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On some Mediterranean Delphacidae (Homoptera, Auchenorrhyncha) described by S. MATSUMURA

[With 41 figures]

Among 43 species of the Fulgoromorpha described in 1910 by S. Matsumura there were 7 Mediterranean species originally referred to the genus Delphax: Delphax tangira-Mats., D. nigrifrons Mats., D. nigricans Mats., D. strigosa Mats., D. furcata Mats., D. cataniae Mats., and D. suezensis Mats. The name Delphax furcata Matsumura, 1910 appeared to be primary homonym of Delphax furcata Provancher, 1872 and has been renamed by Metcalf-(1943) into Liburnia matsumurana Metc.

Scanty descriptions of the above species are not good enough to be interpreted without doubt. To make matters worse, some illustrations accompanying the descriptions were apparently transposed in the paper and bear wrong letterpresses. How strange that the subsequent authors did not notice the evident inconsistence between descriptions and illustrations. Most of the names became then nomina dubia and could be interpreted properly only on the base of type material.

Through the courtesy of Dr. S. Takagi (Hokkaido University, Sapporo, Japan) I had the opportunity to study the types of 5 species of *Delphax* described by Matsumura in 1910. Besides, two specimens of *D. nigricans* Mats., which apparently belonged to the original series, are in the collection of the Hungarian Natural History Museum (Budapest). Only the types of *D. nigrifrons* Mats., were not possible to find.

My sincere thanks are due to Dr. S. TAKAGI (Sapporo), Dr. Á. Soós (Buda-

2

pest) and Dr. J. Stehlík (Brno) for the loan of specimens under their care. After a careful comparison of illustrations in Matsumura's paper with the descriptions of male genitalia in the text, and with types, I am able now to fit the drawings to appropriate species

Name of species	Name below the drawi
D. tangira MATS., (p. 30)	D. nigricans Mats. (Fig. 9)
D. nigrifrons Mats. (p. 31)	D. cataniae Mats. (Fig. 12)
D. nigricans MATS. (p. 32)	D. suezensis MATS. (Fig. 13)
D. strigosa MATS. (p. 33)	D. tangira Mats. (Fig. 7)
D. furcata Mats. (p. 34)	D. furcata Mats. (Fig. 11)
D. cataniae MATS. (p. 35)	D. nigrifrons MATS. (Fig. 8)
D. suezensis MATS. (p. 35)	D. strigosa MATS. (Fig. 10).

These 7 *Delphax*-species described in 1910 belong now to 5 different genera and 2 subfamilies. At least 3 species prove to be synonyms of previously described. Ten new combinations and 5 new synonyms are introduced in the present paper.

The species listed below are given under the generic names with which they should be combined. Two genera are here described as new.

Genitalic structures, and legs were drawn after being boiled in 10 % KOH solution. Enlargement is expressed by a scale of 0.1 mm, accompynying the particular illustrations in the text.

Sogatella matsumurana (METCALF, 1943), comb. n. (Fig. 1-6).

Delphax furcata Matsumura, 1910. p. 34, fig. 11 [primary homonym]. Liburnia matsumurana Metcalf, 1943, p. 364.

Vertex longer submedially than broad at base (1.2:1), angulately rounding into frons, slightly wider at base than at apex (1.1:1), lateral margins straight, apical margin truncate with submedian carinae moderately prominent, anterior arms of Y-shaped carina distinct, median stem weak, submedian carinae narrowly separated at apex of vertex, basal compartment of vertex wider at hind margin than greatest length (1.4:1); and than median length (1.6:1). Frons in middle line longer than broad at widest part (2.3:1), widest slightly beyond middle, median carina simple, narrowly forked at extreme base. Basal joint of antennae longer than broad at base (1.4:1), second joint longer than broad at widest part (2.3:1) and twice as long first joint. Pronotum with disc as broad at anterior margin as long in middle line, lateral carinae nearly straight, strongly divering laterocaudad, not attaining hind margin; total length of mesonotum 2.4 times length of mesoscutellum.

Carinae of postelypeus, frons and vertex, yellowish; postelypeus and

¹ Measurements of head according to a scheme published by Fennah (1963, Fig. 20A, B).

vertex light brown, from between carinae tawny, antennae and legs light brown, genae blackish; pronotum, especially its lateral parts, paler than vertex, side parts tawny; disc of mesonotum yellowish; abdomen brownish, pygofer darker, its dorsolateral margins yellowish. Fore wings hyaline with apical margin brownish, veins concolorous. Length of fore wing 2.7 mm.

