

THE PROBLEM OF THE GENUS DELPHACODES AND CALLIGYPONA,
THREE NEW SPECIES AND OTHER CZECHOSLOVAKIAN
FAUNISTICS (HOM. AUCHENORRH.)

JIRÍ DLABOLA

(Entomological Laboratory, VÚRV, ČSAZV, Praha-Ruzyně)

Although there has been published a rather large taxonomic literature about *Homoptera Auchenorrhyncha* from Central Europe, it is still possible to find there even undescribed species. Considering the faunistics our research never can be so advanced as to know exactly the whole quantity of occurring species. There is a very large number of various biotopes in different parts of the ČSR which gives the possibility of existing to many zoogeographical elements. It renders also difficult the complete knowledge about our leafhopper-fauna. We have well developed xerothermophile, mountains, forest and bush biocenoses and there live so many typical leafhoppers on swamps, moss and other fresh places or near the water, that it is hardly possible to make all necessary investigation for gaining satisfactorial faunistical knowledge during a few years. Besides it is necessary to take into consideration the balance of population density, migrations and other changes in the composition of zoocenoses, which may be observed when studying not only the quantity but also the quality of living specimens together with fytocenological successions. Therefore it is not possible to publish a definitive list of our fauna.

As an addition to the Fauna ČSR I, 1954 and other more recent papers we give here the names of some more than 15 species up to now completely unknown from the ČSR, many of them having here their most northern distribution, being Mediterranean or other similar elements.

Cixius sphagnetophilus n. sp.

Figs 1—4. Total length ♂ 5—5,4 mm. ♀ 5,3—5,7 mm.

Both nearest species *C. stigmaticus* Germar 1818 and *C. dubius* Wagner 1939 are a little larger. Differs from all known species by his dark brown coloured fore wings.

Vertex broad, blackish with lateral pale spots. Face blackish with well marked testaceous middle, upper and lateral keels. Pronotum and tegulae testaceous, scutum with black scutellum.

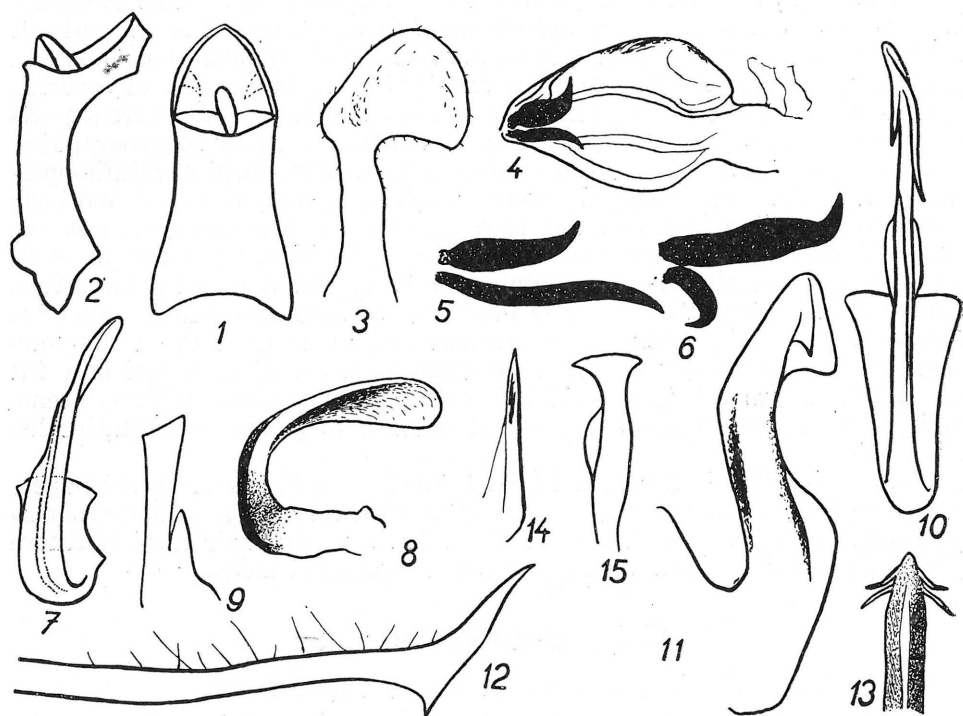
Fore wings dark brown with brown granulated and pale spotted nervature. Granulae without pilosity, wings appendix has granulae only on junctions with nervation. Stigma brown and white. Media with a row of dense circle-formed and zic-zac situated spots, sparse brown spotting in only one row on subcosta.

