Reptile Tick and Mite Infestation: Causes, Signs, Diagnosis, and Treatment

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What external (skin) parasites commonly affect reptiles?

Ticks and mites are the most common external parasites found on reptiles, and can infest lizards, snakes, and chelonians (turtles and tortoises). There are 7 genera of ticks and over 250 species of mites that affect reptiles, including chiggers. "Acariasis" is the medical term for an infestation with mites or ticks.

How do ticks and mites cause disease?

Ticks and mites both feed on the blood of reptiles, and if the infestation is severe, they may cause anemia. Ticks can also transmit a number of diseases and may spread various protozoan parasites that live in the blood stream. Ticks from other continents, such as Africa, may pose special dangers if they get into the environment. They may carry diseases, such as heartwater, that are devastating to other animals such as farm livestock and wildlife. They can also carry diseases that can be transmitted to people, such as Lyme disease.

What are the signs of tick or mite infestation?

The signs of a tick infestation are generally obvious, as the adult ticks are typically visible with the naked eye, especially if they are engorged with blood. Ticks may cause dysecdysis (abnormal shedding) or local reactions where they are attached. If left untreated, large infestations of ticks can cause anemia. In heavy infestations with some species of ticks, suffocation can occur in monitor lizards as the ticks clog the respiratory passages.

Mite infestations may cause the animal to have a dull appearance. The skin or scales may be pitted or crusty, with small hemorrhages. Mites may cause ulcers in lizards, especially iguanas. Affected animals may be depressed or lose their appetite, and be seen rubbing themselves on cage furniture or soaking in water for long periods of time. Severe infestations can cause anemia, and even death.

How are infestations with ticks and mites diagnosed?

The diagnosis of a tick infestation can be made by visually observing the parasite. Ticks are usually found under the scales or in the nostrils of snakes. On lizards, they are commonly seen near the vent or in the nostrils. Ticks usually attach to turtles near the vent, or in the soft skin under the shell in front of or in back of the legs.

Mites are much smaller and less easy to recognize. They may be seen as very small black or red dots on the animal, often around the eyecaps of snakes, or under the scales. They also may be seen floating in the water, or on the owner after handling the reptile.

How are animals with these external parasites treated?

Ticks: Ticks should be manually removed from the reptile using small forceps or tweezers.

1. Grab the tick by the head or mouth parts right where they enter the skin. Do not grasp the tick by the body.
2. Without jerking, pull firmly and steadily directly outward. Do not twist the tick as you are pulling.
3. Using methods such as applying petroleum jelly, a hot match, or alcohol will NOT cause the tick to 'back out.' In fact, these irritants may cause the tick to deposit more disease-carrying saliva in the wound.
4. After removing the tick, place it in a jar of alcohol to kill it. Ticks are NOT killed by flushing them down the toilet.
5. Wash your hands thoroughly.

Please do not use your fingers to remove or dispose of the tick. We do not want you in contact with a potentially disease-carrying tick. Do NOT squash the tick with your fingers. The contents of the tick can transmit disease.

Snakes and lizards with ticks may also be treated with ivermectin (although this is an off-label use), especially if the ticks are located in areas where they are difficult to remove (e.g., the nostrils). Your veterinarian will be able to prescribe the correct dilution and dose for the medication.

> Turtles and tortoises should NEVER be treated with ivermectin; it is toxic in those species.

Mites: There are numerous treatments used to eliminate mites from reptiles. Many of them can be hazardous to the animal if not applied correctly. Always consult with your veterinarian before using any insecticide/pesticide on your reptile.

Water baths: Soaking a reptile in a lukewarm water bath for twenty minutes will drown the mites on the animal's body, but not affect those on the animal's head.

Olive oil: Olive oil can be applied to the entire animal. It works by smothering the mites, but it can be messy.

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Pyrethroids: Pyrethroids are synthetic variations of the insecticide pyrethrin, which is found naturally in chrysanthemums. Pyrethroids generally kill the mites in a shorter period of time and have a longer residual activity. There is one patented formula for reptiles called Provent-a-Mite, which contains 0.5% permethrin, a synthetic form of pyrethrin. To treat tortoises, spray a small amount at each leg opening, being sure to protect the tortoise's eyes. For snakes and lizards, remove the animal and water dish from the enclosure. Spray the substrate and allow it to dry thoroughly. Be sure all vapors have disappeared before returning the animal to the enclosure. Animals showing signs of anemia or weakness should be evaluated by a veterinarian and given supportive therapy prior to treatment with pyrethroids.

Ivermectin: Ivermectin can be given orally, by injection, or a diluted solution can be sprayed on the snake, but in some cases, it is not as effective as pyrethroids. Do NOT use ivermectin in turtles or tortoises, as it is toxic in those species.

Pest strips or dog/cat flea collars: Pieces of pest strips or flea/tick collars of dogs and cats have been used by some as a treatment for external parasites by placing them inside of or on top of the reptile's cage. These often contain organophosphates which are very toxic to reptiles, and their use is NOT recommended.

Cyfluthrin: Cyfluthrin can be used to safely treat the premises and eradicate ticks from a tortoise facility.

In addition to treating the animal, the cage should be cleaned on a regular basis, disinfecting it with a diluted bleach solution (1-3 ounces of household bleach to one quart of water).

Most mite and tick infestations are found on newly acquired reptiles. If you are adding a reptile to your collection, remember to quarantine it away from the other reptiles for at least 1 month. Ticks, especially, can travel fairly large distances (into other rooms) and can accidentally be transferred to other animals on your clothing or other items. Always feed, clean the cage, handle that reptile last, etc., and wash hands and utensils well afterward.

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