

NOTES ON THE DISTRIBUTION OF *EIMERIA DUKEI* LAVIER, 1927 IN AFRICAN BATS

At present, two coccidian species of the genus *Eimeria* have been described for African bats. One is *Eimeria dukei* described by Lavier (1927, C.S. Soc. biol. (Paris) 97: 1707—1708) for the hosts *Tadarida limbata* Peters and *T. pumila* Cretschmar (Mollosidae) from Uganda, the other *Eimeria levinei*, described by Bray (1958, J. Protozool. 5: 81—83) for *T. bennettii* Jentink from Liberia. In 1971, we found coccidians in the bat species *Taphozous nudiventris* Cretschmar (Emballonuridae). Their description is given in the present paper. The bat was captured in the vicinity of the village of Abu Rawash close to the pyramids of Giza (Egypt). After finding coccidians in this host, the content of the intestine of the bat was placed for sporulation in 2 %  $K_2Cr_2O_7$  at 28—30 °C.

Oocysts ovoid to almost spherical, size 21—25 × 18 to 23 µm (average of 27 oocysts) with a thin membrane without micropyle. Sporulation time at 30 °C roughly 20 hr. After sporulation, an enormously large residual body (10—13 µm in diameter), and 4 ovoid sporocysts (7—9 × 4—5 µm) with an indistinct Stieda body remained in the oocyst. The sporocysts contained no residual body, but individual residual granules only.

The morphology of oocysts from *Taphozous nudiventris* is similar to that of oocysts described by Lavier (1927) for the species *Eimeria dukei*

from two bat species of the genus *Tadarida* (Table 1). There is a similarity in shape and size and also in that the oocyst harbours an enormously large residual body which both in the case of *E. dukei* and in our material, pressed the sporocysts to the oocyst wall. Sporulation time of our material was shorter than that given by Lavier, but our material sporulated at 28—30 °C, while Lavier's at 18—20 °C. Although the sporocysts in our material seem to be slightly more slender than those of *E. dukei* (Table 1), the remarkable agreement in the remaining morphological characters suggests that this coccidian from African bats may utilize a wide range of hosts. Since the two bat species of the genus *Tadarida* may share their area of distribution with the species *Taphozous nudiventris*, their nutrition may also be similar. Therefore, one would suspect that both bats of the genus *Tadarida* and the bat species *Taphozous nudiventris* could acquire infection with *Eimeria dukei* Lavier, 1927. We should like to acknowledge the assistance of Dr. V. Hanák, Faculty of Natural Sciences, Charles University, Prague, for advice in our working up of the material.

Table 1. Comparison of oocysts of the coccidian *Eimeria dukei* from bats of the genus *Tadarida* and oocysts from *Taphozous nudiventris*

	<i>Tadarida limbata</i> T. <i>pumila</i> (after Lavier, 1927)	<i>Taphozous nudiventris</i>
Oocyst shape	ovoid to spherical	ovoid to spherical
Oocyst size (in µm)	23—25 × 18—22 spherical 20—24	21—25 × 18—23
Micropyle	0	0
Oocyst residuum	enormous	enormous
Stieda body	not described	indistinct
Sporocyst shape	ovoid	ovoid
Sporocyst size (in µm)	7—9 × 6—7	7—9 × 4—5
Sporocyst residuum	individual granules only	individual granules only

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