Back River/Hockomock Bay Focus Area

Arrowsic, Georgetown, Woolwich

Extending southeastward from Bath, wetlands associated with the Sasanoa and Back Rivers comprise one of the largest brackish tidal marsh systems in Maine. These wetlands from a transition zone from the freshwater tidal systems of Merrymeeting Bay to the saltwater systems near the Kennebec's mouth. Areas of particular ecological interest are described below.

Back River Tidal Marshes and Uplands: Georgetown

The **spartina saltmarshes** along the Back River in Georgetown are long and linear, covering nearly 1,000 acres. The marshes exhibit distinct patterns of vegetational zonation, with cord grass (*Spartina alterniflora*), seaside goldenrod (*Solidago sempervirens*), and silverweed (*Argentina anserina*) dominant along the creeks. Salt hay (*Spartina patens*) flats cover the majority of the marsh but are dotted with slightly depressed "pannes." These wetter pannes are colonized by arrow-grass (*Triglochin maritimum*), seaside plantain (*Plantago maritima*), and the rare **seaside gerardia** (*Agalinis maritima*).

Salt marsh false foxglove (*Agalinis maritima*)

Upland forests adjacent to the Back River are a mixture of oak-pine types embedded with small, scattered freshwater wetlands**. Spotted turtles** (*Clemmys guttata*) have been found in a few locations near the Back River, including three sightings along Trafton Meadow. This population is the eastern-most extent of spotted turtles in their range; the bulk of Maine's spotted turtles are in York County. Despite a moderate survey effort for spotted turtles in 1998, little is known about their abundance or habitat use.

Hockomock Bay: Arrowsic, Georgetown, Woolwich

The north side of Hockomock Bay supports about 65 acres of high quality brackish tidal marsh. Hockomock Point has historically been an important nesting area for **bald eagles** (*Haliaeetus leucocephalus*), but nests have not been active in this area for several years. Suitable nest sites occur within protected areas around the cove.

Pleasant Cove: Woolwich

Medium to large populations of the five following rare species were found along the eastern shore of Pleasant Cove: **Parker's pipewort** *(Eriocaulon parkeri),* **spongy arrowhead** (*Sagittaria calycina*), **mudwort** (*Limosella australis*), **water pimpernel** (*Samolus valerandi*), and **lilaeopsis** (*Lilaeopsis chinensis*). Substrate in this area consists of three types, each supporting a different suite of plants: mucky sand along the upper edge of marsh, deep soft muck that underlies much of the lower portion of the tidal marsh, and bedrock outcrops, in some areas

forming steep banks that drop abruptly to the tidal marsh. Other plants associated with this habitat include a mixture of fresh and brackish marsh species: wild rice (*Zizania aquatica*), American bulrush (*Schoenoplectus pungens*), arrow-grass (*Triglochin maritimum*), atriplex (*Atriplex prostrata*), soft-stem bulrush (*Schoenoplectus tabernaemontanii*), water parsnip (*Sium suave*), amaranth, (*Amaranthus cannabinus*), and freshwater cordgrass (*Spartina pectinata*).

Newtown Creek/Minot Creek Salt Marsh & Tarrs Mountain: Arrowsic

Two **spartina saltmarshes** in excellent condition occur on either side of Tarrs Mountain. Most of these marshes are not ditched, although adjoining salt marshes further to the south along Minot Creek and west of Bald Head have a few old artificial ditches. Together the Newtown Creek and Minot Creek salt marshes cover roughly 200 acres. In 1998 MDIFW researchers observed both the Nelson's sharp-tail sparrow (*Ammodramus nelsoni*) and the uncommon **salt-marsh sharp-tail sparrow** (*Ammodramus caudacutus*) at this marsh

The Tarrs Mountain area, just east of Newtown Creek, supports a variety of unique plant communities (salt marsh, pitch pine woodland, spruce woodland, oak-pine forest) amid 400+ acres of unbroken forest. This habitat variety, condition, landscape context, and proximity to protected land is uncommon in mid-coast Maine.

Preble Point: Arrowsic

The tidal marsh on both sides of the point is dominated by salt-marsh cordgrass (*Spartina alterniflora*), with lesser amounts of softstem bulrush (*Schoenoplectus tabernaemontanii*). On the west side of the point, **horned pondweed** (*Zannichellia palustris*) grows in scattered mats on the mudflats beneath saltmarsh cordgrass. **Lilaeopsis** (*Lilaeopsis chinensis*) grows nearby to the south, in mudflats beneath saltmarsh cordgrass. On the east side of the point, ledges end abruptly at the tidal marsh and lilaeopsis grows in scattered small dense patches beneath the cordgrass.

