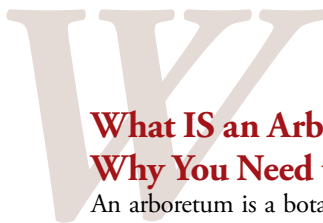




Figure 1. Westonbirt, The National Arboretum, Tetbury, U.K., Acer Glade. (ArbNet accredited Level IV). ArbNet is an international program. Photo provided by Paul Groom.

What's in an Arboretum?

By Sue Paist and Christopher Luley



What IS an Arboretum and Why You Need to Know

An arboretum is a botanical garden specializing in trees or woody plants. Arboreta across the globe conduct scientific research and conservation, engage in public outreach and education, and manage beautiful and diverse tree collections. Arborists have the connections and expertise to greatly impact the establishment and professionalism of arboreta. To advance the planting and conservation of trees, arborists can collaborate with existing or potential arboreta or even start one of their own.

Arboreta can be found in all shapes and sizes and can be traditional and nontraditional. A traditional arboretum is one whose primary purpose is to be a tree-focused public botanic garden. Examples of traditional arboreta include The Morris Arboretum, U.S.A.; Westonbirt, The National Arboretum, UK (Figure 1); and Arboretum Wespelaar, Belgium. Non-traditional arboreta are part of

organizations or institutions whose primary purpose is other than existing solely as an arboretum, but their site includes an arboretum. Examples of nontraditional arboreta include municipal tree collections or parks, school campuses (Figure 2), cemeteries, zoos (Figure 3), and historical properties or estates.

The Value of Arboreta to Communities

Arboreta are outdoor classrooms, living laboratories, and inspiration for a greener, healthier, and more beautiful world. They provide greenspace for communities in which people can relax and recharge. Numerous scientific studies show that trees have a strong positive impact on visitor mental and physical health. Arboreta improve quality of life for the community and provide opportunities for learning about the natural world (Figure 4).

Not only are arboreta beautiful, but they promote awareness and conservation of trees to the public. Many arboreta engage in community outreach initiatives, beautification

efforts, and educational activities. Horticultural and scientific knowledge combined with extensive public outreach make arboreta valuable potential partners to members of the arboriculture industry.

ArbNet: The Interactive Community of Arboreta

ArbNet is an international network of arboreta and tree-focused professionals. This interactive community supports information exchange and collaboration. ArbNet fosters the establishment and professionalism of arboreta; identifies arboreta capable of participating or collaborating in certain scientific, collection, or conservation programs; and advances the planting and conservation of trees.

ArbNet was established on Arbor Day, April 29, 2011, by The Morton Arboretum in partnership with the American Public Gardens Association and Botanic Gardens Conservation International (BGCI). In its first eight years, ArbNet has built capacity for smaller gardens and nontraditional arboreta, like cemeteries, municipalities, and retirement communities, through programs like a Capacity Building Grant, the BGCI/ArbNet Partnership Program, and a portal of online resources. ArbNet also administers an arboretum accreditation program, which recognizes four different levels of professionalism and capacity in tree-focused gardens. ArbNet is the only international professional network and accreditation program specific to arboreta. The strength of the ArbNet network is its diversity—from major world-renowned arboreta (Figure 5), to smaller, lesser known but growing



Figure 2. The Agnes Scott Arboretum of Agnes Scott College in Decatur, Georgia, U.S.A. With more than 2,000 trees, the arboretum is an extension and reflection of their liberal arts curriculum (Accredited Level I). Educational outreach is an important function of most arboreta.

gardens. These arboreta provide guidelines, models, expertise, and inspiration for others so that the entire network can build capacity, collaboration, and best practices for tree-focused gardens around the world. ArbNet's growing community of nontraditional arboreta is reaching new audiences that traditional arboreta wouldn't readily access, broadening public awareness of the importance of trees.

Figure 3. Naples Zoo at Caribbean Gardens, Naples, Florida, U.S.A. A zoo nestled within a garden and arboretum. Its plantings include multiple mature *Ficus* species (*F. altissima*, *F. lutea*, *F. benghalensis*, *F. macrocarpa*, *F. microcarpa nitida*, *F. sycamorus*) throughout the garden (Accredited Level I).





Figure 4. Street trees as part of an arboretum in the Village of Oak Park, Illinois, U.S.A. The Village has more than 20,000 trees representing more than 130 different species and varieties (Accredited Level II).



Figure 5. A Japanese garden in the Prague Botanical Garden in Prague, Czech Republic, with a collection of 6540 trees. There are only 28 Level III accredited arboreta in the world (Accredited Level III).

What is the ArbNet Arboretum Accreditation Program?

ArbNet created its Arboretum Accreditation Program to establish and share a widely recognized set of industry standards for the purpose of unifying the arboretum community and fostering professionalism of arboreta worldwide. Four levels of accreditation are available and awarded based on self-assessment and documentation of an arboretum's level of achievement, including planning, governance, number of species, staff or volunteer support, education and public programming, and tree science research and conservation. There is no fee, and accreditation is good for five years followed by a simple renewal process. As of March 2019, 280 arboreta in 17 countries were accredited through the ArbNet Arboretum Accreditation Program.

