

## EXTERNAL PARASITES (LICE & MITES)

Comparison	Lice	Mites
<b>Size</b>	2-3 millimeters long	1 millimeter diameter (ground pepper)
<b>Speed</b>	Fast-moving	Slow-moving
<b>Color</b>	Straw-colored (light brown)	Dark reddish black
<b>Egg location</b>	Base of feather shaft	Along feather shaft
<b>Egg color</b>	White	White or off-white
<b>Best detection time</b>	Daytime	Nighttime or Daytime
<b>Location</b>	Lives only on host	Lives on host and in environment

### Scaly-Leg Mite

The scaly-leg mite is 8-legged and lives under the scales of the legs and feet of the birds. This mite is pale gray and has a flat round body. They burrow under the leg scales to feed on connective tissue. The life cycle of this mite is 1 to 2 weeks.

This mite is different from other mites in that they cause itching and irritation of the legs. The scales lift and there is subsequent scabbing or crusting. The diameter of a bird's leg shaft may double in size due to scaly-leg mite infestations. White dusty scabs can be observed. In severe cases, birds will develop leg and joint problems making walking difficult. In addition, toe necrosis has been observed (Figure 1).

There are several treatment methods available to control scaly-leg mites. Treatment with Ivermectin® is recommended. In addition, coating the entire leg shaft with petroleum jelly will help to moisturize the scales and revert the scales back to normal in less severe cases.



**Scaley Leg Mites.**

### **Stick-tight Fleas**

Stick-tight fleas are the smallest type of fleas (half the size of a cat or dog flea). They are a burrowing and stationary flea as compared to most fleas, which are jumping fleas. These fleas lay their eggs around the eyes and wattles of chickens causing nodules. Once the flea larvae hatch, they drop off the bird to live in the soil for approximately two weeks. Stick-tight fleas feed off the host bird causing skin irritations and ulcerations. Severe infestations may lead to blindness. Stick-tight fleas often congregate into groups of at least 100 fleas. These fleas are capable of being transferred to other animals like dogs, cats, horses, and even humans. Infested birds will have small brown dots clinging to or embedded into the fleshy portions of the head. The head will become very inflamed and red due to the irritation of the flea living under the skin. Egg production and feed efficiency will decline greatly and birds will become anemic and emaciated. Secondary bacterial infections may develop because of the birds' weakened immune system. In severe cases, stick-tight flea infestations may kill young birds. Stick-tight flea treatments include using carbaryl (Sevin®) to dust the litter and facilities; removal of the fleas using tweezers; or by smothering them with petroleum jelly. In addition, even after treatment, although the fleas have died, they will remain attached to the bird. Raising birds in wire cages at least three feet above the ground is an alternative prevention method.



## Chiggers

Chiggers form clusters on the skin around the wings, neck, and breast of poultry and inject a substance that causes allergic skin reactions. The young chiggers in the larval stages are the ones that do most of the biting. They are 0.16mm in diameter, yellow-orange, and have 6 legs. Adult chiggers have a dense feathery hair coat that gives them a velvety appearance. They are bright red in color and can grow to 1 to 2mm in length. The lifecycle for a chigger is 50 days. These chiggers are the same chigger pests that can affect humans and cause similar problems. Chiggers are primarily a problem in poultry that are raised on pasture.

Poultry that are infested with chiggers are droopy and emaciated. They may have abscesses and extensive skin inflammation. It takes birds at least three weeks to heal after a chigger problem. If chiggers infest a market poultry flock, the carcass quality will be greatly reduced. Chiggers cause red scabby lesions on the carcass. In severe cases, death may result due to secondary bacterial infections.

Infested birds should be treated with a kitten-strength dose of a pyrethrin-based spray and removed from the infested pastures.

## Poultry Lice

Poultry lice are tiny, wingless, 6-legged, flat-bodied insects with broad, round heads. They lay their eggs on the host birds feathers, especially near the base of the feather shaft.



A female louse will lay 50 to 300 eggs at a time, which she cements to the feather shaft. There are several species of lice that affect poultry, and multiple species can affect a bird at any given time. Some species can be localized on specific locations like the quill lice; or others can be found over most of the body surface like the chicken body lice. Chicken body lice feed on dry skin scales, feathers and scabs. However, they will ingest blood extruding from irritated skin. The entire life cycle of the lice occurs on the host bird, primarily in the feathers.

Inspect the vent region of the bird for live lice crawling on the bird (the lice move fast so be ready for that) and for nits (lice eggs) as most infestations start in the area of the bird's body.

Feathers of infected birds may have a moth-eaten appearance. Feather damage will cause the bird to have a dull or roughened appearance.

## Poultry Mites

There are two (2) major types of mites found on the body of poultry. They are the **Northern Fowl Mite** (or in tropical environments, the **Tropical Fowl Mite**) and the **Chicken Mite (or the Red Roost Mite)**.

The most common of external parasite in poultry is the **Northern Fowl Mite** especially in cool weather climates. It sucks blood from all different types of fowl and can live in temperate regions of the world. As compared to the Chicken Mite, the Northern Fowl Mite primarily remains on the host bird for its entire life cycle of 2-3 weeks. These mites are small and black or brown in color, have 8 legs, and are commonly spread through bird to bird contact. Tropical Fowl Mite is comparable to the Northern Fowl Mite but lives in the tropical regions.

The **Chicken Mite** is a nocturnal mite that is primarily a warm weather pest. These mites suck the blood from the birds at night and then hide in the cracks and crevices of the housing during the day. (This could be in the coop flooring, the roost or other such dark places). Chicken Mites are dark brown or black similar to the Northern Fowl Mite.

## Life Cycle of Mites

The life cycle of mites can be as little as 10 days, which allows for a quick turnover and heavy infestations. Mites can be transferred between flocks by crates, clothing and wild birds. Mites are capable of living in the environment and off the host bird for a period of time. Diagnoses of mite infestations are similar to that of lice; however since mites can live off the bird and some are nocturnal, inspect the birds and housing at night especially if you suspect that the Chicken Mites is the cause of the infestation. The hard part is seeing this type of mite on darker colored birds. Use whatever means is necessary to view these nasty critters.

**SYMPTONS:** Observable signs may include darkening of the feathers on white birds due to mites feces; scabbing of the skin near the vent; mite eggs on the fluff feathers and along the feather shaft or a congregations of mites around the vent, ventral abdomen, tail or throat.



Since mites congregate around the vent region, they can also reduce a cock or cockerels ability of successful mating.

### **PRELIMINARY NOTES ON TREATMENT of these parasite problems.**

There are several products used for treatment of lice & mites. *Some have been approved and some have not.* Be sure you understand the product you are using. Some products have a residue that will affect the meat and eggs of the treated fowl. Some are harmful to human consumption if used inappropriately.

There are two products that have been approved and are commonly used. As with all products follow the directions to keep your birds and you both healthy.

Sevin (either in dust form or a diluted liquid. Sevin 10% dust may be used directly on the bird or sprinkled in a dust box. A dust bath box size in this instance is 24"x36"x4" with 2.5 lbs per 100 birds. It has been noted that prolonged use of Sevin often diminishes the effect because lice or mites become immune after long periods of usage. Please note: 5% Sevin does not work as well as 10% and may prolong the length of treatment.

Permethrin liquid which comes in different strengths, is often used by poultry exhibitors in the rinse water when bathing their bird for showing. Permethrin works very well when rotating treatments. Permethrin also comes in .25% dust which can be applied directly on the bird. This also may be used in a dust bath environment.