



NORTHWEST HORTICULTURAL SOCIETY

GARDENnotes
SPRING 2020



Rhododendron 'Ruth Motley'
Photo by Richie Steffen



WHAT'S IN A NAME?

Words by Daniel Mount

WALKING THROUGH THE HYPER-URBAN and overly electrified world that is modern Tokyo last fall, I found it hard to imagine a natural environment ever existing there. Certainly, Tokyo is famous for its many parks and gardens, and even in the most developed areas, there are green rooves and green walls. *Yanagidorii*, literally “willow street,” which runs through central Ginza toward the Imperial Palace, is lined with weeping willows in the near constant shadow of skyscrapers. You can even see in dingy back alleys an urban gardener’s collection of styrofoam seafood containers, plastic pots and old cans hosting everything from camellias to mums to ferns.

The Japanese love their ferns, and you can see them in containers on many doorsteps, used in window displays, or even in the caverns of the subway system at florist stands. One of my favorite Japanese ferns is the Tokyo wood fern (*Dryopteris tokyoensis*). As with many plant names, there is a bit of a deception here. One might assume that this fern is found exclusively, or at least predominantly in Tokyo. Actually, it has a rather wide range throughout the Japanese archipelago, on the Korean peninsula and in southeastern China. The use of the place name in this fern’s botanical name is based on where it was first officially collected.

The Tokyo wood fern was named in 1905 by the Japanese botanist Jinzo Matsumura, the then director of the Koishikawa Botanical Garden at the University of Tokyo. This happens to be the only place I saw the Tokyo wood fern in Tokyo, though I must admit I wasn’t looking that hard elsewhere.

Matsumura worked closely with Tomitaro Makino, known as the “Father of Japanese Botany,” and who is also attributed with naming this fern. At the time, western botany and the Linnaean system of binomial nomenclature were just taking hold in Japan. Japanese botanists would send specimens of plants they collected to European institutions to be given botanical names. Makino changed all that, collecting and naming Japanese plants himself. Though he never finished grammar school, he received a Doctorate in Botany from the University of Tokyo. He named over 2500 Japanese plants, 1000 of which were new to science.

Makino named about 30 of Japan’s 600 or so species of fern, and Matsumura named close to ten. The only fern they share the credit for is *D. tokyoensis*. Matsumura and Makino only gave two other plants the specific epithet of *tokyoensis*, and a handful more the specific epithet of *yedoensis* referring to Edo, the earlier name for Tokyo. Most of these plants’ natural ranges, though they included Tokyo, are not exclusive to Tokyo. While

one, *Alectrorurus yedoensis*, grows only on two southern islands of Japan, far from Tokyo.

The Tokyo wood fern is called *tani-hego* in Japanese, *tani* meaning “valley” and *hego* being the Japanese name for the spider monkey tree fern (*Cyathea spinulosa*). Tokyo woodfern, though it can get to three feet, is hardly a tree fern, but it does like the lowly wet places that a valley might afford.

It thrives in my Snoqualmie Valley garden bathed seasonally in flood waters in a soil that rarely dries out. It is bright of color and upright in habit. Perfect among the bulkier perennials in the shade garden like hostas, Rodgersias and astilbe. The Tokyo woodfern promises to be a big bold fern over time, so it is ideal for tropical effects in Pacific Northwest gardens.

Though its name might conjure laser robot dinner theatre and 37 Metro Tokyoites crushing into subways, it is really quite low-key, named for a Tokyo once wild and forested.

But, now, long gone. ☹

Daniel Mount is a former NHS board member and a frequent contributor to GardenNotes and other publications. You can read his blog at mountgardens.com.

GARDENnotes

Editor

Rick Peterson
rickp@millergarden.org

Designer

Sonya Kopetz
sonya@kbdesign.com

Contributors

Laura Blumhagen
Del Brummet
Jason Jorgensen
Karin Kravitz
Daniel Mount
Richie Steffen
Brian Thompson

Dryopteris tokyoensis – photo by Richie Steffen

SEED PROPAGATION AT HOME

Words and Images by Del Brummet

STANDING IN THE ELISABETH MILLER BOTANICAL GARDEN in mid-September, we looked up into an unusual shrubby oak tree, *Quercus pontica*, commonly called Armenian oak. The bright green leaves were large with a showy yellow midrib running down the center and prominent veins leading to a serrated edge. In the fall, the Armenian oak can light up the lower garden with its golden yellow leaves; and, when they inevitably drop, the open circular branching structure is revealed. This shrub is native to the Caucasus Mountains of southeastern Europe, but the tree in the garden does not have a mature mate nearby so it rarely sets acorns.

Last fall, we scoured the tree and had nearly given it up as another unfruitful year when we were elated to find, nestled in the upper branches, a very large, green acorn. We observed the fruit over the coming weeks as it slowly took on a light brown color and, when it was easy to tease out of the cap, we collected it and sowed it in soil immediately. Less than half a year later in early spring, a

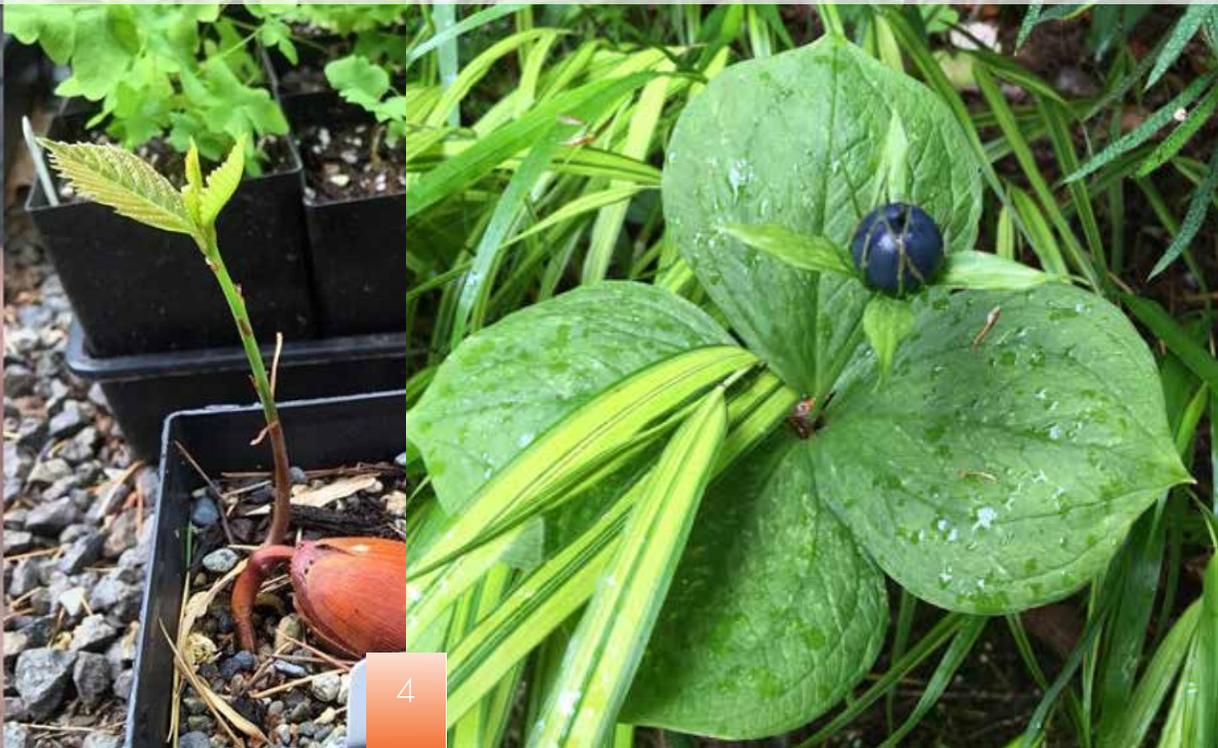
cute little set of glossy bronze colored leaves had emerged from the cracking nut supported from below by the first root.

