



# The Land of Many Grasses

Scarborough Marsh is Maine's largest salt marsh. This 3,100-acre estuary lies at the intersection of the Dunstan and Nonesuch Rivers and Atlantic Ocean. The Native Americans named this area "Owascoag," or *Land of Many Grasses*. In addition to aesthetic and recreational value, this marsh has great ecological importance. Microscopic bacteria break down organic matter into nutrients (detritus) on which small animals feed. In turn, this wildlife is preyed upon by birds and fish that support predators such as hawks, foxes, otters and humans.

Seventy percent of commercially valuable fish and shellfish depend upon salt marshes. Marshes buffer stormy seas, slow shoreline erosion and absorb excess nutrients before they reach the ocean. They also provide nesting habitat and an essential stopover for migrating birds.

#### **Station 1**

Scarborough Marsh began to form 10,000 years ago as the last continental glacier retreated northward. Quantities of clay and gravel washed seaward in the icy melt water. A barrier beach formed across the mouth of the river, and enough silt accumulated behind it so that in time it became shallow enough to support grasses.

## **Station 2**

You are standing by the edge of the Dunstan River, one of several freshwater rivers that empty into Scarborough Marsh. The fresh waters flow in from your left, while the twice-daily tides flood the marsh four miles away to your right. The river water is brackish – partly fresh and partly salty. While it may look dirty, it is not polluted. Its brown color comes from the nutrients and tiny microorganisms it contains.

The dominant plant of the tide marsh is grass. The coarse, tall grass growing along the edge of the river is **cord grass**. Further back from the river and higher up in the marsh is **salt hay**. Both of these grasses have adapted to life in a saltwater environment that few other plants can tolerate.

## **Station 3**

The marsh was important to both the Native
Americans and colonists. The Native Americans
fished for herring and trapped the alewives for fertilizer and food. Colonists grazed cattle on the
rich salt hay and thatched their roofs with
cord grass.

Snowy Egret

In the fall, farmers harvested the salt hay and swept it up onto wooden posts called *staddles*. These staddles (the remains of one are in front of you) held the hay until winter when the frozen ground could support teams of horses and wagons to remove the hay.

## **Station 4**

From this vantage point, you can look out over an arm of the marsh that was cut off from the main marsh when the new road was built in 1954–55. A shallow pond, or *salt panne*, is directly in front of you. It relies on rain or extra-high tides for its water. The mud of the salt panne supports many small creatures that are preyed upon by **Globby Ibis**, herons, sandpipers and **Snowy Egrets**.

#### **Station 5**

Walk out onto the marsh a little way. How does the ground feel under your feet? The salt hay you are standing on is this year's growth. Previous years' growth has been accumulating and decomposing. Since there is very little oxygen in salt marsh mud, decomposition is slow. The accumulation of decomposed grass and other materials forms a layer of peat up to 15 feet deep. If you gently jump up and down, it feels like you are walking on an enormous sponge.

# **Station 6**

As you walked along the path, you may have been scolded by a male **Red-winged Blackbird** guarding his nesting territory while his camouflaged mate tends her eggs. Unlike the panne, this is a tidal stream and is a favorite feeding area for several bird species. Many shorebirds that nest in the Arctic tundra use the marsh as a resting and feeding stop on their annual migrations.

## **Station 7**

Few plants are as versatile as the **cattail**. Its long stems and leaves were used for thatching and weaving; its roots, new shoots, flowers and even pollen are edible. Native Americans used the fluffy seed heads to line their boots and birds use them to use them to line their nests. A cattail seed head contains as many as two million seeds! **Muskrats** eat the roots of cattails and use the leaves to make their lodges.

## **Station 8**

You are standing in front of the *salt panne* (shallow pond) that is frequently occupied by ducks, shorebirds and herons. The short bluish grass is spike grass. On the upland side of the path is a display of typical meadow and roadside plants—**goldenrod**, **clover** and **asters**.

You can also see low shrubs of **meadow sweet** and **sweet fern**. Crushed leaves of sweet fern are very fragrant. Its dried leaves were smoked by Native Americans and may be used for tea. A bit further down by the boardwalk you may notice an orange color on the ground. This is rust that formed when iron in the mud is exposed to the air.

## **Station 9**

You are now taking a brief trip through a patch of upland woods and shrubs. Here you will see small white pine, pitch pine and poplar trees. As you walk, look on the ground for tunnels pushing up through the soil. These are made by star-nosed moles.



Before you is a canal that was dug during the American Revolutionary War. The canal started at a shipyard at the western end of the marsh and stretched to the Dunstan River. The location of the yard was chosen because the marsh hid ship construction from surveillance by British warships at sea.

Plants along this road include **black grass**, **sea lavender**, **salt hay** and **cord grass**. Directly across the road from the canal is a patch of **bayberry** bushes.

#### **Station 11**

This is the last outbound stop. We are at the edge of a salt panne where you can observe various salt marsh activities. Willets, yellowlegs, Glossy Ibis and sandpipers may be probing the mud for food. Peek at the water and you may see large schools of fish, including mummichogs and sticklebacks that feast on the quantities of mosquito larvae and other small creatures. Snowy Egrets and Great Blue Herons may be seen fishing for minnows.









