

GROWERTALKS

Features

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Distylium: The Best New Plant You've Never Heard of

Dr. Michael Dirr

Virtually unknown, unidentifiable, unheralded and unloved, except to the cadre of collectors who desire one of every plant—are evergreen members of the *Hamamelidaceae* witch hazel family, the species sporting small apetalous red flowers from the leaf axils in late winter-early spring, positioned among blue-green to lustrous dark green foliage. The species occasionally surface in arboreta and botanical gardens, and even then their presence is limited by cold hardiness (Zone 7) to coastal and southern climates. The casual gardener would dismiss the species as unworthy of garden real estate.

Over my career, now 43 years, I observed yews, junipers, hollies, firethorns, nandinas, Indian hawthorns and wax myrtles wear out their landscape welcome. A major southern nursery once grew 330,000 blue rug junipers; the number is now 30,000. Could distylium absorb a portion of the landscape territory vacated by the previously mentioned plants? Allow me to discuss the genus and the transformation via breeding to functional, beautiful, easily grown landscape plants.

A little background

Distylium comprises 18 species with 12 endemic (occurring nowhere else) to China with only *D. racemosum*, Isu Tree, and *D. myricoides*, Blue Isu Tree, occasionally available in commerce. The former, an upright, broadleaf evergreen shrub or small tree to 60 ft. in the wild, but considerably smaller under cultivation; the latter, more shrub-like, spreading to 10 ft. high and 15 ft. wide. Again smaller under cultivation. *Distylium racemosum* has been in the University of Georgia trials since 1992 and hasn't been injured by cold, heat or drought. This particular plant is currently 12 ft. high and 12 ft. wide and about as graceful as a cardboard cutout. Remarkably in the worst droughts and recently (2013-14, 2014-15), extremely cold and variable winters, it's never flinched. I've shown the plant to visitors who either pretend to know it or simply say, "Interesting." Not one cutting has ever been requested. End of story ... but not quite so fast.

In the late 1990s/early 2000s, when Piroche Plants in Pitt Meadows, British Columbia, was actively importing and offering exciting new plants, species and cultivars from China, I ordered anything for testing that might increase the palette of Southeastern nursery and garden plants. There were many disasters and a few surprises, like *Meliiodendron xylocarpum*, with pink-white, star-like flowers on naked stems in March. (However, it never caught on.) BUT *Distylium myricoides*, with a beautiful layered growth habit and linear-

lanceolate leaves (dark to blue-green, 2 to 4 in. long, $\frac{3}{4}$ to $1\frac{1}{4}$ in. wide) elevated this author's hackles. A potential alternative to the shot-hole foliage of *Prunus laurocerasus* cultivars; sculpted, demented, meatball hollies (*Ilex*); disease-ridden Indian hawthorn; invasive and scale-ridden *Euonymus fortunei*; and *E. japonicus* cultivars had possibly arrived. Along with the species came Emerald Elf, supposedly more compact, but essentially the same based on 12 years of side-by-side testing.

In the same shipment, *D. racemosum*, strictly along for the ride, was out-planted with *D. myricoides* and Emerald Elf. It looks, acts, grows, flowers, fruits and has the same cardboard persona of the earlier-mentioned 1992 specimen. But accompanying the same-old, same-old was one plant, totally out of character for *D. racemosum* or *D. myricoides*. The plant was flagged, kept and out-planted in March 2003 and, without question, was a hybrid. This has been verified by molecular markers.

A tale of two distyliums

Before revealing totally how this hybrid led to a unique group of selections, let's revisit the two species.

Distylium racemosum has beautiful lustrous dark green, entire-margined, elliptic to obovate-elliptic leaves, $1\frac{1}{4}$ to $2\frac{3}{4}$ in. long by $\frac{1}{2}$ to $1\frac{1}{2}$ in. wide, holding the color in winter, even in full sun. The red-maroon, apetalous flowers (calyx and stamens) in short racemes, appear from the leaf axils in (February) March to April. Certainly, they're not showy from 10 ft., but bright and vivid upon close inspection. The $\frac{1}{2}$ in.-long, two-valved, woody capsule with two seeds matures in October, which are collected before the capsules open, as seeds are naturally expelled. I've observed them in flower, late February to early March in Athens, Georgia, late April at Biltmore Gardens in Asheville, North Carolina. Also, a 10 ft.-high plant grew at the University of Georgia Coastal Gardens near Savannah.

Several pertinent observations concerning the species:

- They're more cold hardy than credited, probably Zone 6
- They're more heat tolerant (as seen in Savannah)
- They're more drought tolerant (no supplemental H₂O on old plant in Georgia trials)
- They like full sun, as well as moderate shade tolerances
- There are no major insects or diseases
- They're easily pruned and maintained at desired size
- They were found in China at elevations of 3,300 to 4,000 ft.

