



# A tree with a peel

Despite some pest issues, birch trees provide a distinctive, well-loved look

BY KYM POKORNY

SALES OF POPULAR BIRCH TREES in Oregon plummeted in the early 2000s when the bronze birch borer made its way across the country and began attacking susceptible plants up and down the Willamette Valley. The voracious insect had been plaguing states in the Midwest and East for years, leaving a trail of horticultural devastation in its path.

Hardest hit were the most-popular white-barked species — paper birch (*Betula papyrifera*), European white birch (*B. pendula*), and gray birch (*B. populifolia*).

It seemed that *B. utilis* var. *jacquemontii* would come to the rescue with resistance. A beautifully formed pyramidal tree with dark green foliage and startlingly white bark, Jacquemonti — or Himalayan — birch didn't quite live up to the hype.

Although it remains a mainstay of the nursery industry, sales are dropping, according to Nancy Buley, director of communications for **J. Frank Schmidt & Son Co.** (JFS), a large shade tree grower in Boring, Oregon. The nursery grows 15

different birch varieties.

"Jacquemonti birch have been a really good seller," Buley said. "But we're not growing as many. The local market is shrinking, primarily because of bronze birch borer. We've cut down our Jacquemonti in our arboretum because they were declining so much. It's been coming on since 2003. No varieties are immune to birch bark borers, but there is some high resistance."

Shawn Nerison, production manager at **Surface Nursery** in Gresham, Oregon, also sees a drop in sales of Jacquemonti, especially in the east, where most of their inventory goes. He blames bronze birch borer, and they are growing less and less of the tree.

Surprisingly, the birch market remains robust in Oregon where birch are the fifth-best selling wholesale shade tree with sales of \$5.8 million in 2019 — more than any other state, according to the U.S. Department of Agriculture Census of Horticultural Specialties. Nationwide, \$26.4 million worth of birch were sold.



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Previous page: *Betula alleghaniensis* 'Parkland Pillar' are container-grown at J. Frank Schmidt & Son Co. This page and opposite: *Betula nigra* 'Heritage' dresses up a corporate landscape with its unique bark.

PHOTO COURTESY OF J. FRANK SCHMIDT & SON CO.

### A top seller

What seems to be selling best for everyone is *B. nigra* 'Heritage', a selection of the U.S. native river birch that's a powerhouse in the nursery industry and a top seller for many growers, including JFS, where it tops the sales among 17 different birch selections they offer.

**Heritage Seedlings**, a propagation nursery in Salem, Oregon, first started growing 'Heritage' for its name and found so much value and interest in the tree that they've kept it in production ever since.

"People would buy 'Heritage' birch and half of them would think it was ours," Krautmann said. "We sold the heck out of them and still do. It succeeded from the get-go. It's bronze birch borer resistant for the most part, it's a great landscape plant and it's easy to root. It's the one that's taken care of us the most."



Krautmann also said he has a soft spot for the late Earl Cully. A keen plantsman, Cully selected 'Heritage', which Krautmann calls "a tree for the ages." Others agree: It is not only a Great Plant Pick in the Northwest but also a

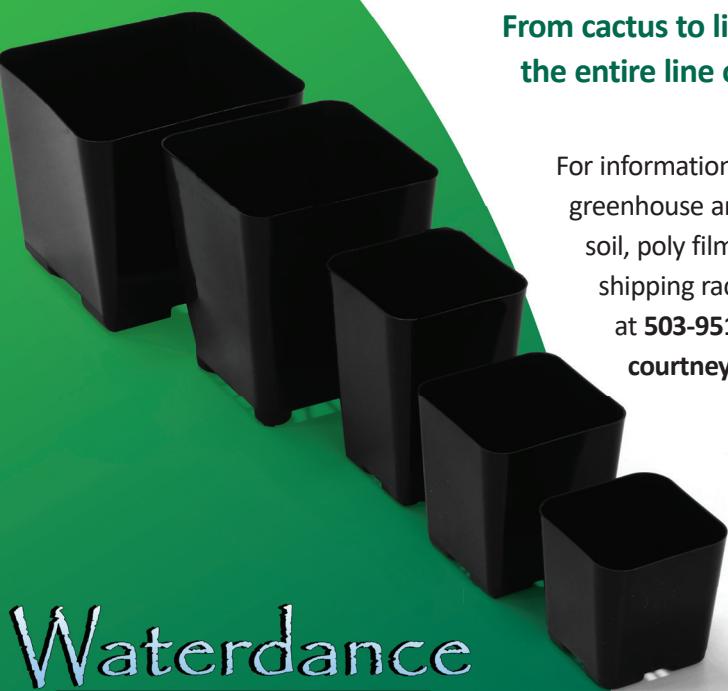
Pennsylvania Horticultural Society Gold Medal Plant back east, both prestigious programs that feature plants appropriate for their areas of the country.

