

TO LEARN MORE

Bitner, Richard L., *Conifers for Gardens: An Illustrated Encyclopedia*. Portland, OR: Timber Press, 2007.

Cutler, Sandra McLean, *Dwarf & Unusual Conifers Coming of Age*. Washington, D.C.: United States National Arboretum, 1997.

Krüssmann, Gert, *Manual of Cultivated Conifers*. Portland, OR: Timber Press, 1986.

Van Gelderen, D.M. and Van Hoey Smith, J.R.P., *Conifers: The Illustrated Encyclopedia*. Portland, OR: Timber Press, 1996.

The American Conifer Society website offers in-depth information about conifers at www.conifersociety.org.

Lenhardt Library

For these and other titles, visit the Lenhardt Library of the Chicago Botanic Garden, open 9 a.m. to 4 p.m. Monday through Saturday and noon to 4 p.m. Sundays. Extended hours are Tuesdays until 7 p.m. Online information is at www.chicagobotanic.org/library.

Joseph Regenstein, Jr. School of the Chicago Botanic Garden

The Regenstein School offers a wide range of classes in gardening, landscape design, botanical arts, and more. For a course catalog, please call (847) 835-8261 or visit www.chicagobotanic.org/school.

Science at the Garden

The Chicago Botanic Garden is home to one of the nation's premier plant conservation programs, through which scientists tackle the most pressing issues in the plant conservation field. To learn more about the Garden's many conservation and scientific efforts, visit www.chicagobotanic.org/research.

The renovation of the Dwarf Conifer Garden has been made possible by a generous gift from Georgiana Taylor, with support from the Woman's Board of the Chicago Horticultural Society.

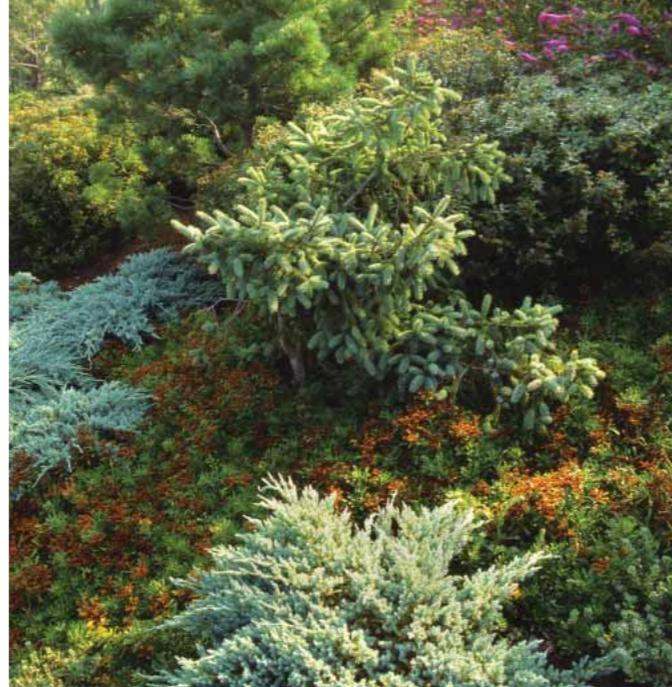


CHICAGO BOTANIC GARDEN

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One of the green treasures of the Forest Preserve District of Cook County



DWARF CONIFER GARDEN



One of the best of its kind in the country, the Dwarf Conifer Garden showcases more than 150 different kinds of the smaller members of the conifer family. Renovated in 2008 (it was first dedicated in 1988), the garden includes a new staircase entrance, views to the Japanese Garden and Great Basin, and a widened, accessible-to-all path.

Conifers are plants that bear cones. Mostly native to the earth's northern hemisphere, conifers have skinny needle-like or scale-like leaves that help reduce moisture loss and allow snow to be shed easily.

The conifer family includes both the oldest living thing on earth (*Pinus aristata*, or Bristlecone Pine, known to reach 4,000+ years old) and the largest (*Sequoia sempervirens*, or Coast Redwood, nearly 400 feet tall).

Dwarf conifers are trees that do not reach the normal size of what is typical for their species. Dwarfism occurs naturally in several ways:

- **Witches' brooms.** Tangled, dense, snarled clumps of branchlets sometimes grow on full-sized trees. Called witches' brooms, these can be caused by disease or genetic mutation. Rooted cuttings from a witches' broom maintain a dwarf habit.
- **Seed mutation.** Some seeds produce much smaller trees than normal, including many of the weeping and contorted varieties.
- **Conditions in nature.** Some conifers grow in habitats with harsh conditions, such as windy, rocky outcrops and alpine zones. Over thousands of years they have adapted to these environments by becoming more prostrate in habit. A common landscape plant, *Juniperus horizontalis*, is an example of this.

GARDENING WITH DWARF CONIFERS



Dwarf conifers are ideal plants for Chicagoland's smaller yards and gardens. They're low-maintenance and resistant to most insects and diseases; many have year-round color; and there is an extraordinary range of sizes and shapes available.

