

CYTODITES THERAE N. SP. FROM THE RESPIRATORY PASSAGES
OF THE BLACK-BILLED CUCKOO IN NORTH AMERICA
(SARCOPTIFORMES : CYTODITIDAE)

BY

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The genus *Cytodites* was revised by Fain (1960) and at the same time a second genus, *Cytonyssus*, was proposed for the family Cytoditidae. Only two species were placed with certainty in the genus *Cytodites* : *C. nudus* (Vizioli, 1870) from the lungs, bronchi, and air sacs of galliform birds, and a new species, *C. psittaci*, from the lungs of the parakeet, *Poicephalus meyeri* in Rwanda. Later Fain and Bafort (1964) added five new species to this genus from a variety of birds coming from India, South America and Central Africa and representing the families Psittacidae, Columbidae and Ploceidae.

We have collected a series of specimens from the lungs, air sacs and body cavity of two black-billed cuckoos, *Coccyzus erythrophthalmus* (Wilson), family Cuculidae, in Rhode Island. These represent a new species and are described herein. Except for *C. nudus*, the cosmopolitan parasite of galliform birds, this appears to be the only other record of the genus in North America and the first record of the genus and the family in a cuculiform host. Only two birds of those examined were found to be infected.

I am happy to dedicate this species to Mrs. Thera Dietz in appreciation for her devoted work as technician and artist during a period of several years in the laboratory of the author at the University of Rhode Island.

This investigation was supported in part by United States Public Health Fellowship (1-F3-AI-40,687-01) from the National Institute of Allergy and Infectious Diseases, and in part by a National Science Foundation Research Grant (GB-1295).

Acarologia, t. XI, fasc. 3, 1969.

Cytodites therae new species.

Diagnosis.

This species most closely resembles *Cytodites amandavae* Fain & Bafort, 1964, because of (1) the fused epimera III and IV which form an arc, (2) the elongate posterior legs, (3) presence of solenidion omega 3, and (4) the general shape of the gnathosoma. It can be separated from *C. amandavae* on the basis of the (1) much expanded ambulacra on legs I and II, (2) modification of the fused epimera III and IV to include a medially projecting portion, and (3) the lack of setae on femora I

