



BRACKENRIDGE ESTATE

ALIEN INVASIVE SPECIES IDENTIFICATION AND REMOVAL METHODS

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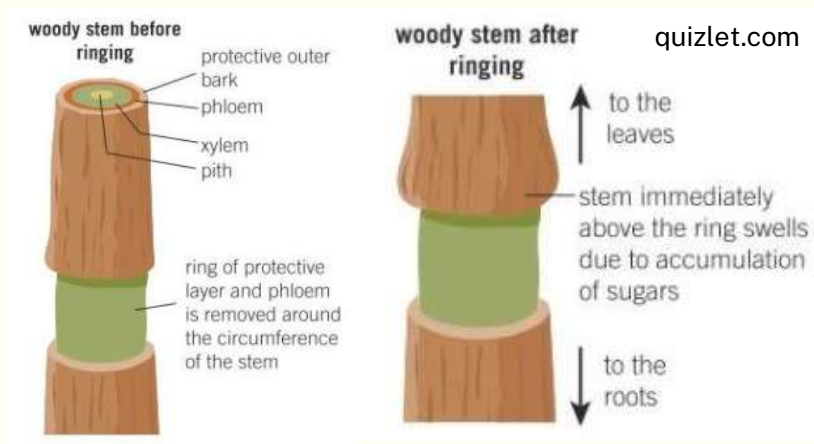
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Descriptions of removal methods.

RING-BARKING/GIRDLING

This is the removal of a section of bark around the trunk of a tree. It prevents the movement of water and nutrients from the roots up to the branches and leaves, causing the tree to die.



FRILLING


This is similar to ring-barking where you remove the layer of bark and phloem. To do this you remove bark in a downward strip, keeping the bottom of the strip still attached to the tree. This method is not as effective as ring-barking.



GRUBBING

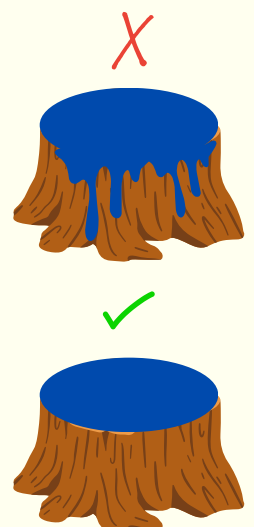
This is the removal of all of the root stock of the removed plant left behind in the soil. Some plants can resprout, like sword fern and pampas grass, if any part of the root system is left behind.

Descriptions of icons.

	Seedling		Bow saw
	Sapling		Goggles
	Tree		Gloves
	Tussock		Loppers
	Tree popper		Chainsaw
	Kaput 100 gel		Garden fork

Application of Kaput 100 herbicide gel - reminder:

- **WEAR** gloves when working with the Kaput 100 gel.
- Paint the gel on with the paint brushes provided.
- Only place the gel on the cut part of the stump and make sure that the gel doesn't touch any other vegetation or drip onto the soil, as it will kill the vegetation and damage the soil.
- Do not place gel on the stump if rain is expected within two hours of application.



IDENTIFICATION

Adult tree



apps.lucidcentral.org



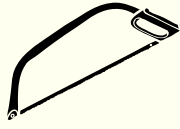
Leaves and flowers

www.austockphoto.com.au



Seed pods

REQUIRED TOOLS



REMOVAL METHODS



Can be pulled out by hand, use a small gardening fork to loosen soil around the seedling. This makes it easier to remove the seedling with the whole root.



