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A NEW ORTHOTYLINE MIRID (HETEROPTERA) FROM SYRIA

by

PIETER H. VAN DOESBURG

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A new species, *Zanchius stami* Van Doesburg (Insecta, Heteroptera, Miridae, Orthotylinae) from Syria, Deir-ez-Zor, is described and illustrated. Late eggs taken from the female abdomen have a peculiar chorionic process. It was found living (predaciously?) on cotton plants. It is compared with the closely related *Z. alatanus* Hoberlandt, 1956. Type specimens are deposited in the Rijksmuseum van Natuurlijke Historie, Leiden, two paratypes in the Národní Muzeum, Praha.

P. H. van Doesburg, Rijksmuseum van Natuurlijke Historie, P.O. Box 9517, 2300 RA Leiden, The Netherlands.

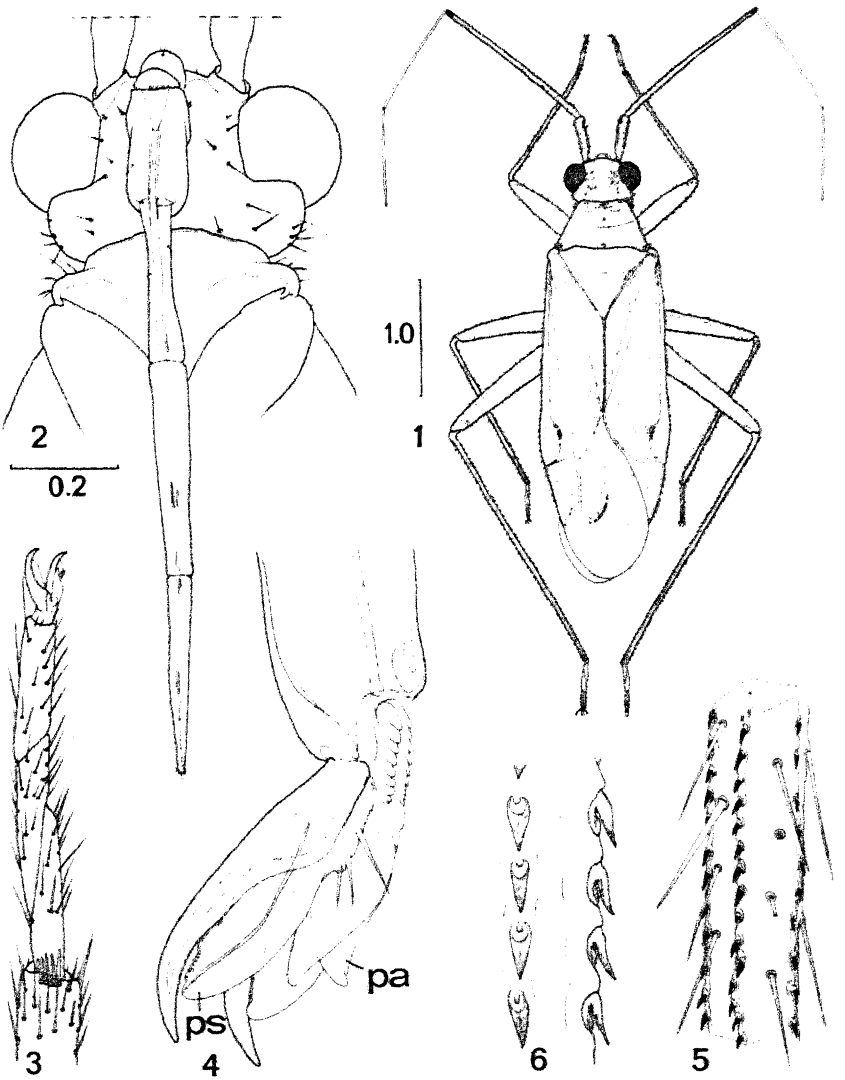
INTRODUCTION

From Dr. Pieter A. Stam, working for the FAO in Syria, the author received for identification, among others, a series of small mirid found on cotton plants. It turned out to belong to an undescribed species of *Zanchius* Distant, 1904 the description of which is here presented. It is a pleasure to dedicate this species to its discoverer.

