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Illustrated Redescription of Two of Pruthi's Species of Cicadelloidea from India

(Homoptera)

With 18 Figures

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London

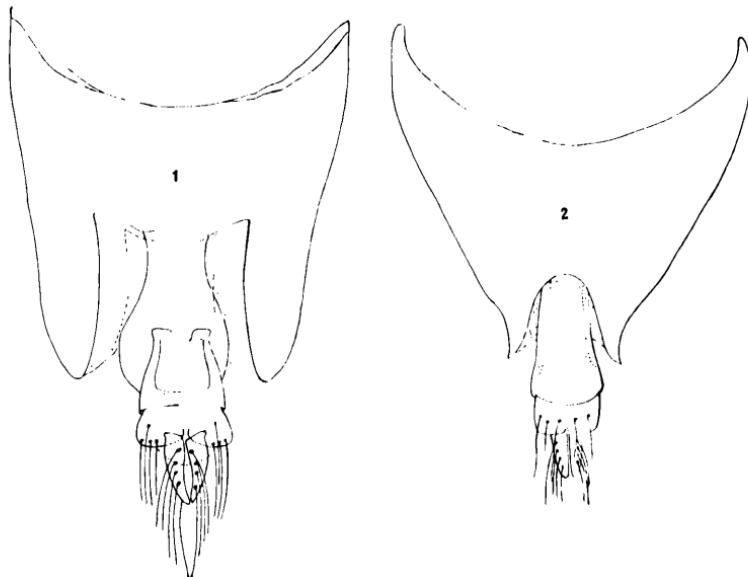
Abstract. Based on material received from India for identification and compared with illustrations by PRUTHI (1930), two of his species, *Thamnotettix prabha* and *T. veinatus*, are further illustrated from unmounted dissected parts of male genitalia and anal tube, and described. These species are transferred to *Recilia* EDWARDS.

Introduction

During 1930–1936 HEM SINGH PRUTHI (1930, 1934 and 1936) published his monumental works on the Indian Jassidae. These studies included illustrations and descriptions of male genitalia. These features are of great taxonomic value but were lacking in otherwise admirable works by W. L. DISTANT (1907 and 1918). However, even PRUTHI's species needed revision to fulfil two requirements; first, as the figures in PRUTHI's papers were based on permanent slides of these structures, a technique considered proper at that time, the views were only dorsoventral and rather distorted because of the parts pressed down under coverslip, and it was necessary to draw figures from dissected parts floating free in liquid medium so as to convey their natural outline; and secondly, as these species are considered to belong to a genus different from their original assignment, to transfer them to their proper genus and justify this action.

Earlier the present writer, being unable to borrow types of PRUTHI's species from the Zoological Survey of India, Calcutta, on account of their policy of not loaning type material, published new combinations of those of PRUTHI's species which were easily identifiable with the help of PRUTHI's illustrations (GHAURI, 1964). After that, a series of papers purporting to restudy the types of PRUTHI's species were published by DATTA (c. g. 1972). In some respects this work is not considered by the present writer (c. f. PRUTHI, 1930, DATTA, 1972 and the present contribution) as being sufficient to do justice to the type material. The objectives of the present contribution, therefore, are

1. To establish a minimum standard for revisionary work, as far as PRUTHI's species are concerned.
2. To illustrate and redescribe two potential pests.
3. To assign these species to their proper genus and justify this action.



Figs. 1+2. 1: pygofer and anal tube, dorsal view (setae of pygofer not shown, mainly for anal tube), of *Recilia prabha* (PRUTHI) – 2: the same of *Recilia veinatus* (PRUTHI).

Genus *Recilia* EDWARDS

EDWARDS, 1922, 204. Type species *Jassus coronifera* MARSHALL, 1866, 222.

