

Plant Diversity Website

Fallopia cilinodis (Michx.) Holub

Common Names: fringed black bindweed (1), fringed bindweed (2), blackfringe knotweed (12)

Etymology: *Fallopia* was named for Gabriello Fallopio, a 16th century professor of botany and anatomy (7). *Cilinode* comes from the Latin *cilium* and *nodus*, meaning “hair” and “node” respectively, referring to the fringe of hairs at each vegetative node (8).

Botanical synonyms (1):

Bilderdykia cilinodis (Michx.) Greene
Bilderdykia cilinodis var. *laevigata* (Fern.) C.F. Reed
Polygonum cilinode Michx.
Polygonum cilinode var. *laevigatum* Fern.
Reynoutria cilinodis (Michx.) Shinnars
Tiniaria cilinodis (Michx.) Small



FAMILY: Polygonaceae (buckwheat family)

Quick Notable Features:

- ↪ stiff bristles fringing a reflexed ocrea (sheath at base of petiole)
- ↪ panicles of inconspicuous greenish white flowers
- ↪ leaves with wavy margins, pilose below, often with veins standing out with reddish color

Plant Height: Stems grow to a length of 0.3-5m (2,17).

Subspecies/varieties recognized: *Fallopia cilinodis* var. *laevigatum* Fern. (1,5). See “Interesting Factoid” below.



Most Likely Confused with: *Dioscorea villosa*, species of *Convolvulus*, *Calystegia*, and *Ipomoea* (Convolvulaceae), other *Fallopia* spp. in our area (*F. convolvulus*, *F. scandens*), and *Smilax* spp.

Habitat Preference: Dry woods, thickets, rocky slopes, and forest edges (2,5,13). Voss (6) notes that it is “characteristic of recently disturbed areas.”

Geographic Distribution in Michigan: Found in every county in the Upper Peninsula and about a third of the counties in the Lower Peninsula, mostly along the Great Lakes (6).

Known Elevational Distribution: Has been observed at elevations up to 720m in New York (11). Flora of North America (13) says it grows up to 900m.

Complete Geographic Distribution: Native to the United States, *F. cilinodis* is found from Georgia, Tennessee, and North Carolina north to Maine and west to Minnesota. In Canada, it is found from Quebec west to Saskatchewan (10).



Vegetative Plant Description: A perennial twining or scrambling herb. The stems of *F. cilinodis* are glabrous or pubescent with oblique ocrea reflexed and bristly, 3-4mm tall. With prolonged exposure to sunlight, the stems become red, and if there is no available support, the stems can be stout and erect. The deciduous, alternate leaves are simple, ovate or triangular with cordate bases, pilose below, borne on slender petioles, 5-12cm long and 2.5-10cm wide. Leaf margins are entire and wavy (2,3,5,13).



Climbing Mechanism: *F. cilinodis* is a stem twiner (5). It climbs sinistrally, or from right to left, an orientation that is relatively rare among stem climbers (personal observation, Robyn J. Burnham).

Flower Description: The ocreate panicles of *F. cilinodis* are borne on peduncles 4-10cm long, and can be terminal or axillary. The greenish white, sometimes pinkish, flowers are 4-7 per fascicle, 1.5-2mm long, with 3 + 2 elliptic tepals. Each flower has 6-8 glabrous or pubescent stamens, a triangular superior ovary, and three short divergent

styles with capitate stigmas. After maturity, the three outer tepals expand to 4-5mm and become papery (2,5,13,17).

Flowering Time: June through September (2,3,4).

Pollinator: None found in the literature.

Fruit Type and Description: A very glossy black achene, 3-4 x 1.8-2.4mm. The three outer tepals persist after maturity, barely covering the achene. The tepals are occasionally winged and barely keeled (2,3,13).

Seed Description: None found in the literature, probably because the achene does not open.

Dispersal Syndrome: The papery calyx may aid in wind dispersal.

Distinguished by: *Fallopia cilinodis* can be distinguished from *Dioscorea villosa* by its veins: *D. villosa* has arcuate-parallel venation, with 7-11 veins converging at the leaf apex. Furthermore, the leaf nodes of *D. villosa* lack an ocrea, and its fruit is a large, three-winged capsule (2,3,4,5).

Generally, species of Convolvulaceae have latex in their stems and/or leaves, and *F. cilinodis* does not. Convolvulaceae fruits tend to be capsules, instead of achenes, and the stems lack an ocrea (2,3,4,5).

Smilax species climb with tendrils borne on the petioles, and have no ocrea at their leaf nodes. Additionally, *Smilax* species typically have arcuate, rather than reticulate, venation (2,3,4,5).

F. cilinodis is differentiated from other *Fallopia* species primarily through its open panicles and stiff hairs at the base of the ocrea; other climbing *Fallopia* have glabrous ocrea (12).

Other members of the family in Michigan: *Fagopyrum* (2), *Fallopia* (4), *Polygonella* (1), *Polygonum* (24), *Rheum* (1), *Rumex* (14) [10]

Ethnobotanical Uses: None found in the literature.

Phylogenetic Information: A study by Kim et al. (9) on flavonoid compounds in *F. scandens*, *F. cilinodis*, *F. convolvulus*, *F. dentatoalata*, and *F. dumetorum* found them to be closely related, but distinct species. *Fallopia* has been assigned to the Polygonoideae subfamily of the Polygonaceae, which is a member of the Caryophyllales, a member of the core eudicots within the angiosperms (15,16).

Interesting Quotation or Other Interesting Factoid not inserted above: M.L. Fernald (14) described a localized, isolated population of *F. cilinodis* at Spruce Knob, West Virginia having sparsely pubescent to glabrous stems and leaves with a stouter calyx and plumper seeds. He compared the Spruce Knob specimens to 86 herbarium sheets of *F. cilinodis* collected from further north and decided, based on phenetic characters, that it was not unique enough to define as a new species. He named it *F. cilinodis* var. *laevigatum*, after the Latin *laevigatus*, meaning “smooth” (8). It is not known whether the population at Spruce Knob still exists.

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