



# *a fresh look at* American Arborvitae

BY DANIEL MOUNT

The popular conifer is sometimes overused as a hedge, but with more than 200 selections available, there are many ways it can be incorporated in the landscape.

**A**MERICAN ARBORVITAE (*Thuja occidentalis*) is as iconic as a white picket fence. Yet, as a garden designer for three decades, I felt it was overused as a hedge or screen plant, and thus avoided including it in my designs. It took planting one such hedge at the insistence of a client to make me give this landscape standard a second look. Since then, I have accumulated a small collection of American arborvitae cultivars on my seven-acre farm east of Seattle, Washington.

After observing my collection for a few years, I was surprised at how well most selections are thriving in my often waterlogged soil. That encouraged me to compare notes with other growers around the country to get a sense of just how adaptable American arborvitae are, and which cultivars are most successful in other regions.

#### ADAPTABLE NATIVE

*Thuja* is a genus of five species in the cypress family (Cupressaceae), two of

which are native to North America; *T. occidentalis* in the east and *T. plicata* in the west. While most commonly known as American arborvitae or simply arborvitae, *T. occidentalis* is often listed with other common names, including eastern or northern white cedar, swamp cedar, and thuja.

American arborvitae's broad native range is a good indication of its status as a tough, adaptable conifer. It is found in the wild from the south end of Lake

The striking chartreuse foliage of the arborvitae selection 'Gold Drop' stands out above a sea of colorful gloriose daisies, 'Marguerite' ornamental sweet potatoes, and other bedding plants in this border at Queen Elizabeth Park in Vancouver, British Columbia.



Winnipeg (USDA Hardiness Zone 2) in Manitoba eastward to the Atlantic, and southward near the moderating effects of the Great Lakes. There are a few isolated populations in Illinois, Ohio, and higher elevations of the lower Appalachian Mountains in North Carolina (USDA Hardiness Zone 6). In the far north it is never more than a large shrub, and in the Appalachians a bonsai-esque, wizened old tree. It reaches its maximum potential in the Great Lakes region, where the tallest living arborvitae, at 113 feet, grows in Leelanau, Michigan.

Though American arborvitae thrives in moist or even swampy sites, it can be

## THE TREE OF LIFE

Though American arborvitae are prized for landscape uses today, they first attracted attention for entirely different reasons. When French explorer Jacques Cartier and his posse entered the Great Lakes Basin in the 16th century, Native Americans had already been making use of the tree for millennia. They used its rot-resistant wood for canoe frames, baskets, and fishing gear. But it was the healing and refreshing tea made from the leaves that most captivated the explorers' interest. It also led to the tree's common name. When Cartier and other members of his group developed scurvy during the harsh northern winter, Native Americans taught them to drink the vitamin C-rich tea. Their quick recovery—five days, by one account—had Cartier believing he had found *l'arbre de vie*, the tree of life. The name was later latinized to *arbor vitae*. —D.M.

found on limestone bluffs along the Mississippi River and on sand dunes along the Great Lakes. It seems to thrive in crowded stands, which is one of the attributes, along with its ability to regenerate from deer browsing, that makes it such a good candidate for hedges.

## HEDGING YOUR BETS

The popularity of American arborvitae shows in the 200-odd cultivars that have been introduced over the years. Of the selections favored for hedging, none is more



**Top:** The narrow, columnar habit of the arborvitae selection Emerald Green ('Smaragd') complements a formal planting of boxwood in Judy Boxx's Bellingham, Washington, garden. **Above:** Technito ('Bailjohn'), shown on the right, is a relatively new selection with a compact, dense, pyramidal shape suited to smaller gardens.





**'Wareana' is a selection from the 1830s that can be used as a low hedge or, as here, a specimen.**

widely admired and used than 'Smaragd', or 'Emerald' arborvitae, often referred to in the trade simply as Emerald Green. They seem to make a nearly unbroken hedge from the West Coast to the East, passing through posh suburbs and trailer parks with democratic ease. And for good reason.

'Smaragd' responds well to shearing, is adaptable to a wide variety of soils, propagates readily from cuttings, and retains its bright green color through heat and cold. After its introduction in 1950, it remained a rather obscure shrub until Iseli Nursery in Oregon began to promote it in the early '80s. It caught on like wildfire, quickly replacing 'Pyramidalis Compacta', which had been the go-to arborvitae for northern hedges since its introduction in the early

20th century. Oregon is now the epicenter of Emerald Green production in the United States, producing over 60 percent of those planted in the country each year.

