



## Pet pests and their control

By Harald Hoffmann, Biosecurity Communications, Peter Davis and Marc Widmer, Entomology, South Perth

Spring, summer and autumn are the seasons when our pets are most likely to be affected by parasitic pests. Animals which groom themselves excessively or appear generally disturbed could be affected by fleas, mites, worms, lice or ticks and should be treated accordingly. This Gardennote describes the most common pet pests and their recommended treatment. As chemical registrations constantly change, this Gardennote avoids specific control measures. Check with your local hardware store, veterinarian or chemical retailer for current registered chemicals.



*Well groomed pets have fewer pest problems*

### Fleas

There are several species of flea in Western Australia. Adult fleas feed only on the blood of warm-blooded animals, including humans. They are small wingless insects, flattened on each side with long legs which enable them to jump up to 300 mm to reach a host. Fleas can transmit disease. The best known example of this is the plague, spread by the rat flea. Fleas, however, are not generally associated with disease transmission in Australia, although they can be responsible for the spread of tapeworm in pets and in humans. For this reason, animals being treated for fleas should also be treated for tapeworm.

### Detection

Regularly check the bellies and necks of your pets for signs of flea activity. If fleas are not obvious on the animal, get a lice comb and comb through your pet's hair at the base of the tail and wipe the comb on a piece of white moist tissue. Fleas consume relatively large amounts of blood. If the tissue stains red, it is a sign of fleas.

### Flea Allergy Dermatitis (FAD)

Apart from flea bites, cats and dogs can suffer secondary symptoms. This is caused by a hypersensitivity to flea saliva, which is released into the skin during feeding to prevent clotting of the blood. FAD is less common during the colder seasons in animals kept outside.

The most affected areas on the host are those where most fleas locate and feed. These are the back, inner thighs and lower abdomen. The affected animals display discrete crusted papules in these areas, and this can lead to great restlessness and discomfort. The scratching, biting and rubbing exacerbate the dermatitis. At this stage, the animal may need veterinary attention, and a thorough flea control program should be instigated.



*Cat-flea*

### Flea life cycle

A blood meal is needed before the adult female can lay eggs. The eggs are laid on the host animal and then fall to the ground. Usually the eggs are laid at night, so they tend to accumulate in the nest or bedding of the host animal. In a short time, legless larvae emerge, which feed on adult flea faeces and other organic material in the soil, carpets or bedding.

Once the larvae complete their development, they pupate (an inactive stage). Larvae and pupae can occur deep in the pile of carpets, in cracks and crevices in the floor or in open sand and soil. The adult flea can remain inactive inside the silky pupal cocoon for a long time, until a host is detected. This explains the sudden appearance of fleas in dwellings that have been empty for long periods. The dormant fleas detect the vibrations of the new occupants and are stimulated to become active and seek a host.

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## Control of fleas

The objective of flea control is to break the flea's life cycle. This involves the simultaneous elimination of adult fleas on the host, along with adult fleas and the various immature stages in the indoor and outdoor environment. This is done with a range of chemicals which act in different ways. It should be kept in mind that cats are very sensitive to some of the insecticides used to control fleas.



*Cats are less tolerant to a range of flea control chemicals*

Carefully follow label instructions. Overexposure may result in cumulative toxicity when the premises are treated. For pets other than cats and dogs, veterinary advice should be sought beforehand as some products can harm or kill pets (rabbits in particular). Regardless of the treatment approach, it is advisable to thoroughly vacuum and clean the indoor premises and outside lairs (including pet bedding) prior to applying an insecticide.

It is a good idea to examine and treat all pets regularly and wash all bedding and kennels at the same time.

### Note

The pet animal may not always be the host of fleas. Fleas may be transmitted by mice or rats. In controlling fleas, the first essential is to locate and treat all host animals and surrounds. If this source of the infestation is not treated, the problem will continue.

### Knock-down chemicals

These chemicals come in a range of products, for example, sprays, powders, shampoos and tablets. These chemicals are applied to the animal and their habitats. Read the label to match the product to your particular requirements. Diazinon or fenthion are highly toxic to birds and are not recommended for treatment around ducks, chickens or other birds.

