

Master gardeners explain the types of hydrangeas and when to prune them.



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Warmer Summers Impact Local Rhododendrons

From sun scorch to lace bug, local gardeners protect their beloved rhododendrons with these conscientious tips.



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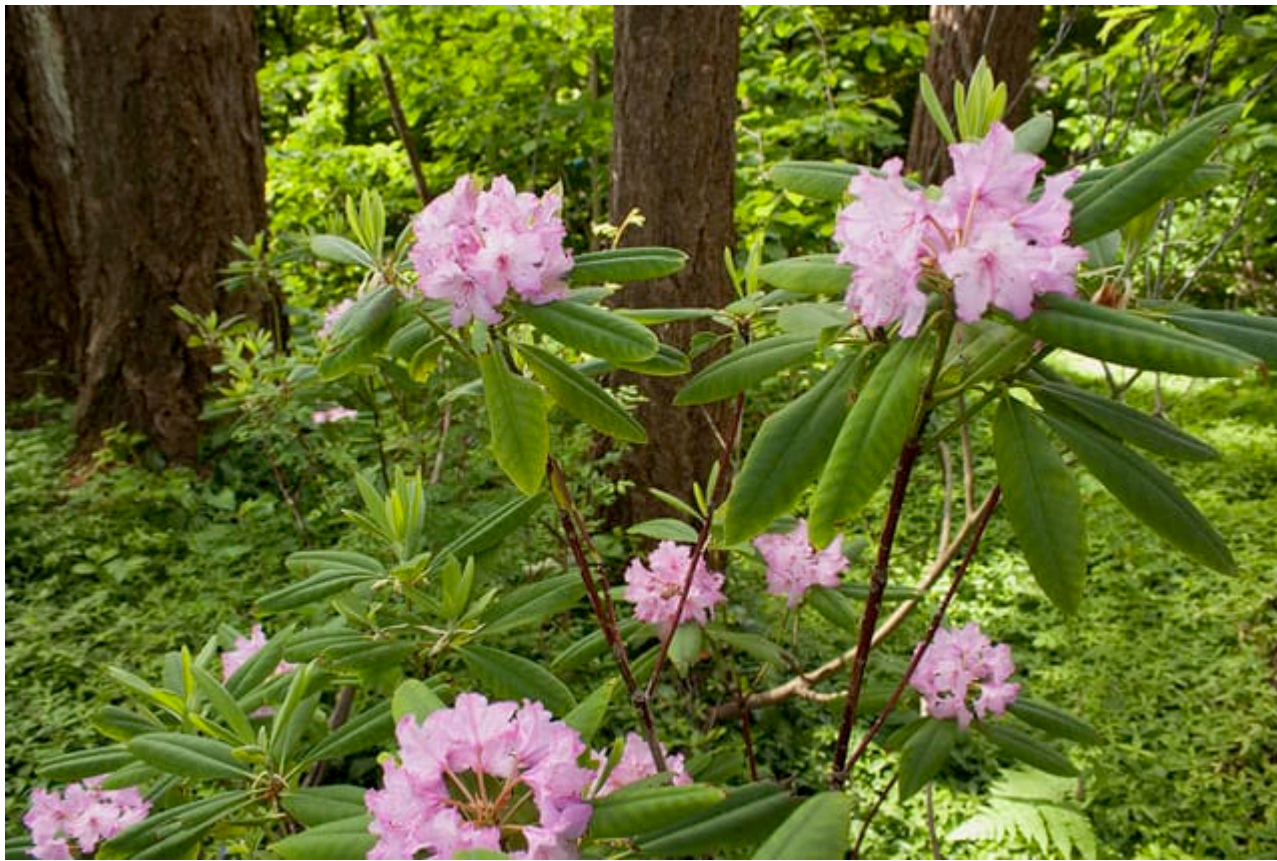
By Sonja Nelson, Skagit County WSU Extension Master Gardener



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Rhododendrons in our gardens, along with the native state flower *Rhododendron macrophyllum*, the Western or Pacific rhododendron in our woodlands, are facing the vagaries of climate change here in the Pacific Northwest as well as worldwide. Gardeners in our moderate climate can no longer assume our benevolent climate will continue its unstinting support for the genus *Rhododendron*. According to the World Meteorological Organization, the average global temperature in 2024 was the warmest year on record at about 2.7° F or 1.55° C above preindustrial levels. Higher temperatures do not bode well for rhododendrons. They like moderation!

