

**ACTA
ZOOLOGICA
ACADEMIAE SCIENTIARUM
HUNGARICAE**

ADIUVANTIBUS

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TOMUS XIV



AKADÉMIAI KIADÓ, BUDAPEST
1968

ACTA ZOOL. HUNG.

ON SOME SPECIES
OF THE GENUS *TUPONIA* REUTER, 1875
(HETEROPTERA: MIRIDAE, PHYLINAE)

By

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(Received August 15, 1967)

The present paper submits a revision of specimens belonging to the subgenus *Tuponia* REUTER, deposited in the Hungarian Natural History Museum, in the collection of the senior author, and of those collected by the Nationwide Light Trap Network. Investigations resulted in two new species, and new distributional data for a number of other species. Locality data are given in subgroupings according to the country of origin, on the basis of the original labels.

Our thanks are due to DR. Á. SOÓS, for making available for examination the material of the Hungarian Natural History Museum, and for his cordial help throughout our work. Sincere gratitude is expressed to DR. E. WAGNER, Hamburg, for his help in sending us comparative material with respect to some species.

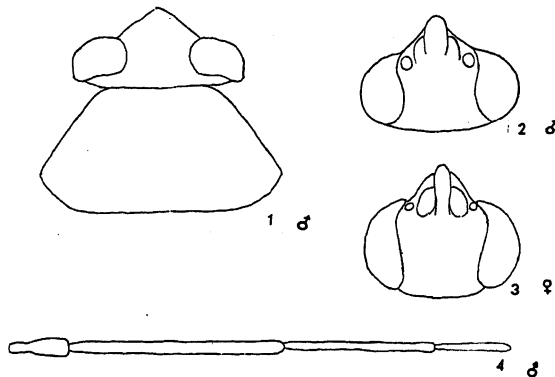
1. *Tuponia pallida* REUTER. — USSR: Ashabad, Turcomania, leg. AIGNER, 1 ♀.
2. *Tuponia ?lethierryi* REUTER. — Tunis: Gabés, 1898, leg. NOUALHIER, 1 ♀.
3. *Tuponia eckerleini eckerleini* E. WAGNER. — France: Les Praz, Chamonix, 1906, leg. GULDE, 5 ♂, 7 ♀.
4. *Tuponia macedonica* E. WAGNER. — Bulgaria: Burgas, 4 June, 1965, leg. M. JOSIFOV, 4 ♂; Ropotamo, 8 June, 1965, leg. M. JOSIFOV, 3 ♂.
5. *Tuponia elegans* JAKOVLEV. — USSR: Araxesthal, Caucasus, leg. REITTER, 1 ♀; Derbent, Caucasus, 1 ♀; Tiflis, 1 ♂; Gök-Tepe, Turcomania, 1 ♀.

6. *Tuponia bilobata* sp. n. (Figs. 1—12)

Body elongate oval, 2.85—3.45 mm (♂), 2.45—3.6 mm (♀). Head 1.3 times wider than long (Figs. 2—3), smallest distance between eyes 1.7 times (♂), that is, 2 times (♀), greater than diameter of eye. Second joint of antennae 0.98, that is, 0.85 times, longer than width of pronotum (Figs. 1, 4). Pronotum 2.1 times longer than wide (Fig. 1); scutellum slightly longer than wide. Cuneus projecting beyond end of abdomen, membrane somewhat longer than wide. Rostrum long, usually reaching third coxa. Head, pronotum, scutellum, and

corium covered with a recumbent, usually light-coloured vestiture of hairs, tending to dark brown on transverse stripes of hemielytrae. Hairs of dorsum and venter lighter, finer. Legs and antennae with fine, white hairs; tibia with long, black spines.