DESCRIPTION

Zanchius stami spec. nov.

Habitus. — Elongate, parallel, almost four times as long (including wings) as wide (across shoulders); total length 3.3-3.9 mm; colour pale yellowish, greenish tinged above.



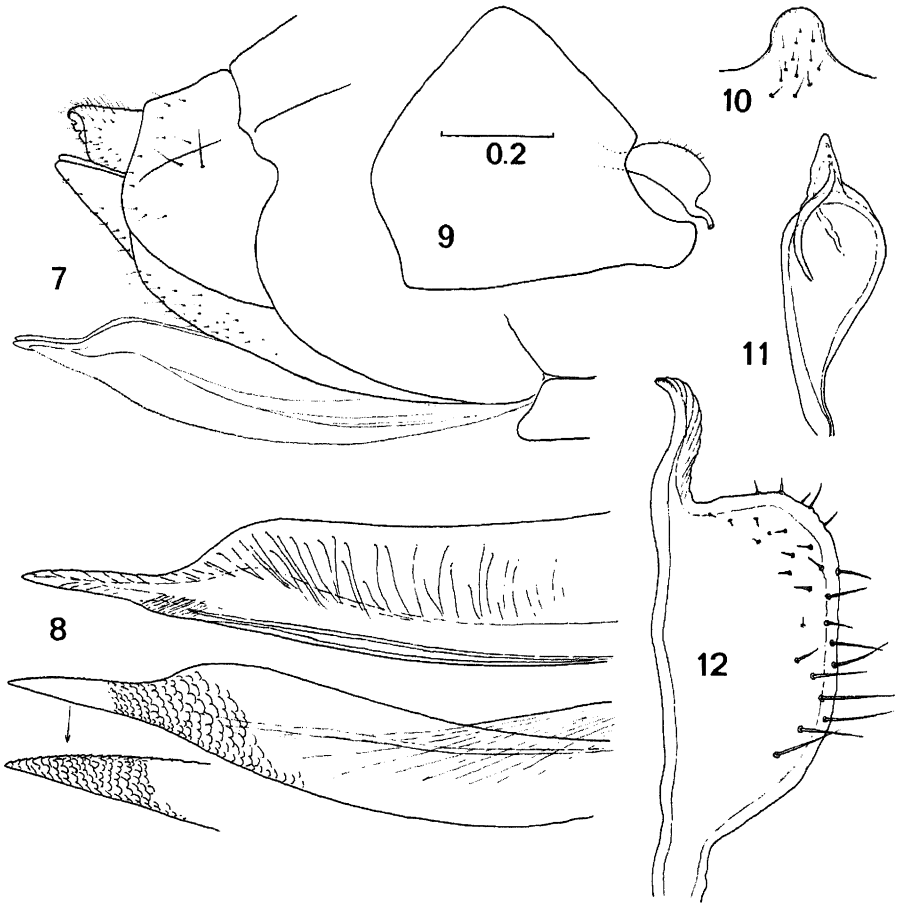
Figs. 1-6. *Zanchius stami* spec. nov. 1. male paratype, dorsal view, scale represents 1 mm. 2. underside of head and part of prothorax, scale represents 0.2 mm. 3. tarsus of left fore leg. 4. pretarsal segment showing claws, pseudarolia (ps) and parempodia (pa). 5. part of hind tibia showing three of the four rows of spinulae. 6. spinulae under high magnification. Fig. 3 2× the scale of fig. 2, figs. 4 and 6 10×, fig. 5 4×.

Head. — Large, broader than long; eyes big, bulging, anteriorly reaching antennal base; tempora rounded, much shorter than length of an eye. Distance between eyes (synthlipsis) about half (♂, 0.42; ♀, 0.47) the maximum width of the head. Antennae very long and thin, as long as the total length of the body including the wings; first antennal segment somewhat shorter than the length of the head; second segment 3.6 to 4 times as long as first; ratio of the four segments about 1:4:3:2 to 2½. Rostrum as long as or a little shorter than second antennal segment, just reaching level of posterior margin of third coxal base, ratio of the segments about 3:3:4:4; first labial segment thick, its width almost half (0.45) of its length; second segment much thinner and narrowed in the middle; anterior half of third segment parallel, from that point the remainder of the rostrum tapers gradually to its apex. Labium small, elongate and triangular, its apex narrowly rounded, its length about 0.3 times as long as first labial segment.

