

Myrica gale L.
MYRICACEAE

sweet gale

Synonyms: *Gale palustris* A. Chev.
Myrica gale var. *subglabra* (A. Chev.) Fernald
Myrica gale var. *subarctica* J. Rousseau.
Myrica gale ssp. *tomentosa* (C. DC) E. Murray
Myrica gale var. *tomentosa* C. DC

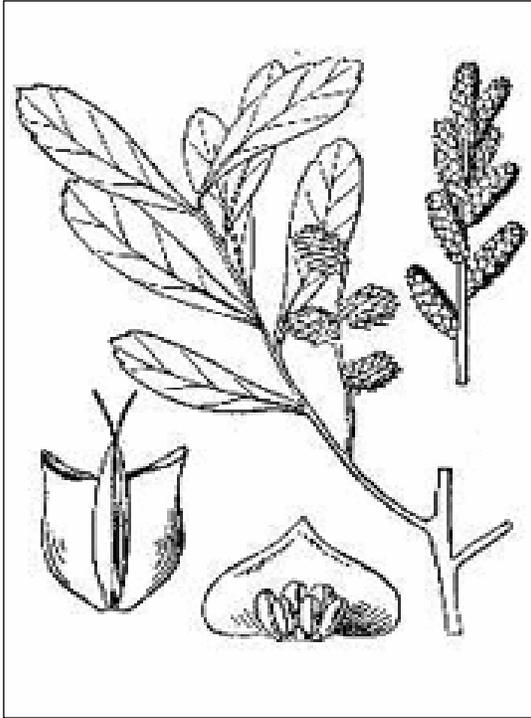


Illustration source: Britton and Brown 1913

General Description.—Sweet gale is the name used most often to refer to this shrub species. It is also known as bog myrtle, Dutch myrtle, English myrtle, and meadow fern, although this species is neither a true fern nor myrtle. Sweet gale is an aromatic, deciduous, shrub up to 2.5 m tall. The plant is single or multistemmed, with strongly ascending branches. The twigs are terete, brown with scattered yellow glands. The leaves are 2 to 6 cm long (including the short petiole), oblanceolate (i.e., widest toward apex) with cuneate bases, toothed only toward the apex, glabrous and shining above but usually pubescent on the blade's underside. Like the twigs, the blades on both sides are often beset with yellow glands. The flowers are in unisexual, unbranched catkins (aments), with the staminate (male) and pistillate (female) catkins appearing on different plants. Individual plants have been known to change sex from year to year

(Burgess 1993). The catkins are stalkless and borne on the upper portions of the preceding year's branchlets. These branchlets die after flowering. The staminate catkins range from 6 to 10 mm long, are crowded on the branchlet, with the individual flowers overtopped by the broad, shining, subtending, brown bracts. The pistillate catkins range from 7 to 10 mm long, each flower subtended by two wing-like bracts that remain fused to the fruit. The fruit of the sweet gale is a three-pointed, compressed, ovoid nutlet that at maturity is dotted with shining red to yellow resin glands.

Range.—Sweet gale is found in the New and Old World temperate regions. It occurs in the Northeastern (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, Michigan, Minnesota, New York, North Carolina, Pennsylvania, Rhode Island, Vermont, and Wisconsin) and the Northwestern (Oregon and Washington) United States (USDA 2003). The species is also known throughout much of Canada (Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Northwest Territory, Nova Scotia, Ontario, Prince Edward Island, Quebec, Saskatchewan, and Yukon) and Alaska (Bornstein 1997). In Eurasia it is known from northwest Europe to Portugal, Poland and northwestern Russia (Belgium, Britain, Denmark, Finland, France, Germany, Ireland, Netherlands, Portugal, Norway, Poland, Russia, Spain, and Sweden).

Systematic Botany.—Taxonomists disagree as to whether the sweet gale and the waxy-fruited bayberry [*Morella caroliniensis* (Mill.) Small] and wax myrtle [*Morella cerifera* (L.) Small] should be placed in the same genus (Bornstein 1997, Fernald 1950, Gleason and Cronquist 1991) or in separate genera (Wilbur 1994, 2002). Sweet gale can be readily distinguished from the waxy fruited species (bayberry, wax myrtle) on the bases of flowers and fruits. If sweet gale is to be recognized

as generically distinct from bayberry and wax myrtle, as is done here, the generic name *Myrica* is to be retained for sweet gale, with the bayberry and wax myrtle being placed in the genus *Morella* (Wilbur 1994, 2002). Various varieties and subspecies [e.g., *M. gale* var. *subglabra* Fernald, *M. gale* var. *tomentosa* C. DC., *M. gale* ssp. *tomentosa* (C. DC) E. Murray] have been recognized within sweet gale based on the degree of pubescence present on the leaves.

Ecology.—Sweet gale can tolerate full sun to dense shade and is usually found in moist to wet areas. Habitats where it can be found include bogs, fens, swamps, and the margins of streams and lakes. The roots of sweet gale contain nitrogen-fixing nodules, which allow it to be particularly tolerant of nitrogen-poor, acidic soils (Baker and Parsons 1997). Nitrogen fixation is accomplished by the actinomycetous fungal genus, *Frankia*.

Reproduction.—Sweet gale is wind pollinated and blooms in the spring. The pollen is allergenic (Lewis 1977). The fruits of sweet gale mature in the fall and are dispersed by water (Ridley 1930, Wilbur 1994).

Growth and Management.—Sweet gale is often cultivated on moist acidic soils where few other species can be grown (Bailey 1922, Rehder 1940). It thrives best in peaty soils and cannot tolerate liming. Propagation can be by seed, layering, or root suckers (Chittenden and Synge 1956). Propagation can also be effected through cuttings taken in late summer or fall. The cuttings should be placed in a bed of peat moss and sand (Everett 1960).

Benefits.—The branches and bark have been used in making a gale beer and in tanning; a decoction has been used for an insecticide and to kill vermin (Rook 1998). The branches of sweet gale were used by the Native Americans, Bella Coola, to prepare decoctions to be used as a diuretic or as a treatment for gonorrhoea (Moerman 1986).

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Gerry Moore, Research Taxonomist, Brooklyn Botanic Garden, 1000 Washington Avenue, Brooklyn, NY 11225

