



Maine Department of Conservation
Natural Areas Program

Carex polymorpha Muhl.

Variable Sedge

Habitat: In Maine, habitat is between downslope seeps (with horsetails and wetland sedges) and upslope mixed oak/huckleberry forest. Preferred soil type is Deerfield Loamy Sand. All Maine occurrences are from coastal towns where climate is moderated by the ocean. [Dry barrens (partly forested, upland); Hardwood to mixed forest (forest, upland); Old field/roadside (non-forested, wetland or upland)]

Range: Southern Maine and southern New Hampshire to Virginia; rare throughout.

Phenology: Flowering occurs between May 16 and 24 in Maine. The female flowers appear first, and seeds mature about eight weeks after flowering. Leaves of the vegetative shoots begin to turn yellow and die back around mid-September.

Family: Cyperaceae

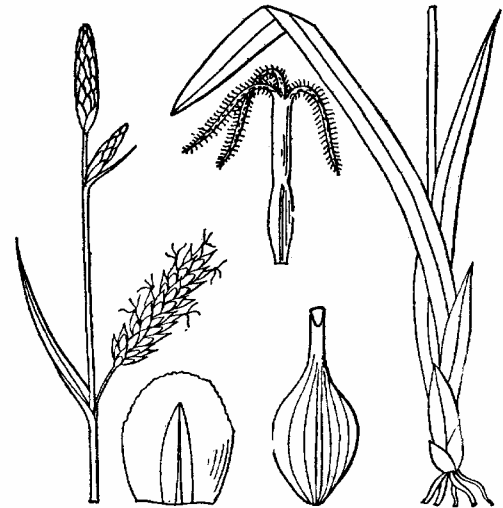


Illustration from Britton & Brown's Illustrated Flora of the Northern United States and Canada, 2nd ed.

Aids to Identification: The genus *Carex* contains 150 species in Maine, but there are several characteristics distinguishing *C. polymorpha* from its close relatives in the *Panicaceae*, a species-group to which it belongs. Rather than growing in clumps, variable sedge has spreading, loosely rooting rhizomes like all members of the *Panicaceae*. Within this group, variable sedge can be distinguished by its long beak on the perigynium, a sac surrounding the achene. The perigynia grow in rows of three or more in the fertile spikes. The lowermost leaves lack a blade and all leaves are a pastel green color in early summer and tawny yellow by mid-September.

Ecological characteristics: *Carex polymorpha* tends to produce abundant fertile (flowering) shoots when growing in full sun and when free from dense competing vegetation. In shaded forest settings, the plant produces very few fertile shoots, though the sterile (non-flowering) shoots can be large and apparently vigorous. It seems likely that increases in light brought about by natural blowdown of trees, fire or logging will stimulate fertile shoot formation in this species. Though the effects of fire on *C. polymorpha* have not been precisely determined, persistent growth of the plant in burned areas suggests that it withstands, and possibly is enhanced by, fire. Fires might be important in terms of stimulating fertile shoot formation since competing woody vegetation is diminished. However, in the absence of fire, the plant can persist and produce fruit in forest settings. It generally grows in mixed woods with oak and pine in sandy soils.

Synonyms:

		Rarity of <i>Carex polymorpha</i>
State Rank:	S1	Critically imperiled in Maine because of extreme rarity or vulnerability to extirpation.
New England Rank:	Division 1	Globally rare plant occurring in New England: Only a few occurrences exist within New England.
Global Rank:	G3	Rare or uncommon globally.

Status of *Carex polymorpha*

Federal Status:	None	No Federal Status.
State Status:	Endangered	
Proposed State Status:	Endangered	Rare and in danger of being lost from the state in the foreseeable future; or federally listed as Endangered. Listing criteria met: Few individuals, At edge of range, Declining populations, Vulnerable to human activity



▲ Historical (before 1982)
● Recent (1982- present)

Known Distribution in Maine:

This rare plant has been documented from a total of 4 town(s) in the following county(ies): Cumberland, York.

Dates of documented observations are: 1881, 1911 (2), 1985, 1986, 1989, 1998 (2), 2001 (2)

Reason(s) for rarity:

Northern limit of range; scarce throughout its range.

Conservation considerations:

Some known populations have succumbed to conversion of their habitat to residential or commercial use; others are vulnerable. Others have declined due to recreational overuse of their habitat by all-terrain vehicles.

The information in this fact sheet was downloaded from the Natural Areas Program's Biological and Conservation Database on 11 MAY 2004. We are grateful to our Botanical Advisory Group for additional information on particular species, and in particular, to Arthur Haines for his assistance with identifying characteristics and taxonomic questions. Nomenclature follows Haines and Vining's *Flora of Maine* (V.F. Thomas Press, 1998); where older works refer to a plant by another name, it is given under "Synonyms". The Natural Areas Program, within the Department of Conservation, maintains the most comprehensive source of information on Maine's rare or endangered plants and rare or exemplary natural communities, and is a member of the Association for Biodiversity Information.

If you know of locations for this plant or would like more information on this species, please contact the Natural Areas Program
State House Station 93, Augusta, Maine 04333; telephone (207) 287-8044.