Aside from Emerald Green, conifer connoisseurs are partial to a number of other columnar cultivars. Gerald Kral, a former director of the American Conifer Society who gardens in Rochester, New York, considers 'Degroot's Spire' one of his favorites. He says its narrow, twisting habit and single leader are great attributes. Single-leader cultivars suffer less breakage and splaying from winter snow and ice than the multi-leader forms, making them desirable for harsher northern climates.

Ed Hasselkuss, curator of the Longenecker Horticultural Gardens at the Uni-

versity of Wisconsin Arboretum in Madison, which is home to the nation's largest collection of mature American arborvitae, prefers 'Hetz Wintergreen' (sometimes listed as 'Wintergreen') above all other arborvitae for hedges. In addition to its columnar habit, Hasselkuss appreciates its year-round deep green color, fast growth, and most important, its single leader. A close second is 'Holmstrup'; Hasselkuss says its slow growth and finely textured, tightly bunched, dark green foliage create a unique hedge. He also recommends 'Techny', a broad-based, compact pyramid with deep green foliage. A variant trademarked as Technito ('Bailjohn') has the same assets as 'Techny' but in a much more compact habit, ideal for smaller urban spaces. 'Wareana', a cultivar from the 1830s that has soft sprays of bright green foliage, is one of my favorites, but hard to find.

### GLOBOSE AND MINIATURE OPTIONS

While selections with upright, pyramidal shapes are the most prevalent, rounded and dwarf forms are gaining popularity. 'Hetz Midget' is a classic that has been in production for nearly 70 years. It grows very slowly, reaching three feet at maturity, and its stout shoots need little shearing to maintain its fine globose form. 'Woodwardii' is a slightly larger, faster-growing option that also holds its four-foot, rounded shape well with minimal shearing. Among my personal favorites of the globose forms is slow-growing and compact 'Tiny Tim', which tops out around one foot. And I like the relative newcomer 'Bobazam' (trademarked as Mr. Bowling Ball, and newly listed as



**Pint-sized with bright golden foliage, 'Harvest Moon' is a popular miniature.**



## Sources

**Forestfarm**, Williams, OR. (541) 846-7269. [www.forestfarm.com](http://www.forestfarm.com).  
**Girard Nurseries**, Geneva, OH. (440) 466-2881. [www.girardnurseries.com](http://www.girardnurseries.com).  
**Meadowbrook Nursery**, Marion, NC. (828) 738-8300. [www.we-du.com](http://www.we-du.com).  
**Musser Forest**, Indiana, PA. (724) 465-5686. [www.musserforests.com](http://www.musserforests.com).  
**Venero Garden Nursery**, Shorewood, MN. (952) 474-8550. [www.venerogardens.com](http://www.venerogardens.com).

## Resources

**Dirr's Encyclopedia of Trees and Shrubs** by Michael A. Dirr. Timber Press, Portland, OR, 2011.  
**Native Trees for North American Landscapes** by Guy Sternberg with Jim Wilson. Timber Press, Portland, OR, 2004.

'Linesville' by the American Conifer Society). Its threadlike, silvery juvenile foliage gives it an overall soft appearance, a lovely counterpoint to its crisp, rounded shape, which rarely needs shearing.

For containers and rock gardens, more miniature forms are now available than ever before. Robert Fincham, author of *Small Conifers for Small Gardens*, highly recommends 'Mini Spiral' that only reaches 30 inches tall with a spread of 10 inches. Growing it myself, I can attest to its diminutive charm, featuring wavy sprays of foliage twisting up its tiny trunk. Two other interesting miniatures worth growing are 'Harvest Moon' and 'Amber Glow', both of which boast bright yellow foliage.

## COLOR CHOICES

Wild arborvitae often discolor in winter, dulling to a drab olive or even near brown. Because of this, arborvitae breeders have looked for plants that hold their color well year round. Many of the selections mentioned earlier, such as 'Smaragd', 'Hetz Wintergreen', and 'Techny', all share this asset.

