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## First Record of *Ixodes brunneus* in Kansas

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**ABSTRACT:** A single specimen, a partially engorged female, of *Ixodes brunneus* was recovered from a common grackle (*Quiscalus quiscula*) in Butler County, near El Dorado, Kansas (USA). The discovery of this tick in Kansas represents a new state record.

**Key words:** *Ixodes brunneus*, common grackle, *Quiscalus quiscula*, tick.

*Ixodes brunneus* is a tick specific to birds in North America. Old World bird ticks previously referred to as *I. brunneus* are now considered to be *I. frontalis* (Keirans, 1985). Additionally, *I. kellogi* is now considered as a synonym of *I. brunneus* (Bequaert, 1945; Cooley and Kohls, 1945; Keirans and Clifford, 1978). *Ixodes brunneus* has been reared in the laboratory and all stages are now described (Anastos and Smith, 1957). The affinity of *I. brunneus* for migratory birds gives it an opportunity for wide dissemination. *Ixodes brunneus* is recorded from 21 states, mostly in the eastern and midwestern United States (Keirans and Clifford, 1978).

Although it is unusual to find more than a few specimens on a single host, *I. brunneus* is reported to have adverse effects on birds (Bishopp and Trembley, 1945). Thomas (1941), Worth (1942) and Gregson (1973) observed that when *I. brunneus* is engorged on a bird's eyelid it may impair eyesight, cause blindness or induce paralysis. Bishopp and Trembley (1945) found birds dead or unable to fly with engorged females of this species attached to the head or neck.

On 1 April 1973 a single tick was found on a common grackle (*Quiscalus quiscula*) collected in Butler County, near El Dorado, Kansas (38°02'N, 96°41'W). It was not until June 1990 that the tick was submitted to the parasitology laboratory at Kansas State University (Manhattan, Kan-

sas 66506, USA) for identification. The tick was subsequently sent to J. E. Keirans (Institute of Arthropodology and Parasitology, Georgia Southern University, Statesboro, Georgia 30460, USA; accession RLM number 119976) who determined it to be a partially engorged female *Ixodes brunneus*. This is the first record of *I. brunneus* in Kansas. Additional studies, currently underway, may help determine the distribution of this tick in Kansas.

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### LITERATURE CITED

- ANASTOS, G., AND C. N. SMITH. 1957. The male, nymph, and larva of *Ixodes brunneus* Koch (Acarina: Ixodidae). The Journal of Parasitology 43: 535-541.
- BEQUAERT, J. C. 1945. The ticks, or Ixodoidea, of the Northeastern United States and Eastern Canada. Entomologica Americana 25: 73-232.
- BISHOPP, F. C., AND H. L. TREMBLEY. 1945. Distribution and hosts of certain North American ticks. The Journal of Parasitology 31: 1-54.
- COOLEY, R. A., AND G. M. KOHLS. 1945. The genus *Ixodes* in North America. National Institute of Health Bulletin No. 184: 1-246.
- GREGSON, J. D. 1973. Tick paralysis, an appraisal of natural and experimental data. Monograph, Canadian Department of Agriculture (9), 109 pp.
- KEIRANS, J. E. 1985. George Henry Falkiner Nutall and the Nutall Tick Catalogue. Miscellaneous Publications of the United States Department of Agriculture. No. 1438, 1785 pp.
- , AND C. M. CLIFFORD. 1978. The genus *Ixodes* in the United States: A scanning electron microscope study and key to the adults. The Journal of Medical Entomology Supplement 2: 1-149.
- THOMAS, R. H. 1941. Ticks affecting birds' eyesight. The Auk 58: 590-591.
- WORTH, C. B. 1942. Ticks affecting birds' eyesight. The Auk 59: 576-577.

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