

RARE SPECIES OF ERIOPHYID MITES (DIPTILOMIOPIDAE: ERIOPHYIDAE: ACARI) FROM SOUTHERN INDIA

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Abstract

In a survey conducted in various reserve forests of southern India, two rare species of diptilomiopid eriophyid mites (Diptilomiopidae) have been recorded for the first time in India -- *Asetadiptacus carmonae* sp. nov. (ex. *Salacia* sp. (?) Hippocrataceae) and *Levonga attakattiensis* sp. nov. The systematic account of the new mite species with suitable line drawings is provided in the paper.

Keywords

Eriophyid, Diptilomiopid, Asetadiptacus carmonae, Levonga attakattiensis, vagrants, new species, southern India

Abbreviations

TNAU - Tamil Nadu Agricultural University, Coimbatore

Introduction

During the course of a biodiversity programme, an extensive survey was undertaken during 1998-1999 to study the fauna of eriophyid mites which remain unexplored and unidentified. A concise statistics on the eriophyid fauna indicate that only less than five per cent of the total tropical fauna have been reported leaving around 18,000 to 19,000 species to be described (Amrine & Stasny, 1994). In our investigation, we have encountered two new species of eriophyid mites viz., *Asetadiptacus carmonae* sp.nov. and *Levonga attakattiensis* sp.nov. These two new mite species are the second species ever recorded in their respective genera and are the first Indian reports. Adequate line drawings are provided for the new mite species besides detailed taxonomic account.

All measurements are expressed in microns.

Asetadiptacus carmonae sp. nov.

(Figs. 1-9)

Material examined

Types: One holotype slide (female marked) and one paratype slide with both sexes, Puthur Reserve Forest, Karnataka, Ex. *Salacia* sp. (?) (Hippocrataceae), Coll. G. Umapathy, TNAU No. 43.