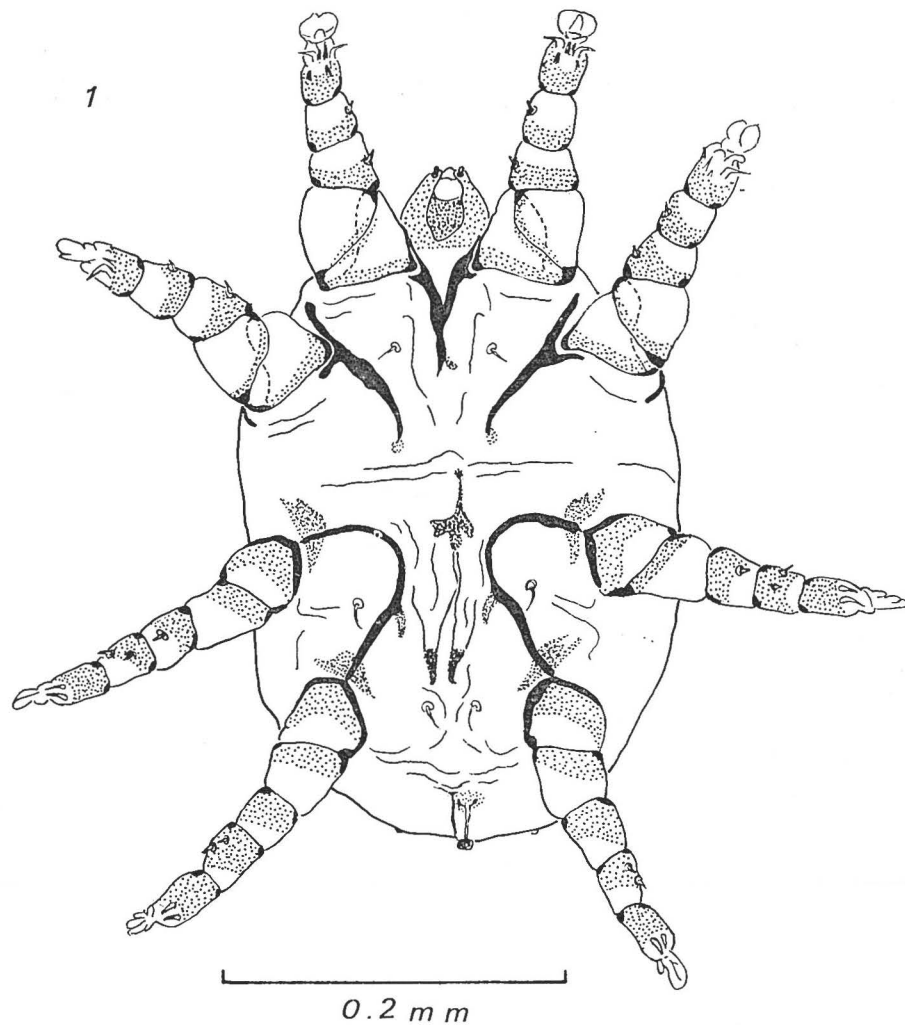


FIG. 1 : *Cytodites therae* n. sp., holotype female, ventral view.

and II. In addition *C. therae* is larger in most dimensions than *C. amandavae*. Together *C. amandavae* and *C. therae* can be separated from all other species in the genus by the fused epimera III and IV and the more elongate posterior legs.

Female (Figures 1, 3, 4, 5).

Length of holotype 389 microns, width 262 microns. Measurements of three paratypes vary from 356 to 398 microns in length and from 248 to 290 in width. *Dorsal surface* is smooth, without a shield and with a few faint irregular striations. Chaetotaxy similar to *C. amandavae*. *Ventral surface* smooth with some irregular striations, and with setae as in *C. amandavae*. Epimera I fused medially to form a "Y"; epimera II free; III and IV fused to form a continuous chitinous arc and with a small medially projecting sclerite. Genital opening at the level of legs III and IV, elongate, with a small medial pygidial sclerite anteriorly and two small indistinct apodemes posteriorly. Genital papilla bulbous and projects beyond the posterior border of the idiosoma, 7 microns in diameter. Sclerotized internally and leading from the papilla is a fine tubule which expands internally. No shield *per se* covers the papilla. Flanking the genital papilla is a pair of very small papillae. Anus ventral.

Gnathosoma : Width 49 microns, length 80 (longer and wider than in *C. amandavae*). Palps short, applied closely to the surface of the gnathosoma and consists of a single segment with one seta arising sub-apically. Chelicerae lacking; mouth large, located ventrally.

Legs : Tarsi with pedunculate ambulacra. Those of tarsi I and II inflated to a greater extent than III and IV. Tarsi I and II possess distally a pair of large angled spines and a pair of smaller straight spines which taper to a fine tip. A series of smaller setae are dispersed apically and subapically. Tarsus I with a large solenidion (omega 1) 10 microns long located near the base and a very short and fine solenidion (omega 3) distally. Tarsi II with a long omega 1 (15 microns) only. Tarsi III and IV with four straight or slightly curved spines and a single small seta all located distally. Tibiae I and II with a single solenidion (9 microns long); III and IV with a smaller solenidion (7 microns). On each tibial segment there is a single simple seta. Genus I, II, and III have a single small solenidion which is wanting on leg IV. Genus I with two small setae; II with a single seta and III and IV with none. Setae are lacking on all femora and trochanters.

Male (Figure 2).

Length 371 microns, width 262. Dorsal surface and gnathosoma similar to female. Ventral integument weakly striated. Medial projections of the fused epimera III and IV barely visible. Genital area relatively large (38 microns long, 34 wide), well differentiated; similar to *C. amandavae*. Legs similar to female with the exception that the seta on femur II is present.

Tritonymph.

