

# Plant Diversity Website

## ***Vicia sepium* L.**

**Common Names:** Bush Vetch, Hedge Vetch (2, 6)

**Etymology:** *Vicia* is derived from the Latin *vetch*, which is also a common name for this genus; *sepium* comes from the Latin *sepes*, meaning 'hedge' (7).

**Botanical synonyms:** *Vicia basilei* Sennen & Mauricio (9)

**FAMILY:** Fabaceae (the Pea or Legume family)

**Quick Notable Features:**

- Perennial vine up to 1 m long with forked tendrils at leaf tips
- Corolla dark blue-pink, with purple (or purple stripes), occasionally white
- Pinnately compound leaves
- Fruit a legume borne on a stalk (stipitate) (12)

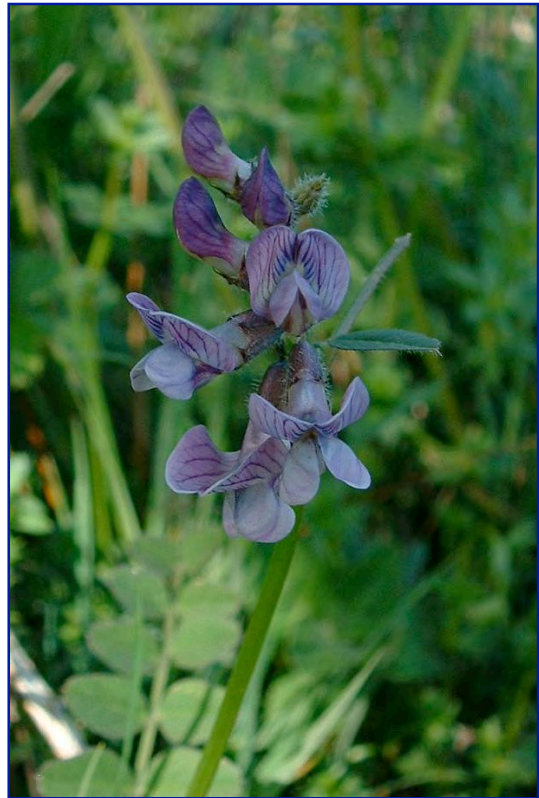
**Plant Height:** Up to 1 m long (12), climbing to 0.6m high (17).

**Subspecies/varieties recognized (4, 14):**

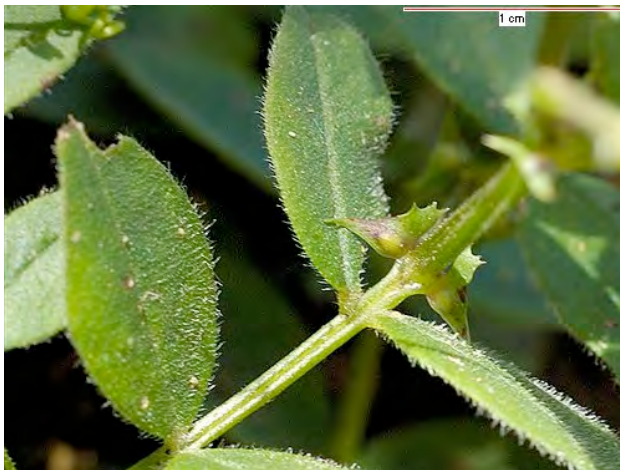
*Vicia sepium* var. *montana* W.D.J. Koch

*Vicia sepium* var. *ericalyx* Celak

*Vicia sepium* var. *hartii* Akeroyd



**Most Likely Confused with:** *V. sativa*, *V. hirsuta*, *V. villosa*, *V. cracca*, and species of *Lathyrus*.



**Habitat Preference:** Hedges, thickets, roadsides, and grassy areas. *V. sepium* prefers neutral to alkaline soils (8, 12).

**Geographic Distribution in Michigan:** Keweenaw County of the Upper Peninsula, and St. Claire and Wayne Counties of the Lower Peninsula (6).

**Known Elevational Distribution:** *V. sepium* prefers elevations around 1,100 m (11).

**Complete Geographic Distribution:** Introduced in northeastern North America, originally from Europe. North American

populations include Greenland, Canada (Quebec, Ontario, Nova Scotia, New Brunswick (Newfoundland), and the United States (Michigan, West Virginia, Pennsylvania, New York,

Vermont, New Hampshire, and Maine). Eastern hemisphere populations can be found throughout Europe, Central Asia, Siberia, Pakistan and Kashmir (4, 6, 13).

**Vegetative Plant Description:** Herbaceous climbing vine with alternate, pinnately compound leaves. Each leaf bears 4-8 pairs of leaflets and has branched tendrils at the tip of the leaf, replacing any terminal leaflets. The leaflets are emarginate or ovate, with an acute or mucronate tip. Stipules are small and coarsely toothed. Pulvini are present at the petiole base. The plant has nitrogen-fixing bacteria in its roots (5, 12, 17).

