

PHYTOPHAGOUS AND PREDATORY MITE FAUNA OF SUNDARBAN BIOSPHERE RESERVE : I. SOME PHYTOPHAGOUS MITES OCCURRING ON MANGROVE VEGETATION AND AGRICULTURAL CROPS

S. K. GUPTA, SANJIB GHOSHAL AND A. CHOUDHURY

S. D. Marine Biological Research Institute, 8/8, B. B. Mukherjee Road, Sodepur, West Bengal

INTRODUCTION

So far no detailed taxonomic account regarding plant mite fauna of the Sundarban Biosphere Reserve (SBR) is available though it is a fact that the said area is rich with luxuriant vegetation both of mangrove plants and of diverse types of agri-horticultural crops. Gupta (1992) reported only 6 species on mangrove plants from that area.

Hence, with a view to exploring the plant mite fauna of that region, this project was undertaken and the present paper reports 21 species belonging to 10 genera and 4 families of those 6 species (*Eotetranychus hicoriae*, *Brevipalpus rugulosus*, *Tenuipalpus micheli*, *Tenuipalpus pernicious*, *Aceria guerreronis*, and *Aceria saccharini*) form new records from West Bengal and 7 plants form new host records. The entire collection was made by the first and second authors and the material is deposited in the SDMBRI.

SYSTEMATIC ACCOUNT

Family 1. TETRANYCHIDAE Donnadieu

1875. Tetranychidae Donnadieu, Faculty des. Sciences de Lyon, p. 9.

Key to the Subfamilies, tribes and genera of Tetranychidae recorded in Sundarban Biosphere Reserve (SBR)

1. Tarsus I dorsally with a single set of usually loosely associated duplex setae or duplex setae absent Tribe **Eurytetranychini***
*female with 2 pairs of anal setae, 4th pair of dorso-central setae in normal position Genus *Eutetranychus*
- Tarsus I dorsally with two sets of closely associated duplex setae Tribe **Tetranychini**, 2
2. With two pairs of para anal setae 3
- With one pair of para anal setae 5

3. Empodium claw like, entire or splits bilaterally into two claw like structures 4
 — Empodium ending into a tuft of hairs Genus *Eotetranychus*
4. Empodium a single claw like structure..... Genus *Panonychus*
 — Empodium splits bilaterally into two claw like structures usually with appendent hairs.....
 Genus *Schizotetranychus*
5. Tarsus one with duplex setae distal and approximate Genus *Oligonychus*
 — Tarsus one with duplex setae well separated dividing segments into three more or less equal
 parts Genus *Tetranychus*

Subfamily 1. TETRANYCHINAE Berlese

1950. Tetranychinae Reck, *Trudy. inst. zool. Akad. Nauk. Gruz. SSR.*, **9** : 123.
 1987. Tetranychinae, Smith-Meyer, *Ent. mem. dept. agr. and water supply. Repub. South Africa*, No. **69** : 74.
 1994. Tetranychinae, Gupta & Gupta, *Mem. Zool. Surv. India*, **18(1)** : 27.

Tribe Eurytetranychini Reck

1950. Eutetranychini Reck, *Akad. Nauk. Grug. SSR* : **99** : 123.
 1994. Eutetranychini, Gupta & Gupta, *Mem. Zool. Surv. India*, **18** : 27.

Genus 1. *Eutetranychus* Banks

1917. *Neotetranychus (Eutetranychus)* Banks, *Ent. News.* **28** : 197.
 1950. *Eutetranychus*, McGregor, *Am. midl. nat.*, **44** : 257.
 1987. *Eutetranychus*, Smith-Meyer, *Ent. mem. dept. agr. and water supply, Repub. S. Africa.*, **69** : 76.
 1994. *Eutetranychus*, Gupta & Gupta, *Mem. Zool. Surv. India*, **18(1)** : 27.

