

A focus of feline babesiosis at Kaapschehoop on the Mpumalanga escarpment

Feline babesiosis is an enigmatic disease. The causative organism, *Babesia felis*, was first described in the Sudan³ from a wild-caught African wild cat *Felis sylvestris* (syn: *Felis ocreata*)¹¹. Although the famous Kenyan lioness 'Elsa' was said to have died of piroplasmosis¹, feline babesiosis in domestic cats has only been reported from South Africa. It is regarded as endemic in the entire eastern and southern coastal strip from KwaZulu-Natal to the Western Cape⁹, but published data on its geographical distribution are scant. There are definite records from Cape Town^{2,7}, Bellville⁴, Stellenbosch⁵ and Knysna¹⁰, all in the Western Cape, and an oblique reference to Port Elizabeth in the Eastern Cape¹⁰. A small piroplasm isolated from a sick caracal (*Felis caracal*) in Durban, KwaZulu-Natal, was shown by DNA sequencing to be closely similar to a *B. felis* isolate from a domestic cat (P A Conrad, University of California-Davis, pers. comm., 1998).

Although *B. felis* is assumed to be tick-transmitted, the vector has not been identified. References to the yellow dog tick *Haemaphysalis leachi* being the vector are based on incorrect interpretation of an assumption^{7,8}.

Clinical cases presented at veterinary practices in inland provinces, e.g. Gauteng, are usually cats that accompanied their owners on holiday to the coast. A few cases have been reported in cats that had no history of travel. That raises the question whether all small piroplasms in felids are, in fact, *B. felis*. A small piroplasm, morphologically similar to but serologically distinct from *B. felis*, isolated from lions (*Panthera leo*) in the Kruger National Park (KNP) may represent a new species⁶.

Recently, a number of domestic cats

with clinical symptoms resembling those of feline babesiosis were presented at a private practice in Nelspruit, Mpumalanga. Small piroplasms were seen on blood smears made from these cats. The cases had originated at Kaapschehoop (25°35.40'S, 30°46.18'E), a village on the escarpment west of Nelspruit. The cats had not left the environs of the village.

We visited Kaapschehoop and collected serum from 18 cats, to determine the prevalence of infection and the *Babesia* species involved. Antigen slides of the *B. felis* isolate that had been used in various drug trials⁹ (Lewis B D, Penzhorn B L, Lopez-Rebollar L M, Swan G E, unpubl. data, 1998) were prepared at the Protozoology Section of the Onderstepoort Veterinary Institute. Indirect fluorescent antibody tests were carried out on the sera, by standard procedures. The results are given in Table 1.

We conclude that the piroplasms present in domestic cats at Kaapschehoop are *B. felis* as there is no cross-reaction between that and the KNP lion isolate⁶. Practitioners in towns along the escarpment should be aware of the possibility of clinical cases. With a study site closer to Onderstepoort, we propose further investigations to identify the vector involved.

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Table 1: Results of indirect fluorescent antibody tests against *Babesia felis* on serum specimens from 18 cats at Kaapschehoop, Mpumalanga.

	Negative	Positive (titre)				
		1:80	1:320	1:640	1:1280	>1:1280
Number	7	3	2	1	2	3

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