Plant Diversity Website

Smilax lasioneura Hooker

Common Names: Common carrion flower, hairy carrion flower, Blue Ridge carrion flower (1,2).

Etymology: According to (1), *Smilax* is Greek for clasping; *lasioneura* is a combination of the Greek *lasios* meaning shaggy, wooly, or hairy; and *neur* for nerve or vein (1).

Botanical synonyms (2)*:*
Nemexia lasioneura (Hook.) Rydb.
Smilax herbacea var. *lasioneura* (Hook.) A. DC.

FAMILY: Smilacaceae (the Catbrier family)

Quick Notable Features:
¬ Unarmed stems
¬ Leaves are bluish-white below
¬ Pubescence on the underside of leaves along veins

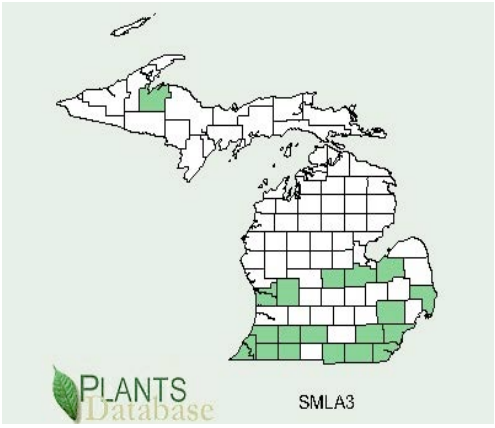
Plant Height: *S. lasioneura* grows to be up to 2.5m tall (1).

Subspecies/varieties recognized: None found.

Most Likely Confused with: other local species of Smilax, such as *Smilax ecirrata, Smilax glauca, Smilax pulverulenta, Smilax rotundifolia, Smilax walteri, Smilax herbacea*, *Smilax hispida*, as well as *Dioscorea villosa* and *Menispermum canadensis.*

Habitat Preference: *S. lasioneura* is found in moist woods, fencerows, alluvial or rich thickets, borders of woods, stream banks and floodplains, sandy oak woods and ridges (1,4,6).

Geographic Distribution in Michigan: In Michigan, *S. lasioneura* is found almost exclusively in the southern counties of the Lower Peninsula. There is only one county in the Upper Peninsula, Baraga County, with a confirmed presence of *S. lasioneura* (3).



Known Elevational Distribution: 300-700m (10).

Complete Geographic Distribution: Native to North America. Found mainly west of the Appalachian Mountains but as far west as Montana, south to western Georgia, and north to southern Ontario (3).

Vegetative Plant Description: *S. lasioneura* is an herbaceous vine climbing up to 2.5m and it is almost always branched. It is quite similar to *S. herbacea* in form. Like *S. herbacea* it is completely unarmed, and has bladeless bracts on the lower portions of the stem but they are spreading-ascending. Also, the leaves are thinner than *S. herbacea* and they are minutely pubescent underneath, especially on the veins. Leaves are entire and rounded, blunt, or short cuspidate at the apex, and they are 7-12 cm long and 4-9 cm wide. There are usually 5 primary veins on the leaves. *Smilax* leaves lack an abscission layer, but the petiole goes through disintegration on ageing, the leaf falls off, leaving a rough end on the stem. The petioles are 2.5-9 cm long (1,4,6,7,8,10).

Climbing Mechanism: *S. lasioneura* climbs using tendrils that are borne from the petioles.

Flower Description: *S. lasioneura* is dioecious. The flowers are green to yellowish and 6 parted. The tepals are 35-45mm. The inflorescence is composed of 3.8cm spherical umbels, which arise in the leaf axils. Each inflorescence has up to 30 flowers. The peduncle can be as much as 2-3 times longer than the petiole. However, the peduncles are seldom over twice as long as the subtending petioles. The ovary is superior and in each locule there are 1-2 ovules (1,4,6,10).

Flowering Time: *S. lasioneura* blooms in May to June (4,7).

Pollinator: *Smilax herbacea*, which is very closely related *S. lasioneura* (*S. lasioneura* is often considered a variety of *S. herbacea*), attracts flies because of it the scent it produces. It is highly likely that flies also pollinate *S. lasioneura* (13).

Fruit Type and Description: The berries of *S. lasioneura* are dark blue to black and glaucous and are borne in round umbellate clusters. The fruits are subglobose and 8-10mm in diameter and ripen in September (1,4,7,10).

Seed Description: *S. lasioneura* fruits have 3-6 dark brown to reddish seeds (4,7,10).

Dispersal Syndrome: The seeds of *S. lasioneura* are bird dispersed (11).

