

or the sizes listed, the most popular in the underground sprinkler systems industry

Part Numbers: 19855, 21055 22655, 25655, 27155, 33155 41055 and 62055.

Our standard pincers, part number 1098, are the most widely used in the field; however, our side jaw pincers, part number 1099, are used where hose is in confined area.

> Seud for free samples and literature.

by Douglas J. Chapman Dow Gardens Horticulturalist Midland, Michigan

Pinus is one of the most versatile genera of plants which is least understood or used. The pines to be considered below, range in height from 12 to 40 feet, thus being landscape effective in most urban situations. Frequently, junipers and yews are used in the landscape to fill in as "narrow-leaf evergreens" where pines would be equally effective (e.g. Pinus densiflora 'Umbraculifera', Pinus bungeana, and Pinus cambra). Two examples each of yews and junipers used are Upright Japanese Yew (Taxus cuspidata 'Capitata', Hick's Yew (Taxus media 'Hicksi'), Hetz Juniper (Juniperus chinensis 'Hetzi'), and Keteleer Juniper (Juniperus chinensis 'Keteleeri'). We shall discuss the pines grouped as two-, three-, and five-needle pines.

In general the two- and threeneedle pines are more tolerant of heavy soil, salt used for de-icing, restricted root sites, and urban conditions than are five-needle pines. The four most important two-needle pines, in the smaller types, are Tanyosho, Swiss Mountain, Lodgepole, and Scotch Pine.

Tanyosho Pine (*Pinus densiflora* 'Umbraculifera') is a large shrub or small tree with dense branching. At maturity it reaches 25 to 35 feet in height with a round or umbrellashaped crown. As this plant gets older, the bark sluffs-off and shows a brilliant reddish-orange which is a colorful addition to the landscape year-round, but most particularly welcome during the winter months. As the tree becomes older, the needles and branching develop a somewhat layered or cloud-like effect which is unique among evergreens.

Swiss Mountain Pine (Pinus mugo) is an exciting foundation plant. This low-spreading densely foliated plant, which reaches 12 to 18 feet in height, fits almost any landscape situation. Mugho Pine responds well to pruning and can be kept in a low formal setting. The cultivar Pinus mugo 'Mughus' is quite spreading and rarely reaches over 10 feet in height, but these plants are not well defined in the trade and pruning of the new growth for form and dwarfing should be practiced.

Lodgepole Pine (*Pinus contorta latifolia*) is an open picturesque plant with an ultimate height of 30 to 40 feet in the Mid-west. The foliage is a vibrant yellow-green, distinguishable from any other pine. This plant has real potential as a screen or border plant adding a rather coarse open texture.

Scotch Pine (*Pinus sylvestris*) is outstanding for its bluegreen foliage and red-orange bark on older trees. In the juvenile state, this plant has a broad pyramidal habit of growth, but as it reaches maturity at 35 to 45 feet, it becomes open and spreading displaying an interesting branching habit and colorful bark.

There are two three-needle pines, Lace-bark and Ponderosa Pine, which have real potential for the Mid-west suburban landscape.

Lace-bark Pine (*Pinus bungeana*) has a short shrubby habit of growth, becoming flat-topped and dense with an ultimate height of 20 to 30 feet. This plant is well adapted to a high water table — well drained alkaline soils, making it particularly useful on landscapes which are



broad, tali pine useful li methun to largè residential lors.

The Swiss Stone Pine is a five-needle variety useful as a screen or foundation plant for large buildings and homes.

The Bristle-cone pine branches grow in a pendulous manner making it a good specimen plant.

An and the fine (fine the invente period, finas to a fine-invente period, finas to a fine-invest layered, and a fine-invest, layered, and a fine-invest, layered, and a fine wild want is 30 to 40 a fine wild want is 40 to 40 a fine wild want is a fine want of the second second a fine is the markery trade a fine wild want is 40 a fine wild wild become



## Versatile Pines

regularly irrigated with "alkaline water." The bark exfoliates exposing patches of red, green, and white providing additional interest to winter landscapes. The plant is dense enough with a unique green foliage, making it an excellent screen or specimen plant.

Ponderosa Pine (*Pinus ponderosa*) ultimately reaches 50 feet in height in the Mid-west. This narrow conical crowned plant becomes quite flat-topped at maturity but is a real addition to coarse textured pines while showing resistance to many of our environmental prob-



lems. The cinnamon bark has deep fissures adding to the rugged coarse landscape appearance making it particularly effective in border plantings or as a specimen plant.

Five-needle pines, such as Bristle-cone, Swiss Stone, Limber, and Japanese White Pine, have a fine texture, in general, requiring well-drained soils, not exposed to highway salts.

Bristle-cone Pine (*Pinus aristata*) is a small tree ranging from 12 to 18 feet in height with an irregular picturesque habit of growth. The short bluish-green needles become dotted with a white resin exudate. This small tree is an outstanding specimen or foundation plant. Its short new growth (candles) grows in every direction from quite vertical to extremely pendulous, adding to the unique growth habit of this plant.

Swiss Stone Pine (*Pinus cembra*) has a very dense conical, some-what formal, habit of growth reaching 30 feet in height. The dark green to bluish-green needles give a medium texture making this plant effective as a specimen, screen, or foundation plant for large buildings and homes. This plant not only grows vigorously in well-drained soils, but seems quite tolerant to many of our somewhat heavy urban soil conditions.

Limber Pine (*Pinus flexilis*) has a broad pyramidal habit of growth when young becoming quite open, reaching 30 to 40 feet at maturity. The glaucous bluish-green needles often are twisted, giving a "fox-tail" appearance. This is an exciting accent or specimen plant which is perfectly hardy and would fit into the medium to large home lot situation.

Japanase White Pine (*Pinus parvivlora*) has a fine dense texture during the juvenile period. It has a broad pyramidal habit of growth becoming flat-topped, layered, and picturesque at maturity. The mature height in the Mid-west is 30 to 40 feet. The needles are yellowish-green to pale green being smaller than White Pine providing an otherwise unobtainable texture to the land-scape with the small needles and distinct layering of branches.

The above-mentioned pines are a needed addition to Mid-west landscapes. As more plantsmen, nurserymen, and homeowners recognize their value, they should become more available in the nursery trade.

The Limber Pine is a broad, tall pine useful in medium to large residential lots.