

Kasey Hartz Natural Area Reference Sheet



Muskegon Community College

Podophyllum peltatum

May-apple or Mandrake

Berberidaceae (Barberry Family)

Blooming season:

March-May.

Plant:

A perennial dicot that is 30-50 cm long with a single forked stem.

Has creeping rhizomes that grow up to 2-20 cm a year.

Entire plant is poisonous except for the ripe fruit.

Leaves:

A pair of nearly opposite, almost equal in size leaves that are attached to the forked stem. Large and umbrella shaped with 5-9 deeply prominent lobes that spread out like a hand.

Dark green and 3-6 dm. Surface is pubescent to glabrous. Margins with dentate teeth apiculate. Fertile plants have a pair of leaves; sterile plants similar leaves but many only have a single leaf.



Flower:

A single, waxy, white, drooping (very rarely pink) flower found dangling on the fork of the stem under the leaves. 1.5-7 cm long. Flower is bisexual.

Petals number 5-9 and are ovate in shape.

Stamens number twice as many as petals, about 10-18.



Fruit:

A single, fruit is produced that ripens July-August. The fruit is a fleshy, yellow, blotchy berry. The berry is round in shape and approximately 5cm long.

There are 30-50 ovoid shaped seeds in each berry.

The fruit is edible when ripe with a pulpy texture.

Can be confused with:

No other plant species that have two large distinctive leaves with prominent lobes in the Kasey Hartz Natural Area.

Geographic range:

Type specimen location: Creek bed Habitat.

State: Found throughout the southern half of Michigan.

Regional: Southern Ontario to Quebec, eastern coast west to Minnesota and south to Texas.



Podophyllum peltatum

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May-apple or Mandrake

Habitat:

Local: Forms large colonies in deciduous woods and on the borders of woods especially in moist environments.

Regional: Found in open deciduous woods, wet meadows, road sides and on river bank in large patches. Prefers moist and well-drained soils.

Common local companions:

Ferns, maples, spicebush, and other wetland species.

Usages:

Human: Cultivated in some gardens. Fruit may be used as a preserve or eaten raw. Used by Native Americans Medicinally as a laxative, wart treatment, and for suicide. The Menominees used the boiled plant as an insecticide to kill the potato bugs on potato plants (Erichsen-Brown 327). In general has been used as a purgative. Is a main source of podophyllotoxin, which has resulted in a semi synthetic derivative, used in chemotherapy. This has shown promising activity against leukemia, tumors of the lymphatic system, brain, bladder, and lungs (Aikman 160). It also was used to attempt to cure deafness by dripping a few drops of the juice into the ear (Angier 101).

Other Animal: Toxic except for ripe berry, but livestock will not usually eat the plant in amounts large enough to make them ill (Muenscher). The flower is pollinated by bees and other insects, which also use the pollen as a food source (Sanders 97). The green fruit has a bad smell, but when ripe is attractive. This is a defensive tactic that protects the unripe fruit and then works as a mean of dispersal. Birds, mammals, and box turtles will eat the ripe, aromatic fruit and disperse the seeds that have gone through their digestive system (Sanders 97-8).

Why is it called *that*?:

Podophyllum means foot leaf referring to the shape of the leaves, and *peltatum* means stalked from the surface which also refers to the shape of the leaf (Gledhill).

Prepared by: Elizabeth LaRue April 2008