

***Anolina prolineata* sp.nov. (Acarina: Iolinidae) a new species from Tamil Nadu, India**

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Summary

A new species of Iolinid mite, *Anolina prolineata* sp. nov. was collected from a grasshopper *Oxya* sp. in Tamil Nadu, India, is described and illustrated.

Key words: Iolinidae, *Anolina prolineata*, *Oxya* sp., ectoparasitic mite

Anahtar sözcükler: Iolinidae, *Anolina prolineata*, *Oxya* sp., dış parazit akar

Introduction

During the course of survey and study of mites associated with insects in Tamil Nadu, one Iolinid mite new to science was discovered. Earlier, Pritchard (1956) and Price (1971) thoroughly described the taxonomic characters of the family Iolinidae with the discovery of two genera viz., *Iolina* and *Anolina*. These Iolinid mites are parasitic on the host insects. They were found in large numbers under the wings and the tympanal cavities. The colour of the mites vary considerably according to the hosts. This paper presents the descriptions of the new mite along with necessary taxonomic drawings. The nomenclature used for the body chaetotaxy and structure are those by Price (1971). So far no Iolinid parasitic mite has been identified from India and this is the first one to be described.

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Almış (Received): 12.06.1995

The type and paratype slides are deposited in the Acarology collections of the Department of Agricultural Entomology, Agricultural College and Research Institute, Tamil Nadu Agricultural University, Coimbatore 641 003, India. All measurements are in micrometers.

Family: **Iolinidae** Pritchard, 1956

Small mites occur in association with insects; with piercing stylet-like cheliceral digits, opposing fixed digits absent; cheliceral bases fused into a nonretractile stylophore; with peritremes absent; palpi without a thumbclaw, with one or more free segments; tarsi I without pretarsi, claw or empodia; with well-developed claws and rayed empodia on tarsi II, III and IV, idiosoma membranous, with abundant striae, with 1 pair of specialized propodosomal sensillae; eyes absent; females with a transverse genital aperture, male with a conspicuous sclerotized aedeagus.

Genus: **Anolina** Price, 1971

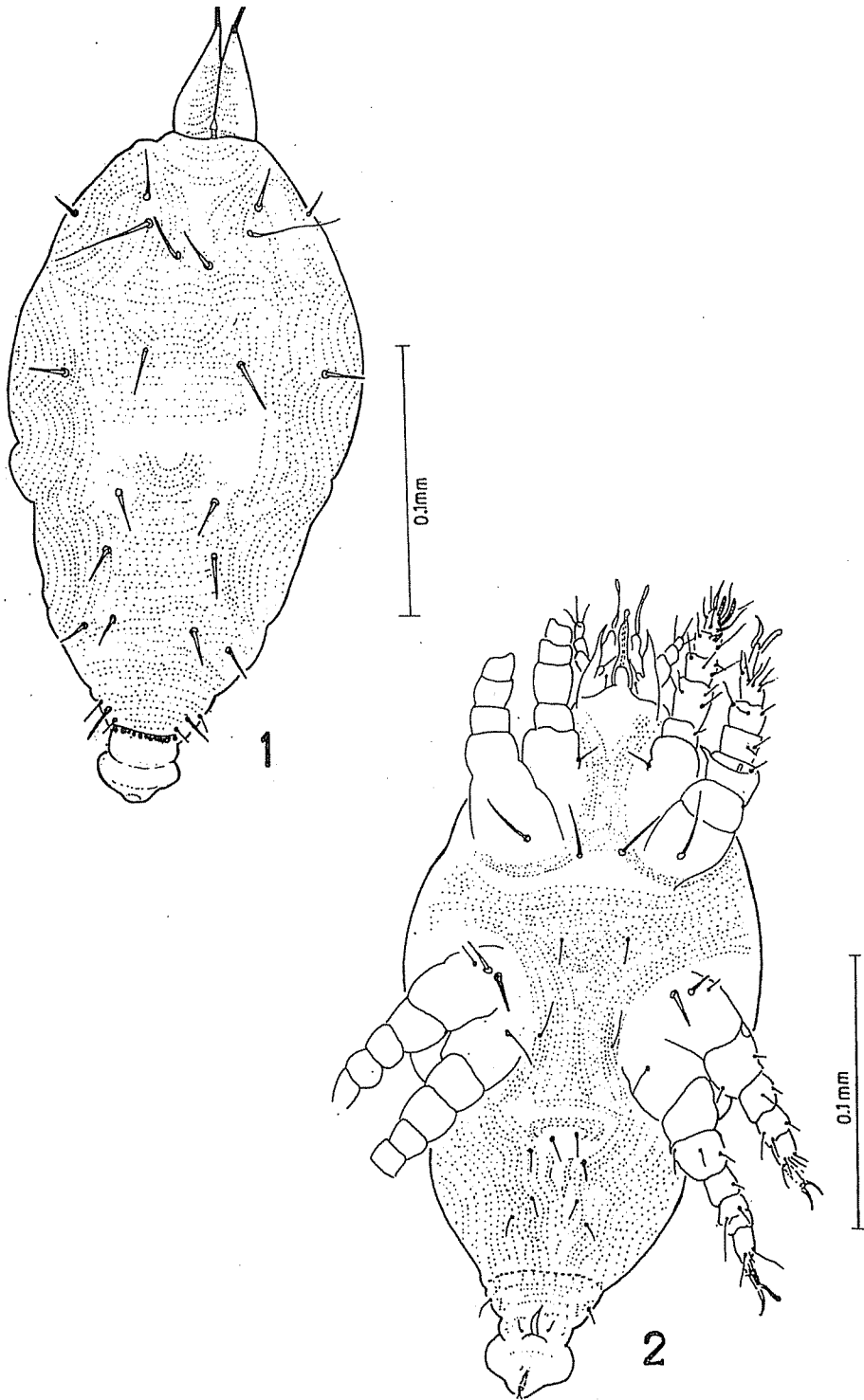
Adult females with movable chelae straight arising near the distal ends of fused chelicera bases. Palpi simple, with 4 segments distal to coxal bases. Terminal palp segment with 1 apical sensillum and 3 subapical setae. Tarsus I without paired distal setae. Tarsi II, III and IV with a conspicuous membranous fold associated with base of claws and empodia. Empodia in females reduced. Propodosoma with 3 pairs of setae and 1 pair of specialized sensillae. Dorsum of hysterosoma with 4 pairs of dorsocentral, 2 pairs of dorsolateral and 4 pairs of caudal setae. Idiosoma without plates; with intricate patterns of striae bearing rounded and triangular lobes. Male aedeagus a pair of stout, appressed, curved blades.

