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A REVISION OF *HOMOPTERA-CICADINEA* DESCRIBED BY S. MATSUMURA FROM EUROPE AND THE MEDITERRANEAN AREA

I. CICADELLIDAE

During his study years (1899—1902) in Europe (Berlin and Budapest) S. Matsumura collected here a fairly large material on *Homoptera-Cicadinea*. On the basis of these materials he described a great number of new species. Two of them (*Thamnotettix kuhlgatzi* and *Athysanus artemisiae*) were described as early as 1900. Further, he carried out more detailed investigations in East Germany (West Prussia), about the fauna of which he published a separate work (Matsumura, 1906). Among the species established there were also several new ones, which, due to relatively good descriptions, were in the majority rightly recognized by later investigators. The only exception is *Deltocephalus excisus* which is dealt with in this paper. S. Matsumura has also collected materials in Hungary (Budapest, Isaszeg) and Romania (Cluj [Kolosvar]). Later he made a tour around the Mediterranean Sea and collected leaf-hoppers in Yugoslavia (Rijeka [Fiume]), Italy (Bari, Palermo, Catania, Syracuse, Novi), Spain (Malaga), Morocco (Tanger), Algeria (Ghazaouet [Nemours], Oran, Algiers), Tunisia (Tunis) and Egypt (Port Said). In addition, he also used some materials received from other entomologists of his time (V. Oertzen from Greece and O. Schmiedeknecht from Egypt). On these materials S. Matsumura has written two papers (1908, 1910). The first contains new species from the family *Cicadellidae*, and the present investigation is a revision of the greater part of the types of those species*.

The species are presented in the order used by S. Matsumura in his work (1908). The valid name is indicated in bold face. Lectotypes have been selected only for the species which proved to be good ones.

Typhlocyba (*Zygina*) *clavalis* (p. 3). The only specimen (a female from Berlin) is strongly greased. But its size (2.65 mm) and the almost entirely red clavus of the fore wing indicate that it is identical with *Flammigeroidia rubrovittata* (Lethierry, 1869) and is not a variety of *Fl. flammigera* (G.), as supposed by Haupt (1935).

Typhlocyba (*Zygina*) *fulguralis* (p. 3). There are two males in the collection. Already Ribaut (1936) connected this species with *Erythro-*

* The author is very much indebted to Prof. Dr. C. Watanabe and to Dr. S. Takagi (Entomological Institute, Hokkaido University, Sapporo, Japan) for the permission to investigate the above-mentioned material and for all the troubles connected with its dispatch.

neura rhamni suavis Ry. According to the modern nomenclature, it is *Fl mmigeroidia suavis* (Rey, 1891).

Typhlocyba (*Zygina*) *serpentina* (p. 4). = *Zyginidia serpentina* (Matsumura, 1908) n. comb. The species is very near to *Z. alexandrina* Lv., 1964 and especially to *Z. ribauti* Dw., 1970, but the aedeagus-tip has a beak-like tooth directed downwards (Fig. 1 A—F).

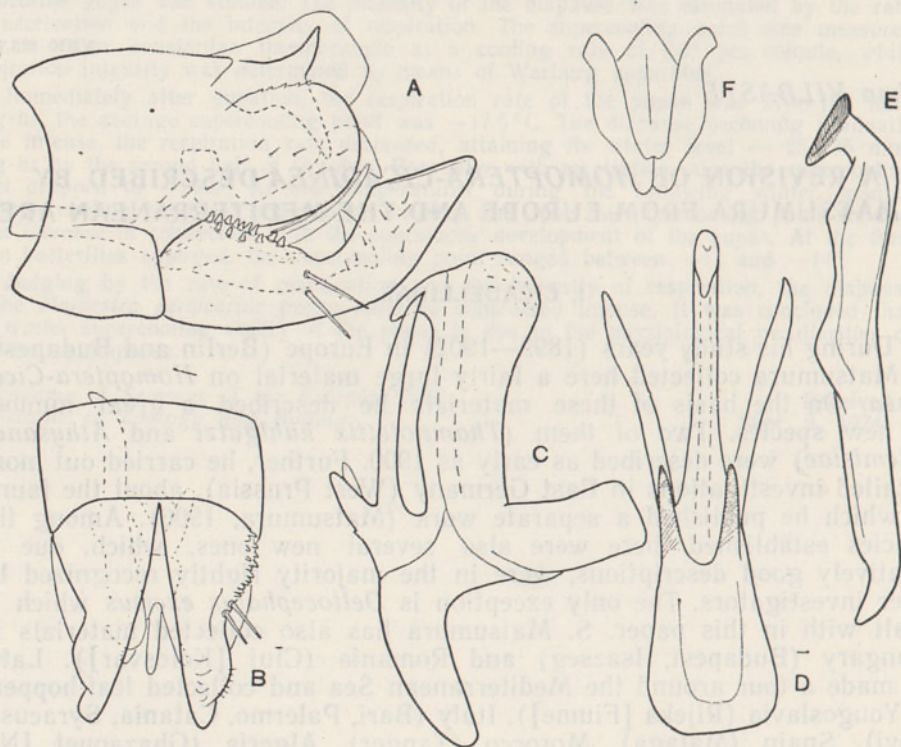


Fig. 1. *Zyginidia serpentina* (Mm.). Male genitalia: A — genital segment, lateral view (enlargement 112 ×); B — genital segment, ventral view (82 ×); C — aedeagus, lateral view (250 ×); D — aedeagus, posteroventral view (250 ×); E — style (150 ×); F — connective (150 ×).