1. *Eutetranychus orientalis* (Klein)

1936. *Anychus orientalis* Klein, *Bull. Agric. Res. Stn. Rehovoth*, **21** : 3.
 1960. *Eutetranychus orientalis*, Baker & Pritchard, *Hilgardia*, **29** : 464.
 1987. *Eutetranychus orientalis*, Smith-Meyer, *Ent. mem. Dept. Agr. and Water Supply, Repub. S. Africa*, **69** : 80-82.
 1994. *Eutetranychus orientalis*, Gupta & Gupta, *Mem. Zool. Surv. India*, No. **18(1)** : 35-39.

Collection Records : 10(F), 3(M), West Bengal, 24-Parganas (South), Sagar Island, Bamankhali; ex *Ocimum sanctum*, and *Solanum melongena*, 5.8.2000; 2(F), Chemaguri, ex Guava, 14.11.2000; Several (M) & (F), Bamankhali, ex *Citrus* 29.12.2001.

Distribution : India (almost in all the states), Afghanistan, Iran, Taiwan, Hong Kong, Israel, Japan, Thailand, Philippines, South Africa, Sudan, Pakistan.

Remarks : This is a cosmopolitan species and its occurrence has been recorded in SBR mainly on vegetables and fruit trees but it has not been recorded on mangrove vegetation. On *Citrus* sp., it was found on upper surface of leaves and the colonies were covered with dusty web.

Tribe **Tetranychini** Reck

1950. Tetranychini Reck, *Trudy. Inst. Zool. Akad. Nauk. Gruz. SSR.*, 9 : 123.

1994. Tetranychini, Gupta & Gupta, *Mem. Zool. Surv. India*, 18(1) : 50.

Genus 2. ***Eotetranychus*** Oudemans

1931. *Eotetranychus* Oudemans, *Ent. Ber.*, 8(178) : 224.

1994. *Eotetranychus*, Gupta & Gupta, *Mem. Zool. Surv. India*, 18(1) : 56.

2. ***Eotetranychus hicoriae*** (McGregor)

1950. *Tetranychus hicoriae* McGregor, *An. Midl. Nat.*, 44.

1955. *Eotetranychus hicoriae*, Pritchard & Baker, *Pacific coast ent. Soc. Mem. Ser.*, 2 : 211.

1973. *Eotetranychus hicoriae*, Lakkundi, *M. Sc. Thesis, UAS, Bangalore*, p. 1-62.

1994. *Eotetranychus hicoriae*, Gupta & Gupta, *Mem. Zool. Surv. India*, 18(1) : 66.

Collection Records : Several males and females, West Bengal, Sagar Island, Bamankhali, ex Guava, 31.1.2001.

Distribution : India (Karnataka, West Bengal), U.S.A.

Remarks : Earlier this species has been reported to infest guava in Karnataka and its occurrence in West Bengal was so far unknown. It was found to severally infest guava in Sagar Island, which caused yellowing of leaves and later brownish patches developed on such leaves.

Genus 3. ***Oligonychus*** Berlese

1886. *Oligonychus* Berlese, *Acari. dannosialle. piante. coltivati*, 31 : 24.

1994. *Oligonychus*, Gupta & Gupta, *Mem. Zool. Surv. India*, 18(1) : 99.

Key to the species of *Oligonychus* recorded in SBR

1. Aedeagus bent ventrad, tarsus I with not more than a single tactile seta on venter just distal of duplex setae. *
- *Bent portion of aedeagus forming an acute angle with shaft. *mangiferus*
- Aedeagus bent dorsal, although the distal end may be directed ventral, tarsus 1 with 2 tactile setae on venter just distal of duplex setae 2
2. Aedeagus with distal end enlarged *indicus*
- Aedeagus with distal end not enlarged 3
3. Aedeagus with distal end strongly sigmoid *sacchari*
- Aedeagus with distal end not strongly sigmoid *oryzae*

3. *Oligonychus indicus* (Hirst)

1953. *Paratetranychus indicus* Hirst, *Proc. zool. Soc. Lond.* Part-4 : 990.
 1955. *Oligonychus indicus*, Pritchard & Baker, *Pacific coast. ent. Soc. Mem. Ser.*, 2 : 354-355.
 1994. *Oligonychus indicus*, Gupta & Gupta, *Mem. Zool. Surv. India*, 18(1) : 104-105.