Body dark brown, feet with brown femora, tibiae and tarsi testaceous.

♂ Inner genitalia show great similarity to nearest *Cixius* species and the main difference can be seen in the same length of both the lateral spines on aedeagus. *C. dubius* has the upper spine longer, whereas in *C. stigmaticus* the lower spine is longer. Other details show no remarkable difference.

Type specimens have been collected on moss with sphagnetophilous vegetation (*Empetrum*, *Vaccinium uliginosum* aso.).

ČSR, Bohemia: Krušné hory, Rottava (Holotype, Allotype), Horní Blatná, 12. VII. 56, Paratypes (Dlabola), Veselí nad Lužnicí, 11. VI. 44 (Hoffer). Slovakia: Ladová jaskyňa, 9. VII. 52 (Dlabola).



Cixius sphagnetophilus n. sp., 1: anal tube dors., 2: anal tube lat., 3: stylus, 4: aedeagus lat., with spines. *Cixius stigmaticus* Germar, 5: spinulation of the aedeagus. *Cixius dubius* Wagner, 6: spinulation of the aedeagus. *Streptanus josifovi* n. sp., 7: aedeagus dors., 8: aedeagus lat., 9: stylus. *Typhlocyba loewi* Lethierry, 10: aedeagus dors., 11: aedeagus lat., 12: stylus. *Erythroneura unipunctata* n. sp., 13: aedeagus dors., 14: aedeagus lat., 15: stylus.

Cixius nervosus v. *longispinus* W a g n e r 1955 — Described and known from western Germany, where it lives with forma typica together or alone. For ČSR cited first material from Bohemia: Jičín, Kozákov u Semil, Peřimov (Dlabola), Čelákovice (Kocourek), Šumava, Srní (Kočmíd); Moravia: Čejč, Javorník (Hoffer), Frývaldov (Lang); Slovakia: Ladová jaskyňa (Dlabola); Austria: Bad Leopoldsdorfer bei Lienz (E. Galvagni), Museum Wien.

Criomorphus borealis (S a h l b e r g 1871) — Known from Northern Europe, first record from ČSR, Bohemia: Dářsko, 1. VI. 56, sphagneto-philous vegetation, 2 male, one female specimen (Dlabola).

Chlorionidea flava L ö w 1885 — First material from Moravia, known from Tatra and other Slovakian localities. Moravia: Pálava, 29. V. 56 (Dlabola).

Kelisia scotti (S c o t t 1870) — Unknown in ČSR, first material from Bohemia: Poříčany, 9. IX. 1907, 1 female (Rambousek).

Eurysa singeri K u p k a 1941 — Lives in Germany, Hungary and Austria; first Czechoslovakian material from Moravia: Pálava, 29. V. 56, in forest-undergrowth, some specimens (Dlabola), Mohelno, 27. V. 56, 2 specimens (Dlabola).

Metropis mayri F i e b e r 1866 — Known from the environments of Vienna, first finding in Czechoslovakia from Moravia: Pálava, 29. V. 56, on xerothermophile grass-vegetation in mass of specimens (Dlabola), Mohelno, 27. V. 56 (Dlabola).

Delphacodes or Calligypona?

Some European authors have not accepted the opinion, that *Delphacodes* and *Calligypona* form one genus only, other homopterologists use only one generic name: *Delphacodes* Fieber, according to Muir 1917.

Chin a 1954 studied the female type of *Delphacodes mulsanti* Fieber and writes that it is the genotype for species belonging to *Calligypona* Sahlberg too, but not for species of *Megamelus* Fieber.

