



# Cultivation Notes

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## Mountain Laurel

*Kalmia latifolia* L.

A New England Native Plant

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Family ERICACEAE

Mountain laurel is a native shrub abundant in Rhode Island, Massachusetts, Connecticut, and New Jersey, and to a lesser extent from southern Maine west through central Ohio and south just to northern Florida. It benefits from full sun, but is tolerant of and will bloom longer in partial shade. In full shade it becomes lanky and flowers sparsely. It prefers well-drained, acidic soils (4.0 to 5.5 pH) as are found in Rhode Island.

A typical flower of the mountain laurel, which blooms around mid-June, has light pink buds, opening to a near-white corolla, with a spot of red pigment at each of the anther pouches. In addition there is a light red narrow band of color around the corolla encircling the ovary, or center of the flower.

*K. latifolia* has five sepals, and its five petals are fused together in a saucer-shaped corolla with 10 small pouches. Each anther is pushed upward into a pouch while the flower is in bud. As the corolla opens, the elastic filaments bend backward under tension, and the anthers are held in place in the pouches and carried down and outward. This feature allows for effective pollen transfer by insects. The bumblebee is the main pollinator. The stamens are released from the pouches when the bumblebee trips the filaments with its feet or proboscis. The upward spring of the stamens results in pollen transfer to the underside of the pollinator, which comes into contact with the stigma of the next flower visited. Self-pollination is rare.

Although *Kalmia latifolia* was used widely as an ornamental garden plant by American colonists and sent back to England by John Bartram in 1724, the first detailed written account of Mountain Laurel occurs in the journals of Peter Kalm, a Swedish botanist and student of Carolus Linnaeus. In 1748, Kalm made a three-year trip to North America to collect seed and plants of species likely to be hardy in Sweden. He returned with more than 300 species of plants for Linnaeus to work with. To honor the collector, Linnaeus named the genus *Kalmia*. It is in the Heath Family (Ericaceae), which includes heaths, rhododendrons, azaleas, wintergreens, blueberries, and cranberries.



## Cultivation

**Soil modification.** Add ground limestone to extremely acidic soils to increase the pH slightly. Add superphosphate to promote flowering. Heavy soil needs organic matter such as compost, aged pine bark chips or wood chips (approx. 3 cubic feet per plant in a 10' square planting area) or a raised bed to increase drainage and 2 to 4 inches of mulch (especially chopped or composted oak leaves), aged wood chips, pine bark, or pine needles. Leaching of lime from foundations and previous applications of lime can readily increase pH. The pH can be reduced by the application of ferrous sulfate. See Jaynes (1997) for rates of application.

**Fertilizing.** Laurels can survive in very infertile soil, but will thrive with a little fertilization. Fertilizer should be applied sparingly. Jaynes suggests application of a commercial fertilizer for acid-loving plants at one-fourth of the recommended amount 3 times per year: early spring, June, and August. More plants have been killed by overfeeding than by neglect.

**Pruning.** Judicious pruning every year is the best way to avoid a plant that is too leggy or large. Making cuts just above a foliated lateral branch will lead to bushier growth at the lower level. If a plant is too tall with no low branches, cut it to within 2 or 3 inches of the ground. It will take several years to reach flowering size, but the result will be a bushier plant that can be pruned eventually if needed.

**Flowering.** Deadheading is mandatory on young plants in order to avoid alternate year blooming. If seed capsules remain, new shoot growth (necessary for flower buds) will be limited and they may inhibit the formation of flower buds elsewhere on the plant.

**Problems.** Leafspots of brown, yellow or reddish color can occur from fungal growth when there is high humidity, moisture, and crowding. To cure, provide more light and air circulation by removing adjacent vegetation, thinning the overstory, spacing the plants, and avoiding overhead irrigation except in early morning. Phytophthora root rot is rare but affects a wide range of plants. The preventive measures are well-aerated roots and well-drained soil. Yellow leaves are normal in the fall, just before the old foliage falls off. Winter injury, characterized by brown leaf tips and edges, can be prevented by applying a good mulch in late fall, avoiding windswept locations, and using snow fencing, pine boughs, burlap or other means for protection. Sunscald in the spring happens to plants acclimated to shade and then suddenly exposed to full sun. Gradual acclimation is the answer. Decline, characterized by leggy growth and dieback of branches, can occur with older established plants. Growth over time leads to heavy shade and competition for water and nutrients. Clearing and pruning surrounding trees can help. Twig blight, a fungal disease, can cause some of the symptoms of dieback and is associated with plants under stress. Prune out the affected branches, and then water, fertilize, and remove competition.

## Propagation

**Cuttings.** To root Mountain Laurel, auxins (plant hormones to promote rooting), bottom heat, and enclosure of cuttings in a plastic tent to hold moisture applied as a mist or fog can help, but do not reliably lead to successful rooting.

**Grafting** is labor-intensive, but proved possible when Weston Nurseries in Hopkinton MA propagated its cultivar selection, *K. latifolia* 'Silver Dollar' by grafting.

**Layering** can be highly successful for producing a small number of new plants from an older one, but is very slow.

**Seed.** Mountain Laurel seed capsules are ripe when they change from green to brown, around mid-October. If not ripe, the seeds will not readily shake out of the capsule. If left on the plant too long, the capsule will split and scatter its seeds although some seed may still be in the split capsules left on the plant.

Place harvested capsules in a paper bag or small container to air dry for a few days until capsules open and the small seeds can be shaken loose. Separate the seeds from the dust or chaff and store them in small envelopes in a refrigerator, where they will remain viable for 10 years.

Temperatures in the range 65° – 75°F are best for germination. Higher temperatures reduce survival, and lower temperatures slow growth dramatically.

An appropriate medium for sowing seed is 2 or 3 parts screened peat moss to 1 part perlite. Add 1.5 teaspoons of ground limestone per gallon of mixture to increase the pH to about 5. The mixture should be moistened, gradually, and using less water than might have seemed correct. Maintaining soil aeration is important. Clear plastic boxes or pots with drain holes are possible containers. Water by setting it in a tray of water. (Do not water from above). If the surface is too rough for small seeds, sprinkle a thin layer of screened sphagnum moss on top before sowing. Seeds should not be covered with medium—light is required for germination.

**Tissue Culture.** This is the most common commercial method of propagation. Essentially tiny plantlets, comparable to seedlings in their juvenility, are grown in test tubes (or an equivalent). Cuttings of these tiny plants root readily in a peat moss mixture.

## References

Jaynes, Richard A. *Kalmia: Mountain Laurel and Related Species*. (Timber Press, Portland OR, 1997, 294 pp. \$34.95)

Two earlier editions of this book are also useful:

*The Laurel Book: Rediscovery of the North American Laurels*. (Hafner Press, NY, 1975)

*Kalmia: The Laurel Book II*. (Timber Press, 1988).