

Some weedy shrubs are shown first.



African boxthorn is a large spiny shrub with smooth-edged bright green leaves and white flowers. It is listed as a Weed of National Significance, though not listed as noxious in Bega Valley Shire. See page 1 of natives guide for a couple of prickly natives with which it could be confused.



Sweet briar (*Rosa rubiginosa*) has only been detected as a single plant on the reserve. Seedlings are palatable and rabbits tend to keep this weed in check on the coast, though it is very common on the Monaro. Large pink rose flowers are followed by hips ripening to red.



Blackberry has compound leaves with 3 or 5 leaflets, the undersides of which are whitish. See page 8 of the natives guide for the native small-leaved bramble, which is sometimes mistaken for blackberry. The native is a smaller plant with pink flowers and bright red small fruits.

The most serious weed in the reserve is African lovegrass, listed as noxious in the Bega Valley.



African lovegrass (*Eragrostis curvula*) is a robust tussock. It is extremely invasive.



The black or leaden grey flowering heads are distinctive.



Native poa tussock (*Poa labillardierei*) is a similar looking plant with purple flower heads.



African lovegrass is very variable and the reserve also has an infestation of the tablelands form, which has a lower, spreading growth habit, bluer foliage and flower heads in which the branches are at 90° or more to the stem (at right, compare with photo above). Long hairs and swellings at the flower head nodes can also be a feature.





Equally serious is St John's wort. It is a common weed of the Monaro but not yet well established in the valley, although the drought has made it much more common especially around Bemboka. It is listed as noxious in class 3 in Bega Valley (must be continuously and fully suppressed and destroyed).



St John's wort (*Hypericum perforatum*) grows to about 1m high. It is a perennial, dying back to the roots after seeding, though some foliage may remain visible over winter. The old seed heads brown off, and exhibit the same branching pattern as above.



The flowers may have small black glands around the edges of the petals. St John's wort spreads by both runners and seed. It is impossible to dig up effectively and spot spraying with a selective broad-leaf herbicide is the only useful control method.



The leaves contain oil glands, visible as translucent dots if held up to the light. These produce hypericin, a toxic chemical. Do not handle this weed without gloves as it can be absorbed through the skin and can cause acute illness.

Fireweed is also listed as noxious in Bega Valley, but as it has become well established during the 2002-09 drought, it is less crucial to control it. Reflecting this, it is listed as a class 4 weed. It is not yet well established in the reserve and could be controlled with regular hand pulling (wearing gloves, as it is also toxic), but as it is spread by windblown seed, it may eventually become too onerous to keep it down.



Thirteen petals are said to be the distinctive feature of fireweed, but the number of bracts (the dark-tipped green structures enclosing the flowers) is more important. It has about 21, while some very similar natives have about 14. There are no native *Senecio* species in the reserve that look similar to fireweed.



It is important when pulling fireweed to look for seedlings, as well as the more visible flowering plants. The seedling above shows the characteristic variability in leaf shape, with smooth edged, toothed and lobed leaves all on the one plant. The smaller seedling at bottom left is a native *Senecio*.



One of the best means of control is to maintain a dense cover of vigorous native plants to exclude fireweed. Kangaroo grass is very good at doing this, but needs to be kept vigorous by occasional light grazing or burning. In the photo above the fireweed is growing mostly in kikuyu and not in adjacent kangaroo grass. Plants which do grow among kangaroo grass are often small.



Some more weedy grasses (kikuyu and paspalum are common but not illustrated):



Foxtail grass (*Pennisetum villosum*) is present as a few small patches, which were sprayed in June 2012. Its fluffy white flower heads are very distinctive.



Panic veldtgrass (*Ehrharta erecta*) is common in shady areas, and is probably too well established for control to be feasible.



Parramatta grass (*Sporobolus africanus*) is similar to the native rat's tail grasses (see page 3 of natives guide) but has shorter heads with no visible branches at the base.



Pigeon grass, left (*Setaria* species) became common in the wet years of 2011-12, especially in the old highway area. This may be only temporary. Shivery grass, right (*Briza minor*) and its relative quaking or blowfly grass (*B. maxima*) are spring flowering annuals, which are only temporarily common in late winter to spring and are not usually significant weeds.



There are no other broadleaf weeds in the reserve which are listed as noxious in Bega Valley. Some are more worth controlling than others, depending on their invasiveness, size and how well established they are already. Some worth tackling are:



Veined verbena (*Verbena rigida*) spreads mostly by runners, so it is useless to hand pull it. It is resistant to most herbicides, so hard to control and quite invasive.



Stinking roger (*Tagetes minuta*) is not well established yet and is easy to hand pull. The foliage has a strong aromatic smell.



Stinking roger seedling with compound leaves having narrow leaflets. When weeding always look for seedlings around the more visible flowering plants.





Giant mullein (*Verbascum thapsus*) is often called lamb's tongues. It has grey furry leaves and a tall spike of yellow flowers.



Twiggy mullein (*Verbascum virgatum*) has the same type of flowers and seed capsules as giant mullein.



Twiggy mullein leaves are hairless, with deeply impressed veins. Both form large rosettes which cover a lot of ground.

The mulleins produce huge amounts of fine seed like pepper, and it is very long-lived in the soil. Prevention of seeding, or careful removal of the seed head for safe disposal is important. Keep the seed head upright while handling it to avoid spilling seed.



