

Reports

9-1990

Saltmeadow hay, *Spartina patens* (Aiton) Muhl

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Recommended Citation

Silberhorn, G. M. (1990) Saltmeadow hay, *Spartina patens* (Aiton) Muhl. Wetland Flora Technical Reports, Wetlands Program, Virginia Institute of Marine Science. Virginia Institute of Marine Science, William & Mary. <https://scholarworks.wm.edu/reports/2207>

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Technical Report

Wetland Flora

No. 90-4 | September 1990

Gene M. Silberhorn
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Saltmeadow Hay

Spartina patens (Aiton) Muhl.

Growth Habit and Diagnostic Characteristics

This fine, wiry grass usually appears collectively as a densely matted meadow in the higher areas of salt and brackish marshes. It also grows on low dunes and sand flats along the coast, however, in this habitat the growth form appears taller and clustered in distinct tufts. The somewhat lax plants of the marshes are from 30 to 60 cm long (1 to 2 feet), whereas dune plants are more erect and average 40 to 120 cm tall (1.5 to 4.0 feet). The long tapering leaves are often rolled inward and appear as a cylinder. The longest leaves are nearly one-half to two-thirds the length of the stem. The lower part of the stem is rather weak and has a tendency to bend when stressed by winds or spring tides and/or storm surges. During these events, individual stems (culms) intertwine, producing the overall effect of swirls or 'cowlicks' that often occur in large, open saltmarsh meadows. Sparingly branched, the inflorescence (flowering head) appears reddish-brown when in flower and dull brown in seed.

Density and Production

Spartina patens often grows with another meadow plant, salt grass (*Distichlis spicata*). Populations seldom occur as pure stands. Culms of mixed samples of saltmeadow hay and salt grass range from 500 to 1600 stems per m² or 50 to 150 stems/ft². Most of the detritus produced remains in the higher parts of the marsh, its usual habitat zone. Organic material accumulates within matted living material, very little of it washed out on spring tides or storm surges. Standing crop estimates of this community for this region range from 1 to 3 tons of dry weight per acre per year.

Distribution

Saltmeadow hay is found in the higher areas of salt and brackish marshes along the coast from the Maritime Provinces of Canada to Florida and along the Gulf Coast to Texas. As the name implies, it is harvested for hay as cattle feed, although this practice is on the wane. In certain areas, large areas of saltmarsh were diked in order to block tidal communication. Diked

areas essentially created high marsh conditions, thereby sustaining meadow communities so they could be harvested for fodder. During colonial times, it was common practice to graze cattle on high marshes in New England maritime states. Even in this century, hay stacks in these marshes were a common sight.

Habitat

Spartina patens is often associated with *Distichlis spicata*, especially near the limits of mean high water or where ponding of saline water occurs during spring tides or storm surges. Saltmeadow hay is also commonly found near the marsh/upland ecotone, usually associated with woody species such as marsh elder (*Iva frutescens*), groundsel tree (*Baccharis halimifolia*) and wax myrtle (*Myrica cerifera*).

In addition to tidal marsh habitats, *S. patens* also grows on low dunes and sand flats. *Spartina patens* is one of the pioneer species that invades overwash fans that form during storm events.

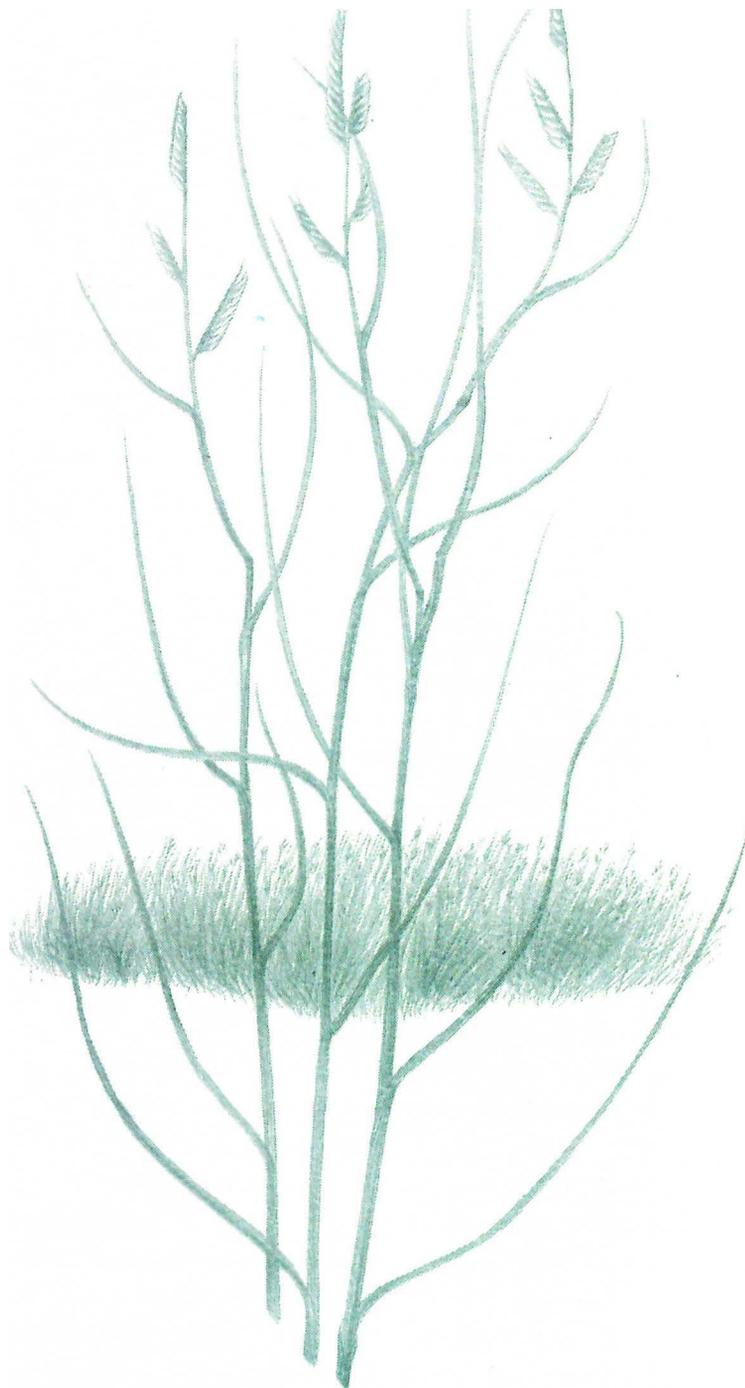
Ecological Values/Benefits

The meadow community is an excellent buffer, filtering sediments and other wastes during periods of runoff. Production and available detritus are somewhat less important to the estuarine environment than intertidal plant communities such as saltmarsh cordgrass. Salt and brackish meadows function as staging and feeding areas for aquatic and land mammals such as muskrats and raccoons and nesting places for rails and other birds. This community is also the primary habitat for the marsh snail (*Melampus bidentatus*), an important food for several species of birds.

Hydrophytic Factor/Federal Delineation

According to the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* and the *National List of Plant species that Occur in Wetlands: Virginia* (1988), *Spartina patens* is classified as a **facultative plus wetland plant (FACW+)**. FACW+ plants usually occur in wetlands (67-99% probability), but are occasionally found in nonwetlands (coastal dunes and sand flats).

Spartina patens
(Aiton) Muhl.



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Partial funding provided by the
Office of Coastal Resources
Management, NOAA.

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Printed on recycled paper.

