Distribution: Arunachal Pradesh; Assam; Meghalaya; Nilgiri Hills; Sikkim

Male genitalia: Uncus with slightly dilated at distal end, setose with a group of setae having club-shaped ends; tuba analis longer than uncus; subscaphium curved and well sclerotized; vinculum moderate, well sclerotized; saccus U-shaped and broad; valva with costa and sacculus very well differentiated, latter with a sclerotized ridge; harpe marked by a small, weakly curved projection; juxta like an inverted Y-shaped structure; aedeagus short and cylindrical, narrow in middle; vesica without any well defined armature but a well sclerotized curved patch at distal end represents cornutus.

Female genitalia: Corpus bursae oblong, with a slight constriction in outer wall in middle; ductus bursae moderately long, rounded distally; with a collar-like thickening at distal end; anterior apophyses with triangular expansions near bases; posterior apophyses short and narrow; ovipositor with rounded and well defined lobes, each lobe densely setose with varying sizes of setae.

Wing Expanse (Half): Male - 13mm; Female - 15mm.

Discussion

The external male genitalic features like uncus, saccus, juxta and female genitalic feature like absence of signum, the shape of ductus bursae and apophyses clearly indicate the congeneric nature of the species *ambionalis* (Felder and Rogenhofer) with the type species *testulalis* Geyer. The reporting of present species from Bander-Dewa locality is its first record from Arunachal Pradesh.

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NOTES ON PHYTOPHAGOUS AND PREDATORY MITES OF MEDICINAL PLANTS OF KOLKATA

S. Lahiri [1], I. Roy [1], S. Podder [1], G.K. Saha [2,3] and S.K. Gupta [4]

[1] Research Scholar, [2] Reader, Dept. of Zoology, Calcutta University 35 Ballygunge Circular Road, Kolkata, West Bengal 700019, India
[4] Former Joint Director, Zoological Survey of India
Email: [3] gkszoo@rediffmail.com (Corresponding author)

Medicinal plants are receiving global attention as 70% of the medicines used by human beings are of plant origin. Since the Indian System of Medicine (ISM) mostly depends upon herbal medicines which are less costly and also free from side effects, Government of India is encouraging popularization, cultivation, conservation and utilization of medicinal plants for prevention and cure of diseases encountered in day-to-day life. Unfortunately, no sincere effort has ever been made in India including West Bengal to explore phytophagous and predatory mites that occur on medicinal plants resulting in great economic loss. The only published document in this respect is of Ghosh and Gupta (2003), which documented the available information in this regard. However, plants considered there were known more as vegetables, fruit trees and ornamental plants and not as true medicinal plants. The present study was taken up to conduct a thorough survey of medicinal plants in Kolkata metropolis (Medicinal Plants Garden of: (i) Ramakrishna Mission Ashrama, Narendrapur; (ii) Agri-Horticultural Garden, Alipore; (iii) Experimental Garden, Department of Botany; and (iv) Bidhan Chandra Krishi Viswavidyalaya) and the results are presented here.

A total of 48 species of mites collected from 35 species of medicinal plants are reported here; 17 species of phytophagous mites (Table 1) representing four families viz. Tetranychidae (11 spp., 5 gen.), Tenuipalpidae (3 spp., 1 gen.), Tarsonemidae (2 spp., 2 gen.) and Eriophydae (1sp.). Among those, *Tetranychus urticae*, *Schizotetranychus cajani*, *Panonyhus citri* and *Polyphagotarsonemus latus* are important pest species causing substantial damage to respective host plants. The others did not inflict any noticeable damage. Maximum diversity among phytophagous group was noted in Tetranychidae (11 spp.) followed by Tenuipalpidae (3 spp.). Among medicinal plants, *D. metel* harboured the maximum number of species (13 spp., 10 gen., 7 fam.) followed by *Adhatoda vasica* (6 spp., 5 gen., 5 fam.). Among 31 species of other mites belonging to predatory groups, 12 were recorded as efficient predators feeding on a number of phytophagous mites and other insects as listed in Table 2.

The family Phytoseiidae represented the maximum number of species (16 spp.) of which four species were found to be efficient predators. The other predatory mites belonging to Stigmaeidae,

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Table 1. List of phytophagous mites occurring on medicinal plants in Kolkata metropolis.