Distylium myricoides is totally different in architecture and leaf characteristics. Most noticeably are the fine-textured, narrow leaves, distinctly blue-green on wide-spreading, horizontally arching branches that layer upon each other. I observed the species at the Raulston Arboretum on November 26, 2003, gloriously blue-green. On February 22, 2004, it was laid waste by the winter as all of the leaves were brown. The two plants in the Georgia trials suffered foliar injury during the 2013-14 and 2014-15 winters with normal regrowth. Flowers, again bright red-maroon, are produced in prodigious quantities from each leaf axil in February to March. Fruits are slightly smaller than those of *D. racemosum*.

It grows at lower altitudes, 1,600 to 2,600 ft., in China and is less cold hardy than *D. racemosum*, but parallels it in the other quality traits. Estimated Zone is 7b, 5 to 10F (-15 to -12C).

So where do we go from here? Actually, back to the suspected, now verified, hybrid. Seeds were collected in 2005, sown and germinated immediately, with seedlings filling 3-gal. containers by late summer 2006. Twenty-one selections were out-planted to the University's horticulture farm and, over a 10-year period, three were patented, named and introduced. Sustained breeding, utilizing the original selections as breeding lines, resulted in three additional introductions.

Many nursery professionals provided opinions about the above selections. I remember a comment from a 2007 visitor, "Who knows distylium?" Counter that with, "Who knew pink-flowered loropetalums, Encore azaleas, remontant hydrangeas (Endless Summer brand) and Knock Out roses would dominate the market?" I believe distyliums' best days reside in the future.

Varieties

The current introductions from the University of Georgia and Plant Introductions, Inc.—Bailey include:

Emerald Heights | Compact, rounded-spreading habit, with lustrous dark green, leathery leaves and small red flowers in leaf axils in February and March. Parent plant is 5.3 ft. high and 8.4 ft. wide. Avoid late summer pruning so foliage fully hardens. Excellent alternative to cherrylaurels, particularly *Schipkaensis*, as it resembles that plant in habit. Adaptable from Zone 7 to 9. Strong-growing selection.

Blue Cascade | Spreading habit with layered branches and the leaves held upright, resulting in a unique texture. Leaves are purple-bronze upon emergence, turning dark matte blue-green at maturity and holding color year-round. Parent plant was 3 ft. high and 7.8 ft. wide. A superior grouping or massing broadleaf evergreen for sun to moderate shade. The foliage color and texture make this a standout introduction. Zones 7 to 9.

Vintage Jade (pictured) | Uniquely different habit with branches layered one-upon-the-other, resulting in a broadleaf evergreen groundcover or low shrub. Lustrous dark green leaves with red flowers that open in February/March. The parent plant is 2.2 ft. high and 8 ft. wide. The perfect plant for covering large areas. Slightly hardier than the above two introductions and estimated Zones 6b to 9 adaptability.



Coppertone | A spreading-mounded evergreen shrub with copper-bronze-red emerging foliage that matures to matte blue-green. The most beautiful kaleidoscopic foliage color combination in spring, almost more attractive than the flowers. The parent plant is 3½ ft. high and 4 ft. wide. Zones 7 to 9.

Linebacker | The first introduction suitable for hedging and screening, the upright-dense habit resembles a white oak whisky barrel in shape. Glossy reddish-orange, new growth matures to shiny dark green. Grows between 8 to 10 ft. high and 6 to 8 ft. wide. Easily pruned to maintain a screen or hedge without the tight block-of-granite appearance of boxwood and holly. Zones 7 to 9.

Cinnamon Girl | This 2016 small-leaf introduction brings distylium closer to a viable alternative to boxwood, holly and other fine-leaf plants beleaguered by insects and diseases in the South. Plum-purple emerging leaves mature to blue-green and hold color through the winter. Has smaller leaves and a more refined texture than the other cultivars. The graceful, spreading-arching habit permits use in grouping, masses and as a tall ground cover. Grows 2 to 3 ft. high and 4 to 6 ft. wide. Zones 6b to 9—to date the most cold-hardy cultivar.

These new introductions are primed and ready for integration into modern landscapes. Their adaptability to wet—yes wet—and dry soils is without parallel. The names distylium and Isu Tree are currently foreign to most gardeners. Given landscape opportunities, they will become “household” names. There are no messy fruits (small brown capsules the color of the older stems) or maintenance anomalies to frustrate gardeners and growers. Foliage remains blue-green to lustrous dark green color through winter. Light tip pruning in May/June (dormant pruning also) spurs new growth flushes and more compact plants. Possibly the best advice is minimal attention.

Distyliums are the best plants you never heard of ... until now. **GT**

Dr. Michael Dirr is Professor Emeritus at the University of Georgia and director of the university's botanical garden. From 2006 to 2014, he was a partner in Plant Introductions, Inc., a private breeding company, that was sold to Bailey Nursery in 2015. He's also published 50 scientific articles, over 300 popular and trade articles, and 12 books.