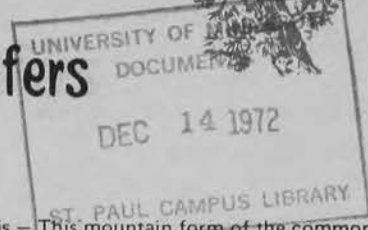


Arboretum Review



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Dwarf conifers



There is considerable interest in dwarf or slow-growing plants for foundation plantings, rock gardens, or borders. Dwarf conifers hold a special interest because of their evergreen foliage. Very little research has been done in Minnesota on this interesting group of plants. We have been growing a few of them since the arboretum started in 1958. Last year we started a special dwarf conifer area where the specimens can be displayed in a setting of rocks. These plants attract a lot of attention, and this review will deal with our past experiences with them. Some of our plants are too young to be fully evaluated. The cultivar names are the ones that they were received under and may not be their true names. No effort has been made to positively identify each species and cultivar.

Some of our specimens represent inherently slow-growing species but most are cultivars which were selected for their slow growth rates. These selections must be vegetatively propagated in most cases.

Abies balsamea (spreading form) — This is a low spreading form of the balsam fir selected by M. Smithberg and Al Johnson near Wykoff, Minnesota. Our specimen was started from a naturally rooted layer. Our specimen is now about 4 feet wide and a foot tall. The needles are characteristic of the species. It is not commercially available.

Abies Koreana 'Prostrate Beauty' — This is a low spreading form of the Korean fir with upright curved branches. Our plants are still very small and have survived just one Minnesota winter. Some very fine specimens of Korean fir are growing in the Hodgson Memorial Arboretum at Waseca.

Abies lasiocarpa 'Compacta' — This plant is dwarf and broadly conic. Our plants are young, and it is too soon to know just how hardy they will be. The Arizona strain of this fir has shown some winter burn in our fir collection.

Abies nordmanniana 'Prostrata' — This dwarf spreading form of the Caucasian fir has survived one winter. It is too soon to predict just how well adapted it will be.

Chamaecyparis pisifera 'Dwarf Blue' — The dwarf forms of the sawara falsecypress in our collection are doing very well. They had been planted along the stream in a shaded area and had not made any appreciable growth in 5 or 6 years. When moved to the dwarf conifer area in full sun, the plants started to grow and came through last winter with no apparent injury. The 'Dwarf Blue' cultivar is an attractive blue. The plants are only about 16 inches tall.

Chamaecyparis pisifera 'Filifera Aurea' — Our plant was obtained in 1964 from a nursery near Detroit, Michigan. It was moved to its present location in the dwarf conifer area in the spring of 1971. The plant is doing well and is now about 5 feet tall. The branches are pendulous and have a golden cast.

Chamaecyparis pisifera 'Minima' — Our plant is a compact form that is now only 11 inches wide and 15 inches tall after 14 years. The scale-like needles have a bluish green cast.

Chamaecyparis pisifera 'Plumosa Compressa' — This small cultivar was obtained from the National Arboretum in 1963. The plants are now about 16 inches tall.

Chamaecyparis pisifera 'Squarrosa Argentea' — This cultivar has scale-like needles arranged in a manner that gives a squarish appearance to the twigs. Our specimen came from the National Arboretum in 1968. The plants are now 18 inches tall and 19 inches wide. The new growth is a light bluish green.

Chamaecyparis pisifera 'Squarrosa Quest' — Our plant, obtained from the Arnold Arboretum in 1957, is now 26 inches tall and 30 inches wide. Its appearance is similar to 'Squarrosa Argentea.'

Juniperus communis 'Repanda' — This dwarf form of the common juniper grows only about a foot tall by 4 to 5 feet wide. This is an attractive cultivar with a dense habit. The needles are dark green with a white band above.

Juniperus communis saxatilis — This mountain form of the common juniper forms a low, spreading, mat-like mound.

Juniperus horizontalis and its cultivars — Most of the creeping junipers grow too fast to be considered dwarfs. We obtained the cultivar 'Procumbens Nana' from the National Arboretum. It resembles *J. procumbens* 'Nana' but is probably distinct and may prove to be even more desirable.

Juniperus procumbens 'Nana' — This dwarf form of the Japanese garden juniper is one of the slowest growing junipers. It is reported to show winter burn in our area, but plants in the arboretum have done well.

Picea abies 'Acrocona' — This possibly should be considered a novelty rather than a dwarf. Its peculiar habit of forming cones at the tips of lateral branches slows the growth rate.

Picea abies 'Clanbrassiliana' — This is one of several compact forms of the Norway spruce. Our plants, now 11 years old, are about a foot tall and 3 feet across. The needles are short and dark green. (photo below)

Picea abies 'Mucronata' — This dwarf upright plant is about as tall as it is wide. Our plant, now 8 years old, is about 3 feet tall and wide.

Picea abies 'Nidiformis' — This plant is commonly called the nest spruce. It forms a flat-topped spreading specimen. Our plants, now about 11 years old, range in diameter from 3 to 5 feet and are only about a foot tall. This cultivar is the one most frequently sold at garden centers in the state.

