

# Sycamores, Streams, and Wildlife



Tim Daniel

As the number of bald eagle nests continue to increase throughout Ohio, large old sycamore trees like this one in the Scioto River floodplain are often selected for a nest site.

by Randy Sanders

**W**hat do wood ducks, smallmouth bass, freshwater mussels, and streamside landowners have in common? They all do best where mature American

sycamores (*Platanus occidentalis*) grow. Why? Because sycamores provide preferred nesting sites, cool deep pools, stable stream channels, and less bank erosion. And their massive roots and towering white trunks also provide Ohioans cleaner drinking water and scenic views of stream valleys during the winter months.

Our native sycamore has the largest circumference and leaves of any hardwood tree in North America. Early writings of the Ohio country leave little doubt of the natural occurrence and huge size of the sycamores growing on our stream banks and floodplains.

*“The banks of this stream (Muskingum River) were thickly clothed with large sycamore trees whose lofty tops and pendant branches leaned over the shores, obscured the outlet (mouth) so much, that a boat in the middle of the Ohio (River), on a cloudy day, might pass without observing it all and that the roots of the trees acted as so many ligatures and fillets of net-work in protecting the earth from the wash of waters.”* (Fishes of Ohio, M.B. Trautman).

*“It seems that the lower Scioto valley in that early day was a celebrated “big tree” region and the giant “Scioto Sycamore” was located on the farm of one — Abram Miller. It was a forked hollow tree measuring 21 feet in diameter and 60 feet in circumference at its base and 42 feet in circumference at the height of five feet. On June 5, 1808, a party of 14 persons mounted on horseback attempted to advance into the cavity. Thirteen men rode into the hollow, the fourteenth did not enter, his horse being skittish, but there was room enough for two more (The Natural Vegetation of Ohio in Pioneer Days, R. B. Gordon; History of Scioto County; The Navigator, Cramer & Spears 1824).”*

## Stream Benefits

Sycamores benefit streams in many ways. During the summer months, their naturally leaning trunks and large leaves provide an abundance of shade, which results in cooler water temperatures, higher dissolved oxygen levels, and less nuisance algae. During the autumn and winter months, their leaves become an important link in the stream food chain.

Huge sycamores like this one (23.3 feet circumference and 7.1 feet diameter) along the Olentangy River are usually older than you would think. A similar size tree located in southeastern Indiana was determined to be 430 years old.



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The strong massive roots of sycamore trees are nature's way of helping to form stable stream channels and exceptional warmwater habitat like that of Big Darby Creek.

Their massive roots help provide stable stream banks and channels, consume large amounts of nutrients and water, and filter out sediments and other surface pollutants.

### Wildlife Benefits

From the tips of their leaves to their mighty roots, sycamore trees are beneficial to many wildlife species in a variety of ways. More than 1,000 aquatic species (fish, mussels, and insects) are directly benefitted by the way sycamores improve a stream's habitat and water quality.

During floods, their trunks create eddies, which provide important fish resting areas from strong currents. They increase the diversity of stream habitats by stabilizing islands and gravel bars and create deep pools and undercut banks which are important habitats for fish during summer droughts. Even their branches, bark, and trunks after falling into streams create woody debris that increases the diversity of habitat, provides cover and food, and helps reduce downstream flooding.

Mature sycamore trees also provide important habitat for many terrestrial species as well. Their great height, open canopy, strong limbs and numerous cavities provide preferred nesting sites for great blue herons, wood ducks, bald eagles, yellow-crowned night-herons, ospreys, great-crested flycatchers, and many woodpeckers.

When it comes to supporting a 2,000-pound bald eagle nest, sycamores are one of the best! And for wood ducks, hollow cavities overhanging a stream allow for a safer landing as their young fall from the nest. Yellow-throated warblers, formerly known as the sycamore warbler, also favor riparian sycamores throughout Southern and Central Ohio. Their cavities are often used as den sites by raccoons and other mammals.

### Landowner Benefits

When it comes to protecting streamside property, landowners should view sycamores as one of their favorite plants. Why? Because they are one of the few plant species that can hold a naturally meandering stream channel together during seasonal floods and frequent high flows. Their massive roots and ability to grow next to a stream's low water level make sycamores one of the best natural plants to prevent stream bank erosion.

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Severely eroding stream banks often occur in Ohio after the sycamores and other riparian trees are removed.



smallmouth bass—Al Staffan



photos by Tim Daniel

Pictured are some Ohio species that benefit from sycamore trees: mussels, smallmouth bass, red-bellied woodpecker, wood ducks, yellow-throated warbler.

### Sycamore Facts

- Distribution: Only Ohio tree found in all 88 counties.
- Preferred habitat: Streambanks, islands, and floodplains.
- Size: Grows to a larger diameter (greater than 10 feet) than any other hardwood in North America. Mature trees range from 80 to 140 feet tall. Grows the largest leaf of any native Ohio tree (greater than 10 inches wide).
- Age: A long-lived tree species. A living tree (22 feet circumference and a little more than 7 feet in diameter) cut down in southeastern Indiana in 1970 was 430 years old.
- Seeds: Produces the most seeds between 50 and 200 years of age. A large "sycamore ball" has about 800 seeds.
- Ohio's current State Champion Sycamore (ODNR Big Tree Program) located in the Grand River watershed (Ashtabula County, Austinburg Twp.) is 29 feet 3 inches in circumference (4.5 feet above the ground), 119 feet high, and has an average crown of 93.5 feet.

## Sycamores, Streams, and Wildlife *continued*

The deep pools they help form will also make fishing better for smallmouth bass and other sportfish! Sycamores improve the scenic qualities a stream has to offer from the dense overhanging canopy during the summer to the distant view of a wintertime stream valley filled with towering white giants. And what landowner wouldn't be proud to take friends down to the creek to show off the largest and oldest tree in the neighborhood that's in his or her backyard?



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**Many stream banks are naturally lined with a dense growth of sycamore trees. This picture shows one of Ohio's best old growth stands of streamside sycamore trees (Scioto River, Pike County). The Division of Wildlife is working with the landowner to permanently protect it with a conservation easement. Lee Crocker, an ODNR state forester named the corridor "The Land of the White Giants."**

Quoting from *The Fishes of Ohio*, "...the roots of the trees acted as so many ligatures and fillets of net-work in protecting the earth..." Riparian sycamores create a chain of benefits that affect the world around them. From natural stream channels to wildlife, to humans, their benefits are so far reaching, landowners are encouraged to protect these mighty giants along rivers and creeks for future generations to enjoy.

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Chip Gross