

Plant Diversity Website

Ipomoea hederacea (L.) Jacquin

Common Names: Small Morning-glory, Ivy-leaf Morning-glory (8,14)

Etymology: *Ipomoea* comes from the Greek words *ips*, which means “worm”, and *homois*, which means “similar to.” *Hederaceae* means “of or pertaining to ivy” (10).

Botanical synonyms (from 14):

*Ipomoea barbiger*a Sweet

Ipomoea desertorum House

Ipomoea hirsutula auct. non Jacq. f.

Ipomoea nil auct. non (L.) Roth

*Pharbitis barbiger*a (Sweet) G. Don

Pharbitis hederacea (Jacq.) Choisy

FAMILY: Convolvulaceae, the bindweed or morning glory family (15)

Quick Notable Features:

- ↪ Deeply 3-lobed pubescent leaves
- ↪ 1-3 purple, white, or rosy flowers on peduncles
- ↪ Simple, alternate leaves with entire, but lobed margins
- ↪ Hairy calyx



Plant Height: Usually between 1 and 2m (5,6), but stems can grow to many meters in length (1).

Subspecies/varieties recognized: *Ipomoea hederacea* var. *hedera*, *Ipomoea hederacea* var. *integriscula* (9,12).

Most Likely Confused with: Members of the genus *Hedera*, *Ipomoea coccinea*, *Ipomoea lacunosa*, and *Ipomoea purpurea* (3,16).

Habitat Preference: *I. hederacea* is frost intolerant and is commonly found in warmer climates. It thrives in cultivated ground, disturbed areas, and waste places (1,3,5,6,14).

Geographic Distribution in Michigan: *I. hederacea* is found only in Lenawee and Kalamazoo counties (16).

Known Elevational Distribution: In California, this species is found from 305 to 1,676 m (8).

Complete Geographic Distribution: The species is native to Central America, but has adapted to tropical, subtropical, and warm temperate regions of the world (1). *I. hederacea* is found in every state from Texas north to North Dakota and east to Maine. New Mexico and Arizona are also included while Vermont is excluded (14).

Vegetative Plant Description: This annual plant has simple, alternate leaves with entire margins. Leaves are ovate and deeply 3-lobed with acuminate tips and cordate bases. They can grow from 3.5-13 cm broad and long. Pubescence occurs on the upper and under surface of the leaves. Petioles grow to more than 12 cm long (3,8,15).

Climbing Mechanism: Stem twine with their apex in a dextral fashion (5,11).

Flower Description: Inflorescences of 1-3 flowers borne in a cymose cluster. Each division of the inflorescence is subtended by opposite, linear-attenuate bracts. These bracts grow to 3 cm long and 2-3mm broad. The 5-merous flowers are perfect and shorter than the pedicel. The calyx is hairy. The individual sepals are ovate-lanceolate with an apex that is acute to abruptly acuminate. The lobes are shorter to slightly longer than the body. The glabrous, funnel shaped corollas are purple, white, or rosy varying from 3 to 5 cm long and 1 to 4 cm wide. There are 5 stamens. The superior, conical ovary is 3-locular, pubescent, and grows to about 1mm long (1,3,8,9,15).



Flowering Time: In the northeastern U.S.A, the plant flowers from July to September (8).

Pollinator: *Ipomoea hederacea* is commonly pollinated by long-tongued bumblebees (4).

Fruit Type and Description: The fruit is a depressed-globose capsule ranging from 8 to 12 mm in diameter. It is glabrous and 3-celled, and contains 1-6 seeds (15,17).

Seed Description: The seeds range from 4.5 to 6 mm long and vary from shades of black to dull grey. They are densely pubescent with hairs in irregular patches, and weight about 34 mg (8,16, 19).

Dispersal Syndrome: Seed dispersal is by wind and rain action, and gravity. Seeds also can be spread by birds, and by human activities by way of contaminated crop and flower seeds (15).

Distinguished by: *Ipomoea coccinea* has a similar height to *I. hederacea* and both grow tangled in amongst other *Ipomoea* species. Once in flower, they are easily distinguished as *Ipomoea coccinea* has a dark orange to red salverform corolla and *Ipomoea purpurea* and *I. hederacea* both have light blue to purple funnellform corollas. *Ipomoea purpurea* and *Ipomoea hederacea* are distinguishable by sepal characteristics and leaf characteristics. *Ipomoea purpurea*'s sepals are ovate-lanceolate with an apex that is acute to abruptly acuminate. The



lobes are shorter to slightly longer than the body. *I. hederacea*'s sepals are lanceolate, long-attenuate, and caudate. The sepal lobes are much longer than the body. Species in the genus *Hedera* have two leaf types: palmately lobed juvenile leaves and unlobed cordate adult leaves. *Hedera*'s green-yellow flowers produced in late autumn are borne in 3–5 cm diameter umbels unlike *Ipomoea hederacea* (large purple, white, or rosy funnel-form corollas). Fruits of species in the genus *Hedera* are small black berries while the fruit of *I. hederacea* is a depressed-globose capsule. *Ipomoea lacunosa* typically has a white corolla with pink to purple anthers. The flowers are typically single or double in axillary position, unlike *Ipomoea hederacea*, which has 1-3 flowers in a cymose inflorescence (15).

Other members of the family in Michigan: *Calystegia* (10 species), *Convolvulus* (2 species), and *Ipomoea* (4 species) (14).

Ethnobotanical Uses: This species is cited as being used as an abortifacient, anthelmintic, cathartic, deobstruent, diuretic, purgative, vermifuge, and vision medication (2).

Phylogenetic Information: The Convolvulaceae are a member of the order Solanales. The Solanales form a monophyletic group with Lamiales and belongs to Asterid I angiosperms. Within Convolvulaceae there are 3 or 4 distinct subfamilies. *Ipomoea* belongs to the Convolvuloideae (11,18).

Interesting Quotation or Other Interesting Factoid not inserted above:

- I. hederacea*'s seeds are poisonous to humans if ingested (1).
- I. hederacea* is a prohibited noxious weed in Michigan. Noxious weeds are generally considered to be serious nuisances or economically detrimental (7).
- I. hederacea* is a minor food source for terrestrial birds and large mammals (15).
- I. hederacea*'s flowers wilt after one day, probably the source of the name "morning glory" (1).

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