**Robinson Nursery** in McMinnville, Oregon, grows 15,000-plus 'Heritage' in

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five-stem clumps in #3 containers that sell three times more than any other birch they grow, according to Adam McClanahan, the nursery's national field brand development representative. Not as white as the insect-prone but well-loved white-bark birch trees like European birch (*B. pendula*), 'Heritage' rivets it with exquisite white, cream and pale salmon bark that peels back to reveal lighter inner bark. It's a fast grower with a large, pyramidal, upright habit and looks best when grown in groups.

#### Running in packs

Many nurseries grow birch as a multi-stem tree, or as matching singles for the buyer to arrange.

"I don't think of birch as a shade tree," Nerison said. "The look good in clumps or multi-stem. It shows off their peeling bark more. They are kind of a native-looking tree."

Customers must agree. At Robinson Nursery, three- to five-stem trees sell three times as much as single-stem trees. The multi-stem trees really show off birch's attributes. Their exfoliating bark is by far their biggest draw, McClanahan said.

But there are other characteristics in favor of birch. Their leaves are small and easy to clean up in fall. They've got graceful forms, are easy to start from cuttings and quick growers. Because of their many attributes, birch remains a popular tree, and new trees keep the market going.

Cultivars of the fast-selling river birch (*B. nigra*) have been specifically selected for

their highly ornamental, salmon-to-cream colored bark on young trees and more modest size as compared to seedlings that can grow to 60-plus feet tall, Krautmann said. River birch cultivars in the nursery trade are among the most ornamentally appealing of trees year-round.

"River birch also offers notable habitat and environmental mitigation values," Krautmann said. "Most recently, I see it used here in the Pacific Northwest as part of bioswales, accompanied by sedges, rushes, alder, *Symporicarpos* and mahonia since it tolerates seasonally wet soils for long periods. Remarkably, it's also very drought tolerant. I see this more often in non-irrigated plantings in the Midwest than here in the Northwest or the South."

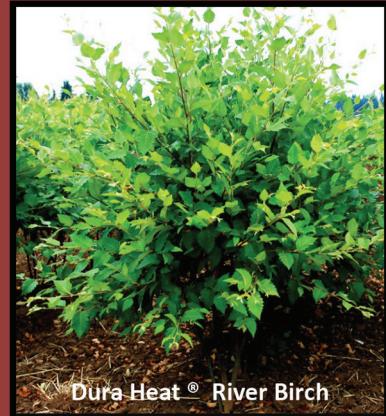
#### Standing up to the heat

In the South, river birch 'Dura Heat' (*B. nigra* 'Dura Heat') is a hit. Its claim to fame is its ability to withstand the heat and humidity. 'Dura Heat' does well in colder areas, too, but doesn't like places with wild temperature fluctuations.

A smaller birch, 'Dura Heat' grows to 30-40 feet so is more useable tree for tiny houses or any smaller space. According to Krautmann, it has glossier foliage and a tighter habit than the species, something that makes him rank 'Dura Heat' over 'Heritage' in those respects. Neither is preferable as street trees; they get too tall for power lines. Both are hardy to Zone 3 and heat tolerant to Zone 9. With growers, it is profitable, quick-turn nursery

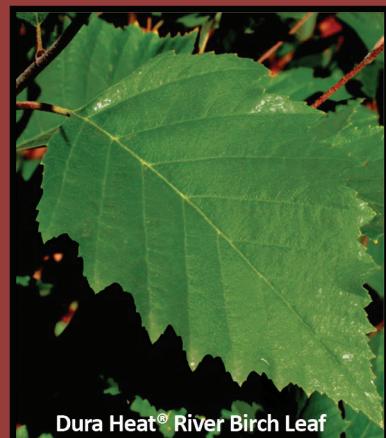


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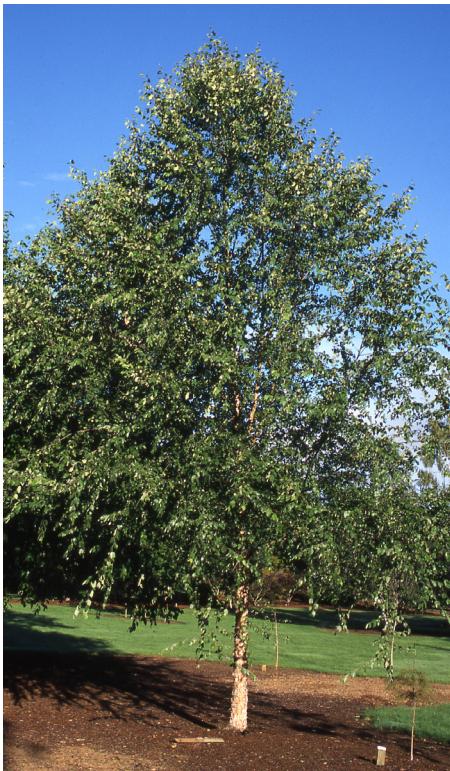
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## A tree with a peel



**Top:** *Betula nigra 'Dura Heat'* works well in smaller landscape designs.

**Bottom:** *Betula nigra 'City Slicker'* is good option for hot and dry environments.

PHOTO COURTESY OF J. FRANK SCHMIDT & SON CO.

trees, reaching market size a year sooner than many tree varieties.