Genitalia as figured (Fig. 1-6). Pygofer with posterior opening roundish, dorsal margin of diaphragm with a sclerotized roll bent ventrad. Aedeagus with 4 teeth along the ventral margin and about 10 teeth in an oblique row on left side of the organ.

Delphax furcata Mats. was based on a series of 6 specimens (433, 2 99) from Sicily (Catania and Siracusa). I have only 2 males at my disposal, pinned

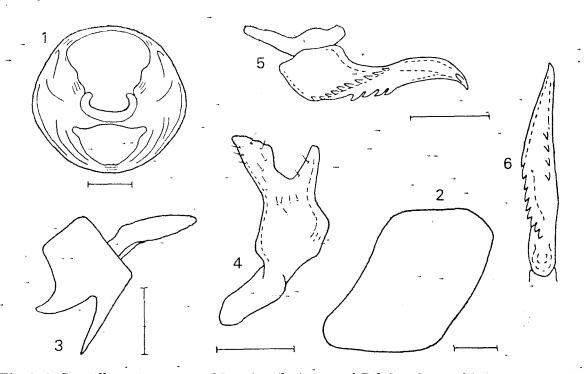


Fig. 1-6. Sogatella matsumurana (Metc.), 3 (lectotype of Delphax furcata Mats.). 1 - pygofer, posterior view, 2 - the same, lateral view; 3 - anal segment, left side; 4 - left paramere, outer aspect; 5 - aedeagus, left side; 6 - the same, ventral view.

into a piece of elder core and labelled as follows: "Siracusa; Matsumura" and "D. furcata Mats.; det. Matsumura" and "Type; Matsumura" (on red paper) and "Sogata". One macropterous male from this series is herewith selected as the lectotype. The paralectotype has the wings missing.

I do not dare to synonymise the species with any of numerous Palaearctic and Ethiopian forms without fuscous spot in clavus. In a key to species, published by Fennah (1963, pp. 75-77) it runs to Soyatella catoptron Fenn. and S. nigrigenis (Jac.). It is very similar to S. catoptron Fenn. in the proportions of head and antennae, but differs in less contrasting coloration (it has no creamy-

white carinae), in the shape of diaphragm, and aedeagus which is more elongated and recurved ventrad in its apical portion, and has only four teeth along ventral margin. From S. nigrigenis (Jac.) it differs in coloration, the shape of anal segment, pygofer, dorsal margin of diaphragm, and parameres. Unfortunately we have so far no information about the degree of individual and geographic variability within the genus Sogatella Fenn.

S. matsumurana occurs also in Algeria: 1 3, Oasis Biskra, winter 1908, coll, J. Steinbach (new record) (in the collection of Institute of Zoology of the Polish Academy of Sciences, Warsaw).

Toya propinqua (FIEBER, 1866). (Fig. 7-11).

Delphax propinqua Fieber, 1866, p. 525, pl. 8, Fig. 24.
Delphax cataniae Matsumura, 1910, p. 35 [description], syn. n.
Delphax nigrifrons-Matsumura, 1910, Fig. 8 [figure with a wrong name].
Calligypona propinqua: Wagner, 1954, p. 77, Fig. 35-37.
Toya propinqua: Fennah, 1965, p. 56.

Delphax cataniae Mats. is conspecific with Toya propinqua (Fieb.), a species well known and apparently of world-wide distribution. Matsumura based his species on two macropterous males, and both specimens are represented in the collection. One of them is herewith selected as the lectotype. The specimens are badly damaged, in the paralectotype the abdomen is missing. Some genitalic characters of the lectotype are given (Fig. 7-11). Wagner (1954) maintained that the aedeagus of T. propinqua (Fieb.) has its surface smooth, in the lectotype of D. cataniae Mats. there are some minute teeth at the tip of the organ, on right side, near the orifice of the ejaculatory duct (Fig. 11).

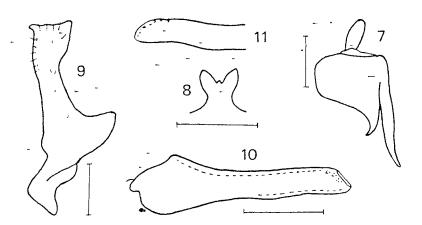


Fig. 7-11. Toya propinqua (FIEB.), 5 (lectotype of Delphax calaniae MATS.). 7 — anal segment, left side; 8 — median process on dorsal margin of diaphragm; 9 — left paramere; 10 — aedeagus, left side; 11 — apical portion of aedeagus, right side.