It is an incredible feeling to find a living plant beginning life, especially after one goes through the effort of collecting, cleaning, and sowing seeds, then waiting anywhere from two weeks to many years. The value put on self-grown plants can be misguided, but oddly satisfying. It's possible to find unique forms from varying stature and habit to unusual leaf color, some good some bad. When propagating you will fail and succeed. Propagation takes patience and routine; but, through practice, much is learned about what plants need and how they reproduce. Most importantly, it's possible to grow plants you rarely find in the nursery trade. In this article, I'll introduce you to the basics of seed propagation from the materials you could use to the mechanics. I will delve deeper into some parts of the process that are less talked about – namely collection, cleaning and the fascinating but frustrating phenomenon of seed dormancy.

Quercus pontica propagation



Paris quadrifolia with fruit



The Seed

Propagating plants can be done through many techniques.

Asexual propagation is done through division, layering, grafting, tissue culture and cuttings which produce clones of the parent plant vegetatively. **Sexual propagation** by spore or seed, on the other hand, produces genetically unique individuals and what follows is focus on sexual propagation by sowing seed which has both its benefits and drawbacks.

In most cases, a seed results from fertilization of the egg by pollen; although, when it comes to plants, there is almost always an exception. Seeds can have a variety of structures; but, put simply, there is an outer protective **seed coat**, an **embryo** and nutritive tissue surrounding the embryo known as the **endosperm**. The goal of seed propagation is to germinate the seed and produce a healthy mature plant. To germinate seeds, many things need to be just right. Some plants can germinate readily given the right conditions while others can have much more stringent requirements or need to be broken out of dormancy. Seeds can also be dead or inviable and won't sprout for you no matter what you try or how much you yell. One of the important first steps is collecting ripe, healthy seed.

Seed Collection

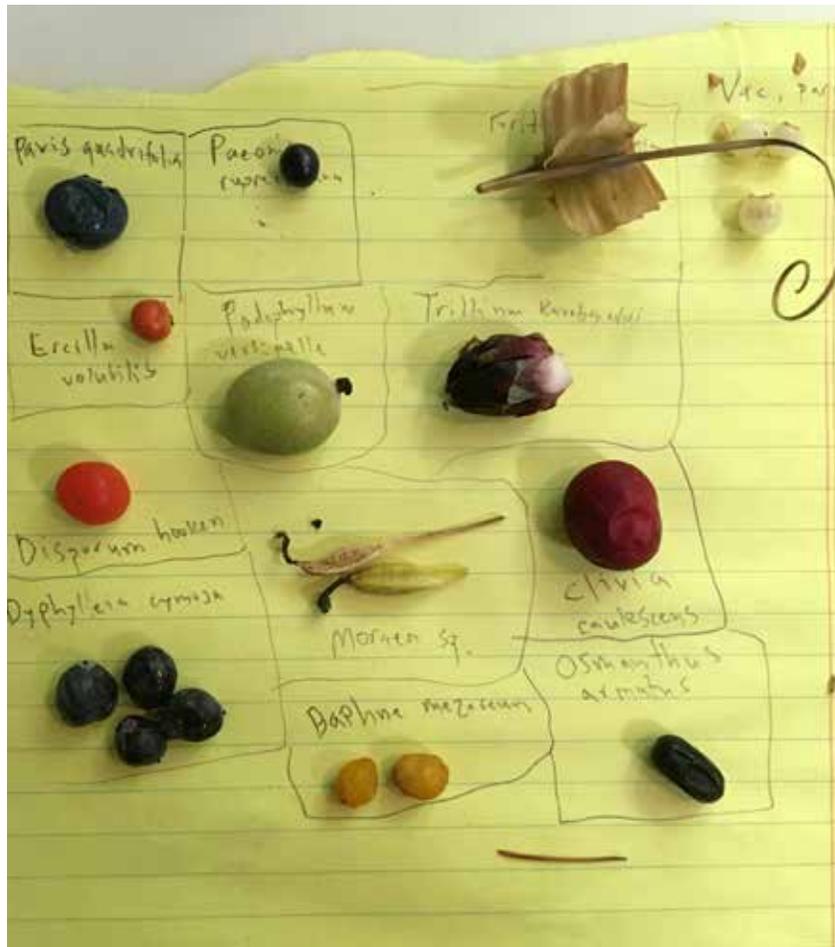
Knowing when to collect seed is useful and in some cases can only be learned through practice and observation. There is valuable information in books, on the internet and in the experiences of fellow propagators to draw on when it comes to collecting ripe seeds of particular species. A good source for researching propagation techniques of native plants of Canada, the United States and Mexico is the Reforestation, Nurseries, & Genetics website

sponsored by the USDA – <https://npr.rngr.net/> (under the Propagation Protocols tab). Through this site, I have gotten valuable information for native species which I've been able to use for related species from other continents. One example of a plant that takes some observation to collect is our native *Vancouveria hexandra* (inside-out flower). In *V. hexandra* the capsule opens early to expose immature seeds. It's important to wait until the seeds begin to darken to light brown before collecting. Another unusual feature of *Vancouveria* is an attachment to the seed known as an **elaiosome** which is present in many understory forest species like *Trillium* and *Viola*. The elaiosome is a fleshy

attachment attractive to ants which aids in dispersal of the plant's seed through an evolved process called myrmecochory. *Epimedium*, which are related to *Vancouveria*, have the same attachment and the seed similarly needs to be sown fresh as they are both short-lived. Knowing the relationship between species can be helpful in propagation for trialing methods between closely related groups.

