

FRIENDS OF HODDLES CREEK NEWSLETTER



FOHC Newsletter is also on line at www.provender.com.au/fohc.

Thanks to Yarra Ranges Council for their generous printing of the Newsletter.

Is it too late to bring the red fox under control?

The red fox may be the most destructive species ever introduced to Australia.

For a start, it carries most of the blame for Australia's appalling record of recent mammal extinctions. Since European settlement, mainland Australia has lost at least 20 mammal species, far more than any other country over the same time period. Mostly these were bandicoots, bilbies, rat-kangaroos, quolls and hare-wallabies, along with relatively large rodents. Over vast areas of southern mainland Australia there are simply none of these medium-sized native mammals left – just seemingly limitless numbers of foxes and rabbits.

Did the fox act alone?

Did the fox act alone to cause these extinctions, or did it have help? Maybe other pressures – like competition from rabbits, changed fire regimes, or unknown diseases – were also important. The evidence, however, points consistently to foxes as the dominant cause. If other factors contributed it was probably by amplifying the predation pressure from foxes on native prey species. The European rabbit, for example, had an important subsidiary role by boosting fox numbers and keeping them high, even as native prey crashed to extinction.

The fox is also a significant pest to agriculture, mainly through preying on lambs and poultry. It can spread disease to domestic animals, and would be a carrier of rabies if that disease ever got into Australia (which is a distinct possibility). The combined environmental and agricultural impacts of foxes, and the effort expended on attempts to reduce that impact, probably costs Australia more than \$200 million each year.

But it could all have been so different.

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Fox on the run

Peter Voutier, from Feralex Pest Control, will be presenting some fascinating insights and a practical workshop on Foxes and rabbits as pest animals and alternative techniques in their control at Yarraburn Centre, Yarra Junction, from 2 - 4 pm on Sunday April 26. This free presentation and workshop will be followed by afternoon tea.

Peter has a Bachelor of Education and spent several years teaching Biology and Science in Secondary schools before commencing his business, Feralex Pest Control. He has developed and used many alternate techniques and specializes in chemical free pest control. Peter is currently contracted to several Municipal Councils and Government Agencies.

This event is jointly sponsored by Friends of Hoddles Creek, Yarra Ranges Landcare Network and Yarra Ranges Council.

Time to get tough on weeds

What is a weed? Probably the simplest definition is that of a plant growing where it is not wanted. This could be in our natural bushland, a creek or river bank, your garden, or a farmer's paddock. The Merriam-Webster online dictionary defines a weed as 'a plant that is not valued where it is growing and is usually of vigorous growth; especially: one that tends to overgrow or choke out more desirable plants'.

Characteristics of weeds are that they grow excessively well in an area, can be invasive and cause damage. We must also keep in mind that a plant that is regarded as a weed in one area can be a valued plant in another. Some plants, whilst not actually being defined as weeds, may show weed-like tendencies, extending into other areas of the garden, or a neighbour's garden, or into bushland.

Weeds can be broadly classified into two distinct types: **environmental weeds**, which invade bushland and threaten indigenous biodiversity, and **agricultural weeds**, which invade crops and pasture. The weeds you find around your home and in the garden may fall into either of these categories depending on where you live.

Where do weeds come from?

Many of our weed species, like pest animals such as the rabbit and fox, were introduced to Australia during settlement, either accidentally or deliberately for horticulture, agriculture and forestry. Their ability to adapt to their new conditions, combined with vigorous reproduction methods, has enabled them to become well established in most natural and agricultural systems. Native species can also have the ability to become weeds if they become established outside of their naturally occurring range. Many environmental weeds are able to become established a considerable distance from the parent plant, by bird dispersal of berries, windblown seeds, or the improper disposal of weeds. You may be unaware that you are infecting the neighbourhood with weedy plants that appear to be well controlled in your garden. Once they become established, environmental weeds can be very difficult and expensive to remove, so it is important to understand that what might be an attractive plant for your garden is not always the best plant for the environment.

Is this plant a weed?

How can we identify plants that are considered environmental weeds? The Yarra Ranges Council has produced a useful brochure listing common garden and agricultural plants that are considered to be environmental

weeds in the Yarra Ranges. They describe environmental weeds as an increasing problem in our region with a significant impact on our environment and the second greatest threat to our local biodiversity after vegetation clearing. It is considered the responsibility of the landowner or occupier to control weeds growing on their property and minimise their spread into neighbouring properties. You can pick up a copy at the Shire offices or on the Friends of Hoddles Creek stall at the WHYLD minimarkets, or on-line at <http://www.yarraranges.vic.gov.au/Property/Trees-vegetation/Weeds>.

