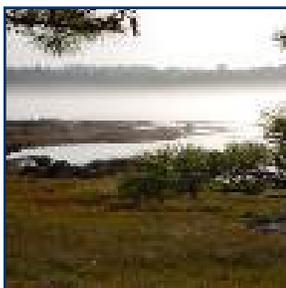


# Taunton Bay



## WHY IS THIS AREA SIGNIFICANT?

Because of its downeast location, Taunton Bay is graced by high tidal fluctuations that create expansive tidal estuaries. Large tidal amplitude and the freshwater tributaries in this region produce conditions that effectively mix nutrients with dissolved gases and create incredibly productive waters. Tidal estuaries, such as those in the Taunton Bay Focus Area, play a critical role in making the Gulf of Maine one of the most productive waterbodies in the world.

## OPPORTUNITIES FOR CONSERVATION

- » 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.
- » Maintain natural hydrologic regime by avoiding drainage or impoundment of the wetlands, streams or adjacent water bodies. Identify and restore tidal restrictions.
- » Encourage town planners to improve approaches to development that may impact focus area functions.
- » Encourage landowners to maintain enhanced riparian buffers.

For more conservation opportunities, visit the Beginning with Habitat Online Toolbox: [www.beginningwithhabitat.org/toolbox/about\\_toolbox.html](http://www.beginningwithhabitat.org/toolbox/about_toolbox.html).

*Photo credits, top to bottom: ME Natural Areas Program, Tim Atkins, ME Natural Areas Program, Paul Cyr, Tim Atkins*

### Rare Animals

- Arctic Tern
- Bald Eagle
- Upland Sandpiper

### Rare Plants

- American Sea-blite

### Rare and Exemplary Natural Communities

- Black Spruce Woodland
- Brackish Tidal Marsh

### Significant Wildlife Habitats

- Tidal Waterfowl and Wading Bird Habitat
- Shorebird Areas

### Public Access Opportunities

- Lamoine State Park, MBLP
- Spring Brook WMA, MDIFW
- Downeast Sunrise Trail, MDO



*Skillings River, Tim Atkins*

## FOCUS AREA OVERVIEW

The Taunton Bay Focus Area includes three sizeable coastal bays in Downeast Maine: Taunton Bay, the Skillings River, and the Eastern Bay of the Mount Desert Narrows, as well as adjacent terrestrial areas such as Crabtree Neck.

The gentle topography of the Taunton Bay region provides extensive intertidal mudflats in protected bays that are productive sources of intertidal and subtidal vegetation. Vegetation in these bays tends to sort itself by the degree of salinity and inundation to which it is subjected. There are extensive eelgrass beds in Taunton Bay, in the Mount Desert Narrows and, to a lesser extent, in the Skillings River. **Eelgrass** (*Zostera marina*) serves as nursery, habitat, and feeding areas for many fish, waterfowl, wading birds, invertebrates, and other wildlife, including commercially valuable fish and shellfish. In 2001, the eelgrass beds suffered a 90% decline for unknown reasons and are now slowly and unevenly recovering. Natural mussel bars and clam flats are also significant features, especially in Taunton Bay and the Skillings River. **Marine worms** are found in the intertidal mudflats of Raccoon Cove, Youngs Bay, Hog Bay, and the Mount Desert Narrows. Marine worms, specifically sandworms and bloodworms, are valued by saltwater sports fisherman as bait, and the commercial industry is centered

in coastal Maine. Marine worms and other invertebrates also provide an outstanding food source for migratory **shorebirds**, and as a result, large numbers of shorebirds feed and roost in these mudflats. High flow rates of water through the Mount Desert Narrows and the Skillings River keep them relatively free of winter ice and provide excellent habitat for wintering waterfowl. Throughout the focus area there are small pockets of tidal marsh dominated by salt-tolerant graminoids such as black grass, salt marsh cordgrass, salt hay, and wire rush. These habitats provide foraging habitat for a variety of **tidal waterfowl and wadingbirds**.

The tidal estuaries of the Taunton Bay Focus Area provide important fish spawning habitat for a number of **diadromous fish**, species that use both marine and freshwater habitats during their life cycle, including alewives and American eel. The estuaries also provide important habitat for sea cucumbers, which are becoming an increasingly important commercial species. There are two distinct breeding populations of **horse-shoe crab** (*Limulus sp.*) here, one at Hog Bay and the other at Egypt Bay, which represent the northern breeding limit for this species. Several freshwater streams support high value **brook trout fisheries** as well.

