

STUDIES ON THE LEAF HOPPER FAUNA OF
MEGHALAYA AND ADJACENT AREAS
II, CICADELLID COLLECTIONS FROM MANAS
AND DIBRUGARH (ASSAM) SURVEYS

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(With one Text-figure)

The present study deals with the collections of Manas Survey 1974 made by the author and that of Dibrugarh Survey 1974 made by Mr. S. K. Chanda. In all 12 species are reported of which 6 species are recorded for the first time from Assam viz., *Arya rubrolineata* Dist., *Phrynomorphus indicus* (Dist.), *Nephotettix malayanus* Ishihara & Kawase, *Deltocephalus dorsalis* Motch; *Deltocephalus distinctus* Motsch. and *Nephotettix malayanus* I. & K. Variations found in the colour of tegmen and vertex have been described. Two different kinds of peculiar males found in the same species are also described and illustrated.

SYSTEMATIC ACCOUNT

Family CICADELLIDAE

1. *Tettigoniella spectra* (Distant)

1853. *Tettigonia albida* (nec walker) Signoret, *Ann. Soc. Ent. Fr. t. 21, & 3* : 663.

1908. *Tettigoniella spectra* Distant. New name for *Tettigonia albida* Signoret 1853 not *Tettigonia albida* Walker 1851. *Fauna Br. India* 4 : 211.

Material.—8 ♂♂, 12 ♀♀; Patacharkuchi (Kamrup), 20.xii.74 K. R. Rao; 9 ♂♂, 10 ♀♀ Saikhowa R. F. Dirak, Dibrugarh 7.xi.74, S. K. Chanda.

Notes.— Basal spot on vertex variable in shape. Eye brown, tegmen pale ochraceous. Reported from Calcutta, Pusa, MALDIVE islands, Minikoi, SRI LANKA and the PHILIPPINES.

2. *Hecalus porrectus* (Walker)

1858. *Acocephalus porrectus* Walker, *List. Hom. Suppl.* : 262.

1908. *Thomsoniella porrecta* (Walker) : Distant, *Fauna Br. India* 4 : 278.
 1918. *Parabolocratus porrectus* (Walker) : Distant, *Fauna Br. India* 7 : 31.
 1973. *Hecalus porrectus* (Walker) : Morrison, *Pacif. Ins.* 15 : 379-438.

Material.— 2 ♀ ♀ ; Dibru R. F. Srijan, 20.xi. 74, S. K. Chanda.

Notes.— Pronotum, vertex and scutellum with pale orange red fasciae; vertex beneath with a black line at the anterior margin. This species is recorded from Maharashtra, Calcutta, Assam, Manipur, BURMA, PHILIPPINES, and Queens land.

3. *Hecalus albomaculatus* (Distant)

1908. *Thomsoniella albomaculata* Distant, *Fauna Br. India*, 4 : 280.
 1918. *Parabolocratus albomaculatus* (Distant) : Distant, *Fauna Br. India*, 7 : 32.
 1973. *Parabolocratus albomaculatus* (Distant): Rao, *Zool. Anz.*, 19 (1/2) 94.
 1973. *Hecalus albomaculatus* (Distant) : Morrison, *Pacif. Ins.* 15 : 379-438.

Material.— 2 ♀ ♀ , Dibru R. F. Srijana, Dibrugarh, 20.xi. 74, S. K. Chanda.

Notes.— Apical areas of tegmen dark brown with white spots. Scutellum with an angulate line before apex.

This is reported from Maharashtra, Bengal, Assam and Manipur.

4. *Arya rubrolineata* Distant

1908. *Arya rubrolineata* Distant, *Fauna Br. India*, 4 : 338.
 1967. *Arya rubrolineata* Distant; Rao *J. Bombay nat. Hist. Soc.* 64 (1) : 130.

Material.— 1 ♀ ; Kahitana, Manas, 16.xii. 74, K. R. Rao.

Notes.— Scutellum with three linear discal spots. Oblique spots on the vertex sanguineous. Abdomen beneath pale yellow with median round black spots.

Previously known from W. Bengal and Manipur. From Assam it is recorded for the first time.

5. *Phrynomorphus indicus* (Distant)

1908. *Athysanus indicus* Distant, *Fauna Br. India*, 4 : 344.
 1918. *Phrynomorphus indicus* (Distant): *Fauna Br. India*, 7 : 51.

Material.— 1 ♀ ; Kahitama (Kamrup), Mairiver, 16.xii.74, K. R. Rao.

Notes.— Face devoid of granules. An arcuate impressed line on the anterior area of pronotum on which small piceous spots occur.

Previously recorded from Maharashtra, Punjab, NEPAL, Pusa, Bengal and Manipur. It is reported for the first time from Assam.

