

Contribution to the *Eurysa lineata* (Perris, 1857)-complex with description of *E. duffelsi* n.sp. (Homoptera: Cicadina, Delphacidae).

by

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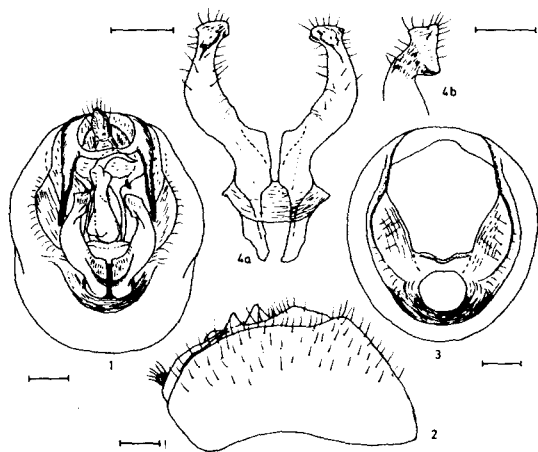
ABSTRACT. — *Eurysa carinata* Melichar, 1899 reported from Tunisia is synonymized with *E. lineata* (Perris, 1857). In addition, *E. duffelsi* n.sp. is described from Crete where the closely related species *E. lineata* does not occur.

The identity of *Eurysa carinata* Melichar, 1899

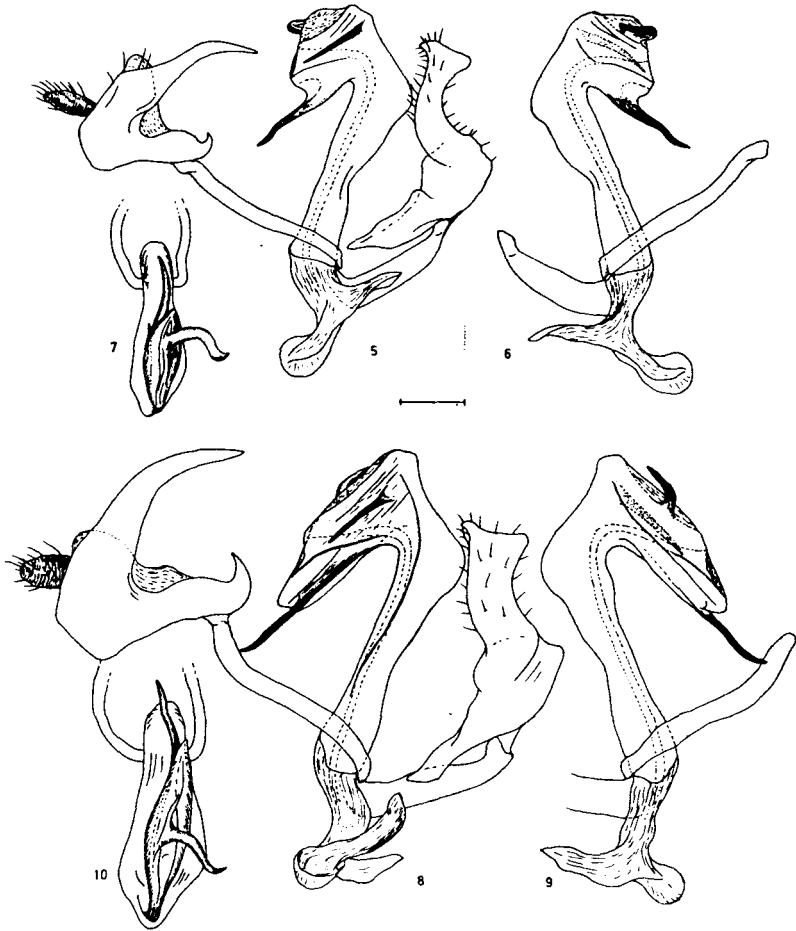
Through the courtesy of Prof. J. Nast (Warszawa, Poland) and Dr. P. Lauterer (Brno, Czechoslovakia) the co-author was able to study the holotype of *Eurysa carinata*, which is preserved in the collections of the Moravian Museum, Brno. This species was described after one single macropterous male from Tunisia and since that time never recorded again. The examination of the male genitalia — already dissected and placed into glycerin apparently by Nast, to whom the type was lent before — revealed the identity with *E. lineata* (Perris, 1857).

E. lineata is a well known euromediterranean species. It is widely distributed and very common in the northern mediterranean region (Drosopoulos, 1982; Asche & Remane, 1982; Drosopoulos, Asche & Hoch, in press). *E. carinata* fits that well into the range of intraspecific variability of *E. lineata* that not even a subspecific rank can be stated, thus *E. carinata* sinks into synonymy with *E. lineata*.

