

Pinus contorta

COMMON NAMES

lodgepole pine

BIOSTATUS

Exotic

CONSERVATION STATUS

Not applicable

CATEGORY

Vascular

STRUCTURAL CLASS

Trees & Shrubs - Gymnosperms

FLOWER COLOURS

No flowers

DETAILED DESCRIPTION

Large shrub or small to medium-sized tree (sometimes large in cultivation); habit erect or spreading. **Branches** straight or somewhat twisted. **Bark** reddish-brown, grey on surface, fissured and forming small plates. **Shoots** brown, glabrous. **Buds** cylindric or cylindric-ovoid, purplish-brown, strongly resinous; scales tightly appressed. **Leaves** 2 per fascicle, 3.5–6.5 cm × 0.8–1.5 mm, sometimes twisted, usually pointed forward, generally yellowish-green; resin canals median; sheath very short after first year. **Male strobili** 5–15mm long, cylindric or broadly cylindric. **Conelets** sessile; scales aristate. **Mature cones** long-persistent, often not opening until long after maturity, subsessile, usually directed downwards or backwards, 3–6 × 2–3.5cm, generally broad-ovoid; base asymmetric; apophyses shining yellowish-brown or brown before maturity, convex; umbo with short, slender, occasionally deciduous prickle. **Seed** wing asymmetric but almost oblong, c. 1 cm long. (Webb et. al., 1988)

SIMILAR TAXA

The combination of short needles in pairs, and small cones with a spikes on the cone scales distinguishes *Pinus contorta* from other naturalised *Pinus* species in New Zealand.

HABITAT

Terrestrial. A plant of montane and subalpine habitats. The plant grows in sites with low fertility. A plant of tussocklands. Areas at risk from invasion by the plant are indigenous and introduced scrub, tussock grassland at medium to high elevation, pasture and open forest.

GENUS

Pinus

FAMILY

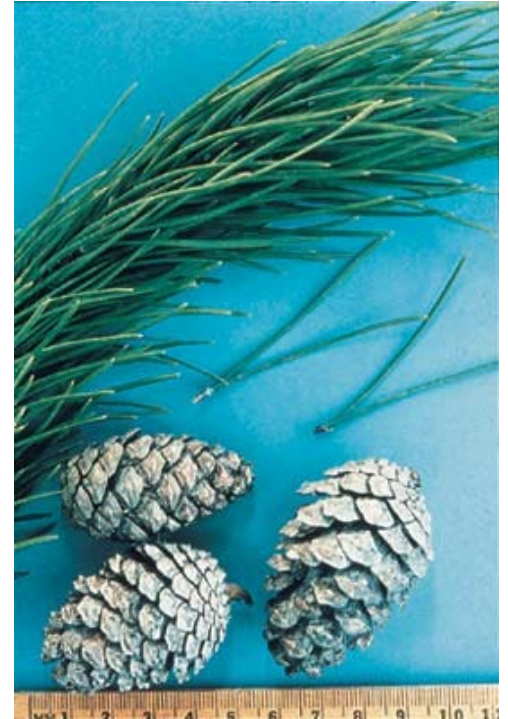
Pinaceae

AUTHORITY

Pinus contorta Loudon

YEAR NATURALISED

1957



Pinus contorta. Photographer: Auckland Regional Council, Licence: Public domain.



Pinus contorta. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

ORIGIN

Rocky mountains, N.W. America

REASON FOR INTRODUCTION

Agricultural (to stabilise high country pasture which were eroding due to excessive burning and high stocking rates and impacts of rabbits).

TOLERANCES

The plant is tolerant to drought and frost (once established) and is slightly tolerant to poor drainage. The plant will not establish in dense forest but is tolerant to partial shade. Regrowth occurs after physical damage and grazing unless all foliage is removed. Trees larger than 2 m can withstand fire, a hot fire will kill seed.

LIFE CYCLE AND DISPERSAL

Perennial. 15,000 viable seeds/year are produced by a 12 year old, 5 m tree. Germination of seeds after 4 years (in dry storage at 4°C will last 10–20 years). Prolific quantities of viable seed is produced. Trees are precocious and recorded as coning at 3 years old. Seed is dispersed by wind that are dispersed over many kilometres.

WETLAND PLANT INDICATOR STATUS RATING

FACU: Facultative Upland

Occasionally is a hydrophyte but usually occurs in uplands (non-wetlands).

ENVIRONMENTAL WEED NOTE

Pinus contorta is the most vigorous spreading conifer species in New Zealand and threatens landscape values, biodiversity and farming productivity by out-competing pasture areas and forming dense stands, even above the natural tree-line. For these reasons, it is the most targeted “pest” conifer species in New Zealand, as shown in Regional Pest Management Strategies. It is banned from sale, propagation and distribution. See also the [National Wilding Conifer Control Strategy](#) produced by the Ministry of Primary Industries.

The National Wilding Conifer Control Programme team at Biosecurity New Zealand, a branch of Ministry for Primary Industries, has produced a wilding conifer [quick ID guide](#).

NATIONAL PEST PLANT ACCORD SPECIES

This plant is listed in the 2020 National Pest Plant Accord. The National Pest Plant Accord (NPPA) is an agreement to prevent the sale and/or distribution of specified pest plants where either formal or casual horticultural trade is the most significant way of spreading the plant in New Zealand. For up to date information and an electronic copy of the 2020 Pest Plant Accord manual (including plant information and images) visit the [MPI website](#).

ENVIRONMENTAL WEED (2024)

This plant is named in a list of 386 environmental weeds in New Zealand 2024 prepared by DOC. 759 candidate species were considered for inclusion on this new comprehensive list of environmental weeds in New Zealand. The species considered were drawn from published lists of weed species, lists of plants that must be reported or managed by law if observed, existing national and regional programmes and agreements for pest management, and species already managed by the Department of Conservation (DOC). Candidate species were then assessed to see if they were fully naturalised and whether they have more than minor impacts in natural ecosystems. Read the full report [here](#).

NVS CODE

PINCON

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/pinus-contorta/>

PDF DATE

27 May 2026