6. *Nephotettix virescens* (Distant)

1908. *Selenocephalus virescens* Distant, *Fauna Br. India* 4 : 291.
 1908. *Nephotettix vipunctatus* (Fabr.), Distant, *Fauna Br. India*, 4 : 359.
 1971. *Nephotettix virescens* (Distant): Ghauri, *Bull. Ent. Res.*, 60 : 484.

Material.— 3 ♀ ♀, Patacharkuchu, 20.xii. 74, K. R. Rao; 4 ♂ ♂, 6 ♀ ♀, Saikhowa R. F. Dirak, 7.xi.74. S. K. Chanda.

Notes.—Vertex unmarked and with a distinct ridge anteriorly much longer in middle than next to eye.

Reported from INDIA, PAKISTAN and the FAR EAST.

7. *Nephotettix nigropictus* (Sta^ol)

1870. *Thamnotettix nigropicta* Sta^ol, *ebv. vet. AK. Farh*; 740.
 1908. *Nephotettix apicalis* (Sta^ol): Distant, *Fauna Br. India*, 4 : 360.
 1971. *Nephotettix nigropictus* (Sta^ol): Ghauri, *Bull. Ent. Res.* 60 (3) : 491.

Material.— 15 ♂ ♂, 25 ♀ ♀; Patacharkuchi, 21.xii. 74, K. R. Rao; 2 ♂ ♂, 6 ♀ ♀ Kahitama, Phura river, 12.xii.74, K. R. Rao; 15 ♂ ♂, 25 ♀ ♀, Srihowa R. F. Dirak, 7.xi.74, S. K. Chanda.

Notes.— Vertex with a distinct ridge anteriorly and much longer in middle than next to eye.

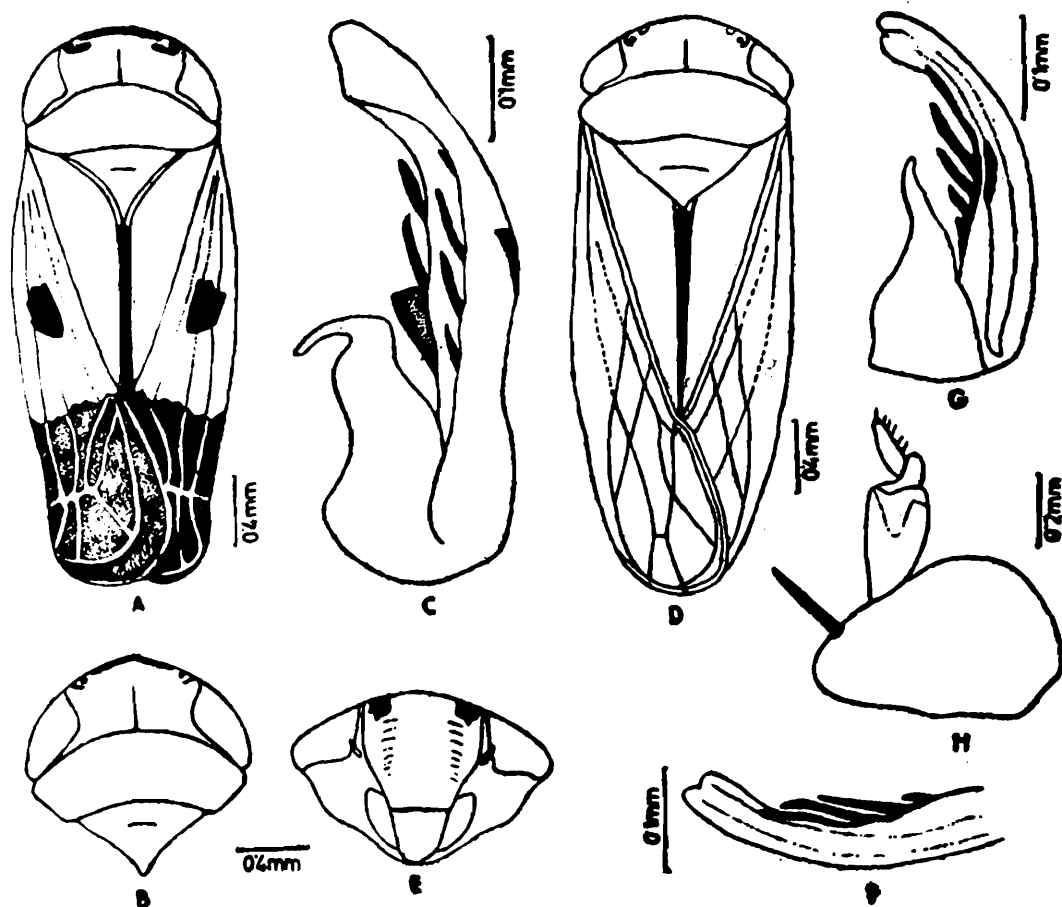
Reported from PALESTINE, INDIA and the FAR EAST

8. *Nephotettix malayanus* Ishihara & Kawase

1968. *Nephotettix malayanus* Ishihara & Kawase, *Appl. Ent. Zool.*, 3 : 119.
 1971. *Nephotettix malayanus* Ishihara & Kawase: Ghauri, *Bull. Ent. Res.*, 60(3) : 496.