Collection Records : Several males and females, West Bengal, Sagar Island, Bamankhali, ex Sugarcane, 19.10.2000; 1(F), 2(M), Chemaguri ex Neem, 14.11.2000; several females and males, Gosaba, ex Sugarcane, 8.11.2001.

Distribution : India (almost in all the states), Pakistan.

Remarks : This species was found to infest sugarcane crop in Tagore Society Agricultural Field Station producing characteristic reddening patches on under surface of leaves. Most of the leaves in the field had shown this damage symptoms.

4. *Oligonychus mangiferus* (Rahman & Sapro)

1940. *Paratetranychus mangiferus* Rahman & Sapro, *Proc. Indian Acad. Sci.*, 11B : 192.
 1955. *Oligonychus mangiferus*, Pritchard & Baker. *Pacific Coast Ent. Soc. Mem. Ser.*, 2 : 330.
 1994. *Oligonychus mangiferus*, Gupta & Gupta, *Mem. Zool. Surv. India*, 18(1) : 108-110.

Collection Records : 3(F), West Bengal, 24-Parganas(S), Bhagabatpur, ex *Mangifera indica*, 18.10.2000; 7(F), 2(M), Lothian Island, ex *Mangifera indica*, 19.10.2000.

Distribution : India (Haryana, Himachal Pradesh, Punjab, Bihar, Gujarat, West Bengal, Meghalaya, Karnataka), Mauritius, South Africa.

Remarks : This mite formed colonies on upper surface of leaves but produced no noticeable damage symptoms.

5. *Oligonychus oryzae* (Hirst)

1926. *Paratetranychus oryzae* Hirst, *Proc. Zool. Soc. Lond.* p. 830.
 1955. *Oligonychus oryzae*, Pritchard & Baker. *Pacific coast ent. Soc. Mem. Ser.*, 2 : 337.
 1994. *Oligonychus oryzae*, Gupta & Gupta, *Mem. Zool. Surv. India*, 18(1) : 110-112.

Collection Records : 5(F), 3(M), West Bengal, 24-Parganas(S), Chandanpidi, ex *Oryza sativa*, 18.10.2000.

Distribution : India (Andaman Nicobar Island, West Bengal, Orissa, Tamil Nadu, Punjab), Thailand.

Remarks : The population of this mite in the field was very poor and no noticeable damage symptoms were recorded.

6. *Oligonychus sacchari* (McGregor)

1942. *Paratetranychus sacchari* McGregor, *J. Univ. Puerto-Rico*. 26 : 91.
 1955. *Oligonychus sacchari*, Pritchard & Baker. *Pacific coast ent. Soc. Mem. Ser.*, 2 : 355-357.
 1994. *Oligonychus sacchari*, Gupta & Gupta, *Mem. Zool. Surv. India*, 18(1) : 114-115.

Collection Records : 2(F) West Bengal, 24-Parganas(S), Bhagabatpur Island, Ex. Sugarcane, 18.10.2000.

Distribution : India (Gujarat, M.P., West Bengal, Orissa), South America.

Genus 4. *Panonychus* Yokoyama

1929. *Panonychus* Yokoyama, *Nippon. Sangyo. Gaichu. Zensho*, 569 : 531.
 1994. *Panonychus*, Gupta & Gupta, *Mem. Zool. Surv. India*, 18(1) : 52.

7. *Panonychus citri* (McGregor)

1916. *Tetranychus citri* McGregor, *Ann. Ent. Soc. Am.*, 9 : 284.
 1919. *Panonychus citri*, McGregor, *Smithsonian. Inst. Proc. U.S. nat. Mus.*, 56 : 641-679.
 1994. *Panonychus citri*, Gupta & Gupta, *Mem. Zool. Surv. India*, 18(1) : 53-54.

Collection Records : Several females and males West Bengal, 24-Parganas(S), Gosaba island ex cashew nut, coconut and papaya, 8.11.2001.

