



Quercus x undulata 'Mesa de Maya' PHOTO COURTESY OF HERITAGE SEEDLINGS & LINERS INC.



The next genera(tion)

Breeders diligently pursue what they hope will strike the market's fancy and become a hot seller

BY KYM POKORNY

WHEN THE PERENNIAL craze hit the Northwest 40 years ago, some breeders were front and center with plants to satisfy the gardeners who couldn't wait to create an English garden in their backyard.

The passion for blowsy borders has faded, but the desire for perennials hasn't abated. The palette continues to grow at a swift — some think too swift — rate. Other trends, including layered borders populated with a mix of perennials, shrubs, trees, vines and bulbs, offer wide-ranging opportunities.

But how do breeders know where to turn their concentration in an industry that can take a decade or more to go from R&D to market?

When breeders decide to start a new program, most don't sit down with staff and discuss what will be hot in 10 or 20 years. Not that plant planning is a seat-of-the-pants exercise, but the people in charge admit it's often a hunch based on deeply rooted knowledge of the industry and the plants they've gambled on in the past.

"Nobody can predict if a new plant is going to be a superstar," said Peter van Rijssen, owner of Concept Plants, an independent company that represents 150 breeders. "But as long as *you* know that it is, you need to share it with the world."

That can be a risk, said Dan Heims, founder and co-owner of **Terra Nova Nurseries Inc.**

"Sometimes you lose your pants," he said. "You can have a really good variety

and the market isn't ready. 10 years ago, if you had introduced the coolest new houseplant, people would have laughed at you. They wouldn't be laughing now with the houseplant rerun."

Trends can be fleeting. Sometimes, they don't last long enough to get a new plant on the truck and down the driveway. Are houseplants here to stay? Will succulents continue to take up precious shelf space at garden centers? They certainly will for a while, but then what? That's when instinct, research and open ears come into play. Or, maybe it's just lust.

"There are breeders who focus on a certain genus because they have had a passion about that genus since they were born," van Rijssen said. "But it is important to consider carefully what you want to target."

The oaks of tomorrow

Mark Krautmann, co-owner with his wife, Jolly, of **Heritage Seedlings & Liners Inc.**, sells more Japanese maple seedlings than anyone else in the world, but his most recent passion is oaks.

"It's a very scientific process," he said, smiling. "It's better to make the decision after one beer instead of two."

It was over beers that Krautmann would discuss oaks with Sean Hogan, owner of **Cistus Nursery LLC** and another oak fanatic. "I still get goose bumps. They're totally addictive and exciting."

In all seriousness, though, he said he wouldn't grow oaks just because he loves them. Some he doesn't think will sell

because they won't look like an oak in his lifetime. Market research suggests that unless they look like an oak, customers will walk right by.

That's not stopping him from developing those that he believes will have an audience that opens their wallets. Heritage has been working with oak expert Allan Taylor in Boulder, Colo., to bring out the best. "He's got 50 to 60 selections over the years. We have the production facility and he has the knowledge. I have the feeling these will be really popular if we do our job right."

Already oaks are catching on, showing promise for the future.

Quercus x undulata 'Mesa de Maya' (above), part of Heritage's Southwest Oak line that came from Taylor's selections, was judged Best in Show at the 2017 Farwest Show New Varieties Showcase, an honor Krautmann said wouldn't have happened if the plant didn't speak to people.