Rhododendrons have a long history in the Pacific Northwest. Native Americans used the flowers of rhododendrons in their dance rituals long before western plant hunter Archibald Menzies identified the *R. macrophyllum*. Menzies was the surgeon-botanist for Captain George Vancouver on board the British ship 'Discovery' in 1792. The *R. macrophyllum*, or Western rhododendron, was sent to King George III and introduced to the Kew Gardens in London. The discovery brought together the British and American plant people who eventually produced a creative milieu communities of rhododendron enthusiasts that made the rhododendron the "King of Shrubs" on both sides of the Atlantic.



References to the Western rhododendron (*Rhododendron macrophyllum*) date back to native Americans using rhododendron flowers in their dance rituals long before the late 1700s. © Photo: Sonja Nelson

One hundred years after Menzies documented finding the Western rhododendron, the state of Washington sought a representative flower to display in the 1893 Chicago World Fair exhibit. The Washington State Fair Commission asked the state's women to decide. A letter-writing campaign began, pitting the native rhododendron against, among others, the clover. (The vote was Western rhododendron 7,704 and clover 5,729.) It was officially designated the Washington State flower in 1959.

However, between the time the Western rhododendron was presented at the Chicago World Fair, rhododendron species from Asia, particularly the Himalayas, had been discovered by dedicated British plant hunters and sent back to Britain to adorn gardens there with their vibrant colors and to hybridize. Many Asian species and hybrids were also brought to America, where nurseries introduced them to the Pacific Northwest. Gardeners welcomed them with enthusiasm and love. And the rhodies loved them back with their stunning performance!

Meanwhile, Washington state's native Western rhododendron grew in its native woodlands as the quietly attractive relative of the more flamboyant Himalayan species. In the 1970s the Western rhododendrons regained popularity as gardening with native plants became popular with the backing of WSU Extension and the Washington Native Plant Society. In 1979, the First

World Climate Conference declared climate change a global issue, and rhododendron gardeners' concern turned to the native Western rhododendron and its environment, along with concern for their rhododendron species and hybrids from afar. The natural environment of the Pacific Northwest, so well suited for much of the genus *Rhododendron*, was becoming jeopardized by temperature increases and other disturbances to its blissful climate.



The Western or Pacific rhododendron is native to the woodlands of the Pacific Northwest. Image © Oregon State University



One of the most sun-hardy of all rhododendrons, the Jean Marie Rhododendron is noted for its large trusses of deep red, trumpet shaped flowers. © WSU Clark County

The complexity of a warming climate makes it difficult to predict precisely how rhododendrons will be impacted by our specific climate and what to do if it does. For instance, if temperatures increased enough to leave visible sun spots on the leaves of rhododendrons, the rhododendrons could simply be moved to a site with partial shade. However, the effect of a warming climate on plants is not always straightforward.

One solution to protect rhododendron gardens from climate change damage is to find varieties—both species and hybrids—that are tolerant of temperature increase and ensuing weather extremes.

A member of the American Rhododendron Society, C.J. Patterson of Massachusetts, has focused his interest in rhododendrons on finding drought-tolerant rhododendrons for East Coast gardens. He writes that “rhododendrons, in general, are mostly very resistant to dry conditions once they are established,” citing *R. carolinianum*, *R. maximum*, and *R. catawbiense* as drought

tolerant. He says one of the most drought-tolerant rhododendron hybrids is the hybrid 'PJM' (*R. minus* var. *Carolinian Group* x *R. dauricum*) and other hybrids of the same cross.

The director of the German Rhododendron Society, Hartwig Schepker, supports the idea that the genus *Rhododendron* is diverse enough to cope with the challenges posed by extreme climate conditions, saying we find them or create new hybrids that will be up to the job.

Another rhododendron expert is Glen Jamieson, the editor of the *Journal American Rhododendron Society*, who often writes about the impact of climate change on rhododendrons, which, he says, has been relatively minor annually. In coming publications, he plans to summarize the weather impacts on his garden in British Columbia over the past 40 years, where there have been extreme cold, heat, precipitation, and wind events-all of which can be attributed to a changing climate.