Delphacodes mulsanti Fieber was described by his author not only after one female but there exists a good male description as well, which enables us easily to determine other material. Studying the genotypical material of *Delphacodes* Fieber, *Megamelus* Fieber and *Calligypona* Sahlberg I have found, that *Megamelus* may be easily separated (already by its form of vertex and male genitalia), but the genus *Delphacodes* cannot be used simultaneously for species called *Calligypona* Sahlberg 1871 (genotype *C. reyi* Fieber) by Ossiannilsson and many other authors. In a number of specimens of *Delphacodes mulsanti* Fieber from ČSR, Italy, Bulgaria and Anatolia; *Delphacodes venosus* Germar from ČSR and Italy; *Delphacodes pilosus* Haupt from Estonia I have found that the direction of pronotal lateral keels is not similar to that in *Calligypona* and may be used not only as genotypical characteristics but — may be — even as a good characteristics for higher systematic units, which was proposed already by Haupt. Keels in *D. mulsanti* are not shortened and "S"

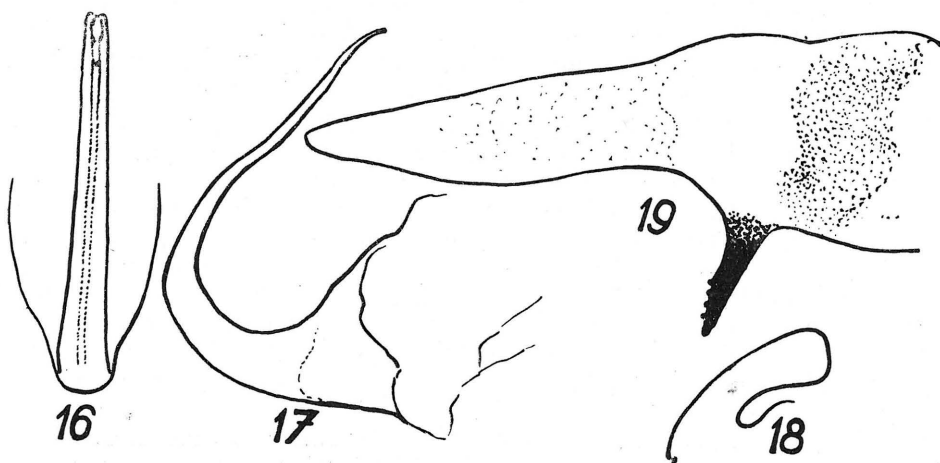
curved, but reach the hind margin and keels of scutum are not so much diverging as it may be seen from the figs added. It may be suggested that Fieber's male holotypus — if it could be examined — would furnish further evidence for this opinion. Holotypus male cannot be found any more according to the kind communication of Mr. Beier, Naturhistorisches Museum, Wien. A couple of specimens from Domanović, Herzegovina, determined by Haensch and deposited in the named Museum support well my opinion on *D. mulsanti* Fieber. Any important change of generic names stated only according to the examination of the female typus cannot be easily accepted, especially if other material shows some differences. Figs 20—21.

Calligypona reyi (Fieber 1866) — First Czechoslovakian material from Slovakia: Gbelce, 12. VIII. 1956, halophile vegetation with *Juncus*, in number of macropterous and brachypterous specimens (Dlabola); Bohemia: Slatiňany, 17. VIII. 1956, one female brachypterous specimen (Dlabola).

Calligypona lugubrina (Boheman 1847) — Known from Bohemia and Slovakia; first material from Moravia in my collection: Branišovice, 28. V. 56, 3 female specimens (Dlabola).

Cicadella spectra (Distant 1910). From *Tettigonia*. — Species known from Oriental Region. In the material received for the determination through the kindness of Dr Beier I have found 4 specimens from Austria: Innsbruck, Tirol, 1926, 2 male and 2 female specimens (Hofeneder), coll. Mus. Wien and coll. Dlabola.