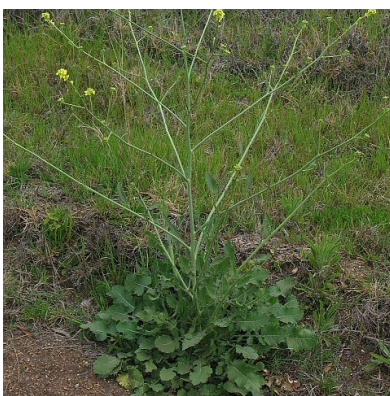
Cobbler's peg (*Bidens pilosa*) was thought to be introduced for a long time, but was apparently collected by Joseph Banks at Botany Bay, suggesting it is native. The black seeds that stick to clothing make it a nuisance and it is not well established, so worth removing anyway.



Black thistle (*Cirsium vulgare*) is the most common thistle in the valley. It is not common on the reserve, so it is worth chipping out the seedlings to prevent it getting established. Most seedlings are in the moister treed areas around the edges.



Prickly sowthistle (*Sonchus asper*) is also uncommon and worth chipping out. It has a less prickly relative, *Sonchus oleraceus*, which is also worth removing. Both have leaves which are less spiny than black thistle (can be pulled by hand) and leaves are more grey-green.



Buchan weed or hairy mustard (*Hirschfeldia incana*) is also uncommon on the reserve and worth removing. It has deeply impressed veins on the lobed leaves and 4-petalled yellow flowers.

Inkweed (*Phytolacca octandra*) is spread by birds and pops up under trees. Chip in passing.







Fleabane (*Conyza* species) is quite well established on the reserve. It is more common in wet seasons, as in 2010-12. It is palatable, so not common in grazed situations, but can become dominant in ungrazed areas. It is probably too well established to control on the reserve without a great deal of effort, though it does pull easily.



Another very common weed is cat's ear or flatweed (at left). It is not worth controlling. However, dandelion (at right) is less common and worth chipping in passing. The backward facing teeth on its leaves are distinctive, and the flower stems are hollow and unbranched, unlike flatweed. Both have spherical "clocks" of seed with white hairs.



Bindyi (*Soliva sessilis*) is another weed in the daisy family, like those above. It is not yet on the reserve, but is common in Colombo Park, and as it is well equipped to hitchhike on shoes (see middle photo) it is likely to get onto the reserve if foot traffic increases between the park and the reserve. Control on the oval and surrounds would help reduce the risk of this happening. There is a native look-alike, carrot weed (*Cotula australis*), which has a more open, spreading habit (right hand plant in photo at right above) and lacks burrs. It is present on the reserve, in shady areas under trees. Its tiny flowers are on long stalks.



Two prostrate weeds are orange-flowered mallow (*Modiola caroliniana*), left and an introduced geranium (*Geranium molle*). It is more densely and softly hairy than the native geranium which is common in the reserve. Chip in passing, but only if you are sure of the identity (see page 4 of natives guide).





Following are three minor weeds, for which control is not necessary. They seldom become very abundant and are only annuals.



Proliferous pink (*Petrohragia nanteuillii*) has grey-green narrow leaves in pairs and clusters of tiny pink flowers. The seed capsules are at centre left above.



Pink centaury (*Centaureum* species) is a small weed to about 20cm high. It can become common in wet springs.



French catchfly (*Silene gallica*) is so named for the sticky hairs on all parts of the plant. Its flowers may be white, pink or red and white.



Paddy's lucerne (*Sida rhombifolia*) is a small shrub to about 1m high. It has very tough stems and roots and is impossible to hand pull. There is a large infestation around the weedy high point of the reserve. Plants elsewhere would be worth chipping.



Ribbed plantain (*Plantago lanceolata*) is a common weed, probably too common on the reserve to be controllable. The flower spikes (above) are quite distinctive.



The leaves of ribbed plantain are held in a basal rosette, either flat and spreading or erect. There is a smaller native plantain (see page 8 of the natives guide) which can be distinguished by the small teeth along the leaf margins, and narrower, longer flower spikes.



White-tip nightshade (*Solanum chenopodioides*) has black berries which are eaten by birds, so it tends to come up under trees. It is not common in the reserve and could be hand pulled in passing. Purpletop (*Verbena bonariensis*) can be up to 2m high, unlike the similar veined verbena (page 3). It becomes common after disturbance.





The following weeds are mostly so far only present on the Bemboka River bank, but should be controlled if they spread onto the reserve.



Japanese honeysuckle (*Lonicera japonica*) is abundant in the river bed. It has black berries which are spread by birds, and wiry tan coloured stems. It could appear under trees in the reserve, and if so it should be removed. The wild form has white flowers which age to cream. The pink form at right is a cultivar, which can also get out of gardens and into the bush.



Hemlock (*Conium maculatum*) is a tall weed (to 2m) which prefers moist shady areas, such as the river bank. All parts of the plant are toxic, so if handling, wear gloves. The lacy, divided leaves in a basal rosette are quite distinctive prior to the plant flowering.



Periwinkle (*Vinca major*), left, is a popular, very hardy, garden plant, which commonly gets out onto river banks, where it spreads downstream in floods. Most reproduction is from runners, not seed. It is almost impossible to eradicate, though cattle keep in grazed down if given access. Any appearing on the reserve should be removed promptly, before it gets established.



Umbrella sedge (*Cyperus eragrostis*) is present in Colombo Creek and probably also in the river bed. It is not highly invasive and can probably be safely ignored. It is not likely to spread away from wet areas, unlike the other weeds on this page. There is a similar, but smaller, weedy sedge, *Cyperus aggregatus*, which is scattered through grassy areas of the reserve. It is probably too common to be worth trying to control.