

## Aphid parasitoids from Bangladesh (Hymenoptera: Aphidiidae)

by

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**ABSTRACT.** — *Trioxys (Binodoxys) greenideae* sp. n., a parasitoid of *Greenidea formosana* (Maki) is described. The description of *Archaphidus greenideae* Starý & Schlinger, 1967 has been complemented from material reared from *Greenidea formosana*. Host records of *Trioxys indicus* Subba Rao & Sharma and *Lipolexis scutellaris* Mackauer, both widely distributed species over most of the Oriental region, are presented.

### INTRODUCTION

The area of Bangladesh has remained completely unknown where it concerns parasitoids of aphids. Hence even preliminary information is valuable for indicating faunal relations among the particular areas of the Oriental region.

A. van Harten has collected some parasitoid material during his stay in Bangladesh in 1981 and the results of its elaboration are presented in this paper.

### REVIEW OF SPECIES

#### *Archaphidus greenideae* Starý & Schlinger 1967

*A. greenideae*, the type-species of *Archaphidus* Starý & Schlinger, 1967 was described from a single specimen reared from *Greenidea ficicola* Takahashi in Taiwan. However, as the description was made on the basis of a mounted specimen, a number of important characters have remained undescribed in necessary detail. Using the opportunity of rearing another specimen from *Greenidea formosana* (Maki) in Bangladesh, we have dissected and mounted it as a slide with the aim to complement the original description in several important respects.

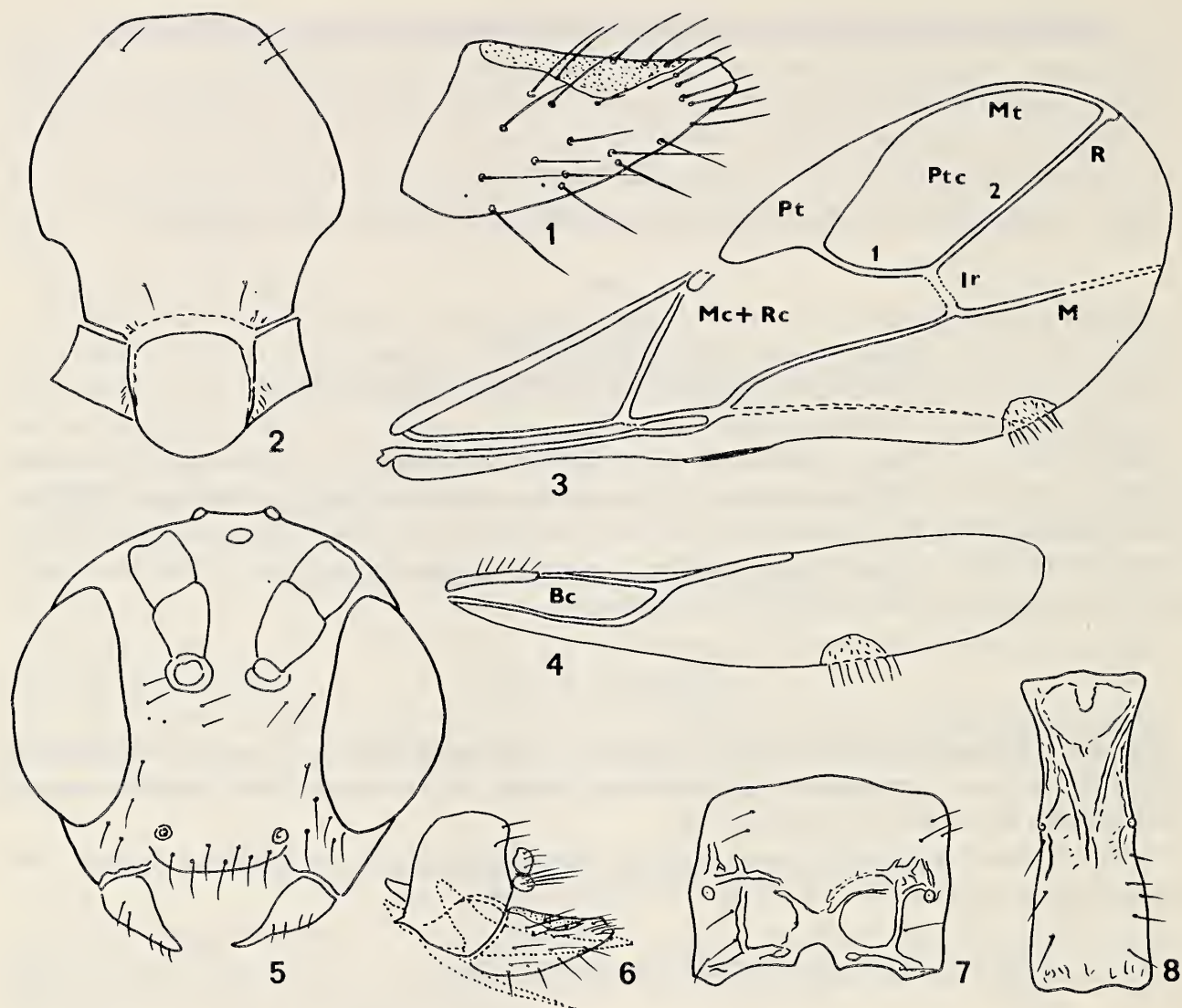
Female. — Head (fig. 5). Eyes large. Gena equal to about 1/5 of eye-length. Tentorial index (i.e. tentorio-ocular line over intertentorial line, relative length) 0.55. Maxillary palpi 4-segmented, labial palpi 3-segmented.

