

New Zealand cedars / pāhautea and kawaka

Native plants

Commonly referred to as New Zealand cedars, *Libocedrus bidwillii* (pāhautea) and another species *Libocedrus plumosa* (kaikawaka or kawaka) are not true cedars at all but actually belong to the cypress family and closely resemble cypresses of the northern hemisphere. Both tree species have small, distinctively conical crowns and papery bark that separates in long narrow strips and hangs from the trunk.



Where is it found?

Kawaka is a tree of lowland and montane forests in the northern half of the North Island and the north-west tip of the South Island. Pāhautea is a small to medium-sized sub-alpine tree that grows up to 1200 metres altitude in the North Island and at lower levels in the west and south of the South Island. Other closely related species are found in Chile, Argentina, Japan, New Caledonia and New Guinea.

New Zealand cedar facts

- Kawaka grows to 25 metres tall with a trunk of 1.2 metres in diameter. Pāhautea seldom exceeds 20 metres in height.
- At high altitudes, pāhautea is often short and stunted, gnarled, or contorted by the wind. Such trees are often very old – sometimes more than 1000 years.
- Their bark tears off in long thin strips which often spiral gradually around the trunk, giving the trees a twisted appearance.
- These trees are unique among New Zealand conifers in having small seed cones made up of a few thin woody scales. The male and female cones occur at the tips of twigs on the same tree.
- Male cones are 3–5 millimetres long and contain about 10–14 scales. They are produced in spring to early summer.
- The female cones are reduced to four large green scales, two sterile and two fertile. When ripe the tiny, dry woody cones split open to release two winged seeds, which are dispersed by wind.
- These trees have closely overlapping scale leaves arranged in four rows of opposite pairs at right angles to those above and below.





Did you know?

On Banks Peninsula, every adult tree of pāhautea except one died between 1941 and 1961. Some scientists suggested that drought and desiccation may have been a primary cause.

Threats

As early as the 1950s, the New Zealand Forest Service reported unhealthy looking stands of pāhautea in Westland and the central North Island. Many populations have declined throughout the country, but scientists are undecided about the exact causes of this decline. One cause appears to be the lack of catastrophic natural disturbances, such as earthquakes, volcanic eruptions and fire that clear large tracts of forest and enable pāhautea to regenerate. Since pāhautea grows mostly in even-aged stands after disturbance, it is also possible that the decline of certain populations is due to the old age of a large number of trees in the same area.

In addition to these natural causes of decline, many scientists also believe that possum browse is damaging some pāhautea populations. Young shoots and pollen-laden cones are especially attractive to possums. Seed scavenging by rodents and possums is also possible, although recent studies have found that seed survival in recent times has been sufficient, where disturbance permits, for the regeneration of pāhautea forest.

Further information

For further information about these trees, contact your local Department of Conservation office.

