



CONIFER CORNER

Mighty Miniatures

*Text by Dr. Bert Cregg, Michigan State University
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Photos by Hannah Cregg, except as noted.*



ORNAMENTAL CONIFER SIZE CLASSES RECOGNIZED BY THE AMERICAN CONIFER SOCIETY

Category	Growth per year ¹	Approx. size at 10 years ²
Miniature	< 1"	< 1'
Dwarf	1" to 6"	1' to 6'
Intermediate	6" to 12"	>6' to 15'
Large	>12"	>15'

¹Size may vary due to cultural, climatic and geographical region

²Refers to growth in any direction

Source: American Conifer Society: www.conifersociety.org

One of the challenges of writing the ‘Conifer Corner’ series of articles is developing a means to organize the discussion of a group of plants as diverse and complex as conifers. Ornamental conifers come in such an incredible array of sizes, forms, shapes, and colors that they nearly defy description or categorization. Fortunately, the American Conifer Society (ACS) has developed several guidelines for categorizing conifers. One way the ACS groups conifers is by their growth habit; columnar, weeping, irregular, and so on. The other principal way the ACS categorizes conifers is based on growth rate and size at maturity. The ACS classifies conifers as miniatures, dwarf, intermediate or large (see sidebar). While the ACS lists typical growth rates and mature sizes for the various categories, most people familiar with growing trees will recognize that trees vary widely in the growth rates, growing more on good sides and less on poor ones. Nevertheless, discussing ornamental conifers based on growth rate makes sense since size is a major criterion in selecting plants for a given site; looking for plants that will best fit the space available and our design intent. With this in mind, the next four editions of *Conifer Corner* will discuss conifers in each of the four size categories defined by the ACS.

In this edition, we’ll start with the small end of the conifer spectrum and discuss *miniature conifers*. These are plants that typically have growth rates of less than one inch per year and may only reach two or three feet in height after three decades. Miniature conifers highlight the



Pinus leucodermis ‘Beran Conica’, Beran’s Conical Bosnian pine

amazing diversity of ornamental conifers. When wandering through a collection of miniature conifers, it's sometimes hard to grasp that a miniature white pine (*Pinus strobus*) or miniature Norway spruce (*Picea abies*), that may be less than 30 inches tall at maturity, are still members of the same species as trees that grow to 120 feet or more. Miniature conifers typically arise from genetic mutations as sports or witches' brooms. As a result of the mutation, the plant produces extremely short internodes that are only a fraction of their typical length. Conifer collectors and nurseries preserve the mutation by grafting and then propagate the plants by grafting or rooting cuttings.

The extremely slow growth and short stature of miniatures can make them a challenge to incorporate in a landscape. Miniatures can often serve as accent plants or as specimens in perennial beds. It is important to be careful in choosing a design or site for miniatures. As conifer expert Chub Harper notes, "The little fellas can get lost in the shuffle." A common use for these slow growing forms is in rock gardens where they are able to stand on their own and not get overshadowed by faster growing neighbors. Some nurseries that specialize in dwarf and unusual conifers market miniatures for container gardens and railroad gardens.

If you're designing a rock garden, container garden, or just looking for an accent plant for a container bed, here are some miniatures that merit consideration.

CHUB'S CHOICES: Chub Harper lists his 'top five' favorite plants in each of the ACS conifer size classes.

Miniature Conifers — Growth per year: less than one inch.
Size at age ten years: one foot.

1. <i>Picea abies</i> 'Pumila'	Dwarf Norway spruce
2. <i>Picea glauca</i> 'Pixie Dust'	Dwarf Pixie White spruce
3. <i>Pinus strobus</i> 'Minuta'	Dwarf White pine
4. <i>Pseudotsuga menziesii</i> 'Little Jon'	Dwarf Douglas fir
5. <i>Tsuga canadensis</i> 'Lewis'	Dwarf Canadian hemlock



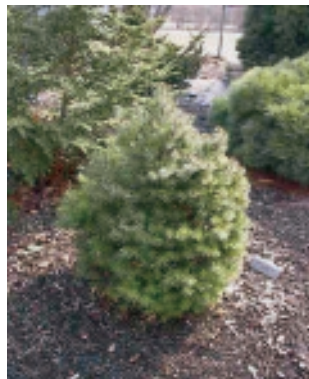
Little big men. These *Abies procera* 'Hupp's Dwarf', Hupp's Dwarf Noble firs may reach only 2 feet high at age 35. *Abies procera* trees in native stands in the Northwest can grow to over 240 feet at maturity.



Picea abies 'Pumila', Dwarf Norway spruce

Picea abies 'Pumila'. This Norway spruce cultivar forms semi-prostrate mounds. Unlike many of the 'nest' forms of *Picea abies*, which tend to flatten out, Pumila maintains a rounded habit with shoots pointed upward. Conifer expert Chub Harper notes, "This is an outstanding versatile plant and it's tougher than a nail."

Pseudotsuga menziesii 'Little Jon', Little Jon Dwarf Douglas-fir. Photo courtesy of Chub Harper.



Pseudotsuga menziesii 'Little Jon'. This Douglas-fir is unusual in that it maintains a relatively upright form and is one of the slowest growing Douglas-firs reaching about 3 feet at age 20. This is a well-behaved plant with rich green color.



Pinus parvifolia 'Hagoromo', Hagoromo Japanese white pine

Pinus parvifolia 'Hagoromo'. This plant is noteworthy since there are few good miniature pines. Hagoromo is a dense slow-growing plant that does well with relatively little attention. Its fine texture makes it an excellent choice for rock gardens or landscapes with limited space.

Picea omorika 'Guenter'. This plant is a very dwarf and dense conical plant with dark green needles that have silvery back sides. This plant is an excellent candidate for the rockery or other small garden. Cultivar may be listed as 'Hexebessen'.



Picea omorika 'Guenter', Guenter's Serbian spruce

Tsuga canadensis 'Lewis'. As usual, hemlocks provide the answer when looking for conifers for the shade. Lewis has an upright, irregular form. It is dark green with dense needles. Site selection is important with hemlocks; the rule to remember is to avoid winter sun.



Pinus glauca 'Pixie Dust'. This plant is slower growing and more dense than the typical dwarf Alberta spruce (*Picea glauca* 'Conica'). Like many of the miniatures, it makes a great addition to rock gardens.

Made in the shade: dwarf Canadian hemlocks such as *Tsuga canadensis* 'Lewis', Lewis Dwarf Canadian hemlock are a great conifer choice for shady spots. Photo courtesy of Dax Herbst.

Pinus strobus 'Minuta'. Nice low mounding white pine with short needles. Prefers full sun.



Pinus strobus 'Minuta', Dwarf white pine. Photo courtesy of Dax Herbst.



Picea glauca 'Pixie Dust', Pixie Dust white spruce



This Mountain pine (*Pinus uncinata* 'Hnjido') shows the incredibly short internodes characteristic of miniature conifers. This plant will reach 8 inches in ten years.




Miniature conifers such as *Picea abies* 'Little Gem' (left), Little Gem Norway spruce add contrast when planted near larger trees.



Picea abies 'Bant', Bant's Dwarf Norway spruce

Picea abies 'Little Gem'. This is a superb rock garden specimen. It was a witches' broom that had developed on *P. abies* 'Nidiformis', which itself was a witches' broom that had been found on a Norway spruce.

Picea abies 'Bant'. This slow-growing form of Norway spruce forms a neat globe. Larry Stanley of Stanley and Sons Nursery in Oregon suggests that this may be the best new small Norway spruce on the market. 

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