Another excellent source of information on weeds and pest species is the former Department of Environment and Primary Industries (DEPI) who have an A – Z of weeds (from the home page click on Agriculture & food, then Pests, diseases & weeds, and Weeds) with information on the plant status, photographs, plant biology, growth and life cycle, environmental impact and management.

Noxious Weeds

Under the Catchment and Land Protection Act 1994 (CaLP Act) there are some plants which are declared as noxious in Victoria because they either cause or have the potential to cause environmental or economic harm. This act requires that: "In relation to his or her land a land owner must take all reasonable steps to eradicate regionally prohibited weeds and prevent the growth and spread of regionally controlled weeds."



Ragwort is a noxious weed that is poisonous to grazing animals.

Blackberry (*Rubus fruticosus* spp. *aggregate*) and **ragwort** (*Senecio jacobaea*) are both declared noxious weeds that are a significant environmental and agricultural problem in the Hoddles Creek area. The blackberry is also listed as a weed of national significance (W.O.N.S.), meaning that it has

significant impact across Australia both environmentally and economically and is a priority for control.

The blackberry (European Blackberry) is considered a serious environmental threat and is a highly invasive species. It provides shelter and is a food source for pest species such as rabbits, foxes and deer and can also compete with and eliminate other vegetation by excluding light from the soil surface. In its early stages of infestation, blackberry will grow over or occupy gaps in native vegetation and in later stages can severely restrict regeneration in native forests.



Blackberries provide food and shelter for pest animal species and the dry canes can be a fire hazard.

Blackberry is also an extremely serious agricultural threat, due to its rapid growth and ability to reproduce through various methods. It will readily establish on disturbed sites and infest large areas. Once established it is expensive to manage and can even be a fire hazard due to large amounts of dead canes. The plant's strong prickles make it hazardous and unpalatable to grazing animals (except browsing animals, such as goats and deer) and impenetrable thickets provide harbour and food for pest animals such as rabbits and foxes, starlings and blackbirds. It may also restrict access to watercourses which may affect recreational activities, forestry operations and for grazing animals.

Ragwort can be invasive on roadsides, in forestry plantations, native forests and woodlands, threatening biodiversity in these areas. The weed is poisonous to grazing animals, both when fresh and dried in fodder. It causes cumulative liver damage leading to photosensitisation, jaundice, wasting and sometimes death in animals. Dairy cattle forced to graze ragwort produce tainted milk. Ragwort is a major pasture weed particularly on land grazed by cattle and horses and on dairy farms. It produces dense foliage close to the ground which suppresses and prevents regeneration of other vegetation. Ragwort competes strongly with more desirable plants, reducing pasture productivity and the value of agricultural land.

Other noxious weeds that are found locally include Boneseed (*Chrysanthemoides monilifera*), English Broom (*Cytisus*

scoparius), Spear Thistle (*Cirsium vulgare*), Gorse (*Ulex europaeus*), Tutsan (*Hypericum androsaemum*), Bridal Creeper (*Asparagus asparagoides*), Angles Onion (*Allium triquetrum*), Bulbil Watsonia (*Watsonia meriana* var. *bulbillifera*), Sousob (*Oxalis pes-caprae*), Hawthorn (*Crataegus monogyna*) and Willow (*Salix* spp.),

How can we control weeds?

There are various ways of controlling weeds. Non-chemical methods include simple **hand weeding** or **hoeing** that is a part of every gardener's routine.

Mulching is another and one of the best ways to keep the garden free of weed, as well as the benefit of helping to keep the soil friable and retain moisture. **Revegetation** can be used in some areas (such as roadsides and along waterways) by densely planting locally indigenous species to increase competition with weed species.

Chemical control is an alternative, but we advise you choose the most environmentally friendly option and follow the guidelines for use on the label. Use with caution near waterways to ensure that contamination and subsequent damage to aquatic life does not occur.

Do weeds have positive side? Under controlled circumstances, a number of weeds can greatly benefit our gardens. They hold top-soil, draw up nutrients, provide food, and can help control insects. However, if for whatever reason you don't have the time to tackle all of the weeds consider them free ground cover.

There can be times when it is sensible to let non-spreading annuals grow on that otherwise fallow ground. Just cut the plants down before they go to seed and compost them or, once they've wilted, turn them under into the soil. This can be useful to the gardener in several ways. Firstly, if we compost or turn under those weeds, the valuable nutrients and trace minerals they've brought up will get redistributed to the topsoil.