Material.— 7 ♂ ♂, 7 ♀ ♀, Kahitana Phura river, 15.xii. 74, K. R. Rao.

Notes.—Ishihara and Kawase (1968) while describing the species mention the presence or absence of a central black spot on tegmen and aedeagles as having 4-5 spines on each side. Ghauri (1971) redescribing the species mentions four pairs of spines only on the aedeagus. The author in the present study has come across four normal males (Text-fig. 1A) where the tegmen has a central black spot and the submarginal band of the vertex represented by short transverse traces behind the ocelli, the aedeagus having four pairs of spines. Here two peculiar males are also met with, where the submarginal band is in the form of short streaks obliquely placed behind the ocelli (Text-fig. 1B) and the aedeagus with 4+3 spines (Text-fig. 1C), Regarding, the second peculiar kind



Text-fig. 1— *Nephrotettix malayanus* Ishihara & Kawase, A-Dorsal view of normal ♂ Semidiagramatic, B—A Peculiar ♂ Head and thorax-Dorsal view, C—Aedeagus of the above ♂ — latero-ventral view, D—Dorsal view of a second peculiar ♂ — Semi diagramatic, E—Face of the above ♂, F & G— Lateral views of its aedeagus, H—Pygofer with anal tube- lateral view.

studied here, the male shows two small round black spots on the anterior margin of vertex (Text-figs. 1D & E), sub-marginal band as short traces behind the ocelli, marginal band being absent, head pronotum and scutellum immaculate, aedeagus (Text-fig. 1F, G) with 4+5 spines, basal plate arms with hook like projection on the outer side, distodorsal and distoventral corners of pygofers round (Text-fig. 1H), pygofer spine single. Seven females of the species studied here conform to the description given by Ghauri.

9. *Cicadula montanus* (Distant)

1908. *Deltocephalus montanus* Distant, *Fauna Br. India*, 4 : 384.

1930. *Cicadula montanus* (Distant): Pruthi, *Mem. Indian Mus.*, 11(1) : 56.

Material—1 ♂, 2 ♀, Kahitama, Phura river, 12.xii. 74, K. R. Rao.

Notes.— Vertex anteriorly obtuse. Pronotum transversely striated. Scutellum with minute dark spots front of the transverse impression. So far known from Simla, Khashi, Dalhousie and Muree hills. Recorded here for the first time from Assam.

10. *Cicadula maculatus* Pruthi

1930. *Cicadula maculatus* Pruthi, *Mem. Indian Mus.*, 11(1) : 58.

Material.— 1 ♂, Kahitama, Phura river, 12. xii. 74, K. R. Rao.

Notes.— Vertex with three black spots near the apex. Scutellum with a black spot near each basal angle. The outer branch of the first vein reaching the apex of tegmina. Reported from Calcutta, Darjiling and Gangtok.

11. *Deltocephalus dorsalis* Motsch

1859. *Deltocephalus dorsalis* Motsch; *Ftud. Ent.* : 114.

1908. *Deltocephalus dorsalis* Motsch.: Distant, *Fauna Br. India*, 4 : 380.

1918. *Deltocephalus dorsalis* Motsch.: Distant, *Fauna Br. India* 7 : 81.

Material.— 3 ♂♂, 1 ♀, Shaikhowa R. F. Dirak, 7.xi. 74, S. K. Chanda.

Notes.— Vertex with two cross shaped spots at the transverse impression. Pronotum with four obscure longitudinal fasciaw, Scutellum clear. Previously known from Bengal, South India and BURMA. Recorded from Assam for the first time.

12. *Deltocephalus distinctus* Motsch.

1859. *Deltocephalus distinctus* Motsch; *Etud. Ent.* : 112.

1908. *Deltocephalus distinctus* Motsch.: Distant, *Fauna Br. India*, 4 : 382.

Material.— 1 ♂, Kahitama, Mai river, Phalguri, 16.xii.74, K. R. Rao.

Notes.— Anterior margin of vertex black with five spots. Tegmen without macular shadings.

Previously recorded from SRI LANKA. It is reported for the first time from Assam.

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SUMMARY

In all 159 examples belonging to twelve species have been studied from the collections made from Manas and Dibrugarh surveys. Four new records from Assam have been established. Redescription of the species *Nephotettix malayanus* Ishihara and Kawase was done. Distributional records for all the species have been provided.

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