The types, pinned side by side into a block of elder core, bear the following labels: "Catania; Matsumura" and "Delphax; cataniae n. sp.; det. Matsumura" and "Type; Matsumura" (on red paper) and "Liburnia; cataniae; Mats.". The lectotype has been furnished by an additional circular piece of red paper.

Toya suezensis (MATSUMURA, 1910), comb. n. (Fig. 12-18).

Delphax suezensis Matsumura, 1910, p. 35 [description]. Delphax strigosa Matsumura, 1910, Fig. 10 [figure with a wrong name]. Calligypona bella Linnavouri, 1964, p. 342, Fig. 26, syn. n.

Vertex as long submedially as broad at base or a little shorter, subrectangularly rounded into frons, narrower at apex than at base, lateral margins concave, submedian carinae prominent, shaft of Y-shaped carina weakly developed, submedian carinae uniting at apex of vertex and markedly prominent, basal compartment of vertex wider at hind margin than greatest length (1.4:1); and the median length (1.7:1). Frons in middle line twice longer than at widest part, widest at two thirds from base, lateral margins slightly convex, median carina simple. Antennae with basal joint longer than broad at widest part (1.4:1), second joint twice longer than first. Ocelli distinct, blemmata absent. Pronotum with disc as long in middle line as broad at anterior margin, lateral carinae weakly concave, not attaining hind margin. Total length of mesonotum 2.6 times greater than that of scutellum. Post-tibial spur with 16 teeth.

Stramineous; fore wings (in brachypters), and pygofer, except its dorsal part, chestnut-coloured.

Anal segment of male (Fig. 14) with spinose processes relatively long, curved distally when viewed from side. Pygofer moderately long with posterior opening broader than long, medioventral process absent, diaphragm with dorsal margin elevated at middle into a very long, parallel-sided process, abour 5 times longer than broad at base (Fig. 15). Parameres strongly diverging laterodorsal, apical margin obliquely truncate, outer apical angle subacute, inner apical angle rounded (Fig. 16). Aedeagus (Fig. 17) long, tubular. Total length of brachypters 1.7 mm, length of fore wing (in brachypters) 1.0 mm.

Described from Egypt. In the type series there are 8 brachypterous specimens mounted together on a block of elder core and labelled as follows: "Port Said" and "D. suezensis; det. Dr. Matsumura" and "Type; Matsumura" (on red paper) and "Liburnia suezensis Mats.". One male specimen is herewith selected as lectotype; it has been marked with an additional round piece of red paper. One female specimen seems not to belong to the same species.

This species was by some authors erroneously referred to the genus Sogatella Fenn, and even synonymised with S. vibix (HPT.). In spite of differently shaped processes of the anal segment, it should be referred to the genus Toya Dist.

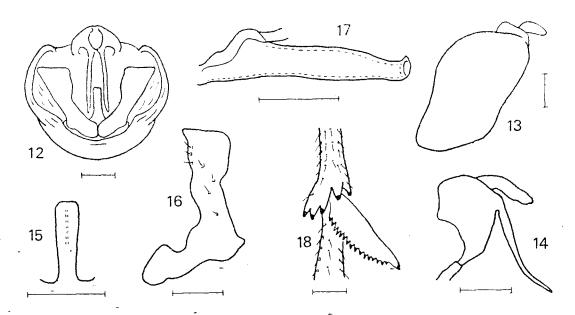


Fig. 12-18. Toya suczensis (MATS.), 3 (lectotype of Delphax suczensis MATS.). 12 = genitalia, posterior view; 13 - pygofer and anal segment, lateral view; 14 \(-\) anal segment, left side; 15 - median process on the dorsal margin of diaphragm; 16 - left paramere, outer aspect; 17 - aedeagus, left side; 18 - right post-tibial spur.

and is nearly related to Toya obtusangula (Linnaviori) (Calligypona obtusangula Linnaviori, 1957, p. 51, Fig. 2 C-F) described from Italy and recorded also from Cyprus, Israel and Egypt, and to Toya canidia Fennah, 1969, described from Sudan. To the genus Toya belongs also Toya hispidula (Lindenberg), comb. n. (Calligypona hispidula Lindberg, 1953, p. 186, Fig. 42d, 43g,h), known to occur in Canary Is., Madeira, Morocco and Egypt.

Toya tangira (MATSUMURA, 1910), comb. n. (Fig. 19-25).

- Delphax tangira Matsumura, 1910, p. 30 [description].

Delphax nigricans Matsumura, 1910, fig. 9 [figure with a wrong name].