Preble Point is also the state's only known location for the **marsh bulrush** (*Bolboschoenus* x *novae-angliae*) -- a hybrid between river bulrush and salt-marsh bulrush. This hybrid has not been documented in Maine in over 20 years (i.e., ranked SH).

Rare Species/Natural Communities Summary Table for the Back River/Hockomock Bay Focus Area:

Common Name	Latin Name	State Status	S-Rank	G-Rank
Exemplary Natural Communities				
Brackish Tidal Marsh		n/a	S3	not ranked
Mixed Graminoid – Forb Saltmarsh		n/a	S4	not ranked
Oak – Hickory Forest		n/a	S2	not ranked
Pitch Pine Woodland		n/a	S3	not ranked
Spartina Saltmarsh		n/a	S3	not ranked
Tidal Creek		n/a	SU	not ranked
White Oak – Red Oak Forest		n/a	S3	not ranked
Rare Plants				
Horned pondweed	*Zannichellia palustris*	SC	S2	G5
Lilaeopsis	*Lilaeopsis chinensis*	T	S2	G5

Marsh bulrush	*Bolboschoenus* x *novae-angliae*	PE	SH	G5
Marsh-elder	*Iva frutescens*	E	S1	G5T5
Mudwort	*Limosella australis*	SC	S3	G4G5
Parker's pipewort	*Eriocaulon parkeri*	SC	S3	G3
Saltmarsh false-foxglove	*Agalinis maritima*	SC	S3	G5
Smooth sandwort	*Minuartia glabra*	SC	S2	G4
Spongy arrow-head	*Sagittaria calycina*	SC	G3	G5T4
Spreading sedge	*Carex laxiculmis*	E	S1	G5
Water pimpernel	*Samolus valerandi*	SC	S2	G5T5
Rare Animals				
Bald eagle	*Haliaeetus leucocephalus*	T	S4B,S4N	G4
Salt-marsh sharp-tail sparrow	*Ammodramus caudacutus*	not listed	S3B	G4
Spotted turtle	*Clemmys guttata*	T	S3	G5

Other Resources Mapped by MDIFW:

Other MDIFW resources mapped in the Lower Kennebec area include Deer Wintering Areas, Shorebird Feeding Areas, Inland Wading Bird and Waterfowl Habitats, and extensive areas of Coastal Wading Bird and Waterfowl Habitat.

Protection Status:

Over 2,400 acres, including nearly eight miles of Back River shoreline, have been protected within this focus area. Significant protected properties include the Holt Research Forest, the Bald Head Preserve, the Flying Point Preserve, and Back River IFW lands.

The Maine Wetlands Protection Coalition, a consortium of groups including the Friends of Merrymeeting Bay, Lower Kennebec Land Trust, Nature Conservancy, Maine Coast Heritage Trust, and MDIFW, is actively pursuing further land protection in the area.

Conservation Considerations:

- Although some of the shoreline within this focus area has been developed, most of it is low-density residential, and scattered large undeveloped parcels remain. Nonetheless, residential development continues in the area, and further shoreline development may reduce buffers needed for wildlife, fragment wildlife habitat, influence water quality, and serve as a pathway for invasive species. Protection of remaining undeveloped shoreline parcels along the Back River should continue to be a top priority, and further protection of the Sasanoa and Hockomock Bay shorelines is also important.

- With the exception of three houses and yards adjacent to the marsh at the northeast end of Pleasant Cove, uplands adjacent to the eastern side of the cove are forested (primarily pine, spruce, and hemlock) and intact. Prior to 1999 tidal flow up the Back River Creek (adjacent to Pleasant Cove) was controlled by a tide gate that allowed flow outward but not inward. In 1999 the tide gate was removed as part of a wetland mitigation project for Bath Iron Works. While it might restore tidal habitat north of Route 1, removal of the tide gate may also influence the hydraulic dynamics of the mudflats and rare plant habitat south of Route 1 in Pleasant Cove.

- Invasive species, such as common reed (*Phragmites australis*), have expanded rapidly in salt and brackish marshes in other parts of New England. While invasive plants do not seem to be a major threat currently, their distribution and abundance should be monitored.