Distribution : India (Himachal Pradesh, Manipur, Tripura, U.P., Meghalaya, West Bengal, Jammu and Kashmir), Nepal, South America, U.S.A., Central America, China, Japan, Middle East, South-Africa, Thailand, Taiwan, Hongkong.

Remarks : Although this species was recorded on a number of hosts but none of these hosts had shown any damage symptoms.

Genus 5. *Schizotetranychus* Tragardh

1915. *Schizotetranychus* Tragardh, *Zts. Ang. Ent.*, 2 : 277.
 1994. *Schizotetranychus*, Gupta & Gupta, *Mem. Zool. Surv. India*, 18 : 86.

8. *Schizotetranychus hindustanicus* (Hirst)

1924. *Tetranychus (Schizotetranychus) hindustanicus* Hirst, *Ann. Mag. nat. Hist. London*, 9(14) : 829.
 1955. *Schizotetranychus hindustanicus*, Pritchard & Baker. *Pacific coast ent. Soc. Mem. Ser.*, 2 : 266-267.
 1994. *Schizotetranychus hindustanicus*, Gupta & Gupta, *Mem. Zool. Surv. India*, 18(1) : 95.

Collection Records : Several females and males West Bengal, 24-Parganas(S) Chandanpidi, ex Citrus, 14.11.2000; Several males and females, Bamankhali, ex Citrus, 31.1.2002.

Distribution : India (Tamil Nadu, Kerala, West Bengal).

Remarks : This mite was found severely infesting citrus plantation in a private orchard at Bamankhali producing yellowish and greenish stipplings, the characteristic damage symptoms produced by this species. It was found to occur both on the upper and lower surfaces of the leaves.

Genus 6. *Tetranychus* Dufour

1832. *Tetranychus* Dufour. *Annls. Sci. Nat.*, **25** : 276.

Key to the species of *Tetranychus* recorded in SBR

1. Proximal duplex setae on tarsus-I of female distal to tactile setae 2
- Proximal duplex setae on tarsus-I of female more or less in line with tactile setae 4
2. Aedeagus with a knob distally 3
- Aedeagus very long slender tapering distally *fijiensis*
3. Aedeagal knob with very small anterior and posterior projections; empodium II of male with proximo ventral tridigitate spurs *macfarlanei*
- Aedeagal knob with anterior acute projection while posterior projection absent, empodium II of male with 3 pairs of proximo ventral hairs and small distinct mediodorsal spurs ... *ludeni*
4. Upper surface of aedeagal knob straight or rounded with some kind of projection *
- *empodium I of male with strong mediodorsal spur *urticae*
- Upper surface of aedeagal knob concave with anterior or posterior rounded projections berry like *neocaledonicus*

9. *Tetranychus fijiensis* Hirst

1924. *Tetranychus fijiensis* Hirst, *Ann. Mag. Nat. Hist.*, **9** (14) : 523.

1994. *Tetranychus fijiensis*, Gupta & Gupta, *Mem. Zool. Surv. India*, **18**(1) : 121-123.

Collection Records : 5(F), 3(M), West Bengal, 24-Parganas(S), Sagar Island, ex *Tabernaemontana coronaria* and *Rhizophora* sp., 5.8.2000; 3(F) and 3(M) Lothian Island, ex-bitter gourd, 19.10.2000.

Distribution : India (Assam, Karnataka, Tamil Nadu, Kerala, Nicobar Island), Nokuoro Island, Fiji, Thailand, Liki Island.

Remarks : This species is known to infest Coconut in the coastal regions of India and also in other countries. The present hosts on which this mite has been recorded in Sagar Island are hitherto unknown.

10. *Tetranychus ludeni* Zacher

1913. *Tetranychus ludeni* Zacher, *Berlin. Mitt. Boil. Anst. H.*, **14** : 40.

1994. *Tetranychus ludeni*, Gupta & Gupta, *Mem. Zool. Surv. India*, **18**(1) : 127-129.