Benefits of Accreditation

Accreditation holds many benefits for arboreta. An accredited arboreta is recognized for achievement of specified levels of professional practice. Accreditation provides motivation and resources for continued improvement and higher levels of professional standards. By collaborating with other similar organizations, new benchmarks and models can increase professional achievements. Individuals and arboreta may emerge as leaders, exert influence, and encourage professional development in other organizations. Collaboration with other arboreta for scientific, collection, or conservation activities is facilitated by accreditation. Accredited arboreta are eligible for funding opportunities.

How to Get Involved and Make an Impact

The ArbNet Accreditation program makes a stronger impact with arborists' involvement. There are lots of opportunities for arborists interested in working with existing or potential arboreta, or even starting one of their own. Several examples of accredited arboreta are provided here to show how arboreta and arborists can interact, and the different function arboreta can have depending on their mission and individual attributes.

Draves Arboretum, Darien, New York, U.S.A.

Draves Arboretum is in Darien, New York, located in the western part of the state (USDA climatic zone 5) and within the Lake Erie snowbelt. The arboretum was informally started in 1993 by Tom Draves, an ISA Certified Arborist® and owner of Draves Tree and Landscape. It received Level II ArbNet Accreditation in 2017 and Level III accreditation in 2019 based on its collection of over 700 woody tree and shrub species and cultivars (Figure 6). There are only 28 Level III accredited arboreta in the world.

Draves did not start with the intent of becoming a formal arboretum, but instead wanted to trial tree species and cultivars as a way to offer clients a place to view trees and shrubs being recommended for their landscapes. As the collection grew, more formal design plans were developed along with the mission to use the site to trial new introductions and to provide a venue for education on tree identification and arboricultural management.

The Arboretum has several plants of pure origin, or a plant directly collected from the native source, that are extremely rare in the trade. Draves himself is well known in the nursery business and has developed and patented tree cultivars of his own finding, including the well-known and widely planted Street Keeper™ honeylocust (Figure 7). He also identified several other promising cultivars that are not yet patented including Sugarbush, a dwarf sugar maple, and white poplar "Draves Column," among others.

The educational mission of the arboretum expanded recently, as a formal educational building was completed in 2019. The arboretum now offers workshops and annually brings in high-level speakers to support its educational mission. Oversight of the Arboretum is supported by its board of directors which includes several area arborists, consultants, and plant biologists (Figure 8). All of the maintenance, including pruning, pest and turf management, and planting is done by himself and crews from Draves' tree service. The Arboretum also has a required provisional charter as an educational site from the New York State Board of Regents.

Woodlawn Cemetery and Arboretum Bronx, New York, U.S.A.

Woodlawn Cemetery became a Level II Arboretum in 2017. The site is well-suited to this status, as it sits on over 400 acres with 6500 trees comprising over 145 different tree species and cultivars in densely populated New York City (Figure 9). The site is a National Historic Landmark with a mission of conservation, preservation,



Figure 6. The woody plant collection of Draves Arboretum has expanded to over 700 plant species.



Figure 7. Street Keeper™ honeylocust was introduced by Tom Draves and is growing in Draves Arboretum (left). Parent plant of Street Keeper™ honeylocust in situ (right).



Figure 8. Draves Arboretum is overseen by its board of directors, which is comprised of local arborists, consultants, and plant biologists. Tom Draves (center of group).

and education. As such, the arboretum offers a canopied urban forest environment that is open to the public and also heralds a unique blend of American funerary monuments and mausoleum architecture amidst a natural landscape. The urban forest and arboretum is managed by a consulting arborist and relies on several local arboricultural companies for pest management, pruning, and removal services.

The ArbNet accreditation allowed the Cemetery to formally recognize the importance of the trees on the site, which is over 45 percent tree canopy covered. The Arboretum is highlighted within the bigger forest by a formal

tree walk with a map to each tree and a tree-trolley ride with dedicated video descriptions of selected Arboretum trees that is viewed as the trolley tour is conducted (Figure 10). The Arboretum is also another direct portal to the educational mission of Woodlawn Cemetery.

Mitch Rose, the Executive Director of the Cemetery and Arboretum, said “The Arboretum collection is a way the Cemetery can formally offer educational programs to the public as well as highlight the importance of its urban tree management program. It also allows us multiple ways to connect clients and the public with the importance of trees to the Cemetery and surrounding community. ArbNet accreditation has been key in helping us financially develop support for the Arboretum and urban forest management.” Woodlawn Cemetery and Arboretum is in the process of gaining Level III status as further planting and research programs are being pursued. It is also provisionally chartered as an educational site by the New York State Board of Regents.

StarHill Forest Arboretum, Petersburg, Illinois, U.S.A.

StarHill Forest Arboretum, founded in 1976, is a private arboretum that holds the distinction of being the first arboretum accredited by ArbNet at Level III. It has been placed in trust to Illinois College by the founders, Guy and Edie Sternberg, and is the official teaching and research arboretum of the college (Figure 11). Nearly 30 tree cultivars have been (or are about to be) introduced from this arboretum (Figure 12).