Liburnia segetum Haupt, 1927, p. 11, pl. 1, fig. 8, syn. n.

Calligypona segetum: Linnavuori, 1962, p. 26, fig. 18f, g, h.

Vertex a little longer medially than broad at base (1.1:1), subrectangularly rounding into frons, slightly narrower at apex than at base, lateral margins straight, apical margin truncate with submedian carinae distinctly prominent, Y-shaped carina obsolete, submedian carinae uniting at-apex of vertex, posterior compartment of vertex wider at hind margin than its greatest length (1.4:1). Frons slightly narrowed at apex than at base (1.1:1), in middle line longer than broad at widest part (2.7:1), widest just below eyes. Median frontal carina simple. Rostrum a little surpassing post-coxae. Basal joint of antennae longer than broad (1.3:1), second joint longer than first (2:1), Ocelli distinct. Disc of pronotum longer in middle line than broad at anterior margin (1.2:1),

lateral carinae nearly straight, not attending hind margin. Median length of mesonotum greater than that of pronotum (3.5:1). Total length of mesonotum greater than that of scutellum (2.1:1). Post-tibial spur in lectotype with 25 (left leg) and 26 (right leg) teeth.

Body coloration fuscous brown; paler are: head above except intercarinal area, pronotum except pronotal pits and immediately behind eyes, and carinae of frons and postclypeus. Frons between carinae dark brow. Basal antennal joint darker than second joint. General coloration in male is darker than in female. Fore wings (in macropters) hyaline, veins infuscated in apical portion, apical margin of fore wings fuscous. A distinct (especially in males) fuscous spot in clavus at level of union of claval veins between common vein and margin. Total length 3.1 mm, fore wing 2.5 mm. Pygofer (Fig. 19–21) moderately long, posterior opening oval, dorsolateral angles slightly produced; medioventral process absent; diaphragm with a median process incised and provided with two small wings directed caudad. Paramere (Fig. 23) with two apices, basal lobe well developed. Aedeagus (Fig. 24) tubular with a scaled structure mounted dorsally on the basal portion of the organ.

The type series of Delphax tangira Mats. consists of four macropterous

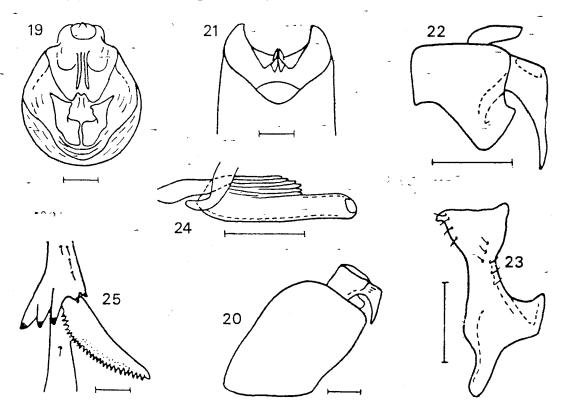


Fig. 19-25. Toya tangira (MATS.), \$\mathcal{Z}\$ (lectotype of Delphax tangira MATS.). 19 - genitalia, posterior view; 20 - pygofer and anal segment, lateral view; 21 - pygofer, ventral view; 22 - anal segment, left side; 23 - left paramere, outer aspect; 24 - aedeagus. left side; 25 - right post-tibial spur,

specimens: three males and one female. All are pinned into one piece of elder core and provided with following labels: "N. Afrika; Tangier; Matsum." and "Delphax tangira n. sp." and "Delphax "and "Type; Matsumura" (on red paper). One male is here designated as the lectotype and furnished by a round piece of red paper.

This species is closely related to Toya albicollis (MOTSCH.) sensu WAGNER, 1954, described from Ceylon. The last species was referred by Fennah (1969) to the genus Harmalia Fenn. A series in the collection of Moravian Museum (Brno), from Henaratgoda, Ceylon, redescribed and illustrated by Melichar (1903) under the name Liburnia albicollis (Motsch.), contains 10 male specimens; two of them were dissected and illustrated by Wagner. As the types of Delphax albicollis Motsch. are impossible to find, the interpretation given by Wagner should be accepted. However, the above specimens do not belong to Harmalia FENN: the submedian carinae are united at apex of vertex (so they are in the types of Delphax tangira MATS.). It should be noted that the above mentioned series from Ceylon contains 4 additional male specimens erroneously admixed to it. The females cannot be determined with certainty. Toya tangira (MATS.) differs from T. albicollis (Motsch.) in size (it is 0.5 mm longer), darker coloration (pronotum only slightly paler than mesontum), shape of the pygofer (dorsolateral angles slightly produced) and differently shaped median process of diaphragm.