I'll use *Trillium* as another example and reference it for each step in the propagation process. *Trillium* fruit will develop over a relatively long period of time, and it is important to not collect the fruit until it is soft and squishy to

the touch. It should pull off the plant readily which you can then save in a plastic bag or Tupperware until it is time to be cleaned. Another important thing to consider when it comes to collection is whether the seeds should be kept moist or left to dry out. Some plants need to be kept moist all the way from collection to sowing. Seeds collected from *Clivia* (a relative of *Amaryllis*) are an example of seeds that need to be kept moist. The pearly looking seeds should either be sown immediately or stored in a moist paper towel overnight before planting to keep wet. *Clivia* seeds can sprout in just one to two weeks after planting. Then, it is just seven short years until first flowering! On the other hand, some





Clivia seed



Clivia seed sprouted



Clivia seedling

seeds should be allowed to dry out before sowing. Martagon lilies, and some other members of the Liliaceae, or lily family, should be allowed to ripen until the point that the seeds are dry and papery. With these plants I have endeavored to let the seed ripen to maturity on the plant before collecting. There are some plants where it is possible to collect the seed earlier and to let it ripen in a paper bag. This can be helpful if you are worried about losing seed to predation or natural dispersal. Another method is to use a fine mesh bag tied around the developing seeds which can help with species that eject their dry seeds.

Cleaning the seed

Seeds come in many packages in nature from the fleshy red, green or blue fruits of *Trillium* and its relative *Paris* to the dry brown pods of *Penstemon* and snapdragons. For those fruits that are fleshy, removing the material surrounding the seed is often important for a few reasons. Some fruits that are left untended have the potential to rot or mold and affect the seed's germination. There is also evidence that removal of the fruit increases germination in many species when it comes to simple mechanical removal. I often use a fine mesh sieve along with a bowl of water to slowly wash and isolate seeds. The fruit will float away from the seeds and you can pour the separated fruit into another bowl to isolate the seeds (just don't lose them). On the other hand, for some fleshy fruits it can aid the process to keep fruit in a plastic bag until overripe and soft, then soak prior to cleaning to help the pulp degrade. This is

the case for *Trillium* fruit as it is easier to clean if you let the fruit sit for around a week. Additionally, soaking the fruit can help the elaiosome detach, limiting the potential for mold if stored.

When it comes to dry seeds it's helpful to have an instrument like a popsicle stick or needle to help clean the chaff (dry non-seed material) away from the seed. One method I've found is to put dry seeds on top of a piece of paper and tap the seeds away from the chaff which works well when the seed is heavier than the chaff. Properly cleaned and dried seeds can be stored for many

species in paper envelopes in the crisper drawer of the fridge.

As I touched on earlier some seeds have a shorter life and must be sown fresh like *Narcissus*, *Impatiens* and *Primula*. There is a large range in how long seeds can be stored. One of the oldest seeds to have been radiocarbon dated and grown into a live plant was the arctic flower *Silene stenophylla* clocking in at around 32,000 years old!



Seed in propagating containers

Germination

Before we get to seed dormancy, which can be limiting to germination, let's start with the basics. There are four key environmental factors which affect germination:

water, oxygen, light, and temperature. **Water** is very important to germination as one of the key moments in germination is imbibition of the seed by water leading to swelling of its tissues and resulting enzymatic activity. Once seeds are sown, they should be kept moist but not in standing water; any dry periods can kill the



Stauntonia fruit



Stauntonia fruit in half



Stauntonia seed cleaned

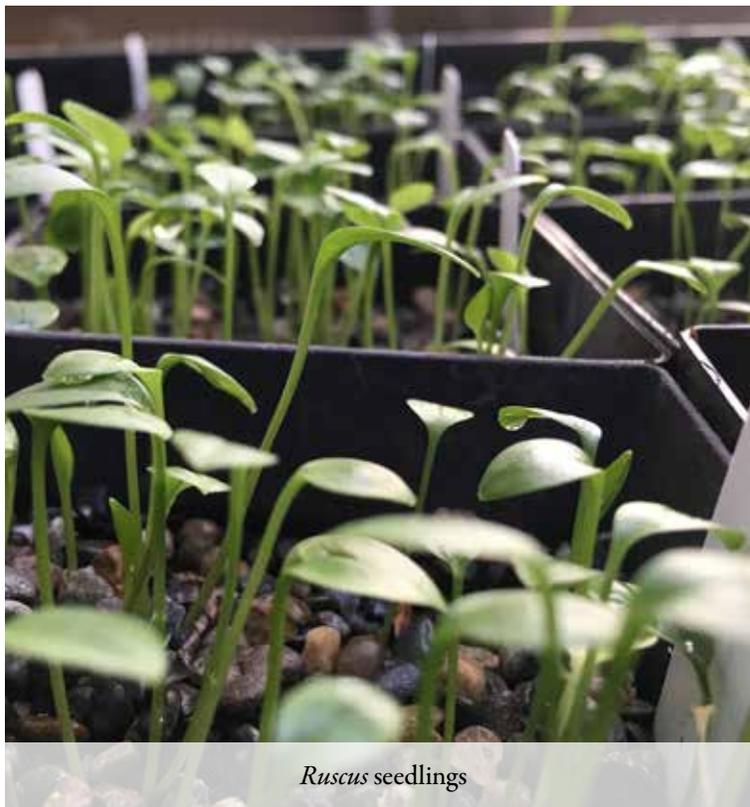
embryo while being too wet could lead to rot. **Oxygen** is another important factor as cellular respiration occurs in seeds. The medium the seeds are in should be loose with proper aeration. **Light** is required for germination in some species but not others. The fine seeds of *Begonia*, *Geranium*, and *Impatiens* need light to germinate and should be sown on the soil surface or very near it. This is common for smaller seeds and may be an adaptation to encourage finer seeds to germinate closer to the surface of the soil. Light can also inhibit germination of some species whereas in others it doesn't appear to matter either way. **Temperature** is another important factor and some species only have a range of temperatures in which they will sprout. By using heating mats and full-spectrum lights you can encourage seeds to germinate indoors where it would be difficult or impossible to start outdoors in your climate. At the Miller Garden we grow many species outdoors which puts them through the cold winter temperatures, but we also start seeds indoors as well as in the greenhouse.