Figure 9. The “Great White Oak” in early spring growing in Woodlawn Cemetery and Arboretum.

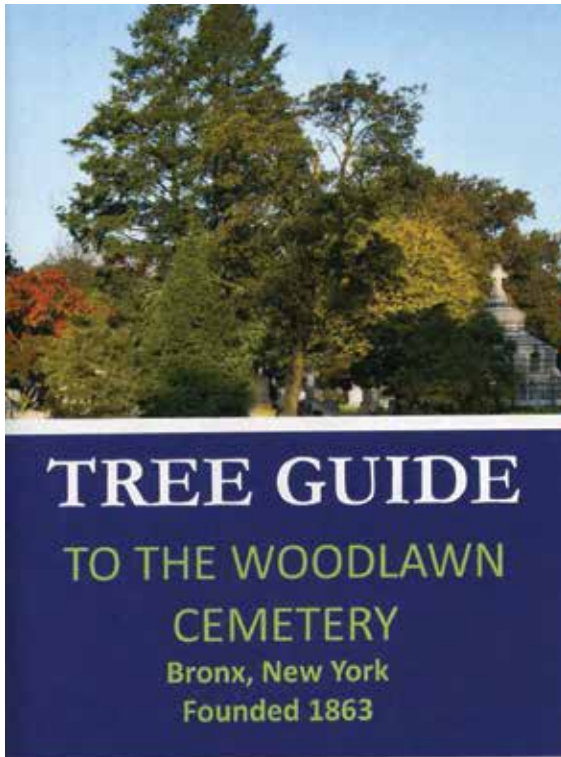


Figure 10. The Arboretum at Woodlawn Cemetery is open to the public and is the basis for a self-guided tree walk through the Cemetery. The Cemetery also has developed a trolley tour of Arboretum trees.

Many arborists are already familiar with StarHill Forest Arboretum due in part to its high profile creator Guy Sternberg. Sternberg is a well-known speaker from arboricultural conferences because of his extensive knowledge of oaks and native tree species. StarHill Forest Arboretum is a reflection of that knowledge, and the 50 acre arboretum holds an extensive collection of nearly 300 oak species, the largest collection in North America. The site also has over 1000 other species, including a state champion catalpa, several county champions, and other extremely rare or ex-situ conservation specimens (Figure 13).



Figure 11. Starhill Forest Arboretum has been placed in trust to Illinois College by the founders, Guy and Edie Sternberg, pictured here.



Figure 12. *Quercus x guadalupensis* is one of the many introductions made by Starhill Forest Arboretum. The Arboretum harbors the largest collection of oaks in North America.

StarHill Forest Arboretum is a means for Sternberg and his wife to work on their passion for nature, the collection, and the education of arborists on oaks and other species. Sternberg is also the founding president of the International Oak Society and a founding member of the Illinois Native Plant Society. The arboretum is managed by the Sternbergs with help from arborist Scott Pantier and their full time curator Alana McKean. StarHill Forest Arboretum has become a prime example of how an individual's knowledge and passion for trees, as well as a life's work, can be translated into an accredited arboretum and a valuable resource for the arboricultural community.

Anyone interested in learning more about ArbNet or pursuing accreditation through their worldwide program

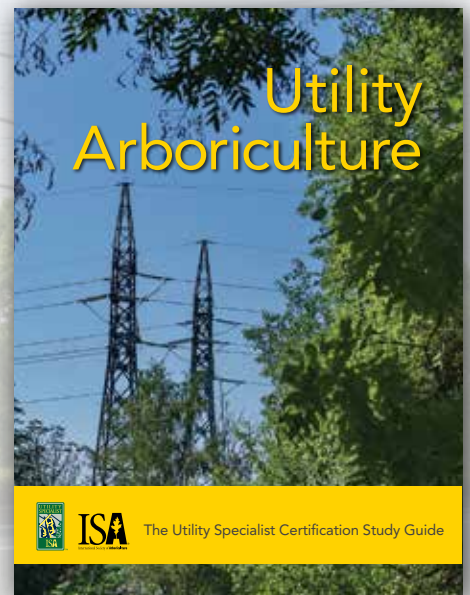


Figure 13. Starhill Forest Arboretum has over 1000 species in its collection. Shown here are Prince of Darkness Beech, fastigiated oaks, and *Picea asperata*.

can visit the ArbNet website (www.arbnet.org). The website contains listings of all accredited arboreta by level of accreditation and has sample applications to assist organizations that are interested in how to apply for their own accreditation.

Sue Paist is the ArbNet Coordinator at The Morton Arboretum located in Lisle, Illinois (www.arbnet.org). Christopher Luley is a Naples, New York based urban forestry consultant. He is on the board of directors of Draves Arboretum and is curator of the Woodlawn Cemetery and Arboretum (www.chrisluleyphd.com). Photos are courtesy of the authors unless otherwise noted.

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