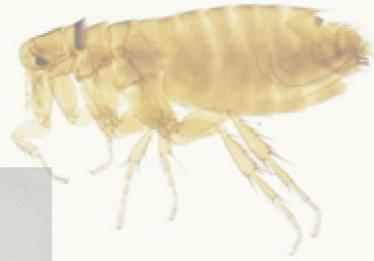


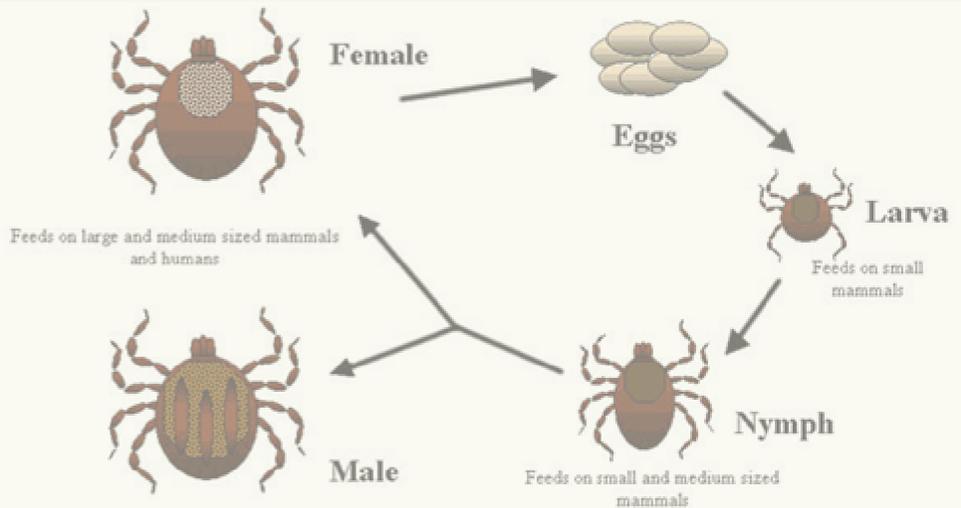
HOW TO DISTINGUISH BETWEEN TICKS AND FLEAS?



TICKS

Ticks are small arachnids which are under the same classification as spiders. Larvae, nymph and adults all require blood meals to complete their lifecycle however, some tick species are able to survive up to a year without any blood meal. There are over 800 tick species that come from 2 families which are Ixodidae (hard ticks) & Argasidae (soft ticks). Ticks are also vectors of diseases as they commonly transmit diseases to both humans and animals. Most of the tick bites are caused by females as males usually die after mating. Interestingly, the mobility of ticks is very limited as they cannot jump or fly however, they will crawl onto a host to start feeding.

LIFECYCLE



Egg : When a female lays eggs, it usually takes a period of 60 days before the egg hatches. Once the larval emerges, it requires a blood meal to survive.

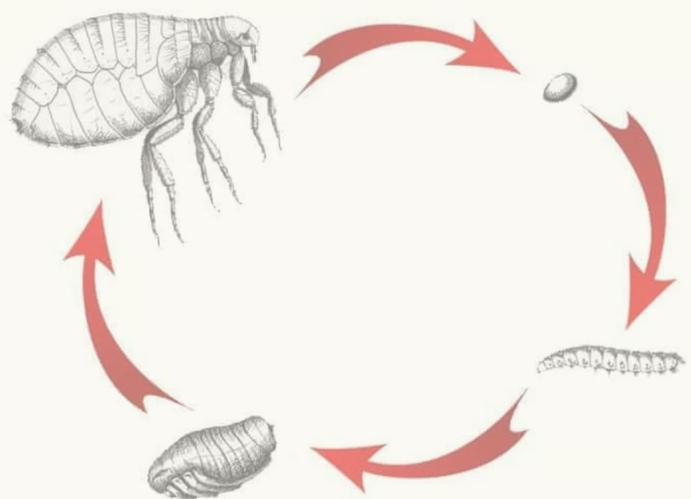
Larval : At the larval stage, small animals such as rodents are targeted as their desired host to feed on. They are usually small and only have 6 legs instead of 8 legs which is unusual for an arachnid.

Nymph : At this stage, the nymph now acquires an additional of 2 legs which adds up to a total of 8 legs. When the nymph finds a new host to feed on, it will molt into an adult.

Adult : This is the final stage of the tick's lifecycle whereby they will wait and grab onto hosts that brush against shrubs or tall grass to once again feed on a blood meal and mate. The female then lays eggs and the cycle repeats.

FLEAS

Fleas are blood-sucking and wingless insects that are similar to ticks which have limited mobility. However, fleas are able to jump onto hosts. Unlike the nymph and adult ticks, fleas only have 6 legs in total. Both female and male fleas are able to transmit flea-borne diseases and both sexes require blood meals to survive and advance into the next stage of their life cycle.



LIFECYCLE

Eggs : A female will lay an average of 20-50 eggs which are normally deposited under carpets or crevices. The laid eggs will hatch at the right temperature and humidity.

Larvae : At this stage, the flea larvae will not start feeding on a blood meal yet as they do not have the ability to do so. Thus, flea larvae will mostly feed on flea dirt which is also known as adult flea faeces. They are commonly found in dark places and under crevices as these larvae are sensitive towards light sources.

Pupae : This particular stage of the life cycle consists of fleas converting into cocoons which can last from several days to weeks depending on the environmental condition. The cocoon mainly functions to protect the larvae while it develops into its adult form. Interestingly, the developed larvae will not emerge as an adult until it senses a nearby host via vibration, heat emitted from pets or even carbon dioxide levels.

Adult : When a suitable host is detected by the adult flea, it will then emerge from the cocoon to start feeding. If no host is detected, the flea will not survive and complete its lifecycle. The female flea then continues to feed and breed and the whole cycle is repeated.