

AL FORDHAM: Dr. Pike from the University of New Hampshire would like to describe a tree which he feels has been overlooked.

DR. PIKE: One of my chief interests have been the use of native plants for landscape work and one which is particularly pretty in the architecture of its branches is *Cornus alternifolia*. It is difficult to find in nurseries but is very hardy and has a tremendous range over the continent. Its blossoms are not as spectacular as the Florida and Korean Dogwood but it is quite handsome in fruit. The fruits are up to 1/3" in diameter in large clusters on red peduncles. I feel it should be grown more widely. Thank you.

AL FORDHAM: Next we will have Lanny Pride of Butler Pa. who has done a good deal of work with Holly and Rhododendrons who would like to show a few slides.

LANNY PRIDE: *Ilex Opaca* 'Carnival' and 'Arlene Leach' are selections of Grace Hybrids, the result of testing and breeding for 40 years at Butler, Pennsylvania by Orlando S. Pride. The Grace Hybrids have proven to be hardier and have more vigor than other clones tested in the Butler area. They also grow more compact and transplant more readily than most other clones tested.

CEDRUS DEODARA 'KASHMIR' AND ITS PROPAGATION BY CUTTINGS

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Cedrus deodara, commonly known as the Deodar, Indian or Himalayan Cedar, is a tree native to the Himalayan Mountains from Nepal to Afghanistan at altitudes of 1200 meters or higher. Although perhaps the most striking, it has been considered the least hardy of the true cedars. Rehder lists it as a Zone 7 plant while Den Ouden and Boom, in their recent *Manual of Cultivated Conifers*, speak of it as being not quite hardy in Western Europe. L. H. Bailey considered it to be by far the best conifer for planting on the Pacific slope and one of the most popular conifers planted in Southern California. It is also widely used throughout the Gulf States. Through the years deodar cedars have been tested repeatedly for hardiness at the Arnold Arboretum but have always failed to survive for they lacked the ability to withstand the winters.

In 1961 two one-year-old grafted plants of a cultivar named *Cedrus deodara* 'Kashmir' were given to the Arnold Arboretum and since that time they have proven hardy. This clone provides an excellent example of the unseen differences that can be present in individual plants. In a nursery row this plant would appear similar to others, yet there was an invisible genetic difference — the ability to withstand low

temperatures. The winter of 1967-68 proved severe in the Arboretum nursery. Most plants of border-line hardiness were killed outright while numerous others were badly damaged. *C. deodara* 'Kashmir' however, came through with some slight needle browning at the branch tips but with no damage to the wood.

Cedrus deodara 'Kashmir' originated in the nursery of Dr. J. Franklin Styer, Concordville, Pennsylvania. Dr. Styer has kindly provided its history as follows: "This is the only plant of 200 set in nursery rows in 1930 which survived the winter of 1933-34 when temperatures dropped suddenly to 25 degrees below zero. Standing alone, it also survived the similar winter of 1936-37. The only winter injury we have experienced with grafted trees has been on branches immediately above snow, and this has only occurred once, causing one lot to be bare of branches up two feet on the southwest side." It should be pointed out that the winter of 1933-34 was catastrophic in the northeast. Temperatures dropped to levels where even some native trees were killed outright.

PROPAGATION OF *CEDRUS DEODARA* 'KASHMIR' BY CUTTINGS

The following table reports propagation trials of *Cedrus deodara* 'Kashmir' by cuttings. Cuttings were made on October 18, 1967 and placed under polyethylene plastic with bottom heat at 75 degrees. They were lifted on February 29, 1968 and after one growing season are now about 22 inches tall.

TREATMENT	No of Cuttings	% of Rooting
Hormo-Root "C" (0.80% IBA-Thiram added Powder formulation)	50	90
Control — no treatment	50	88
IBA plus NAA — 5,000 ppm each (5 second dip)	50	84
IBA at 10,000 ppm (5 second dip)	50	80
IBA plus NAA — 2,500 ppm each (5 second dip)	50	64
IBA at 5,000 ppm (5 second dip)	50	64
245 TP at 5,000 ppm (powder formulation)	50	34

Cedrus deodara 'Kashmir' is a strikingly beautiful fast growing tree with silvery-blue color and nodding branch tips. It is quite unlike any other conifer hardy in the Boston area. Although plants are available commercially its apparent hardiness should be brought to the attention of the membership as it could make a fine addition to the ornamental trees grown

in climates similar to that of Boston, Massachusetts. Many of the plants resulting from our propagation trials will be used for testing in locations with winters more severe than those of the Arnold Arboretum.

