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**OCCURRENCE OF THE BAT TICK, *ORNITHODOROS KELLEYI*
(ACARI: ARGASIDAE), IN MICHIGAN**B. M. OConnor and J. S. H. Klompen¹

ABSTRACT

The bat tick, *Ornithodoros kelleyi*, is recorded from Michigan for the first time. A single female was collected in a building on the University of Michigan campus in Ann Arbor.

Ornithodoros kelleyi Cooley and Kohls, is an ectoparasite of vespertilionid bats over much of North America, ranging from British Columbia and Arizona to New York and Cuba. In the Great Lakes region, this tick has been reported from Minnesota, Wisconsin, Illinois, Pennsylvania, New York (Cooley 1942), Ohio (Bequaert 1946), and Indiana (Wilson 1958, Whitaker 1982). This species has not been previously reported from Michigan and was not collected during a recent survey of bat ectoparasites in the state (Dood & Kurta 1982). Reported hosts for this tick in North America include *Eptesicus fuscus* (Palisot de Beauvois), *Myotis lucifugus* (Le Conte), *M. californicus* (Audubon & Bachman), *Pipistrellus subflavus* (Cuvier), *P. hesperus* (Allen), and *Antrozous pallidus* (Le Conte). The morphology and life history of this species have been reviewed by Sonenshine (1962) and Sonenshine and Anastos (1960).

On 3 February 1988, a single female specimen of *O. kelleyi* was collected by the authors from an inside wall on the second floor of the University of Michigan Museum of Zoology, in Ann Arbor, Washtenaw Co., Michigan. The specimen was preserved and deposited in the collection of the Insect Division in the museum, labelled with the voucher number HK 88-0202-1. The area of the building where the tick was collected has periodically harbored colonies of big brown bats (*E. fuscus*) and occasionally silver-haired bats (*Lasionycteris noctivagans* [Le Conte]) although the presence of hibernating bats in the area could not be verified at the time the tick was collected. *Eptesicus fuscus* appears to be the preferred host of this tick in the Great Lakes region. Whitaker (1982) reported 14.5% infestation of 491 *E. fuscus* examined in Indiana, with an average of 0.26 ticks per bat. In contrast, the only other host utilized in Indiana, *Myotis lucifugus*, exhibited an infestation rate of only 2.4% of 84 bats examined, with 0.08 ticks per bat.

Although *O. kelleyi* has been found in human habitations on several occasions (Cooley 1942, Sonenshine & Anastos 1960), it is unlikely that these ticks will bite humans and their occurrence should not cause alarm. Sonenshine & Anastos (1962) found that nymphs and adults would feed only upon bats although larvae fed readily upon laboratory rats.

LITERATURE CITED

- Bequaert, J. C. 1946. The ticks, or Ixodoidea, of the northeastern United States and eastern Canada. Entomol. Americana 25:73-232.

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- Cooley, R. A. 1942. Determination of *Ornithodoros* species. *Publs. Am. Ass. Advmt. Sci.* 18:77-84.
- Dood, S. B. & A. Kurta. 1982. New records for ectoparasites of Michigan bats. *Great Lakes Entomol.* 15:217-8.
- Sonenshine, D. E. 1962. External anatomy of the bat tick, *Ornithodoros kelleyi* Cooley & Kohls (Acarina: Argasidae). *J. Parasitol.* 48:470-485.
- Sonenshine, D. E. & G. Anastos. 1960. Observations on the life history of the bat tick *Ornithodoros kelleyi* (Acarina: Argasidae). *J. Parasitol.* 46:449-454.
- Whitaker, J. O., Jr. 1982. Ectoparasites of mammals of Indiana. *Indiana Acad. Sci. Monogr.* 4:1-240.
- Wilson, N. 1958. Additions to the tick fauna of Indiana (Acarina: Argasidae, Ixodidae). *J. Parasitol.* 44:23 (suppl.)