Mesonotum (fig. 1) without notaulices, almost hairless. Propodeum (fig. 7) with divergent carinae and two lateral areolae in the lower portion, sparsely haired. Forewing (fig. 3): pterostigma 3 times as long as wide. Radial abscissa 1 equal to half of the abscissa 2. Interradial vein somewhat shorter than half of radial abscissa 1. Hindwing (fig. 4).

Tergite 1 (fig. 8) more than 3 times as long as wide across spiracles, with two divergent carinae in the basal portion, somewhat rugose in the central third; spiracular tubercles poorly prominent, situated at the half of the tergite. Genitalia (figs. 1, 6): ovipositor sheaths triangular, slightly curved upwards, with indurated upper margin, curved, with numerous long hairs. Ovipositor lanceolate at the apex.

Note. — The shape of the ovipositor sheaths seems to represent an isolated type when compared with the other genera of the aphidiid parasitoids (cf. Starý, 1976).

Material. — *Greenidea formosana* — Bangladesh: Dacca, 17.II.1981, on *Psidium guajava* L., 1 ♀ (A. van Harten).



Figs. 1-8. *Archaphidus greenideae* Starý & Schlinger. 1, ovipositor sheath, detail; 2, mesonotum; 3, forewing; 4, hindwing; 5, head, frontal view; 6, genitalia; 7, propodeum; 8, tergite 1. Abbreviations: Bc: basal cell; Ir: Interradial vein; M: Median vein; Mc: Median cell; Mt: Metacarpus; Pt: Pterostigma; Ptc: Pterostigmal cell; R: Radial vein (abscissa 1, 2); Rc: Radial cell.

*Lipolexis scutellaris* Mackauer, 1962

*Toxoptera odinae* (van der Goot) — Dacca, 23.II.1981, on unidentified plant (A. van Harten).

Without host data — Joydebpur, 23.II.1981, in a Malaise-trap (A. van Harten).

