

**Remanodelphax cedroni gen. et spec. nov. from Greece
(Homoptera Auchenorrhyncha Delphacidae)**

With 1 Fig.

By

SAKIS DROSPOULOS

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Abstract:

A new taxon of the family Delphacidae has been discovered in Greece most probably belonging to the subfamily Stirominae WAGNER, 1963. It is distinguishable by the unusual structure of its male genitalia. Characters congeneric with any of the known palaeartic or african genera could not be found. Therefore, a new genus is established: Remanodelphax gen nov., type species: Remanodelphax cedroni n. sp.

INTRODUCTION:

On field surveys in a protected park near Thessaloniki (called Cedron-hill) a pair of an unusual delphacid species was collected. Its bifurcated parameres and anal tube could not be related with any known species. In addition, its aedeagus was also unusual and at first examination it was thought that such an aedeagus could have been broken. However in another locality (Agios Georgios, N. Euboea) quite unexpectedly another male and two females were sampled, identical with the specimens collected previously. The bifurcated paramere agreed with that of Sogatella

genus to which I first thought to place this species generically, but bifurcated parameres are common amongst Delphacidae and probably evolved convergently several times. With the valuable help of Prof. R. Remane and M. Asche it was concluded that this species could not be related to the genus Sogatella but also not any other of the known palearctic and african genera. Therefore, this genus is named in honour of Prof. R. Remane. Remanodelphax cedroni sp. n. is named after the locality where it was found for the first time.

DESCRIPTIONS:

Remanodelphax gen n.

Vertex as long medially as broad at base, subacutely rounding into frons, approximately equal in length at base and apex, apical margin shallowly convex with submedian carinae evanescent at apex of vertex, Y-shaped carina distinct, greatest length of basal compartment of vertex longer than half of vertex length (1:0,9), frons widest at middle, middle line longer than wide at widest part (1:0,7), lateral margins shallowly convex, median carina simple, evanescent at apex of frons; length of postclypeal disc about half length of the length of frons and about as long as broad at base, in profile shallowly convex; ocelli distinct; antennae cylindrical: basal segment longer than broad, second segment about twice as long as first. Pronotum with disc, length of anterior margin of pronotal disc much longer than in middle line, lateral carinae straight, not attaining hind margin, length of mesoscutellum shorter than half the length of mesonotum (0,7:1). Post-tibial spur without teeth.

Anal segment of male quite distinct, relatively big, ring-like, with long undulating processes widely separated. Pygofer moderately long with posterior opening broadly ovate almost as broad as long dorsoventrally, in profile with dorsolateral angles obtusely rounded, only weakly produced; not inflected mesad; parameres large, bifurcated; Aedeagus long with a large phallotreme (fig.1d-j).

Type - species: Remanodelphax cedroni sp. n.

The distinctive features of this genus are mainly the bifurcated parameres, the processes of the male anal tube and the structure

of the aedeagus. According to the shape of the head (broad, rounded, evanescent carinae), and the spineless post-tibial spur it belongs to the subfamily Stirominae WAGN.

Remanodelphax cedroni sp. n.

Proportions of head as above; Body yellowish brown, pronotum, mesonotum, vertex, and frons almost uniformly coloured; abdomen (except the first two segments which are yellowish in dorsal view) brownish; pygofer fuscus. Fore wings in macropterous male 2,5 mm long, relatively narrow. Fore wings in brachypterous males 1,7mm long while in females the length is 1,8-1,9mm. In brachypterous male and females the length of the fore wings extend as long as the body, while in macropterous male it extends far beyond the abdomen. In both brachypterous and macropterous specimens fore wings hyaline with veins slightly brownish; a few hairs on veins and margins. Total length in macropterous male 3mm, in brachypterous male 2,1mm and females 2,3-2,5mm.

Anal segment of male relatively big, ring like, with long undulating processes, widely separated. Pygofer moderately long with posterior opening broadly ovate, almost as broad as long dorsoventrally, in profile with dorsolateral angles obtusely rounded, only weakly produced not inflected mesad. Diaphragm with dorsal margin rather broadly produced dorsocaudal at middle in a large rounded lobe semicircularly excavate medially. Aedeagus long, angular slightly curved at anterior part, with three rows of teeth differing in number of teeth and length, with a large phallotreme typical for this species. Connective relatively big, strongly connected to the penis. Parameres large and broad meeting in the largest part of the middle line and bifurcated,

Type - material

Holotype: ♂ macr. (M), Greece, Thessaloniki, Cedron-hill, 250m (26.XII.1979), leg. S. Drosopoulos, in coll. Drosopoulos. Paratypes: 1 ♀ brach. (B), Cedron-hill (27.XII.1979) and 1♂B, 2♀♀B, Agios Georgios, N. Euboea, 200m (21-22.VI.1980), leg. S. Drosopoulos, in coll. Drosopoulos.

ECOLOGY:

In the collecting site of Cedron-hill the two specimens were sucked from the low parts of *Adropogon ischaemum*. Extensive observations for collecting more material on that date (26.XII.1979) and an other one (25.IV.1980) were without success. However, three more specimens were sampled in Agios Georgios, N. Euboea without noticing the exact spot, because it was thought that this species might be *Iubsoda stigmatica* (MELICHAR, 1897) with which *R. cedroni* resembles externally. Certainly it is a very rare species in Greece, occurring on slopes of hills close to the coastal zone environment. It is one of the few delphacid species collected during winter, most probably hibernates as an adult since no larva were found in that locality and the two specimens were newly emerged adults. The biotopes where this species occurred are moderately dry during winter time, under and between pine trees. It should be mentioned here that on 25.IV. 1980 two other delphacid species *Horvathianella palliceps* (HORVÁTH, 1897) and *Tropidocephala andropogonis* (HORVÁTH, 1895) were sucked from the same spot at Cedron-hill on *Andropogon ischaemum*, while from the locality at Agios Georgios, N Euboea *Toya propinqua* (FIEBER, 1866), *Xanthodelphax stramineus* (STÅL, 1858), *Plastena fumipennis* (FIEBER, 1866) and *Kelisia henschii* (HORVÁTH, 1897) were sampled from a small area next to a spring.