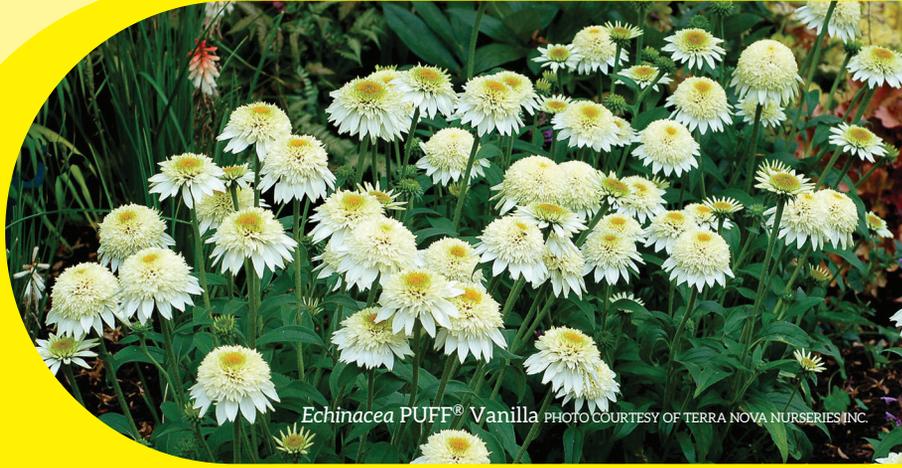
'Mesa de Maya', an oak he calls "achingly beautiful," takes a stance of about 20 to 25 feet with a width to match. This striking tree with blue-gray foliage grows in high pH, salty soils and 120 degrees in Southwest summers. Though drought-tolerant, 'Mesa de Maya' handles irrigation, too, making it an easy choice for urban lots.

Native and hybrid oaks are on the table at **J. Frank Schmidt & Son Co.**, as well. They've introduced nine so far, including **Crimson Spire™** and the new columnar standouts **Skinny Genes®**, **Streetspire®** and **Beacon®**. All are great fits for city streets, especially for parking strips.



Firestarter® Tupelo (*Nyssa sylvatica* 'JFS-red' USPP 26795)

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Echinacea PUFF® Vanilla PHOTO COURTESY OF TERRA NOVA NURSERIES INC.



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Perennial superstars

Though the *Heuchera* genus is what Terra Nova was known for early on, it was begonias that tickled Heims' first interest in plants 40 years ago. Returning to his first love, he and his band of breeders brought forth a wide-ranging collection, 29 of which are now in the catalog and selling strongly.

Another genus Terra Nova can take credit for improving is *Coleus*, once a dusty, leggy group of houseplants that's turned a breeding corner in dramatic fashion. What were muddled colors are now saturated and brilliant.

No longer leggy, the *Coleus* bred by Chuck Pavlich, director of new plant development for the nursery, doesn't even have to be pinched back. They fill a pot rapidly, don't drop their leaves and resist diseases like powdery mildew.

Echinacea may be the biggest perennial star of the last decade and its popularity shows no signs of slowing. There are yellows and oranges and reds and white and doubles now. Some are fragrant. Customers love them. But you never know what the future will bring.

"It's like a botanical clock," Heims said. "At noon, everybody wants one;

it's the hottest thing in the whole world and sells for \$650. At three o'clock, it's still really cool, but the price comes down and the profit is not as high. At six, interest wanes, you have a huge surplus in the greenhouse and start dumping them. At nine, they're gone. At 10, people say, 'Whoa, what's that' and then it gets super popular again."

The timing can be 20 years, or even 60, he said. Just think of dahlias, which were the "it" plant of the '60s. Then the market collapsed. Tissue culture gave them a shot in the arm and now they are going strong.

Shrubs that shine

If one genus wins Most Popular, it has to be *Hydrangea*. "It's a great success story," said David Roberts, general manager of **Bailey Innovations**. "They have sailed into the stratosphere."

Always a popular garden plant, hydrangeas really hit their stride after plant breeder Michael Dirr, professor emeritus at the University of Georgia, found the first reblooming plant growing randomly in Bailey's fields. From there came the ubiquitous Endless Summer® line of hydrangeas, an improvement that ➤

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Vitex agnus-castus PHOTO COURTESY OF BAILEY



Echinacea 'Tiki Torch'
PHOTO COURTESY OF TERRA NOVA NURSERIES INC.

moved hydrangea from grandma's go-to plant into the slot of best-selling plant in the country.

