

NEW SPECIES OF OTOPHEIDOMENIS (ACARINA : PHYTOSEIIDAE)
ECTOPARASITIC ON SPHINGID MOTHS FROM UGANDA¹

by

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The genus *Otopheidomenis* is presently represented by 6 known species (PRASAD 1970 a, b). Of these, 4 species are known to be parasitic on sphingid moths. In a search for moth mites, several hundred preserved moths were examined during 1970 in the Royal Ontario Museum, Toronto, Canada. This search has yielded two interesting mites which are described below as new.

The holotypes are deposited in the Royal Ontario Museum, Toronto, Canada. Paratypes of *O. aporodes* n. sp. are deposited in the Royal Ontario Museum, Canada ; U. S. National Museum, Washington, D. C. ; and the Zoological Survey of India, Calcutta.

1. *Otopheidomenis achlora* n. sp.

(Fig. 1)

DIAGNOSIS : Females and male with one dorsal shield, incised mediolaterally ; setae 13 absent. Females without genital setae, with all sternal setae on the sternal shield, and with 2 heavy ventral setae at the anterior tips of tarsus of legs II-IV ; posterior setae on coxae of legs I-III short and heavy. Male with 3 pairs of setae on the sternogenital shield, and femur of leg II with two heavy, spinose setae.

FEMALE : Idiosoma 450-490 μ long and 204-255 μ wide (all length measurements taken at the longest point and width at the widest point from 3 specimens). One dorsal shield, incised mediolaterally, covering approximately three fourths length of the idiosoma, 326-337 μ long and 173-194 μ wide, reticulated over entire surface (Fig. 1A). Body dorsum with 11 pairs of minute setae (except z5 and r5 which are comparatively long) of which 10 pairs are on the dorsal shield and 1 pair (r5) are on lateral membranous integument ; z5 37-40 μ long, r5 18-20 μ long and remaining setae on the dorsal shield measure 5-11 μ long (lateral setae are longer than median setae) ; z5 very finely serrated.

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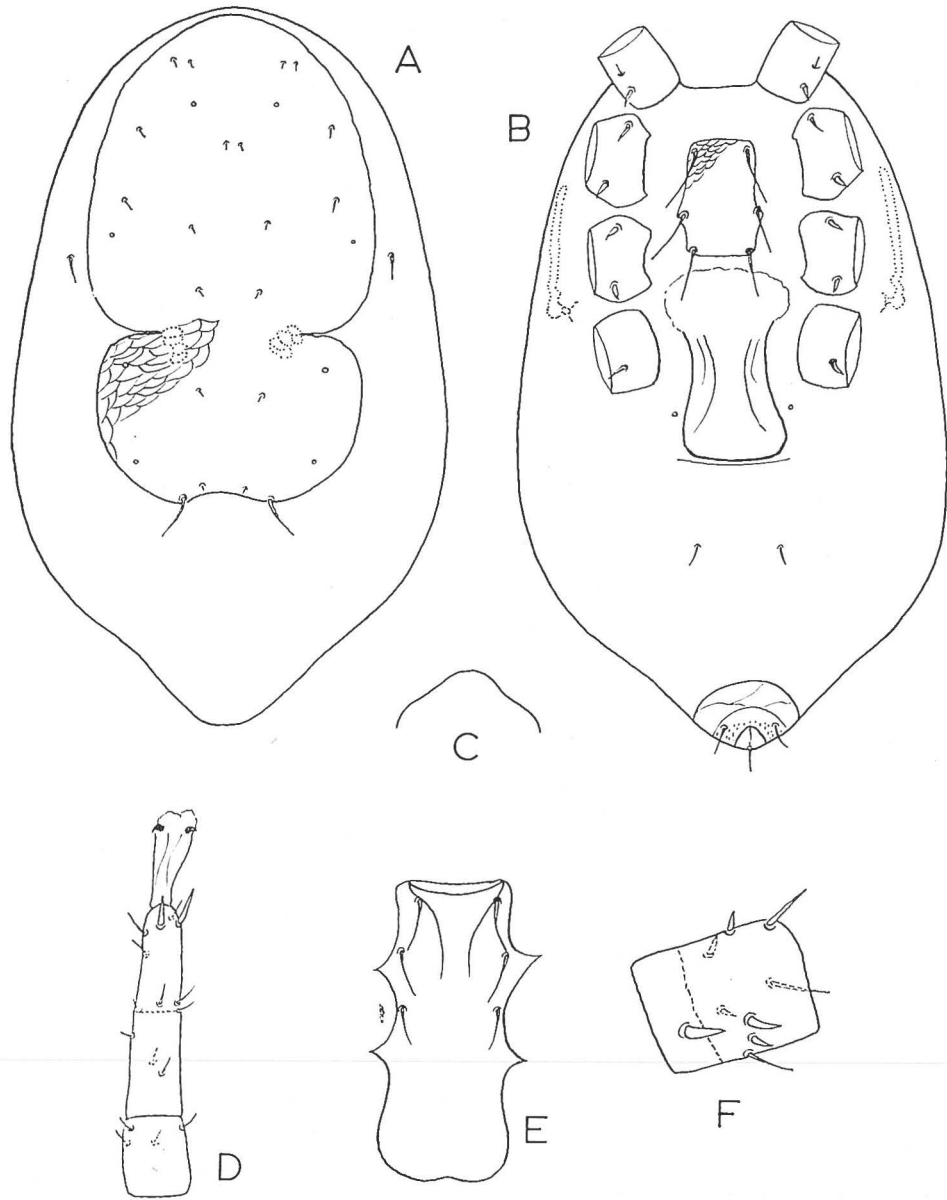


FIG. 1. — *Otopheidomenis achlora* n. sp.