Length 370 microns, width 247. Dorsum and venter with fine irregular weak striations. Chaetotaxy similar to female but less well developed.

Protonymph.

Length 230 microns, width 163. Integument very weak, irregularly striated. Chaetotaxy of dorsum and venter in general similar to tritonymph. Only two spines are presents on tarsi III and IV. Ambulacra simple and much shorter than in the tritonymph.

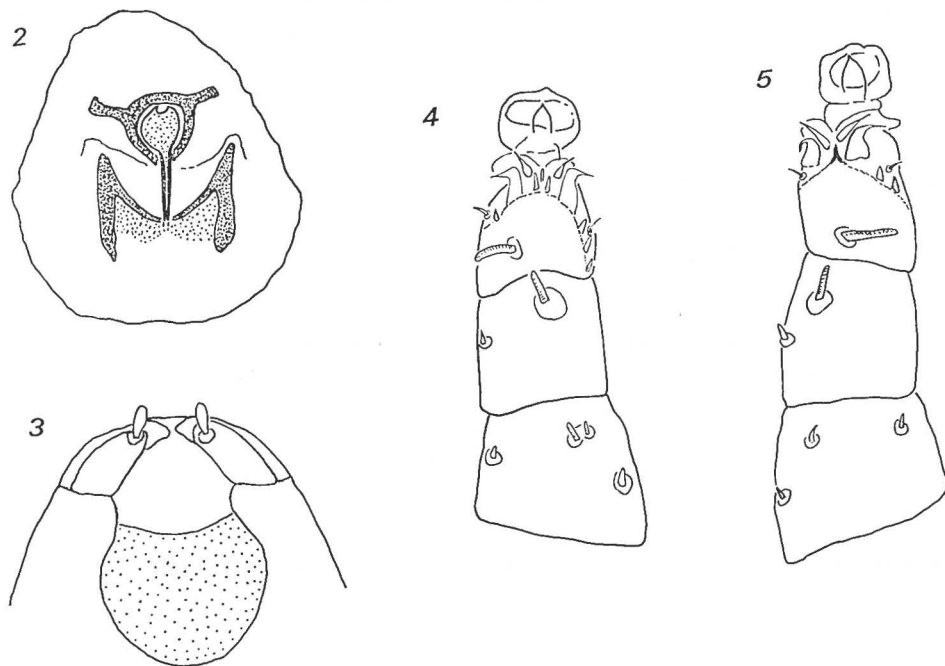


FIG. 2-5 : *Cytodites theae* n. sp.

2. — Allotype male, genital area. 3. — Gnathosoma, female paratype. 4. — Tarsus, tibia, and genu of leg I, holotype, dorsal view. 5. — Tarsus, tibia, and genu of leg II, holotype, dorsal view.

Types : Material examined consists of seven females, two males and two nymphs (protonymph and tritonymph) all from the black-billed cuckoo, *Coccyzus erythrophthalmus* (Wilson), family Cuculidae.

Holotype female, allotype male, plus four females, one male and two nymphs were collected by J. ZBYROWSKI in Richmond, Rhode Island, on 7 July 1962 (Nº. H62-07-07-4).

Two additional paratype females were taken by Dr. A. MOORHOUSE in Charlestown, Rhode Island, on 16 July 1962 (Nº. H62-07-16-1).

The holotype, allotype, and a paratype are on deposit in the United States National Museum. Paratypes have been deposited in the acarological collections of the Zoology Department, University of Rhode Island, Kingston, and the Institut de Médecine Tropicale, Antwerp, Belgium, as well as the Institute of Acarology, Ohio State University, Columbus, Ohio.

ACKNOWLEDGEMENTS.

I wish to thank Dr. Alex FAIN, Institut de Médecine Tropicale Prince Léopold, à Anvers, for the use of his laboratory in carrying out a portion of this work, and for his kind advice and criticisms. Also, I want to acknowledge the assistance of Dr. A. MOORHOUSE and Mr. J. ZBYROWSKI in collecting the hosts, not only those reported herein, but also the many other birds and mammals collected during the course of these studies.

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