DISCUSSION:

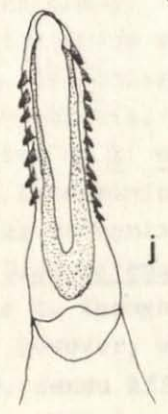
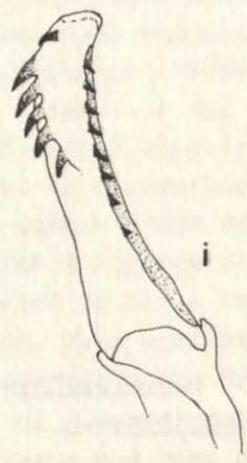
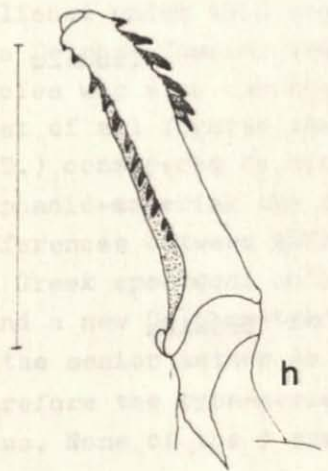
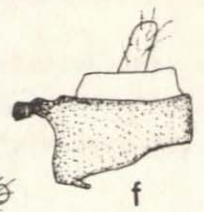
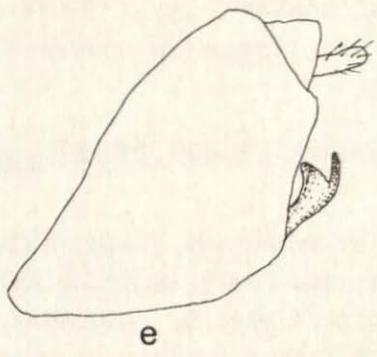
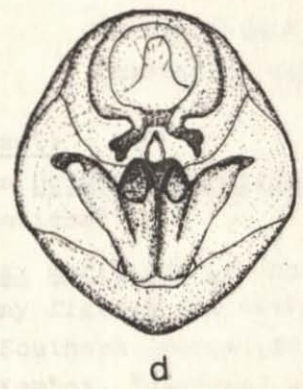
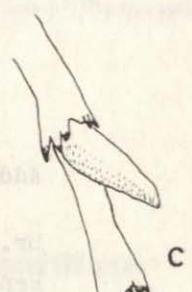
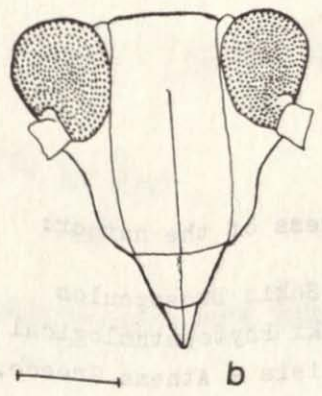
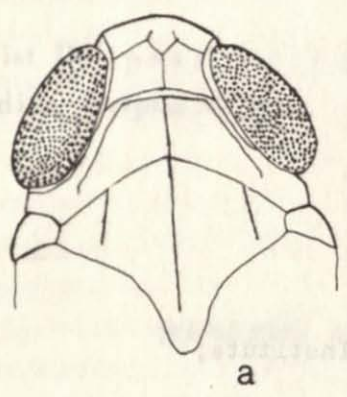
During an extensive field survey of the last three years on Auchenorrhyncha from Greece, it was disappointing that only one of the 36 new species for the Greek fauna was endemic, although several of them could be characterised as rare species or had been thought to be endemic for other countries up to now, (DROSOPOULOS, 1982). Greece offers many sites for ecological and geographic isolation, but for delphacids that could not serve as an isolation mechanism. On the other hand, most of the delphacid species were related to certain grass species which can offer food and oviposition substrate for the whole year. In addition, most of the well studied and known European species of planthoppers were found also in Greece at more or less the same habitat and food plants they use elsewhere. These observations strongly indicate: that in delphacids the food plant has

an important role in the process of speciation and this has been stated twice before by the author (DROSOPOULOS, 1977, 1982). Endemism in planthoppers should be expected from monophagous species inhabiting endemic grass species. Since *Andropogon ichaemum* has a larger distribution than Greece (TUTIN and others, 1980), it is expected that sooner or later this new species will be found in other countries as well.

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Fig. 1. Remanodelphax cedroni gen. and sp. n.
Head and thorax (a), frons and clypeus (b),
post - tibial spur (c); genitalia, posterior
view (d), pygofer and anal segment, lateral
view (e), anal segment side view (f), left
paramere (g) and aedeagus: right side view (h),
left side view (i) and dorsal view (j).
Bars represent 0,2 mm.
(Fig 1h,i,j, M. ASCHE del.)



Address of the author:

Dr. Sakis Drosopoulos
Benaki Phytopathological Institute,
Kiphisia - Athens Greece.

