



Bush For Life



Aggressive invader making its home down under

Boneseed is found in many parts of South Australia.

From South Africa, it is now naturalised in many parts of southern Australia and has become one of Australia's most widespread and damaging environmental weeds. Its South Australian stronghold includes parts of the South-East, Eyre and Yorke Peninsulas and particularly the Mt Lofty Ranges.

A perennial woody shrub, boneseed commonly grows to two metres or more in height and diameter.

It is often planted in gardens as an ornamental species, however boneseed is capable of invading and dominating the understorey of forests and bushland areas.

It is particularly invasive in coastal areas and in some instances may form dense thickets, excluding most other plant species.

Boneseed can thrive in a range of environments including coastal sands and it commonly inhabits rocky, infertile and inhospitable sites where few other plant species are able to establish.

Boneseed produces a relatively shallow root system and while plants are young this makes manual removal quite simple, however in larger plants the root mass is large and physical removal is difficult.

Identifying boneseed

The young leaves are covered with white, matted hairs, particularly on the underside, which disappear as the leaves mature.

Adult leaves are an elongated oval or elongated diamond shape with blunt toothed lobes along the edges furthest from the stem, tapering to a short petiole (stalk of the leaf) at the base.

Boneseed normally flowers from mid-spring to early summer with the flowers developing in clusters at the ends of the branches.

The flowers are about 20 mm in diameter with four to eight bright yellow petals resembling the flowers of a daisy. The fruit is about six mm in diameter, green and fleshy at first then becoming black at maturity. Eventually the fruit flakes off to expose the inner seed.

At maturity, seeds are very hard and bone-like in texture and colour and they are shed during summer and autumn.

On some seed, the hard seed coat splits open soon after maturation and may germinate as soon as soil moisture is adequate. For other seed, the seed coat may remain intact for many years and the seed may remain dormant for up to 10 years.

Heat can crack the seed coat and large numbers of boneseed seedlings may be the first vegetation to reappear after fire.

Seed germination may occur at any time of the year but is usually greatest in autumn.

Seed numbers of up to 2500 per square metre have been recorded beneath established boneseed infestations.

Distribution in patches of bush

Once boneseed has established in an area it may spread rapidly, especially if native vegetation is disturbed mechanically or by fire.

Seedlings are commonly found beneath trees, germinating from seeds in the droppings from birds roosting.

Dispersal

Boneseed is commonly spread by birds and animals which eat the fruit. They digest the fleshy fruit but the hard seed passes unharmed through the digestive system.

The fruit is also carried by ants to their nests where they eat the flesh and discard the seeds. And both the fruit and seed may be carried in moving water.

The inappropriate dumping of seeding plants after removal can also lead to spread of the weed.

Invader of bushland

Boneseed is not significant as a weed of agriculture. It does not survive cultivation and plants are readily grazed by livestock.

However, it is an environmental weed, a plant which reduces environmental value through its ability to invade bushland and compete with native flora.

As such, it restricts the growth and re-establishment of native plants and reduces biodiversity.

In these situations, native fauna may also be affected by the loss of available habitats and food sources.

The shallow root system of boneseed gives it a competitive advantage over deeper-rooted species, especially in areas of low summer rainfall.

Moisture from light showers is absorbed by the boneseed plants before it reaches the deeper rooting zone of associated plants.

Boneseed is surprisingly flammable for an evergreen plant and dense infestations can be a significant fire hazard.

Boneseed invades disturbed ground, but can also invade undisturbed bushland as it is dispersed by birds, foxes etc.

Boneseed on BFL sites

Many bushcarers will have come across boneseed on their sites.

During the cooler months seedlings are easily handpulled, although the plant develops quite a large root mass, with roots that can spread along the surface of the soil so care must be taken to hold the soil down on either side during removal.

Larger plants, all year round, and seedlings over the summer months, are better treated using the cut and swab technique.

Please don't "yank" them out.

This will cause massive soil disturbance, or if the stem snaps off, follow up work will be required.