To this species belong only the specimens from Catania (thereunder the series labelled by Matsumura red as "Type"). Lectotype (a male) is designated by a red point around the micropin on the pith surface. The specimens from Palermo belong to *Z. lineata* (Lb., 1953), whereas those from "N. Afrika (Triest)* 2/VII 1902" belong to *Z. moczaryi* (Hv., 1910). The remaining part of the original series was investigated by Dr. I. Dworakowska (Poland). As she informed me in a letter (dated 14.X. 1970), they belong as follows: N. Africa, Oran — *Z. lineata* (Lb.); Algiers and Ghazaouet — *Z. scutellaris* (H.-S.), Port [Said] — *Z. alexandrina* (Lv.). The specimens from Novi and Rijeka were females. Dr. Dworakowska has found among the specimens collected in Catania also 1 ♂ and 2 ♀ of *Z. lineata* (Lb.).

* Here a small confusion has occurred. As known Triest (Rijeka) does not lie in N. Africa but in Yougoslavia. On the other hand, "Triest" has not been mentioned by Matsumura in his original description.

Typhlocyba (*Zygina*) *nigricostalis* (p. 5—6). As there are only 4 females in the collection, the systematic position of this species remains unclear. The wing venation is that of the typical *Erythroneurini*. A very characteristic coloration does not allow to connect this species with any species of the tribe known to the present author.

Typhlocyba fiumensis (p. 6—7). There are only two females (from Rijeka) in the collection. This species was synonymized with *T. exornata* Hv., 1905 by Horvath (1911). After the description it is identical with *Youngiada loewi* (Lethierry, 1884) n. syn.

Typhlocyba nigradorsalis (p. 7—8). This species is represented in the collection by a single female collected in Tanger. According to wing venation, it belongs to the genus *Eupteryx* s.l. and is with high probability to be referred to *Eupteryx filicum* (Newman, 1853) n. syn.

Typhlocyba unipuncta (p. 8). Instead of this species there is one male in the collection bearing a label on which "*T. cyclops*" was originally written (with black India ink). This was later struck out with red India ink and defined as "*monostigma*". This specimen is without any doubt the one on which basis *T. unipuncta* was described. Its genitalia are those of *Eupteryx filicum* (Newman, 1853) n. syn. The specimen is apparently a teratological one. The black point on the crown does not lie in the middle, but on the right side of the coronal suture. There are also some other minor differences (it is somewhat smaller — 3.02 mm to the tips of the fore wings, the abdominal dorsum is stramineous, the appendages of the aedeagus are more spread, etc.). On the other hand, its finding locality is also Tanger as in the foregoing species.

Typhlocyba tangerica (p. 8—9) was not investigated during this study.

Typhlocyba algerica (p. 9—10). 3 males and 3 females from Algiers attached to two pith blocks were investigated. Most of them belong to *Youngiada pandellei* (Lethierry, 1878) (= *Y. aurovitta* s. Rb.) n. syn. One male specimen belongs to *Empoasca decipiens* (Paoli, 1930).

Gnathodus 4-guttatus (p. 10—11). In the collection there are only two females from Sicily (Catania, Palermo). The structure of the head, the size and the spinulation of the hind knees (2.1.1.) indicate that they probably belong to *Balclutha saltuella* (Kirschbaum, 1868) n. syn. Only the coloration, which is very variable in this species, is somewhat more yellowish and orange than usually in specimens coming from Southern Europe.

Gnathodus pallidulus (p. 11—12). A large series (5 ♂, 12 ♀) from North Africa and Formosa was examined. They belong to *Balclutha frontalis* (Ferrari, 1876) (= *B. rosea* (Sc. 1876) nec Prov. (1872)).

Cicadula bipunctella (p. 12). This species has been synonymized with *Gnathodus bipunctatus* Melichar 1904 by Heller und Linnavuori (1968). If the subspecies division is used (cf. Zakhvatkin, 1946; Ruppel, 1965), then the nominate form of *Cicadulina bipunctata* (Melichar, 1904) is identical with *Cicadulina zae* China, 1926, n. syn.* the Mediterranean form should be named *Cicadulina bipunctata bipunctella* (Matsumura, 1908), whereas the Pacific subspecies should be called *C. bipunctata capitata* (Kirkaldy, 1907) (cf. Evans, 1966).

Cicadula flaveola (p. 12—13). I could examine two males from Malaga (Spain) and three females from Tunis (although in the original description

* By courtesy of Dr. J. Stehlik and Dr. P. Lauterer (Brno, Czechoslovakia) I could examine the type series of *Gnathodus bipunctatus* from the collection Melichar, and could establish that they belong to the form with pallical processes situated on the same level.

it is mentioned that the species was represented only by 4 specimens). They belong to *Nesoclutha erythrocephala* (Ferrari, 1882) **comb. nov.**, **n. syn.***

Cicadula brevis (p. 13—14) was not studied during this investigation. But already in 1910 S. Matsumura, on the suggestion of Dr. G. Horvath, synonymized his species with *Cicadula halophila* = *Macrosteles halophila* (Horvath, 1908).

