

***Chorioptes bovis* (Mite) Isolation from Chicken**

¹ADEDOKUN, O.A. and ²OWOADE, A.A.

Departments of ¹Veterinary Microbiology and Parasitology, and
²Veterinary Medicine, University of Ibadan, Ibadan, Nigeria

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Abstract

During routine visits to two poultry farms in Ibadan, Nigeria, heavy infestations of the birds with minute barely visible ectoparasites were encountered. These parasites caused itching and depressed egg production in affected flocks. Samples of the ectoparasites were collected from the two farms and identified as *Chorioptes bovis*.

Introduction

Ectoparasitic infestations are known to cause loss of productivity in terms of weight loss, and depressed egg production in layers. This is usually accompanied by financial losses. Ectoparasites such as lice, fleas and mites are common parasites of poultry (Haungerford, 1969). Mites that are commonly found in poultry include red mite (*Dermanyssus gallinae*), tropical fowl mite (*Ornithonyssus bursa*) and northern fowl mite (*Ornithonyssus sylvarum*). Other mites which infest poultry are scaly leg mite (*Knemidocoptes mutans*), air sac mite (*Cytodites nudus*), subcutaneous mite (*Laminiosioptes cysticola*) (Gordon, 1977).

Parasitic mites are so small as to be just visible only to the naked eye. Some of them are however, slightly smaller than this. In this paper, a mite encountered in some poultry flocks in Nigeria is reported.

Materials and Methods

Field Encounter

Routine visits were paid to two poultry farms in Ibadan, Nigeria. One, a flock of 3,400 layers housed in metal cages, and the other a breeder flock of 3,000 kept on deep litter. The birds were examined routinely for ectoparasites and found to have barely visible moving organisms on the body.

Examination

A hand lens was used for better visualization of the parasites on various parts of the chicken body.

Parasite Harvesting

Cotton wool swabs were soaked in 5% formalin and used to mop the parasites into the same solution in a universal bottle.

Microscopic Examination

The parasites were transferred on to glass slides with rubber tip pipette and covered with cover slip. The parasites were examined at x100 objective of the light microscope.

Results

On identification, the adult mite has rounded mouthparts, while a cup-shaped sucker is placed on very short unsegmented pedicel. Suckers are present on all appendages in the male which also has truncated abdominal tubercles bearing paddle-like or spatulate hairs (Plate 1) as described by Geogi and Geogi (1990). Based on these key features, the mite was identified as *Chorioptes bovis*.

Discussion

The identification of *Chorioptes spp.* of mites on chicken is of significance to poultry farmers and veterinarians. Chicken hitherto has not been described as a host for *Chorioptes spp.* The mite is known to localize and cause asymptomatic infestation on already established hosts like cattle, sheep horses, goats and rabbits, except when present in large numbers (Geogi and Geogi, 1990). Localization was not an obvious feature on chickens but featherless and relatively featherless areas (head and leg) were uninfested. This may be attributable to the fact that *Chorioptes spp.* have non-burrowing mites with mouthparts adapted solely for chewing and they feed on shed scales and other skin debris.

The main clinical manifestation on both farms reported here was reduction in egg production. Loss to the farmer will not only be in terms of reduced productivity but

also in the cost treatment and reduced market value of such birds. Veterinarians will also have the challenge of diagnosing the mild infestation in chickens, which may be relatively asymptomatic.

Though specific names have been given to *Chorioptes spp.* found in other hosts viz: *Chorioptes bovis*, *C. ovis*, *C. equi*, all are considered to belong to the single species *C. bovis*. This implies that there is a single species of *Chorioptes* which apparently is non-host-specific and the chance of infesting other unidentified hosts is not remote. However, the mite may not seem to have preference for humans as the farm attendants had no skin irritation, itching or any form of dermatitis.

In conclusion, it is advised that veterinarians, scientists and entomologists include *Chorioptes bovis* in their expectation of mite species that infest poultry. A further investigation into the presence of this mite on poultry is in progress.

References

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Plate 1: *Chorioptes bovis* isolated from chicken (x 1,250).

- a = Cup-shaped sucker
- b = Short unsegmented pedicel bearing the sucker
- c = Rounded mouth parts
- d = Truncated abdominal tubercles
- e = Spatulate hair arising from abdominal tubercles