Body white, rarely of a yellowish-white basic colour, vertex and anterior part of pronotum yellow, anterior section of scutellum and usually also that of pronotum pale orange. Basal section of scutellum again a vivid orange colour, on males rarely partly or entirely dark brown. Anteriorly to apex of



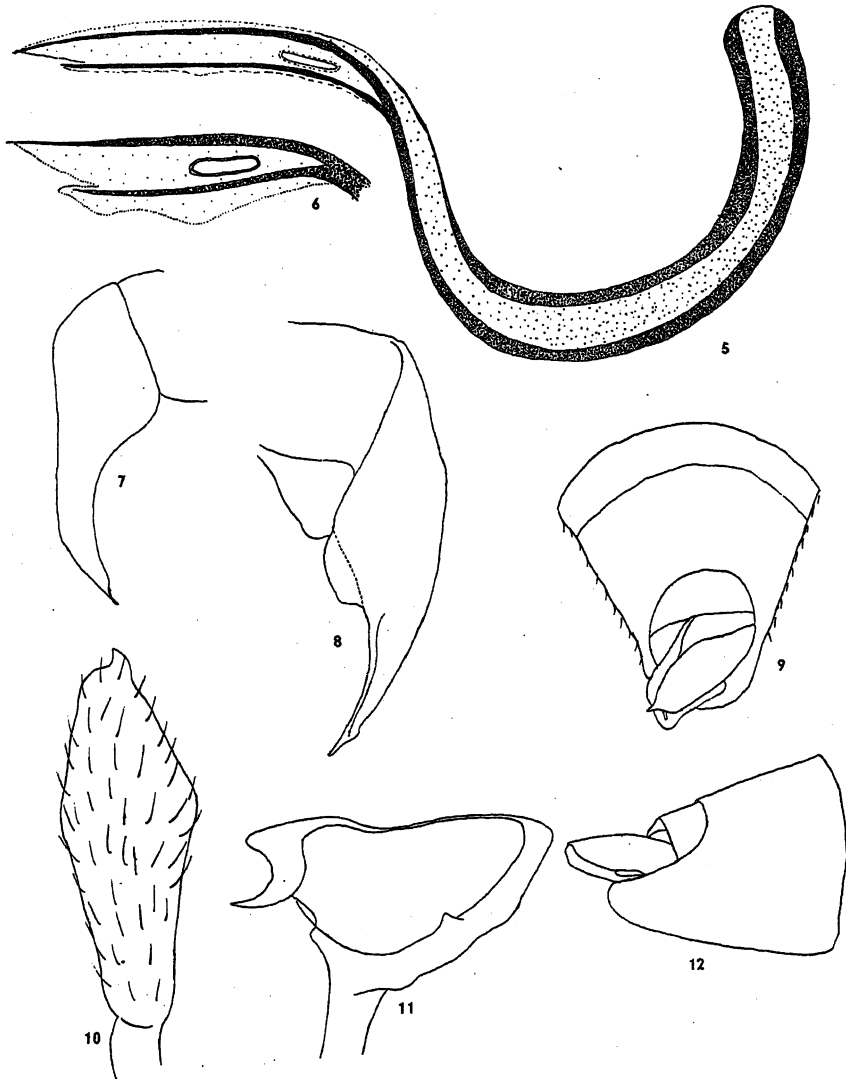
Figs. 1—4: *Tuponia bilobata* sp. n. 1 = head and pronotum of male, 2 = head of male, 3 = same of female, 4 = antenna of male

clavus and corium an oblique red stripe, followed by a triangular white field on corium, with usually a rosy red spot on base of mesocorium and clavus in males. Cuneus white, twice longer than wide. On dark males, all orange and red pattern substituted by brown. Membrane uniformly dark brown, venation white. A black spot each at base of membrane and at end of cell, and a white one near end of cuneus. Dorsal and ventral side of thorax green in males, yellowish-green in females. Except for yellowish-green or green connexivum and black genital segment of males, entire dorsal side dark green. In rare cases, dorsal side of males tending to black to a greater extent.

Male vesica large, terminally bifurcate (Fig. 5), with a membrane between fork (Fig. 6). Vesica falcately arcuate. Membrane of fork forming a lobe toward inferior side. In a superior view, theca (Fig. 7) basally wide, then rapidly attenuating and apically arcuate; in a lateral view (Fig. 8) gradually attenuating, evenly arcuate and basally lamellately expanded. Right paramere long, widest beyond middle, apically tapering, apex shaped like an owl-beak (Fig. 10). Left paramere (Fig. 11) triangular, with a strongly curved hypophysis and an erect tooth on lower margin. In a superior (Fig. 9) and lateral (Fig. 12) view, right paramere as long as left one. In a superior view, only thecal base

and apex, in a lateral view, only base visible. Parameres dark green, theca caramel brown.