A-D, female : A, dorsum ; B, venter ; C, tectum ; D, tarsus IV ; E-F male : E, sternogenital shield ; F, femur II.

Tritosternal laciniae and the basal sclerite absent. Sternal shield 94-100 μ long and 66-69 μ wide, truncate anteriorly and posteriorly, reticulated over entire surface (Fig. 1B) ; 3 pairs of sternal setae on the sternal shield, measuring (anterior to posterior) 44-51 μ , 46-51 μ , and 48-51 μ long ; metasternal setae absent. Genital shield truncate posteriorly, 84-100 μ wide posteriorly ; pair of genital setae absent, a pair of pores present beside genital shield. Anal shield 68-73 μ in width, lightly reticulated, with 3 anal setae. One pair of ventral setae present on the integument between genital and anal shield. Metapodal plates absent. Spermatheca in form of a long, thin, tube. Peritremes measure 107-117 μ long.

Fixed digit of chelicera reduced to small protuberance ; movable digit long, with 8-10 teeth.

Corniculi long, slender. Tectum with smooth, round, anterior margin (Fig. 1C). Number of setae on palp (trochanter to genu) as follows : 0, 4, 5. Length of legs : I. 343-361 μ , II. 347-363 μ , III. 347-357 μ , and IV. 416-425 μ . Number of setae on legs (coxa to tibia) : I. 2, 5, 11, 9, 8 ; II. 2, 5, 9, 9, 7 ; III. 2, 5, 6, 8, 7 ; IV. 1, 5, 6, 8, 7. Distal seta on coxa of leg I short and very thin ; remaining setae on coxae of legs I-III short and well thickened. Tarsus of legs II-IV with 2 heavy ventral setae, measuring 19-23 μ long, at the anterior tips (Fig. 1D).

MALE : Idiosoma 352 μ long and 194 μ wide (1 specimen). One dorsal shield, incised medio-laterally, 302 μ long and 165 μ wide, covering most of idiosoma, with reticulation and dorsal chaetotaxy like that in female but setae on idiosoma short. Tritosternal laciniae and the basal sclerite absent. Sternogenital shield 155 μ long, with 3 pairs of setae (anterior to posterior) 28 μ , 23 μ , and 21 μ long, and with genital opening located anteriorly (Fig. 1E). One pair of ventral setae 7 μ long present on integument between sternogenital and anal shield. Anal shield 72 μ in width. Peritremes measure 94 μ long. Setae on legs short and heavy. Femur of leg II with 2 thickened, spinose setae (Fig. 1F). Remaining characters are as in female.

COLLECTION DATA : Holotype, female, Budongo Forest, Uganda, from *Antinephele achlora* Holland, 25 June 1968 (4500 feet), T. M. SHORTT, Royal Ontario Museum, Toronto, Canada (VP 70-16). Paratypes, 2 females, 1 male, several immature stages, collection data as for holotype. All mites were removed from a moth in March 1970 by the author. The mites were found dorsally on left and right side behind the wind bases.

2. *Otopheidomenis aporodes* n. sp.

(Fig. 2)

DIAGNOSIS : Females and males with one dorsal shield, incised mediolaterally ; setae 13 absent. Females with genital setae, with short sternal setae on the sternal shield, and with 2 heavy ventral setae at the anterior tips of tarsus of legs II-IV ; setae on coxae of legs I-IV short and thin. Males with 4 pairs of setae on the sternogenital shield, and femur of leg II with 3 greatly thickened setae of which one borne on a very large protuberance.

FEMALE : Idiosoma 436-579 μ long and 306-375 μ wide (5 specimens). One dorsal shield, incised mediolaterally, 359-397 μ long and 220-267 μ wide, reticulated over entire surface (Fig. 2A). Body dorsum with 11 pairs of minute setae (except z5 which are moderately long) of which 10 pairs are on the shield and 1 pair (r5) are on lateral membranous integument ; z5 22-28 μ long, r5 11-14 μ , and remaining setae on the dorsal shield measure 4-8 μ long (lateral setae are longer than median setae) ; z5 finely serrated.

