



WOODY NOTES

MANHATTAN PLANT MATERIALS CENTER

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Observational Plantings

In autumn we look forward to the colorful fall foliage that adorns the hills, valleys, and towns where we live and travel. A species worth including in the landscape is black gum.

Black gum, *Nyssa sylvatica*, Marsh. (NYSSACEAE) also known as black tupelo, black gum is a native tree of the eastern United States. It grows best on well-drained, light textured soils on the low ridges of second bottoms and on the high flats of silt loam alluvium. It tolerates brief spring flooding on alluvial sites and is common on the dry upper and middle slopes of the Appalachian Mountains. On the drier uplands, it grows best on loam and clay loam soils. Black gum is shade tolerant and usually grows in the intermediate crown class on most forest sites.



Black gum stands out in the landscape in full fall color contrasting with pecan in the background.

A single black gum, accession 9050506, was planted in the landscape in the headquarters area of the PMC back in 1966. Today it is growing in that intermediate crown class next to a large pecan tree and is adjacent to a cedar windbreak. Every fall it can be relied upon for its rich, red colored leaves which turn just a few at a time at first and suddenly, before you know it, the tree's foliage is completely red. It beams on a sunny fall day with its glossy scarlet foliage. Just imagine one of these beauties reflecting on a pond in your backyard. Black gum is classified as a medium to large-sized tree, growing 60 to 80 feet tall on adapted sites. Our specimen, last measured in 2015, stands at about 42 feet tall. Not too bad considering that the tree is not growing in its natural habitat and given its close proximity to other trees. The nearest natural habitat being southeastern and south central Missouri, Arkansas, and extreme eastern and southeastern Oklahoma. Our tree was one of five trees obtained from a Missouri nursery.

If you like red fall foliage, the tree is worth considering in the eastern part of Kansas. It most likely will be slow growing, depending on the site, yet will produce in terms of eye appeal early on.

The species is used by a variety of birds and mammals such as brown thrashers, mockingbirds, thrushes, flickers, robins, wild turkeys, wood ducks; black bear and fox; while white-tailed deer and beavers browse the twigs, foliage, and young sprouts. Black gum also provides cavities and nesting sites and is a good honey tree.

Besides planting the black gum for its foliage, black gum can be used for construction. The heavy, non-splitting wood can be used to construct docks and wharves. The wood is also used for crossties, veneer for containers, plywood, pulp, and lumber for pallets, boxes, and crates.



Black gum's glossy scarlet, fall foliage

Silverscape®olive, *Elaeagnus X 'Jefmorg'* (Elaeagnaceae) Nebraska NRCS field trials are ongoing for Silverscape®olive, a natural hybrid between Russian olive, *E. angustifolia*, and native silverberry, *E. commutata*, which is reportedly sterile. The plant is being tested for use as a potential replacement for Russian olive in windbreak plantings. In 2007, the PMC was asked to plant some Silverscape in its woody plant observation nursery. In 2010, one of the shrubs produced a few fruits. In the following year, 103 fruits were collected in the fall. The fruits were sent to the Southern Region Native Plant Coordinator, USDA Forest Service, National Seed Laboratory, Dry Branch, Georgia, for analysis. The seeds looked full under x-ray examination. About half of the seeds were then cut open. Under a magnifier, it looked like the flower tissue that the seed formed around had hardened around a thin embryo cavity filled with white "cottony" material. It was assumed this was also deteriorated flower tissue. So viable seed production by Silverscape was ruled out for the time being. In 2012,



Developing fruits of Silverscape, 8/29/2011



Nine suckers double flagged by pink and white flags south of Silverscape row

similar to 2010, two of the plants produced a few fruits. Enter 2014, several, what appeared to be seedlings several inches tall were found in the area of the Silverscape plants, along with some larger plants that had popped up around the adjacent area. These were all determined to be suckers from the mother plants, including the smallest "seedling appearing" ones. The first of these suckers were actually noted a year early and had put on quite a bit of growth by 2014, the tallest being 5 feet tall. Due to a lack of plot maintenance, which usually consisted of disking between the rows, these suckers were revealed. They were only found in the disturbed area of the plots. No suckers were found in the drip line or under the canopy of the mother plants. A total of 19 suckers were detected. One of the smaller

ones was 30 feet out from a mother plant. The greatest distance from a mother plant was 36 feet 5 inches and the closest sucker was 7 feet 8 inches from the base of a mother plant. It is theorized that these suckers were produced in response to injury to the roots of the plants caused by disking. In the spring of 2014, Nebraska forester, Richard Gilbert, Nursery Manager at Bessey, noted flowering in Silverscape and a check on the plants that July, noted some fruits on the plants. He commented that there are no Russian olive around, so the Silverscape would have had to self-pollinate or cross pollinate among themselves. In the fall he cut open some of the fruits but did not find any seed. Richard Woollen, NC District Forester, checked on his planting which was in plastic mulch and did not find fruits or any suckering going on. Gilbert commented that the plants are tough in that when he planted them, he did not water them and they have done just fine. The jury is still out on whether Silverscape is capable of producing viable seed. Further investigations are warranted.

Flagging, a condition on branches which indicates death, was noted in the Silverscape during evaluations in fall/late summer of 2014 which revealed cankers on a number of branches affecting most of the plants. Several cankers are associated with *Elaeagnus*, *Tubercularia* canker and *Phomopsis* canker, however, no fruiting bodies were found in order to be able to determine a particular disease. Also, one of the suckers displayed symptoms that were not definitive and will require further monitoring. Dead branches made up 10% to 20% of the plant's canopy. This is an undesirable aspect of the shrub, requiring pruning of the unsightly branches which opens up the canopy to invading plant competition. If this issue becomes an increasing problem, the species should not be recommended for planting.

For more information on Silverscape® olive, see Plant Materials Technical Note from Montana, MT-76, dated October, 2011, entitled: Silverscape® olive *Elaeagnus x 'Jefmorg'* or *Elaeagnus x 'Silverscape'* Not a Replacement for Russian Olive in Conservation Plantings.



Suckers that were growing along a rhizome and inch or so below the soil surface and 30 feet away from a mother plant in 2014