Pronotum. — Broadly trapezoidal, about two times as broad as long (median); sides straight, gradually converging anteriorly; posterior margin weekly bisinuate, leaving mesonotum largely uncovered; posterior angles rounded and extended posteriorly; anterior margin slightly concave, collar furrow indistinct dorsally, laterally terminating in a deep pit from which a fine groove demarcates the very narrow ventro-lateral part of the collar which is ventrally interrupted by the convex anterior rim of the prosternum. Sides of pronotum strongly deflected ventrad, lateral margin slightly extending from anterior angle to the middle part and posteriorly rather suddenly retracted towards the base of the wing and here excavated to fit the wing base. Prosternum flat, anteriorly extended and provided with a short, sublateral and longitudinal carina at each side. Mesosternum large, inflated, with a fine median groove. Metasternum small, deeply hidden between the meso- and metasternal coxae as seen from the ventral side.

Wings. — Fore wings long (2.8-3.2 mm), slender, each almost 5½ times as long as wide at the claval apex and considerably passing tip of abdomen. Hind wings only a little shorter than the fore wings.

Legs. — Coxae moderately slender, all of about equal length, as long as the first two rostral segments together. Femora slightly spindle-shaped, fore and middle femora about two times as long as the coxae, third femora longest, almost three times that length. Tibiae very slender, fore and middle tibiae respectively 1/3 and 1/4 longer than their femora, hind tibiae very long and thin, about 3/5 longer than their femora, more or less square in cross-section, having four rows of spinulae on the longitudinal edges. Tarsi slender, the three segments of about equal length, the first two overlapping each other for about 2/3 of their length. Claws thickened basally, otherwise simple; pseudaroliae



Figs. 7-12. *Zanchius stami* spec. nov. 7. last segments of female abdomen with ovipositor *in situ*. 8. right gonapophyses VIII (below) and IX (top); scale-like texture on former drawn only partly. 9. male genital capsule seen from left side showing its form and position of left paramere, scale represents 0.2 mm. 10. posterior margin of genital cavity seen from behind. 11. right paramere. 12. left paramere. Figs. 7, 9 and 10 are drawn to the same scale, fig. 8 2× this scale, figs. 11 and 12 4×.

rather large, partly jointed along the proximal half of inner curve of each claw, with a free lobe whose apex is passed by the claw for about 1/7 of the total length of the claw (fig. 4). Parempodia rather large, 2/5 of length of a claw, apically tapered, bent ventrally, and their apices narrowly rounded.

Abdomen. — Small, of normal shape, only 0.3 (♂) to 0.5 (♀) times the length of the fore wings. Male genital segment a little longer than wide, funnel shaped, narrowly extended beyond genital opening with a rounded apex; left paramere with a broad shaft, rather abruptly passing into a slender bisinuate

