

Cucumber Tree: *Magnolia acuminata*



Bark



Twig & Buds



Leaf



Immature fruit



Mature Fruit

The Cucumber Tree is the only native *Magnolia* species to Canada. It is a valuable shade tree and is highly desirable for ornamental planting because of its showy flowers, attractive foliage and bark. The tree is named for the resemblance of its immature fruit to a cucumber. According to the Government of Canada the current Cucumber Tree population in Canada consists of about 200 trees in 15 naturally occurring sites, with most sites consisting of only a few mature reproductive individuals (2012). Its small population size and specific habitat requirements in a highly fragmented habitat has designated the Cucumber Tree as protected under the federal Species at Risk Act and the provincial Endangered Species Act.

BIOLOGY

- Measures up to 30m tall, with a comparable spread at maturity
- Grows in a pyramidal shape, branching out with age
- It matures in 100 years and seldom lives more than 150
- The bark is thin and brown-gray colour with long scaly ridges
- The branches are stout with vertical grey lenticels
- The leaf structure is simple, large, oblong-ovate to elliptic shape, from 10 to 24 cm in length and half of that in width with a pointed tip and no teeth
- They have large green-yellow perfect flowers that begin at about the age of 30 that measure 6 to 8 cm with 6 petals that emerge from April to July, depending on location
- Beetles are the main pollinator species for this tree, although lone trees do produce a small number of fruits with a few seeds in each
- The fruit of the Cucumber Tree matures in late summer and looks cone-like, measuring 3 to 8 cm composed of numerous orange to red fleshy pods, containing 1-2 seeds
- At maturity the seeds are suspended by long slender threads from the fruit
- A good seed crop occurs about every 4 or 5 years
- Seed bearing begins at about age 30 with its optimum age of 50 and beyond
- The dispersal of the seeds occurs by birds and small mammals a short distance from the parent tree

HABITAT

- In Canada, it only grows naturally in Norfolk County and in the Region of Niagara
- Requires rich, moist, medium-to coarse acidic soil that are well drained
- It is often found on elevated areas within or at the edge of swamps
- Shade intolerant
- Good light conditions are necessary for regeneration

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THREATS & LIMITING FACTORS

- A Cucumber Tree's habitat is critical to protect because of its need for forest openings and gaps for seedling establishment
- Many populations are isolated due to habitat fragmentation
 - this reduces crosspollination and the range of seed dispersal
- Less than optimal connectivity between sub-populations and their small population sizes may reduce opportunities for gene exchange
 - Over time, this can result in a species' decreased ability to adapt to change and possibly its extirpation or extinction
- It is continuously threatened from the presence of logging operations on private lands leading to deforestation and fragmentation of its habitat
- These operations cause isolation, reducing reproductive potential since many trees are too widely separated for cross pollination
- Logging operations also directly impacts the health of Cucumber Trees from indiscriminate cutting causing bark abrasion to trees adjacent to skidder trails or felled trees, suffocation of saplings by slash piles, and soil erosion and compaction

HOW CAN I HELP THE CUCUMBER TREE ?

- Get to know your woodlot and see if you have any Cucumber Trees or other Species at Risk on your property
- Avoid clearing any land or doing agricultural expansion, especially near wetlands, as that could lead to fragmentation of, and disconnection from nearby Cucumber Tree populations
- Implement good forestry practices during logging operations to create a habitat that will facilitate regeneration
- Report illegal activity related to Cucumber trees to 1-877-TIPS-MNR (847-7667)
- Report your sightings of Cucumber Trees to the Natural Heritage Information Centre at nhic.mnr.gov.on.ca

DID YOU KNOW?

When pollinating insects first enter the flowers of the Cucumber Tree, they cannot escape because of the tiny wax rollers on the surfaces of the petals that cause them to fall back whenever they try to climb out. It is only after the pollen is released that the petals bend back, releasing the pollen-covered insects.

REFERNECES

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