

Eimeria pseudemydis LAINSON, 1968, FROM THE RED-EARED TURTLE, Pseudemys scripta elegans, IN ARKANSAS

Author: BONE, LEON W.

Source: Journal of Wildlife Diseases, 11(2): 290-291

Published By: Wildlife Disease Association

URL: https://doi.org/10.7589/0090-3558-11.2.290

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Eimeria pseudemydis LAINSON, 1968, FROM THE RED-EARED TURTLE, Pseudemys scripta elegans, IN ARKANSAS

LEON W. BONE, Department of Zoology, University of Arkansas, Fayetteville, Arkansas 72701, U.S.A.

Eimeria pseudemydis Lainson, 1968, was found in the feces of a red-eared turtle Pseudemys scripta elegans from Lonoke County, Arkansas. One of eight turtles was infected with this parasite. E. pseudemydis was described originally from oocysts found in the feces of Pseudemys ornata from British Honduras. Lainson¹ reported one of two P. ornata was infected with this eimerian, but failed to describe the sporulation time. Oocysts collected in this study sporulated in 24-48 hours at room temperature (20-22C) in 2.5% potassium dichromate.

The description of *E. pseudemydis* based on the present study is as follows:

Oocysts spherical with a wall of two layers 1.4 µm thick. The inner layer was smooth, clear and averaged 0.7 µm in thickness while the outer layer was more opaque. Fifty sporulated oocysts measured 16-20 by 13-19 μm (mean 16.7 by 17.7) with a length-width ratio of 1.0-1.2 (mean 1.05). Micropyle absent, Polar body and oocyst residuum present. Oocyst residual body composed of many granules of various sizes, usually bound by a thin membrane; residuum scattered occasionally. Sporocysts pyriform with a pointed Stieda body at the narrow end. Fifty sporocysts were 9-13 by 4-7 μ m (mean 10.4 by 5.4). Length-width ratio 1.4-2.6 (mean 1.9). Sporocyst residuum present as numerous granules in the central region of sporecyst, usually surrounded by membrane. Sporozoites vermiform, generally not intertwined or overlapping. Spherical refractile body approximately 3 µm in diameter present in the broad end of the sporozoite with a smaller refractile body present occasionally in the narrow end. The sporozoite nucleus was spherical and about 1.5 μ m in diameter.

E. pseudemydis reported in this study differed from the original description in the presence of a polar granule, a two-layered oocyst wall, and the spherical refractile bodies at one or both ends of the sporozoite. Slight differences in size were also noted. These differences are considered insufficient for separation of the two parasites into distinct species.

In addition to *E.pseudemydis* from *P. ornata*, one other eimerian species is reported from the genus *Pseudemys*. Sampson and Ernst² described *E. scriptae*

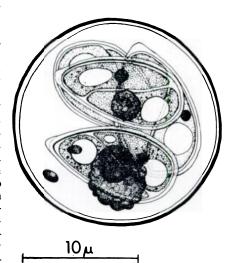


FIGURE 1. Sporulated oocyst of Eimeria pseudemydis.

from P. scripta elegans in the United States. E. scriptae differs from E. pseudemydis in the presence of a micropyle and the absence of an oocyst residuum.

The present study extends the geographic range of *E. pseudemydis* to the United States and reports *P. scriptae elegans* as a natural host for this coccidian.

Acknowledgements

The author thanks Dr. J. V. Ernst and Mr. E. A. Dahlem for their assistance and Dr. D. L. Cundall for the preparation of Figure 1.

LITERATURE CITED

- 1. LAINSON, R. 1968. Parasitological studies in British Honduras. IV. Some coccidial parasites of reptiles. Ann. Trop. Med. Parasit. 62: 260-266.
- SAMPSON, J. R. and J. V. ERNST. 1969. Eimeria scriptae n. sp. (Sporozoa: Eimeriidae) from the red-eared turtle, Pseudemys scripta elegans. J. Protozool. 16: 444-445.

Received for publication 25 November 1974