



The rise of the tupelo tree

With the steady introduction of new cultivars, *Nyssa sylvatica* gains prominence in the trade

BY TRACY ILENE MILLER

NYSSA SYLVATICA — commonly known as sour gum, black gum and black tupelo — is a shade tree to watch in the 2020s.

Right around the turn of the century, several factors came into play, including successful breeding programs, the tree diversity movement and an increase in container production. These helped *Nyssa* cultivars just being introduced at the time to reach the market — and the market jumped.

Twenty years later, orders are consistent nationwide, and introductions have continued to roll out. Here we will evaluate the strengths of the new trees, and of what remains still to be evaluated as tupelo gains a foothold in the shade tree market and becomes widely planted across the United States.

Before 2000, *N. sylvatica* seedlings existed as a steady crop for some growers who sold to large projects. Aside from that, they were grown mostly by the truly committed, said Keith Warren, now-retired director of product development of **J. Frank Schmidt & Son Co.** (Boring, Oregon), who still works on breed-

ing and plant introductions.

“*Nyssa sylvatica* was appreciated by tree lovers and arborists for the occasional bright-red, eye-popping fall color in landscapes,” Warren said. “They were more the exception than the rule.”

Initial cultivars open the door

While cultivars dominated the nursery trade for major shade tree genera, such as *Acer* and *Ulmus*, for *N. sylvatica*, seedlings dominated. As seedlings, they exhibited great variability in fall and leaf color. Growth and form also varied quite a bit. That was problematic for nursery growers dependent on consistent form for production and for selling reliable traits to the customer.

The species has three flaws that inhibited wide nursery use, Warren said: a floppy form as a young tree; inconsistent and fairly average fall color; and difficulty in transplanting bareroot because of the long taproot.

The first really commercially successful or widely used *Nyssa* was Forum® Tupelo (*N.s.* ‘NXSXF’ PP11391, 45 feet by 25 feet), >>

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Previous page: Afterburner® Tupelo (*Nyssa sylvatica* 'David Odom'). PHOTO COURTESY OF J. FRANK SCHMIDT & SON CO.

trademarked in late 1998 by Select Trees (Bishop, Georgia). Following soon after, Red Rage® Tupelo (*N.s.* 'Haymanred', 30–40 feet by 20 feet) was trademarked by Mike Hayman of Indiana and introduced by J. Frank Schmidt. *N.s.* 'Wildfire' (40 feet by 25–30 feet) was trademarked by Steve Hottovy (Beyond Green, Canby, Oregon) at about the same time, Warren said.

Warren is co-author with Michael Dirr, of *The Tree Book: Superior Selections for Landscapes, Streetscapes and Gardens*, released last year, which describes 18 cultivars as being currently viable in the trade.

Hans Nelson and Sons Nursery

(Boring, Oregon) started growing *Nyssa* in containers for a particular customer when 'Wildfire' was released.

"The demand for 'Wildfire' was surprising," said Jesse Nelson, general manager.

Customers (finish growers) came around to see the tree and its summer-long color, and from there, interest in *Nyssa* took off. The trees spoke for themselves, and advertising was unnecessary. Word of mouth sufficed, Nelson said.

All three of the first *Nyssa* cultivars were good trees for single attributes, Warren said, but they were still game changers because they brought consistency.

"[Forum has an] outstanding upright branch structure, but average fall color," he said.

"Red Rage has an extremely glossy summer foliage that turns red in fall, but an average form. And 'Wildfire' was very different, with red-tipped new growth. But it has a broad spread and an uncontrolled form."

A rise in interest

Once there was uniformity in habit, interest in *Nyssa*, nationwide, became dependable and increased because of the dazzling fall color and their ability to perform in tough situations. According to Warren, *Nyssa* are tolerant of many soil conditions, both wet and dry, and of poor drainage and low soil oxygen found in compacted urban soils. Once established, they are reasonably drought tolerant; they do not like to dry out when transplanted and in the first year.