Hard Nut to Crack

When it comes to seed dormancy, it may be important to utilize some form of pre-treatment depending on your goal. Some species will germinate in lower quantities or not at all without proper treatment whereas others may just take much longer to germinate but will ultimately have similar numbers sprout. An example of this in our nursery was *Ehrendorferia chrysantha* which is a cool relative of bleeding heart from California. Smoke treatment was

recommended; but, I sowed it without any treatment, and it took three years to sprout. I talked with someone who received the same seed but used liquid smoke for pre-treatment and their seed sprouted in one year. This pre-treatment method is to try and break a chemical/physiological dormancy. Seed dormancy is complex, but it makes sense for plants to have evolved processes that prevent germination at inopportune times. I'll go through a few examples of the many ways to try and break dormancy.

Thick Seed Coat - Physical dormancy



Ruscus seedlings

Scarification is a method used to imbibe water into the seed coat in species with a tough seed coat like *Juniperus*. Submerging in hot water, just below boiling point, is one method. Another method is using sandpaper, a razor or a needle to nick the seed coat.

Winter Stratification - Physiological Dormancy

Some seeds require subjection to cold temperatures for a period followed by warmer temperatures. *Trillium* needs a three-month period of chilling followed by a three-month warm period plus a second 3-month cold period before it will germinate. Although there may be a few sprouts the first summer, it isn't until after

the second winter that we see the majority germinate. Cold stratification can be accomplished in the refrigerator which can help for species that have longer cold treatment requirements than our winters provide.

Finally, Set-up and Materials!

For starting seeds indoors such as small seeds, we sow on the soil surface and use a container or tray with a plastic cover to keep the seeds humid. We often use a media with peat in it for indoors germination; but, if you want to avoid peat, you can also use coconut coir. It's important for the medium to be well aerated, uniform and sterile. Soil-less mixtures of peat or sphagnum moss with perlite or vermiculite work well.

Most of our propagation is done outdoors on raised tables. Keeping the containers off the ground seems to help with slug damage as well as the propagator's back. It's important to cage seeds using something like hardware cloth wire mesh to keep mice, birds and squirrels from messing with your precious seeds. It is important to use clean and sterile containers for propagation. Using solid and rigid containers confined in a tray can help keep your containers from spilling and losing the seed.

Our medium for outdoor seed starting is one-part compost, two parts pumice and two parts bark with the large chunks sifted out for seed starting. A light covering of fine pebbles (sand screw) over the surface of the soil prevents liverwort and moss from growing but you can also use chicken grit or similar materials.

Seeds are sown one to two times their diameter deep. In some cases, seeds may need to be sown nearer the surface or even on top of fine gravel when it comes to some alpiners. Remember to label and date your seeds.

Transplanting

This can be one of the trickier parts of the process. One way to minimize transplanting is to sow seeds individually into plugs but this doesn't work for species with low germination percentages. Another option is to sow many seeds in one container and then pinch out all but the strongest seedling. I've heard this method can work for growing our native Pacific madrone (*Arbutus menziesii*) which resents transplanting. For many plants we wait one year until the seedlings are more developed before we tease them apart using a fork or a sharpened chopstick and move them to a flat or larger containers.

You're on your own from here. Good Luck! ☺

Del Brummet is Head Gardener at the Elisabeth C. Miller Botanical Garden and a board member of NHS.

NEW MEMBERS

Sue Auld	Tara Macdonald
Kayla Balassone	Jane C MacKinnon
Tom Barrett & Barbara Stock	Marcia L Miller
Nora L Bauser	Megan Myers
Shamora E Bearwood	Yvonne Naum
Dennis Beatty	Tina Neiders
Hazel Beatty	Stacia M Neil
Barbara D Beers	Maria A Nelson
Debra Behrens	Ema Nemes
Tracey M Bernal	Kathleen Newcomer
Todd P Black	Julie O'Donald
Andrea A Blukis	Margaret Pageler
Carol Burns	Eugene Parnell
Dana Burns	David Peterson
Michelle R Burton	Kate B Phillips
Sarah J Campbell	Thomas E Phillips
Karen Carnot	Jennifer J Power
Beth A Clark	Randy Rahn
Joan M Clawson	Pranhitha Reddy
Trina A Colburn	Brenda Reiss
Alison Conliffe	Kate Riley
Mary Pat P Connors	Carol L Ringold
Kay Crampton	Daniel F Romano
Anna G Daniel	Margaret M Sandvig
Shelle Dier	Jennie Sanford Arnold & Douglas Lapchis
Ananda Dorje	Barbara Schmitt
Kathleen S Dwyer	Teri Schroeder
Alice Espey	Lynn Schueler
Carol Fleming	Judith E Scott
Jill K Gallagher	Laurel Skillman
Eugene Gavriluk	Patricia J Skjervheim
Susan K & David Gillman	Virginia L Sly
David Gravelle	Crane A Stavig
MariAna J Gustafson	Rebecca & Alexander Stewart
Colleen M Hagan	Kathleen E Stout
Jess J & Alex Hagenah	Frank Stowell
Dave & Sandy Hanower	Pamela Terhorst
Holly Harris	Mollie Tremaine & Dick McKinnon
Jeannie R Harris	Michael Turner
Susan Hedrick	Susan F Uland
Joan K Horn	Laur Vytlačil
Kristen Hunt	Barbara H Wall
Signe Rosa Hunter	Renee Wall
Severne Johnson & Elizabeth Sheridan	Amy L Warrick & James Kelly
Lisa Kjaer-Schade	Jenifer S Wiefeldt
Jocelyn Lear	Emily A Wilkins
Carol J Leppa	Stephanie Woods
Maureen B Linehan & Marta Acedo	Julia L Wootten
Vanca Lumsden	

GREAT PLANT PICKS SPOTLIGHT

Plants for a Better Planet

GPP Selections for Drought Tolerance, Pollinators, and Natives!

by Richie Steffen and Rick Peterson

Images by Richie Steffen unless otherwise noted

Triteleia 'Queen Fabiola'

THE MILD TEMPERATURES OF THE PACIFIC NORTHWEST'S modified Mediterranean climate is a blessing to gardeners; however, all is not necessarily ideal either. Long, wet periods in winter are offset by dry summers with nary a drop of moisture for many weeks at a time. Fortunately, there is a wide variety of plants available in nurseries that will tolerate these extremes with, of course, some great performers being native to our region. In celebration of the 50th anniversary of Earth Day, Great Plant Picks is highlighting a variety of outstanding plants that help make a better planet. As gardeners we have the opportunity to take a lead role in stewarding our landscapes. By choosing plants that use water wisely and support wildlife diversity (including insects), we can keep urban areas as a healthy

oasis for birds, butterflies, bees and much more.

