

Summer Pest Profiles - Fleas & Ticks

Summer is rapidly approaching, and with that comes the heat and humidity which encourages the development, breeding and spread of those perennial pests – ticks and fleas. Already, due to relatively high rainfall, this summer is expected to be a prime year for these pests. As well as being a source of great irritation, both of these can carry a variety of diseases causing great discomfort to human beings and they might even prove fatal to some pets.

Ticks

Ticks are small arachnid parasites that feed on animal and human blood. Seventy species of ticks are recognised in Australia: Fourteen of those are soft ticks (family: Argasidae) and 56 are hard ticks (family: Ixodidae). Only 16 of these 70 will feed on humans and domestic animals, while the other 54 species feed only on wild mammals, reptiles and birds.

The most important tick in Australia is the Paralysis Tick, *Ixodes holocyclus*. Over 95% of tick bites in Eastern Australia are due to this species and most tick-borne illnesses are caused by it. The paralysis tick is restricted to the east coast of Australia only. It is not found in WA, the Northern Territory or South Australia. Other common species include the Bush Tick, *Haemaphysalis longicornis*, Brown Dog Tick, *Rhipicephalus sanguineus* and Cattle Tick, *Boophilus microplus*.



Brown Dog Tick

Rhipicephalus sanguineus

There are four stages in the life cycle of a tick; the egg, larvae (around 1mm and light brown in colour when not full of blood), nymph (around 2mm and pale brown) and the adults (4–5mm in length, when not engorged and up to 1cm if full). The Paralysis Tick needs to feed on blood to develop through its lifecycle from the larvae stage to a nymph and to an adult. The adult female takes blood to obtain protein for the laying of eggs. Female paralysis ticks can transmit a toxin to their host while feeding that may cause illness or disease and even paralysis or death to pets, particularly dogs.

Pets are particularly vulnerable to ticks as they are more likely to go into environments that ticks inhabit.



Australian Paralysis Tick

Ixodes holocyclus

After feeding and mating on a host, females fall off the host, lay eggs and subsequently die. One female can lay up to several thousand eggs. Eggs are often laid in leaf litter; in the soil; and on areas of dense foliage such as long grass or bushy shrubs.

After 1 week and up to 90 days depending on temperature and humidity, the egg hatches into a 6 legged larva or seed-tick. After feeding and moulting, seed-ticks develop into 8 legged nymphs. Nymphs are similar in appearance to adults only smaller and sexually immature. After feeding and moulting, nymphs develop into sexually mature adults.

Some ticks require multiple hosts to move to the next stage of development, such as Bush and Paralysis Ticks (3-host-ticks), while others only require only one host (single-host-ticks) such as Cattle Ticks.

Most of the tick lifecycle is spent in the immature stage and off the host. While not on a host, ticks can be found in areas that are moist and cool, as ticks are highly prone to drying out in hot, dry conditions.

The Paralysis Tick is most common in moist, humid coastal areas with abundant native animals that serve as hosts. Long grasses and bushland provide ideal environments, and if you live close to these areas, it is not uncommon to have Paralysis Ticks in your garden. This tick has a distinct seasonality; the larval stage is most active during the autumn months, the nymph during winter and the adult during the spring. This tick is most active during periods of high humidity, especially after rain.

Paralysis Ticks are not particularly mobile, and rely on passing animals for a blood meal. The Paralysis Tick will crawl up the stems of grasses or along branches and 'perch' ready to latch on to a passing animal, including humans. They rarely climb higher than 50cm in their habitat. After finding a host they can walk up the body and attach to the head area.

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Controlling ticks is an integrated pest management effort.

The Primary control method is to reduce the environment favourable to ticks: Keep lawn areas tidily mown; keep weeds to a minimum; if adjacent to bush areas, remove weeds and try to create a buffer strip; prune and thin out shrubs to reduce humidity.

Pesticide sprays will work on the adult tick at the stage when it is in an elevated position, seeking a host. Regular applications of a pyrethrum-based product is effective as residual or systemic insecticides are of no real advantage. The larval or nymph stage is difficult to control as they are found in dense vegetation or leaf litter.

Fleas

There are three main flea species in Australia.

- The Cat flea, *Ctenocephalides felis*, which is the most common flea in Australia. It attacks dogs, rats, humans and other mammals.
- The Dog flea, *Ctenocephalides canis*, which is less common than the cat flea, but similar in appearance.
- The Human flea, *Pulex irritans*, which has become uncommon due to improvements in home hygiene standards.

Fleas are blood-sucking parasitic insect pests. They belong to an order of insects known as Siphonaptera, which translates to 'wingless siphon'. They are mostly commonly known for the irritation caused by their bite and the revulsion felt when they are seen on family pets.



The Cat flea
Ctenocephalides felis

Females use blood to nourish their eggs and will lay up to 4 eggs after each feed. A flea will commonly lay some 100 eggs over their life cycle which lasts several months. The eggs are small (about 0.5mm), whitish in colour, and oval in shape. Depending in climatic conditions, they can hatch in as little as one week, or, in unfavourable conditions they may remain dormant for many months. The larvae that hatch from the eggs are like small white maggots, about 3 mm in length, and sparsely coated with very fine hairs. These wriggle around in search of food, usually skin scales or undigested blood excreted by the adults. They will hide away in cracks and crevices for shelter and are rarely seen.

Larvae go through four moults (instars) over a 1 – 3 week period. The life cycle is faster in warmer conditions. The final instar will form a pupa by spinning a cocoon. They will metamorphose inside this cocoon into an adult flea, over a period of 1 week through to many months depending on climatic conditions. They will commonly emerge from the cocoon only when they feel movement and vibrations from a potential host.

As in the case of ticks, controlling fleas is an integrated pest management effort.

Primary physical management includes hygiene and housekeeping measures, regular thorough vacuuming of the home, and washing as well as treatment of pets and their bedding. There is a wide range of registered treatments available for fleas on animals.

Areas where fleas are active such as carpets should be treated with a registered residual pesticide, preferably containing an IGR, which should also be applied to harbourages where the flea larvae may be present. Sandy areas around homes along with the subfloor region are also a common refuge for fleas that will need to be treated with pesticide. Many sandy soils are water repellent, so the addition of a soil wetting agent will significantly improve the efficacy of the pesticide treatment.

We carry a complete range of the best products available to tackle fleas and ticks.

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