Top and center: Red Rage® Tupelo (*Nyssa sylvatica* 'Haymanred'). PHOTO COURTESY OF J. FRANK SCHMIDT & SON CO.

Bottom: *Nyssa sylvatica* 'Wildfire'. PHOTO COURTESY OF ROBINSON NURSERY

Nyssa are slow-growing trees with deep roots, with no aggressive root systems breaking up sidewalks when planted as street trees, said James Barborinas, a certified arborist and owner of Urban Forestry Services (Mount Vernon, Washington).

Because of their slow growth, it could be five years and then another five years thereafter before maintenance pruning is necessary. Unlike the fast-growing shade trees, and they have flexible limbs that are less susceptible to breakage. Barborinas added that there is little or no objectional fruit, depending on whether you choose a female or male cultivar (which is identifiable with each cultivar), and good insect and disease resistance. And then, of course, there is the impressive fall color. *Nyssa* is now on approved street lists from Pennsylvania to Missouri to Oregon and Washington.

All that interest has led J. Frank Schmidt to increase by five times the amount of production in the past 10 years, said Guy Meacham, new plant development manager at J. Frank Schmidt. *Nyssa* makes up 5% production at **Robinson Nursery** (Amity, Oregon), according to General Manager Chris Robinson. Nelson believes they account for about 15% of container production at Hans Nelson and Sons.

"We did increase our production, and we continue to increase," Nelson said. "*Nyssa* is one of the big ones."

The very slow growth of *Nyssa* does mean they are investments, but worth it, according to Barborinas. Many nurseries don't want to wait two or three years to have a saleable tree.

"We have about 3,000 growing in the ground, and we have only about 30 that are about 2-inch caliper," he said. "Most cities are wanting trees that are 2 inches or larger, but they're taking as small as 1.5 to 1.75 inches, which sell out at those sizes."

"We get the largest we can get as liners from the few who grow them," Nelson said. "After we get a liner, that takes two to three years to get it ready, and we'll have it another four to six years before we sell it."

Compare that to a maple — which are available as a larger liner — and he can get from 2 inches to 2.5 inches >>



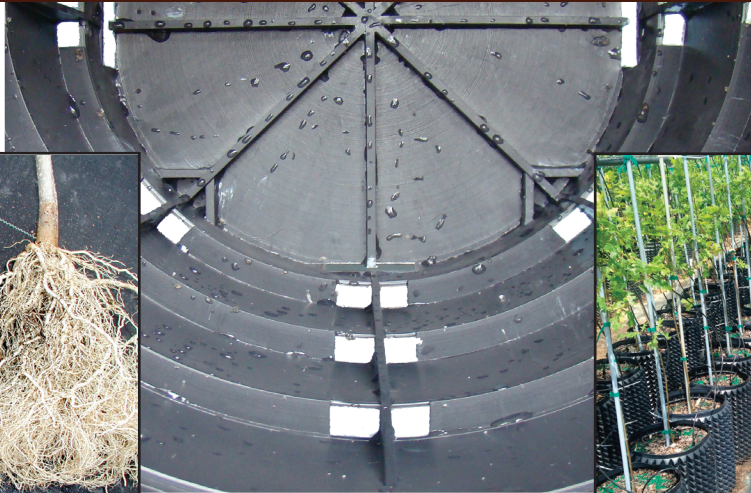
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Top and bottom: *Nyssa sylvatica* 'Wildfire'.

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in three years. *Nyssa* can add another two or three years to the growing process, and they can't be sold bareroot.

Nelson also finds the cultivars can be "finicky" for propagation.

"We chip bud everything in the summer, and some of the cultivars don't take as well as others," he said. "We try to have our own scion wood source, but on newer varieties that isn't always possible. Some has to be shipped in."

For all or some of those reasons, growers are committed to *Nyssa*, but with inventory in lower numbers than for other shade trees.