Since it is difficult, if not impossible, to predict precisely the effects of climate change on rhododendrons in the future, conscientious basic care is the best way to help them survive hard times in the future. Washington State University lists watering, fertilizing, and mulching as basic care.

Basic Care for Rhododendrons

Washington State University Extension recommends this regimen of basic care:

Watering

- Water rhododendrons at least once a week, or when the top inch of soil feels dry.
- Avoid waterlogged soil, which can damage rhododendrons.
- Water well in the fall to prepare for winter

Fertilizing

- Use a fertilizer made for acid-loving plants.
- Fertilize in the spring when buds swell and in the fall after flowering.
- Follow the product label recommendations.

Mulching

- Use coarse organic mulch, like wood chips, to cover the root zone.
- Keep mulch at least 4 inches deep, but don't let it touch the base of the plant.
- Mulch helps conserve water, reduce weeds, and moderate soil temperatures

Other Tips

- Plant rhododendrons in well-drained acidic soil
- Avoid dense or compacted soil
- Provide shade or semi-shade
- Prune out dead flowers
- Avoid overhead watering
- Maintain good air circulation
- Prevent injury to reduce the chance of infection
- Clean up and destroy fallen leaves

A Unique Opportunity to Observe Local Climate Change Impact

The coordinators of the various gardens within the WSU Extension Master Gardener Discovery Garden west of Mount Vernon were questioned about possible damage in their gardens due to recent summers with high temperatures. Five coordinators reported no change, and four coordinators reported slight changes. Ironically, six coordinators reported damage from unusual cold spells. The Rhododendron Garden coordinator, however, reported extensive damage to a large planting of small-leaved rhododendrons due to warming temperatures.





Photo © Sonja Nelson

Rhododendrons are divided into two natural divisions: the lepidotes and the elepidotes. Small-leaved rhododendrons belong to the lepidote division based on the tiny scales on the undersides of their leaves. Elepidotes do not have scales and tend to be large-leaved.

Sun scorch on the leaves of rhododendrons has long been an occasional problem for gardeners, but the warming caused by climate change has introduced a new, insidious avenue for damage—the rhododendron lace bug (*Stephanitis rhododendri*). Believed to have migrated from California, lace bugs have taken advantage of the longer growing season in the Pacific Northwest and can complete their life cycle, where, in 2023, in the Rhododendron Garden, it laid eggs and, as a result, destroyed a planting of rhododendrons.



[Rhododendron lace bug](#) (*Stephanitis rhododendri* Horvath) © [Insect Images Photographers: Seastone, L. and B. Parks](#)



Azalea lace bug (*Stephanitis pyrioides*) © Photo: [Jim Baker, North Carolina State University, Bugwood.org](#)

The lace bug affected rhododendrons with small leaves, mainly in the island meadow section of the Rhododendron Garden, namely hybrids 'Ramapo,' 'Ginny Gee,' and 'Patty Bee.'

The rhododendron lace bug has one generation per year. It overwinters as eggs laid on the underside of leaves. Nymphs are about 1/8 inch long and are spiny. Adults are about 1/8 inch long and whitish tan with lacy-looking wings. Damage is usually apparent by early to mid-July. The lace bug sucks on the undersides of leaves and causes stippling on the upper surface of the leaves and tar-like deposits of excrement on the lower surface. Repeated infestations may result in yellowed, sickly plants. Spraying the undersides of the plants to remove the lace bugs was considered impossible because the leaves grow so densely and so close to the ground; thus the affected plants were removed. New planting will take place in 2025.

The related azalea lace bug (*Stephanitis pyrioides*) has four to five life cycles annually. It infects rhododendrons also but has not been found in the Rhododendron Garden section of the Discovery Garden. Both types of lace bug overwinter.



Lacewing insect © Insect Images:
Photographer: Johnny N. Dell

The lace bug is not to be confused with lacewing insects (*Chrysoperla* species) which are native to the Pacific Northwest and important natural predators providing biological control of aphids.

Treatment for Lace Bug

For non-chemical treatment, Washington State University recommends hand removal of adults and nymphs regularly to limit the amount of visible damage. This can be done with a strong spray of water.