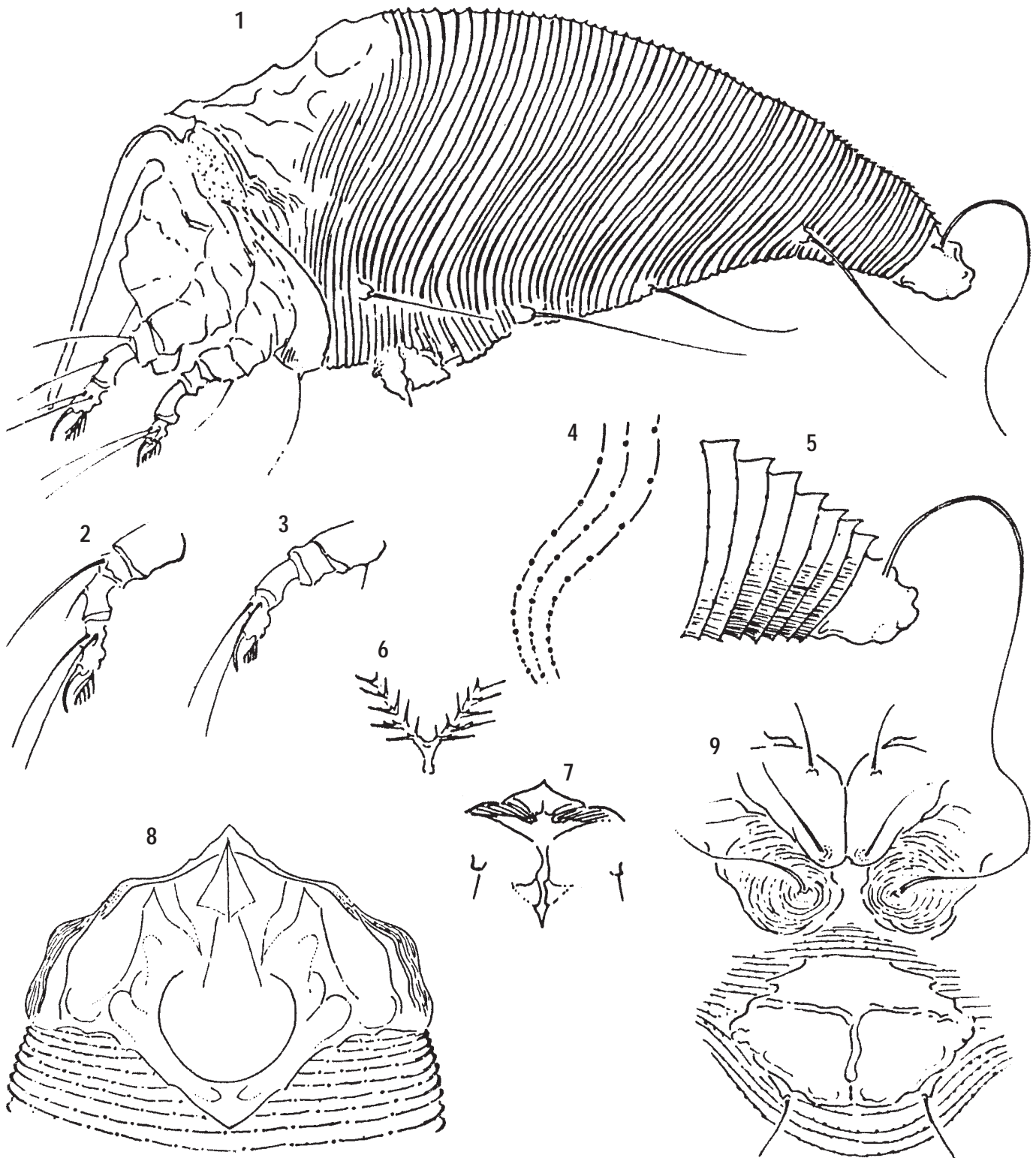
Etymology

The new species is named after M.M. Carmona who coined the genus.

Diagnostic features

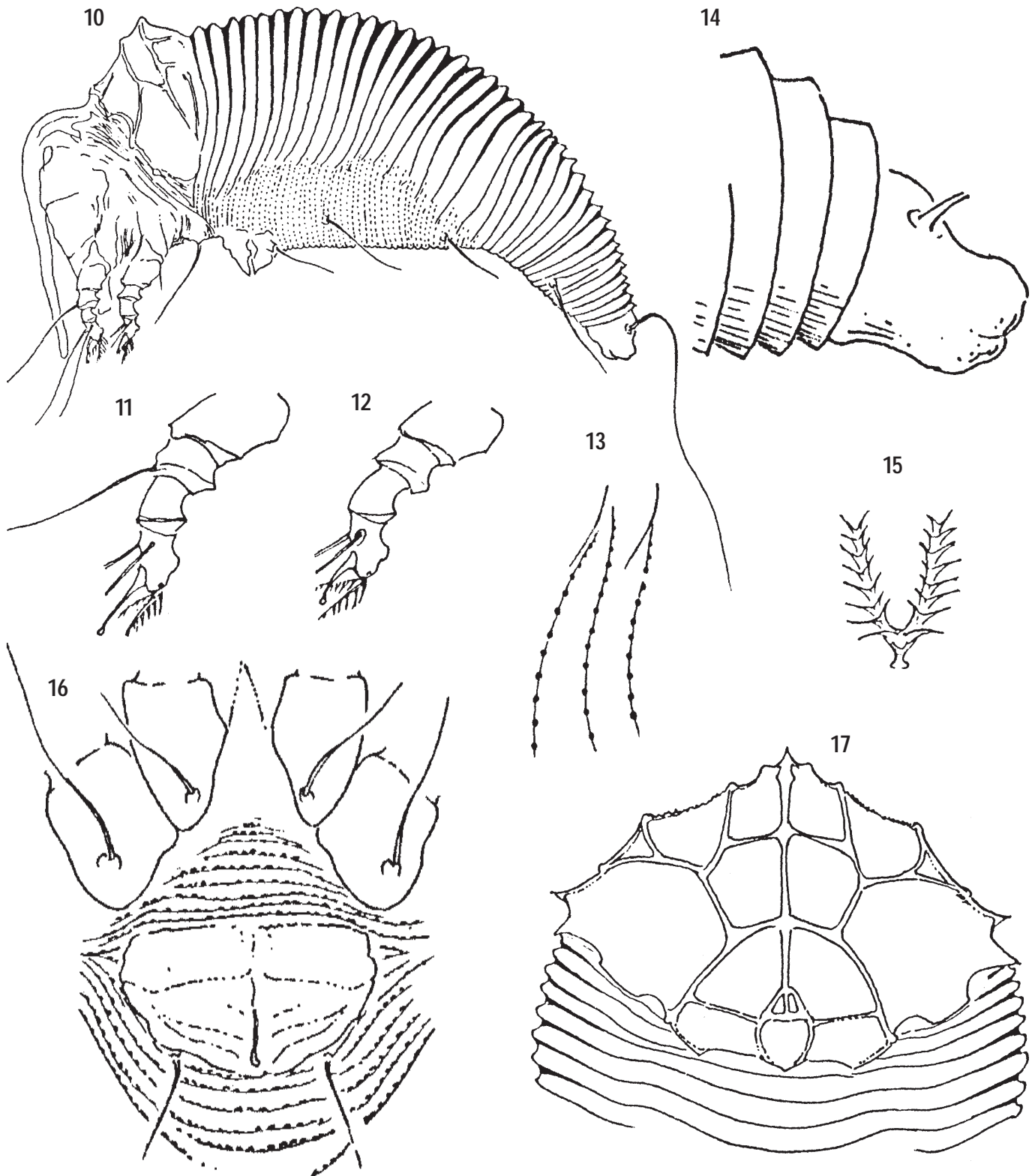
The new species is differentiated from the type *Asetadiptacus emliae* Carmona (1970) by its shield design and smooth female genital cover flap.