'Wildfire' and its competitors

After nearly 20 years, 'Wildfire' is still one of the most produced *Nyssa* cultivars in the country, according to Meacham. It's royalty-free and most popular in the South, where 'Wildfire' makes up 50% of production of *Nyssa*. Overall, it has always been more popular in the southeastern United States. But with cultivars, sales are now leveling across *Nyssa*'s best growing regions — in USDA Hardiness zones greater than 5b, Meacham said.

"'Wildfire' is interesting year-round," Barborinas said. "Every new leaf has a red tip, it has good fall color and it holds its leaf a long time," which is only a liability in colder zones.

At Robinson Nursery, 'Wildfire' sells at about 2.5 times higher than the next three top sellers, which are tied for second place:

- Green Gable™ (*N.s.* 'NSUHH' PP22951, 50 feet by 30 feet), introduced by Alex Neubauer of Hidden Hollow Nursery in Tennessee and named for its gable-shaped canopy;
- Tupelo Tower™ (*N.s.* 'WFH1', 30–40 feet by 20 feet), introduced in 2013 by Bill Hendricks of Klyn Nurseries in Perry, Ohio, appreciated for its distinct narrower columnar habit and hardiness to Zone 4; and
- Northern Splendor™ blackgum (*N.s.* 'Northern Splendor', 40–50 feet by 20–30 feet) which is the same plant as *N.s.* 'Twin Lakes', and also hardy to Zone 4.

The latter two varieties are a whole zone hardier than the rest of the cultivars



mentioned in this article, which are generally considered hardy to Zone 5.

'Wildfire' doesn't have much cold hardiness, according to Robinson. The same goes for Green Gable, but it's still a favorite of Robinson and Barborinas. It has a good leader and well-spaced branches to make a fuller tree, not too narrow, and has a dark leaf that fades to a fiery red. The fiery red color and upright, uniform habit is shared with Robinson's second favorite, 'Northern Splendor', which goes dormant weeks earlier than other *Nyssa*.

"It's a beautiful plant, with an upright branching structure, and a lot of *Nyssa*, they are descending."



Nelson believes 'Wildfire' is a grower's plant, in that it maintains its form and grows rapidly. However, it needs pruning, is a dense tree and the color fades with summer. It's a best-seller, but not necessarily one of his favorites. His favorites include Red Splyndor® (*N.s.* 'NMSTF', 35 feet by 20 feet, Zone 5), which is new to his nursery's 2021 catalog and as a pyramidal shape and dark, glossy and thicker leaf.

"[It] will more likely hold up in the summer in places with high humidity," Nelson said. An additional favorite is Green Gable, which is another top seller at the nursery that is also one of the harder ones to produce. The buds just don't take as well as the others, according to the growers.

With its roots in Tennessee, Green Gable isn't planted much in the Northwest and most are delivered to the southeast, according to Meacham.

"Some cultivars are more regional than others," Meacham said. "A lot are still relatively new — they are regional now, and they tend to do well where they were introduced first."

Afterburner® (*N. s.* 'David Odom', 35 feet by 20 feet), selected by Warren and introduced by J. Frank Schmidt in 2012, and Firestarter® (*N.s.* 'JFS-red' PP26975), 35 feet by 18 feet) top both Barborinas' and Meacham's lists.

Afterburner is a fast grower with similar characteristics to Green Gable. Both are female with a central leader, uniform habit and an upright pyramidal to oval shape — but it's the fire-engine red fall leaf that distinguishes it for Barborinas.

"That is a big plus," he said. "When you see it, wow, it's a head-turner."

Firestarter was selected by Warren in 2005 and reached the J. Frank Schmidt catalog in 2014. Its habit is similar to Afterburner, but it is a male, with no fruit, and is tighter with shinier foliage in summer and fall color that starts 10 days later, Meacham said.

