After starting my position as the UDBG curatorial graduate student, I soon realized there were few familiar plants from my home state of Washington. I searched our plant database to compile a list of woody taxa native to Washington, Oregon, northern California, and British Columbia growing at the UDBG. The Delaware Valley region can be a difficult place to grow Pacific Northwest natives for two reasons: they are unsuited to the hot, humid summer temperatures, and they are accustomed to abundant atmospheric moisture during the winter months. Based on my observations at the UDBG and nearby public gardens, I have selected a group of Pacific Northwest woody taxa I consider worthy of horticultural merit in this area.

**Calocedrus decurrens**

California incense-cedar occurs in the southern Oregon Cascade Mountains, California, and Nevada. It is a drought-tolerant species with fan-like sprays of flattened needles and ornamental cinnamon-red furrowed bark. Seed cones are unique, with 4-6 scales, with the inner two fused together. Longwood Gardens is home to the Pennsylvania state champion, measuring 78.5 feet in height. *Calocedrus decurrens* is represented at the UDBG by three specimens, all planted in the Clark Garden along South College Avenue.

**Thuja plicata**

Western redcedar, as well as the following plant, yellow-cedar, both have a long history of use by Native Americans in the Pacific Northwest. Bark, branches, and roots harvested from these trees are woven and carved to create a variety of objects such as baskets, rope, mats, clothing, bandages, towels, and fish traps. In fact, very few cedar trees were felled before European settlement; most wood was harvested by splitting planks from live trees along the grain. While not part of UDBG’s collection, specimens can be found at the Morris Arboretum and Longwood Gardens. I most commonly see the cultivar ‘Green Giant’...
I hope you visited the garden this summer and fall, it looks better than ever thanks to the hard work of the interns, staff and volunteers. Beds are weeded and mulched. The Hydrangea Garden near Fischer Greenhouse is complete (see UDBG Annual Intern Laura Swain’s article in this issue). The meadow in the Lepidoptera Trial is cleared of weeds and has a cover crop of fescue in place to prevent erosion and help control weed invasion. Laura Swain is evaluating the plants that remain and under Melinda Zoehrer’s guidance will develop a list of potential plants to plug in, thus enhancing the value of the site for Lepidoptera and the appearance of the garden.

This summer the interns and Jackie added a significant collection of *Baptisia*, or false indigo, to the Lepidoptera Garden, thanks to George Coomb at Mt. Cuba Center who donated plants from the Trial Garden. The interns traveled to Mt. Cuba and under George’s watchful eye, dug plants and transported them back to the UDBG. The plants were planted in the bed near the new raised wooden deck. *Baptisia* is coarse-rooted and difficult to transplant, yet many have already produced new growth and seemed to be settling into their new home. Spring will be the true test of their performance. Matt McDermitt, annual intern, is working to build upon the initial plants with seed collected in Florida and new selections purchased from the nursery trade.

Removing it was painstaking but a great improvement for the plants. A few loads of compost, some tilling and mulch, and they had a renovated bed ready to be planted.

Now for an update on the master plan progress. Seven firms submitted proposals and four were chosen to make presentations in late October. The firm chosen was Studio Outside, a landscape architectural practice in Dallas Texas. The firm has completed many types of late perennials linger, fall color continues, and the colored stems and fruit appreciated throughout the winter are pronounced.

Work continues this fall with the renovation of the lilac bed just south east of Townsend Hall. Many of the original plants dating from the mid 1960s were overgrown and had been rejuvenated many times. What resulted was a tangled mass of indiscernible plants and woody weeds. The interns, working under UDBG Gardener Jackie Perry’s guidance, removed most of the overgrown plants, weeds and suckers that had overrun the bed. During the work, they discovered a thick plastic weed barrier that was laid about 50 years ago.

Laura Swain, Andrew Adams and Matt McDermitt laid a meandering sod path through the Hydrangea Garden near Fischer Greenhouse, and also built a bench pad where people can sit to enjoy the garden. Photo: Bob Lyons
projects around the country, ranging from public spaces to residential designs, and includes many university botanic gardens. The winter will be a time to survey garden stakeholders, both within and outside the university, for input to the planning process and many of UDBG Friends will be solicited during these sessions. We will update you via email and in the next newsletter.

I encourage you to visit the garden and take a look at the many projects completed and still underway. Late perennials linger, fall color continues, and the colored stems and fruit appreciated throughout the winter are pronounced. It is always worth a weekend stroll to relax and enjoy.

UDBG member and gardener Mike Janis spent one day a week this summer and fall volunteering with Dr. Bob Lyons in the Trial Garden planting, pruning, pinching, staking, weeding, mulching, and labeling plants. Mike had a stroke earlier this year and found that working in the garden has been instrumental in his speech recovery. Mike is seen here talking to a few physical therapy students from UD’s Star Campus.

The interns worked on a complete overhaul of the raised eyebrow planter in the Townsend Hall courtyard outside the Commons planting succulents and cacti. The courtyard creates a warmer microclimate because of the wall and the protection of the building.

Bob Lyons generously donated the gravel mulch.