Even though the summer of 2019 was quite atypical with some amount of rainfall every few weeks, the summers in prior years had much hotter temperatures than average and with longer periods of drought. For those who want to water less, there is an abundance of great plants that will tolerate not being watered during the dry cycles of summer. These drought tolerant trees, shrubs, and perennials can withstand going without being watered for weeks on end; although, if you are planning an August barbecue, you may want to water once every two to three weeks to keep plants looking more perky.



Iris tenax



Epilobium septentrionale 'Select Mattole' (Image courtesy Joy Creek Nursery)

PERENNIALS

One of our favorite genera (among way too many!) is *Iris* and the native *Iris tenax* is both exquisite in flower and reliable in the garden by being drought tolerant once established as well as adaptable to both sun and light shade. In May, these low mounding, evergreen perennials produce a profusion of blooms ranging from pale lavender, rich purple to pale violet-blue that show well against the evergreen foliage.

Although south of the GPP region, there is a great northern California native, *Epilobium septentrionale*, formerly called *Zauschneria septentrionalis*. The latter genus is now lumped in with *Epilobium* (don't get us started on name changes, or at least Rick!). Nevertheless, *E. septentrionale* 'Select Mattole', a cultivated variety of this species, is spectacular in flower and foliage. The frosted silver leaves are a brilliant contrast to the bright orange-red tubular flowers from mid-summer to early fall, and hummingbirds feast on the nectar. This perennial has a tidy, very slow spreading habit. This particular species is the most

tolerant of our winter wet as well as cold and performs year after year with no problems. Although deciduous in winter, it regains the lustrous silver foliage by July when it begins to bloom again for months.



Achillea 'Moonshine'
(Courtesy Blooming Nursery LLC)

Another perennial beauty for cottage gardens, herbaceous borders, cutting gardens, or small spaces is *Achillea* 'Moonshine', a bold, beautiful summer-bloomer with bright lemon-yellow flowers and with upright stems clothed in gray-green, fern-like foliage. The flat-topped umbels are highly attractive to pollinators such as butterflies and the plants tolerate lean, dry soils.

BULBS

Many bulbs are drought tolerant and in the latter days of winter who would not welcome the bright flowers of crocus. A favorite is *Crocus tommasinianus*. Being a species rather than a hybrid, the flower color is variable ranging from pale silver-lavender to dark purple. The wispy green foliage, with a thin silvery median, emerges right behind the flowers and expands as the

Crocus tommasinianus 'Barr's Purple'



Triteleia ixioides





Philadelphus 'Belle Etoile'



Arbutus unedo

blooms fade before going dormant by late spring. If well-suited to a garden site, this crocus may naturalize. *C. tommasinianus* 'Barr's Purple' is a charming selection with darker purple tips and lighter centers. Daffodils are an excellent choice if you have problems with deer. Early bloomers like the widely available *Narcissus* 'Tete-a-tete' or 'February Gold' are a delight in late February and early March. A classic late bloomer is the poet's narcissus, *Narcissus poeticus*, the tall stems with fragrant white flowers sport a red-ringed yellow center in May.

We have a wealth of native bulbs as well. Every garden should include a patch of camass. Their tall purple-blue spikes of flowers are a welcome sight in late spring. Look at the Great Plant Picks website (www.greatplantpicks.org) for a selection of the best. Another group of late spring bloomers are the wild hyacinths, grouped in the genera *Brodiea*, *Tritelia* and *Dichlostemmon*. The cultivars *Tritelia* 'Corrina' and 'Queen Fabiola' have flowers of rich purple clustered on top of tall stems giving a similar look to agapanthus. If you prefer a bright yellow, try *Tritelia ixiooides*, commonly called goldstar flower.



Narcissus 'February Gold'

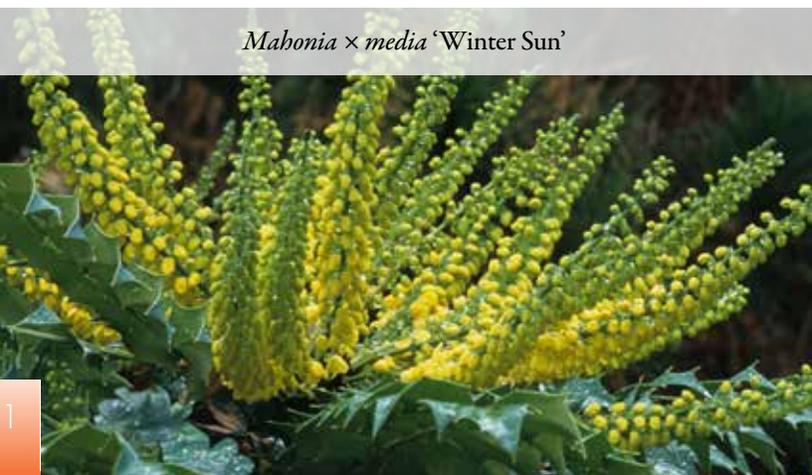
SHRUBS

When we think of shrubs for our native pollinators and honeybees, it is natural to think of the showy spring and summer bloomers. One of our favorites is the mock orange, *Philadelphus* 'Belle Etoile'. It forms a large shrub with powerfully fragrant blooms in late spring to early summer and is quite carefree in the garden. This is only a single example of a long list of great reliable bloomers from roses, hardy fuchsia, weigela and viburnum. All are pollinator friendly, beautiful and easy to grow with many selections that tolerate extended periods of dry weather.

Less obvious choices, due to a lack of floral upstaging, are several types of hedging plants that are quite floriferous in their own way. Evergreen berberis and Japanese holly, *Ilex crenata*, may have small flowers that are often tucked amongst the foliage, but few would ever know that these plants flower if it was not for the mighty profusion of bees that hum around these shrubs in springtime. *Berberis* × *gladwynensis* 'William Penn' is a tough and prickly low hedge



Osmanthus heterophyllus 'Variegatus'



Mahonia × *media* 'Winter Sun'

with copious yellow flowers tucked around deep green leaves. The Japanese holly cultivars ‘Convexa’, ‘Green Island’ and ‘Northern Beauty’ are durable and great thorn-free choices plus they make a great substitute for English boxwood.

Some of our native pollinators can be active in autumn, very early spring or during warm periods in winter. It is tremendously helpful to have a few plants in the garden that can provide a source of food during the “off” seasons. *Arbutus unedo* (strawberry tree) and *Osmanthus heterophyllus* (sweet olive) are two enduring fall bloomers. The *Osmanthus* has the added bonus of being extremely fragrant; try *O. heterophyllus* ‘Variegatus’, ‘Goshiki’, or ‘Purpureus’. In late autumn and early winter, it is hard to beat the floral show of *Mabonia × media*. With several cultivars available you can have flowers from November to February, and the overwintering Anna hummingbirds love to frequent these large shrubs. In the height of winter, the sumptuously fragrant blooms of *Sarcococca* not only delight us but are very pleasing to the odd winter roaming bumblebee.