The highest flea populations are found where animals sleep or where they spend a lot of time. A pet's bedding can be washed in hot water to kill the eggs and larval stages, but fleas will survive in cracks and crevices in the floor or in the structure of their quarters. Treat these areas with recommended knock-down chemicals.

When insecticidal sprays are used, at least two applications are needed because the immature stages of the flea are not vulnerable to treatment. Apply the

second treatment 10 days (in hot weather) to 14 days (cooler weather) after the first. Do not contaminate animal drinking vessels, food containers or fish ponds with insecticide residues.

## Flea collars

A range of insecticidal collars are effective, but they need to be replaced regularly. Their active life depends on the chemicals in them and the length of the animal's fur; being less effective on long-haired animals.

## Treatment of pets

Treatments for pets come as dermal spot treatments or tablets. Although expensive, these chemicals are effective and last for four to six weeks and can control the egg and larval stages in the surrounding areas as well.

## Space treatments

Entire rooms can be sealed and treated with specialised 'flea bombs'. These contain an insecticide combined with insect growth regulators, and can provide extended periods of control with a single treatment.



*Clean chicken pens prevent stickfast flea and mite infestations*

## Chickens

Chickens are affected by so called 'Stickfast' fleas. These occur in summer and autumn and infest the birds around the comb and eyes.

The application of non-burning oils such as vaseline or neatsfoot oil, smeared on the affected parts, may be used to treat stickfast fleas on chickens. Always consult a qualified veterinarian for specific advice when treating fleas on any avian poultry species.

In chicken pens, a clean concrete floor under roosts will drastically reduce the survival of fleas and other pests.

## Ticks

Ticks are blood-sucking external parasites. Female ticks grow to 25 mm long when fully engorged. They are usually reddish-brown and firm, and resemble



*Stickfast flea*

tough, leathery sacs of fluid. Ticks are not insects but are in the Class Arachnida, as are spiders and mites. In south-western Australia the main ticks affecting pets (and people) are the kangaroo tick, *Amblyomma triguttatum*, and the brown dog tick, *Rhipicephalus sanguineus*. The term pepper tick refers to the smaller, young nymphal ticks.

### Detection and life cycle

Ticks are usually visible on the host, where they embed themselves with their barbed mouthparts while feeding. Ticks develop through a series of moults and have four stages of development: egg, larva, nymph and adult. Adults usually mate on the host and will leave the host when fully engorged. The female will then rest for a while prior to laying thousands of eggs before dying. These parasites can survive many months between feeding, at any stage of development.

Upon hatching from the egg, the six-legged larval tick climbs onto foliage at the side of an animal trail or path from where it can transfer to a passing animal or person when they brush against the foliage. They feed on the host for several days before dropping to the ground. The larva digests the blood meal, then moults to an eight-legged nymph and repeats this process to find a host. It will then engorge itself, drop to the ground, then moult into an adult tick.



Farm dogs are more likely to get ticks

Ticks are found more commonly on dogs than on cats, especially if dogs exercise in bush areas with prominent wildlife such as kangaroos. The most commonly infested sites are the head, neck and ears; these being less accessible areas for scratching and grooming. On humans they are most often found in areas where clothing is tight on the body such as sock lines and waistbands, as well as around the collar.

Ticks can produce some inflammation of the skin and possible allergic reactions at feeding sites. Heavy infestations on pets and livestock can lead to anaemia, although this is rare. Medically important complications involving ticks include tick-typhus, Q-fever and tick-bite paralysis. However, these conditions do not normally occur in South Western Australia. If sickness, lethargy or even slight paralysis occurs in an animal (or a human) exposed to tick bite, seek immediate medical or veterinary attention.

### Tick control and removal

The life cycle of a tick roughly resembles that of fleas and similar action as described for fleas can be taken. Long term treatments for fleas can also control ticks on your pets and 'tick collars' are also available for dogs.

It is not possible to eliminate ticks from natural bush areas. On private property, tick infestations can be averted to some extent by keeping grasses short and by pruning shrubs along pathways to avoid direct contact with foliage. Private property can be fenced to prevent access by kangaroos and hence prevent the introduction of ticks onto the property.