The new species stands nearest to *Tuponia elegans* JAKOVLEV, differing in the conformation of the vesica. The arc of the vesica is narrower and more rotund, the two branches carry their membranous lobe not above but below; the eye of the membrane is not above the two branches but between them and



Figs. 5–12. *Tuponia bilobata* sp. n., ♂: 5 = vesica of penis, 6 = branches of vesica, 7 = theca in dorsal view, 8 = same in lateral view, 9 = genital segment in dorsal view, 10 = right paramere, 11 = left paramere, 12 = genital segment from the right

hardly discernible. The arcuate portion of the vesica is thicker than in *T. elegans*. As to colouration, the nearly allied *Tuponia eckerleini eckerleini* E. WAGNER, and *Tuponia eckerleini orientalis* E. WAGNER, as well as *Tuponia macedonica* E. WAGNER, are considerably bigger, and with essentially different vesicas.

Holotype male and allotype female: Szolnok, Hungary, 20 July, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK.

Paratypes: Hungary: Budatétény, Budapest, 11 June, 1964, light trap, 1 ♂; 12 June, 1964; light trap, 1 ♂; 1 ♀, 26 August, 1964; light trap, 1 ♂, 1 ♀; 19 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 2 ♂, 2 ♀; Rókushegy, Budapest, 18 July, 1964, light trap, 1 ♀; 27 July, 1964, light trap, 1 ♂, 1 ♀; 25–26 July, 1964, light trap, 1 ♂; 24 July, 1967, on *Tamarix ramosissima*, leg. P. BENEDEK, 102 ♂, 73 ♀; Rózsadomb, Budapest, 21 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 40 ♂, 67 ♀; 24 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 57 ♂, 57 ♀; 26 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 80 ♂, 85 ♀; Kenderes, 28 Sept., 1964, light trap, 1 ♂; 12 July, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 4 ♂; Kétpó, 21 July, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 5 ♂, 1 ♀; Mezőtúr, 19 July, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 1 ♂, 1 ♀; Miskolc, 17 July, 1964, light trap, 1 ♀; Pécs, 22 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 22 ♂, 13 ♀; Szarvas, 18 July, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 24 ♂, 18 ♀; Szolnok, 20 July, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 122 ♂, 104 ♀; Tarcal, 20 July, 1964, light trap, 1 ♂. — Bulgaria: Somovit, 1 ♂, 2 ♀. — USSR: Aralich, Armenia, 12 June, 1893, 2 ♂, 8 ♀.

The holotype, allotype and a part of the paratypes are deposited in the Zoological Department of the Hungarian Natural History Museum, the majority of the paratypes in the collection of the senior author.

7. *Tuponia* sp. ♀ (*elegans-eckerleini* group). — Roumania: Braila, leg. A. MONTANDON, 1 ♀.

8. *Tuponia tamaricis tamaricis* PERRIS. — Algeria: Fil-fila, leg. A. THÉRY, 1 ♂, 1 ♀. — Italy: Grado, pr. Trieste, 2 ♂, 2 ♀. — France: Hyères, 1 ♂, 1 ♀; Le Racou, Pyrénées or., 3 and 7 June, 1953, leg. E. WAGNER, 2 ♂; near Arles, B. d. Rh., Sts. Maries d. l. mér, 29 June, 1954, leg. E. WAGNER, 1 ♀.