CONIFERS

Many conifers also show excellent drought tolerance with dwarf selections being extremely useful in the urban landscape. Dwarf Hinoki cypress, *Chamaecyparis obtusa*, and dwarf Japanese cedar, *Cryptomeria japonica*, are top rate choices. Dwarf Hinkoi forms like ‘Kosteri’, ‘Nana’ and ‘Nana Lutea’ grow very slowly and develop an almost sculptural look as they mature. Two choice Japanese cedar dwarfs are ‘Tansu’ and ‘Vilmoriniana’. The cultivar ‘Tansu’ forms a tight mound of short, prickly foliage and also becomes sculptural in shape as it grows while ‘Vilmoriniana’ grows as a rounded ball. All of these cultivars grow slow enough that they can spend decades in the garden and not outgrow the space.

There are some beautiful slow-growing pines that will get big enough to create a garden statement in a reasonable amount of time, but will not become immense in the long-term so are appropriate

for the urban landscape. For starters, either *Pinus heldreichii*, *P. parviflora* Glauca Group or *P. thunbergii* ‘Thunderhead’ would be a showpiece in any garden. *Pinus heldreichii* (formerly *P. leucodermis*) is commonly called the Bosnian pine; hailing from the Balkan Mountains and southern Italy, the needles are a deep dark green that have a lustrous and rich tone and young cones have a beautiful blue-purple coloring. A slow to moderate grower, a Bosnia pine at 10 years will be about 8 to 10 feet tall and six feet wide with a strong central trunk and tight pyramidal form. As it matures, its form will become a little more open showing an attractive layered branching habit. It is a very tough and versatile evergreen tolerating poor soil locations and sunny hot spots.

Pinus thunbergii ‘Thunderhead’ also has deep dark green needles but grows as a compact irregular mound giving the impression of thunderhead clouds. Nestled in the center of the needles are bright white buds providing a strong visual contrast. It is slow growing, ten-year-old plants are little more than 4 feet tall with a spread of 6 feet.

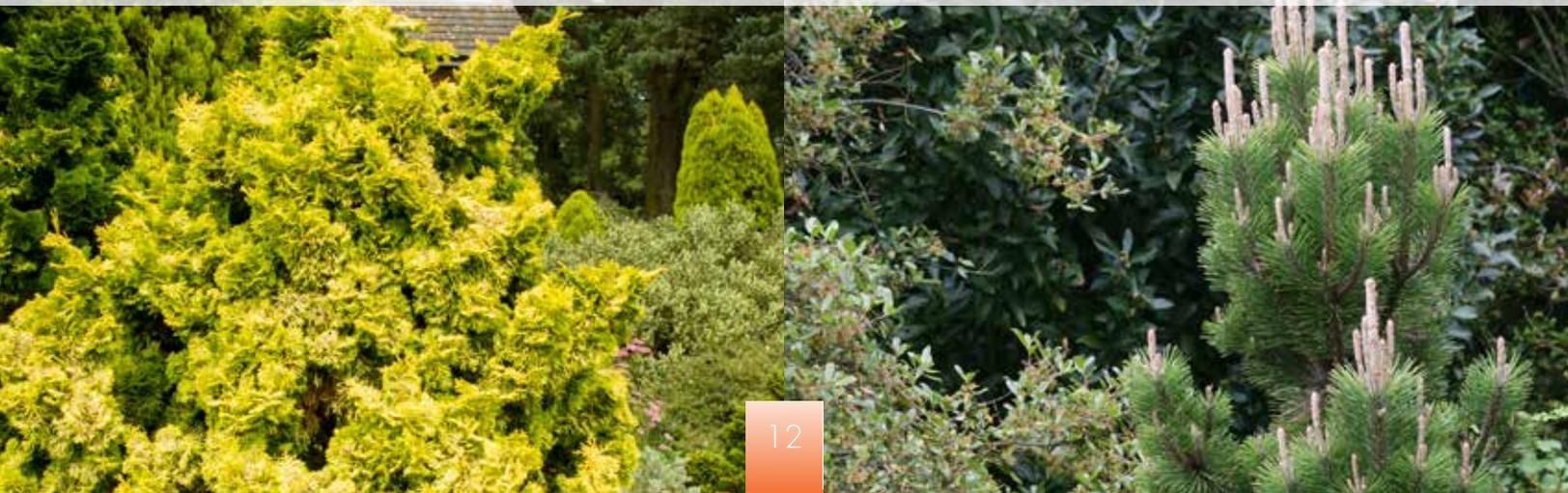
Pinus parviflora Glauca Group represents blue-needled selections of the lovely Japanese white pine. These slow-growing evergreen trees form a dense, conical pyramid when they are young and gradually develop wide-spreading branches and a flat-topped shape with maturity. The combination of handsome foliage and attractive overall shape make blue-needled Japanese white pines outstanding garden trees.

The wide selection of plants available to us allows our gardens to become waterwise as well as havens for pollinators and a wide array of other wildlife. As gardeners we can bring so much more to our yards and neighborhoods than just a visually pleasing space. Try a few of these plants, or others from the GPP list, in your garden and be a part of planting for a better planet. ∞

Richie Steffen is Executive Director of the Elisabeth C. Miller Botanical Garden and a board member of NHS.

Chamaecyparis obtusa ‘Nana Lutea’

Pinus thunbergii ‘Thunderhead’



LITERARY NOTES

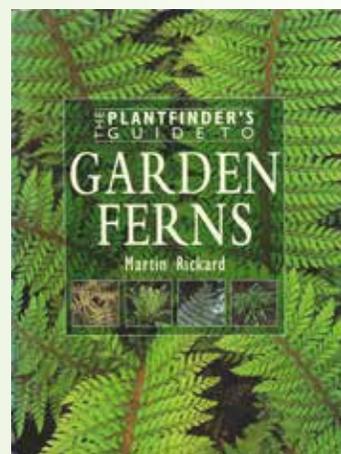
from the Miller Library

by Brian Thompson

I RECENTLY HAD THE GREAT PRIVILEGE AND PLEASURE TO CO-TEACH A CLASS for the Northwest Horticultural Society with Sue Olsen, a local expert on ferns. Sue also has an impressive fern book collection, and I was very interested in learning of some of her favorite writers. Here are three older books she recommends.

Reginald Kaye was a 20th century, English nursery owner and an expert at growing everything from orchids to alpine plants. He had both a hosta and a pulmonaria named after him, but he wrote about his favorite plants in *Hardy Ferns* (published in 1968), a book that helped revive something of the popularity ferns enjoyed during the Victorian period. His writing is both pragmatic and lightened by dry humor. In a chapter on companion planting, he warns, “requests for bits of your hellebores should be received coldly,” as they take a couple years to re-establish after being divided.