If a tick is found attached to you or your pet, application of a volatile liquid, such as methylated or surgical spirit, or suffocating the tick with vaseline (over a few hours), may make the tick withdraw, mouthparts and all, from the wound before dying. Ideally though, it is best to wait until one can acquire a pair of fine-pointed tweezers and at the skin level (without squeezing the tick's body), lever the tick out slowly and deliberately. If some of the tick's mouthparts break off and remain in the wound they should be removed and the wound disinfected to prevent inflammation or secondary infection.

### Bush tick

The bush tick, *Haemaphysalis longicornis*, was first detected in Western Australia in 1983, on cattle at Walpole. Because large infestations on a host can cause severe anaemia and even death, an intensive effort was made to discover the extent of infestations, and to predict whether the tick could become a serious pest. On the west coast, and inland areas, the bush tick is unlikely to establish as conditions are too hot and dry during the critical summer period. One exception has occurred in an area near Harvey, where cattle have been sent from the Walpole area for many years. Ticks are occasionally seen there in low numbers on cattle grazing perennial pastures.

### Mites and lice

Mites and lice on dogs and cats are generally not a problem in Western Australia and can be controlled employing similar methods as for fleas. Mites and lice are also common pests of chickens.

They may spend considerable time off the host, therefore it is essential to treat the environment, particularly any nooks and crevices in the floors and walls of roosts and coops.

Lice and mites can be treated with chemical dusts or sprays. Follow label instructions closely, and check with your veterinary supplier to see what is best for your situation.



Chicken mite

## Pests in aviaries

In Western Australian home gardens, aviaries get commonly affected by rodents, insects and feral birds, all of which can spread parasites as well as bacterial and fungal diseases.

Mice and rats are attracted to bird food. They may leave their excretions in the food containers, contaminating it with many potential pathogens such as *Salmonella*, *E.coli*, etc.

If possible, rodents should be physically excluded from the aviaries. It may pay to surround the base of the aviary with a galvanized iron sheet.

This should be 300 mm above ground and dug in 300 to 600 mm. A concrete floor will prevent the rodents to dig into the aviary. If any rodent manages to get in they can be controlled using traps situated in bird proof boxes within the cages. To avoid rodents keep the outside of the aviaries clean of food scraps. Hanging feed dispensers rather than floor or wall mounted will help to discourage rodents. Install traps and poison in bird proof boxes outside the aviary. Some aviary owners keep a resident guinea pig in the aviary to deter rats and mice.

Insects can also be transmitters of diseases and parasites. In Western Australia ants and cockroaches are the most common insect pests in aviaries, apart from mites, ticks and fleas. If required, an application of a registered surface spray should control most insects (consult with your chemical retailer, hardware or pet shop).

It is also important to avoid contact of your aviary birds with wild birds. Double wire on the outside will make predation by wild birds more difficult - some can attack through single wire. Wild birds are often transmitters of internal parasites (eg intestinal worms) or air sac mites (*Sternostoma tracheacolum*).

The popular Gouldian Finches and Canaries are particularly susceptible to air sac mites. A clinical sign of air sac mites is open mouth breathing, which has a characteristic clicking sound. In a heavy infection some birds can be observed gasping for air. Other signs include coughing, nasal discharge, tail bobbing, weakness and weight loss. If your birds are affected, consult your local veterinary for treatment.



*Aviary showing double door, covered roof and some rodent proofing*

Aviary owners should adapt a basic program which prevents diseases through hygiene. This includes:

- The aviary should have a full roof to give shelter to the birds, keep the food dry and prevent wild birds defecating into the aviary
- Minimum access of people to the aviary
- Cleanliness of all equipment, food and water
- Exclusion of feral birds and other pests
- Quarantining and thorough observation of new birds in a separate cage for 60 days before introducing them into the aviary
- Minimising stress to the birds (stress may weaken the immune system and activate diseases which may be dormant in the birds)

When sending or delivering samples, the following information is required: Collector's name, location (where the specimen was found), full address, telephone number and email address, description of the damage, and date collected.

Department of Agriculture and Food  
Pest and Disease Information Service  
3 Baron Hay Court  
South Perth WA 6151  
For details phone freecall 1800 084 881  
Email: [info@agric.wa.gov.au](mailto:info@agric.wa.gov.au)