Delphacodes nigrifrons (MATSUMURA, 1910), comb. n.

Delphax nigrifrons Matsumura, 1910, p. 31 [description].

Delphax cataniae Matsumura, 1910, fig. 8 [figure with a wrong name].

The cotypes (2 33) could not be found in Matsumura's collection. The species was described from Sicily and with no doubt belonged to the genus *Delphacodes* Fieber, 1866, sensu Linnauuri, 1957, Dlabola, 1957, 1961, and Nast, 1958. Incidentally, I still regard the interpretation of *Delphacodes* Fieber. given by the above authors as the only acceptable.

Flastena gen. n.

Vertex a little shorter or slightly longer submedially than broad at base (1:1.1-1.1:1), obtusely or subrectangularly rounding into frons, broader at base than at apex, apical margin truncate with submedian carinae moderately prominent and narrowly separated at apex, lateral margins shallowly convex, Y-shaped carina distinct. Frons 2-2.5 as long as broad at widest part, with median carina moderately thick, forking just at base. Blemmata¹ present,

¹ For the term blemma see Fennah, 1963, p. 46.

distinct. Antennae slightly surpassing frontoclypeal suture, second joint about 1.5 as long as first. Post-tibia with 2 lateral spines, and 2+3 terminal spines; spur with teeth staggered in two rows. Fore wings in brachypters surpassing abdomen, distinctly narrowing towards end, rounded at apex.

Anal segment of male long, its posterior part extending into a claw-like process directed ventrad. Pygofer relatively short, opening nearly as long dorso-ventrally as broad, with lower margin emarginated; medioventral process absent; diaphragm with dorsal margin shallowly excavated. Parameres S-shaped, apical margin obliquely truncate, outer apical angle more elongated than inner angle, with an additional protuberance before the end. Aedeagus compressed laterally, curved upward, provided with rows of teeth.

Type-species: Delphax fumipennis Fieber, 1866.

The generic name is an arbitrary combination of letters, feminine in gender.

To this genus belongs also Flastena fumata (LINDBERG), comb. n. (Calligypona fumata LINDBERG, 1948, p. 126, fig. 34 A-D), described from Cyprus and recorded from Bulgaria, Greece and Turkey; the winter has investigated specimens from Romania (Dobrogea) (new record) in the collection of Natural History Museum (Budapest).

Flastena gen. n. has little-in common with Ribautodelphax WAGN. to which Calligypona fumāta LDB. was referred by DLABOLA (1971). It differs from other European genera in proportions of head, shape of anal segment, and male genitalia.

Distribution of know species: Madeira, Portugal, Spain, France, Morocco, Italy (Sicily), Greece, Bulgaria, Romania, Turkey (Anatolia), Cyprus.

Flastena fumipennis (FIEBER, 1866), comb. n. (Fig. 26-33).

Delphax fumipennis FIEBER, 1866, p. 527, pl. 8, Fig. 37.

Delphax nigricans Matsumura, 1910, p. 32 [description].

Delphax suezensis Matsumura, 1910, Fig. 13 [figure with a wrong name].

Calligypona bifurcata Lindberg, 1961, p. 61, Fig. 7, syn. n.

The types of *Delphax nigricans* Mats. have not been found in Sapporo. In the collection of Natural History Museum (Budapest) there are two male brachypterous specimens of this species, labelled: "Palermo; Matsumura" and "*Delphax nigricans* Mats.; det. Horváth". Formally, both specimens are no types whatever; they belonged to material collected by Matsumura and were probably sent to Dr. G. Horváth for comparison before the manuscript of *D. nigricans* Mats. was completed. The description below is based on the two mentioned specimens.

Vertex as long submedially as broad at base or slightly shorter, obtusely or subangularly rounding into frons, broader at base than at apex (1.1:1), lateral margins straight, apical margin truncate with submedian carinae distinctly prominent, Y-shaped carina distinct, submedian carinae narrowly separated

at apex, basal compartment of vertex wider at hind margin than greatest length (3.5:1). From in middle line longer than wide at widest part (2:1), slightly widest at level of lower margins of eyes or a little further down, lateral margins somewhat concave between eyes, median carina forked at base of from, then becoming gradually thicker and forming a distinct nodule at some distance before the

