

Crack willow

Salix xfragilis

Family

Salicaceae (willow)

Where is it originally from?

Northern temperate regions

What does it look like?

Deciduous tree (<25 m), occasionally only shrub size, with spreading rather than hanging branches, and rough and fissured bark. Roots sucker and rootlets are bright red when in or near water. Dark or brownish green shoots are not slender, and snap with a loud crack when bent. Bud scales are shiny and dark brown. Shoots and leaves are silky when young but become hairless as they mature. Lance-shaped leaves with tiny serrations are bluish underneath and the upper surface is shiny and often covered with bright red galls. Narrow downward curving catkins (40-75 mm long) appear at the same time or after the leaves, from September to October. As there are only male plants in New Zealand, no fruit is formed.

Are there any similar species?

Many *Salix* species are similar including hybrids of *S. fragilis*.

Why is it weedy?

Resprouting and suckering habit and rapid growth creates dense thickets. Tolerates flooding, hot to cold, most soils, and semi-shade.

How does it spread?

Stem fragments are spread by water, and suckers spread locally. Planted intentionally on stream and river banks and also in damp places to absorb water.

What damage does it do?

Replaces native species in riparian sites and forms vast dense (often pure) stands along channels. Causes blockages, flooding and structural changes in waterways.

Which habitats is it likely to invade?

Stream and lake edges, and river systems, throughout New Zealand.

What can I do to get rid of it?

1. Physical removal - dig out small plants or excavate larger areas. Dispose or burn all plant material.
2. Cut and paste - Cut the stem/trunk as close to the ground as possible and cover the entire stump with herbicide as soon as possible after cutting. Apply glyphosate gel (120g/L strength)
3. Basal spray - spray stems up to 20cm diameter with X-Tree Basal. Ensure the base is thoroughly covered at ground level.
4. Drill or frill - Drill downward sloping holes around the circumference of the trunk about 8-10 cm apart, or Frill (make deep cuts into the sapwood at regular intervals around the base of the tree, taking care not to ring-bark the plant). Fill the holes with undiluted 'neat' glyphosate (360g/L active ingredient) or saturate the frill cuts with glyphosate (360g/L active ingredient) mixed at 250ml/L
5. Foliar spray (full leaf stage only) - Apply herbicide using a hand held sprayer/knapsack to plants <1m tall or gun and hose for larger infestations.

Apply glyphosate (360 g/L active ingredient) herbicide at 20ml/L plus organosilicone penetrant (2ml/L) to cover entire plant. Note: Glyphosate overspray will kill other (desirable) plants.

OR apply metsulfuron herbicide (600g/kg active ingredient at 0.5g/L knapsack or 20g/100L gun and hose) + organosilicone penetrant (3ml/L). Note: Metsulfuron overspray will kill other (desirable) broadleaf



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Photo: Trevor James



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plants and has residual activity in the soil which aids in killing below ground parts.

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.

What can I do to stop it coming back?

Almost all cut stems root where they fall. Cut stumps regrow rapidly. Do not fell unless all plant material can be disposed of at a refuse transfer station or by burning. Best to poison while standing to avoid live stem contact with ground. Prevent grazing and other disturbance. Interplanting can follow if non-spray follow up control options used.