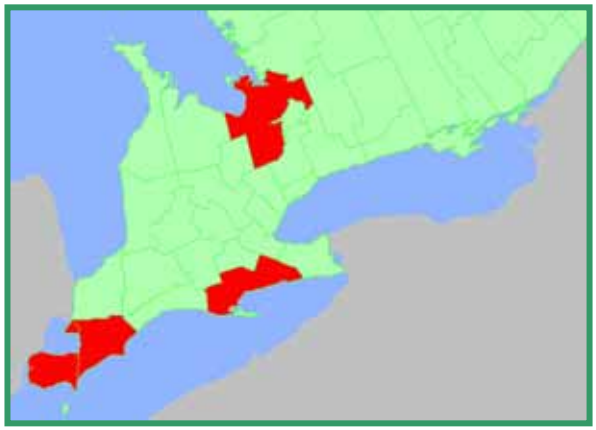
Nelumbo lutea (Willd.) Pers. American Lotus



Best Survey Period

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Legal status: No legal status in Canada. It has not yet been considered by the Committee on the Status of Endangered Wildlife in Canada. Threatened in Michigan.

Global and provincial rank: G4/S2

Other Common names: Water chinquapin, yonkapin, yanquapin, yockernut, alligator button, duck acorn, volee.

Family: Nelumbonaceae. The Lotus-lily Family

Total range: *N. lutea* is native and widespread in the eastern and central US. It may have been spread throughout its present range by First Nations people who used the seeds and tubers for food.

Provincial distribution: In Ontario *N. lutea* is at the extreme northern limit of its range. It is mainly restricted to marshes along the shores of the Great Lakes.

Recognition: *N. lutea* is a perennial, aquatic herb with a milky juice. Long, cylindrical, spongy rhizomes grow just below the substrate surface and produce starchy tubers during the fall. Tubers are stout and up to 25 cm long.

Leaves are large (up to 35 cm) and round to oval with the stalk joined in the middle of the leaf. Leaves arise directly from the rhizome and either float on the water surface, or are held erect above the water.

They are dull bluish green and water repellent above, paler beneath with very prominent veins branching from the centre.

The flower bud is large and egg-shaped, formed of several layers of overlapping scales, and held on an erect stem up to 0.5 m above the water. Flowers are solitary, one on a stem, pale yellow, up to 15 cm across, with many petals. The centre of the flower is a flat-topped receptacle shaped like an inverted cone. It is surrounded by many yellow stamens.

Seeds are round, dark brown, nut-like and up to 1.5 cm across, borne in pits in the receptacle.

Habitat: In Ontario *N. lutea* grows in shallow water of marshes, ponds and muddy shores around the Great Lakes. In other areas it may occupy ponds, lakes, backwaters and bays in water up to 2.5 m deep.

Biology: The flowers last 2 days and are pollinated by insects. Flowers open in the morning and at first only the female parts are exposed. This helps ensure cross-pollination because flowers are likely to be pollinated from older flowers where pollen is being released.

Seeds develop in the flat-topped capsule, which eventually falls into the water and rots, releasing the seeds. Seeds over-winter before beginning to germinate. They may remain viable for decades. As they germinate they float to the surface and are dispersed by wind and wave action.

Established colonies expand by rhizomes and the plant also propagates itself from tubers.

Conservation/management: Populations of *N. lutea* in Lake St. Clair appear to migrate with changes in lake levels.

Dyking and management of water levels may affect the species. Pollution in run-off is also detrimental.

In the southeast US the species is sometimes considered to be invasive. Large colonies may restrict boat movement and foul propellers and fish lines. The plants may provide breeding habitat for mosquitoes.

Comments: The American Lotus is considered sacred by several American cultures and is said to have mystic powers.

The tubers and roots can be boiled as a starchy food. The nuts can be roasted like chestnuts and used in soups or ground into sweat meal. The terminal shoots were once collected and dried and used as a winter food.

The seed heads are sold for dried flower arrangements.

Research needs: The number and extent of *N. lutea* populations in the Walpole Island marshes have not been surveyed. Known populations are in shallow water where it is difficult to take a boat. The species may be affected by dyking of marshes for wildlife management and by falling lake levels.

Selected references:

Hall, T. F. and W. T. Penfound. 1944. The biology of the American lotus, *Nelumbo lutea* (Willd.) Pers. American Midland Naturalist 31: 744-758.

Rogers, J. A. 1981. The American lotus - *Nelumbo lutea* (Willd.) Pers. Aquatics 3(3): 4, 8.

Abstract citation:

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