EIMERIA (PROTOZOA: EIMERIIDAE) FROM THE RICE RAT AND PYGMY MOUSE IN MEXICO

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Materials and Methods

During the summer of 1958 a collecting expedition to Mexico was made by Dr. David L. Langebartel and John R. Winkelmann of the Department of Zoology, University of Illinois. They collected fecal specimens from 13 bats and 6 rodents, placed them in 2.5% potassium bichromate solution, and brought them to Urbana for examination.

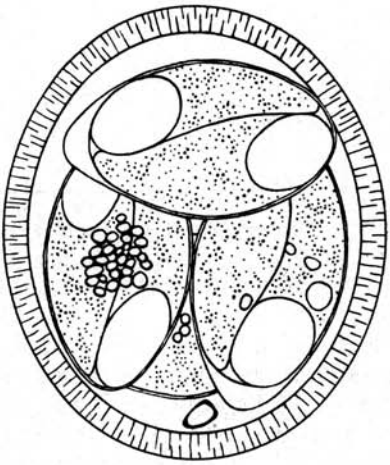
Each sample was mixed thoroughly, placed in a thin layer in a Petri dish at room temperature for a week to sporulate, and stored in a refrigerator. The samples were examined after sugar flotation, using a Leitz Ortholux microscope with apochromatic objectives.

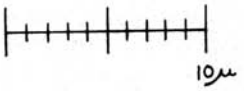
No coccidia were found in the bats, but one new species and one previously described species of *Eimeria* were found in the rodents.

The skins and skulls of the host animals are preserved in the University of Illinois Natural History Museum. The numbers given with the host designations are those of the host animals in the museum.

Acknowledgments

We should like to express our appreciation to Dr. Langebartel and Mr. Winkelmann for providing the specimens and to Dr. Donald F. Hoffmeister, Director of the Museum, for making final identifications of the hosts.





Results

Eimeria couesii n. sp.

Diagnosis: *Eimeria*: Oocysts (Fig. 1) ellipsoidal, pale yellowish. Five sporulated oocysts were 20-23 by 17-20 microns with mean of 21.4 by 18.0 microns; length-width ratio was 1.20; wall somewhat rough and pitted, heavy, composed of single layer about 1.3 microns thick, with radial striations. Micropyle absent. Oocyst residuum absent. Oocyst polar granule present. Sporocysts ovoid; seven measured 10-14 by 7-8 microns with mean of 11.7 by 7.7 microns; length-

width ratios ranged from 1.2 to 1.8, mean of 1.53. Stieda body present. Sporozoites oriented longitudinally in sporocysts, with large clear yellowish globule at large end. Sporocyst residuum composed of rather loose granules or absent.

Host: Rice rat, *Oryzomys couesi couesi* (No. 18,833)

Location: Feces.

Locality: Oaxaca, Mexico.

The oocysts of *E. couesii* have been compared with the descriptions of all the other species of *Eimeria* reported from rodents. They differ from them all. However, since it has not been possible in any cross transmission experiments to infect rodents of one genus with *Eimeria* species from rodents of another genus, it is not considered necessary here to differentiate *E. couesii* formally from species of *Eimeria* other than those which have been reported from rodents of the genus *Oryzomys*. The only one of these is *E. oryzomysi* Carini, 1937 from *Oryzomys* sp. *E. couesii* differs from *E. oryzomysi* in having a polar granule, in lacking an oocyst residuum, and in heavy, striated rough oocyst wall rather than a smooth, thin one.

Eimeria baiomysis Levine, Ivens and Kruidenier, 1958

This species was found in a pygmy mouse, *Baiomys musculus* (No. 18,832), collected at Oaxaca, Mexico. Only three sporulated oocysts were seen. They measured 23-24 by 20-21 microns.

E. baiomysis was originally described from *Baiomys taylori* from Queretero, Queretero, Mexico. The present report is a new host species record.

Summary

Eimeria couesii n. sp. is described from the rice rat, *Oryzomys c. couesi* from Oaxaca, Mexico. Its oocysts measure 20 to 23 by 17 to 20 microns. *E. baiomysis* Levine, Ivens and Kruidenier, 1958 is reported from the pygmy mouse, *Baiomys musculus*, from the same locality, a new host record.

Literature Cited

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