Dorycephalus baeri Kuschakewitsch 1866. — In the faunistical investigations it is not a rare case to find a completely unexpected species from the aspect of their distribution. Similarly to the unexpected ascertaining of *Paradorydium lanceolatum* Burm. in the environs of Prague some



Dorycephalus baeri Kuschakewitsch, 16: aedeagus dors., 17: aedeagus lat., 18: stylus, 19: pygophore.

years ago (this species extincted in our country by now!) in this year *D. baeri* Kusch. was found. This is a species known from South Russia and Hungaria. In the undetermined material of the Viena Museum, send to me through the kindness of Dr Beier I found this species too and to my greatest surprise another specimens was found in North Bohemia. This species representing undoubtedly an extreme xerothermophilous element was found on grass vegetations. During this year as well as during the two precedent years climatic conditions in spring and summer were most unfavourable, therefore it is very difficult to explain the presence of this species in Central Europe. In the swept material larvae have been found also. The whole development lasts 2 years. The larvae were grown on *Agropyron* sp. and remained alive for more than an week. Figs 16—19, 22.

Bohemia: Oblík, 4. VII. 56, 1 male by sweeping on low hill with grass fytocenose (Bouček), 6. VIII. 56, 1 female (Dlabola); Raná, 12 females, 1 male and many larvae, also-stylopised (Dlabola); Austria: Mödling (Handlirsch), Museum Wien.

Psammotettix angulatus (Thén 1898) — First Czechoslovakian material from Bohemia: Krkonoše, Labská louka, 7. IX. 54, many specimens (Dlabola).

Streptanus confinis (Reuter 1888) — First Czechoslovakian material from Bohemia: Krkonoše, Labská louka, 7. IX. 54, 8 specimens (Dlabola).

The following species has been found in the material from Bulgaria, kindly send for determination by Josifov, Sofia, and I use this occasion to express my deepest gratitude to the collector of this new species, deposited in coll. Dlabola.

Streptanus josifovi n. sp.

Figs 7—9. Total length ♂ 3,65—3,9 mm, ♀ 4,3—4,9 mm.

Like *S. marginatus* Kirschbaum, but in male genitalia much differenciaded. Testaceous, without intensive coloration, only the face and the body on the sternal part is dark brown, with small testaceous bands especially on the face like in other eusceloid forms. Vertex yellowish with one middle line and two darker bands in a slightly oblique direction, the one reaching up to the tip of the head, the second coming forward to the middle line only. Pronotum in the part behind the head, paler, of the same colour as the vertex, other parts darker, like the fore wings, superficially rugulose. Scutum and scutellum weakly chagrined. Fore wings with paler nervation chagrined, testaceous, shorter than the tip of the abdomen (or longer in macropterous female specimens and darker near the distal part) in both sexes. Abdominal tergites testaceous, with browned junction-lines. Hind wings only $\frac{2}{3}$ of the fore wings, visible through the elytra, which are light transparent. Feet testaceous with browned bands and spinulation especially on the hind tibias.

Male genitalia: Aedeagus slightly curved dorsoventrally and especially towards the tip more strongly laminated and with a torsion (90°) in the longitudinal axis, rounded on the tip.

Female genitalia: VII. sternite with lateral angles rounded to a broadly and angularly excavated posterior margin that bears at its apex a short median tooth.

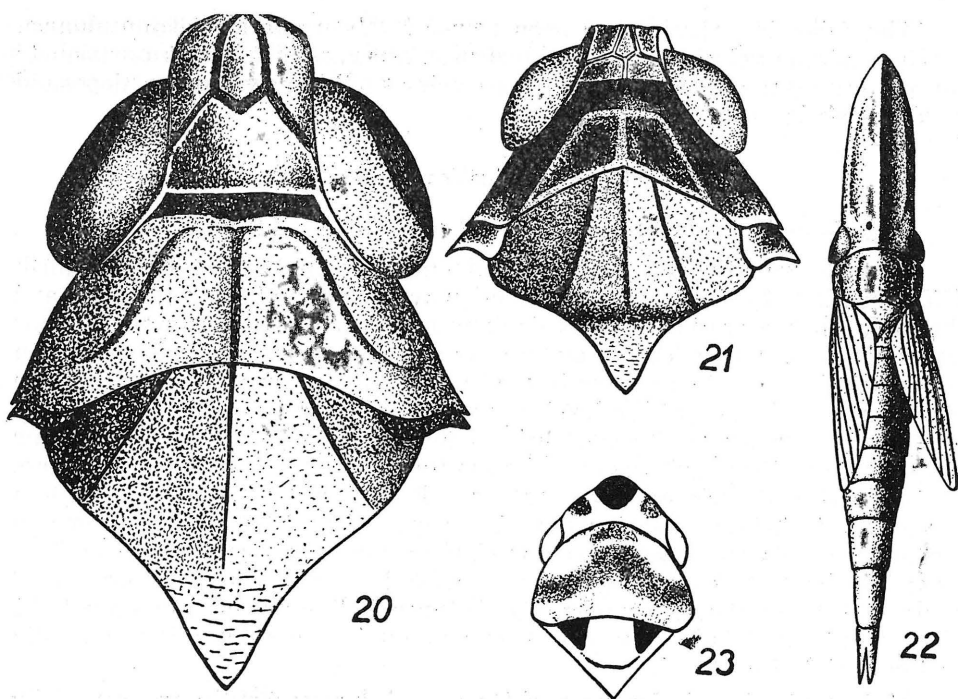
Bulgaria: Kazanlak, 26. IV. 53, holotype, allotype and paratypes in some specimens (Josifov).