North American native river birch and its cultivars have proven the most resistant to the birch borer. Another river birch selection growing quickly in popularity because of its creamy, almost-white, papery bark is *B. nigra 'City Slicker'*, according to Buley.

"We really like 'City Slicker,'" she said. "It was selected in Oklahoma by Carl Whitcomb. He selected it for its white bark, which starts at a very young age. It has better heat- and drought-resistance than is typical of river birch and the scientific conclusion is that it's the most resistant to bronze birch borer."

Other attributes of 'City Slicker' are its deep, glossy green foliage that turns bright gold in fall and its attractive oval to rounded form. It grows in a pyramidal fashion to about 35 feet tall with a spread of 25 feet. It's best used as a specimen tree and fulfills the need for a smaller tree for shrinking home landscapes.

'Dakota Pinnacle', the most columnar of cultivars at 10 feet wide and 30 feet tall, more than fulfills that requirement. McClanahan thinks it's a fantastic tree and is trying to talk Robinson into growing it.

"We're seeing demand go up for columnar trees and trees that are smaller in stature, especially columnar,"

thinks is a lot of potential, especially for people with higher pH soils and droughty situations. 'Northern Tribute' boasts of ivory bark that exfoliates to copper-bronze and an upright rounded habit that's eye-pleasingly different than the rounded form of the species. The tree rises to 35 feet at maturity and spreads 30 feet. It's hardy to Zone 3.

### Researching durable options

Healthy trees have less to worry about when it comes to bronze birch borers, but stressed trees are fair game. The insect will attack any birch if the tree is already affected by drought or high temperatures. Climate change will only make it worse.

"I'm a firm believer that climate change will negatively impact plants," said Todd West, assistant dean, College of Agriculture, Food Systems and Natural Resources at North Dakota State University (NDSU). "The issue we're seeing in the landscape industry is how do we select plants that can survive changes each year. Weather patterns will be erratic. This will be our biggest issue as breeders: How do

McClanahan said. "People still want the feel of a tree but don't have the room."

Of all birch selections, McClanahan said *B. alleghaniensis 'Parkland Pillar'* ranks as his top choice, though his affections are fickle — they are open to change.

Krautmann points to 'Northern Tribute' as a more-recently introduced river birch from North Dakota with what he



*Betula nigra 'Northern Tribute'* spreads out and is not the traditional birch shape.

PHOTO COURTESY OF J. FRANK SCHMIDT & SON CO.



"we breed for climate change. That's a big question. That's why we're looking at trees that can handle great shifts in weather."

With its cold winters, hot, dry summers and high pH soil, NDSU has the perfect environmental attributes for breeding birch. If a tree lives North Dakota, it lives anywhere, West said. When he came on board in 2011, his predecessor had long been working on birch. Dale Herman, former breeder and professor emeritus in horticultural sciences at NDSU, started collecting germplasm and planting trees in 1974.

"He took a small program and turned it into something special," West said. "I get to play with everything he received from China, Russia, Europe, Canada and Australia. We have an extremely diverse collection."

On 80 acres about 45 minutes from Fargo, Herman created an arboretum now named after him. The farm was purchased in 1973 to expand the horticulture program and get away from Fargo's Red River Valley clay soil.

"The nice thing about North Dakota is our growing environment is very conducive to producing plants for urban areas," West said. "The pH of the soil averages 8.2 so everything has to be pH tolerant or it's gone. We are among the top 10 driest states in the country. So, if you look at urban environment, it's typically very dry and high pH. We select trees for drought tolerance and pH. It's a given. If it

An advertisement for Alpha Nursery. At the top is a large stylized 'A' logo with the word 'ALPHA' and 'NURSERY' below it. Below the logo is a landscape view of a nursery with rows of plants. A Greek key border separates the top from the middle section, which shows a worker in a field. The bottom section contains text and contact information.

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*Betula nigra 'Northern Tribute'* is a relatively new drought-tolerant option.

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evaluation temperature — which separates what will or won't survive.

Birch trees take from 20–40 years to make it to market, West pointed out. "It's a long-term investment," he said. "We evaluate a tree for 20 years before we release it. The grower may take another 10 years. Add breeding into that and you've got another amount of time."

For West, it's worth it. Bronze birch borers may have given the genus a hit, but it hasn't shut it down. Breeders continue on the path of new resistant varieties to feed the public's love of this iconic tree. ☈

*Kym Pokorny is a garden writer with more than 20 years' experience writing for The Oregonian (Portland, Oregon) and other publications. She is currently a communications specialist with Oregon State University Extension Service.*

can't handle high pH and drought, it won't survive here."

Of course, hardiness is always a consideration. The six trees that have

been released from NDSU are hardy to at least Fargo's Zone 4a, some to Zone 3.

West kids that he's the only person in the country who wishes for -40 F weather, his

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