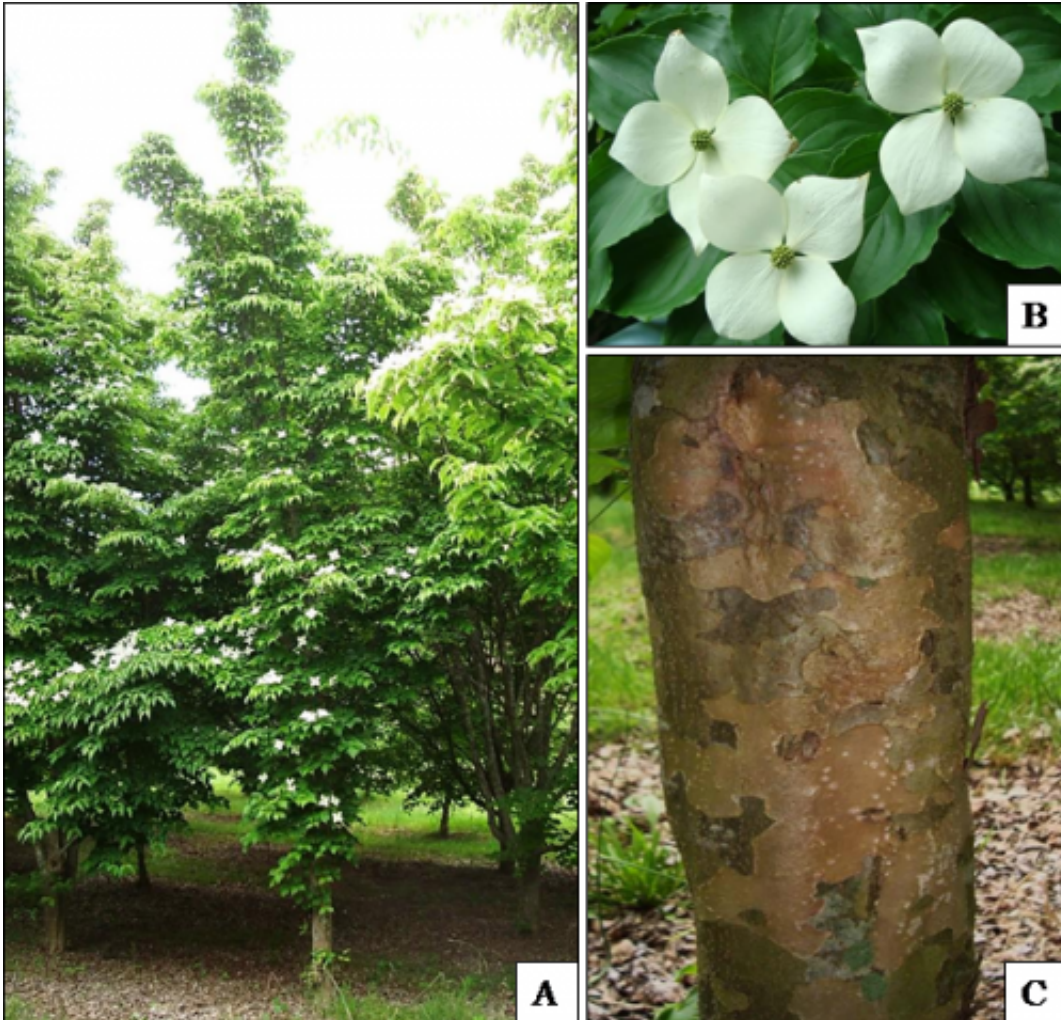


Three new ornamental dogwoods introduced

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'Empire', one of the new dogwood varieties, is shown in the photo at 20 years old. 'Empire' features brilliant white bracts and exfoliated bark. Credit: Phillip Wadl

In the nursery and landscape industries, flowering dogwood (*Cornus florida*), kousa dogwood (*Cornus kousa*), and their hybrids are the most popular and economically significant members of the genus *Cornus*. The deciduous trees are highly valued for their spring display of pink, red, or white bracts, brilliant red fall foliage, and exfoliating bark. In the United States alone, retail and wholesale sales of dogwoods account for more than \$30 million dollars annually.

In the past, flowering dogwoods were severely affected by dogwood anthracnose and [powdery mildew](#). A program initiated more than 20 years ago at the University of Tennessee resulted in the release of 'Appalachian Spring', the first flowering dogwood cultivar with resistance to dogwood anthracnose, and four powdery mildew resistant cultivars. "We have found that *Cornus kousa* is more tolerant to anthracnose and powdery mildew than *Cornus florida*," explained Phillip Wadl, lead author of report published in *HortScience*. "Hybrids between these two species are generally more vigorous than typical plants of either parent species, and have resistance or tolerance to dogwood anthracnose and powdery mildew."

Wadl and colleagues Mark Windham, Richard Evans, and Robert Trigiano evaluated 400 seedlings of *C. kousa* for disease resistance and traits such as color, degree of overlap, size of bracts, tree form, and bark and leaf characteristics. The scientists selected three cultivars they named 'Empire', 'Pam's Mountain Bouquet' and 'Red Steeple' for development and eventual release. 'Empire' is a brilliant, white-bracted kousa dogwood that has a columnar form and exfoliating bark. 'Pam's Mountain Bouquet' (patent pending) is a kousa dogwood with a spreading form that features a prolific fused bract display. 'Red Steeple' is a kousa dogwood that features a columnar-shaped canopy with red foliage that fades to green with high temperature and white bracts that have a red tint along the margins.

The authors noted that dogwood anthracnose and powdery mildew were not observed on any of these trees. Analyses showed that 'Empire', 'Pam's Mountain Bouquet', and 'Red Steeple' are genetically distinct from the 26 cultivars and unnamed accessions of *Cornus kousa* that are maintained in the University of Tennessee's kousa dogwood collection.

The program has applied for a plant patent for 'Pam's Mountain Bouquet'. A limited quantity of budwood has been distributed to wholesale nurseries in Tennessee and Japan, and selected nurseries have been identified to propagate the cultivars.

More information: The complete study and abstract are available on the ASHS *HortScience* electronic journal web site:
[hortsci.ashspublications.org/c ... ntent/49/9/1230.full](http://hortsci.ashspublications.org/content/49/9/1230.full)

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