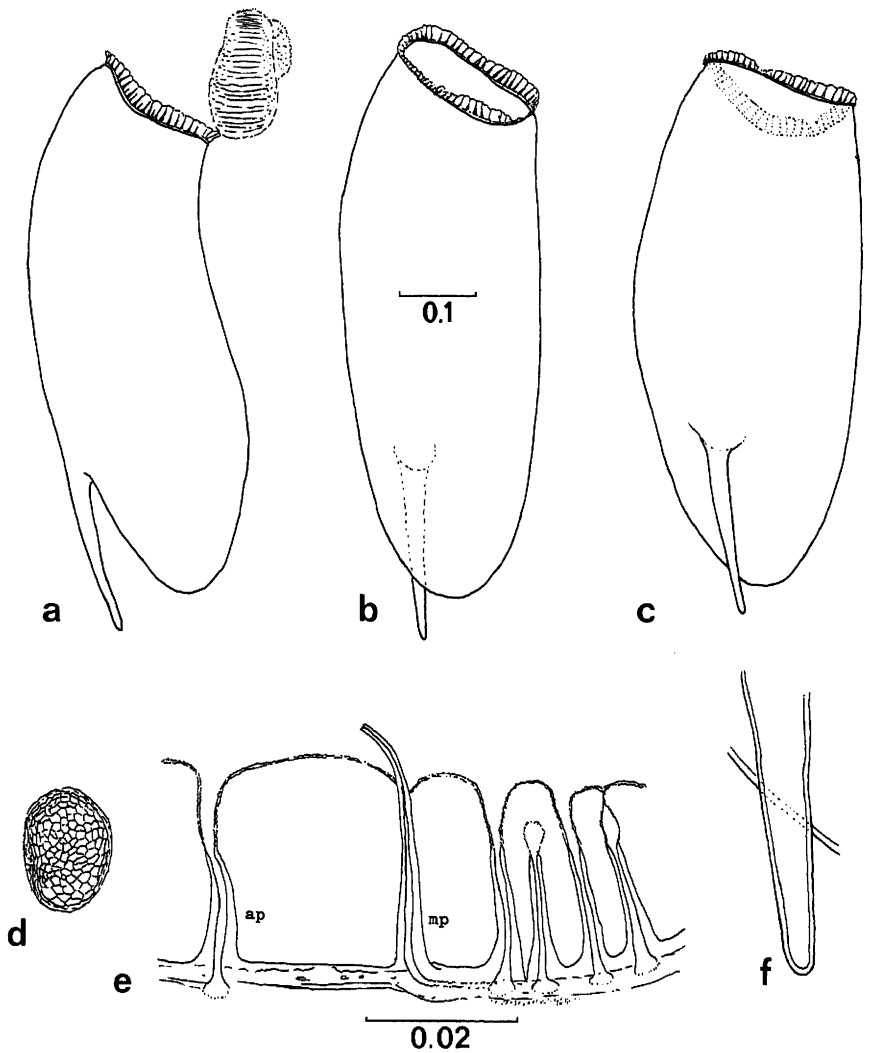


Fig. 13. *Zanchius stami* spec. nov. eggs in lateral (a), ventral (b), and dorsal (c) view; d. operculum; e. part of the collar greatly enlarged (oil immersion) showing aeropylar processes (ap) and one micropylar process (mp); f. end of a chorionic appendage showing an uninterrupted chorion. Figs. a, b, c and d same scale, f 4× this scale, scale in e represents 0.02 mm.

apical hook (fig. 12); right paramere small, clublike with a pointed apex (fig. 11). Female genitalia with the usual, well-developed ovipositor (fig. 7); the apices of the first and second valvulae are shown in fig. 8.

Egg. — Mature or almost mature eggs (fig. 13) taken from the abdomen smooth, white, elongate oval, slightly curved, with an oblique anterior open-

ing and with a subcaudal, posteriorly directed slender process; operculum (fig. 13d) slightly oval, a little proliferated and consisting of a porous cellular mass; the rim around the operculum with a short upright collar of one row of 65-70 aeropylar outgrowths interconnected by membranous tissue, and two slender micropylar processes, almost opposite to each other, that protrude above the collar's edge (fig. 13e).

Colour. — General colour of the body pale yellowish with a faint greenish tinge, head and thorax sometimes more orange-yellow. Eyes reddish brown. First antennal segment with a red spot at the underside of the apex, an orange streak at the outer side, and a small orange spot proximally at the inner side; extreme apex of second segment red, undersides of second, third and fourth segments tinged with rose. Upper side of head, thorax and hyaline corial part of fore wings including membranal basal cell, greenish, colour more or less concentrated in small grains or accumulations of grains, leaving on the wings ill-defined uncoloured areas, especially on lateral part of clavus, anterior half and apex of exocorium, medial part and apex of endocorium, and posterior part of the membranal cell; rest of membrane lightly clouded with a beige tinge, iridescent and with a dark green to blackish spot along the postero-apical side of the cell. Hind wings subhyaline, lightly opalescent, strongly violet to bluish iridescent. Legs pale yellowish, femora lightly tinged greenish, last tarsal segment darkened.

