

## FIRST REPORT OF *AESCULUS FLAVA* (SAPINDACEAE) ADVENTIVE IN NEW YORK

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### ABSTRACT

The Yellow Buckeye, *Aesculus flava* (Sapindaceae), is naturalized in Bronx and Putnam counties, New York. This report documents two large populations of spontaneous trees, one in each county and each consisting of numerous mixed-age individuals ranging from fruiting adults to saplings. Both populations occur in natural stands of mostly native tree species but are near homes and gardens. The plants are documented with herbarium specimens and iNaturalist observations.

This is the first report of the spontaneous occurrence of *Aesculus flava* Sol. (Sapindaceae) in New York (Werier 2017; Weldy et al 2019).

Voucher specimens. **New York. Putnam Co.:** Between towns of Garrison and Cold Spring and between the Hudson River and Rout 9D, in valley of Indian Brook, 79 Indian Brook Rd. at intersection with Warren Landing Road, 41.404333, -73.934347 (WGS84,  $\pm 25$ m), ca 52 m elev., 18 Aug 2019. *Atha 16072* (NY). **Bronx Co.:** New York City, grounds of the New York Botanical Garden, E of the Bronx River and N of the Stone Mill road, between the Lilac collection and the operations yard, 40.860210, -73.873225 (WGS84,  $\pm 25$ m), ca 22 m elev., 8 May 2018, *Atha 16002* (NY).

The Putnam County population consists of at least eight mature fruiting individuals of various size classes and numerous saplings scattered over approximately 0.5 hectares. The forest is dominated by *Acer rubrum*, *Acer saccharum*, and *Fagus grandifolia*. The Bronx County population consists of numerous fruiting trees of various size-classes and numerous saplings within an area of approximately 4 hectares in the Bronx River Forest, north of the New York Botanical Garden. The forest is dominated by *Fraxinus pennsylvanica*, *Fraxinus profunda*, *Morus alba*, *Acer platanoides*, *Acer saccharum*, *Acer negundo*, *Quercus rubra*, *Aesculus flava*, and *Celtis occidentalis*.

In addition to the specimens cited here, both populations are documented by observations in the community science program iNaturalist (iNaturalist 2019). The New York Botanical Garden voucher cited here (Fig 1) is from a solitary spontaneous tree located 1.1 km SSW of the Bronx River Forest population. The Putnam County voucher specimen is a fruiting collection.

*Aesculus flava* is native to the Appalachian mountains of northern Alabama and Georgia, north to southwestern Pennsylvania and the Ohio River Valley (Williams 1990). Its northward migration is not unexpected as the climate warms, but the fruit are heavy and not naturally dispersed long distances, except by gravity and water. More study may reveal naturally dispersed trees from southwestern Pennsylvania into New Jersey and toward New York, but the Hudson River, New York Bay, and the dense development of New York City are formidable barriers that would likely prevent natural dispersal. These dispersal dynamics and the observed pattern of spontaneous occurrence suggest that spontaneous individuals in New York are most likely dispersed locally from cultivated trees.

### ACKNOWLEDGEMENTS

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## LITERATURE CITED

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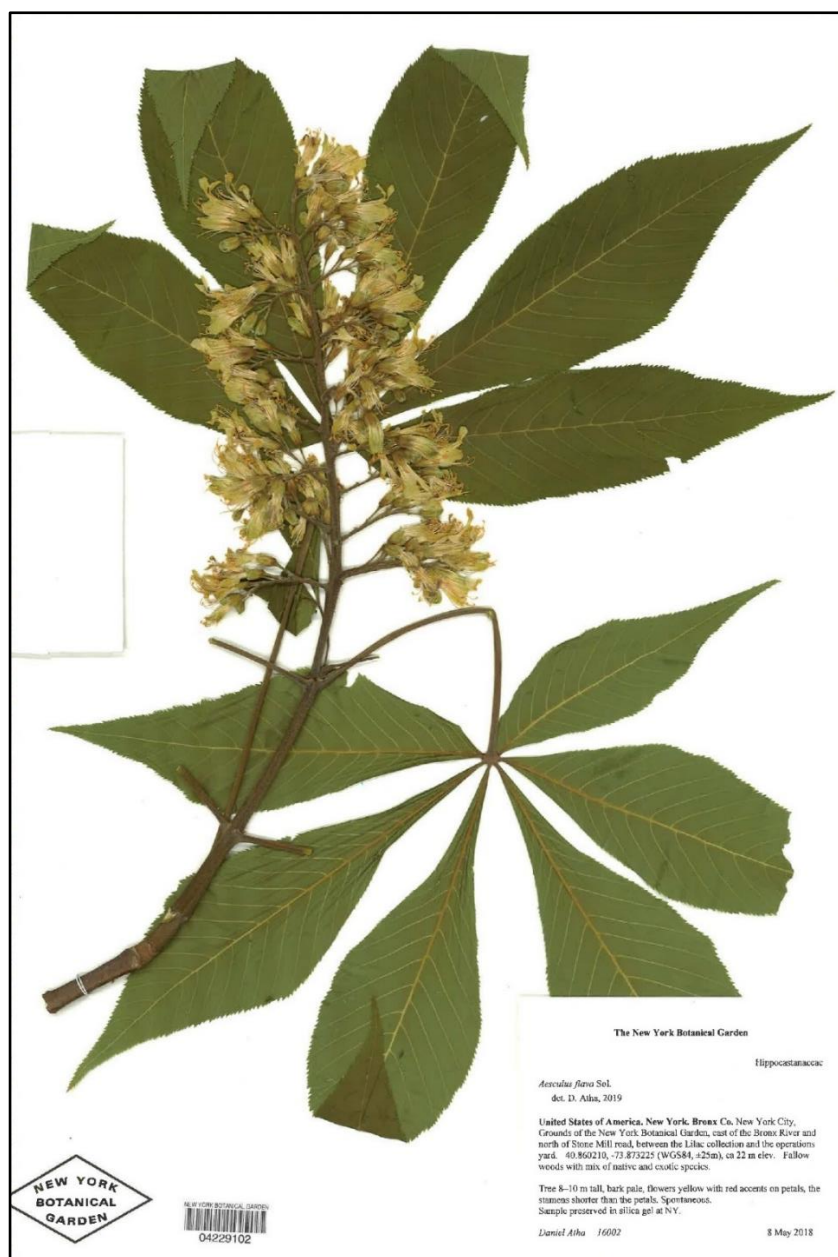


Figure 1. *Aesculus flava* from a spontaneous tree in Bronx County, New York. Atha 16002 (NY).