Species	Host plant	Period	Importance
Tetranychidae			
1. *Tetranychus urticae* Koch	*Adhatoda vasica*, *Azadirachta indica*, *Datura metel*, *Wissadula periplocifolia, Sida rhombifolia, Ocimum sanctum*	Sept.-Oct.	Infestation caused appearance of yellowish spots on leaves. Later such leaves withered.
2. *T. ludeni* Zacher	*Datura metel*	Oct.-Nov	No noticeable damage symptoms
3. *T. fijiensis* Hirst	*Ficus carica*	Oct.	No damage symptoms
4. *T. neocaledonychus* Andre	*Wissadula periplocifolia*	Nov.-Dec.	No damage symptoms
5. *Tetranychus* sp.	*Abelmoschus moschatus*	Dec.	
6. *Oligonychus indicus* (Hirst)	*Saccharum officinarum*	Nov.	Reddish patches at the point of feeding.
7. *O. oryzae* (Hirst)	*Cymbopogon winterianus*	Oct.-Dec.	Leaves developed whitish patches at the point of infestation.
8. *Eotetranychus* sp.	*Datura metel, Wissadula periplocifolia*, *Saccharum rhombifolia, Nyctanthes arbortristis, Achyranthes aspera*	Oct.-Dec.	No apparent damage symptoms
9. *Schizotetranychus cajani* Gupta	*Indigofera tinctoria*	Oct.-Dec.	Infested leaves became yellowish, smaller in size and later dried up.
10. *Schizotetranychus* sp.	*Curcuma zedoaria*	Nov.-Dec.	No damage symptoms
11. *Panonychus citri* (McGregor)	*Carica papaya*	Sept.-Dec.	Infested leaves show discoloburation near petiolar attachment.
Tenuipalpidae			
12.*Brevipalpus karachiensis* Chaudhuri, Akbar & Rasool	*Achyranthes vasica*, *Azadirachta indica*, *Ocimum sanctum*, *Boerhaevia diffusa*	Sept.-Dec.	No damage symptoms
13. *B. phoenicis* (Geij.)	*Datura metel*	Oct.-Nov.	No damage symptom
14. *Brevipalpus* sp.	*Cinnamomum zeylanic*, *Azadirachta indica* Acacia catechu, *Stephanica japonica*, *Calotropis procera*, *Catheranthus roseus*	Oct.-Nov.	No damage symptom
Tarsonemidae			
15. *Steneotarsonemus* sp.	*Mangifera indica*	Sept.	No damage symptoms
16. *Polyphagotarsonemus latus* (Banks)	*Ocimum sanctum, Datura metel*	Oct.-Dec.	Leaves become curled and wrinkled.
Eriophydae			
17. *Paratetra murrayae* Channa Basvanna	*Murraya koenigii*	Nov.	No damage symptoms

Table 2. List of important predatory mites and their respective prey species.

Predatory mites	Prey species
Cunaxidae	
1. *Cunaxa setirostris* (Hermann)	*Tetranychus fijiensis*
2. *C. mangiferae* Gupta	*Oligonychus* sp.
3. *Dactyloscirus* sp.	*Brevipalpus* sp.
4. *Amblyseius* (*Amblyseius*) *largoensis* (Muma)	*Tetranychus urticae, Tetranychus neocaledonychus, Brevipalpus phoenicis*
Phytoseiidae	
5. *Amblyseius* (*A.*) *herbicolus* (Chant)	*Tetranychus neocalidonychus, Brevipalpus* sp.
6. *Amblyseius* (*A.*) *paraaerialis* Muma	*Tetranychus* sp.
7. *Amblyseius* (*A.*) *adhatodae* Muma	*Brevipalpus* sp.
8. *Amblyseius* (*A.*) *kulini* Gupta	*Paratetra murrayae*
9. *Amblyseius* (*A.*) *channabasvannai* Gupta & Daniel	Green hopper
10. *A.* (*Euseius*) *finlandicus* (Oudemans)	*Brevipalpus* sp., *Panonychus citri*
11. *A.* (*Neoseiulus*) *longispinosus* (Evans)	*Brevipalpus* sp.
12. *A.* (*Paraphytoseius*) *multidentatus* (Swirski & Shechter)	*Polyphagotarsonemus latus*

Bdellidae, Cunaxidae etc. were less abundant and hence their predatory efficiency is doubtful. The present report lists all the species along with their hosts, period of occurrence and nature of damage in case of phytophagous species and important prey mite in case of predatory species (Table 2). Incidentally, most of the mites reported here for the first time on respective host plants.

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