John Mickel provides a trans-Atlantic perspective with *Ferns for American Gardens* (1994). As the curator of ferns at the New York Botanical Garden, he has considerable experience with the cold hardiness of his subjects, although recognizes his book, “is not the last word on hardy fern cultivation, but only a beginning.” Despite being from the East Coast, his many garden worthy selections are vetted for suitability throughout the country, and in his acknowledgements, he credits many members of the Hardy Fern Foundation, based in the Seattle area, for their input.



Finally, Martin Rickard's book, *The Plantfinder's Guide to Garden Ferns* (2000), includes an extensive list and description of cultivars, an obvious passion of the author and very popular with patrons of the Miller Library as the book has been checked out over 30 times. Of these three books, this has the best illustrations, including two-page plates containing several varieties for comparison with the fine foliage clearly highlighted by the lighter background.

Of course, all these titles should be supplements to Sue's own writing including her award-winning *Encyclopedia of Garden Ferns* (2007), and *The Plant Lover's Guide to Ferns* (2015), which she co-wrote with Richie Steffen. I recommend checking all these books out from the Miller Library! ☺

Brian Thompson is the manager and curator of horticultural literature for the Elisabeth C. Miller Library.



Thank you to our patrons. The Wednesday Evening Lecture Series would not be possible without the tremendous support of our patrons. Their generosity helps NHS provide an outstanding educational program for Northwest gardeners. In light of the current events limiting gatherings, these generous contributions allow NHS to explore and implement new options and forums for the dissemination of horticultural information. Thanks for your continued support!

2020 Patrons

Joseph Abken
 Joann Alidina
 Phoebe Andrew
 Kathleen Archer
 Larry Arndt
 Janis Arthur
 Barbara Asmervig
 Annette Barca
 Carolyn Barden
 Douglas Bayley
 Karen A Benson
 Patsy Bergdahl
 Bonnie Berk
 Suzette & Jim Birrell
 Ginny Brewer
 Katherine Elaine Brogdon
 Delaney Brummet
 Beth Burman
 Kit Cameron
 Nancy Campbell
 Whitfield Carhart
 Virginia Caunt
 Deborah Cheadle
 Sarah Cheng
 Gerrie Cherry
 Sue Clark
 Ilsa Coleman
 Patricia Crockett & Keith Johnson
 Stacie Crooks, Crooks Garden Design
 Gina Crumbaker
 Julie Davis
 Tanya DeMarsh-Dodson
 Emily Dexter
 Tina Dixon
 Carol Driver
 Anita Dunn
 Lorene Edwards Forkner
 Janet Egger
 Janet Endsley
 Ken & Cauleen Eshleman
 Sue Ewens
 Natalie Findlay
 Phoebe Fine, Phoebe Fine Design
 Carolyn Fisher
 Catherine Floit
 Gayle Forslund
 Gwyn Fowler
 Keith Geller
 Maren Gilliland

Marilyn Glenn
 Loretta Goetsch
 Courtney J Goetz
 Greg Graves
 Dorothy Guth
 Linda G Hanson
 Lucy Hardiman
 Terry Hayes
 Margaret Hayes Thombre & Rahul Thombre
 Deborah Heg
 Gail Hongladarom
 Yolanda Houze
 Becky Johnson
 K Suzanne Jones
 Jason Jorgensen
 A C Kennedy Inc dba Kemper Iversen
 Ann Keppler
 Karin Kravitz
 Wendy Lagozzino
 Denise Lane
 Susanna M Lane
 Raymond J Larson
 Susan & Barry Latter
 Jeanne Marie Lee
 Dorothy Lennard
 Ann LeVasseur
 Jan Lewinsohn
 Judy Likness & Cheryl Hughes
 Toni Loomis
 Barbara Lycett
 Mark & Joanie Lyke
 John MacKean
 Charlie Madden
 Hans & Tina Mandt
 Susie Marglin
 Gillian Mathews
 Linda & Roger McDonald
 Robert Meadows
 Kathy Meislahn
 Lindsay Michimoto
 Renee Montgelas
 Rebecca Murlless
 Ann Neel
 Lee & John Neff
 Richard & Jana Nelson
 Sue Nevler
 Colleen O'Connor
 Mariette O'Donnell
 Chuck Ogburn

Lucinda O'Halloran
 Courtney Olander
 Sue Olsen
 Camille Paulsen
 Maryann Pember
 Betsy Piano
 Susan Picquelle
 Beverly Pierson
 Dinny Polson
 Terry Pottmeyer
 Monte Powell
 Debi Quirk & Steve DeMont
 Suzanne Ragen
 Ravenna Gardens
 Katie Riss
 Stephanie Rodden
 Elizabeth Rodgers
 Nita-Jo Rountree
 Marilou Rush
 Kathleen Sabo
 Liz Sanborn
 Mary Alice Sanguinetti
 Jean Savory
 Canan Savrun
 Elizabeth Scott
 Richie Steffen & Rick Peterson
 Philip R Stoller
 Nancy Strahle
 Zach Stratton
 Karen Swenson
 Jane Coffelt Thomas
 Walter Thompson
 Sue Tong
 Shelagh Tucker
 Cathy Van Dyke
 Eileen Van Schaik
 Margaret E Watson
 Jean Weaver
 Wendy Welch
 Linda A Wells
 Joanne White
 Sherri Wilson
 Withey Price Landscape & Design LLC
 Lynn Wolf
 Phil Wood
 Woodinville Garden Club
 John A Wott
 Jennifer Wyatt
 Sheila Wyckoff-Dickey

President's Message



Dear NHS Members,

This letter has been very hard for me to write, but as I finally put these words to paper, I feel ready to send it to all of the wonderful and supportive members of NHS in this troubling time.

First off, I would like us to look at what a wonderful start of the year we had before COVID-19 cast its shadow over the Pacific Northwest. Our first two lectures in January and February for the Wednesday Night Lecture Series by Heidi Hughes, Richard Hartlage, and Bryon Jones were well attended, informative, and educated us about the future of the Seattle Waterfront Park and the amazing interplay of plants and animals at Point Defiance Zoo & Aquarium in Tacoma. Seattle's Northwest Flower and Garden Festival in February was a great opportunity to re-engage and connect with our members and introduce our organization to all the attendees. We hosted an information booth and membership drive in the seminar room at the show this year.

