



# RARE PLANTS OF NEW HAMPSHIRE

## Giant Rhododendron

*Rhododendron maximum* L.     **Synonyms:** great laurel, rosebay rhododendron

**Heath family (Ericaceae)**

### What Does It Look Like?

Interwoven shrubs of great height form large colonies in dark, cool, mossy swamps, along brooksides, or in low moist forests. Shrubs have finely textured bark broken into thin scales, reach 4.5 m (15 ft.) or more in height, and produce giant showy clusters of flowers above large evergreen leaves. Shrubs and colonies can live for many years.

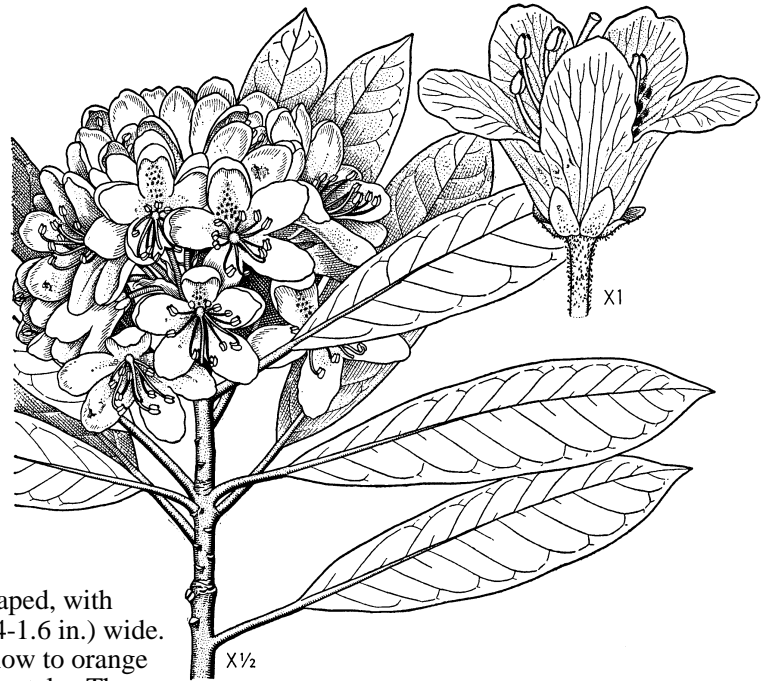
**Leaves:** The large, simple, evergreen leaves are 12-25.5 cm (4-10 in.) long, entire (not toothed) along the margins, dark green and shiny above, whitish with rust colored hair below, and crowded toward the tops of the stems on petioles or leaf stems about 2-3 cm (0.8-1.2 in.) long.

**Flowers:** The pale pink or white flowers are funnel-shaped, with five broad petals, and are about 3.5-4 cm (1.4-1.6 in.) wide. The inside of the top petal has a spray of yellow to orange flecks, a few of which are also on the lateral petals. The stamens protrude and bend slightly upward. Flowering occurs from late June or early July through early August.

**Fruit:** A woody capsule about 1.3 cm (0.5 in.) long ripens in September and October, opening at the top into five sections. Seeds are oval and winged.

**Key features:** Large, broad, evergreen leaves with fuzzy hairs on the lower surface and flowers similar to commonly cultivated forms.

**Similar species:** Mountain laurel (*Kalmia latifolia*) leaves are glabrous (hairless) on both sides and narrower. The flowers are similar in color but clearly distinct in shape from giant rhododendron. They are cup-shaped with 5 small triangular lobes.



### Where Is It Found?

Giant rhododendron grows in acidic and moist soils. In New Hampshire these sites are primarily found in basin swamps, along lower slopes, or alongside brooks and ponds. This species is very shade tolerant and is usually found in low-lying heavily wooded areas of eastern hemlock (*Tsuga canadensis*), red spruce (*Picea rubra*), oaks (*Quercus* spp.), red maple (*Acer rubrum*), and beech (*Fagus grandifolia*). One population is found in an extremely rare association with Atlantic white cedar (*Chamaecyparis thyoides*) in a basin swamp in Manchester. The only other known populations of this kind are found in Massachusetts, Connecticut and Rhode Island. In general, this species is much more prominent in the south, where it is often found along with mountain laurel on moist forested low slopes.

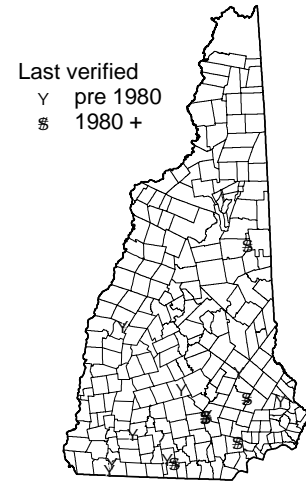
The flowering potential of giant rhododendron is very short-lived in individual plants. Flowering and fertilization reaches its greatest capacity when the shrubs are two years old and plants appear to slow or stop flower production after the fifth growing season. This species primarily reproduces vegetatively, greatly limiting opportunities for dispersal.



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**Conservation status:** Giant rhododendron is not currently listed in New Hampshire, but is proposed for threatened status. Of 15 known locations, only six have been verified since 1980. The largest giant rhododendron swamp in New Hampshire is less than 3.2 ha (8 ac.). Most populations occur in an area of less than 0.8 ha (2 ac.).

**Range:** Nova Scotia and Maine southwest to Ohio and south to Alabama and Georgia, especially in the mountains in the south.



## Why Is It Rare?

The habitat of this species has been lost to development and impacted by pollution. Giant rhododendron is also not well adapted to a northern climate. In addition, the showy flowers make it vulnerable to over-collection.

## Conservation Considerations:

New Hampshire's populations are primarily threatened by development within upland watersheds. Giant rhododendron thrives in acidic, nutrient-poor soils and is vulnerable to nutrient and pollutant inputs. An increase in development within the upland watersheds of some populations has led to declines in population size and the quality of the surrounding natural community. Canopy removal within or close to populations can also overexpose plants to the sun and reduce soil moisture, resulting in damage to the plants. Maintaining a significant buffer of undisturbed vegetation next to giant rhododendron populations would help to filter out nutrients and pollutants from runoff, as well as maintaining an adequate canopy cover.

While giant rhododendron is tolerant of specific wetland conditions, plants do not tolerate excessive or extended flooding. Swelling beaver populations, compressed into small areas by habitat decline and loss in areas where lands have undergone rapid development, have been a more recent threat. A significant portion of one long-established population in New Hampshire has been destroyed by beaver flooding in association with rapidly encroaching development. Beavers may need to be removed, or dam bypasses installed, to protect threatened giant rhododendron populations.

Protected populations require continued stewardship and vigilance to guard against polluted upland runoff, invasive non-native species, and excessive human disturbance. Unprotected populations are especially vulnerable.

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The information in this fact sheet is current as of December 2002. It is based on a database maintained by the NH Natural Heritage Program, a bureau in the Division of Forests & Lands in the Department of Resources and Economic Development. NH Natural Heritage is a member of NatureServe, which represents an international network of Heritage programs. Illustration by Eduardo Salgado. Reprinted with permission from The New York Botanical Garden Press. Originally published in H. A. Gleason, *The New Britton and Brown Illustrated Flora of the Northeastern United States and Adjacent Canada*, Vol. III, p. 9, copyright 1952, The New York Botanical Garden.

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Mooseplate funds received by NH Natural Heritage are vital to developing information that leads to the protection of native plant species and natural communities.