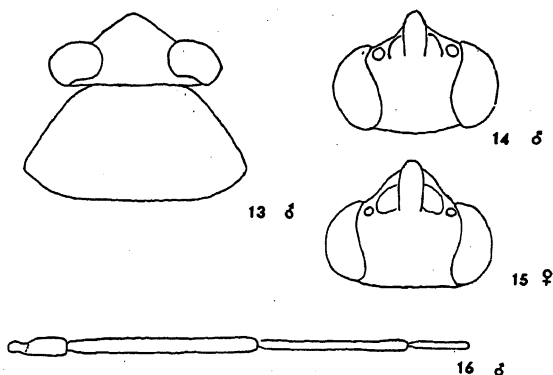
9. *Tuponia carayoni* E. WAGNER. — France: La Nouvelle, 1 ♂, 3 ♀; Palavas, 12 August, 1891, 2 ♂, 1 ♀; Pérols, 11 August, 1891, 2 ♂, 4 ♀; Camargue, 12 August, 1880, 2 ♂, 3 ♀. — Crete: Herakleion, April, 1906, leg. BIRÓ, 3 ♂, 7 ♀. — Yugoslavia: Castelnuovo, Dalmatia, leg. REITTER, 2 ♂, 2 ♀; Spalato, 1901, leg. HORVÁTH, 1 ♂.

10. *Tuponia hungarica* sp. n. (Figs. 13–23)

Body elongate oval, 3.0–3.45 (♂), or 2.95–3.45 (♀) mm. Head 1.3 times wider than long (Figs. 14–15), smallest distance between eyes 1.65 times (♂), or twice (♀), wider than diameter of eye. Second antennal joint 0.85 times (♂, ♀) as long as widest breadth of pronotum (Figs. 13, 16). Pronotum twice wider than long, scutellum slightly wider than long. Cuneus slightly projecting beyond end of abdomen, membrane somewhat longer than wide. Rostrum long, reaching third coxa. Body covered with fine, scattered, silvery hairs. Legs and antennal joints with a fine silvery pubescence, hairs of femoral apices black, tibia also with black spines among hairs.

Basic colour white (♂), greenish-white or yellowish-white (♀), vertex and anterior portion of pronotum with a pale orange tinge. Base of scutellum usually dark brown in males, and mostly a vivid orange in females. Posteriorly to middle of scutellar base a small brown or orange cuneiform design. Hemi-

elytra of male white, clavus, mesocorium, and exocorium displaying a dark brown oblique stripe preterminally. Stripelet of exocorium darker than that of clavus and mesocorium, thus conspicuous even when examined by the naked eye. End of clavus, meso- and exocorium, and entire cuneus white, this latter

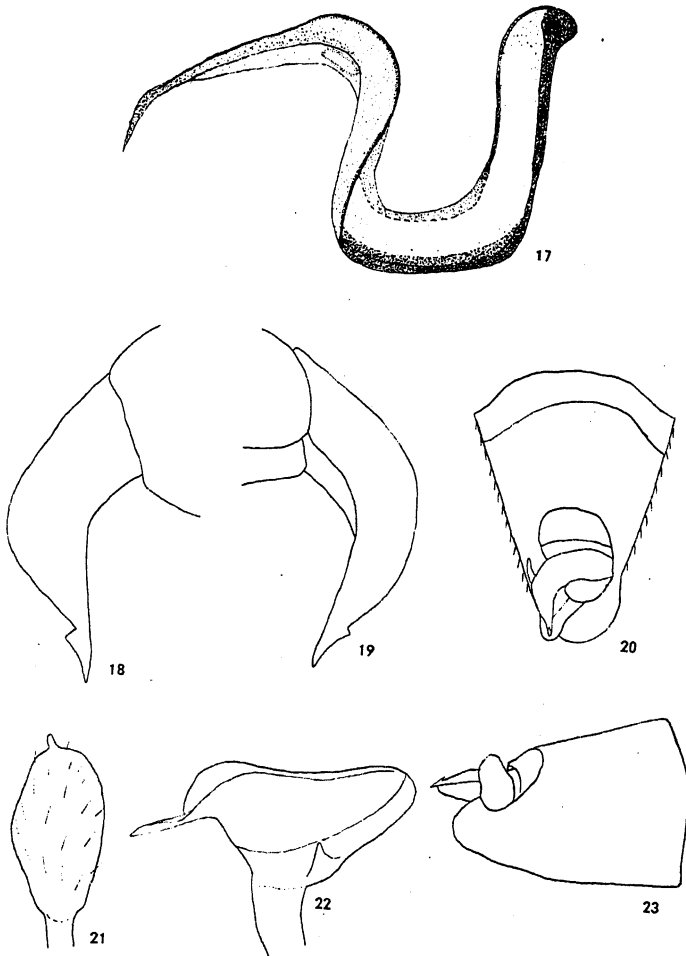


Figs. 13–16. *Tuponia hungarica* sp. n. 13 = head and pronotum of male, 14 = head of male, 15 = same of female, 16 = antenna of male