'Sheri's Cloud' (*N.s.* 'Sheri's Cloud', 15–20 feet by 10–12 feet) isn't one many grow, and its sales are far lower than other tupelo. According to Robinson, it's a beautiful plant with a nice form >>>



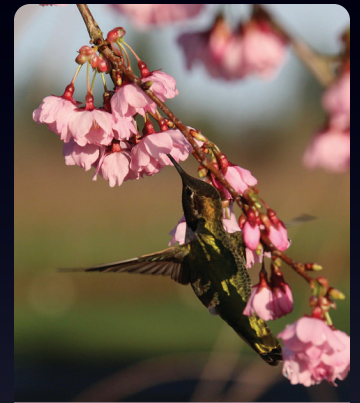
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Top: Firestarter® (*Nyssa sylvatica* 'JFS-red' PP26975). PHOTO COURTESY OF J. FRANK SCHMIDT & SON CO.

and stunning variegation, with cream-colored tips and a lighter green leaf than the species, and shades of pink and red in the fall. It was found in a roadside ditch in Arkansas by Jeff Flanagan, a state Department of Parks and Tourism employee, who gave it to Shadow Nursery (Winchester, Tennessee) to develop.

The path forward

The future of *Nyssa* selections, as with any tree, will depend in part on efforts to select for better qualities and address issues with the genus.

Robinson said he isn't looking to add more cultivars to what the nursery grows, but when they become available, he'd be evaluating them for upright branching. He's seeking something that is narrow, has a dark crisp leaf, good fall color and pest resistance. They've had some prob-

lems with mites.

Ryan Contreras, Ph.D., associate professor in the **Oregon State University** (OSU) Department of Horticulture, is at least testing the viability of two cultivars selected by a trip around the campus, where long stands of *Nyssa* stood — all with different features.



Selecting from those stands, he found two for further study: a weeper and an upright form with good branching. “[It had the] glossiest leaves I’ve ever seen on a *Nyssa*.”

“The weeper is remarkably different than any of the other weepers out there,” Contreras said. It’s still being observed in OSU’s research fields and by a few growers, and the feedback is mixed on whether the industry needs a weeper. The second selection is demonstrating an attractive form, glossy leaves and good fall color, and dormancy achieved weeks earlier than existing cultivars, a useful characteristic that could help with shipping and protection from damage by an early freeze event.

“At this time, we’re still evaluating it, and whether it is better than what’s already out there,” he said. It’s been five years in evaluation, and has another two to three to go. ➤

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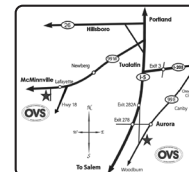
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Top: Green Gable™ (Nyssa sylvatica 'NSUHH' PP22951'). PHOTO COURTESY OF ROBINSON NURSERY

“There has been a lot of introductions of *Nyssa*, and we don't want to compete with what the industry is doing,” he said. “My program is designed to complement the industry, not compete with it.”

“We may have more cultivars than we need right now,” Warren said. “All of them represent a great improvement over what we had 10 to 15 years earlier. But among them, they are sorting themselves out.” They are being compared to each other or which cultivar is best for one location or another. That sorting process is typical.

The disease resistance isn't completely mapped, either. “There is a fair amount of regional difference,” Warren said. Most are adapted to Oregon, with its low humidity, but in the East, where humidity is an issue and leaf spot is more important, varieties are still being evaluated. J. Frank Schmidt introduced



Red Rage to the market in 2010, which is leaf spot resistant.

In developing and introducing new cultivars from here, J. Frank Schmidt is concentrating on cold hardiness, accord-

ing to Meacham. Even a half zone cold hardier would open up *Nyssa* to new markets, he said.

For the near future, the market for *Nyssa* does not look to be slowing down, as the cultivars provide steady, good-performing additions to the mix of available shade trees. With the variation in shape and habit the cultivars offer.

“There is almost a *Nyssa* for every space,” Nelson said — except under powerlines, where they run the risk of severe pruning. Outside of that situation, there is a *Nyssa* suited for almost any space where shade trees are planted. ©

Tracy Ilene Miller is a freelance writer and editor who covers several topics, including gardening and the nursery industry. She can be reached at tmillerwriter@gmail.com.

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