

LET'S VISIT A SALT MARSH

At the mere mention of a salt marsh many of us quickly turn up our noses, with visions of dank sultry places swarming with hordes of ravenous mosquitoes. However our ancestors viewed salt marshes quite differently and rapidly recognized their value as pasture land. Today we see little obvious commercial importance in our coastal marshes but they certainly are fascinating places for a naturalist.

On the Island there are several thousand acres of salt marsh. These usually are found in sheltered coves, behind a barrier beach system, or in estuaries where salt and fresh water mix. Salt marshes form where shallow coastal waters receive sediment deposits carried by the tides. As silt loads accumulate upward, tidal flats eventually become exposed at low tides, permitting colonization by land plants. With the growth of marsh vegetation, leaves, stems and roots help to catch and hold even more sediment.

Silt laden waters flooding over the marsh are slowed by the vegetation and soon drop much of their load. This can cause the seaward edge of the marsh to become higher than landward portions. Needing drainage routes ebbing tide waters gradually cut a pattern of tidal creeks across the marsh surface. Ice scouring in winter, slumping of saturated creek banks to block drainage, and settling of algal mats to create shallow depressions and pools all work to further influence marsh topography.

To live in a salt marsh plants must overcome many difficulties. These include battering by storm tides, inundation by silt, soil with low oxygen content, and large temperature, salinity and moisture fluctuations. Because of the physical problems of the marsh habitat a relatively small number of plants has developed the necessary adaptations for dwelling there. A large part of the marsh surface is dominated by fairly pure stands of only one or two species. These are arranged in distinct bands or zones, and are quite readily identifiable by colour even from a distance.

Below the seaward edge of the marsh lie tidal flats of bare mud. Above, a small bank marks the transition to vegetated marsh dominated by salt water cord grass (Spartina alterniflora). This tall tough grass provides the characteristic fresh greenness of marsh vegetation. Landward from the broad cord grass zone lies a narrower band of salt marsh hay (Spartina patens). This fine hair-like grass was in earlier days prized for livestock fodder. The weak stems of salt marsh hay allow the winds to flatten it into swirled mats. This upper zone of the marsh is often poorly drained, thus permitting the formation of shallow pools. Around and above these, two more typically freshwater species sometimes occur: the coarse yellow-green sedge Carex paleacea and the dark green rush Juncus balticus. These four perennial grass-type plants and especially the Spartinas have extensive root systems penetrating into the marsh soils. Although their above ground parts are scoured away by winter ice, the sturdy roots hold the marsh together as a firm sod.

Where, for whatever reason, the cover of the dominant grasses has been destroyed, several salt tolerant annuals are quick to take advantage. Samphire (Salicornia europa), a small stubby plant whose leaves and stems have a swollen succulent appearance, is quick to move in on the bare mud surface. Easily recognized by its fiery red colour of late summer, samphire is eaten as tasty greens earlier in the season. Sea lavender (Limonium nashii) prefers the more elevated sites provided when retreating winter ice deposits large clods of sod on the marsh surface. In late summer sea lavender blossoms into a mass of tiny lilac flowers which are excellent for dried arrangements.

Two other showy salt tolerant species found along the upland edges of salt marshes are seaside goldenrod (Solidago sempervirens) and Scotch lovage. Sometimes the upper edges of mature salt marshes merge with brackish and fresh water marsh systems, and here cat tails, bulrushes and a host of other more inland plants may be found.