Texture. — Surface smooth, shining; upper side sparsely set with short, colourless, suberect hairs, somewhat denser on frons, temporae, pronotal sides, propleurae and costal margin and cuneus of fore wings. Antennae and legs with usual tomentum, hairs on first and basal part of second antennal segment brownish black, on rest of antennae and legs more or less brownish to colourless. Posterior tibiae with four rows of closely set dark, scale-like spinulae (fig. 5), dorsal and ventral rows along the entire length of the tibiae, anterior and posterior rows proximally more or less shortened. Abdomen sparsely set with long, fine hairs.

Measurements (in mm). — Males: total length including wings 3.4-3.9, width at shoulders 0.87-0.98, width of head across eyes 0.59-0.66, length of head (not very reliable as visible part is dependant on position of head) 0.43-0.52, distance between eyes (synthlipsis) 0.24-0.29, antennae: length of antennal segments: I 0.35-0.37, II 1.33-1.37, III 1.0-1.1, IV 0.83-0.92, length of pronotum 0.37-0.40, width of pronotum 0.72-0.78, length of scutellum 0.34-0.38, width of scutellum 0.46-0.48, length of fore wings 2.9-3.2, width of hemelytra (at level of the claval apex) 0.46-0.52, length of posterior tibiae 2.07-2.30 mean (10): 2.17. Females: total length including wings 3.3-3.6, width (at shoulders) 0.87-0.92, length of head 0.43-0.52, width of head across eyes 0.58-0.61, dis-

tance between eyes (synthlipsis) 0.26-0.28, length of antennal segments: I 0.37-0.39, II 1.39-1.44, III 1.06-1.17, IV 0.86-0.97, length of pronotum 0.37-0.39, width of pronotum 0.72-0.76, length of scutellum 0.32-0.39, width of scutellum 0.45-0.48, length of fore wings 2.7-3.1, width of fore wings 0.48-0.51, length of posterior tibiae 1.9-2.27, mean (10): 2.12.

Biology. According to Dr. Stam (in literis) the specimens of this species were found on cotton plants where they almost certainly live predatory.

Material studied. — The material consists of dried specimens which maintained their colour best but suffered severe mutilation during transport, and specimens preserved in alcohol which were to a much greater extend complete, but largely discoloured. From both sources series of specimens have been mounted. In addition, Dr. Stam has sent the author at his request some carefully mounted specimens from which the holo- and allotypes were chosen.

Holotype ♂, allotype, 72 ♂, 148 ♀ and 4 nymphal-V paratypes (partly in alcohol), Syria, Deir-ez-Zor, VIII.1982, P. A. Stam leg.; 1 ♂, 2 ♀ paratypes, Cyprus, nr. Limassol, 23.X.1963, G. A. Mavromoustakis leg., all in the collection of the Rijksmuseum van Natuurlijke Historie, Leiden; 1 ♂, 1 ♀ paratypes from the Syrian series in the Národní Muzeum, Praha.

Comparative notes. — The new species is closely related to *Z. alatanus* Hoberlandt, 1956, but greater in body length. The habitus is more elongate, the head broader, the eyes bigger, second antennal segment much longer, and there are differences in the colour patterns of the first two antennal segments. The form of the male left paramere is different. Also noteworthy is the presence of four rows of minute dark spinulae on the hind tibiae. Hoberlandt (1956: 48) mentioned the presence of only two rows as a character which *Zanchius* Distant would share with *Malacocoris* Fieber, 1858 but in a paratype specimen of *Z. alatanus* kindly presented for comparison by Dr. Hoberlandt, the present author found after a careful examination of a hind tibia a shortened but distinct third (anterior) row; obviously this character is variable in the genus. Most extraordinary is the structure of the egg. To the best of the author's knowledge no similar process, nor even any outgrowth comparable with it, has ever before been noticed in Heteroptera. It should be interesting to examine the eggs of related species.

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