

## Gillenia

Porteranthus (Britton ex Small) (nom. superfl.)

Gillenia (syn. Porteranthus) is a genus of two species of perennial herbs in the family Rosaceae, *Gillenia stipulata* and *Gillenia trifoliata*. Common names for plants in this genus include: Bowman's root, Indian-physic, American ipecac. This genus is endemic to dry open woods with acidic soils in eastern North America. Both plants are subshrubs with exposed semi-woody branches and serrated leaves; the larger lower leaves are divided into palmately arranged leaflets. Plants bloom in May, June, or July; blooms are composed of five slender white petals which are loosely arranged and typically appear slightly twisted and limp as if they were wilted. The flowers mature into small capsules. *G. stipulata* and *G. trifoliata* are often planted as ornamentals[1] and used in herbal medicine.[2][3][4]

Traditionally this genus is considered to be related to *Spiraea*,[5] but it became apparent that it comes from the lineage which leads to tribe Maleae (which arose from within subfamily Amygdaloideae).[6][7]

*Gillenia* has a haploid chromosome number of 9, while Maleae have a haploid chromosome number of 17 (which was probably produced from a *Gillenia*-like ancestor by doubling the genome and then losing a chromosome). Flower structure and fossil evidence also point to *Gillenia* sharing distinctive features with the Maleae.[6] Another similarity between *Gillenia* and Maleae is susceptibility to *Phragmidium* fungus. Differences between *Gillenia* and Maleae include the chromosome number and the latter being solely woody pome bearing plants, while *Gillenia* is herbaceous and has a dry follicular fruit.

The name *Porteranthus* (Britton ex Small), named for Thomas Conrad Porter,[8] has sometimes been used for this genus. The name *Gillenia* was thought to be already occupied by *Gillena*, a very similar name used by Michel Adanson as a synonym for *Clethra*[9] (under the International Code of Nomenclature for algae, fungi, and plants "names that are so similar that they are likely to be confused" should be treated as homonyms[10] Art. 53.3-5). However, a proposal to formally conserve *Gillenia*[9] was mooted after it was determined that *Gillena* was not validly published and a vote at the International Botanical Congress decided that it and *Gillenia* were not likely to be confused.[11] Thus, *Gillenia* is the correct name (and *Porteranthus* was validly published but is superfluous and illegitimate[10] Art. 52.1).

The two similar species can be distinguished by their stipules. In *G. stipulata*, the stipules at the base of the leaves, which are round and deeply toothed, persist throughout the life of the plant. In *G. trifoliata* the long slender stipules are quickly deciduous, this species also tends to have longer leaves and petals.

*Gillenia trifoliata* flowers

Mature fruit, an aggregate of follicles

