

Marsh Succession

by Kenn Oberrecht



As a coastal river flows toward the ocean, tidal influences on riverine waters increase. From the head to the mouth of the estuary, the salinity gradient also increases. In other words, estuarine waters are saltiest near the estuary's

outlet to the ocean and become progressively fresher the farther upstream they are. The salinity gradient also influences what sort of vegetation is found on the estuary and in adjacent wetlands.

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On the West Coast, eelgrass beds typically occur in the lower estuary as subtidal and intertidal wetlands. Bottom sediments here are usually a mixture of mud and sand, heavily populated with bottom-dwelling and burrowing animals.

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Where salinity is high, typical salt-marsh plants include pickleweed and fleshy jaumea. Low brackish marshes, where fresh water from the river

has diluted incoming ocean water, are often characterized by sedges and grasses, such as arrowgrass and Lyngby's sedge.

Farther upland along the estuary, high salt and brackish marshes occur where they are flooded less than daily, usually by the highest tides of the month. Here, tufted hairgrass, common spike rush, meadow barley, and Pacific silverweed are often dominant. A number of other plants grow in the low and high, salt and brackish marshes. Species also overlap a good bit, especially in transition zones between low and high marshes.

All of these wetlands are complex and highly productive. They provide food and shelter for countless organisms and are vital components of the estuary and coastal zone.

Farther inland, as salinity progressively diminishes, brackish marshes give way to freshwater wetlands. Here, cattails and purple loosestrife line the edges. Just beyond, bullrushes grow, often next to water lilies or spatterdock. Farther out, in the open-water areas, a variety of aquatic plants flourish.

We're still learning about the great number of animals that reside in or frequent the marshes. Of course, fishes and shellfishes are the main inhabitants of and visitors to the subtidal and intertidal salt and brackish marshes. Many species of waterfowl, sea birds, shorebirds, and wading birds also depend on these marshes for food and cover. Even birds of prey--including hawks, ospreys, and eagles--hunt the marshes.

Mice and shrews live in the higher marshes, as do many kinds of insects. Abundant food attracts many songbirds, which in turn entice owls and the smaller hawks.

Deer visit the salt and brackish marshes to feed, as do other mammals, such as skunks, raccoons, mink, and river otters. These same species also forage in and around the freshwater wetlands, where beaver and muskrats are often year-round residents.

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