The record of *E. carinata* (= *E. lineata*) from near Tunis was based on material collected by Schmiedeknecht, which seems to be rather unreliable and should be treated with reserve (cf. Hoch & Remane, 1983). The occurrence of *E. lineata* in Tunisia should be verified by future field-work.



Figs 1-4. *Eurysa duffelsi*. 1, 3, male genital segment caudal view; 2, the same in lateral view; 4, parameres.



Figs 5-10. *Eurysa duffelsi* (5-7) and *E. lineata* (8-10). 5, 8, male genital armature in left lateral view (from left to right: anular tube, aedeagus, paramere); 6, 9, right lateral view of aedeagus; 7, 10, dorsal view of aedeagus. (In all figures bars represent 0.1 mm).

Eurysa duffelsi n.sp.

The delphacid *Eurysa lineata* is a very common species in Greece and it has often been collected at many localities of continental Greece including the Peloponnese and Euboea (Drosopoulos, 1982; Asche & Remane 1982; Drosopoulos, Asche & Hoch, in press). In contrast to this *E. lineata* was never reported from the Aegean islands and Crete although several collections were made there by us and other colleagues; nor is *E. lineata* reported from Cyprus, so far. However, testing some delphacid material from Crete collected by dr. J. P. Duffels, it was very obvious that another species closely related to *E. lineata* exists. This species appeared to be a new species and it can be easily distinguished from *E. lineata* as follows: (All males and

females at hand are brachypterous). The color of the male of *E. duffelsi* is entirely black and fairly shining, while that of *E. lineata* is yellowish white or sordid yellow. Females of *E. duffelsi* are very similar in color pattern to those of *E. lineata*. Thus, pronotum and scutellum of females of *E. duffelsi* are yellow with four brownish longitudinal bands or brownish with three light longitudinal bands. Forewings of male specimens black and shining, while those of the females are similar to those of *E. lineata* (whitish-yellow to brownish-yellow).

E. duffelsi is much smaller than *E. lineata*. Thus measurements of brachypterous specimens are as follows: *E. duffelsi*, body length 4 ♂♂: 2.02-2.15 mm, 10 ♀♀: 2.30-2.85 mm; head width 4 ♂♂: 0.73-0.80 mm, 10 ♀♀: 0.80-0.90 mm. *E. lineata* from W. Germany, body length 3 ♂♂: 2.45-2.50 mm, 3 ♀♀: 2.95-3.05 mm; head width 3 ♂♂: 0.83-0.85 mm, 3 ♀♀: 0.95 mm.

The genital segment of the new species (figs 1-3) is very similar to that of *E. lineata* (see also Ossiannilsson, 1978; Drosopoulos, 1982). However, there are constant differences between the two species in the parameres, anal tube and aedeagus (figs 4-10). Thus, in comparison to *E. lineata*, the parameres of *E. duffelsi* are more slender in the frontal part which extends out of the phragma. The frontal part of the aedeagus of *E. duffelsi* is proportionally shorter than that of *E. lineata* and the apical spine of the aedeagus is orientated in a different direction in each species. The anal tube of *E. duffelsi* is more slender than that of *E. lineata* and, in lateral view, the two spines form a wider concavity in the new species than in *E. lineata* (figs 5, 8).

Holotype ♂, paratypes 2 ♂♂ and 8 ♀♀ collected at Samaria Gorge (1000 m), Crete, Greece on 13.V.1982; paratypes 2 ♀♀ collected at Moni Arkadiou, 24 km S.E. of Rethymnon (500 m), Crete on 26.V.1982 and 1 ♂ collected at Drosia, between Perama and Irakleion (250 m), on 18.III.1978. All type material is collected by J. P. Duffels, and deposited at the Institute for Taxonomic Zoology (Zoological Museum) of the University of Amsterdam, the Netherlands, except one male and one female paratype (Samaria Gorge) which are in the collection of the first author (Benaki Phytopathological Institute).

Dr. Duffels informed us that the new species was collected at a high elevation of the Samaria Gorge, rather close to its entrance at the land-side, on grasses and low vegetation under *Pinus* sp. and *Abies cephalonica* Loud. The collection date (middle of May) indicated that there is no allochronic phenology of the new species and its closely related species *E. lineata* which was collected that year at many localities of continental Greece in the same period of the year (Drosopoulos, Asche & Hoch, in press). Furthermore, the new species seems to replace *E. lineata* geographically in the southwestern part of its distribution area, since there are no records of *E. lineata* of that region. If this hypothesis holds, allopatric speciation may have occurred.

The new species is named after our colleague dr. J. P. Duffels.

LITERATURE

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