Growth rates

Dwarf conifers grow slowly. The American Conifer Society offers these size guidelines for all conifers:

| Category | Approximate growth per year | Approximate size at 10 years |
|--------------|-----------------------------|------------------------------|
| Miniature | Less than 1 inch | Less than 1 foot |
| Dwarf | 1 to 6 inches | 1 to 6 feet |
| Intermediate | 6 to 12 inches | 6 to 15 feet |
| Large | More than 12 inches | More than 15 feet |

Site and soil

Overall, dwarf conifers thrive in sunny locations with well-drained, slightly acidic, sandy soil (though most perform well in Chicago's less-than-perfect clay soils). Yews, spruces, and hemlocks can take partially shady conditions, but conifers don't grow well in heavy shade. Conifers benefit from periodic fertilizer applications.

Pruning

Because most dwarf conifers grow so slowly, pruning is rarely required. Conifers shed previous years' needles regularly in the spring—that's why the interior of an evergreen is bare. Dead needles can be left as natural mulch for the plant.



DWARF CONIFER SELECTIONS

Dwarf conifers for blue color

What humans see as blue color is actually a protective, waxy outer coating on new-growth needles. It wears off over time.

Picea pungens 'Montgomery' – Colorado Spruce. A compact clone that's one of the best of the blues.

Juniperus squamata 'Blue Carpet' – Singleseed Juniper. This juniper with silver-blue foliage makes a good ground cover.

Dwarf conifers for gold color

Picea pungens 'Spring Ghost' – Colorado Spruce. Spring growth is whitish-yellow.

Juniperus horizontalis 'Mother Lode' – Creeping Juniper. This prostrate form is bright yellow in summer.



Dwarf conifers for partial shade

Taxus x media 'Everlow' – Yew. A low grower that can handle both partial shade and wind.

Tsuga canadensis 'Stewart's Gem' – Canadian Hemlock. Tolerates light shade.





DWARF CONIFER FORMS

All hardy in Midwest gardens, these dwarf varieties delight the eye with interesting shapes, textures, and colors. Sizes listed are approximate at 10 years old.

Globose Naturally round forms add formality to walkways, beds, and edgings.

Thuja occidentalis 'Little Gem' – Eastern Arborvitae, 1-3 feet tall by 4½-6 feet wide. *Chamaecyparis thyoides* 'Heatherbun' – Heatherbun Falsecypress, 3 feet tall by 4-5 feet wide.

Mound Low and rounded, mounded forms can hide the stems and foliage of plants behind them, and create interesting, organic bumps and hills in too-flat beds and lawns. *Pinus mugo* 'Sherwood Compact' – Mugo Pine, 2-3 feet tall by 2-3 feet wide.

Columnar Narrow or close-to-the-street yards benefit from the screening qualities of taller-than-broad uprights. Also good as hedges and windbreaks. *Pinus nigra* 'Arnold Sentinel' – Austrian Pine, 10-12 feet tall by 2-3 feet wide. *Picea pungens* 'Fastigiata' – Columnar Colorado Spruce, 25 feet tall by 5 feet wide.

Pendulous Weeping, drooping branches make the pendulous forms ideal focal points in beds or borders. *Tsuga canadensis* 'Pendula' – Canadian Hemlock, 5 feet tall by 7 feet wide. *Juniperus rigida* 'Pendula' – Weeping Juniper, 4-5 feet tall by 2-3 feet wide.

Flattened Globose or Nest An unusual shape, often with a bowl-shaped center. *Picea abies* 'Repens Gold' – Golden Bird's Nest Norway Spruce, 3 feet tall by 4 feet wide.

Prostrate Prostrate forms grow flat, and when planted on an incline they appear to flow downhill. *Pinus sylvestris* 'Hillside Creeper' – Scots Pine, 2 feet tall by 6-8 feet wide. *Juniperus horizontalis* 'Mother Lode' – Creeping Juniper, less than 1 foot tall by 2-3 feet wide.

Upright Pyramid When punctuation is called for, use a cone-shaped form. Excellent as anchor when partnered with other dwarf conifers. *Abies concolor* 'Select' – White Fir, 5 feet tall by 3 feet wide. *Picea abies* 'Cupressina' – Norway Spruce, 6-8 feet tall by 3 feet wide.

Irregular Free-flowing, irregular shapes add softness to informal or cottage-style gardens. *Larix decidua* 'Varied Directions' – European Larch, 8-10 feet tall by 10-12 feet wide.

RARE OR UNUSUAL DWARF CONIFERS

Use the map to locate them.

1. *Thujaops dolabrata* 'Nana' – Hiba or False Arborvitae. A connoisseur's plant with bright green foliage in summer. It can grow well in partial shade, but is marginally hardy in this area.
2. *Picea pungens* 'Pendula' – Colorado Spruce. This popular form, with branches that cascade downward, performs well.
3. *Chamaecyparis nootkatensis* 'Green Arrow' – Nootka False Cypress. A very narrow tree with pendulous branches planted here in a group of three. 'Green Arrow' keeps its green color year-round.
4. *Picea abies* 'Virgata' – Snake Branch Spruce. Rather like a giant stick figure, this Norway spruce has long, dark green needles.
5. *Picea abies* 'Acrocona' – Norway Spruce. Showy purple-red cones in spring distinguish this slow-growing dwarf conifer.
6. *Metasequoia glyptostroboides* 'Miss Grace' – Dawn Redwood. A rare, weeping dwarf form of dawn redwood, this is one of the few deciduous conifers.
7. *Pinus contorta* 'Taylor's Sunburst' – This unusual pine has bright golden yellow new growth that persists through summer.



Unusual shapes, unexpected colors, and 150 dwarf varieties in one unique garden.