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RESEARCH NOTE

SOME PROTOZOAN PARASITES OF WILD BIRDS FROM THE VICINITY OF ONDERSTEPOORT

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ABSTRACT

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The protozoan parasites of wild birds from the vicinity of Onderstepoort are recorded. New host records for the Republic of South Africa are: *Haemoproteus* in *Threskiornis aethiopicus, Francolinus swainsonii, Columba guinea* and *Streptopelia senegalensis; Leucocytozoon* in *Anas erythrorhyncha, Netta erythrophthalma, C. guinea* and *Passer domesticus* and *Plasmodium* in *Numida meleagris.*

In 1971/72 a total of 74 wild birds of 13 species collected at or near the Onderstepoort Veterinary Research Institute was examined for protozoan parasites. Blood, liver and bone-marrow smears were stained with Giemsa and subsequently examined for such parasites. In addition, cardiac blood and bone-marrow were seeded onto saline-neopeptone-blood medium (Diamond & Herman, 1954) and nutrient NNN medium (Baker, 1966), incubated at 37 °C and examined on Days 3, 10 and 14.

Forty-nine birds were infected with protozoan parasites and 2 with microfilaria. The results are summarized in Table 1.

Leucocytozoon was present in 8 and *Haemoproteus* in 7 species of birds. As only erythrocytic stages, i.e. gametocytes, were found and the parasitaemias were of a low level, no attempts were made to identify the species of *Haemoproteus* and *Leucocytozoon*. Since it is difficult to distinguish morphologically between gametocytes of *Plasmodium* and *Haemoproteus* it is possible that some gametocytes of *Plasmodium* were erroneously identified as *Haemoproteus*.

A very small number of trophozoites and a schizont of an unidentified *Plasmodium* was found in *Numida meleagris*.

On Day 14 trypanosomes were present in 1 of the 2 bone-marrow cultures on nutrient NNN medium from 1 *Francolinus swainsonii*. The parasites were highly motile and were 21 μm in length.

Leucocytozoon has previously been recorded from *F. swainsonii* (Oosthuizen & Markus, 1967 a, b), *N. meleagris* (Oosthuizen & Markus, 1967 a, c), *Streptopelia senegalensis* (Oosthuizen & Markus, 1968) and *Passer melanurus* (Fantham & Robertson, 1927), and *Haemoproteus* from *N. meleagris* (Oosthuizen & Markus, 1967 b, c). According to Oosthuizen & Markus (1967 b), Enigk found both *Leucocytozoon* and *Haemoproteus* in *N. meleagris*. *Trypanosoma numidae* was recorded from *N. meleagris* (Oosthuizen & Markus, 1967 b).

New host records for the Republic of South Africa listed in this publication are *Haemoproteus* in *Threskiornis aethiopicus, F. swainsonii, Columba guinea* and *Streptopelia senegalensis, Leucocytozoon* in *Anas erythrorhyncha, Netta erythrophthalma, C. guinea* and *Passer domesticus* and *Plasmodium* in *N. meleagris.*

TABLE 1 Parasites found in blood smears

Family	Bird Species	Number examined	Parasites found				
			L	L & H	L & P	H	M
Ardeidae	*Ardeola ibis* (Cattle heron)	3	—	—	—	—	—
Ciconidae	*Ciconia abdimii* (White-bellied stork)	1	—	—	—	—	—
Threskiornithidae	*Threskiornis aethiopicus* (Sacred ibis)	3	—	—	—	1	—
Anatidae	*Anas erythrorhyncha* (Red-billed teal)	6	1	—	—	1	—
	Netta erythrophthalma (Southern pochard)	3	1	—	—	—	1
Phasianidae	*Francolinus swainsonii* (Swainson's francolin)	14	8	2	—	—	—
Numididae	*Numida meleagris* (Helmeted guinea fowl)	24	4	11	1	6	—
Rallidae	*Gallinula chloropus* (Moorhen)	1	—	—	—	—	—
Columbidae	*Columba guinea* (Rock pigeon)	11	1	—	—	5	—
	Streptopelia senegalensis (Laughing dove)	2	—	2	—	—	1
Apopidae	*Apus affinis* (Little swift)	1	—	—	—	—	—
Ploceidae	*Passer domesticus* (House sparrow)	4	2	1	—	—	—
	Passer melanurus (Cape sparrow)	1	1	—	—	—	—
	Total	74	18	16	1	13	2

L = *Leucocytozoon*
H = *Haemoproteus*
P = *Plasmodium*
M = Microfilaria

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