Distant Breeding Programs Greatly Benefit Alaska
By Mel Monsen

With our acid soils and three native rhododendrons (*R. lapponicum*, *R. camtschaticum*, and *R. camtschaticum subsp. glandulosum*) Alaska gardens should be able to host many rhododendrons and azaleas. Unfortunately, popular garden varieties are almost always unable to survive our long cold winters, (except in some south coastal areas). Now however, two distant breeding programs directed at increasing the hardiness of rhododendrons and azaleas have produced cultivars that are worth trying in many parts of Alaska. The first program is at Helsinki University, which began in 1973 and is directed at rhododendrons. Nine named cultivars have been released since 1986. The second breeding program is at the University of Minnesota, which began in 1957 and is directed at deciduous azaleas. Eleven cultivars are on the market with three more scheduled for release in the near future.

Helsinki University Rhododendrons

Finland's Helsinki University is at almost the exact same latitude as Anchorage and, when it began the breeding program in 1973, had access to rhododendrons that had been planted in a local Helsinki arboretum in the 1930s. The survivors in this group had been through a series of harsh winters, which had selected for hardiness. Because of this existing pool of survivors, the breeding program was able to select *R. Brachycarpum subsp. tigerstedtii* as the source for hardiness. Originally, they used 53 individuals as maternal parents and 23 species and 48 hybrids as paternal parents. From an initial 22,000 hybrid seedlings, about 14,000 were evaluated in collaboration with the Helsinki City Parks Division. These 14,000 seedlings were reduced to 9,000 survivors after two severe winters in the mid-1980s. Temperatures were as low as -38 degrees F. Among these survivors were many plants that experienced no damage. From these 80, candidates were cloned and nine cultivars have been released. Many of these nine are available at local nurseries and through retailers on the Internet.

In local Anchorage gardens these rhododendrons have proven themselves to be hardy, although protection from winter winds and moose browsing is required for a healthy plant. Locally, the bloom timing varies depending on the weather and location, but late May to late June is normal. They should be hardy in coastal Alaska locations, throughout the Gulf of Alaska and perhaps into the Aleutians and Bristol Bay. They may even be worth a try in interior Alaska in warmer locations or with winter protection.

Elviira – First released from the program in 1986, cherry red flowers on a compact early blooming bush. About 3-feet high and wide at maturity.

Hellikki – Purple/red flowers on a round bush. About 4- to 5-feet high at maturity.

Haaga – Pink flowers on an upright growing bush. About 5- to 6-feet high at maturity.

Helsinki University – Light pink flowers on an upright growing bush. About 7-feet high at maturity. May be the hardiest as it as rated to about -40 F.

Kullervo – Pink flowers fading to white on a compact bush. About 4-feet high at maturity.

Pekka – Light pink flowers with light green leaves. This prolific flowerer is new and should be available shortly.

Peter Tigerstedt – White with a brown blotch flowers on a tall bush. Over 7-feet high at maturity, this bush is sometimes listed as P.M.A. Tigerstedt.

Pohjola's Daughter – White with a green/brown blotch flowers on a compact bush. The flower buds are a bright violet-red before opening. About 3-feet high, this bush is sometimes listed as Pohjolan Tytär.

Mikkeli – White with pink tinted flowers on a tall late-blooming bush. The leaves are dark green and a light down covers young shoots and unopened leaves.

The Helsinki University breeding program is continuing as you read this and new cultivars should be available in coming years. They are working on producing a hardy yellow rhododendron and added an azalea breeding program in 1988. Photographs of these rhododendron cultivars can be viewed on the internet at http://honeybee.pc.helsinki.fi/users/AVAINOLA/rhodo/cultivars.htm.

University of Minnesota Azaleas

University of Minnesota's hearty azalea breeding program began in 1957 and has produced deciduous azaleas of many colors that are hardy from -30 to -45 degrees F. These azaleas are from a cross between *R. kosteranum* (mollis azaleas) and *R. prinophyllum*. The first release was the result of 28 years of crosses and tests to ensure hardiness. Once hardiness was achieved, the program concentrated on color variation so that a full range of colors is now available. Modern research methods include labs equipped to freeze plant materials down to -40 degrees F while they are monitored with a thermocouple. Then, the tissue is examined under microscopes to determine the temperature where damage occurs for individual cultivars. The first Northern Lights azalea cultivar became available in the late 1970s, and in Anchorage they are now fairly common, if unappreciated, in local nurseries. These azaleas have a nice fragrance and often have a nice red fall color. In Anchorage they can reach 4 feet in height and width after several years of growth.

In local Anchorage gardens the azaleas listed below have proven themselves to be hardy for nearly two decades but require protection from moose, who love the dormant flower

buds in winter. They bloom in late May to early June. They have no winter die-back in Anchorage and are worth a try in almost any area of the state, including the interior.

Northern Lights – 1978, pink

Pink Lights – 1984, pink

White Lights – 1984, white

Rosy Lights – 1984, deep rose, very floriferous

Golden Lights – 1986, golden

Orchid Lights – 1986, orchid (purplish/pink)

Spicy Lights – 1987, salmon pink

Apricot Surprise – 1987, light orange

Mandarin Lights – 1992, orange

Northern Hi-Lights – 1994, white with bright yellow upper petal

Lemon Lights – 1996, lemon yellow

The University of Minnesota breeding program is also continuing and has three new cultivars, which should be out in the next few years. The first, Tri Lights, is expected this spring and has multi-colored flowers. Other expected introductions are Plum Lights and Candy Lights. Photographs of these azalea cultivars can be viewed on the internet at http://www.maes.umn.edu/maesinfo/releases/ornashrubs.html#Azalea.