

### Research Notes

## NEW RECORDS OF TWO ORIBATID SOIL MITES (ACARI: ORIBATIDA) FROM INDIAN STATE OF TELANGANA

SHELLEY ACHARYA, PARAMITA BASU and  
D. N. ADAGALE

Zoological Survey of India, M-Block, New Alipore,  
Kolkata-700053 (West Bengal).  
E mail: acharya.shelley@gmail.com

Oribatid mites are one of the most important components of detritus food web in all possible terrestrial habitats. They play role in decomposition process of organic matter, nutrient cycling process, soil formation process in various ecosystems and also act as determinant of soil quality and soil pollution (Edwards et al., 1970; Crossley, 1977; Seastedt, 1984).

Telangana, as the 29th state of India was formed officially on 2nd June, 2014, by the separation from Andhra Pradesh. This state is located on Deccan plateau in southern peninsula of India with semi-arid climatic condition and mineral rich soil in the form of coal and iron ore. An early study on the Oribatid fauna of Andhra Pradesh was executed by Sanyal (2007). During his survey, soil samples from 4 districts of Telangana, e.g. Khamman, Rangareddy, Karimnagar and Nizamabad, were collected and 23 species of Oribatid mites under 15 genera and 14 families were identified.

In the present study, total of 5 soil samples were collected from different habitats of Tandur village in May, 2015. 20 specimens of Oribatid mites were extracted from the soil samples. A total of eight species belonging to eight genera under five families were identified and 2 species of Oribatid mites under 2 genera and 2 families were recorded for the first time from the state.

Village Tandur is located in Ranga Reddy district at 17.23°N and 77.58°E. It is located 110 km away from Hyderabad, the capital. For taxonomic studies, litter, soil and humus samples from all habitats were collected by shovel from upper 10 cm soil profile and kept in polythene bags. The samples were extracted by using modified Tullgren funnels and extracted mite specimens were collected in glass tubes containing 70% alcohol.

The specimens were studied and photographed under Leica EC3 using Leica Application Suite EZ Version 3.0.0 software. In this study, the classification proposed by Balogh (1972) has been followed. Identified specimens are deposited in the National Zoological Collection of the Zoological Survey of India, Kolkata.

### Family Epilohmannidae

#### Genus *Epilohmannia* Berlese

*Epilohmannia* Berlese 1916, *Redia*, 12: 176.

1. *Epilohmannia pallida* Wallwork, 1962

*Epilohmannia pallida* Wallwork 1962, *Acarologia*, 4(4): 689.

Diagnosis: Prodorsal setae minute; interlamellar setae barbed distally; sensillus with fusiform head beset with barbs; notogastral setae 14 pairs, strongly curved, distinctly barbed; genital setae 6 pairs.

Material studied: 1♀, Ranga Reddy, Tandur vill., 7.v.15, from soil, coll. D.N Adagale (Regn. No. 5106/17).

Distribution: India: West Bengal, Himachal Pradesh, Tripura, Telangana (new record); Elsewhere: Africa, Indonesia.

### Family Oppiidae

#### Genus *Lanceoppia* Hammer

*Lanceoppia* Hammer 1982, *Biol. Skr. Dan. Vid. Selsk.*, 13 (2): 42.

2. *Lanceoppia nodosa* (Hammer, 1958)

*Oppia nodosa* Hammer 1958, *Biol. Skr. Dan. Vid. Selsk.*, 10 (1): 54.

Diagnosis: The propodosoma is narrow and the rostrum pointed. The pseudostigmatid organ is thin, almost pear shaped at the tip and the borders slightly serrated. The hysterosoma is oval, broadest across the middle.

Material studied: 2♀♀, Ranga Reddy, Tandur vill., 7.v.15, from soil, coll. D.N Adagale (Regn. No. 5104/17).

Distribution: India: West Bengal, Telangana (new record); Elsewhere: Argentina, Bolivia.

Acknowledgements: Authors are grateful to Dr. Kailash Chandra, Director, Zoological Survey of India, for providing facilities and encouragement. They are also grateful to Dr. A. K. Sanyal, Emeritus Scientist, for help and suggestions.

### References

- Balogh, J. 1972. *The Oribatid Genera of the World*. Akademiai Kiado, Budapest, Hungary: 188 pp.
- Crossley, D. A., Jr. 1977. The role of terrestrial saprophagous arthropods in forest soils: Current status of concepts. In *Proc. Life Sci.: The Role of Arthropods in Forest Ecosystems*. Springer-Verlag, New York: 49-56.
- Edwards, C. A., Reichle, D. E. & Crossley, D. A. Jr. 1970. The role of soil invertebrates in turnover of organic matter and nutrients. In: *Analysis of temperate forest ecosystems*. Springer-Verlag, Berlin: 147-172.
- Sanyal, A. K. 2007. Acari: Oribatei. In: *Fauna of Andhra Pradesh. Zool. Surv. India, State Fauna Ser. 5 (Part 3)*: 37-70.
- Seastedt, T. R. 1984. The role of microarthropods in decomposition and mineralization processes. *Ann. Rev. Ent.*, 29: 25-46.