If you choose to use a chemical treatment, two recommended pesticides that are legal in Washington are:

- **Safer Brand BioNEEM Multi-Purpose Insecticide and Repellent Concentrate [Organic]** Active ingredient: azadirachtin [*EPA registration number: 70051-6-42697*]
- **Safer Brand Garden Defense Multi-Purpose Spray Concentrate [Organic]** Active ingredient: clarified hydrophobic extract of neem oil [*EPA registration number: 70051-2-42697*]

The best time to treat is May and June. For more information, download the WSU fact sheet on rhododendrons and lace bugs @ (<https://hortsense.cahnrs.wsu.edu/fact-sheet/rhododendron-rhododendron-lace-bug/>).

The Rhododendron Garden in the Discovery Garden allows the public to view plants as they grow in our specific climate. The damage to some of the small-leaved rhododendrons is sad to see, but it gives gardeners the knowledge to make necessary changes in their gardens to keep them beautiful.

Soon, spring will once again bring forth the eye-catching, luscious blooms on the rhododendron hybrids planted in our gardens and the quietly elegant blooms of our native Western rhododendron at the edges of our woodlands.

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Questions about home gardening or becoming a master gardener may be directed to Skagit County WSU Extension Office, 11768 Westar Lane, Suite A, Burlington, WA 98233; by phone: 360-428-4270; or via the website: www.skagit.wsu.edu/mg

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Is Bamboo for You?

If you love bamboo, be a good neighbor and understand how to select, grow, and maintain the plant.



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By Kay Torrance, Skagit County WSU Extension Master Gardener

Bamboo is alternately loved and hated by home gardeners. Typically, gardeners are firmly planted in one camp or the other. Full disclosure: I love bamboo. With its soft green glow and exotic sculpted leaves rustling in the breeze, the impact of bamboo in a garden can be transforming. It invokes tranquility and quiet contemplation. Bamboo is unlike any other plant in the garden.

Bamboo resists drought, deer, pests, and disease. As a landscape plant, it is self-mulching and evergreen. It grows well in poor soil. With all this going for it, why do so many cringe at the thought of growing bamboo? Bamboo has a reputation for being invasive and difficult to maintain. Is that a tired stereotype? Bamboo is not maintenance-free, few plants in the garden are. It requires at least annual maintenance and more extensive care every 3-4 years. Much less than a fruit tree but more than a cactus.

Often, bamboo is planted as a fast-growing evergreen privacy border, with the expectation that no pruning or maintenance will ever be needed once it is grown. Is that reasonable for any plant? Before planting, was the selected bamboo evaluated to see if it had a clumping or running habit? Whether it was short or timber-sized? The key to being in zen with your bamboo is understanding how to select, grow, and maintain the plant.



Phyllostachys Edulis 'Moso' is a common timber variety growing in Arashiyama Bamboo Forest in Kyoto, Japan. Photo © Bobbi Lemme



Phyllostachys nigra 'Black Bamboo' showing the smaller canes from the purchased nursery pot in the back and the new larger green culms produced two years later. Photo © Kay Torrance

What is Bamboo?

Bamboo is the tallest member of the grass family. Believed to originate in China, over a thousand species are growing worldwide in various climates. Some timber varieties grow over 100 feet tall with culms over a foot in diameter. In lush tropical environments, varieties can grow three feet a day. You can also find bamboo thriving in the snow-covered foothills of the Himalayas. Most bamboos originate from Asia, but several species of the genus *Arundinaria* are native to the Southeastern US.

Botanically, the plant is an evergreen perennial. Like all grasses, it has a woody ringed hollow stem known as a culm (commonly called canes). The joints along the culms are called nodes, and branches grow out above the nodes. The plants have an underground stem called a rhizome, and roots are clustered along the rhizome. New plants erupt from rhizomes as buds. These are called shoots once they emerge from the ground. New culms are protected by papery sheaths, which fall off when they mature and harden.

Not only is bamboo beautiful, it is functional. Strong enough for buildings, furniture, and fences, it is still used today in Asia as scaffolding to build skyscrapers. It is a renewable resource for home décor, garden stakes, brooms, livestock food, and charcoal. Tender baby culms are a dietary delicacy.