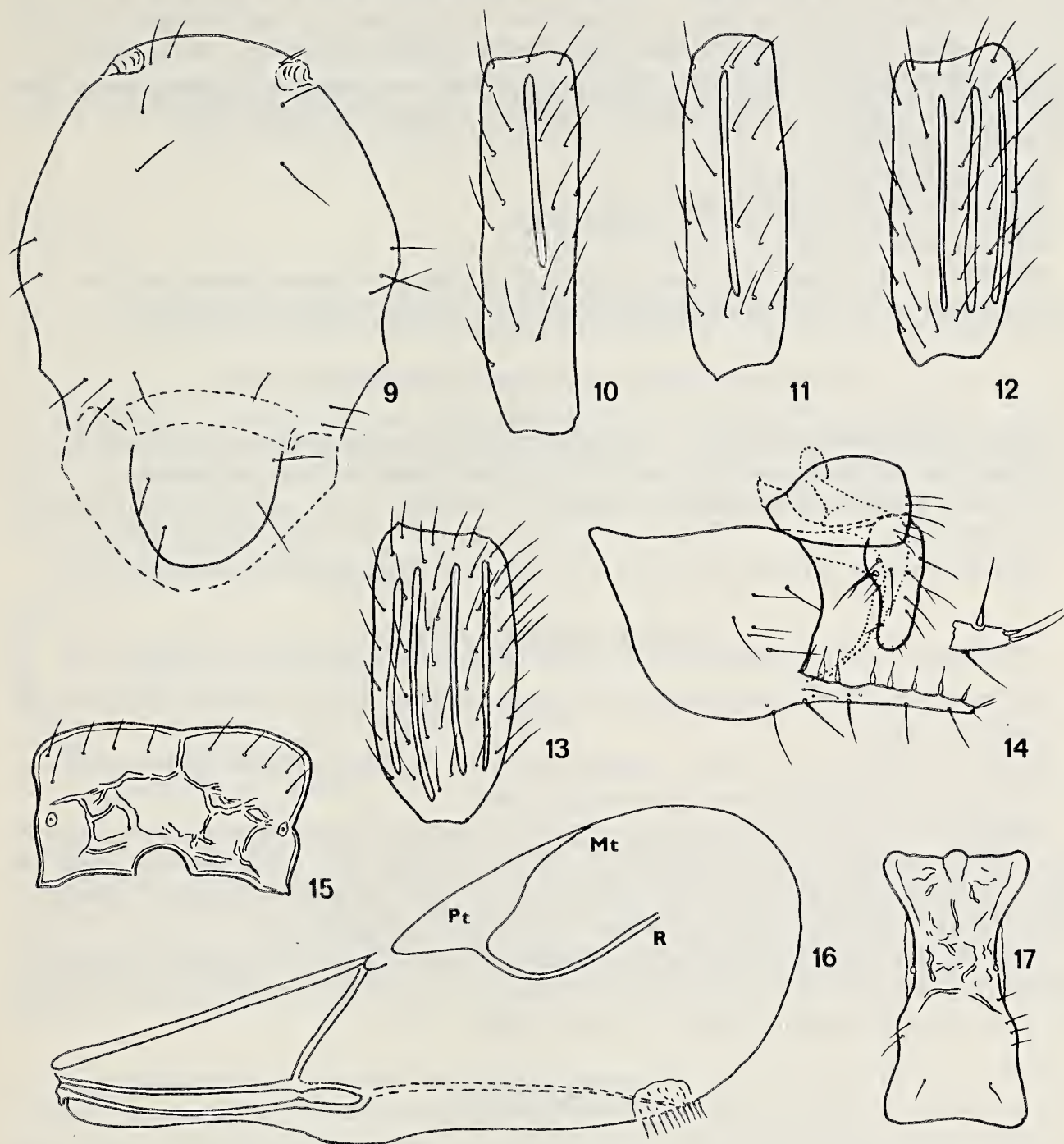
*Trioxyx* (*Binodoxys*) *greenideae* sp. n.

It is easily distinguishable from all its Oriental congeners by the shape of the prongs of the last abdominal sternite: they are relatively strong, straight, bearing 7 stout hairs on their dorsal surface and 2 long simple bristles at the apex.

The name of the new species is derived from that of its host, *Greenidea formosana*.