medially with an occasional, very slight brownish shade. Legs, ventral side of thorax and abdomen green, dorsal side of abdomen vivid green, except for light green connexivum and black genital segment. Antenna yellow. Colouration of females occasionally agreeing with that of males, but pattern of corium generally richer and more colourful. Clavus, and often mesocorium, of females bearing a longitudinal red or orange stripe, at other times entirely red or orange. Exocorium coloured generally only preapically, quite exceptionally tinged pale reddish. In places according to male pattern, colouration invariably deeper and stronger. Apex of exocorium always, clavus usually, white. Cuneus often displaying a pale or marked red spot, but apex and base invariably white. Ventral side of female thorax and abdomen yellowish-green, also legs a paler green than those of males. Dorsal side of abdomen vivid green, except for yellowish-green connexivum and genital segment. In dark-coloured females, hairs arising on transversal stripe of corium occasionally partly dark brown. Membrane black, venation white. Area within cell of membrane and section behind apex of cuneus darker. A white triangle discernible between apex of cuneus and cell.

Vesica of male narrowly arcuate (Fig. 17). Its terminal appendix longer than width of arc, its apex slightly angularly decumbent. Theca evenly arched, gradually attenuating apicad, with a conspicuous preapical tooth on exterior margin of arc (Figs. 18, 19). Right paramere short, only twice longer than wide (Fig. 21), stout, widest medially, bearing a small apical appendix. Left para-

mere triangular (Fig. 22), anterior section drawn into a long, straight hypophysis, lateral section with an erect, black tooth. In a superior (Fig. 20) and lateral view (Fig. 23), right paramere shorter than left one, and being small, leaving theca uncovered. Parameres green, theca black or blackish-brown.



Figs. 17–23. *Tuponia hungarica* sp. n., ♂: 17 = vesica of penis, 18 = theca in dorsal view, 19 = same in lateral view, 20 = genital segment in dorsal view, 21 = right paramere, 22 = left paramere, 23 = genital segment from the right

The new species stands nearest to *Tuponia carayoni* E. WAGNER, but the distance between its eyes is greater, the arc of the vesica considerably narrower, the vesical branch strikingly longer and apically broken downward. The colouration is darker and thus more marked than that of *Tuponia carayoni*. The spot of the exocorium is more conspicuous. The configuration of the vesica

resembles also that of *Tuponia lethierryi* REUTER and *Tuponia mixticolor* COSTA, but the arc of the vesica is much narrower, its branch longer, and the colouration is also different.

Holotype male and allotype female: Rózsadomb, Budapest, Hungary, 26 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK.

Paratypes: Hungary: "ERTI-telep", Budakeszi, 13 June, 1964, light trap, 1 ♂; Budatétény, Budapest, 11 June, 1964 light trap, 1 ♂, 5 ♀; 12 June, 1964, light trap, 4 ♂, 19 ♀; 19 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 1 ♂; Rózsadomb, Budapest, 21 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 59 ♂, 67 ♀; 24 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 52 ♂, 100 ♀; 26 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 52 ♂, 90 ♀; Gerla, 18 June, 1967, light trap, 1 ♂; Hódmezővásárhely, 11 June, 1966, light trap, 1 ♀; Kenderes, 10 June, 1966, light trap, 4 ♂, 3 ♀; Miskolc, 9 June, 1964, light trap, 1 ♀; Pécs, 22 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 2 ♂, 4 ♀; Pusztabánréve, 29 June, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 21 ♂, 11 ♀; Szolnok, 20 July, 1967, on *Tamarix tetrandra*, leg. P. BENEDEK, 1 ♂; Tarcal, 20 July, 1964, light trap, 1 ♂; Tass, 13 June, 1964, light trap, 1 ♀; Velence, 12 June, 1964, light trap, 1 ♂.

Holotype, allotype, and a part of the paratypes are deposited in the Zoological Department of the Hungarian Natural History Museum, the majority of the paratypes in the collection of the senior author.

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