How Bamboo Grows

Bamboo produces new culms from rhizomes in the spring. They grow rapidly for 30 to 60 days, obtaining their full height. Only then will they start producing limbs and leaves. After the spring surge, bamboo does not generally grow taller or produce new culms until the following year. Individual culms can last 5-15 years before dying if not damaged. Bamboo rarely flowers, and it is typically propagated by division.

Bamboo is generally grouped by rhizome growth habits such as clumping or running. Growth habit is the single most important consideration when choosing a variety for your landscape! Clumping bamboos have U-shaped rhizomes that produce culms that are a shorter distance from the parent. Running bamboos naturally spread by sending new rhizomes many feet away from the parent plant. One hears stories of bamboo taking over yards and damaging sidewalks and foundations. To avoid such problems, carefully choose a variety suited to your selected location. Consider pots or containers instead of direct planting.

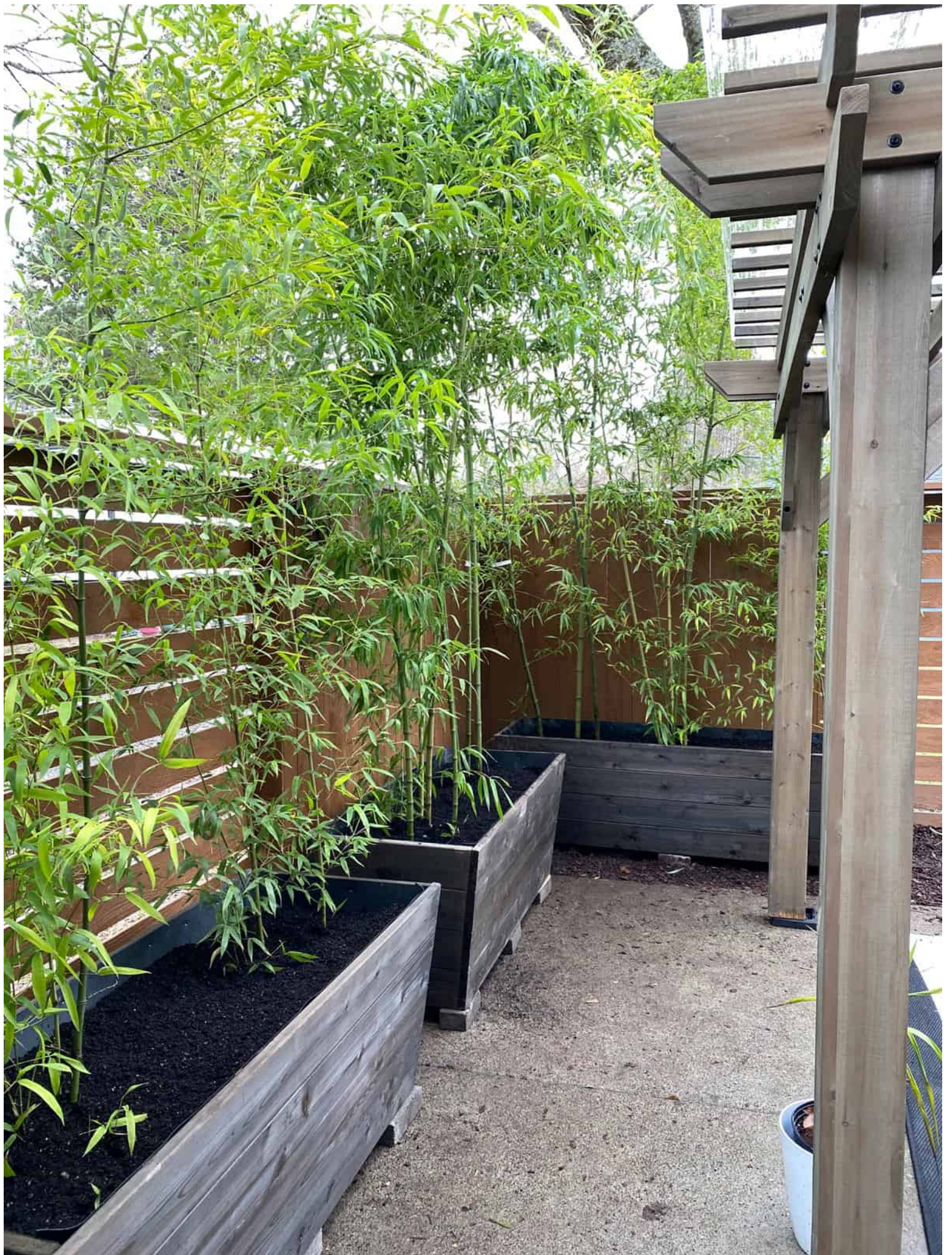
Newly divided bamboo typically takes 3-5 years to reestablish its root system and produce full-size canes. More vigorous running varieties take less time, and clumping varieties take longer.

