

## Tree of the Month, December 2013:

### Alpine snow gum (*Eucalyptus pauciflora* subsp. *niphophila*)

High atop the snowy Australian Alps lives the hardiest gum tree on the planet, *Eucalyptus pauciflora* subsp. *niphophila*, the alpine snow gum. *Niphophila* is Latin for 'snow-lover', which may refer to either their creamy pale bark or their bendy branches that dislodge snow, allowing them to survive 2,000 meters up on the peaks of the tallest mountains in Australia. The snow gum can survive freezing temperatures of -23 °C (-9.4 °F), and with its attractive red stems, white flowers, gray-green, sickle-shaped evergreen leaves, and pale peeling bark, has become a popular tree with gardeners in cold climates such as Canada, Norway, and the UK.

The specific epithet *pauciflora* means 'few flowers' in Latin, which is odd since the tree has plenty of flowers. Why the species was given the name *pauciflora* is a mystery - perhaps the man who named the species, Czech botanist Franz Wilhelm Sieber, based his description on a poor specimen or his collection was damaged and lost flowers during transport back to Europe.

Alpine snow gums bloom in the spring. Their flower structure is common in the Myrtle family – which includes gum trees (*Eucalyptus*), bottlebrush (*Callistemon*), wax apple (*Syzygium*) and manuka (*Leptospermum*). The sepals and petals are fused and form a structure called the operculum—a cap that protects the flower bud. The name *Eucalyptus*, which means 'well-covered' in Latin, refers to the operculum. By the time the flower opens, the operculum is shed to reveal numerous snow white stamens. The flowers of the alpine snow gum are an important nectar and pollen source in the alpine habitats of Australian Alps National Parks.

Alpine snow gum has an interesting survival mechanism called a lignotuber – a swelling at the base of the tree that contains carbohydrates and dormant buds. In extreme cold or a forest fire, the trunk and branches of the tree will die back to the lignotuber. The tree can survive on the energy stored in the lignotuber until the crisis is over, and then regenerate by sending up new shoots.

VanDusen Botanical Garden has two young alpine snow gums in the Southern Hemisphere Garden (see map on reverse).