Tritosternal laciniae and the basal sclerite absent. Sternal shield 99-107 μ long and 92-96 μ wide, truncate anteriorly and posteriorly, reticulated over entire surface (Fig. 2B) ; 3 pairs of sternal setae on the sternal shield, measuring (anterior to posterior) 15-17 μ , 16-18 μ , and 18-20 μ long ; metasternal setae absent. Genital shield rounded posteriorly, 98-113 μ wide ; pair of genital setae measure 11-13 μ long and located off the shield. Anal shield 106-117 μ in width, reticulated, with 3 anal setae. One pair of small ventral setae, 8-10 μ long, on the integument between genital and anal shield. Metapodal plates absent. Spermatheca in form of a long, thin, tube. Peritremes measure 108-122 μ long (Fig. 2C).

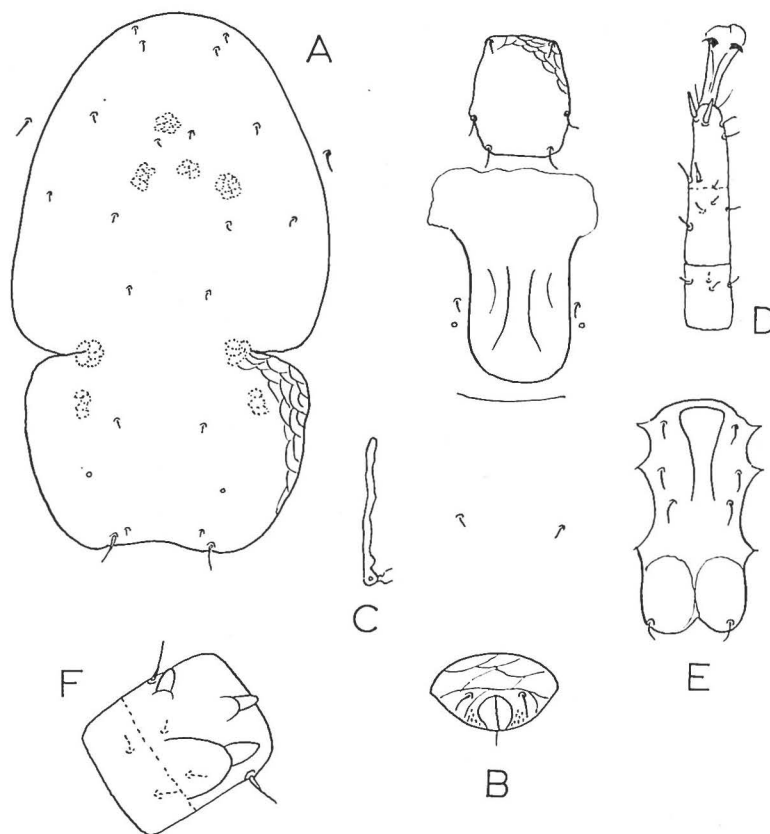


FIG. 2. — *Otopheidomenis aporodes* n. sp.
A-D, female : A, dorsal shield ; B, ventral shields ; C, peritreme ; D, tarsus IV ;
E-F, male : E, sternogenital shield ; F, femur II.

Fixed digit of chelicera reduced to small protuberance ; movable digit long, slender, with 7-8 teeth. Corniculi long, slender. Tectum with smooth, round, anterior margin and number of setae on palp and legs as in *O. achlora*. Length of legs : I. 357-404 μ , II. 371-387 μ , III. 371-398 μ , and IV. 440-459 μ . Setae on coxae of legs I-IV short and thin ; tarsus of legs II-IV with 2 heavy ventral setae measuring 16-20 μ long located at the anterior tips (Fig. 2D).

MALE : Idiosoma 391-424 μ long and 244-270 μ wide (2 specimens). One dorsal shield, incised mediolaterally, 363-367 μ long and 204-220 μ wide, covering most of idiosoma in length, with reticulation and dorsal chaetotaxy like that in female but setae on idiosoma short. Tri-tosternal laciniae and the basal sclerite absent. Sternogenital shield 150-154 μ long, with 4 pairs of setae (anterior to posterior) 15-17 μ , 14-17 μ , 14-18 μ , and 13-17 μ long and with genital opening located anteriorly (Fig. 2E). One pair of ventral setae 9-12 μ long present on integument between sternogenital and anal shield. Anal shield 112-116 μ in width. Peritremes measure 46-58 μ long. Length of legs : I. 275-286 μ , II. 261-268 μ , III. 255-261 μ , and IV. 269-282 μ . Setae on legs short and heavy. Femur of leg II with 3 greatly thickened setae of which 1 borne on a very large protuberance (Fig. 2F). Remaining characters are as in female.

COLLECTION DATA : Holotype, female, Budongo Forest, Uganda, from *Hippotion aporodes* R. and J., 17 June 1968, T. M. SHORTT, Royal Ontario Museum, Toronto, Canada (VP 70-17).

Paratypes, 6 females, 2 males, several immature stages, collection data as for holotype. All mites were removed from a moth in March 1970 by the author. The mites were found on right side posterior to the wing base.

ABSTRACT

Two new species, *Otopheidomenis achlora* and *Otopheidomenis aporodes*, are described and illustrated. Both species are known from Uganda from the sphingid moths *Antinephele achlora*, and *Hippotion aporodes*, respectively. The mites were found behind the wing bases.

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