There are some plants do not belong in the compost because of the risk of spreading an already unwanted plant. These include toxic plants or perennials that spread by underground runners or bulbils such as onion weed or nut grass. You will want to eliminate these.

Disturbance creates the opportunities for weeds to establish. When soil is cultivated, weed seeds are brought to the surface where they germinate. In an area that is thickly planted or mulched there is less opportunity for weeds to establish themselves. Rather than weeding and leaving cleared soil, have your preferred plants to hand and plant them immediately. Having a closely planted garden with ground covers is a sensible approach. There will be less opportunity for weeds to establish themselves and the garden will look good.

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The fox arrives in Victoria

A brilliant piece of historical research by Ian Abbott shows how difficult it was to introduce the fox to Australia. Victorian settlers, who were keen to indulge the “noble sport of fox-hunting”, released foxes on many occasions, beginning in the 1840s. Some early releases were evidently quite serious attempts to establish wild populations, such as a liberation of a group of at least six foxes in the Dandenong Ranges in 1864.

Released animals were rarely, if ever, seen again. They may have been killed by hunters or dingoes, or they might have taken poison baits that were laid for dingoes and stray dogs. In any case, they did not establish viable populations.



It was not until about 1874 that a fox population finally took off, on the Werribee Park property of the wealthy Chirside family. From that point the fox was unstoppable. Despite all attempts at control it swept like an avenging fire through all of the southern half of Australia in just a few decades.

This history nicely illustrates an important biological principle. Small, newly introduced populations face a high intrinsic likelihood of going extinct. The small numbers of animals in such populations might be hard to find, but even poorly targeted control efforts can be useful if they increase those individuals' risk of death, and therefore make it even more likely that the population will go extinct.

This history may now be repeating in Tasmania where an illegal release of several foxes in about 1998 has evidently resulted in a widely dispersed but extremely low-density fox population. The Tasmanian State Government is attempting to push this population towards extinction using broad-scale poison baiting. This is controversial, but is the most sensible response to the risk that foxes will do to the Tasmanian environment what they have already done to mainland Australia.

As with any other well-established invasive species, it is very hard to turn back the clock and reduce the impact of foxes. Trapping and shooting

generally have little effect on population size unless they are done intensively in well-defined areas where rates of re-invasion are low. Bounty schemes set up to encourage broad-scale fox removal by shooters, such as the program recently established by the Victorian State Government, are likely to be ineffective and wasteful.

There are four control options that can produce sustained reductions of fox impact.

First, poison baiting using 1080 can give good results, because foxes readily take poison baits. There is a particular advantage in the use of 1080 to protect wildlife from fox predation in Australia, because while foxes are highly susceptible to this toxin, native Australian mammals are much less so because it occurs naturally in some Australian plants. A drawback is that **reduction in fox abundance can result in increased feral cats** (which are also susceptible to 1080 but generally do not take baits), because foxes aggressively suppress cats. For some prey species, cats are just as significant a threat as foxes, or more so.

Fencing can be used to exclude foxes from high-value areas such as nature reserves, although the investment needed to protect large areas in this way is huge.

Livestock guardian dogs, such as the maremman sheepdog, have proved their worth in protecting livestock from many species of predators, including foxes. Guardian dogs have even been used to keep foxes away from seabird colonies in southern Victoria.

Finally, in some situations dingoes can reduce populations of both foxes and feral cats. They do this partly by hunting and killing them. Intriguingly, dingoes have been recorded killing foxes and cats but not eating their victims, as if the killing was motivated by simple malice. This is a good thing, because it means that foxes and cats fear and avoid dingoes, so that habitats in which dingoes are active can serve as refuges for prey species that are especially vulnerable to both foxes and cats.

This article, by **Christopher Johnson**, Professor of Wildlife Conservation and ARC Australian Professorial Fellow at University of Tasmania, was originally published in

THE CONVERSATION

<http://theconversation.com/is-it-too-late-to-bring-the-red-fox-under-control-11299>.

Come on and join FOHC

The Friends of Hoddles Creek are always on the lookout for new members. To join, just contact us with your name, address and phone or email details. You can mail these to FOHC, PO Box 298 Yarra Junction, Vic 3797, or email us at friendsofhoddlescreek@gmail.com.

See more at our website (www.provender.com.au/fohc) or on Facebook – just search ‘Friends of Hoddles Creek’ or ‘FOHC’.