Female: 180 long, 75 wide, 50 thick. Rostrum 34 long, pointing obliquely backward. Antapical seta two long. Shield 52 long, 65 wide, broadly conical; shield area involve several unclear or faint lines and troughs; median incomplete, extend up to 1/3



Figures 1-9. *Asetadiptacus carmonae* sp. nov.

1 - Lateral view of the mite; 2 - Foreleg; 3 - Hind leg; 4 - Lateral skin structure; 5 - Lateral view of caudal segment; 6 - Feather claw; 7 - Male genitalia; 8 - Dorsal view of the anterior; 9 - Female genitalia and coxal base



Figures 10-17. *Levonga attakattiensis* sp. nov.

10 - Lateral view of the mite; 11 - Foreleg; 12 - Hindleg; 13 - Lateral skin structure; 14 - Lateral view of caudal segment; 15 - Feather claw; 16 - Female genitalia and coxal base; 17 - Dorsal view of the anterior

anterior; admedian and submedian lines incomplete, sinuate. Shield margin with numerous longitudinal lines. Dorsal tubercles and shield setae missing. Foreleg 38 long; tibia 8 long; tibial seta 5 long, placed at proximal 1/3; tarsus 7 long; fore femoral seta absent; claw 7 long, curved, blunt. Feather claw long, divided, five-rayed. Hind leg 35 long; tibia 7 long and tarsus 6 long; hind patellar setae missing. Forecoxa join centrally by a Y shaped mid-sternal line; anterior coxae connate for moderate length; hind coxae with numerous faint lines; coxae with usual setation. Setiferous coxal tubercles I, II and III are almost on longitudinal approximation.

Abdominal thanosome has about 60 undifferentiated rings; small, pointed microtubercles present throughout. Lateral seta 13 long on ring eight to ten; first ventral 35 long on ring 28; second ventral seta 15 long on ring 48; third ventral 25 long on ring eight from behind; caudal seta 40 long; accessory seta missing. Female genitalia 18 long, 26 wide, not oppressed to coxae. Coverflap smooth; genital seta short, eight long.

Male: 150 long, 62 wide, 48 thick. Genitalia 18 wide, seta five long.

Remarks

The mites are leaf vagrants.

Levonga attackattiensis sp. nov. (Figs. 10-17)

Material examined

Type: A holotype slide with the type marked. Attakatti Reserve Forest, Coimbatore District, Tamil Nadu, 15.vi.1999, ex. unidentified tree, Coll. G. Umamathy, TNAU No. 19.

Diagnostic features

The new mite species deviate from the type *Levonga pappintongensis* Manson (1984) due to its shield design, absence of shield seta and forecoxal setiferous tubercles. This is the second species described under this genus.

Female: 135-140 long, 55 wide. Rostrum 42 long, pointing down. Shield 23 long, 53 wide, shield surface has three rows of boxes in symmetrical fashion; posterior most sides of shield has tooth-like projections. Dorsal tubercles and shield seta missing. Foreleg 37 long, tibia 7 long, tibial seta absent; tarsus 5 long; claw 5 long, knobbed, feather claw divided, eight-rayed; fore femoral seta absent. Hindleg 33 long, tibia 6 long, tarsus 4 long; hind femoral and hind patellar setae missing. Fore coxa widely separated; first setiferous tubercles missing; seta on tubercle 11, 15 long; second setiferous tubercles well ahead of transverse fine through third tubercles; seta on tubercle III, 33 long; coxal bases smooth.

Thanosome differentiated into about 50 smooth tergites and 110 microtuberculate sternites; tergite and sternite at the ratio of 1:1.5; dorsum has a median ridge and shallow trough on both sides. Lateral seta missing; first ventral 12 long on sternite 35; second ventral 10 long, on about ring 65; third ventral 12 long, on ring 12 from behind; caudal seta 35 long; accessory seta not seen. Female genitalia 20 long, 25 wide; coverflap has no obvious ribs. Genital seta 10 long.

Male: Not known.

Remarks

The mites are lower surface leaf vagrants.

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