Cicadula tunisiana (p. 14—15). This species was represented in the collection by a single female specimen from Tunis. The systematic position of this species is unclear, since its general appearance differs somewhat from that of the genus *Macrosteles* (although there exist only two subapical cells and the dorsal side of the fore tibiae has 1.3 spines). So the head is much wider than the pronotum, the fore margin of the head is more pointed, etc.

Athysanus transversalis (p. 14—15). Two females from Syracuse and a pair from the same locality (marked with a red Type label) were examined. They belong to the *Exitianus nanus* group (cf. Ross, 1968), as the side lobes of the pygofer have 4 black macrochaetae. It differs, however, from the only known species of the group in having a narrow tongue-like pygofer lobe, an almost angular aedeagus, etc. (Fig. 2A—F).

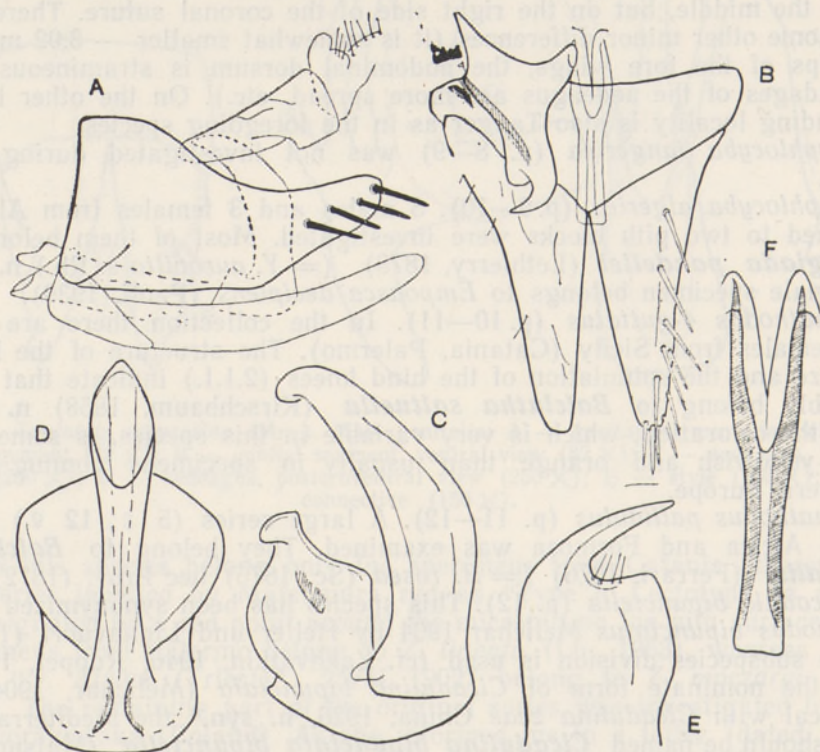


Fig. 2. *Exitianus transversalis* (Mm.). Male genitalia: A — genital segment, lateral view (82X); B — genital valve and plates (right ventral, left dorsal view, 82X); C — aedeagus, lateral view (150X); D — aedeagus, caudal view (150X); E — style (250X); F — connective (150X).

* Already a comparison of the figures of *Nesoclutha pallida* Evans, 1947 (cf. Evans, 1947, 1966) with those of *Irinula erythrocephala* (Fr.) (cf. Ribaut, 1952) shows that these species belong to the same genus. As *Nesoclutha* Evans, 1947, is older than *Irinula* Ribaut, 1952, it has the priority.

Also the pattern of the vertex is somewhat different — the cross band between the eyes is uniformly arched, not S-formed as in figures in Ross (l. c.). Species distinctus — *Exitianus transversalis* (Matsumura, 1909). Lectotype: male labelled "Siracusa, Matsumura".

Thamnotettix egyptiacus (p. 16). The only female specimen, on the basis of which the species was described, was investigated. This is apparently *Neoliturus tenellus* (Baker, 1896) as was already stated by Linnavuori (1964).

Thamnotettix lineatopunctatus (p. 16—17). The only male specimen (thus a holotype) belongs to the species later described as *Cicadula divaricata* Ribaut, 1952. Only almost the whole face is black, with only a few light streaks and points. The genitalia coincide entirely with those of the species of Ribaut. Thus *Cicadula lineatopunctata* (Matsumura, 1908) = *C. divaricata* Ribaut, 1952, n. syn.

Thamnotettix siciliensis (p. 17—18). One male (from Tanger) and one female (from Sicily) were investigated. They belong to *Cicadula lineatopunctata* (Matsumura, 1908) n. syn. The frons is predominantly light, with up to 4 pairs of dark arched lines.

