Aesculus glabra
Ohio Buckeye

Edward F. Gilman and Dennis G. Watson

INTRODUCTION

A true North American native, Ohio Buckeye forms a short trunk with a low branching structure, creating an oval to rounded canopy 40 to 50 feet wide on a tree 50 to 70 feet tall (Fig. 1). The four to six-inch-long, coarse, bright green, palmately compound leaves have an unpleasant odor when crushed, as do the twigs, giving this tree its other common name of Fetid Buckeye. The fragrance should be a warning sign for this plant since all parts of it are poisonous, a factor which should be considered when placing it in the landscape. One of the first trees to shed its leaves in autumn, Ohio Buckeye puts on a vivid display of bright orange and yellow fall foliage. The spring flowers are also quite showy, the erect, yellow/green, six-inch-high panicles decorating the branches. The one to two-inch-long, showy, brown fruits ripen in late summer and may become a litter problem since they are very prickly. These fruits are quite popular with squirrels and other wildlife.

GENERAL INFORMATION

Scientific name: Aesculus glabra
Pronunciation: ESS-kew-lus GLAY-bruh
Common name(s): Ohio Buckeye, Fetid Buckeye
Family: Hippocastanaceae
USDA hardiness zones: 4 through 7A (Fig. 2)
Origin: native to North America
Uses: recommended for buffer strips around parking lots or for median strip plantings in the highway; shade tree
Availability: grown in small quantities by a small number of nurseries

DESCRIPTION

Height: 50 to 70 feet
Spread: 40 to 50 feet
Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms
Crown shape: round
Crown density: dense

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Growth rate: medium
Texture: coarse

Foliage

Leaf arrangement: opposite/subopposite (Fig. 3)
Leaf type: palmately compound
Leaflet margin: serrate
Leaflet shape: elliptic (oval); ovate
Leaflet venation: pinnate
Leaf type and persistence: deciduous
Leaflet blade length: 4 to 8 inches; 2 to 4 inches
Leaf color: green
Fall color: orange; yellow
Fall characteristic: showy

Flower

Flower color: yellow
Flower characteristics: spring flowering; very showy

Fruit

Fruit shape: oval; round
Fruit length: 1 to 3 inches
Fruit covering: dry or hard
Fruit color: brown
Fruit characteristics: attracts squirrels and other mammals; fruit, twigs, or foliage cause significant litter; showy

Trunk and Branches

Trunk/bark/branches: droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; not particularly showy; should be grown with a single leader; no thorns
Pruning requirement: requires pruning to develop strong structure
Breakage: resistant
Current year twig color: brown; reddish
Current year twig thickness: thick

Culture

Light requirement: tree grows in part shade/part sun; tree grows in full sun
Pests

No pests are of major concern.

Diseases

Leaf blotch, powdery mildew, and leaf scorch.

Soil tolerances: clay; loam; sand; acidic; extended flooding; well-drained
Drought tolerance: moderate
Aerosol salt tolerance: none

Other

Roots: surface roots are usually not a problem
Winter interest: tree has winter interest due to unusual form, nice persistent fruits, showy winter trunk, or winter flowers
Outstanding tree: not particularly outstanding
Invasive potential: little, if any, potential at this time
Ozone sensitivity: sensitive or moderately tolerant
Verticillium wilt susceptibility: not known to be susceptible
Pest resistance: very sensitive to one or more pests or diseases which can affect tree health or aesthetics

USE AND MANAGEMENT

Ohio Buckeye will grow in full sun or partial shade on well-drained, fertile soil but should not be exposed to extended drought or excessive heat, two factors which make this tree unsuitable for use as a street tree. Falling fruit would also be a problem along streets. It is suited for naturalized plantings or for establishing a native grove in a park. The fruit can be quite entertaining for children.

Propagation is by seed.