2017 Marks the 25th Anniversary of the UDBG Plant Sale!

2017 UDBG January Mini-Series

Seasonal Color - Herbaceous Perennials by Dr. John Frett

Classes will be held from 6:30-8:30 pm in 132 Townsend Hall

25 Spring Flowering Perennials - Wednesday, January 11
25 Summer Flowering Perennials – Wednesday, January 18
25 Late Summer/Fall Flowering Perennials – Wednesday, January 25

UDBG Friends: $25 per class; Nonmembers: $35 per class

Perennials add excitement and diversity to the landscape or garden as they burst into flower each year. Some feature colorful foliage in addition to beautiful flowers, while others add architectural and multi-season interest. Join UDBG Director John Frett as we discuss their cultural requirements (light, soil, and ease of growth) of both subtle and BOLD beauties for the home landscape.

Registration and prepayment required: Email botanicgardens@udel.edu or call 302-831-2517
Minimum 10 people
In the event of snow, classes will be held Thursday evening. Payment will be refunded if cancellation is made 10 business days prior to class.

Tricyrtis 'Sinonome', one of the stars of the late summer/fall border.
Photo: Kathy Barrowclough
Hydrangea Garden Enhanced
Laura Swain, Year-long Intern 2016-2017

Hard work and persistence of the entire UDBG team led to the transformation of an under-utilized garden area to a welcoming, multi-purpose green space. The transformation began two years ago when it was decided that a grove of trees had outgrown their original planting intent. Then graduate student Jason Veil and the 2014 team undertook the arduous task of thinning and removing several specimens of *Ilex*. They created a large open bed and filled the shady understory with a collection of *Hydrangea*, as well as several other shrub species and herbaceous perennials. In an effort to continue enhancing the space, this year’s summer and year-long interns worked along with Jackie Perry to install benches and create a meandering path through the bed. Not only do the additions allow for more accessible teaching, they also provide a convenient and pleasant shortcut from the adjacent parking lot, or a relaxing place to sit between classes.

The process began by marking two proposed bench locations and establishing the path route. Over the course of a few days bench foundations were dug and backfilled with gravel and a layer of sand. Bricks were laid to create a beautiful and functional surface for the benches to rest upon. Before the sod was installed for the paths, slight grading was needed to encourage drainage during heavy rains. After a few weeks of preparation and with all hands on deck, the UDBG team put in about 1,500 sq. ft. of sod in one day! The transformation was breathtaking and immediate.

The green space now welcomes any passerby to relax in the mottled shade beneath one of our oldest American hollies, planted in 1969. While there, take time to get to know some of the 25 different hydrangeas.

*Hydrangea quercifolia* ‘Brihon’ (Little Honey)
*Hydrangea macrophylla* ‘Blaumeise’
*Hydrangea involucrata* ‘Wim Wutten’
*Hydrangea macrophylla* ‘Mdm Emile Mouillere’

Photos: Melinda Zoehrer
Caroline (Carrie) Toth began her work at the UDBG as a student summer intern. After a display of hard work and dedication to improving the garden, she continued on as a part-time intern in the fall and spring semesters, in her free time leftover from homework, lab work, and studying. We knew that with her uplifting spirit and excellent work ethic she would go on to do great things after graduating from UD. Carrie currently works for the American Conservation Experience, a non-profit organization associated with Americorps, which matches employees with environmental conservation service opportunities. She is a Native Plant Nursery Intern at Grand Canyon National Park. Her responsibilities include greenhouse work, endangered species monitoring in the park, and leading volunteer efforts. In her time off she enjoys hiking and camping and familiarizing herself with native plants and wildlife, an interesting contrast to the deciduous forests of the East Coast, where she grew up.
in the Mid-Atlantic area. Likely a hybrid of Thuja standishii and T. plicata, ‘Green Giant’ reaches 30-40 feet in its lifetime and is a great choice for a hedge or screen in full to part-sun. It was named the Delaware Nursery & Landscape Association’s Plant of the Year in 2005 and was a Pennsylvania Horticultural Society (PHS) Gold Medal Plant in 1998.

**Xanthocyparis nootkatensis**

The accepted name of this species is currently under taxonomic debate, so you may have seen the synonyms Chamaecyparis nootkatensis or Callitropsis nootkatensis in use. This conifer has a graceful form with long flattened sprays of dark-green foliage that hang vertically. Bark is a grey-brown color and peels in strips to reveal a yellow inner-bark, hence the common name, yellow-cedar. This species typically reaches over 100 feet tall in the wild but will attain about 60 feet in the Mid-Atlantic region. I recently noticed a fine specimen of the cultivar ‘Pendula’ at the Morris Arboretum in Philadelphia, planted in 1998. ‘Pendula’ also received the PHS Gold Medal Plant Award in 2015. UDBG’s specimen is located in the Clark Garden.

