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Author: Peirce, M. A.

Source: Journal of Wildlife Diseases, 20(2) : 153-154

Published By: Wildlife Disease Association

URL: https://doi.org/10.7589/0090-3558-20.2.153

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range for *D. immitis*. Two of the infections involving worms of both sexes were patent. Blood from one of these foxes contained large numbers of circulating microfilariae and although blood from the other fox was not examined, developing microfilariae were observed in the uterus of the female worms recovered from this animal.

By comparison, 51 of 405 (12.6%) dogs of all breeds and ages from the same locality routinely examined at the Rural Veterinary Centre of the University of Sydney for microfilariae of *D. immitis* in the 2 yr preceding July 1983, were positive.

The results indicated that heartworm infection was reasonably prevalent in red foxes living in the western fringes of Sydney, and that patent infections do occur in this species. Fecund *D. immitis* females and circulating microfilariae have been demonstrated in red foxes elsewhere (Monson et al., 1973, N.Y. Fish Game J. 20: 48–53; Stone, 1974, N.Y. Fish Game J. 21: 87) and this survey reaffirms the potential of these canids to serve as reservoir hosts of this parasite.

Journal of Wildlife Diseases, 20(2), 1984, pp. 153–154
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Parasites of Chiroptera in Zambia

M. A. Peirce,[1] UNDP/FAO, Box 31966 Lusaka, Zambia

During mist-netting operations for birds in Zambia a small number of bats was caught and examined for haematozoa and ectoparasites. Thin blood smears were prepared from peripheral blood, air-dried, fixed in 100% methanol for 3 min and stained with Giemsa's solution at a strength of 1:10 at pH 7.2 for 1 hr. Microscopical examination was carried out under 10× and 100× (oil immersion) objectives.

Of the 22 bats examined, most were caught at Balmoral (15°33′S, 28°12′E) and Copper Chalice some 8 km north. Six (37.5%) of 16 *Epomophorus gambianus parvus* Ansell (Pteropodidae) were infected with a haematozoan parasite identified as *Hepatocystis epomophori* (Rodhain) (Garnham, 1966, Malaria Parasites and other Haemosporidia, Blackwell Scientific Publications, Oxford, England, 1,114 pp.). One *Rousettus aegyptiacus leachi* (A. Smith), Pteropodidae; one ?*Nycteris woodi* Andersen, Nycteridae; one *Tadarida pumila* (Cretz.), Molossidae (from Kafue National Park); one *Pipistrellus nanus* (Peters) and two *Scotophilus viridis* (Peters), Vespertilionidae, were negative. The infected bats were caught at the Copper Chalice site between 30 March 1980 and 27 April 1980 at the end of the rainy season, indicating a vector activity associated with the rains. This confirms earlier observations reported by Garnham (1966, op. cit.). No ectoparasites were found on any *E. gambianus parvus*. A single nycteribiid, *Eucampsipoda africana* Theodor, was recovered from *Rousettus aegyptiacus leachi*, and one mite, *Spinturnix walkerae* Zumpt & Till, from *Pipistrellus nanus*.

Keymer (1971, J. Zool. (Lond.) 163: 421–441) recorded several haematozoan parasites from bats in Zambia including a parasite tentatively identified as *H. epo-*

Received for publication 7 November 1983.
[1] Present address: 16, Westmoreland Close, Wokingham, Berkshire, RG11 9AZ, United Kingdom.

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mophori from one *Epomophorus labiatus* Temminck. The present results confirm the presence of *H. epomophori* in the chiropteran fauna of Zambia which probably has a wider distribution in African Pteropodidae than current records suggest (Garnham, 1966, op. cit.).

Blood films from one *Pteropus rodricensis* Dobson from Cascade Pigeon, Rodrigues (Mascarene Islands) and one *Pteropus* sp. from Praslin (Seychelles) obtained under similar conditions to those in Zambia, were negative. Slides of *Hepatocystis epomophori* from *E. gambianus parvus* have been deposited in the Wellcome Museum Collection, London, England (Accession Numbers: M3381-4). The nycteribiid has been deposited in the British Museum (Natural History), London, England (Accession Number BM. 1984-7).

The author is grateful to G. W. Howard, University of Zambia for identifying some of the bats, and to A. M. Hutson, British Museum (Natural History) for identification of the ectoparasites. Blood smears from the bats of Rodrigues and Seychelles were kindly sent by A. S. Cheke and C. J. Feare respectively.

Journal of Wildlife Diseases, 20(2), 1984, pp. 154–155
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Rate of Digestion of Blowfly Maggots by Ducks

G. Wobeser and E. A. Galmut, Department of Veterinary Pathology, Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0, Canada

Although blowfly maggots are considered important as carriers of toxin in avian botulism (Duncan and Jensen, 1976, J. Wildl. Dis. 12: 116–126), it is unusual in our experience to find maggots in the digestive tract of intoxicated birds. The senior author has found remains of maggots in only one duck during more than 10 yr of investigating waterfowl botulism in Saskatchewan. This might have been because the ducks had not consumed maggots or, alternatively, maggots may have been consumed and digested before the birds developed clinical disease and were found.

The simultaneous availability of a group of ducks destined for euthanasia and necropsy for reasons other than botulism, and of maggots collected from natural cases of botulism in ducks, provided an opportunity to test the rate of digestion of maggots. Twelve adult female mallards (*Anas platyrhynchos* L.) that had been held in cages in the field with access to both commercial and natural foods were each given 30 live 1–1.5-cm maggots. The maggots were removed from duck carcasses immediately prior to use and were not identified as to species. Maggots were placed in a soft transparent plastic tube that was passed into the bird's lower esophagus and then flushed from the tube with approximately 20 ml of water. The birds were released into a pen and observed to ensure that regurgitation did not occur. Individual birds were killed by cervical dislocation at intervals from 15 min to 12 hr after receiving maggots. At necropsy the esophagus, proventriculus, giz-

Received for publication 12 September 1983.

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