

THE OCCURRENCE OF SOME HITHERTO UNDESCRIBED  
*LEUCOCYTOZOOM* AND *HAEMOPROTEUS* SPECIES  
IN SOUTH AFRICAN BIRDS.

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INTRODUCTION.

Members of the genus *Leucocytozoon* Danilewsky, 1890, and *Haemoproteus* Kruse (1890), have been recorded from domestic birds and a large number of wild birds in South Africa. Specific names have been assigned to some of them only. Although it has been established that *L. anseris* Knuth and Magdeburg (1922) of the goose in Germany, *L. smithi* (Laveran and Lucet, 1905) of the turkey in North America, *L. simondi* Mathis and Leger, (1910) and *H. columbae* Celli and Sanfelice, (1891) may be responsible for definite diseases, it is unknown whether the species occurring in South Africa possess any pathogenicity.

EXPERIMENTAL OBSERVATIONS.

In the blood and organ smears obtained from the birds mentioned in this paper only gametocytes in various stages of development could be detected but no asexual phases.

The *Haemoproteus* parasites resembled *H. columbae* very closely.

The host cells containing the gametocytes of the *Leucocytozoon* were distorted to such an extent as to prevent their identification. The parasites themselves were ovoid or circular.

1. *Leucocytozoon* sp. in the domestic pigeon, *Columba livia* (Gmel).

Eleven out of seventeen pigeons from a dovecote in Pretoria died suddenly. Lung smears from some of the birds showed a moderate infection of *Leucocytozoon*. The mature gametocytes measured  $8-11 \times 9-12$  microns. Blood and organ smears prepared from three of the apparently healthy survivors proved negative.

2. *Leucocytozoon* sp. and *Haemoproteus* sp. in the Namaqua dove, *Oena capensis* L.

A dove was found dead at Onderstepoort. Blood, lung and kidney smears showed the presence of a *Haemoproteus* sp. and a moderate infection of a *Leucocytozoon* sp. The mature gametocytes of the latter measured  $11.5-12 \times 6.8-10$  microns.

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3. *Leucocytozoon* sp. and *Haemoproteus* sp. in the Ring dove, *Afropelia capicola capicola* (Sund).

A blood smear from a dove was obtained from the Officer in Charge, Veterinary Research Laboratory, Pietermaritzburg. Examination showed the presence of a moderate infection of a *Haemoproteus* species and numerous gametocytes of a *Leucocytozoon* species. The mature stages of the latter measured 10-11 × 10-11 microns.

DISCUSSION.

Due to insufficient material and evidence in the above-mentioned cases it was impossible to conduct studies on the parasites, with the result that no specific names were given.

It is possible that an intercurrent disease was responsible for the death of the birds and that the protozoal parasites were present as a result of a previous infection. Turkeys and ducks are known to develop a state of premunity after an active infection of *Leucocytozoon* and pigeons after recovery from a *Haemoproteus* infection.

CONCLUSION.

The presence of *Leucocytozoon* in three and *Haemoproteus* in two members of the family Columbidae is recorded.