**Chamaecyparis lawsoniana**

Another closely related species to the Atlantic white cedar, Chamaecyparis thyoides, and the commonly planted Asian species, C. obtusa and C. pisifera, is the Port Orford cedar, C. lawsoniana. All have scale-like leaves and globose bluish-green cones resembling soccer balls. This species occurs in southern Oregon and northern California. The national champion is 242 feet tall and resides in the Siskiyou National Forest in Oregon. UDBG houses Chamaecyparis lawsoniana ‘Green Hedger’ in the Clark Garden, a cultivar selected for dense growth and a conical habit, perfect for shearing into hedges.

**Pinus monticola**

Western white pine is the western equivalent to Pinus strobus (eastern white pine), but with a denser and narrower form, and larger cones. In their native range, populations of Pinus monticola have suffered due to the spread of white pine blister rust from French nursery stock imported in 1910. Due to the abundance of an alternate host, Ribes spp. (gooseberries and currants), about 90% of western white pines have died. Fortunately, several pines survived and are under close observation by researchers studying blister-resistance. The specific epithet monticola refers to its preference for montane (mountain) habitats. A weeping cultivar, P. monticola ‘Pendula’, is present in the garden south of Townsend Hall.

**Abies concolor**

*Abies concolor*, or white fir, exhibits outward curving, glaucous (blue color) needles and can be used as an alternative to the Colorado blue spruce, *Picea pungens*, in the landscape. This species occurs further south, in southern Oregon and the southwestern states at high elevations (2,000 to 10,000 feet above sea level). While widely planted in the Midwest, this species is usually intolerant of heavy clay soils and humidity south of USDA Zone 7. UDBG has a fine specimen in the Clark Garden that has started to produce cones, which are held upright on the higher branches.

**Pseudotsuga menziesii**

Douglas fir is one of the most important timber crops of the Pacific Northwest region and is often used for construction and grown as a Christmas tree. As the state tree of Oregon, *P. menziesii* regularly grows over 200 feet tall in the wild. The national champion is located on Vancouver Island, B.C., measuring 242 feet tall and 13.9 feet in diameter. One of my favorite characteristics about this tree are the cones. Small bracts subtend the cone scales, giving the appearance of the hind legs and tail of a mouse who is hiding inside. There are two subspecies of *P. menziesii*, including ssp. menziesii (coast Douglas fir) which is faster growing, taller, and has yellow-green needles; and ssp. glauca (Rocky Mountain Douglas fir) which is slower growing, has blue-green foliage, and is more commonly used in the midwest and northeastern landscape because of its ability to withstand climatic extremes. UDBG has the cultivar ‘Graceful Grace’, a weeping form that can only hope to attain a height of 40 feet in its lifetime.

**Juniperus scopulorum**

*Juniperus scopulorum*, or Rocky Mountain juniper, is native to Washington, British Columbia, eastern Oregon, Nevada, and northern Arizona. The cultivar ‘Skyrocket’ can be located at
the UDBG in the old golf course along the road facing Ecology Woods. This selection has a very narrow, upright form with blue-green awl-like needles, eventually reaching 15 feet tall by 2 feet wide.

**Mahonia aquifolium**

Visitors to the UDBG may notice a large specimen of *Mahonia aquifolium* (*Berberis aquifolium*), or Oregon grape holly, located by the eastern entrance to Townsend Hall. Thick, evergreen leaves provide year-round interest in addition to yellow flowers borne in erect, terminal inflorescences that appear in spring followed by blue-black berries resembling grapes. Inner bark is yellow, a common trait in the Berberidaceae family, and the leaves occasionally turn a purplish color during the winter months. *Mahonia repens*, creeping mahonia, is another Pacific Northwest native worthy of consideration as an evergreen groundcover, reaching only 10-18 inches high.

**Cornus nuttallii**

*Cornus nuttallii* was named by John James Audubon in honor of Thomas Nuttall, a scientist who first differentiated the species from *Cornus florida*. Pacific flowering dogwood differs from its eastern equivalent with a more upright form and flowers surrounded by larger 4-8 creamy white bracts. Specimens of *C. nuttallii* can be found at the Tyler Arboretum, one of which is a Pennsylvania state champion at 42.3 feet tall. The UDBG hosts a fabulous looking hybrid between the two species, ‘Eddie’s White Wonder,’ between Worriilow Hall and Townsend Hall, which displays characteristics of both parents and is more suited to east coast conditions.

**RESOURCES**


Support UD Botanic Gardens

Your support helps the advancement, improvement, and success of the UD Botanic Gardens. Your gift enables the gardens to expand as an outdoor classroom, an experiential laboratory, and a research center.

WINTER HEATING

Mike Czupryna sent us this image of salsa he made from one of the 20 hot peppers offered at UDBG’s Spring Plant Sale. He’s grown hot peppers for over 25 years, making salsa from a different variety each year. His simple hot sauce recipe: macerate whole peppers in white vinegar; cook the mash in a stock pot outside as the steam can irritate the eyes. When cool, pass the mash through a food mill and strain the mix into bottles. Thank you Mike for sharing your image and enthusiasm.

Photo: Mike Czupryna

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Visit the UD Botanic Gardens
UDBG is open to visitors everyday from sunrise to sunset; admission is free.

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