

An Indiana Record of *Amblyomma americanum* (L.)

JAMES E. WAPPES, Purdue University

On June 14, 1966, an adult female of the lone star tick, *Amblyomma americanum* (L.), was found attached to the author after a field trip to Kolb pond, located five miles north of West Lafayette, Tippecanoe County, Indiana. The specimen was checked for positive identification by Dr. W. L. Butts, formerly of Purdue University. It has been deposited in the Purdue University Research Collection.

Upon reviewing the literature for records of the lone star tick in Indiana, it was found that there were no valid published records of it being collected under natural conditions in the state, with the possible exception of a record from dogs in Harrison County. Wilson (3) listed only three occurrences of it in the state.

It has been recorded in Tippecanoe, Brown, and Harrison counties. The record from Tippecanoe County definitely was traced to individuals who had recently returned from vacation in Carroll County, Arkansas. In fact, they brought back preserved specimens of *A. americanum*, which they had taken from their dog in Carroll County. The specimen collected in Brown County from a wood thrush, *Hylocichla mustelina* (Gmel.), is an engorged nymph that was attached at the edge of the lower beak, close to the base. For an unknown reason, the collector did not supply a definite date, but it is quite possible that this bird was a recent migrant from the south. The 1957 edition of the "American Ornithologists Union Checklist" gives the winter range of *Hylocichla mustelina* as from southern Texas south through eastern Mexico and Central America, well within the range of the lone star tick. A small number of birds were examined from the same area in which this collection was made, but they produced no additional records.

The third record was from Harrison County, bordering on the Ohio River. The ticks were submitted by a veterinarian, and as near as he could recall, they were collected in the spring. The owner of the dogs was contacted, and as far as he knew, the dogs had never been out of the state. This record was the only one in which further inquiry did not disclose evidence of introduction and in which it appeared that the ticks may have originated in Indiana.

Attempts were made by the author to collect more specimens of *A. americanum* from the Kolb pond location. A drag was made from white flannel and wood as described by Smith (2) and used by the author in the area around Kolb pond. This location consists of a muck sand area around the extremities of the pond which graduates into firmer soil that has heavy vegetation and a few scattered trees. There is no cultivated land for a half-mile in any direction, although there is a farm house about one-eighth mile from the pond. Ten hours spent dragging in the area around Kolb pond did not produce any specimens of the lone star tick, although several *Dermacentor variabilis* (Say), the American dog tick, were collected in this manner. In a further attempt to gain

more *A. americanum*, traps were set to capture small mammals. *Microtus pennsylvanicus* (Ord), meadow vole, *Peromyscus maniculatus* (Wagner), deer mouse, *Sylvilogus floridanus* (Allen), eastern cottontail rabbit, and *Didelphis virginiana* Kerr, opossum were caught and examined. Results were again negative.

Wilson (3) concluded, "It is my opinion that *A. americanum* is a permanent, though rare, resident in the southern-most counties of Indiana."

Diamond and Strickland (1) state "*Amblyomma americanum* is a carrier of the rickettsia, *Coxiella burnetii*, causative agent of Q fever. It is suspected as a vector of the disease to man and animals. Man is possibly infected by inhalation of contaminated dusts on infected tick feces. This tick is also a vector to man of Rocky Mountain spotted fever and tularemia. In the Eastern and Southern States, *A. americanum* reportedly causes tick paralysis in man and in dogs. It is a suspected vector of Bullis fever."

They report its distribution ". . . from as far west in Texas as the brush grows, north to Missouri, and east in a broad belt to the Atlantic coast. It has been reported in Michigan, Illinois, and Iowa. It is believed that this species was formerly more numerous in the Northern states. The type locality is Pennsylvania or New Jersey." (1)

It has a wide range of hosts, apparently attaching to any mammal with which its comes in contact, with larva and nymphs attaching to the same hosts as the adults.

Literature Cited

1. DIAMONT, GERALD, and R. K. STRICKLAND. 1965. Manual on Livestock Ticks. (ARS 91-49) USDA, Washington. 142 pp.
2. SMITH, CARROLL N. 1946. Biology and Control of the American Dog Tick. USDA Tech. Bull. 905.
3. WILSON, NIXON. 1961. The Ectoparasites of Indiana Mammals. Unpublished Ph.D. Thesis, Purdue University.

(Author's note: Any information regarding *Amblyomma americanum* in Indiana would be greatly appreciated and welcomed by the author.)