Collection Records : 5(F) West Bengal, Sagar Island, Bamankhali, ex *Tabernaemontana coronaria*, 6.8.2000; 3(F) and 5(M), Lothian Island, ex Okra and a trailing plant locally called 'Pui sag', 19.10.2000; 3(M) Bhagabatpur Island ex guava and papaya, 18.10.2000.

Distribution : India (West Bengal, Delhi, Karnataka, Gujarat, U.P., Bihar, Tamil Nadu), South Africa, U.S.A., South America, New Zealand, Europe.

Remarks : This is a very important pest species known to occur on a wide range of vegetables mainly on beans on which it causes severe damage. In the present study, though this mite was seen to infest vegetables like lady's finger, Pui sag, chilli etc. and some ornamental plants but the characteristic damage symptoms of this species were not discernible except on lady's finger.

11. *Tetranychus macfarlanei* Baker and Pritchard

1960. *Tetranychus macfarlanei* Baker & Pritchard, *Hilgardia*, **29** : 537.

1994. *Tetranychus macfarlanei*, Gupta & Gupta, *Mem. Zool. Surv. India*, **18**(1) : 129-131.

Collection Records : 4(F), Lothian Island ex bitter gourd, 19.10.2000.

Distribution : India (West Bengal, Madhya Pradesh, Andaman Nicobar Island, Rajasthan, Gujarat, Tamil Nadu, Karnataka), Mauritius.

Remarks : In western parts of India, this mite was reported to infest brinjal and cotton seriously but in present investigation its infestation was not found on bitter gourd in serious form.

12. *Tetranychus neocaledonicus* Andre

1933. *Tetranychus neocaledonicus* Andre, *Bull. Mus. natn. Hist. Nat. Paris* (2) **5** : 302.

1994. *Tetranychus neocaledonicus*, Gupta & Gupta, *Mem. Zool. Surv. India*, **18**(1) : 131-133.

Collection Records : 3(F), 2(M) Sagar Island, Bamankhali, ex *Tabernaemontana coronaria*, Pui sag, chilli, 5.8.2000.

Distribution : India (Throughout the country), Cosmopolitan.

Remarks : This mite was reported to occur on over 200 host plants (Smith Meyer, 1987; Gupta and Gupta 1994) and is considered to be one of the most important pest species of crop plants. Its infestation in the present study was never found as serious.

13. *Tetranychus* sp.

Collection Records : 2(F) Sajnakhali ex Pasur (*Xylocarpus* sp.), 8.11.2001.

Remarks : Due to non availability of male, the specific determination could not be made. No tetranychid mite has been reported earlier on *Xylocarpus* sp. from any part of the world.

Family II. TENUIPALPIDAE Berlese

1913. Tenuipalpidae Berlese, *Acarotheca. Italica. Firenze, Tipografica di. M. Ricci.* p. 17.

1985. Tenuipalpidae, Gupta, *Handbk. Plant Mites of India*, p. 118.

Key to the genera of Tenuipalpidae known to occur in SBR

1. Hysterosoma normally with penultimate pair of dorsolateral setae flagelliform *Tenuipalpus*
 *Tenuipalpus*
 — Hysterosoma normally with penultimate pair of dorso lateral setae of normal length
 *Brevipalpus*

Genus 7. *Brevipalpus* Donnadieu

1875. *Brevipalpus* Donnadieu, *Rehcerches. pour. servir. a. l'histoire. des. Tetranyques*, p. 143-145.

1985. *Brevipalpus*, Gupta, *Handbk. PLant Mites of India*, p. 123.

Key to the species of Brevipalpus known to occur in SBR

1. Hysterosoma with six dorsolaterals *essigi*
 — Hysterosoma with five dorsolaterals 2
 2. Propodosoma without reticulation on dorsomedian region *phoenicis*
 — Propodosoma with irregular broken striations *rugulosus*

14. *Brevipalpus essigi* Baker

1949. *Brevipalpus essigi* Baker, *Amer. Midl. Nat.*, 42 : 367.

1979. *Brevipalpus essigi*, Gupta & Ghosh, *Rec. zool. Surv. India*, 77 : 199.