Hydrangeas, a star of the past and present, is almost a sure bet to be a star of the future, as well. Bailey bought Dirr's breeding company and plans to continue breeding reblooming hydrangeas. With 35 acres for R&D in Athens, Georgia, Roberts said the company has the room to bring new reblooming varieties to market that are improved in some way: disease resistance, stronger stems, more compact plants.

Two other genera Roberts looks to for a potential Cinderella story are *Vitex* and *Distylium*. He likes to call *Distylium* "the best plant you never heard of" and sees it as a potential replacement for blight-infected boxwood, a feat any breeder would want to accomplish. It's evergreen, imminently clippable, tough and disease resistant. "*Distylium* will get popular," Roberts promised.

The best-known of the *Vitex* genus is *V. agnus-castus*, a small tree with extreme

drought and heat tolerance. On the other hand, it also endures water-logged soils.

"Pollinators flock to it," Roberts said. "It's very compact, has a wide window of bloom, long panicles of blue flowers and fragrant leaves. I'd like to see some love for it."

He thinks that's completely possible with the breeding Bailey is doing to find a shrub form that constantly reblooms.

Word on the streets

Though it might appear that someone at J. Frank Schmidt & Son Co. has a crystal ball, the process of developing successful new trees is more practical than magical. Guy Meacham, new plant development manager, explains that selecting nursery-worthy trees that have the best sales potential is a top priority when the company sets out to select improved cultivars from a promising genus.

Led by Meacham's predecessor, Keith Warren, Schmidt's saw the need for improved cultivars of street trees years ago and started developing trees tailored

for city life, including fastigate trees that leave sidewalks and driveways straight and smooth.

"We're working with over 30 different genera at one time," Meacham said. "We're really not that strategic. When we have something good, we introduce it."

Schmidt's latest success story is Redpointe® Maple (*Acer rubrum* 'Frank Jr.' USPP 16769). It's a runaway hit since its introduction in 2006 because it checks all the boxes for a great maple: pyramidal shape, dark green foliage and intense red fall color, more tolerant of high pH, fast growing with a uniform growth habit that makes it easier for nurseries to grow.

With a goal of offering native trees that perform well in urban settings, Schmidt is developing and introducing cultivars of native trees such as American Hophornbeam (*Ostrya virginiana*), redbud (*Cercis canadensis*), American Hornbeam (*Carpinus caroliniana*) and Black Tupelo (*Nyssa sylvatica*). Not only do they fulfill the public's desire for natives, they also support the native pollinators and birds people want to save.

Native *Nyssa sylvatica* has gotten considerable attention from Schmidt, where breeding is focused on its potential as a street tree. According to Nancy Buley, the nursery's communications director, their improved cultivars of *Nyssa* have it all: a strong central leader, upright branches with open angles, hardness and dependably brilliant red fall color. These include Afterburner® (*N.s.* 'David Odom'), Firestarter® (*N.s.* 'JFS-red' USPP 26795), Gum Drop® (*N.s.* 'JFS-PN Legacy1'), and Red Rage® (*N.s.* 'Haymanred'). Green Gable® (*N.s.* 'NSUHH' USPP 22951), a handsome new introduction of *Athena* Trees, Inc., is also offered by Schmidt.

Others to watch

Heritage agrees natives should be part of any breeding program. Krautmann espe-

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× *Gordlinia* PHOTO COURTESY OF HERITAGE SEEDLINGS & LINERS INC.



Redpointe® red maple (*Acer rubrum* 'Frank Jr.' USPP 16769)
PHOTO COURTESY OF J. FRANK SCHMIDT & SON CO.

cially gives a nod to inter-generic hybrids like × *Gordlinia* (*Gordonia* × *Franklinia*) and inter-specific hybrids such as Rutgers' *Cornus florida* × *C. kousa* varieties.

But for Krautmann, the plant to watch is magnolia, a plant he has almost the same affection for as oaks. As with so many selections, a possible future magnolia came about completely serendipitously. It all started when Krautmann donated a seedling to a school auction. At two years and two feet tall, the tree was easy to overlook. Now, it's a one-in-a-million specimen.