In an established grove, the new culms are roughly the same size as the existing ones. Proper sunlight, water, and soil nutrition will establish new plants quickly. Adequate watering in the first year is essential while the roots are established.

The growth habit of above-ground branches also varies between bamboos and is important when selecting bamboo for the right look in your yard. Some bamboos suppress branches on the lower nodes, creating a very upright and open appearance. Some are naturally weeping and have a more informal look. Some have a single branch emerging above a node, while others have multiple branches at each node, producing dense foliage. These branches can be pruned, but selecting a variety with the desired growth characteristics is easier than pruning each year.



Qiongzhusa tumidissinoda 'Walking Stick' bamboo has enlarged nodes. It is a fun variety that grows up to 12' (less in a container). It is also an aggressive running bamboo, sending rhizomes a long distance from the source and likes to jump barriers. Photo © Kay Torrance



Bamboo garden and planter studio. Photo courtesy of Bamboo Garden Nursery

Varieties and Selection

The American Bamboo Society lists almost 500 kinds of bamboo grown in the US and Canada. Sizes vary from under a foot to over 100' tall. Many bamboos have gold, blue, red, black, and variegated canes. The nodes can be straight or bulbous, like the walking stick bamboo in Bu Belly or Chinese. There are even varieties with zigzag canes. See the section below for a list of varieties suited for the PNW.

The Pacific Northwest is not an ideal growing location for bamboo. Bamboos grow slower in our cool summers with limited rain. Some bamboos that are invasive elsewhere are not a problem here. For example, *Phyllostachys aurea*, common 'Golden' or 'Fishing pole' bamboo, has a reputation for being invasive. However, here, bamboo grows slower than in climates where summer temperatures average 90+ degrees Fahrenheit. If you plant it in the shade, the growth will be slower. A neighbor planted *Phyllostachys aurea* next to a water garden over 50 years ago. Initially, it thrived, but as conifers grew up around the area, it struggled for light and recently died. Like other grasses, most bamboos can take full sun and will thrive in it. Some prefer part shade. None will grow in full shade.

Is bamboo right for you? Before adding bamboo or any plant to your garden, think about your goals and expectations:

- What do you want to accomplish? Privacy? Texture? Most people select bamboo as a natural evergreen privacy screen or a focal point for their garden.
- How much room do you have? Do you want a forest, a clump, or a pot on your deck? There are varieties appropriate for all of these uses.
- How much maintenance do you have time for? Clumping varieties require less root pruning and are less likely to escape.
- How tall should the plants grow? Although bamboo tolerates pruning well, the resulting boxy look might not be desired. Selecting a variety that matures to the desired height without topping is better.
- Do you want small, delicate leaves that tinkle in the wind or large leaves that rustle? I have a patch of *Pseudosasa japonica* 'Japanese Arrow' bamboo. Its large leaves rustle delightfully in a breeze, growing only to 15'. It provides year-round privacy but is a running bamboo, so its growth needs to be limited with semi-annual root pruning.
- Is there a color preference? In addition to solid green, culms can be yellow, orange, red, blue, silver, or even variegated. Leaf colors can be shades of green, yellow, blue, silvery, and variegated. Beware that many colorful bamboos are from the tropics, so choices for the PNW are limited.

- Do you want pencil-width stalks, medium size, or a diameter measured in inches? If you want a cane that is an inch across, make sure you have room for a forest. If you choose a large-diameter bamboo, you can have bamboo canes for projects around your home. Small-diameter culms can provide endless plant stakes, craft supplies, and weaving material. Having uses for pruned canes makes maintenance enjoyable.
- Are you looking for an open upright structure or a dense natural fence? Running bamboos have more space between the culms and a more upright appearance. Clumping bamboo culms grow more closely together. Some bamboos have more horizontal branches that make a good privacy screen.