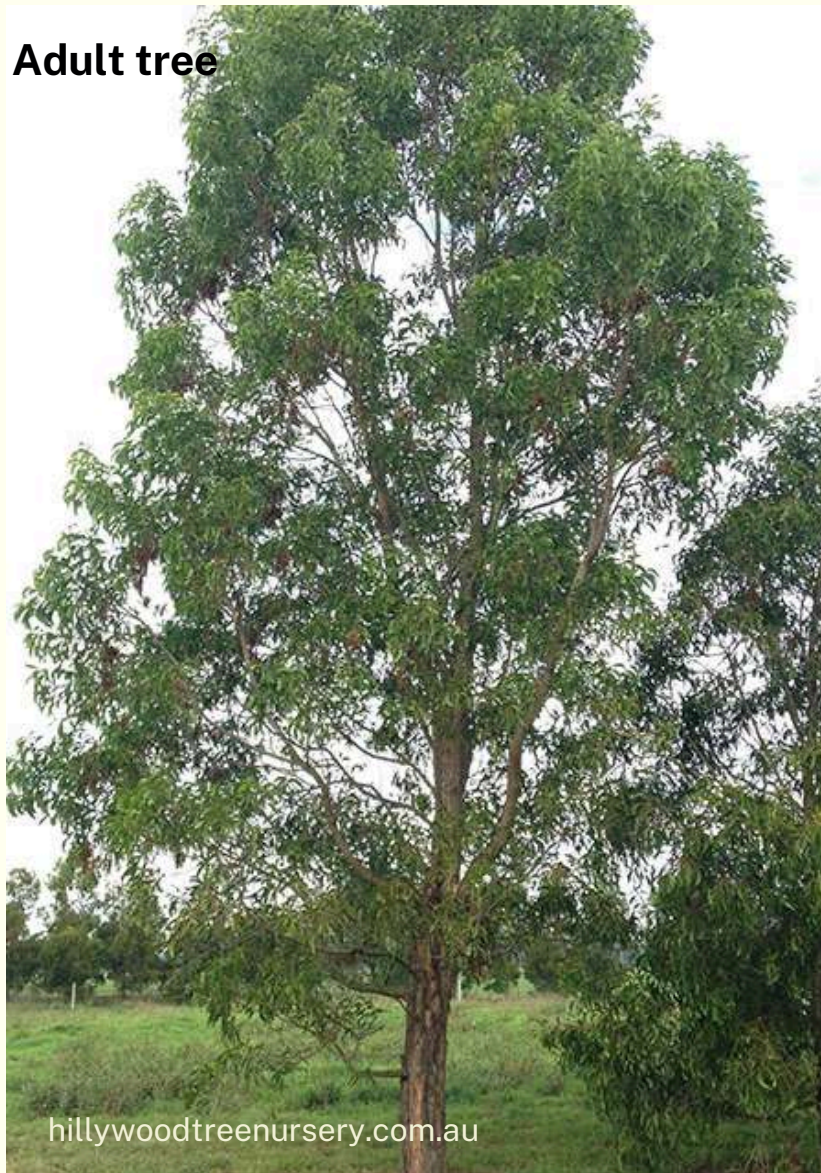
Use a tree popper to pull out with the root. Individuals that can't be removed with tree popper must be cut to a stump. You don't need to stump treat Rooikrans.



Ring-bark large individuals that are not easily cut with a chainsaw. Smaller trees can be cut to a stump. Stump treatment is not necessary.

IDENTIFICATION

Adult tree



Leaves and flowers



Seed pods

REQUIRED TOOLS



REMOVAL METHODS



Can be pulled out by hand, use a small gardening fork to loosen soil around the seedling. This makes it easier to remove the seedling with the whole root.



Ring-bark or frill saplings and where necessary, cut to a stump. Blackwood resprouts, apply Kaput 100 gel to stump.



Ring-bark or frill large individuals that are not easily cut with a chainsaw. Smaller trees can be cut to a stump. Treat the stump with Kaput 100 gel.

IDENTIFICATION**Adult tree**

www.ipmimages.org



www.cahidigitallibrary.org



tropical.theferns.info

Leaves and flowers**Seed pods**

REQUIRED TOOLS



REMOVAL METHODS



Can be pulled out by hand, use a small gardening fork to loosen soil around the seedling. This makes it easier to remove the seedling with the whole root.



Use a tree popper to pull out with the root. Individuals that can't be removed with tree popper must be cut to a stump. Black wattle resprouts, apply Kaput 100 gel to stump.



Ring-bark or frill large individuals that are not easily cut with a chainsaw. Smaller trees can be cut to a stump. Treat the stump with Kaput 100 gel.

IDENTIFICATION

Adult tree



Leaves and flowers



Seed pods



REQUIRED TOOLS



REMOVAL METHODS



Can be pulled out by hand, use a small gardening fork to loosen soil around the seedling. This makes it easier to remove the seedling with the whole root.



Use a tree popper to pull out with the root. Individuals that can't be removed with tree popper must be cut to a stump. Port Jackson resprouts, apply Kaput 100 gel to stump.