Thamnotettix dubiosus (p. 18—19) = *Neoliturus dubiosus* (Matsumura, 1908). The species was rightly recognized by A. Zakhvatkin (Захваткин, 1935) and later thoroughly described and figured by Young and Frazier (1954), who in their study used two syntypes from Palermo

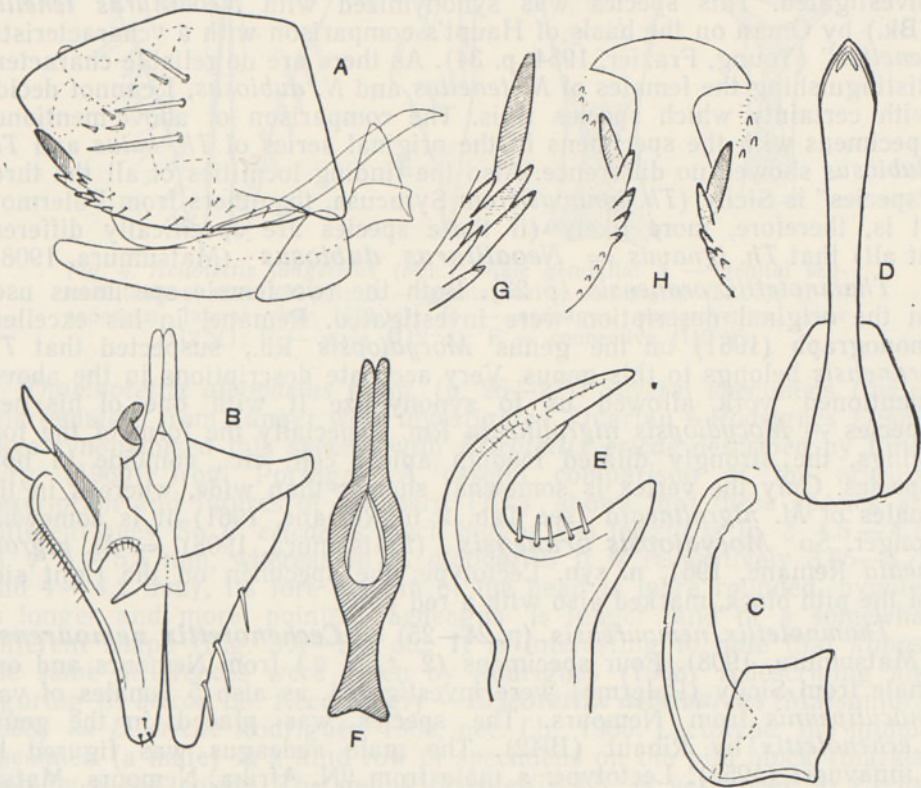


Fig. 3. *Aconurella minutissima* (Mm.). Male genitalia: A — genital segment, lateral view (112×); B — genital valve and plates (112×); C — aedeagus, lateral view (165×); D — aedeagus, caudal view (250×); E — style (325×); F — connective (165×); G — tip of pygofer lobe, lateral view (375×); H — pygofer lobes, posteroventral view (150×).

deposited in the U. S. National Museum. Lectotype: the only male in a series (1 ♂, 3 ♀) mounted on a pith plate. The specimen is additionally marked with a red dot on the pith surface. Labels: "Palermo. Matsumura" and handwritten "Palerm. 9/8", *Thamnotettix dubiosus* det. Matsumura."

Thamnotettix minutissimus (p. 19). The only male specimen (holotype) from Algiers was investigated. This belongs to the genus *Aconurella* Rb. and should be called *Aconurella minutissima* (Matsumura, 1908) n. comb. The genitalia (Fig. 3A—H) are similar to those of *A. proluxa* (Lt.) in having a very big upper tooth on the hind margin of the pygofer. But the lower teeth diminish continuously downwards. Also the coloration is different — Matsumura's species is uniformly light stramineous. Strangely this species has not been found later.

Thamnotettix rostralis (p. 19—20). The only male specimen from Algiers was investigated. It belongs to *Nealiturus opacipennis* (Lethierry, 1876) n. syn.

Thamnotettix liberatus (p. 20—22) = *Nealiturus opacipennis* (Lethierry, 1876) n. syn.

Thamnotettix salus (p. 21—22). Three males and one female (from Palermo) were investigated. As already assumed by Young, Frazier (1954) they belong to *Nealiturus dubiosus* (Matsumura, 1908), being specimens with infuscated veins.

Thamnotettix ignavus (p. 22). Ten females (from Sicily) were investigated. This species was synonymized with *Nealiturus tenellus* (Bk.) by Oman on the basis of Haupt's comparison with a "characteristic *tenellus*" (Young, Frazier, 1954, p. 34). As there are no reliable characters distinguishing the females of *N. tenellus* and *N. dubiosus*, I cannot decide with certainty which species it is. The comparison of above-mentioned specimens with the specimens in the original series of *Th. salus* and *Th. dubiosus* showed no difference. Also the finding localities of all the three "species" is Sicily (*Th. ignavus* from Syracuse, the others from Palermo). It is, therefore, more likely (if these species are specifically different at all) that *Th. ignavus* = *Nealiturus dubiosus* (Matsumura, 1908).