Phyllostachys nigra 'Black Bamboo' grown against a foundation and contained by a sidewalk at the Elisabeth C. Miller Library in Seattle. In this shady contained location, it will not grow to its unconstrained height of 35'. Photo by Kay Torrance

If you are considering bamboo:

- Avoid buying large (over ½ mature culm size) running bamboo unless you are committed to containing and maintaining it. See maintenance requirements below.
- Avoid planting a hedge of any type of bamboo along a property line for privacy and not

building a containment system along the property line to keep it on your side.

- Avoid planting bamboo in areas where there is irrigation or where you fertilize routinely. It will grow fast and require more maintenance. Bamboo planted next to turf lawns will soak in all that water and fertilizer and grow quickly.

Planting and Management

Even though bamboo is likely filling the role of a shrub or tree in your yard, manage it like the grass it is. If you want to contain a plot of grass, you either put a barrier in the ground to redirect the root growth, or you can edge (cut) the roots. The same method is required to contain a stand of bamboo. Bamboo rarely seeds and is surprisingly difficult to propagate from seed.

Container Planting

The most obvious barrier to preventing bamboo spread is planting it in a pot or container. Like any potted plant, it will need to be thinned every few years or become a root-bound mess. Choose straight-sided pots and use a perennial root-cutting blade to reduce the size. You can build wooden planters with a removable side, making thinning easier. Don't wait too long. The job just gets more challenging.

Root Barriers

You may have a natural root barrier, such as a rocky terrain or a pond. Despite its tropical appearance, bamboo does not like wet feet. It makes a great companion planting around ponds and will grow best on a small mound, elevating its roots from moisture. You can use a densely forested area as a natural barrier, as bamboo needs some sun. You do not want to plant larger or timber bamboo close to your home, driveway, or sidewalks. Clumping bamboo can also put a lot of pressure on a barrier or pot. Allow room on all sides of the barrier to do maintenance. Don't install a barrier right on a property line. Set it back about two feet so you can manage the back side.

Most yards do not have suitable natural barriers, so fabricated barriers are needed. Typical bamboo root depth is around 8-12", with some timber bamboo roots reaching around 18". A healthy bamboo with vigorous roots will try to dig under or over the top of your barrier, so a barrier height of 24" is common. Barriers up to 30" may be required for timber bamboo. If you mound your bamboo, a shallower barrier can work.

You can use metal, wood, or fabric as barriers. Metal will rust and disintegrate over time, and wood will rot. The most long-lasting barriers are either rigid 40 mil HDPE (high-density polyethylene) or flexible EPDM (ethylene propylene diene monomer). Alternatively, you can buy a thick EPDM pond liner and cut it to size. Standard landscaping fabric is insufficient for control. You can buy molded pond liners in various shapes and fill them with dirt instead of water. You will need to cut holes in the bottom so they drain, but don't cut them too close to the

sides.

Barriers will do a good job of containing the bamboo, but you still need to inspect the area during the spring and summer and check for the occasional rhizome trying to go over or under the barrier. The bamboo stand will overgrow its area over 3-7 years and must be thinned. It is best to do this before the roots become a solid mass and are hard to cut. Plan on removing a third of the bamboo every 3 years. Battery-operated or electrical reciprocating saws with long wood or pruning blades make the job easier.

Perimeter Trench

Another method of containment is a loosely filled perimeter trench. Dig an 18" deep trench about 12-18" wide around the bamboo location. Fill it with sand, pea gravel, or loose soil. Don't use soils with silt or clay, as they will compact and harden over time. Bamboo rhizomes will continue to grow and expand freely when they enter the trench. In the fall or early spring, use a spade (the ones with serrated blades work best), root saw, or reciprocating saw with a long blade and work around the perimeter, cutting off and removing any new growth that has entered the trench. Make sure to pull out all of the rhizomes. You do not need to worry about the fibrous roots.



Fargesia nitida 'Jiuzhaigou' is a clumping bamboo. This cultivar is 'Red Fountain' with red canes. Many cultivar of this variety can be found with different colored canes. © Photo by Kay Torrance