1985. *Brevipalpus essigi*, Gupta, *Handbk. Plant Mites of India*, p. 128.

Collection Records : 1(F) Gosaba, Tagore Society Agricultural Field Station, ex *Hibiscus rosa-sinensis*, 8.11.2001.

Distribution : India (Car Nicobar Island, West Bengal), U.S.A., Mexico.

15. *Brevipalpus phoenicis* (Geijskes)

1939. *Brevipalpus phoenicis*, Geijskes, *Meded. Landb. Hooges. Wageningen*, 42 : 230.

1961. *Brevipalpus phoenicis*, Das, *Two & Bud.*, 8 : 3-4.

1985. *Brevipalpus phoenicis*, Gupta, *Handbk. Plant Mites of India*, p. 130-131.

Collection Records : 5(F) Bamankhali, ex brinjal, 5.8.2000.

Distribution : India (Almost from all the States), Cosmopolitan.

Remarks : This is an important pest species and is known to infest over 100 host plants throughout the world. Often it causes serious damage specially to fruit trees and ornamental plants.

16. *Brevipalpus rugulosus* Chaudhri, Akbar and Rasool

1974. *Brevipalpus rugulosus* Chaudhri, Akbar and Rasool, *Univ. Agril. Lyallpur.*, p. 45-48.

1980. *Brevipalpus rugulosus*, Sadana and Chhabra, *Sci. and Cult.*, 46 : 369-370.

1985. *Brevipalpus rugulosus*, Gupta, *Handbk. Plant Mites of India*, p. 132.

Collection Records : 2(M) Sajnakhali, ex Sundari (*Heritiera fomes*), 8.11.2001; 1(F), Gosaba Tagore Society agricultural field station, ex *Oryza sativa*, 8.11.2001.

Distribution : India (Punjab, West Bengal), Pakistan.

Remarks : The occurrence of this species on Sundari (*Heritiera fomes*) and paddy form new hosts. Earlier, Sundari has no record of infestation by any tenuipalpid mite. The leaves became brittle due to its infestation.

Genus 8. *Tenuipalpus* Donnadieu

1875. *Tenuipalpus* Donnadieu, *Recherches pour servir a l'histoire des Tetranyques.*, p. 139-145.

1985. *Tenuipalpus*, Gupta, *Handbk. Plant Mites of India*, p. 138.

Key to the species of the *Tenuipalpus* known to occur in SBR

1. Hysterosoma with a differentiated extension anterior to coxa-III *micheli*
- Hysterosoma without a differentiated extension anterior to coxa-III *pernicis*

17. *Tenuipalpus micheli* Lawrence

1940. *Tenuipalpus micheli* Lawrence, *J. Ent. Soc. South Africa*, 3 : 111.

1974. *Tenuipalpus micheli*, Nageshchandra & ChannaBasavanna, IV *Int. Congr. Acarology, Austria*.

1985. *Tenuipalpus micheli*, Gupta, *Handbk. Plant Mites of India*, p. 146.

Collection Records : 1(F), Sajnakhali, ex Sundari, 8.11.2001.

Distribution : India : Karnataka, Andaman Islands, West Bengal (South 24-Parganas), South Africa.

Remarks : This species is recorded in West Bengal for the first time and its occurrence on 'Sundari (*Heritiera fomes*) forms new host record.

18. *Tenuipalpus pernicis* Chaudhri, Akbar and Rasool

1974. *Tenuipalpus pernicis* Chaudhri, Akbar and Rasool, *Univ. Agril. Lyallpur.*, p. 85.

1978. *Tenuipalpus pernicis*, Maninder & Ghai, *Oriental. Ins.*, 12 : 225.

1985. *Tenuipalpus pernicis*, Gupta, *Handbk. Plant Mites of India*, p. 146-147.

Collection Records : 3(F), 5(M) Bhagabatpur, ex papaya and guava, 17.10.2000.

Distribution : India : Delhi, West Bengal, (South 24-Parganas), Pakistan.