Anolina prolineata sp. nov.

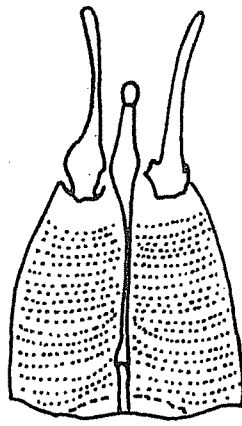
(Figs. 1-5)

Diagnosis

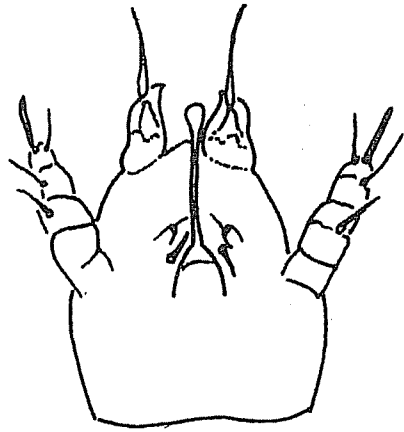
This new species resembles ***A. lineata*** Price, 1971 in all characters, but it is easily distinguished on the basis of size. ***A. prolineata*** sp. nov. is about 1/2 the size of ***A. lineata***. The new species idiosoma is 259, gnathosoma length 49 and Leg I 59 long as against 414, 71 and 149 long in ***A. lineata***. The caudal region of ***A. prolineata*** with 3 pairs of slender setae as against 4 pairs in ***A. lineata***. This new species is also separable from ***A. lineata*** on the basis of gnathosomal ventral structure, chaetotaxy of the palpi and leg tibia, and dorsal body setae.