After treatment, cut the plant into smaller sections and spread these over the ground, but try not to pile them up. If you feel the

need to pile them up, then perhaps you should be moving further *along* the weed front.

The good news about boneseed on Bush For Life sites is that larger areas can be looked after successfully, as long as Bushcarers use the minimum disturbance methods of weed removal.

Bushcarer Roy Pearce removed boneseed from over 300 hectares from his Bush For Life site in the Barossa Reservoir!

Roy also had to deal with bridal creeper at the same time.

It doesn't appear that boneseed regenerates as much as Montpellier broom, English broom or gorse and these weeds will take more effort to eradicate.

The number one rule is to use the minimum disturbance methods!

An Australian look-a-like

Myoporum insulare, native juniper, can be confused with boneseed.

It is a shrub that grows one to three metres, with white flower petals with purple spots. It normally flowers in late winter and into spring.

The fruit is fleshy and purple and it grows mainly on the coast and in sand dunes.

Similarities between the two plants

The leaf size and shape of these plants are similar. Both have "toothed" leaves that have ridges along the edges of the leaves and they both produce dark berries.

Telling the difference

The leaves of boneseed are bright lime or yellow green with the native juniper leaves a light green, but look very similar to the boneseed.

Both the boneseed and native juniper leaves alternate along the stems.

While both leaves are 'toothed' the boneseed's 'teeth' are bigger, with larger gaps between them than the native juniper's.

Unlike the native juniper, young boneseed leaves are often covered in a cottony down (experienced Bushcarers with this weed would have found this down on their shirt sleeves).

The main difference is in the flowers.

Boneseed has a distinctive yellow daisy flower which occurs in late winter and into spring while the flowers of the native juniper are small and white.

If you are in any doubt, simply wait for the plants to flower before beginning to remove any boneseed.

Of course, please ensure that it is not another native shrub with a yellow daisy flower!

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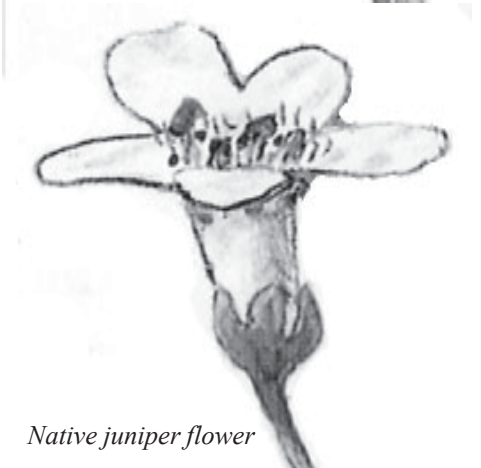
Part of this article is based on a pamphlet from The Department of Primary Industries, Water and Environment, Tasmania, Agdex 647.



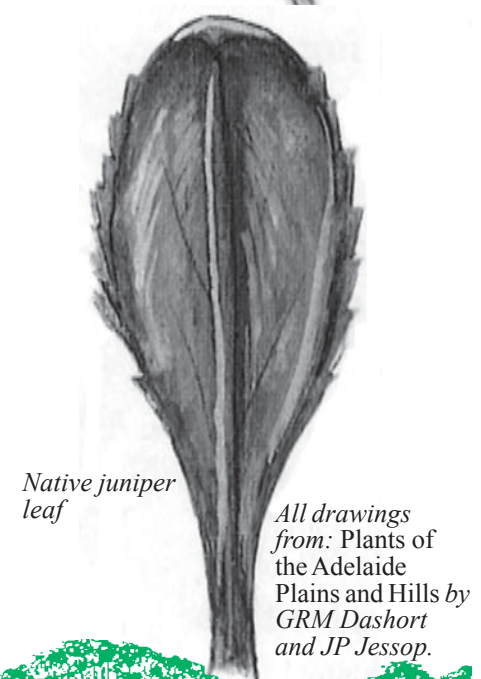
Boneseed flower.



Boneseed leaf



Native juniper flower



Native juniper leaf

All drawings from: Plants of the Adelaide Plains and Hills by GRM Dashort and JP Jessop.



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