A careful perusal of KRAMER's paper (1962) dealing with the definition of *Recilia* will clearly show the differences between *Recilia sensu stricto* and *Deltcephalus*. To recapitulate these points, suffice it to mention that whereas the anterior arms of the basal plate (connective) are anteriorly divergent in *Deltcephalus*, these in *Recilia* are approximate (Figs. 6 and 17) and the gonopore of *Recilia* is dorsal and ill-defined while the gonopore in *Deltcephalus* is apical and well-defined. The aedeagus in both these genera is fused with the basal plate (connective). *Recilia* and *Deltcephalus* are very different from *Thamnotettix* ZETTERSTEDT (1838) (type species *Cicada confinis* ZETTERSTEDT) vide RIBAL T (1952), in which PRUTHI placed the species under study.

Some of the structures which are being described for the first time now, based on these two species, may most probably be characteristic of the genus *Recilia*.

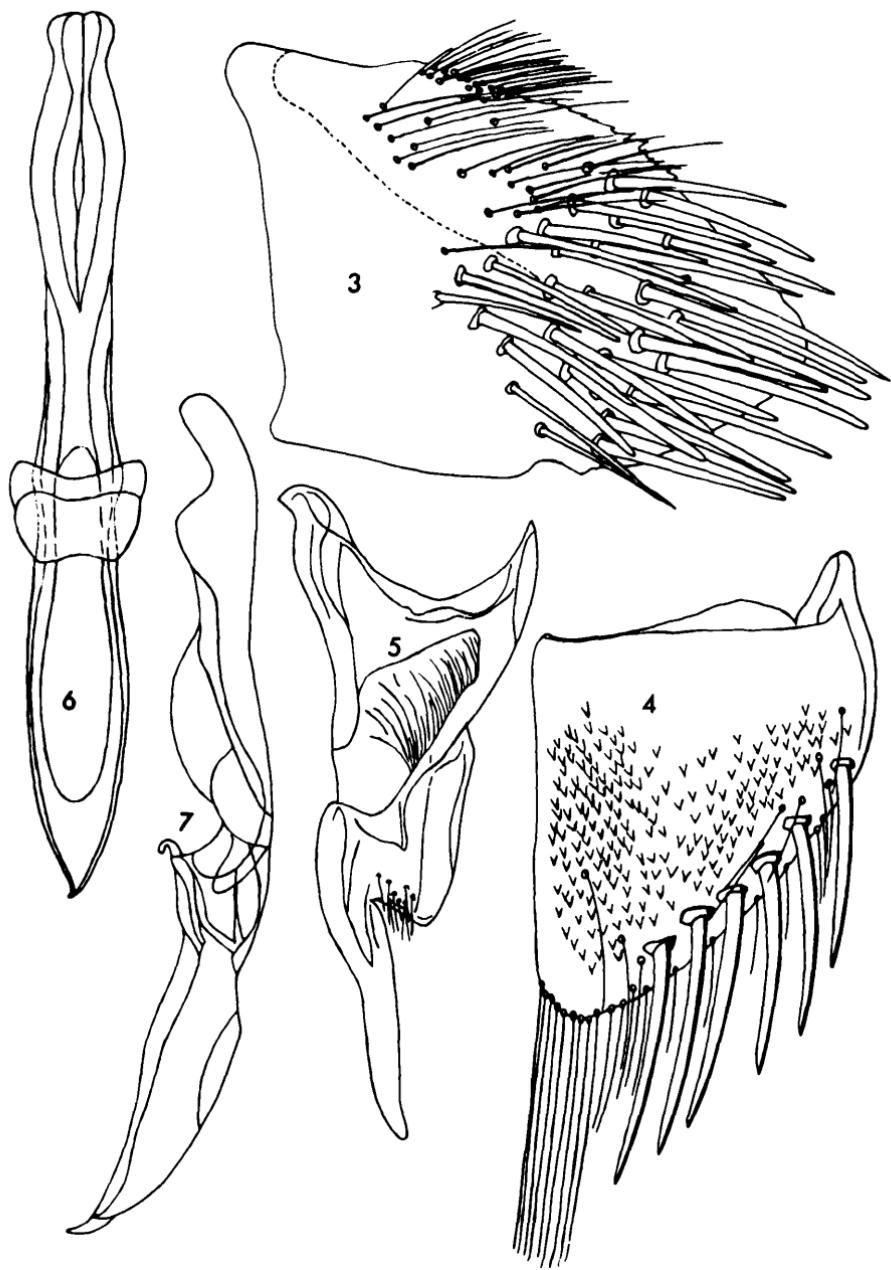
Recilia prabha (PRUTHI) comb. n.