Thamnotettix oranensis (p. 23). Both the two female specimens used in the original description were investigated. Remane, in his excellent monograph (1961) on the genus *Mocydiopsis* Rb., suspected that *Th. oranensis* belongs to this genus. Very accurate descriptions in the above-mentioned work allowed us to synonymize it with one of his new species — *Mocydiopsis nigrolineata* Rm. Especially the form of the fore wings, the strongly dilated median apical cell, etc., coincide in both species. Only the vertex is somewhat shorter than wide, whereas in the males of *M. nigrolineata* (see Tab. 2 in Remane, 1961) it is somewhat longer. So *Mocydiopsis oranensis* (Matsumura, 1908) = *M. nigrolineata* Remane, 1961, n. syn. Lectotype: the specimen on the right side of the pith block, marked also with a red point.

Thamnotettix nemourensis (p. 24—25) = *Cechenotettix nemourensis* (Matsumura, 1908). Four specimens (2 ♂, 2 ♀) from Nemours and one male from Sicily (Palermo) were investigated, as also 5 females of var. *maculipennis* from Nemours. The species was placed in the genus *Cechenotettix* by Ribaut (1942). The male aedeagus was figured by Linnavuori (1956). Lectotype: a male from "N. Afrika, Nemours. Matsumura", an intact specimen on a pith block, marked also with a red point on the pith surface.

Thamnotettix tangericus n. sp. (p. 25). The species is redescribed by Rodrigues (1968) under the name *Heliotettix fernandesi* (n. syn.). Accordingly, the valid name for it should be *Heliotettix tangericus*

(Matsumura, 1908). Lectotype: male on the left side of the pith block (marked also by a red point). The genus *Heliotettix* Rodr. is very near to *Synophropsis* Haupt, 1926, differing from the latter by its free (not fused with connective) aedeagus and sclerified anal tube. The genitalia of this species are given in Fig. 4A—F.

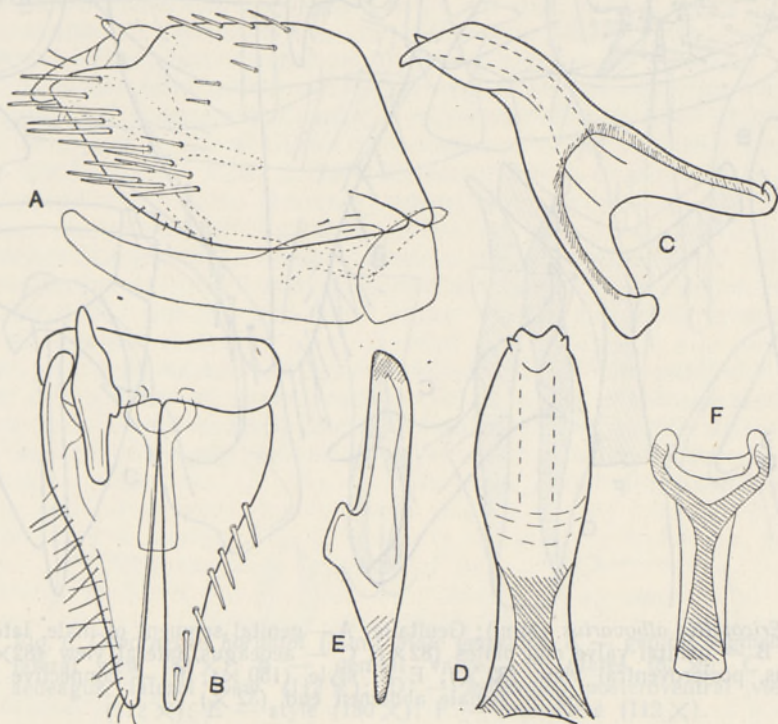


Fig. 4. *Heliotettix tangericus* (Mm.): Male genitalia: A — genital segment, lateral view (52 \times); B — genital valve and plates (52 \times); C — aedeagus, lateral view (112 \times); D — aedeagus, posteroventral view (112 \times); E — style (112 \times); F — connective (112 \times).

Thamnotettix albovarius n. sp. (p. 26—27). Several specimens (males and females) from Tangerang were investigated. Quartau e Rodrigues (1969) have synonymized this species with *Ericotettix ericae* described by Lindberg (1960) from Portugal. A careful comparison of the original description and figures of Lindberg (1.c) shows that these species are different ones. So *E. ericae* is much bigger (its length is in δ 4.5—4.7, in f 5—5.5 mm, whereas in *E. albovarius* it is respectively 3.65—3.72 and 4—4.2 mm), its fore margin of the head is more rounded, pygofer is longer and more pointed, aedeagus is longer and of a somewhat different shape (Fig. 5A—F), etc. It is interesting to note that almost the same differences were given by Rodrigues (1968) redescribing and figuring *E. ericae* Lb. Accordingly — *Ericotettix albovarius* (Matsumura, 1908) = *E. ericae* Rodrigues, 1968, nec. Lb., 1960. Lectotype: the middle specimen (a male) in a hind row of specimens on the pith block (marked also by a red point). The genus *Ericotettix* Lb. is very near to *Cechnotettix* Ribaut, 1942, differing from it by a different spinulation of the fore and middle legs (I—1.3; II—4.4), by the aedeagus which has long acuminate plates behind the gonopore, etc.