**Flower Description:** The blue-purple or occasionally white flowers are 8-15 mm long and grow in sessile or almost sessile inflorescences of 2-6 flowers. Each pedicel is slightly longer than the inflorescence peduncle. The fused calyx is irregular and forms a glabrous or villous tube 4-5mm long, with the two upper sepals distinctly shorter than the lower three. The calyx is deeper in color than the zygomorphic corolla, which is also 5-parted. The lower two petals form a keel, and the wings of the corolla adhere to the middle of the keel. The style is filiform and hairy, and the stamens are more or less diadelphous (5, 6, 17).



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**Flowering Time:** June – September (12)

**Pollinator:** A study from Scotland that included *V. sepium* indicated that certain bees choose plants with corollas longer than the bees' tongues for nectar (1). Two bumblebees, *Bombus pasuorum* and *B. sylvarum* have been suggested as pollinators, as well as *Autographa gamma*, a moth (15).

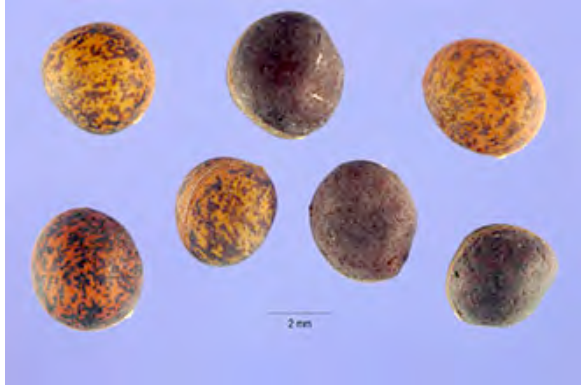
**Fruit Type and Description:** The fruit is a black stipitate legume, linear with a long beak (representing the remnant style base), 1.8-3.0 cm long, 0.7 cm wide (12).

**Seed Description:** Seeds are glabrous, 3-4 mm in diameter, usually 4-7 per fruit (12).

**Dispersal Syndrome:** None found in the

literature.

**Distinguished by:** *V. sepium* can be distinguished from *V. cracca*, and *V. villosa* by its sessile or nearly sessile inflorescences. *V. cracca* and *villosa* have long peduncles. Additionally, *V. cracca* has a very symmetrical calyx quite different than the irregular calyx of *V. sepium*, and *V. villosa* has 10+ flowers per raceme, unlike the 2-6 flowers of the inflorescences of *V. sepium*.



While *V. sativa* has similar inflorescences to *V. sepium*, the calyx of *V. sativa* is regular. *V. hirsuta* has distinctly peduncled inflorescences (6, 17).

*V. sepium* can be most accurately distinguished from members of the genus *Lathyrus* by its styles and stamen-tubes. The styles of *Vicia* are pubescent or villous at the apex; those of *Lathyrus* are pubescent or villous along the entire upper side of the style. Additionally, the stamen tubes of all *Vicia* members “terminate obliquely” whereas those of *Lathyrus* are truncate. A final character that may possibly distinguish *Vicia* from *Lathyrus*

is the stems – *Lathyrus* members often have winged stems, unlike *V. sepium* (6, 17).

**Other members of the family in Michigan:** 97 species in 34 genera. Genera *Cercis* (1), *Crotalaria* (1), *Melilotus* (3), *Trifolium* (10), *Medicago* (3), *Cytisus* (1), *Baptisia* (3), *Amphicarpaea* (1), *Phaseolus* (2), *Strophostyles* (1), *Desmodium* (12), *Psoralea* (1), *Lespedeza* (8), *Glycine* (1), *Caragana* (1), *Gymnocladus* (1), *Gleditsia* (1), *Wisteria* (2), *Amorpha* (2), *Robinia* (3), *Schrankia* (1), *Lupinus* (3), *Cassia* (4), *Pisum* (1), *Lathyrus* (10), *Vicia* (9), *Dalea* (2), *Anthyllis* (1), *Lotus* (1), *Coronilla* (1), *Apios* (1), *Tephrosia* (1), *Astragalus* (3), and *Hedysarum* (1). [6]

**Ethnobotanical Uses:** The seed can be cooked and eaten (8).

**Phylogenetic Information:** *V. sepium* is a member of the subfamily Faboideae within the family Fabaceae. Fabaceae, along with the Polygalaceae, Quillajaceae, and Surianaceae form the Fabales order. The Fabales, Rosales, Cucurbitales, and Fagales form a monophyletic clade within the Eurosids I within the larger Rosid group of the Eudicot angiosperms (16).

**Interesting Quotation or Other Interesting Factoid not inserted above:** The elevational distribution of this species has changed since 1905. Optimum elevation currently is about 1,100 m, whereas in 1905 it was closer to 1,000 m (11).

Voss (6) mentions only two collections made in Michigan, one from 1915 in Detroit, and the second from Isle Royale in 1959.

**Literature and websites used:**

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2. Close-up of leaflets by John Crellin on May 26, 2005 in the Bantry Abbey Graveyard, Ireland. <http://www.floralimages.co.uk/pviciasepiu.htm>
3. Flowers and leaves image taken by John Crellin on May 23, 2004. Mendip Hills, Somerset. Black Rock. <http://www.floralimages.co.uk/pviciasepiu.htm>
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