

## Harvesting Ribbed Mussels Damages a Salt Marsh

Ribbed mussels burrow into salt marsh peat layers and add to the fabric of the structure of the marsh. Biological activity they stimulate in their burrows helps to cement the marsh matter together by making it "more sticky". This helps the marsh edge to resist the physical forces that erode the margins. In addition, as the mussels feed on microscopic plants when they are submerged, the filtering action helps to improve water clarity, allowing sunlight to reach deeper into the water and improve conditions in coastal habitats. Ribbed mussels are also an important member of a marsh's food web (e.g., waterfowl feed on them in winter).

Removing mussels from a marsh leaves behind a pock-marked surface that easily erodes and weathers away. Note the enlarged holes where mussels once lived. Large, gaping holes in the damaged area indicate that many pieces have broken away, causing the marsh to shrink in size. It is not likely the marsh will be able to rebuild the damaged areas, due to losses that occur from rising sea level, ice scour, and other factors.



Where winter ice has killed Spartina roots and the grass is gone, ribbed mussels remain and provide structure to salt marsh margins.



Ribbed mussels and Spartina grass form a highly productive community in a healthy salt marsh.



Where mussels have been removed, damage to the marsh margins is quite evident. Note the large piece of peat that has broken away and is now submerged.