Thamnotettix acuminatus (p. 27—28) was not investigated. It was placed by Linnavuori (1971) in his new genus *Melillaia*. As *Thamnotettix*

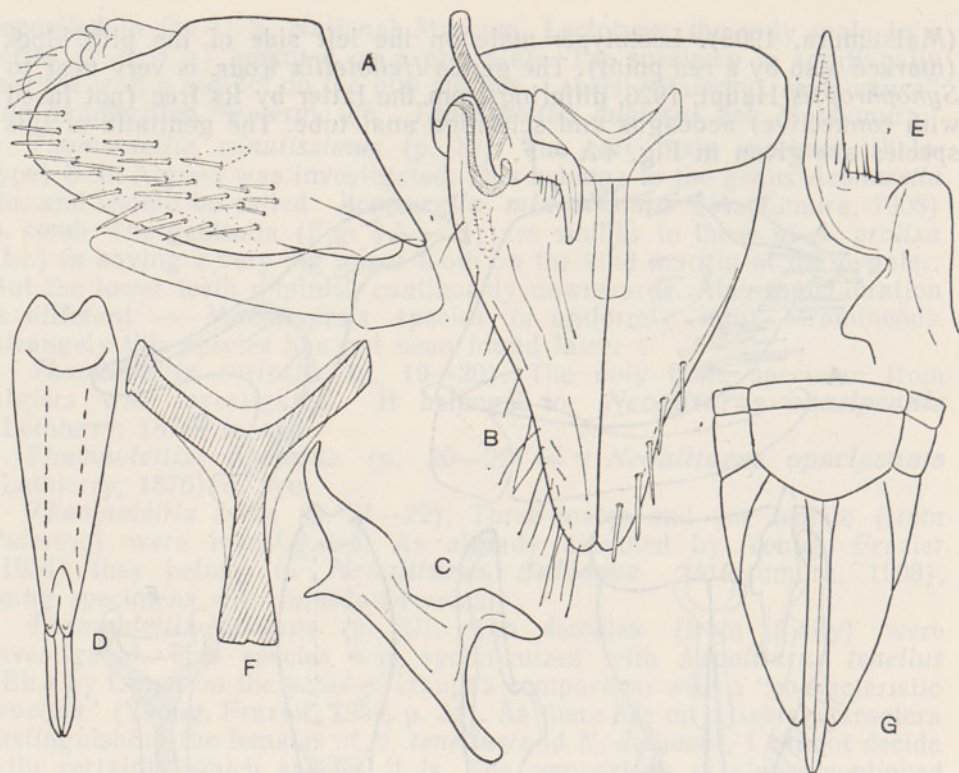


Fig. 5. *Ericotettix albovarius* (Mm.); Genitalia: A — genital segment of male, lateral view (52 \times); B — genital valve and plates (82 \times); C — aedeagus, lateral view (82 \times); D — aedeagus, posteroventral view (82 \times); E — style (150 \times); F — connective (112 \times); G — female abdomen end (32 \times).

acuminatus Mm. is a primary homonym, Metcalf (1955) has changed it into *Th. matsumuri*. So the valid name is *Metillaia matsumuri* (Metcalf, 1955).

Jassus nemourensis (p. 28) was not investigated, either. As stated already by Horvath (1911), it is a younger synonym for *Jassus Theryi* Hv. = *Allygus theryi* (Horvath, 1907).

Scaphoideus egyptiacus (p. 29—30). Although Matsumura stated that types of this species are deposited in the National Museum of Budapest, one male specimen was found in the collection, which the present author designated as a lectotype. For the species, the new genus *Neolimnus* was described by Linnavuori (1953). The species should be called *Neolimnus egyptiacus* (Matsumura, 1908).

Scaphoideus horvathi (p. 30—32) = *Osbornellus horvathi* (Matsumura, 1908) **n. comb.** There are one male and several females from Nemours and Algiers in the collection. Male genitalia are presented in Fig. 6 A—F. Lectotype: the only male (from Nemours) with removed abdomen, marked also by a red dot on the pith plate.

Deltocephalus velox (p. 32—33). There are three specimens in the collection. One female, carrying a label "Kolosv. 6/7" had also an identification label attached to it, on which was written "*compactis* n. sp." The latter was later crossed out with red ink and instead of it was written "*velox*". This specimen belongs to *Diplocolenus frauenfeldi* (Fieber, 1869). A pair labelled "Hungaria" belongs to *Jassargus obtusivalvis* (Fie-