Where American arborvitae shines, though, is in the gold and yellow varieties. Hasselkuss admires 'Yellow Ribbon', noting it is the only single-leader golden cultivar to date. Kral lists 'Golden Tuffet',



Shown here planted with salvias and variegated giant reed at Chanticleer gardens in Wayne, Pennsylvania, 'Yellow Ribbon' stands out as one the best single-leader, columnar American arborvitae selections with yellow or golden foliage.

a spreading cushion of golden-orange juvenile foliage, as a favorite. As a garden designer, I like the 100-year-old cultivar 'Rheingold'. I use it as much for the golden foliage that sets off spring's vibrant tulips as I do for the way it blends with the changing leaves of the autumn garden and holds a somber coppery glow through the winter.

Sandy Dittmar of Iseli Nursery is most excited about an amber form of 'Smaragd' that was found in Poland. Dubbed 'Jan-

tar', which is Polish for amber, it could soon be brightening up hedges across the country. Then there's a semi-dwarf cultivar 'Gold Drop', a seedling of 'Holmstrup' selected by arborvitae expert Clark West of Harrison, Ohio. Its lovely yellow foliage actually gets brighter in winter.

Two new introductions from Christopher Daeger, manager of the Stanley Rowe Arboretum outside of Cincinnati, and his long-time friend and collaborator





'Rheingold', shown here complementing the fall foliage of *Berberis thunbergii* var. *atropurpurea* 'Crimson Velvet', is a relatively compact, spreading selection with golden-tinted foliage.

on arborvitae selection Clark West, will become available through the American Conifer Society this year. Of the pair, named 'Going Up' and 'Going Down', the latter is said to have a distinct bluish cast—a rare hue for American arborvitae, which in its natural state tends to have a yellow undertone to its green foliage.

Some white-variegated varieties are available, but I find them uninteresting. Hasselkuss recommends the large glo-

bose form 'Sherwood Frost', which has tidy white-tipped foliage.

### PROMISING NEW SELECTIONS

Much of the excitement in new *T. occidentalis* cultivars has arisen from the collaboration of Daeger and West. Currently Rowe Arboretum holds about 115 of West's selections. At least 34 of those, known as the 'Filiformis' group, were seedlings of a seedling from the cultivar 'Filiformis' that West grew in his Ohio garden. This diverse group shows a great deal of promise with globose, columnar, and pyramidal forms, some with the threadlike foliage of 'Filiformis' and others with the feathery fans of the species. But more importantly, they have inherited heat tolerance from their parent, a step in the right direction for American arborvitae in this time of climate change.

### CULTURAL REQUIREMENTS AND A CAVEAT

Though most sources recommend well-drained, slightly alkaline soils, my arborvitae are thriving in heavy acidic soils often flooded in winter and remaining waterlogged long after the rainy season

has passed. So far I have only lost 'Golden Tuffet', probably better off in the well-drained soils of a rock garden. And I only eliminated one, 'Teddy', which after a few good years splayed hideously, a trait shared by many multi-stemmed varieties.

Once properly sited, most arborvitae don't require much maintenance. For keeping hedges healthy, Dave Wagner of Wagner Nursery in Oregon's Willamette Valley, which specializes in large field-grown Emerald Green, recommends a biyearly shearing and topdressing with a balanced (16-16-16) fertilizer each spring. Spider mites can be a pest of arborvitae, so monitor trees in fall by shaking a branch over a piece of white paper. If you observe tiny mites on the paper, treat trees with ultra-fine horticultural oil in fall.

In the wild, American arborvitae is a valuable habitat species, especially in the Great Lakes region where it provides critical winter cover and browse for white-tailed deer. In cultivation, its susceptibility to deer browse is probably the worst failing of American arborvitae. I would go so far as to say it is probably not worth planting without protection from deer fencing in suburban and rural areas where deer are plentiful. My own collection has had no deer damage despite its proximity to a wildlife sanctuary rife with deer, which I attribute to our very large dog, who patrols our property.

### LOOKING BACK AND LOOKING AHEAD

Last year while on vacation, I walked the boardwalk trails through the sand dunes of Kohler-Andrae State Park in Sheboygan, Wisconsin, searching for an old stand of American arborvitae on the western shores of Lake Michigan. I had picnicked in that area back in the '70s and the memory of those trees remained vivid. When I finally found them again, I was pleased to see they had not only survived nearly 40 years in pure sand and in full exposure to Wisconsin's harsh winters, but had grown!

This discovery reaffirmed my belief that this tough, adaptable conifer has limitless potential. While I continue to seek out older cultivars to add to my American arborvitae collection, I am equally excited about up-and-coming selections of this garden classic that breeders have in the works. 🌿

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Mr. Bowling Ball ('Bobozam') has a compact habit and feathery blue-green foliage.