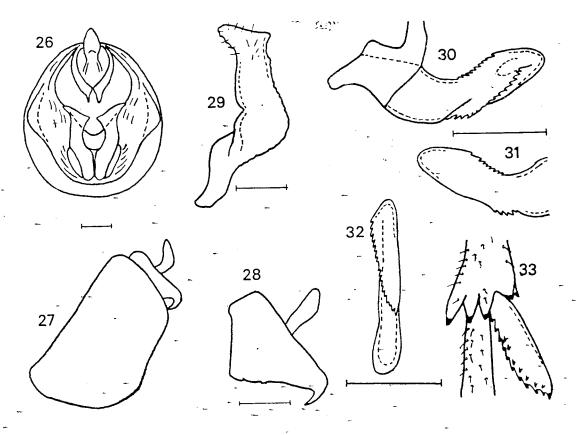


Fig. 26-33. Flastena fumipennis (Fieb.), 3. 26 — genitalia, posterior view; 27 — pygofer and anal segment, lateral view; 28 — anal segment, left side; 29 — left paramere, outer aspect; 30 — aedeagus, left side; 31 — the same, right side; 32 — the same, dorsal view; 33 — right post-tibial spur.

fronto-clypeal suture (a rather unusual character in the *Delphacidae*), lateral and median carinae prominent, from between them markedly hollowed. Ocelli small, blemmata well visible. Pronotum with lateral carinae weakly concave and not attaining hind margin, pronotal pits distinct. Post-tibial spur (Fig. 33) with 17 teeth which are distinctly staggered in two rows.

Brown; paler are: median carina of frons, carinae of clypeus, second joint of antennae, pronotum, hind margin of scutellum, and legs; dorsolateral margins of male pygofer white. Fore wings 2.7 as long as wide, narrowing toward apex, apex rounded; shiny, semitransparent, uniformly chestnut-brown, veins prominent, slightly darker, with distinct granulation.

Total length 2.5 mm, length of body 2.1 mm, length of fore wing 1.7 mm,

Genitalia as figured (Fig. 26–32). Parameres with outer apical lobe irregularly serrated before tip, subapical inner protuberance small, inner margin of paramere serrated up to the protuberance. Aedeagus with rows of teeth on both sides.

Iubsoda gen. n.

Vertex as long medially as broad at base, or shorter than broad, subacutely rounding into frons, slightly wider at apex than at base, apical margin shallowly convex, with submedian carinae uniting at apex of vertex and evanescent at the point of union, greatest length of basal compartment of vertex less than half of vertex length; frons in middle line nearly twice longer than wide at widest part, widest at middle, lateral margins shallowly convex, median carina simple, length of postelypeus about half length of frons; antennae surpassing frontoelypeal suture, basal joint much longer than first; blemmata absent; lateral carinae of pronotum slightly concave, not attaining hind margin. Post-tibial spur without teeth. Anal segment of male small, without spinose processes. Pygofer long, tubular, strongly excavated dorsally, medioventral process absent. Aedeagus tubular, provided with a crown of spinose processes at its apex; parameres long, with a spinose process at base, which is directed caudad.

Type-species: Liburnia stigmatica Melichar, 1897.

The genus is named in honour of the International Union of Biological Sciences (IUBS) in connection with its recent Resolution promoting the taxonomical investigations. The name is feminine in gender.

Iubsoda gen. n. is a member of the subfamily Stirominae Wagn. and is distinguishable by very long, tubular pygofer provided with long and recurved mesad processes in its upper part, by short and reduced anal segment, and by elongated parameres each having a process at base. To this remarkable genus belongs also Iubsoda gylippus (Fennah), comb. n. (Eurysa gylippus Fennah, 1969, p. 11, Figs. 1-8), described from Ethiopia.

Distribution of known species: Italy (Sicily), Yugoslavia and Ethiopia¹.

Iubsoda stigmatica (Melich, 1897), comb. n. (Fig. 34-41).

Liburnia stigmatica Melichar, 1897, p. 69.

Delphax strigosa Matsumura, 1910, p. 33 [description]. syn. n.

Delphax tangira Matsumura, 1910, Fig. 7 [figure with a wrong name].

¹ To the same genus belongs *Iubsoda duffelsi* (DLABOLA), **comb. n.** (*Muirodelphax duffelsi* DLABOLA, 1974, p. 291, fig. 6-15) recently described from Cyprus and Spain(Balearie Is, and Malaga) (Acta Zool. Ac. Sci. Hung., Budapest. 20 (3-4), 1974, pp. 289-308). It has not been taken into account in the above description of the genus *Iubsoda* gen. n.

