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Aesculus 'Autumn Splendor'

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The members of the genus *Aesculus*, known as buckeyes and horsechestnuts, includes trees commonly planted in parks, arboreta, college campuses, and home landscapes (2). *Aesculus* 'Autumn Splendor' is a selection that combines leaf scorch resistance, cold hardiness in USDA zone 4a, handsome flowers, and brilliant fall color to make it a particularly desirable medium-sized landscape tree.

Origin

Selected at the Univ. of Minnesota Landscape Arboretum after observation for more than 20 years, this buckeye was named 'Autumn Splendor' in 1980 because of its brilliant fall color. The seed from which it was grown was obtained from the Morton Arboretum in Lisle, Ill. as seed from *A. sylvatica* Bartr. However, the characteristics of 'Autumn Splendor' fit most closely those of *Aesculus* × *arnoldiana* Sarg. (determined by J.W. Hardin, personal communication). *Aesculus* is a genus in which interspecific crosses occur readily (3, 4). The putative parents of *Aesculus* × *arnoldiana* are *A. glabra* and *A. ×hybrida*, the latter resulting from a cross between *A. octandra* and *A. pavia*.

Description

The taxonomic characteristics of 'Autumn Splendor' very closely approximate those of *Aesculus* × *arnoldiana*, whose most apparent parental species is *A. glabra* (3). 'Autumn Splendor' is a deciduous, oval- to round-headed tree growing to 15 m in height (Fig. 1). Young stems are thick and have a slight pubescence that is quickly lost. Branch color changes from bright green (with prominent lenticels) the first year to reddish-gray then silver-gray in subsequent years. Lower, older branches arch toward the ground. Oppositely arranged palmate leaves have five leaflets that are finely serrated, acuminate at apex, cuneate at base, and 100 to 150 mm long. A light pubescence, most prevalent in vein axils, is lost as leaves unfold. Mature leaves have dark green adaxial surfaces with lighter green abaxial surfaces and petioles 30 to 50 mm long. Winter buds are light brown and ovoid, terminals being up to 30 mm long and laterals 10 to 20 mm. Bud scales are brilliant

pink as buds expand in the spring. The perfect flowers are yellow (RHS6D) with an orange-red blotch (RHS14B) on the upper claw and are borne in terminal panicles that reach 100 mm in width and 200 mm in length. Individual flowers are ≈20 mm in diameter. The thickly husked fruit is a yellow-brown capsule containing one or two shiny, chestnut-brown seeds 20 to 30 mm in diameter.

The noteworthy ornamental foliage characteristics of 'Autumn Splendor' include dark green glossy summer color (RHS126A), resistance to leaf scorch (Fig. 2), which often causes early defoliation in *Aesculus glabra* and other buckeyes (5), and intense red (maroon) fall color (RHS181A at peak of color). The fall color of 'Autumn Splendor' is unique for *Aesculus*. Foliage of many members of the genus turns from green to yellow-brown prior to abscission. *Aesculus glabra* can develop an attractive orange autumn coloration in seasons when the foliage is not too severely damaged by leaf scorch. However,

even in the best of seasons, Ohio buckeye does not match the attractiveness of the fall coloration of 'Autumn Splendor'. The handsome flowers and demonstrated cold-hardiness in USDA zone 4a are also assets of this plant.

Propagation

Most traditional methods of vegetative propagation, including whip-and-tongue grafting and rooting of stem cuttings, have resulted in low success rates. However, we have had good success with side-grafting 'Autumn Splendor' onto actively growing *Aesculus glabra* seedlings in containers in the greenhouse—this method can be used for commercial propagation. Some potential has been found for rooting stem cuttings from root suckers. Adventitious buds and somatic embryos have been obtained from crown internode segments during investigations designed to develop an *in vitro* propagation system, but no intact plantlets have been derived using this system (1).

Availability

Scionwood will be provided to institutions wishing to establish this tree for evaluation only. Requests should be sent to H.M. Pellett, Univ. of Minnesota Landscape Arboretum, Chanhassen, MN 55317.



Fig. 1. The original tree of 'Autumn Splendor', illustrating mature tree form.

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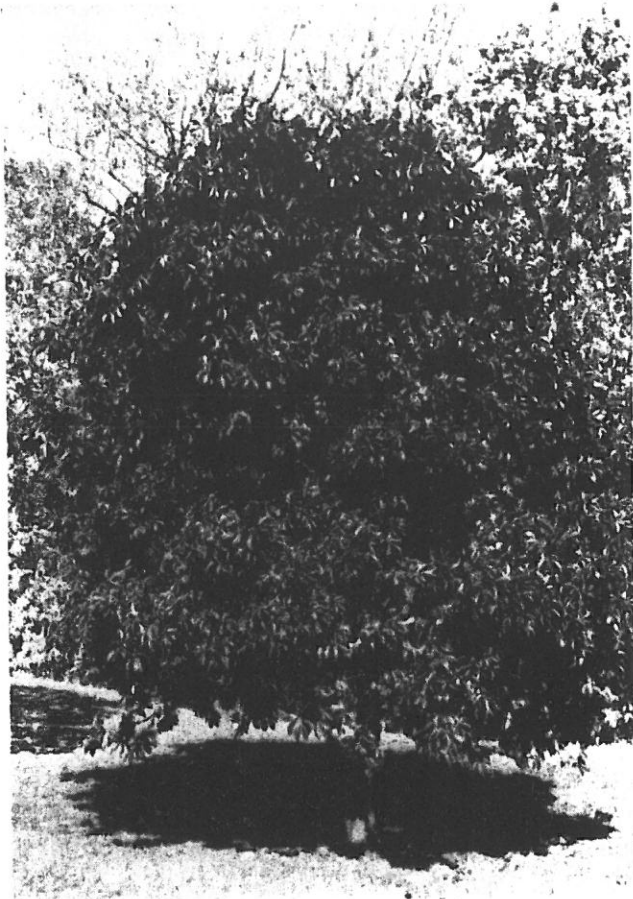


Fig. 2. 'Autumn Splendor' in early October at time of fall color, illustrating the quality of foliage at the end of the growing season.

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