that may disturb the forest around an IWWH/TWWH or a Shorebird Area.
- » Permanent and temporary docks and piers can negatively impact shorebird habitats through direct habitat loss and disturbance issues related to activities around structures. These structures should be carefully planned and permitted when located in shorebird areas. Contact MDIFW biologists for more information.
- » 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

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Animals	Bald Eagle	<i>Haliaeetus leucocephalus</i>	SC	S4B,S4N	G5
	Crowberry Blue	<i>Plebejus idas empetri</i>	SC		
	Peregrine Falcon	<i>Falco peregrinus</i>	E	S1S2N,S2B	G4
	Atlantic Salmon	<i>Salmo salar</i>	E		
Plants	Salt Marsh Sedge	<i>Carex vacillans</i>	E	S2	GNR
Natural Communities	Salt-hay Saltmarsh	<i>Spartina saltmarsh</i>		S3	G5

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.