Delphax strigosa Mats., described from Sicily, proved to be synonymous with Liburnia stigmatica Mel. described from Yugoslavia (Dalmatia: Dubrovnik). A comparison of types of both species showed that they are identical in all details.

Proportions of head as above; surface of frons perceptibly shagreened. Body yellowish brown, pronotum and mesonotum in macropters darker; sides of abdomen and of pygofer, fuscous. Fore wings in brachypters 1.4 mm long, hyaline, acutely rounding at apex, and leaving pygofer and two last abdominal segments uncovered. Fore wings in macropters 2.8 mm long, relatively narrow,

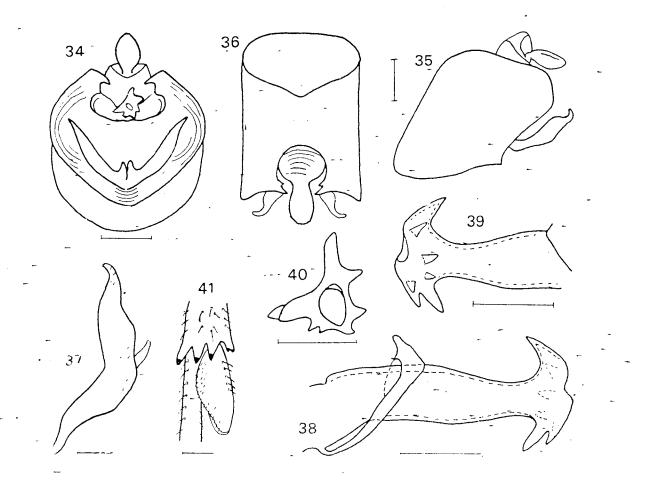


Fig. 34-41. Iubsoda stigmatica (Mel.), 5 (lecotype of Delphax strigosa Mats.). 34 — genitalia, posterior view; 35 — pygofer, side view; 36 — the same, dorsal view; 37 — left paramere, outer aspect; 38 — aedeagus, left side; 39 — the same, right side; 40 — the same, posterior view; 41 — right post-tibial spur.

reach far beyond the abdomen, hyaline with veins slightly brownish, acutely rounding at apex; a brownish suffusion along the costal margin between node and apex. Total length in macropters 3.3–3.6 mm, in brachypters 2.5 mm. Post-tibial spur (Fig. 41) covered with minute hairs, teeth absent.

Anal segment reduced, collar-like, relatively small, without spinose processes, connected with aedeagus by means of two week membraneous copulae. Pygofer (Fig. 34–36) relatively long, tubular, seen from above with a deep round excavation; posterior opening a little longer than broad, dorsolateral angles produced mesad; medioventral process absent. Aedeagus (Fig. 38–40) tubular, constricted before its end and provided with some lobes and spines, eight in number, when seen from behind. Parameres long and narrow, each having a thin spinose process arising near the base of the visible portion of the organ, and directed caudad.

The type series of *Liburnia stigmatica* Mel., preserved in Moravian Museum (Brno), consists of 4 specimens: one macropterous male (selected herewith as lectotype), one brachypterous male, one brachypterous female, and one parazited -(by a strepsiptere) brachypterous male. The types are labelled: "Dalmat.; Ragusa" and "Typus" (on red paper); the determination label is in the box.

Delphax strigosa Mats. was based on 3 specimens and all of them are in the collection: 2 males, and one female (all macropterous). One macropterous male is here selected as lectotype. The type-material is labelled as follows: "Siracusa; Matsumura" and "Delphax; strigosa n. sp." and "Type; Matsumura" (on red-paper) and "Liburnia; strigosa; Mats.".

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REFERÈNCES

- DLABOLA J. 1957. The problem of the genus *Delphacodes* and *Calligypona*, three new species and other Czechoslovakian faunistics (*Ho. Auchenorrh.*). Acta Ent. Mus. Nat. Pragae, Praha, 31, pp. 113-119, 23 Figs.
- DLABOLA J. 1961. Calligypona Sahlberd 1871 is a real and valid genus. Revision of the type, Delphacodes mulsanti Fieber (Hom. Auchenorrh.). Acta Ent. Mus. Nat. Pragae, Praha, 34, pp. 47-50.
- DLABOLA J. 1971. Taxonomische und chorologische Ergänzungen zur türkischen und iranisschen Zikadenfauna (*Homopt. Auchenorrhyncha*) (Sammellausbeute von Dr. WITTMER mit einem Nachtrag über andere Gebeite der Paläarktis). Acta Faun. Ent. Mus. Nat. Pragae, Praha, 14, pp. 115-138, 60 Figs.
- FENNAH R. G. 1963. The Delphacid species-complex known as Sogata furcifera (Horváth) (Homoptera: Fulgoroidea). Bull. Ent. Res., London, 54 (1), pp. 45-79, 20 Figs.
- FENNAH R. G. 1965. Delphacidae from Australia and New Zealand (Homoptera: Fulgoroidea). Bull. Brit. Mus. (N. H.) Entom., London, 17 (1), pp. 1-59, 199 Figs.
- FENNAH R. G. 1969a. Fulgoroidea (Homoptera) from New Caledonia and Loyalty Islands. Pacific Insects Monographs. Honolulu. 21, 116 pp., 586 Figs.
- FENNAH R. G. 1969b. Delphacidae (Homoptera, Fulgoroidea) from the Sudan Republic. Acta Ent. Fenn., Helsinki, 26, pp. 1-78, 226 Figs., 1 map.