Rooting materials used in the above work were prepared from concentrated formulas donated by the Research Department, Amchem Products, Inc., Ambler, Pennsylvania.

AL FORDHAM: We next have Dick Washburn from the University of Alaska and he wants to show a few slides of what can be done in this harsh climate.

DICK WASHBURN: A few general remarks about Alaska's climate — the Maneska Valley where we're located and where about $\frac{1}{3}$ of the population live has a photoperiod varying from $5\frac{1}{2}$ to $19\frac{1}{2}$ hours, December to June. Our minimum temperature is about -32° F with -45° F in some low spots; the maximum is about 85° F. In the Valley where the University is located they range from 100° F down to -70° F. In Southeast Alaska where the capital is located it is very similar to Washington and Oregon.

This is *Rosa rugosa* 'Ruth' it has never died back with or without cover. It has one main period of bloom; with few exceptions the hardy roses carry this character with them.

This is an old timer *Rosa gallica grandiflora*; it will die-back a little bit. It is one of the very few hardy ones that has a green, sort of succulent type stem. It is very colorful.

Here we see one of the hardiest of the double whites. This also has just one main period of bloom each season. The single form will often have 100-150 blooms at one time. It is *Rosa spinosissima altaica* a double form.

This slide shows some of the plants that can be grown around the Fairbanks area. Sweetberry Honeysuckle, a number of Prunus, the Birdcherry, the Maacki Cherry and the true Chokecherry, *Spiraea trilobata* are all represented. The temperature here approaches -70° F but they don't have much wind.

This is one of the lilacs which is commonly grown in our area, the Royalty Lilac; It's a *S. villosa* hybrid developed at the Morden Experiment Station and is also very hardy at Fairbanks. It is not as fragrant as the Fench hybrids or the common but it blooms at a very early age, we had one that bloomed from a cutting about a foot tall. It never diesback and in addition the moose don't like it.

This is one of the few pines that will do well, its a Lodgepole Pine and is native in Alaska in the Southeast region. It is about the only large exotic pine that does very well.

AL FORDHAM: Next we'll have Chuck Feryok of Sayville, Long Island who will describe a new *Cotoneaster*.

CHUCK FERYOK: This is a seedling of *Cotoneaster praecox* from a batch of open pollinated seed. It is a vigorous grower and produces fruit consistantly, it is easily propagated from cuttings. I've tagged the name 'Cardinal' on it be-

cause it's such a red color. It's semi-evergreen under our condition with winter temperatures averaging in the low teens. The outstanding thing about it is its consistent fruiting habit.

AL FORDHAM: Al Johnson of the University of Minnesota will now describe a low growing *Cornus*.

AL JOHNSON: This is a *Cornus stolonifera* dwarf which we picked up about 5-6 years ago. It is derived from a witches broom. The plant is topping off at about 4 feet; they are all uniformly compact and may be a valuable addition to the dwarf dogwoods. It has a dense, heavy branching habit.

AL FORDHAM: Tony Shammarello who has developed many rhododendrons will now describe a couple of his latest accomplishments.

TONY SHAMMARELLO: I would like to show you two azaleas which are recently introduced. The first has the plant character of a Kurume and so grows 2 or 3 times more vigorous, the flowers are larger and it does not seem to fade in the sun. This is one of the hardiest azaleas in my area. The name is 'Hino-Red.'

This is our most recent introduction called 'Helen Curtis'. It is an outdoor azalea and may also be useful for greenhouse forcing. Last year we had — 12° F and the plant only bloomed at the base. It seems to mature its flower buds early enough and I believe it will be a very hardy azalea. Both are evergreen and root very easily.

AL FORDHAM: Roy Nordine has a few slides he'd like to show.

ROY NORDINE: As you know this forum is where we come to see and hear the most unusual things; so I'm going to show you some new varieties of crabapples — but no comments.

(Roy proceeded to show several slides of some of the most unusual crabapples, though the audience appeared to be more impressed with the pink grass).

AL FORDHAM: Art and architecture have all gone psychedelic so why not Horticulture. This then terminates this forum.