Female. — Eyes large. Gena equal to 1/10 of the eye-length. Tentorial index 0.22. Antennae 11-segmented, thickened to the apex; Flagellar segment (= F) 1 (fig. 10) 3.5 times as long as wide, with 3 rhinaria, the hairs slightly longer than half of segment diameter; F<sub>2</sub> (fig. 11) about 1/7 shorter than F<sub>1</sub>, with the same length of the hairs; F<sub>5</sub> (fig. 12) 3 times as long as wide, wider than F<sub>1</sub>, maximum length of the hairs equal to half of segment diameter; preapical F segment





Figs. 9-17. *Trioxys (Binodoxys) greenideae* sp. n., ♀ paratype. 9, mesonotum; 10, F<sub>1</sub>; 11, F<sub>2</sub>; 12, F<sub>3</sub>; 13, preapical F segment; 14, genitalia (inset — apex of the prongs, detail); 15, propodeum; 16, forewing; 17, tergite 1.

(fig. 13) twice as long as wide, the hairs distinctly shorter than half of segment diameter.

Mesonotum (fig. 9) with very sparse hairs. Propodeum (fig. 15) with central pentagonal areola, the carinae often with irregular rugosities. Forewing (fig. 16): pterostigma 3 times as long as wide; metacarpus short, equal to about 1/3 of pterostigma length. Radial vein about 3 times as long as the width of pterostigma.

Tergite 1 (fig. 17) almost 3 times as long as wide at spiracles; primary (= spiracular) tubercles situated somewhat before the half of the tergite, poorly prominent; secondary tubercles also poorly prominent, situated about at the end of the second half of the tergite; the distance between primary and secondary tubercles shorter than the width at spiracles; rugose in the basal half. Genitalia (fig. 14): prongs strong, straight, with 7 long, basally dilated, hairs on the upper surface, and with 2 long and simple apical hairs.

Coloration: Head dark brown; clypeus brown; mouthparts yellowish brown, apex of mandi-

bles dark. Antennae: scape, pedicel, F<sub>1</sub> and most of F<sub>2</sub> yellow, the rest of flagellum brown. Thorax yellow, sometimes with obscured spots on the lobes of mesonotum. Wings hyaline, venation light brownish. Legs yellow, apices of tibiae and tarsi obscured. Abdomen brown; tergite 1 yellow, tergites 2 and 3 yellow with dark lateral spots. Ovipositor sheaths dark brown, prongs light brownish.

Body length about 1.7 mm.

Male. — Coloration similar to that of the female.

Mummy brownish yellow.

Material. — *Greenidea formosana* — Dacca, 17.II.1981, on *Psidium guajava*, holotype ♀, 1 ♀, 1 ♂ paratypes (A. van Harten). Deposition: Coll. P. Starý (Czechosl. Acad. Sci.).

*Trioxys (Binodoxys) indicus* Subba Rao & Sharma, 1959

*Hysteroneura setariae* (Thomas) — Rajshahi, 19.II.1981, on Gramineae (A. van Harten).

*Myzus persicae* (Sulzer) — Joydebpur, 17.II.1981, on *Brassica* cv. (A. van Harten).

*Toxoptera odinae* (van der Goot) — Rajshahi, 19.II.1981, on *Murraya paniculata* (L.) Jack. (A. van Harten).

Without host data — Dacca, 18.II.1981, on *Citrus limon* (Burm.). (A. van Harten).

#### DISTRIBUTION OF SPECIES

Despite of the relatively small quantity of parasitoid material, some zoogeographical conclusions may be drawn.

*Lipolexis scutellaris* and *Trioxys indicus* are widely distributed species over most of the Oriental area; both species have a broad range of hosts.

Apparently, as can be derived from the parasitoid spectrum of those aphids in other areas of the Oriental region, a peculiar parasitoid complex is associated with the Greenideid aphids. Of those parasitoids, *Trioxys (B.) greenideae* is a new species, whereas *Archaphidus greenideae* proved more widely distributed, viz. at least from Taiwan to Bangladesh.

More detailed information on the distribution and host ranges of the particular species as well as on the fauna of the whole Oriental area can be obtained in Starý (1975), Starý & Ghosh (in prep.), Starý & Schlinger (1967) and Takada (1968).

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