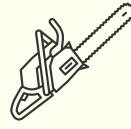
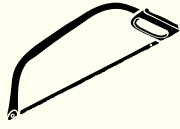


Ring-bark or frill large individuals that are not easily cut with a chainsaw. Smaller trees can be cut to a stump. Treat the stump with Kaput 100 gel.

IDENTIFICATION

Adult plant



REQUIRED TOOLS**REMOVAL METHODS**

Grub out the whole seedling, ensure you get all the roots out.



Grub out the entire tussock, ensure you get all the roots out.,
You may need to treat with a foliar (leaf) herbicide.

IDENTIFICATION



Leaves and flowers



Seed casings

REQUIRED TOOLS



REMOVAL METHODS



Can be pulled out by hand, use a small gardening fork to loosen soil around the seedling. This makes it easier to remove the seedling with the whole root.



Use a tree popper to pull out with the root. Individuals that can't be removed with tree popper must be cut to a stump. Bluegum resprouts, apply Kaput 100 gel to stump.



Ring-bark or frill large individuals that are not easily cut with a chainsaw. Smaller trees can be cut to a stump. Treat the stump with Kaput 100 gel.

IDENTIFICATION

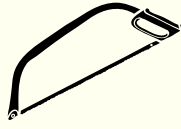


Leaves and flowers



Seed pods

REQUIRED TOOLS



REMOVAL METHODS



Can be pulled out by hand, use a small gardening fork to loosen soil around the seedling. This makes it easier to remove the seedling with the whole root.



Use a tree popper to pull out with the root. Individuals that can't be removed with tree popper must be cut to a stump. **Ensure you lay a plastic sheet down to catch the cones and seeds.** Please wear goggles to protect your eyes from the needles.



Larger individuals can be removed using the same methods as the sapling stage. No stump treatment is required.



Please note that *Hakea sericea* will drop its cones and seeds while you are removing it. Please ensure that you have a plastic sheet big enough to cover the ground around the shrub to catch any cones and seeds.

IDENTIFICATION

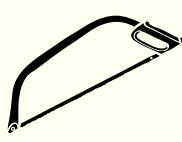


Leaf and stem



Fruit

REQUIRED TOOLS



REMOVAL METHODS



Can be pulled out by hand, use a small gardening fork to loosen soil around the seedling. This makes it easier to remove the seedling with the whole root. **Be careful of the thorns.**



Use a tree popper to pull out with the root. Some individuals may not come out with the root, grub out the roots.



Cut the adult shrub low and then grub out what you can. Apply Kaput 100 gel to any stump remaining after grubbing.



Please note that *Lantana camara* is poison and can cause skin irritation. Please make sure you wear gloves and a long sleeve top to limit skin contact with the leaves and thorns.

IDENTIFICATION**Adult tree****Needles****Cones**

REQUIRED TOOLS



REMOVAL METHODS



Can be pulled out by hand, use a small gardening fork to loosen soil around the seedling. This makes it easier to remove the seedling with the whole root.



Use a tree popper to pull out with the root. Individuals that can't be removed with tree popper must be cut to a stump. Make sure you wear goggles to protect your eyes from the needles.



Ring-bark all the way down to the roots or cut down to a stump. If you are cutting with a chainsaw, ensure you cut below any regrowth, as it can resprout.

IDENTIFICATION



Needles



Cones

REQUIRED TOOLS



REMOVAL METHODS



Can be pulled out by hand, use a small gardening fork to loosen soil around the seedling. This makes it easier to remove the seedling with the whole root.



Use a tree popper to pull out with the root. Individuals that can't be removed with tree popper must be cut to a stump. Make sure you wear goggles to protect your eyes from the needles.



Ring-bark all the way down to the roots or cut down to a stump. If you are cutting with a chainsaw, ensure you cut below any regrowth, as it can resprout.

IDENTIFICATION**Leaves and flowers****Fruit**

REQUIRED TOOLS



REMOVAL METHODS



Can be pulled out by hand, use a small gardening fork to loosen soil around the seedling. This makes it easier to remove the seedling with the whole root.



Use a tree popper to pull out with the root. Individuals that can't be removed with tree popper must be cut to a stump. Bugweed resprouts, apply Kaput 100 gel to stump.



Ring-bark large individuals that are not easily cut with a chainsaw. Smaller trees can be cut to a stump. Treat the stump with Kaput 100 gel.