Thamnotettix prabha PRUTHI (1930)

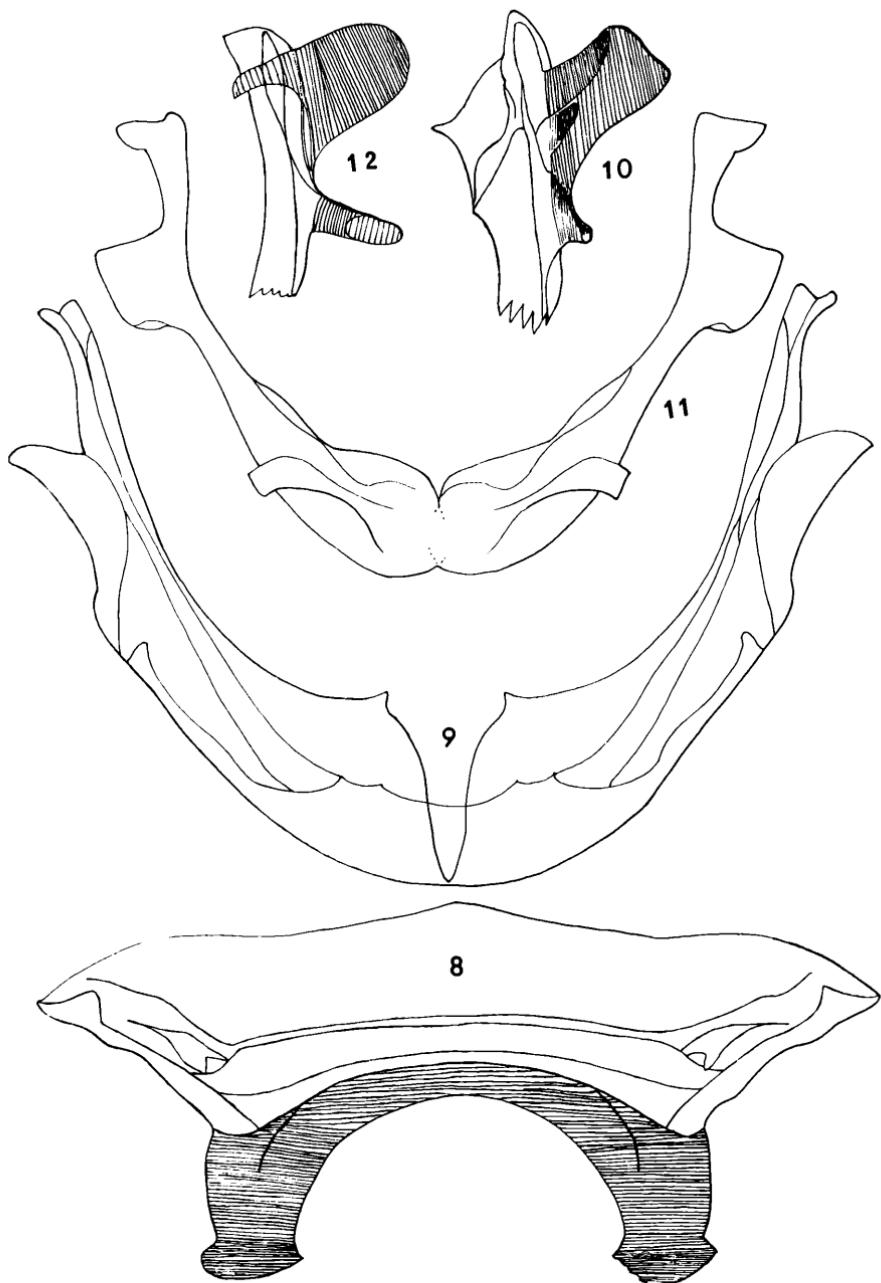
Thamnotettix prabha PRUTHI: DATTA (1972)

Male genitalia and anal tube

Pygofer, anal tube In dorsal view (Fig. 1) with a deep and wide emargination posteriorly, covered by a membrane accommodating anal tube dorsally membranous and partly so ventrally as well; viewed laterally (Fig. 3) upper margin with a close group of fine setae, margin itself serrated beyond smooth basal margin, submarginally with fine scattered setae, disc with roughly five rows of macrosetae.