Distinguished by: *S. lasioneura* is best identified by the minutely pubescent underside of its leaves, especially on the veins. It can be distinguished from close relatives by the petioles, which are 2.5-9 cm long, on average twice as long as *S. herbacea*. *S. lasioneura* has bladeless bracts on the lower stem that are spreading-ascending as opposed to *S. herbacea* which has appressed-ascending bracts. In addition S. lasioneura is spineless unlike *S. hispida*. (4, 6,10). It can be distinguished from *Dioscorea villosa* by the presence of petiole tendrils, which are absent in *Dioscorea*. In addition, *Dioscorea* has as many as 9 veins arching to the apex whereas *S. lasioneura* has only 3-5 (3). *Menispermum canadensis* is a similar alternate-leaved climber that does not bear the strong arching veins and no petiole tendrils.

Other members of the family in Michigan: Six other species of *Smilax* are present in Michigan: *Smilax ecirrhata, Smilax herbacea, Smilax illinoensis, Smilax hispida, Smilax pulverulenta, and Smilax rotundifolia*. *Smilax* is the only genus in the Smilacaceae. Often *S. lasioneura* is either confused in the field with *S. herbacea* or it is classified as a subspecies of it (3).

Ethnobotanical Uses: The rhizomes of various species of *Smilax* are used to make a beverage called sarsaparilla that has medicinal uses against rheumatism. The rhizomes can also be made into jellies and could be used in the same fashion potatoes are, or could be ground to make bread or mush. The seeds of some *Smilax* species were sometimes used as beads and a brown dye can be made from the roots (10).

Phylogenetic Information: The Smilacaceae is a member of the order Liliales. Liliales belong in the monocot clade. They form a monophyletic group with Asparagales, Dioscoreales, Pandanales, Arecales, Poales, Commelinales, Zingiberales, Petrosaviales, Alismatales, and Acorales. Liliales are angiosperms (9).

Interesting Quotation or Other Interesting Factoid not inserted above: It was found that for *S. lasioneura,* even though it ripened its fruit in September, birds would not eat the fruit and the fruit would remain on the plants long into the winter. It was also found that *S. lasioneura* generally lacks foliar shelters and shelter-dwellling mites that are found in over 70% of species sampled in east-central Illinois (11,12).

Literature and websites used:

1) Robert W. Freckmann Herbarium University of Wisconsin-Stevens Point. Last modified: March 19, 2008 (http://wisplants.uwsp.edu 7 July 2008)
2) Kartesz, J. 2000. ITIS Standard Report Page. 1996-2008 (http://www.itis.gov 7 July 2008)
3) USDA, NRCS. 2008. The PLANTS Database, Version 3.1, National Plant Data Center, Baton Rouge, LA 70874-4490 USA. (http://plants.usda.gov/ 7 July 2008)
4) Fernald, M. L. 1950. *Gray's Manual of Botany,* 8th ed. New York, USA: American Book Company.
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6) Voss, E.G. 1972. *Michigan Flora Part I: Gymnosperms and Monocots.* Bloomfield Hills, Michigan, USA: Cranbrook Institute of Science.
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9) Solomon, J. 2006. W3TROPICOS VAST nomenclatural database. Missouri Botanical Garden. (http://mobot.mobot.org/W3T/Search/vast.html 30 January 2008)
10) Holmes, W.C. 2002. *Smilacaceae*. In: Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. New York and Oxford. 26: 468, 474-475
11) Thompson, J. N. and M. F. Wilson. 1979. Evolution of temperate fruitbBird interactions: phenological strategies. *Evolution.* 33: 973-982.
12) Wilson, M. F. 1991. Foliar shelters for mites in the Eastern Deciduous Forest. *American Midland Naturalist.* 126: 111-117.
13) Connecticut Botanical Society. Last modified: November 13, 2005 (http://ct-botanical-society.org/ 18 July 2008)

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1) Picture of whole plant by Merel R. Black and retrieved from the University of Wisconsin – Stevens Point Website. http://wisplants.uwsp.edu/WisPlants.html
2) Michigan Distribution Map from the Department of U.S. Agriculture http://plants.usda.gov/java/profile?symbol=SMLA3
3) Picture of leaf from Kay Yatskievych and retrieved from the Discover Life website. http://www.discoverlife.org/20/q?search=Smilax+lasioneura
4) Picture of flower umbel by Merel R. Black and retrieved from the University of Wisconsin – Stevens Point Website. http://wisplants.uwsp.edu/WisPlants.html
5) Picture of fruit by Robert W. Freckmann and retrieved from the University of Wisconsin – Stevens Point Website. http://wisplants.uwsp.edu/WisPlants.html
6) Photo of seeds © Robyn J. Burnham, University of Michigan

PRIMARY AUTHOR: Bradley Sisson with modifications by Robyn J. Burnham
Information: contact rburnham@umich.edu

For additional information on Michigan Plant Diversity web pages please contact Robyn J. Burnham via email: rburnham“at”umich.edu