- Fieber F. X. 1866. Grundzüge zur generischen Theilung der *Delphaeini*. Vern. Zool.-Bot. Ges., Wien, **1866**, pp. 517–534, pl. 8.
- LINNAVUORI R. 1952. Contributions to the Hemipterous fauna of Palestine. Ann. Ent. Fenn., Helsinki, 18 (4), pp. 188-195, 6 Figs.
- Linnavuori R. 1957. Remarks on some Italian Delphacidae (Hemiptera Homoptera). Boll. Soc. Ent. Ital., Genova, 87 (3-4), pp. 49-52, 2 Figs.
- Linnavuori R. 1958. On some new or little known Mediterranean *Homoptera*. Boll. Soc. Ent. Ital., Genova, 88 (3-4), pp. 34-38, 2 Figs.
- Linnavuori R. 1962. *Hemiptera* of Israel III. Ann Zool. Soc. Bot. Fenn. "Vanamo", Helsinki, 24 (3), pp. 1–108, 45 Figs.
- LINNAVUORI R. 1964. Hemiptera of Egypt, with remarks on some species of the adjacent Eremian Region. Ann. Zoolo. Fenn., Helsinki, 1 (4), pp. 306-356, 28 Figs.
- LINDBERG H. 1948. On the insect rauna of Cyprus. Results of the expedition of 1939 by Harald, Håkan and P. H. LINDBERG I-II. Comm. Biol., Helsingfors, 10 (7), pp. 1-175, 54 Figs.
- LINDBERG H. 1961. Hemiptera Insularum Madeirensium. Comm. Biol., Helsingfors, 24 (1), pp. 1-82, 10 Figs.
- Matsumura S. 1910. Neue-Cicadinen aus Europa und dem Mittelmeergebiet. Journ. Coll. Sci. Imp. Univ. Tokyo, 27 (18), pp. 1-38, 13 Figs.
- Melichar L. 1897. Einige neue Homopteren-Arten und -Varietäten aus Dalmatien und dem Küstenlande. Wien. Ent. Zeit., Wien., 16, pp. 67-72.
- Melichar L. 1903. Homopteren-Fauna von Ceylon. Berlin. 248 pp., 6 plates.
- METCALF Z. P.-1943. Areopidae (Delphicidae). General Catalogue of the Hemiptera. Fasc. IV Fulgoroidea, part 3. Northampton, Mass., 552 pp.
- NAST J. 1958. Homopterological notes X-XII. Acta Zool. Crac., Kraków, 2 (35), pp. 887-899, 24 Figs.
- Nast J. 1972. Palaearctic Auchenorrhyncha (Homoptera). An annotated check list. Warszawa, 550 pp.
- WAGNER W. 1954. Die Fulgoroidea der OMAR-COOPER-Expedition in die Lybische Wueste. Bull. Soc. Fouad Ier Entom., Kairo, 38, pp. 211-219, 41 Figs.
- WAGNER W. 1963. Dynamische Taxionomie, angewandt auf die Delphaciden Mitteleuropas. Mitt. Hamb. Zool. Mus. Inst., Hamburg, 60 (1962), pp. 111-180, 37 Figs.

STRESZCZENIE

[Tytuł: O śródziemnomorskich Delphacidae (Homoptera, Auchenorrhyncha) opisanych przez S. MATSUMURĘ]

Praca zawiera rewizję typów gatunków opisanych w 1910 r. przez S. Matsu-Murę pod nazwą rodzajową *Delphax*. Dziesięć kombinacji i 5 synonimów jest nowych. Opisano nadto 2 nowe rodzaje: *Flastena* gen. n. i *Iubsoda* gen. n.