Grateful thanks goes to our board members and volunteers and their enthusiasm and drive; we added over 100 new members to our organization at that event. The NHS sponsored James Alexander-Sinclair to join us from the United Kingdom as a Northwest Flower and Garden Festival show judge and guest speaker. His heartfelt and humorous talks helped us re-appreciate gardening and its myriad ways of delight and healing. I also had the great pleasure to take James on a whirlwind tour of the beautiful collections of gardens we have in the Pacific Northwest. He was impressed with the interconnectedness of some of our Northwest landmark gardens; we explored the Miller Garden, Bloedel Reserve, Heronswood, and Windcliff. Finally, we had an amazing and unbelievable turnout for our Spring Ephemeral Plant Sale in March. I've never seen the NHS Hall so crowded with excited longtime and new members, plant growers and sellers, and new connections made through our marketing efforts. We truly have a lot to be thankful for!

I also do not want to ignore and minimize what is the most pressing issue we are facing currently. We are all affected by the COVID-19 epidemic that is omnipresent in the world today. Many of our elderly and immunosuppressed friends and family members are facing real challenges from this disease and fighting for their lives. We are all in profound shock and stunned at how quickly our world can be upended. I know that all of us are doing our part to stay home and avoid personal contact and social interaction. Unfortunately, human connection and social interaction is the one thing that most everyone needs in time of loss and grief. We need to support each other in different ways for the time being by making phone calls, emailing, and sending old-fashioned letters! These are very difficult times for us and the world. I know we will get through this tragedy, but it will take time.

I do know, though, that our members have a secret weapon up their sleeves: Gardening! We have known all along that being outside and enjoying Mother Nature can heal the heart and soul. We didn't need anyone to tell us to baby that houseplant we keep on our windowsill, how delicious those homegrown tomatoes and raspberries taste, or how being outside and gardening can lower your blood pressure. Get busy in your garden; look at how happy children are playing in the dirt. Just remember to thoroughly wash your hands for at least 20 seconds afterwards! Even if you don't have a garden currently and if you are able, take a walk in your neighborhood or local public garden. There are also many gardening and nature videos and programs to watch on TV or online if you're not able to get outside. Enjoy the nature that is around you at this moment. Now is our time to get our gardens ready for the season as well as appreciate and learn about the nature that surrounds us. You'll be surprised at what you see and notice. A bouquet of fresh flowers on your table will lift your spirits and connect you with nature even inside your home.

On behalf of our Board of Directors, I am wishing you all much strength and hope this spring. 🌸

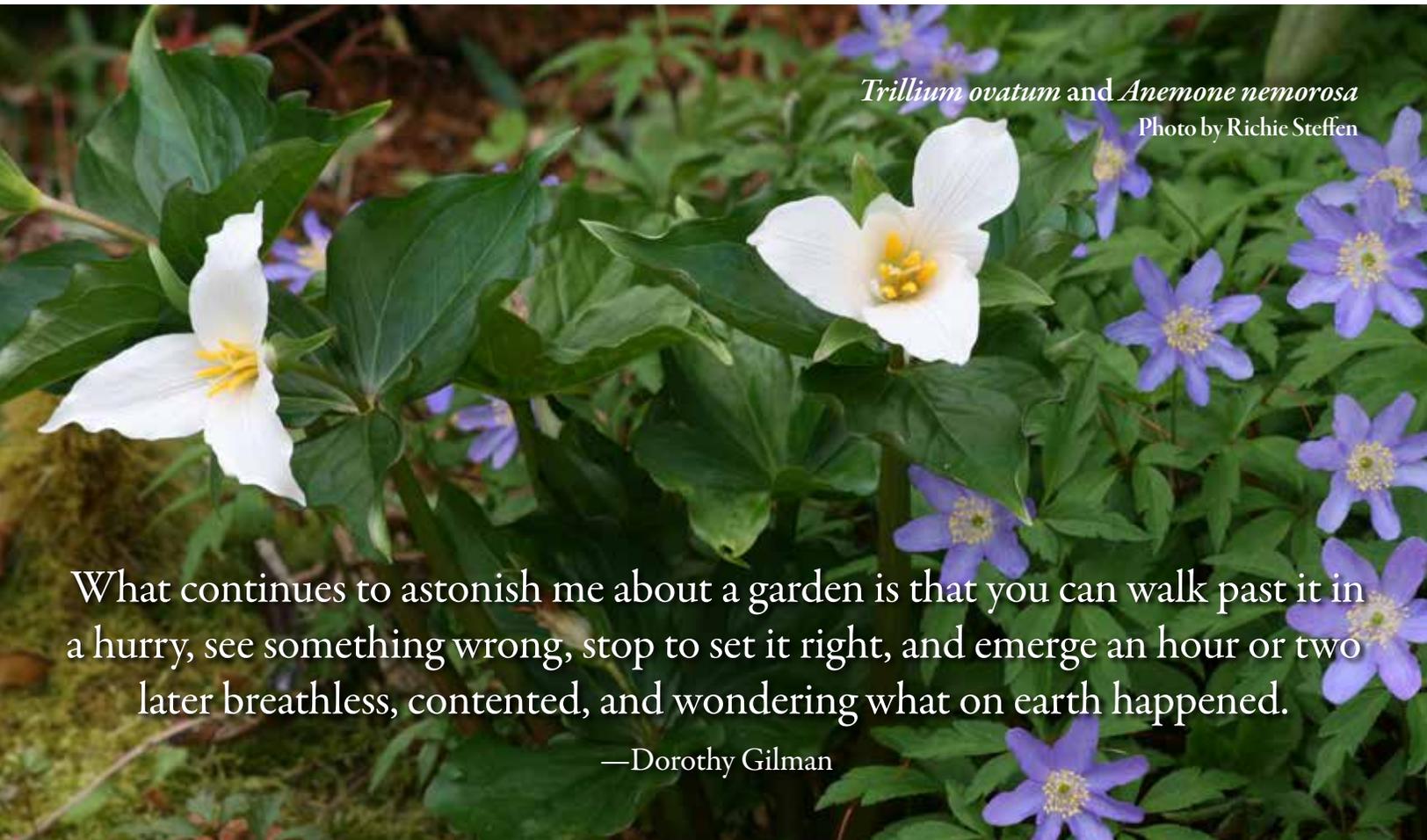
Happy Gardening,

Jason Jorgensen
NHS President



NORTHWEST HORTICULTURAL SOCIETY
PO Box 4597
ROLLING BAY, WA 98061-4597

Non-Profit
Organization
U.S. Postage
PAID
Seattle, WA
Permit No. 4842



Trillium ovatum and *Anemone nemorosa*
Photo by Richie Steffen

What continues to astonish me about a garden is that you can walk past it in a hurry, see something wrong, stop to set it right, and emerge an hour or two later breathless, contented, and wondering what on earth happened.

—Dorothy Gilman