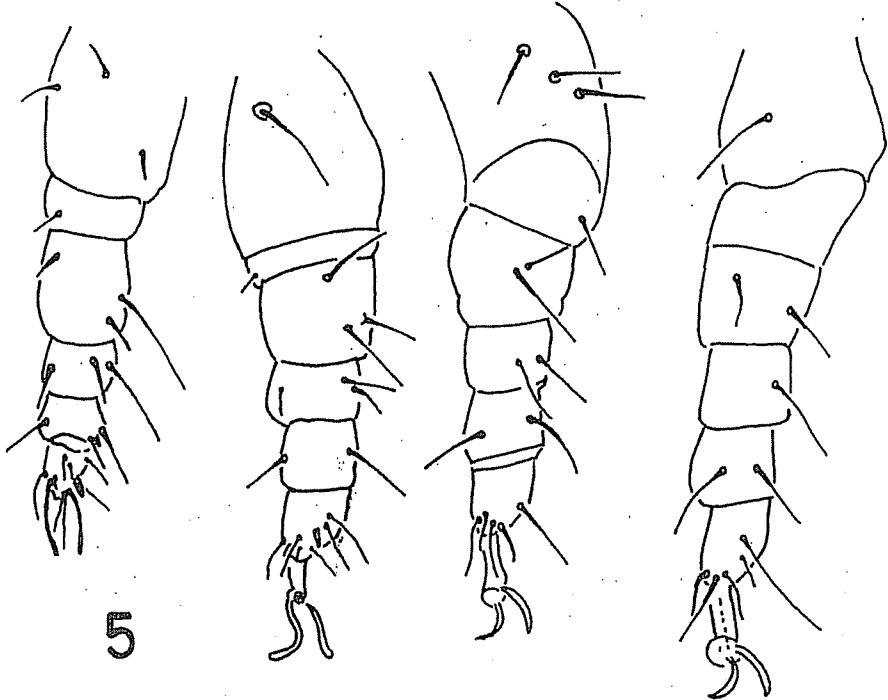
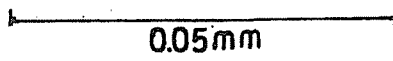
Figs. 1-2. *Anolina prolineata* sp. nov. 1. Female dorsum, 2. Female venter.



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Figs. 3-5. *Anolina prolineata* sp. nov. Dorsal view of gnathosoma, 4. Ventral view of gnathosoma, 5. Legs I-IV.

Female dorsum

Idiosoma length 259 width 135; gnathosoma 49; body entire, without shield, exhibiting fine intricate patterns of striated round and triangular lobes. Propodosoma with 3 pairs of stout small setae and one pair of long sensillae. Hysterosoma with 4 pairs of dorsocentral setae; 2 pairs of dorsolaterals in line with 1st and 2nd dorsocentral setae. All dorsal setae are small, stout with blunt tips and are equal in length (13). Caudal region with 3 pairs of slender setae.

Venter

Apodemes poorly developed, ventral surface with well developed intricate patterns; venter with 1 pair of small anal setae, 2 pairs of setae anterior to genital aperture, 2 pairs of setae in the middle region of opisthosoma; and one pair between coxae II, III and IV.

Gnathosoma

Gnathosoma 49 long; cheliceral stylets straight, 13 long, arising near tip, not recurved basally. Palpi simple with 4 segments distal to coxal bases. Terminal palpi each with one apical sensillum and one lateral and one dorsal setae, tibiae and fused femur-genu with one setae. Gnathosoma with 2 pairs of ventral setae; oral setae lacking.

Legs

Legs I-IV setation including solenidion as follows: Coxae 3-1-3-1; Trochanters 1-1-1-0; Femora 3-3-2-2; Genua 3-3-2-1; Tibiae 3-2-2-2 and Tarsi 9-8-5-6. Leg I from coxo-trochanteral joint to tarsal setae measures 59 long. Tarsus I without paired distal setae. Tarsi II, III, IV with a long fold associated with claw and empodia. Tarsi I with 1 dorsal solenidion, tibia I with a distal solenidion and a closely placed sensory peg.

Types

Holotype female adult marked on slide, India; Tamil Nadu: Coimbatore, 7.X.1990 ex. 5 hosts, Grasshopper, *Oxya* sp. (Orthoptera: Acrididae), coll. M. Mohanasundaram (No. 85/1), two paratypes with one female each collection data same as that of holotype.

This new species resembles *Anolina lineata* in almost all characters, hence it is named as *A. prolineata*.

Relationship to the host

These mites are found in large numbers below the tegmen and hind wings as well as in the tympanal cavities in the first abdominal segment. They are purely parasitic and all stages could be seen. The colour of mites while alive may vary according to the host grasshopper on which it is feeding.

Acknowledgements

The authors wish to express their sincere thanks to Dr. Robert L. Smiley, USDA, ARS, Beltsville, Maryland, USA for critically reviewing and correcting this manuscript of this article and for the supply of reprints.

Özet

Tamil Nadu (Hindistan)'dan yeni bir akar türü, *Anolina prolineata* (Acarina: Iolinidae)

Bu çalışmada Tamil Nadu (Hindistan)'da *Oxya* sp. (Orthoptera, Acrididae) üzerinde parazit olarak bulunan yeni bir akar türü olan *Anolina prolineata* (Acarina, Iolinidae)'nın orijinal tanıtımı yapılmıştır.

References

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