Remarks : No record of the species was available from West Bengal earlier and the two hosts on which it has been recorded now also form two additional host records.

Family III. ERIOPHYIDAE Nalepa

1898. *Eriophyidae* Nalepa, Das. *Tierreich.*, 4 : 5.

Genus 9. *Aceria* Keifer

1944. *Aceria* Keifer, *Bull. Calif. Dep. Agr.*, 33 : 22.

1985. *Aceria*, Gupta, *Handbk. Plant Mites of India*, p. 180-181.

19. *Aceria guerreronis* (Keifer)

1965. *Eriophyes guerreronis* Keifer, *Eriophyid studies*, B-14. *Calif. Dept. Agric. Bureau of Entomol.*, 20 pp.

Collection Records : Several males and females, Gosaba, ex *Cocos nucifera*, 8.11.2001.

Distribution : India (Kerala, Karnataka, Andhra Pradesh, West Bengal), Mexico, Venezuela, Brazil, West Africa.

Remarks : This mite was collected from underneath perianths of fallen nuts having white 'V' shaped scars. This is the first record of the species from West Bengal. It is known to cause severe damage on coconut plantation specially in Southern India and for that the planters suffer heavy economic loss amounting to lakhs of rupees.

20. *Aceria saccharini* Wang

1964. *Aceria saccharini* Wang, *Rept. Taiwan, Ser. Exp. Sta.*, 33 : 83-94.

1966. *Aceria sacchari* ChannaBasavanna, *Univ. Agri. Sci. Bull.*, p. 55-57.

1985. *Aceria saccharini*, Gupta, *Handbk. Plant Mites of India*, p. 202-203.

Collection Records : Several females, Gosaba, Tagore society agricultural field station, ex Sugarcane, 8.11.2001.

Distribution : India : Karnataka, Tamil Nadu, Andhra Pradesh, Punjab, West Bengal (South 24-Parganas).

Remarks : This mite was seen producing reddish blisters on inner leaf sheath.

Family IV TARSONEMIDAE Karger

1877. *Tarsonemidae* Karger, *Archiv. Fur, Naturgesch.*, 43 : 215.

Genus 10. *Polyphagotarsonemus* Beer & Nucifora

1965. *Polyphagotarsonemus* Beer & Nucifora, *Bull. Zool. Agri. Bachic.*, (2) 7 : 19-43.

21. *Polyphagotarsonemus latus* (Banks)

1904. *Tarsonemus latus* Banks, *Proc. U. S. Nat. Mus.*, 32(1553) : 615.

1958. *Hemitarsonemus latus*, Dutt. *Indian Farm.*, 8 : 10-12.

1985. *Polyphagotarsonemus latus*, Gupta, *Handbk. Plant Mites of India*, p. 292-294.

Collection Records : 4(F), 1(M), Sajnakhali, ex Garjan (*Rhizophora apiculata*) and Sundari (*Heritiera fomes*), 8.11.2001.

Distribution : India (Almost in all States), West Bengal (South 24-Parganas), cosmopolitan.

Remarks : This mite is a serious pest of vegetables, ornamental plants and fruit trees in India, causing mostly crinkling and curling of young leaves. Hence, its occurrence on Sundari and Garjan is interesting and both form new host records. However, no crinkling and curling symptoms were seen in the present study on the host plants.

SUMMARY

The present paper provides a taxonomic account of phytophagous mite fauna occurring on mangrove vegetation and agri-horticultural crops in the Sundarban. Biosphere Reserve and reports 21 species belonging to 10 genera and 4 families of those 6 species viz. *Eotetranychus hicoriae* (McG.), *Brevipalpus rugulosus* Chaudhri *et al.*, *Tenuipalpus micheli* (Lawrence), *Tenuipalpus pernicious* Chaudhri *et al.*, *Aceria guerreronis* (Keifer) and *Aceria saccharini* Wang are recorded from West Bengal for the first time and 7 plants form new host records.

ACKNOWLEDGEMENTS

The authors are thankful to the Ministry of Environment and Forests, Govt. of India, for financing this Project, without which this work would not have been possible.

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