

FASCIOLA TRAGELAPHI IN A BEEF COW

Sir,

A two and half-year old (Brahman cross) cow from Anglesea farm, Matopos with a history of wasting died in July 1998. No other clinical signs were reported. The farm had approximately 1400 beef animals and the body condition of most of the animals was moderate to poor.

A routine post-mortem examination was carried out on the dead animal at the farm and the salient lesions observed in liver were; massive liver fibrosis and thickened bile-ducts protruding on the surface, giving the ducts a 'pipe-stem' appearance. On cross-section, large numbers of long flukes were recovered from the dilated bile-ducts. The tentative diagnosis made was chronic fasciolosis caused by *Fasciola gigantica* and one fluke fixed in formalin was submitted to the Faculty of Veterinary Science, Parasitology section for confirmation.

At the Parasitology laboratory the following features of the parasite were noted before staining the parasite with aceto-alum carmine (Gibbons et al., 1996); parasite was leaf shaped and flattened dorso-ventrally, slender and long with the maximum width in the posterior half. The features and measurements noted after staining are given in Table 1. On comparison with the morphological features of the species of the genus *Fasciola* (that are known to infest livestock and wildlife) i.e. *F. gigantica*, *F. hepatica* and *F. nyanzae*, differences were noted in the size,

Table 1. Comparison of measurements of the stained parasite with that of *Fasciola (Tenuifasciola) tragelaphi* described by Pike and Condy (1966)

	Measurements of the stained parasite (mm)		Ranges of measurements by Pike and Condy (1966) (mm)
Body	length	50.00	102–120
	width	6.25	6.0–7.0
Cephalic cone	length	2.97	2.96–3.33
Oral sucker	length	0.53	0.592–0.666
	width	0.66	0.814–0.888
Ventral sucker	length	0.97	1.332–1.480
	width	0.91	1.332–1.554
Distance of testes from anterior end		5.00	4.10–5.80
Anterior limits of vitellaria	left	2.52	1.90–2.70
	right	2.50	1.20–2.20

shape of the body, and distribution and arrangement of the reproductive organs. The length of the parasite was larger than the normal size of *F. gigantica* and *F. hepatica* but similar to *F. nyanzae*. The position and arrangement of the genitalia differed in that the ovary of this fluke was bilateral, with two equal parts lying to the right and left of Mehli's gland, and the testes lay almost entirely in the posterior half of the body away from the female genitalia, which lay in the anterior half of the body. These morphological features differed from all other species of *Fasciola*, where the ovary is unilateral and mostly lying to the right of the median line, but were similar to those of *Fasciola (Tenuifasciola) tragelaphi* recovered from *Tragelaphus spekei* by Pike and Condry (1966).

The different measurements of this fluke in comparison to the ranges of measurements of *F. tragelaphi* (Pike and Condry, 1966) are shown in Table 1. Our measurements are based on only one specimen, which makes them unreliable when comparing them with the ranges reported by Pike and Condry (1966) from a larger number of specimens. However, based on the distribution and arrangement of the reproductive organs we diagnosed this fluke as *F. tragelaphi*.

The full host-spectrum of *F. tragelaphi* is not known, although Pike and Condry (1966) suggested that the sitatunga might be the only host, as they could not find the parasite in the red lechwe, *Kobus leche*, which were grazing in the same areas as the infected sitatunga. However, Condry (1972) managed to experimentally infect bovine with *F. tragelaphi*, but natural infection in bovine has not been reported to date. Although there is game in Anglesea farm, we are not certain of the presence of sitatunga, which might explain the origin of this parasite. The natural intermediate host-snail involved in the transmission of the parasite is yet to be found but Condry (1972) successfully infected *Lymnaea natalensis* with this parasite, and it is possible that snails of the genus *Lymnaea* are the natural intermediate host of this parasite. With the emergence of game farming in Zimbabwe under which livestock and game are reared in close contact, it is important that veterinarians be aware of this parasite, although more information is still needed concerning the epidemiology and pathogenesis of the parasite.

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References

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