Picea abies 'Pumila' — This another of the dwarf Norway spruces. Our plant, now 13 years old, is 2 feet tall and 5 feet wide.

Picea abies 'Pygmaea' — This cultivar, introduced about 1800, is still widely grown in cultivation and is quite similar to 'Pumila.'



Picea glauca 'Conica' — Commonly known as the dwarf Alberta spruce, this cultivar has been widely planted. The original plant was discovered by Dr. A. Rehder and J.G. Jack in the Canadian Rockies near Lake Laggan, Alberta, in 1904. The habit of growth is a dense cone. The plant puts on only a few inches of new growth each year. Our plants are about 5 feet tall after 13 years. This plant must be protected from the winter sun by a burlap shade and is subject to red spider injury. Its tendency to winter burn limits its use in this area.

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***Picea jezoensis* (dwarf form)** — A dwarf form of the yeddo spruce has been planted in our dwarf conifer collection. We obtained the plants from the Plant Introduction Station in Beltsville in 1959. Our plants are now about 3 feet tall. Winter burn has ranged from none to severe. This plant will probably require a sheltered location in this climate.

***Picea omorika* 'Nana'** — This dwarf form of Serbian spruce has been in cultivation since its introduction in 1930. A mature specimen is about 4 feet tall and 5 feet wide. The species has done well in a protected spot. The cultivar 'Nana' was planted a year ago and has come through just one winter. It is too soon to say whether this cultivar will be useful.

***Picea pungens* 'Globosa'** — This is a slow-growing form with silvery-green foliage. The mature form is globular with a slightly flattened top. Our plants are still quite young, but this form should be fully hardy.

Pinus aristata — The bristlecone pine is not a true dwarf, but it does have a slow growth rate. Trees, in their natural range, live up to 3000 years, thus attesting to their slow growth rates. This pine should be planted on well-drained soil. Our oldest plants are about 4 feet tall after 8 years. The needles are dark green, and the form of the plant is upright but a bit irregular. The growth is very dense because the needles are retained for 12 to 20 years.

***Pinus banksiana* (dwarf forms)** — The native jack pine grows to a height of 40 or more feet. Al Johnson, of our staff, has been growing seedlings from seeds collected from "witches brooms," and a good percentage of the seedlings are true dwarfs. Some of these seedlings are now over 12 years old and are not more than 2 to 3 feet tall. These might be used in a rock garden or for a low informal hedge. (photo below)



***Pinus banksiana* 'Uncle Fogy'** — This weeping form of jack pine can be used as a groundcover or as a novel feature in the rock garden. This cultivar is propagated by grafting on seedling jack pine. The height and, to a certain extent, the form of the plant are determined by the height of the graft. We have received many favorable comments on this selection.

***Pinus densiflora* 'Umbraculifera'** — This is the Japanese umbrella pine which is a very dense form of the Japanese red pine. Unfortunately because this selection is not fully hardy, each spring there is considerable winter burn. Our plants are now about 5 feet tall and very dense. The recovery after winter injury is usually quite complete, but the discoloration in late winter and spring is objectionable.

***Pinus densiflora* 'Pendula'** — The habit of growth is similar to that of 'Uncle Fogy' and is either prostrate or weeping depending on the height of the graft. Our plants are just a year old, and it is too soon to know whether this cultivar will prove hardy.

***Pinus flexilis* 'Compacta'** — This is a compact form of limber pine. Our plants were set out last year, and it will be several years before we can fully evaluate this cultivar for hardiness. The species generally has been hardy in this area.

***Pinus pumila* (Japanese Stone Pine)** — Our plants were grown from seeds obtained from Tokyo University Forest, Hokkaido, Japan. This is a dwarf pine with a prostrate habit of growth. Our plants are now 9 years old from seed and are only a foot high and 2 feet wide.

***Pinus resinosa* (dwarf forms)** — Dwarf forms of the Norway pine have been selected from seedlings grown from cones collected on "witches brooms." These plants are now 7 years old from seed and make attractive mounds about 15 inches tall and 20 inches wide. These should prove to be useful ornamentals.

***Pinus strobus* (dwarf forms)** — These have a similar origin to the dwarf jack and Norway pines. These form almost perfect globes and are about 18 inches tall by 2 feet wide after about 10 years.

***Pinus sylvestris* 'Globosa Glauca'** — This is a dwarf form of the familiar Scotch pine. The needles are silvery green and shorter than normal. Our plants are still young and further testing is needed to determine the hardiness of this selection.

***Thuja occidentalis* 'Hetz Midget'** — This is a very promising selection of the American Arborvitae that grows in a very dense, globe-shaped form. Our oldest plants, now 12 years old are only about a foot tall and as wide as they are tall. We have used this as a dwarf hedge and as specimen plants in our dwarf conifer collection. This is one of our very promising dwarf conifers for formal plantings. No shearing is needed to maintain a perfect globe form.

***Tsuga canadensis* 'Pendula'** — This selection has been in the trade since its discovery near Fishkill Mountain along the Hudson River in 1870. It sometimes grows under the cultivar name of 'Sargentii.' This plant does best where it has protection from the winter sun. We have not included it in our dwarf conifer area but do have plants growing in a shady area in the arboretum. A number of plants have been established in the Twin Cities area.

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