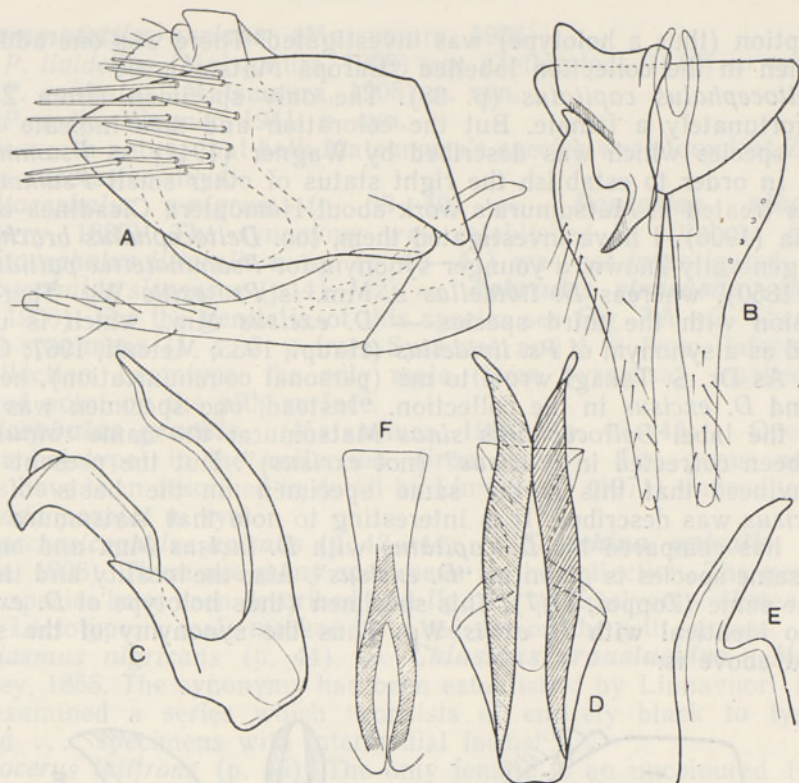


Fig. 6. *Osbornellus horvathi* (Mm.) Male genitalia: A — genital segment, lateral view (82 \times); B — genital valve and plates (82 \times); C — aedeagus, lateral view (112 \times); D — aedeagus, posteroventral view (112 \times); E — style (180 \times); F — connective (112 \times).

ber, 1868). It must be stressed that the genitalia of these species (quite different from each other) do not fit into the description of Matsumura.

Deltocephalus immundus (p. 33—34). The only specimen (male) in the collection (from Hungary) belongs to *Psammotettix helvolus* (Kirschbaum, 1868) *n. syn.*

Deltocephalus oranensis (p. 34—35). All the six specimens (females) noted by Matsumura in the description were checked up. This species could not be explained. For this purpose topotypic males are needed.

Deltocephalus kolosvarensis (p. 35—36) = *Psammotettix kolosvarensis* (Matsumura, 1908). Several specimens (2 δ , 12 ♀) were investigated. The synonymy with *P. similis* (Wagner, 1947) was established by Dlabola (1960) after an investigation of some specimens from the original series deposited in the National Museum of Budapest. Lectotype: complete male on a pith block, marked also with a red point.

Deltocephalus sinuatus (p. 36—37) = *Turrutus socialis* (Flor, 1861). The synonymy was established already by Haupt (1935). Haupt has connected this species with a dark variety — *f. onustus* (Fieber, 1869). The only specimen (female) in the collection was a normally coloured one.

Deltocephalus nemourensis (p. 37—38) = *Psammotettix nemourensis* (Matsumura, 1908) *n. comb.* This species has been described in detail by Remane (1965) under the name *Psammotettix wagneri n. syn.* The only specimen (a male from Nemours) used by Matsumura in the

description (thus a holotype) was investigated. There was one additional specimen in the collection labelled "Europa Matsumura".

Deltocephalus capitatus (p. 38). The only specimen (from Zoppot), is unfortunately a female. But the coloration and size indicate that it is the species which was described by Wagner (1941) as *Psammotettix exilis*. In order to establish the right status of other small *Psammotettix* species treated in Matsumura's work about Homoptera Cicadinea of East Prussia (1906), I have investigated them, too. *Deltocephalus brachynotus* is, as generally known, a younger synonym for *Psammotettix pallidinervis* (Db., 1850), whereas *D. lividellus* s. Mm. is *Ps. exilis* Wg. There is a confusion with the third species — *D. excisus* Mm., which is usually treated as a synonym of *Ps. lividellus* (Haupt, 1935; Metcalf, 1967; Greene, 1971). As Dr. S. Takagi wrote to me (personal communication), he could not find *D. excisus* in the collection. "Instead, one specimen was found under the label *Deltocephalus sinus* Matsumura; the name "sinus" had later been corrected in "incisus" (not *excisus*"). But the present author is convinced that this is the same specimen on the basis of which *D. excisus* was described. It is interesting to note that Matsumura (1908, p. 38) has compared his *D. capitatus* with *D. incisus* Mm. and on page 2 the same species is given as "*D. excisus*". Also the locality and the date are the same (Zoppot, 17/7). This specimen (thus holotype of *D. excisus*) is also identical with *P. exilis* Wg. Thus the synonymy of the species treated above is:

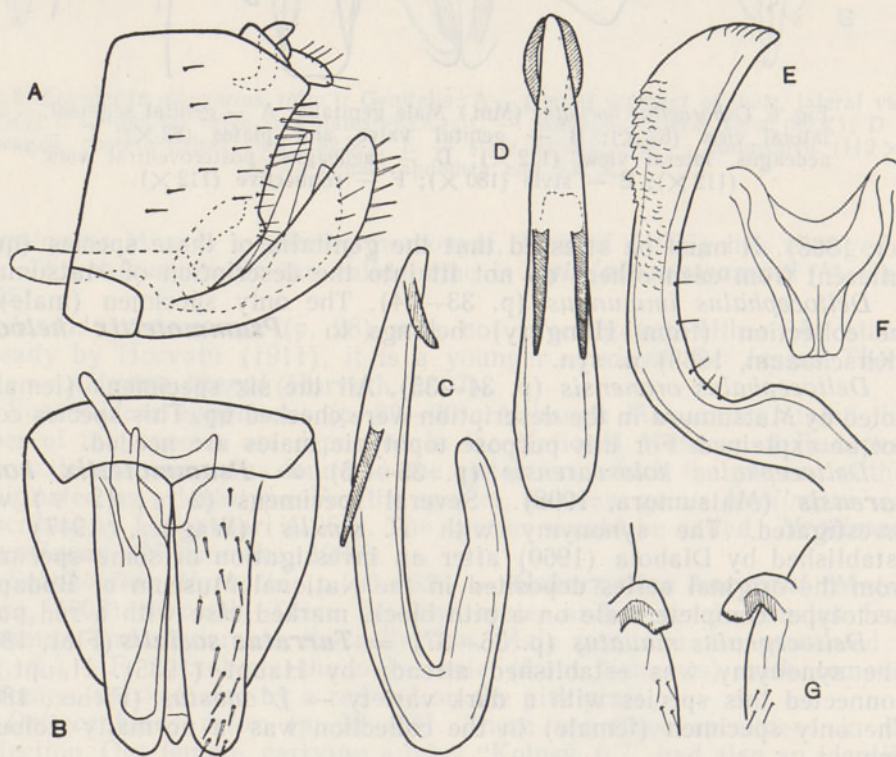


Fig. 7. *Aphrodes siracusae* (Mm.). Male genitalia: A — genital segment, lateral view (63 \times); B — genital segment, ventral view (63 \times); C — aedeagus, lateral view (135 \times); D — aedeagus, caudal view (135 \times); E — style (135 \times); F — connective (135 \times); G — appendages of pygofer lobes (112 \times).

Psammotettix excisus (Matsumura, 1906)

= *P. lividellus* (Matsumura, 1906) nec (Zetterstedt, 1810) n. syn.

= *P. capitatus* (Matsumura, 1908) n. syn.

= *P. exilis* Wagner, 1941, n. syn.

It is worth noting that both Matsumura's species were found at Zoppot on two successive days.

Deltocephalus v-nigrum (p. 39—40) = *Pantallus alboniger* (Lethierry, 1889). The synonymy was established by Dlabola (1955).

Deltocephalus littoralis n. sp. (p. 40—41) was not investigated.

Acocephalus siracusae (p. 41—42) = *Aphrodes siracusae* (Matsumura, 1908). For the genitalia of this species see Fig. 7A—G. There are several specimens (1 ♂, 3 ♀ from Syracuse and 4 ♀ from Palermo) in the collection. Lectotype: the only male (from Syracuse), marked also by a red point on the pith surface.

Epicephalus gracilis (Matsumura, 1908) (p. 42—43). One male (thus a holotype) in the collection (from Oran). The genus and the species have been described in detail by Linnavuori (1971) under the name *Bousaada psapfa*, n. syn.

Charcharicephalus apicalis (p. 43—44) = *Selachina apicalis* (Matsumura, 1908). There are many specimens in the collection. The genitalia of this species have been described and figured by Emelyanov (Емельянов, 1962). Lectotype: a male marked by a red dot on the pith surface.

Chiasmus nigricans (p. 44) = *Chiasmus translucidus* Mulsant and Rey, 1855. The synonymy has been established by Linnavuori (1965) who examined a series which "consists of entirely black to typically marked . . . specimens with intermedial forms".

Idiocerus latifrons (p. 45). The only female is an uncoloured (immature) specimen of *Idiocerus stigmaticalis* (Herrich-Schaeffer, 1835) n. syn.

Idiocerus brunneipennis (p. 45—46). This species was synonymized with *Idiocerus fasciatus* Fieber, 1868, by Haupt (1935). I can only confirm it.

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I. Cicadellidae

Resümee

On vaadatud läbi Euroopast ja Vahemeremaadelt pärinevate tirtide kogu (säilitatakse Hokkaido Ulikooli Entomoloogiatstituudis). Liigid on esitatud samas järjestuses nagu S. Matsumura töös (1908), tänapäeval kehtivad nimetused on poolpaksus kirjas. On lisatud 7 tirdiliigi genitaalide joonised.

Eesti NSV Teaduste Akadeemia
Zooloogia ja Botaanika Instituut

Toimetusse saabunud
1. VII 1974

Юхан ВИЛЬБАСТЕ

РЕВИЗИЯ ЦИКАДОВЫХ, ОПИСАННЫХ С. МАТСУМУРА ИЗ ЕВРОПЫ И СРЕДИЗЕМНОМОРСКИХ СТРАН

I. Cicadellidae

Резюме

Дана ревизия цикадовых, собранных и описанных в начале настоящего века (хранятся в Энтомологическом институте Хокайдоского университета, Япония). Виды приведены в порядке использования в работе С. Матsumура (Matsumura, 1908). Действующие названия даны полужирным шрифтом. Приведены также рисунки гениталей самцов 7 видов.

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