Figs 3-7. 3: pygofer of *R. prabha*, lateral view – 4: subgenital plate of *R. prabha*, ventral view – 5: paramere of *R. prabha* – 6: basal plate and aedeagus of *R. prabha*, dorsal view – 7 the same, lateral view.



Figs. 8–12. 8: ventral second apodeme of *R. prabha* — 9: ventral first apodeme of *R. prabha* — 10: central part of the same, internal view — 11: ventral first apodeme of *R. veinatus* — 12: central part of the same, internal view.

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Subgenital plate (Fig. 4): Outer margin curving, with fine long marginal setae, forming a "tail" at apex, a few similar fine setae submarginally, submarginal thick setae (macrosetae) located away from apex as well as base, surface with conical sclerotised markings.

Basal plate (connective) (Figs. 6 and 7): Anterior arms almost fused together, also fused with aedeagus.

Paramere (style) (Fig. 5): External claw long and a little sinuate, internal claw very short and thick, with a group of small setae.

Aedeagus (Figs. 6 and 7): "Boat-shaped" gonopore dorsal and ill defined, in lateral view pointed apex much more clearly visible, almost straight.

Basal apodemes (Figs. 8, 9 and 10): In anterior view of first apodeme a very elaborate structure of which central part in internal view is shown in Fig. 10. The second apodeme robust, comparatively simple with short arms separated by a semicircular arc. The description and illustration of body colour and structure by PRUTHI (1930) and DATTA (1972) is sufficient and is not repeated here.

Material examined India, Shillong, VI. 1979 (B. L. BARUA), 3 & 6/ C.I.E. A 11351, on weeds near potato field, 3 ♂♂ 1 immature. All in BM (NH), London.

Recilia veinatus (PRUTHI) comb. n.

Thamnotettix veinatus PRUTHI (1930)

Thamnotettix veinatus PRUTHI DATTA (1972)

Male genitalia and anal tube

Pygofer, anal tube (Figs. 2 and 14): In dorsal view with a deep emargination posteriorly covered by a membrane accommodating a long anal tube mostly membranous; viewed laterally dorsal margin in middle with a close group of long fine setae, actual margin serrated, disc with roughly five rows of macrosetae.

Subgenital plate (Fig. 15): External margin mostly straight with five macrosetae located in middle area, fine long setae all along margin and forming a "tail" at apex, disc with some similar microsetae, surface covered with conical sclerotised structures with an apical prolongation. The straight margin of subgenital plate is atypical of the genus *Recilia*.

Basal plate (connective) (Figs. 17 and 18): Anterior arms approximate, almost fused together, also fused with aedeagus.