"We went to visit the owner when she was in hospice," Krautmann said. "We

asked where she found *that* tree. 'From you guys,' she said.' What are the odds of that?"

Exceedingly low. But it happened. That's the world of breeders and those who have an observant eye for truly distinctive, market-worthy plants.

Sometimes, like when Durr found a reblooming hydrangea or Krautmann slapped his forehead over a keeper that

started out in his hands, it's all about luck. But, luck or not, you have to know what to look for and what to do with it after you find it. And it's a slow process.

"When we start breeding a product we don't know if you cross x with y that you'll get w," Meacham said. "If you cross enough times, you might get w. That takes a long time." ➤



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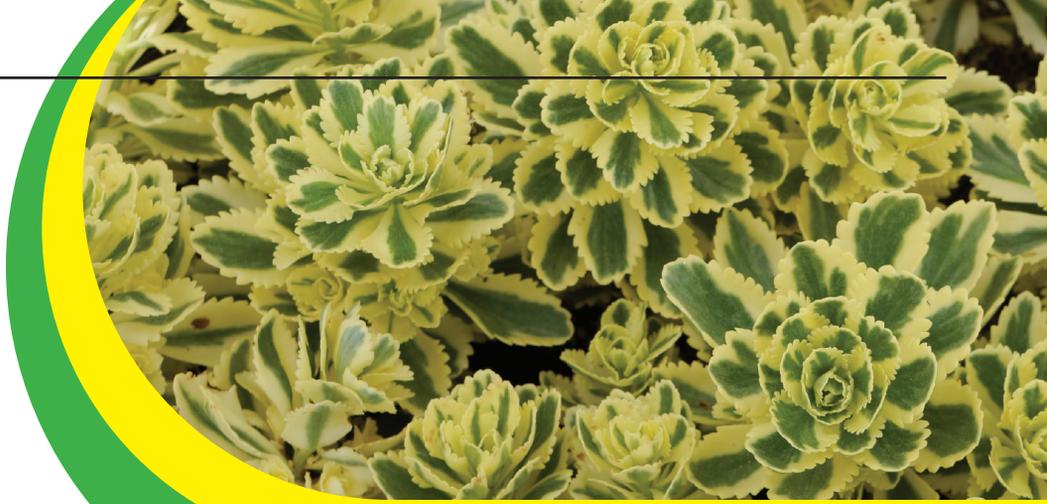


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Back in the perennial world, van Rijssen gives a nod to *Delosperma* as a popular plant of the future. Concept Plants first introduced ‘Jewel of the Desert’ and ‘Wheels of Wonder’ and breeding continues for more of these superstar plants.

“I think that is the next petunia,” he said. “They are so easy and perfect for gardeners and non-gardeners. It has constant impact all summer long without any maintenance. They’re waterwise with a high impact of color.”

Already popular *Sedum* is sure to draw even more attention as breeding continues, van Rijssen said. Proving his point is *Sedum* ‘Atlantis’, which took home Plant of the Year from the Royal Horticulture Society’s Chelsea Flower Show for 2019. It’s no wonder. The low-care, drought-tolerant, pollinator magnet has unusual green foliage with light creamy margins and yellow flowers.



Sedum ‘Atlantis’ PHOTO COURTESY OF CONCEPT PLANTS

Achieving the impossible

Why do breeders get so much joy from their careers? As van Rijssen said, “We love to introduce game-changing varieties where the trade will think, ‘How is that possible.’ How cool is that?”

It’s about giving the public something new, something they didn’t know they had to have until they saw it.

“If you don’t have something to capture people’s imagination it will be like

Baskin-Robbins still having the same 31 flavors after 30 years,” Krautmann said. “They wouldn’t be around anymore.” ©

Kym Pokorny is a garden writer with more than 20 years of experience writing for The Oregonian (Portland, Oregon) and other publications. She is currently a communications specialist with Oregon State University Extension Service. Kym can be reached at kym.pokorny@oregonstate.edu.

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