

GROWING KNOWLEDGE

Series content is coordinated by Dr. Jay Pscheidt, professor of botany and plant pathology at Oregon State University in Corvallis, Oregon.



Oregon State University



An ongoing series provided by Oregon State University in collaboration with the United States Department of Agriculture and in partnership with the Oregon Association of Nurseries



Detail view of *Hibiscus syriacus*. PHOTO BY JEFF STOVEN

Bred for success

These are some current and future cultivars from Oregon State University Ornamental Plant Breeding

BY RYAN N. CONTRERAS

I AM IN MY 13th year at Oregon State University (OSU). Spending more than a decade doing something sounds like a long time, but in the world of woody plant breeding, that is just getting warmed up. That is how I feel about the status of the program — I'm proud of the work we have achieved, but we are just starting to hit our stride.

Below is a summary of a few of our releases that are available now and some small hints at some of the cultivars you can expect to see in the next few years.

***Ribes sanguineum* 'Oregon Snowflake' PP26763**

Flowering currants are a lovely Oregon native shrub. They flower early in spring and are much-loved by pollinators. Unfortunately, they often are leggy and get a bit ungainly in the garden.

To address this issue, we used non-targeted mutagenesis to develop 'Oregon Snowflake'. It is a highly compact cultivar that has dense branching. This white flowering cultivar has proven to be a bit tricky in propagation, but it is available in limited numbers from Pacific Crest Ornamentals (<http://www.pcgroundcovers.com/>);



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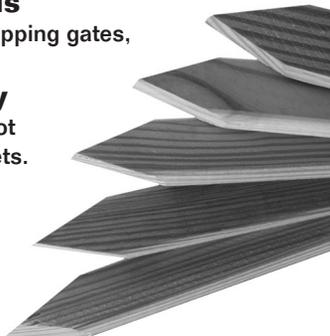
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Cotoneaster 'Emerald Beauty' PP32308 in a production evaluation at the Lewis Brown Horticulture Research Farm in Corvallis. These were finished #3 that were two years old from cuttings and had been pruned only at transplant. PHOTO BY RYAN CONTRERAS



pcornamentals@gmail.com).

It is also available for a non-exclusive license from OSU by contacting Denis Sather (denis.d.sather@oregonstate.edu).

Cotoneaster 'Emerald Beauty' PP32308 and 'Emerald Sprite' PP31719

Cotoneasters used to be grown by the millions but have fallen out of favor in much of the country. In my opinion, there is much to explore in this genus of several hundred species. Our work on this group is ongoing, but we have introduced two improved cultivars.

'Emerald Sprite' was introduced for its novel habit and improved fire blight resistance. It is extremely compact, reaching approximately 8–14" high by 20–30" wide. We have found this selection to be a little less robust than its sister seedling, 'Emerald Beauty', but its "cute factor" is high and I think it has opportunity for the retail market.

'Emerald Beauty', on the other hand, is a production and landscape beast. It finishes a #3 fast and with few touches. Similarly, in landscape trials it has shown itself to form a dense, low hedge of 2–3' high by 4–5' wide and fits the landscape niche formerly occupied by 'Coral Beauty' but is much more uniform.

Both cultivars are being represented by Plant Haven International Inc. (<https://planthaven.com/>) to whom requests for license should be directed. I'm pleased to share that a number of Oregon growers are producing one or both of these selections.



Left: White Icicle™ (left) and 'Oregon Snowflake' PP26763 (right) container evaluation. Both plants were unpruned.

PHOTO BY RYAN CONTRERAS

Right: Cotoneaster 'Emerald Sprite' PP31719.

PHOTO BY RYAN CONTRERAS



Hibiscus syriacus

The name of the game is seedless. I have evaluated dozens and dozens of cultivars and wherever we have them — whether in the gravel pad, field, or greenhouse — we must come behind them and deal with the resulting seedlings. I have seen hundreds of seedlings under landscape plants.

In addition to being a nuisance in the garden, I suspect that these seedlings may contribute to mislabeling, or may have already, if they are allowed to grow up in stock blocks from which stem cuttings are then collected.

We have developed a large ploidy series including 4x, 5x, 6x, 7x, 8x, and 10x and, and have evaluated the fertility of most. This work has shown us the value of manipulating chromosome number to develop new cultivars that have low or virtually no fertility.

The first two selections being released are a white flowered form with red eye spot and a pink flowered form with red eye spot. Both have dark foliage, good branching and have done well in production. Althea is generally easy to propagate and grow, and these are no exception.

I plan to apply for release from the Oregon Agricultural Experiment Station in 2022, and if approved, OSU will seed a U.S. Plant Patent. Both will be available to license from OSU on a non-exclusive basis.

New trees!

Along with cherrylaurels, which are a story for another day, the longest running project I have is breeding for seedless maples. Since 2010, we have been work-

ing on developing Amur and Norway maples that will fit the needs of growers, gardeners, municipalities, and land managers, but not escape cultivation.

This work has expanded to other species, including sycamore maple, hedge maple, and trident maple, but our greatest progress remains in Amur and Norway.

We have generated hundreds of triploids of these species and recently have made some selections that have been propagated and currently are in production evaluation. The stakes are relatively high, so we want to be as sure as possible of their performance and seedlessness. As such, the testing phase will be ongoing ➤



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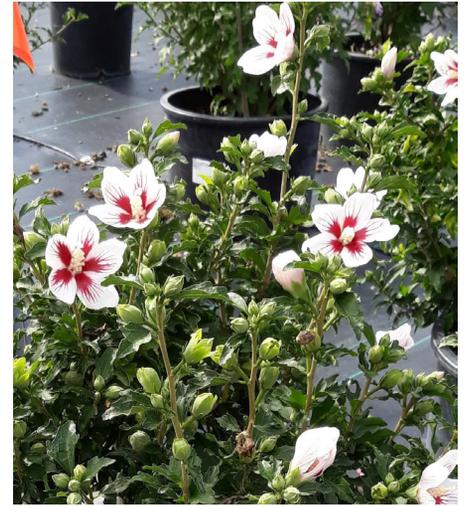
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Two new seedless pentaploid selections of *Hibiscus syriacus*. LEFT PHOTO BY TYLER HOSKINS, RIGHT PHOTO BY JEFF STOVEN

for some time, but progress is being made, so stay tuned!

Another new selection that I hope to introduce in the next few years is a selection of *Nyssa sylvatica*, which was initially made for its incredibly glossy leaf. I commented that it looks like it is covered in lacquer and some growers agreed that it is perhaps the glossiest they had seen. What was a very pleasant surprise was how well it performed in production after grafting.

The original tree has a very large, rounded head so its shape in a production row was anyone's guess. Fortunately, it develops an upright habit with good branch angles and overall has been amenable to large-scale production. Collaborating growers have helped move this selection forward and there is interest from a national branding company. Release may be within two years, depend-



ing on propagule increase.

The last forthcoming introduction I will mention is our weeping, purple styrax. Tom Ranney (J,C, Raulston Distinguished Professor at North Carolina State) has coined the term “scientific serendipity”, which I love, and it sounds better than saying I got lucky.

We set out making crosses to develop the resulting genotype, but I expected it to take several generations to find the right combination, let alone one that was worth

growing. To my delight, we recovered a purple weeper with pink flowers after the first year of crosses. It has proved to be extremely vigorous and collaborating growers have expressed much excitement about this selection and have recommended a national branding company to represent this selection. ©

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