

# Douglas fir

*Pseudotsuga menziesii*

## Family

Pinaceae (pine)

## Where is it originally from?

North America

## What does it look like?

Very large resinous evergreen tree with thick bark that is reddish-brown underneath, and rough and furrowed when mature. Branches sit horizontally, and are in irregular whorls, while branchlets usually droop. Ridged shoots are light to dark brown with short hairs. Shiny purplish-brown winter buds (to 1 cm long) are narrow and sharp. Needle-like leaves (15-38 x 1-2 mm) are clustered in twos, whitish beneath, have edges that are often rolled, and are orange-scented when crushed. Male cones (12-20 mm long) are catkin-like, while papery cylinder-shaped female cones (5-10 cm long) are downward-pointing. Seed scales are large and broad, bract scales are longer and thinner than seed scales, and are 3-pointed, with the centre point longest.

## Why is it weedy?

Rapidly invades high country land, costing millions a year to control. Produces up to 20,000 wind-spread seeds per tree every year, and seed can remain viable for years. Can change landscapes completely, threatening fragile grassland and herbfield ecosystems.

## How does it spread?

Seed is spread by wind in autumn and winter, with seedlings establishing most readily on well lit sheltered sites where there is no competition from other vegetation. Seldom spreads onto land where vegetation cover is dense.

## What damage does it do?

Invasion and suppression of grassland and regenerating shrubland, invasion of low-stature plant communities including herbfield and tussockland. Can also threaten landscape character and recreation value. Major wilding conifer species in southern areas.

## Which habitats is it likely to invade?

Lowland, montane and subalpine habitats, growing in sites with low-moderate fertility. Found in scrub and forest margin communities, shrublands, tussockland and light wells in forest.

## What can I do to get rid of it?

1. Handpull small seedlings (all year round). Leave on site to rot down.
2. Cut down (all year round): cut low enough to remove all green needles. Leave on site to rot down.
3. Stump swab (all year round): cut down close to ground and paint stump with metsulfuron-methyl 600g/kg (1g/L) or picloram gel. Don't need to remove all green needles if using this method.
4. Bore & fill (all year round): drill 1 hole every 150 mm around the trunk, and fill with 1g metsulfuron-methyl 600g/kg per hole.
5. Cut and squirt (all year round): make one cut every 150 mm around the trunk, and fill with 1g metsulfuron-methyl 600g/kg per cut.
6. Frilling (all year round): with a sharp chisel or axe, make a deep cut into the sapwood at regular intervals around the base of the tree, taking care not to ring-bark the plant. Immediately apply metsulfuron-methyl 600g/kg (1g/L) to each cut using a paintbrush or squeeze bottle.
7. Spray (spring-summer): glyphosate (100ml/10L) or metsulfuron-methyl 600g/kg (5g/10L)

CAUTION: When using any herbicide or pesticide, PLEASE READ THE LABEL THOROUGHLY to ensure that all instructions and directions for the purchase, use and storage of the product, are followed and adhered to.



[www.weedbusters.org.nz](http://www.weedbusters.org.nz)



Photo: Trevor James

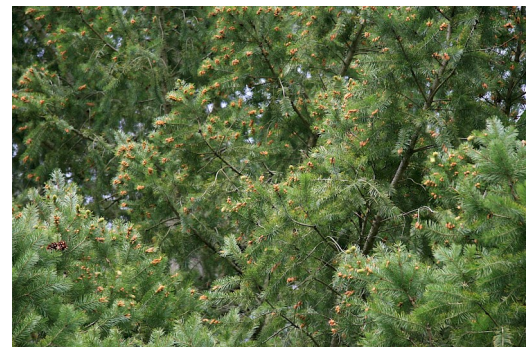


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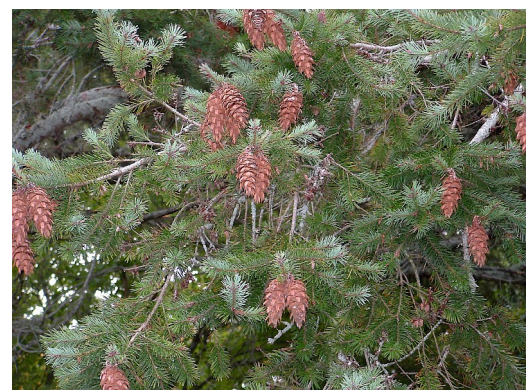


Photo: Carolyn Lewis

**What can I do to stop it coming back?**

Continue to monitor and remove further infestations as seedlings appear.