



## Foxes

### Impacts

Predation by the fox has been listed as a key threatening process. A key threatening process is defined as a something that “threatens or may threaten the survival, abundance or evolutionary development of a native species or ecological community” (DECC).

Foxes have contributed to the decline of much of Australia’s native fauna, particularly ground nesting birds, medium sized ground dwelling and semi-arboreal mammals. The average fox requires 136 kg of food a year. Their presence has also had a huge impact on native predators such as the spotted-tail quoll. Due to their large numbers and efficient hunting and scavenging foxes are able to out-compete native predators for resources. The impact on ground-nesting birds has also been devastating. These birds provide an easy target for foxes when nesting. Predation by foxes has been a major factor in the decline of species such as the plains wanderer and bush stone curlew.

The fox is also a vector for weed dispersal (such as blackberries), is a major predator of lambs and poultry, will damage drip irrigation systems and horticultural crops and significantly reduce biodiversity.

The negative impact of foxes comes at a considerable cost to the environment and the Australian economy. The costs associated with foxes include management and control programs, rehabilitation of degraded sites and increased costs to food production. The following table highlights the annual costs of managing foxes in Australia.

Table 1: Cost of foxes (Pest Animal Control CRC, 2004)

Cost Component	Control	Loss
Sheep Production Loss	-	\$17.5 million
Environmental Impact Cost	-	\$190 million
Management Cost	\$16 million	-
Research Cost	\$4 million	-
<b>Total Cost</b>	<b>\$20 million</b>	<b>\$207.5 million</b>

### Distribution

Foxes occur throughout most of Australia, and are found in all parts of NSW and the ACT. Their distribution includes both rural and urban areas, and they are commonly found in the suburbs of most large cities. The species has become established throughout the entire Molonglo catchment, occurring at particularly high population densities on the fringe of urban areas and farmland, although less so in higher timbered areas.

### Case Studies

Huon, a local Landowner from Forbes Creek has been having considerable trouble managing the fox problem on his land for many years now at a significant cost to the farm in terms of both time and resources. He believes their population density would surprise many people, due to their nocturnal lifestyle and shy nature they are not always seen, but their presence is certainly felt. “Once again I have lost quite a few lambs to foxes this year. It is time to re-introduce a \$10 bounty for each fox tail, to get the local community unified and motivated to deal with this national pest once and for all”. The loss of livestock to foxes is not an isolated event, it is a story repeated many times over within the Molonglo catchment.

### Description

Foxes are usually solitary and most active at night but activity during the day is not uncommon, especially when adults are feeding cubs. The fox is a largely carnivorous animal, it is an opportunistic predator and scavenger who will eat a wide variety of plant material, human refuse, vertebrate and invertebrate prey, including sheep, lambs, chickens and small native mammals and birds.

They are highly adaptable and occur in a range of habitats including fragmented areas offering a range of shelter and food. Fox tracks and scats are similar to those of smaller dogs, with the tracks being slightly narrower and more oval. Additionally the track pattern is very narrow, often overlapping and can be in a single straight line.

Breeding occurs during winter, with gestation lasting 51 to 53 days when 3 to 5 cubs are born. At 10 to 12 weeks of age cubs usually leave the den but are not independent until they are 6 months old. They are able to breed the following winter.

A fox can travel 25 km in search of food. Population densities in temperate grazing land as occurs in the Molonglo catchment are known to be as high as 7 foxes per square kilometre.



Keryn Molloy, Invasive Animals CRC

Fox with prey



### What can be done?

There are a number of options for fox control on your property. A good place to start is to contact your local Livestock Health and Pest Authority (LHPA) or Parks, Conservation and Lands (PCL) branch. In NSW foxes are currently listed as a nuisance species under the *Rural Lands Protection Act 1998*. The LHPA or PCL can provide you with advice and assistance on control measures. It is important to undertake pest animal control in a humane manner, minimising pain and suffering to the animals involved whilst being aware of your legal obligations. Before conducting any control measures ensure you are aware of your legal obligations and any ethical issues by contacting the relevant authorities. When planning a control strategy, be sure to engage your neighbours as their assistance will be essential for success of any control program.

### Control methods

- **Poisoning** – Significant legal restrictions apply relating to signage while baiting, number of baits supplied, clearance distances between baits, use on small properties and in urban or closely settled rural areas. Baits have the potential to impact on non-target species. For use and information on controlled pesticides you must contact your local LHPA or PCL branch.
- **Fumigation** – Requires both specialist operator and equipment. This method requires extensive knowledge of native mammals that may utilise dens or warrens, to avoid non-target species mortality.
- **Shooting** – Target specific and effective in the removal of a small number of foxes. Often used at night with a spotlight, a fox whistle and around dens or animal carcasses. A small calibre, high velocity rifle with proficient operator can be effective both day and night. Under the Game and Feral Animal Control Act 2002 a licence (R-Licence) issued by the Game Council of NSW is required to hunt foxes on public land in NSW.
- **Trapping** – Can be effective in dealing with small numbers of foxes, but may have non-target species impact. Requires experienced and competent person to be effective and humane. Steel jawed traps are illegal, as is the use of soft jawed traps within town or village boundaries. All traps should be used in accordance with the code of practice and standard operating procedures. Traps should be cleared and deactivate as soon as possible after dawn to avoid excess suffering and capture of non-target animals.

Consider a control program that tackles all your pest animal issues as the reduction in one species may lead to an increase presence of another. Pest animal control is also a part of controlling your weeds as these species often create the opportunity for weed establishment or act as a vector for the weeds. It may be useful to consult the Molonglo Catchment Group's weed information pack to identify the weeds pest species are bringing on to your land.

### What YOU can do

The Molonglo Catchment Group is always interested to hear from you regarding any pest animal activity in your area. If possible, record the GPS coordinates of the location of a sighting. If this is not possible, a description of the location will suffice. Other than direct sightings, some indications of fox activity include:

**Droppings:** Similar to dogs, usually about the size of an adult human's finger. Droppings have a sharply pointed end.

**Tracks:** The track pattern is very narrow, often overlapping and in a straight line. Similar to those of small dogs, though fox tracks are slightly smaller and more oval in shape.

Your help will enable the MCG to build up a picture of the distribution of this destructive species in our catchment.



Brent Johnson & DEWHA

Fox with prey



Invasive Animals CRC

Fox prey