Paramesurus reticulatus Horváth 1897 — Known from Hungary, first Czechoslovakian material from Slovakia: Kamendín, 26. VII. 55, 16 specimens (Dlabola, Bouček).

Mocydiopsis parvicauda Ribaut 1939 — Known from France, Anatolia; first Czechoslovakian material from Bohemia: Rezek, 28. VIII. 1907, 1 specimen (Preiss), Běchovice-Úvaly, IX. 1905, 2 specimens (Uzel).

Thamnotettix dilutior (Kirschbaum 1868) — First Czechoslovakian material from Bohemia: St. Boleslav, VIII. 1908 (Uzel).

Typhlocyba loevi Lethierry 1884 — Unpublished figs of inner genitalia are added, figs: 10—12. Known from Austria and France, first Czechoslovakian material from Slovakia: Kamenice n. Hronom, 12. VIII. 56, 4 specimens on *Quercus* (Dlabola).



Calligypona reyi (Fieber): 20. *Delphacodes mulsanti* Fieber: 21. *Dorycephalus baeri* Kuschakewitsch: 22. *Erythroneura unipunctata* n. sp.: 23.

Dikraneura stigmatipennis (M. R. 1855 — In Czechoslovakia known only from Slovakia, first material from Bohemia: Radotín, on *Verbascum*, 14. VIII.—9. IX. 55 (Dlabola). Other Slovakian localities: Čenkov, 8. VIII. 55, Bíňa, 28. VIII. 52 (Dlabola), Sv. Mária, 13. IX. 51 (Hoffer).

***Erythroneura unipunctata* n. sp.**

The second new species found in the material from Bulgaria, kindly send for determination by Josifov, Sofia.

Figs: 13—15, 23. Total length ♂ 3,33 mm, ♀ 3,66 mm.

Yellowish, with indistinctly delimited dark brown pattern, blackish spot on the head-apex and 2 lateral triangles on scutum.

Vertex yellow with the rounded great blackish spot on the apex and two browned, poorly developed lateral spots. Face yellow, postclypeus and anteclypeus brownish, especially near the antennae-basis darker and joined with the lateral spots on vertex, these delimiting the heart-formed light spot on the head round the black apex. Genae yellow.

Pronotum near the vertex with one darker spot, interrupted from the large transversal semilunar band, which is prolonged to the lateral margins. Black triangles from scutum somewhat visible through the hind part of pronotal tergite. Fore wings yellowish or nearly colourless and partly transparent with darkening between main nerves. Nervation broadly yellow, especially on axillaris, media and cubitus. Hind wings hyaline, somewhat darkened. Feet yellow with brown tips of tarsi.

Aedeagus male short, with 2 lateral pairs of appendages near the apex. Stylus in the general form of the *E. distinguenda*-group, broadened to the tip, but stunted on the distal part.

Female VII. sternite with uncurved hind margin and brown ovipositor. After the coloration of the head-apex easy to differentiate from other species of the genus *Erythroneura*.

Bulgaria: Kazanlak, 26. V. 1953, holotype, allotype and paratype female (Josifov).