



## Common diseases in kakariki: **Mites in the area of the quill**

Lately we received more and more inquiries regarding kakariki suffering from feather problems. Some animals had been treated unsuccessfully for years in a row. And some of the birds in our flock, consisting only out of rehomed animals, suffered from the same problems. By chance, our trusted veterinarian took part in a course on the subject of feather mites and called us the next day asking for feathers from our Leila.... Results came in soon: Leila suffered from feather mites. Living mites were seen under the microscope.

Mites are very difficult to detect by human eye. But one can suspect an infestation by a close inspection of a dropped feather. Before we continue on this subject we should consider 2 different types of mites can be found in kakariki.

- Feather shaft mites
- Mites of the neocnemidocoptes species

### **Feather shaft mites**

live mainly in the large flight feathers and are probably not the cause of severe featherloss. Their life circle almost always takes place near the short, proximal, unfeathered section of the quill, called the calamus. Most birds are infected during nesting period.

(Lit.: Schöne, Schmidt, Sachse, Schmäschrke, Federspulmilben bei Papageien, PAPAGEIEN 2/2011, pages 49ff. Here you may look for further information)



pictures:

left: Outside of quill showing faecal remnants inside

right: Sectioned quill with faecal remnants inside .

Not all feathers of an infected bird have to necessarily show signs of infection! We now monitor all dropped tail- and wingfeathers on discoloration in the quill. The shafts of the mites, the yellowish excrements and exuvia (remains of the exoskeleton of mites) as seen in the pictures, seem to be sure indications of a possible mites infection. These signs are easy to spot with a naked eye. The mites themselves are very small; 1.43 mm when mature.

However, for a correct diagnosis it is still necessary to spot living mites under a microscope!

also look at : [www.federmilben.de/en/home.html](http://www.federmilben.de/en/home.html)



picture: possible neocnemidocoptes infection

### **Neocnemidocoptes-Miltes (this species)**

can live at the base of any feather. It's habitat is located in the area of the follicle hole. Their habitat is covered by the upperskin and this way they are invisible from the outside. They are the cause of severe feather irregularities. In cases of heavy infestation a bird suffers from severe loss of feathers in the head and neck area.

Because the small feathers drop faster than the large ones, this kind of loss helps to spot infestation sooner. But again: for

a correct diagnosis it is still necessary to spot living mites under a microscope! These mites are even smaller than the above described kind. Max 0.4 mm. It probably spends the majority of it's life cycle in the horn like and somewhat thickened part of the quill. The part which is connected to the skin.

This type of mite prefers kakariki as a host and was found only with an exception on one other parrot species.



pictures: possible neocnemidocoptes infection, (not confirmed by microscope)

Depending on the stage of development and gender it can be either immobile to extremely mobile thus infecting more feathers. Here too the infection of a bird is possibly in the nestling period during the gathering under the wings, first symptoms occur only during or after the sexual maturation of the parakeet.

(Lit.: Schöne, Schmidt, Sachse, Schmäschke, Lausittiche- Befiederungsprobleme durch eine bisher unbekannte Milbe, Kleintier. konkret 4/2010, page 29ff.)

Most of the time, this type of mites are the cause of feathering problems in kakariki. A simultaneous attack of feather shaft mites is possible, but not the cause for the featherings problems.