One of downeast Maine's most important aggregations of bald eagle nest sites is within the Taunton Bay Focus Area; the other is at Cobscook Bay. **Bald eagles** (*Haliaeetus leucocephalus*) are at the top of the food chain, and the number of nesting pairs here is a testament to the availability of fish and other food sources in this region. The state-threatened **Arctic tern** (*Sterna paradisaea*) also breeds within the focus area, at Youngs Bay. Arctic terns migrate up to 20,000 miles, from their northern breeding grounds to Antarctica.

Sizeable unfragmented coastal habitat blocks occur along portions of both Taunton Bay the Skilling's River. A **Black Spruce Woodland** occurs on Hyde Point adjacent to the Skillings River. This rare community type is characterized by open knolls dominated by low-growing black and red spruce trees and heath shrubs such as blueberry and huckleberry. Soils are thin, and the presence of charcoal is evidence of past fire history. An exemplary **Spruce-Fir-Northern Hardwoods Ecosystem** is within the focus area, on Mt. Desert, Thomas Island, The Twinnies, and Thompson Island. Thompson Island also has a population of the rare **American sea-bligh** (*Suaeda calceoliformis*).

### CONSERVATION CONSIDERATIONS

- » An increase in shoreline development can have adverse impacts on estuarine habitat through increased nutrient loads, siltation, and loss of a habitat buffer.
- » Seawalls and other shoreline stabilization techniques (e.g. riprap) can disrupt sediment inputs from natural erosion processes resulting in alterations to the sediment structure. This can adversely affect species composition and the productivity of mudflats.
- » Physical barriers such as dams, culverts, and bridges can change tidal flows, alter salinity, modify drainage, prevent sediment movement, and impede animal movements. Barriers to diadromous fish passage threaten productive fisheries and in turn may have impacts on other species like bald eagles that feed on them.
- » 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.
- » 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

### Ecological Services of the Focus Area

- Provides nutrient export for marine food webs.
- Cleans water running off land and discharging into ocean.
- Provides an outstanding food source for migratory shorebirds.
- Serves as nursery habitat for juvenile fish and shellfish.
- Supports regional biodiversity.

### Economic Contributions of the Focus Area

- Serves as an important recreational resource with opportunities for wildlife observation, paddling, hunting, and angling
- Supports valuable local marine resource industries with fish, shellfish and marine worms.
- Provides scenic viewsheds that raises property values.



Arctic Tern, Unknown



Brackish Tidal Marsh, Maine Natural Areas Program

- are sensitive to losses from pollution, dredging, and over-harvest. Licensing is required to dig them.
- » Shoreline development and subsequent habitat degradation are potential threats to Maine's small populations of horseshoe crab. Though generally overlooked as a resource, horseshoe crabs in Maine are very vulnerable to depletion from any harvesting activities. In 2003, taking and possession of horseshoe crabs became prohibited in Maine.
  - » Water quality changes such as changes in salinity, temperature, turbidity, or physical properties of the water can negatively affect habitat for species.
  - » Point and non-point sources of pollution can change faunal communities in tidal communities. Oil spills can destroy or significantly disrupt functioning systems.
  - » Direct alteration of habitat through filling, dredging, dragging, or other major human disturbances can alter floral and faunal communities and disrupt complex food webs.
  - » This area includes Significant Wildlife Habitat for tidal water-
- fowl and wading birds and for shorebirds. Both land managers and private landowners should follow best management practices in and around Significant Wildlife Habitat. Maintaining wide forested buffers 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 Significant Wildlife Habitat.
- » 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.



*Skillings River, Tim Atkins*

**RARE SPECIES AND EXEMPLARY NATURAL COMMUNITIES OF THE FOCUS AREA**

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Animals	Arctic Tern	<i>Sterna paradisaea</i>	T	S2B	G5
	Bald Eagle	<i>Haliaeetus leucocephalus</i>	SC	S4B,S4N	G5
	Upland Sandpiper	<i>Bartramia longicauda</i>	T	S2B	G5
Plants	American Sea-blite	<i>Suaeda calceoliformis</i>	T	S2	G5
Natural Communities	Black Spruce Woodland	<i>Black spruce woodland</i>		S3	G4?
	Brackish Tidal Marsh	<i>Brackish tidal marsh</i>		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.