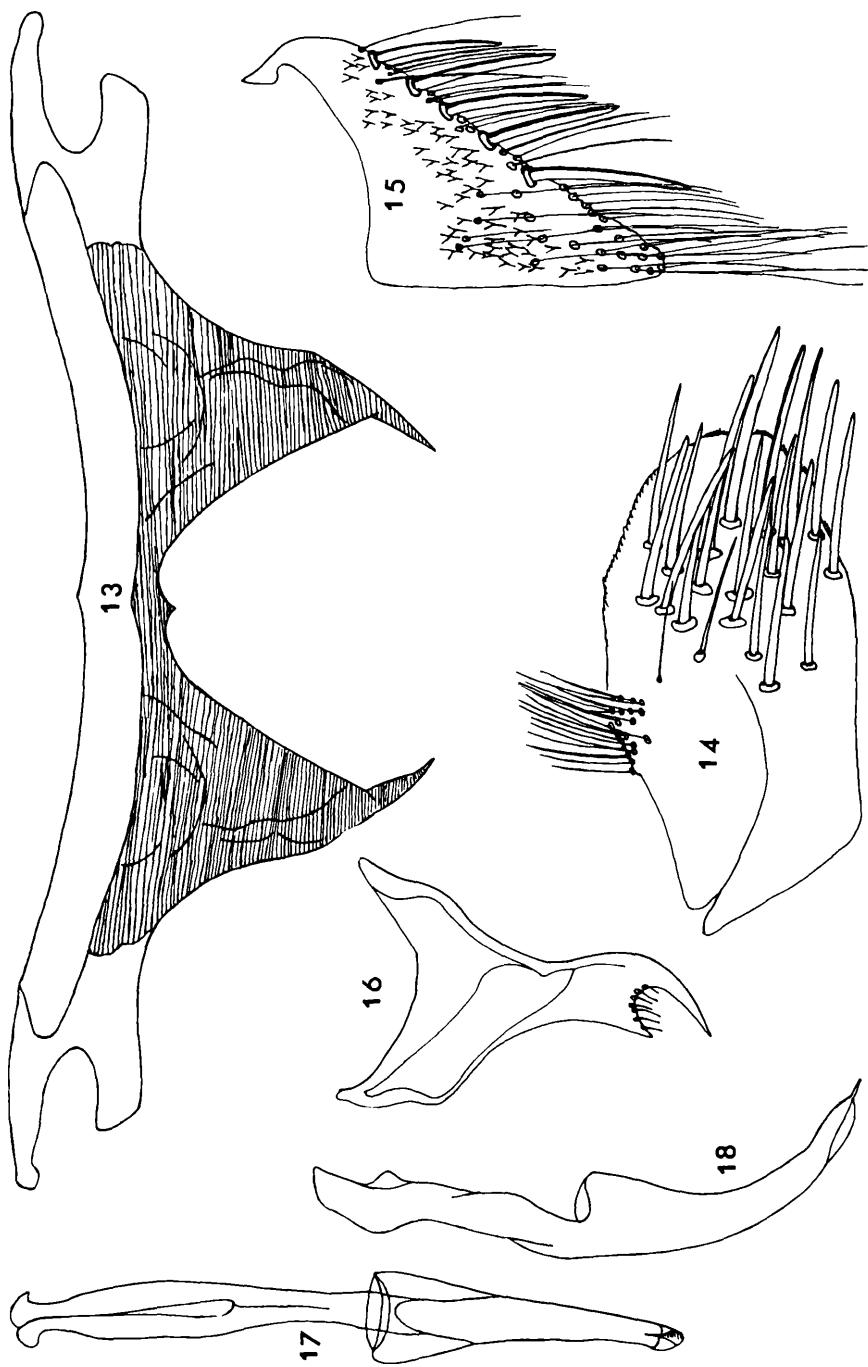
Paramere (style) (Fig. 16): External claw short, curved with sharp tip, internal claw pointed, short, with small setae.

Aedeagus (Figs. 17 and 18): In dorsal view tip upturned, gonopore ill-defined, viewed laterally pointed apex much more clearly visible, gently curved.

Basal apodemes (Figs. 11, 12 and 13): In anterior view first apodeme much complicated, central part in internal view is shown in Fig. 12; generally similar to that of *R. prabha* but specifically different (c. f. Figs. 9, 10 and 11, 12). The second apodemal arms pointed, basally triangular separated by a deep excavation (Fig. 13).

The description and illustration of body colour and structure was sufficiently done by PRUTHI (1930) and DATTA (1972).

Material examined India, Orissa, Cuttack, 15. IX. 1978 (K. NATARAJAN), 29/ C.I.E. A 11133, on grass, 1 ♂. In BM (NH), London.



Figs. 13-18. 13: ventral second apodeme of *R. veinatus* — 14: pygofer of *R. veinatus*, lateral view — 15: subgenital plate of *R. veinatus*, ventral view — 16: paramere of *R. veinatus* — 17 basal plate and aedeagus of *R. veinatus*, dorsal view — 18: the same, lateral view.

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