

**Description of a new species of leafhoppers
genus *Cicadella* Latreille ,1817
(Homoptera:Cicadellidae) from Iraq**

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Abstract

The present study introduces description of new species of leafhopper genus *Cicadella*, Latreille1817.External morphological characters particularly male and female genitalia were discussed and illustrated .

Locality and date of collection were given

Introduction

The genus *Cicadella*, Latreille1817 (Cicadellidae:Cicadellinae) contains relatively variable sized leafhoppers and are slender ,fragile, attractively coloured and patterned leafhoppers (1,2).Species of this genus are usually active , jumping insects feeding on the palisade layer of lower surface of the leaves of their host plants ,so they suck the plant sap leaving small irregular white spots which represent dead cells lost their sap and chlorophyll (3,4,5).

Materials And Methods

Specimens were collected by using light trap from different sites in Baghdad province during summer 2001 .

Insects were put in Petri -dishes and left to dry .Dissection and studying external morphological characters including male and female genitalia were done according to AL-Asady,1990 (6) .

Examination of specimens and drawings of selected taxonomic characters such as :spotting patterns of vertex , face and thorax , shape of male abdominal apodeme , chaetotaxy of vertex, face and thorax , shape of male abdominal apodeme , chaetotaxy of male and female genitalia and venation of fore and hind wings , were done by using

both dissecting stereo and compound microscopes under different magnifications with the use of ocular micrometer . Keys for isolation and identification of species were used (7,8,9) .Symbols determining different parts of the body are shown in Table 1.

Results and Discussion

Cicadella longicephala sp.nov.

Body:

Relatively large ;slender;elongated ;yellowish overall length of males and females :5.9-6.8 mm .

Vertex :Fig.(1)

Bright yellow ;distinctly elongated and protruded anteriorly ; anterior margin slightly pointed ; coronal suture distinct occupy middle of the longitudinal axis ;compound eye dark brown and approximately triangular ; pair of simple eyes which are marginal in position , elongated and very close to compound eye; posterior margin wide and convex .

Face : Fig.(2)

Elongated ;narrowing anteriorly; frons and postclypeus brownish yellow with pair of wavy transverse grooves much distinct in males than females in which frons and postclypeus rather yellowish pale ; gena , lorum and anteclypeus are whitish yellow .

Pronotum : Fig.(3)

In both sexes it is bright yellowish white ; anterior margin wide truncate ; posterior margin narrower and slightly convex anteriorly ;lateral margin protruded laterally ; its width as twice as its length .

Mesonotum: Fig.(4)

Ground colour yellowish white and rather bright; its length distinctly larger than its width ; prescutum large , elongated and crown – like with three pairs of identical regular oriented longitudinal brown streaks; scutum large and wide with three pairs of identical regular oriented longitudinal brown streaks: one pair marginal ,one pair paramarginal and the other pair median; scutellar suture wavy , scutellum protruded posteriorly into small pointed procces.

Fore Wing:Fig.(5)

Long, covering all the abdominal segments in both sexes ; slightly dark yellow; PEX OBTUSE ; Sc vein incomplete ,Cu vein connect completely with corio-claval suture; corium with two anal veins ; median cell rather elongated than any of subcostal and radial

cells ; submedian cell slightly longer and wider than subradial cell; internal apical cell elongated; apex with six apical cells ;five external apical cells which become gradually smaller toward apex .

Hind wing : Fig.(6)

Membranous and silvery ; gradually narrowing from base toward apex; apical margin obliquely truncate ;peripheral vein complete and join with all longitudinal veins and their branches; anal fold distinct near wing base .

Male Genitalia

Aedeagus:Fig,(7)

Cylindrical and elongated; its base wide ;its apex narrow with two mostly identical processes .

Genital Plate: Fig .(8)

Triangular in shape ;its base wide obliquely truncate ; its internal lateral margin with six spines ; apex narrow and obtuse.

Genital Style :Fig.(9)

Smaller than genital plate; its base protruded into elongated sclerotinized process; its apex in the form of a beak .

Male Basal Abdominal Apodeme :Fig.(10)

A pair of relatively large tubular apodemes occupy the cavity of first abdominal segment.

Female Abdominal Sternites: Fig.(11)

The posterior margin of 7th abdominal sternite wavy and medially protruded into small process directed posteriorly ; all abdominal sternites completely yellow ; the 9th abdominal segments forms the pygofer; the ovipositor lies inside a ventral groove in the pygofer; apex of ovipositor orange .

Male Abdominal Sternites: Fig.(12)

The 9th Abdominal segment forms the genital capsule from which the pleural, sternal and tergal parts are fused to form the pygofer; all the abdominal sternites are completely yellow with grayish patches .

Female Genitalia

Ovipositor :Fig.(13)

It is formed as appendages of 8th and 9th abdominal segments ; it is generally used to pierce and insert the eggs into something such as plant tissue; the ovipositor consist of three pairs of what called valvulae which are :the upper valvulae (sheath) and both middle and lower valvulae form the piercing and inserting part; the tip and part of the lower margin of the sheath with row of identical spines ; the tip of the middle valvulae pointed and part of its lower margin lobed ; the tip of lower valvulae forms a beak- like .

Comparison Notes :

Cicadella longicephala sp. Nov. is closely related to *Cicadella viridis* L. but it differs from it by the following points

1. The head is rather elongated .
2. Face completely yellow and without median longitudinal band but with pairs of transverse grooves .
3. Aedeagus simple in shape with two apical processes .
4. Postclypeus and anteclypeus flat .

Materials Examined :

1-Male Holotype

1-Female Allotype

7-Male + 1-Female Paratypes

Baghdad - Iraq

Coll. June 2001 (Leg. H.S. AL-ASADY)

The types were deposited in Iraq Natural History Museum

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Table(1):English terms and their symbols used in the study

Symbol	English
AM	Anterior Margin
A	Anal Veins
Ant.C	Anteclypeus
ApCs	Apical Cells
AM+C	Anterior Margin +Costa
1A	First Anal
2A	Second Anal
AF	Anal Fold
Ap M	Apical Margin
Ap P	Apical Processes
Ap	Apodeme
C	Costa
CSu	Coronal Suture
CE	Compound Eye
Cr	Corium
Cl	Clavus
Cu+Cr.ClSu	Cubitus +Corio-Claval Suture
CuC	Cubital Cell
Eap Cs	External Apical Cells
G.pl	Genital Plate
G	Gena
IAC	Internal Apical Cell
L V	Lower Valve
L	Lorum
MC	Median Cell
M	Media
MV	Median Valve
Ovi	Ovipositor
Ph V	Peripheral Vein
Py	Pygofer

PM	Posterior Margin
Post.C	Postclypeus
Ps	Prescutum
RC	Radial Cell
R	Radius
Sc	Subcosta
Sha	Shaft
Sp	Spine
Sh	Sheath
SE	Simple Eye
S	Scutum
SSu	Scutellar Suture
St	Scutellum
ScC	Subcostal Cell
Sub MC	Submedian Cell
Sub RC	Subradial Cell

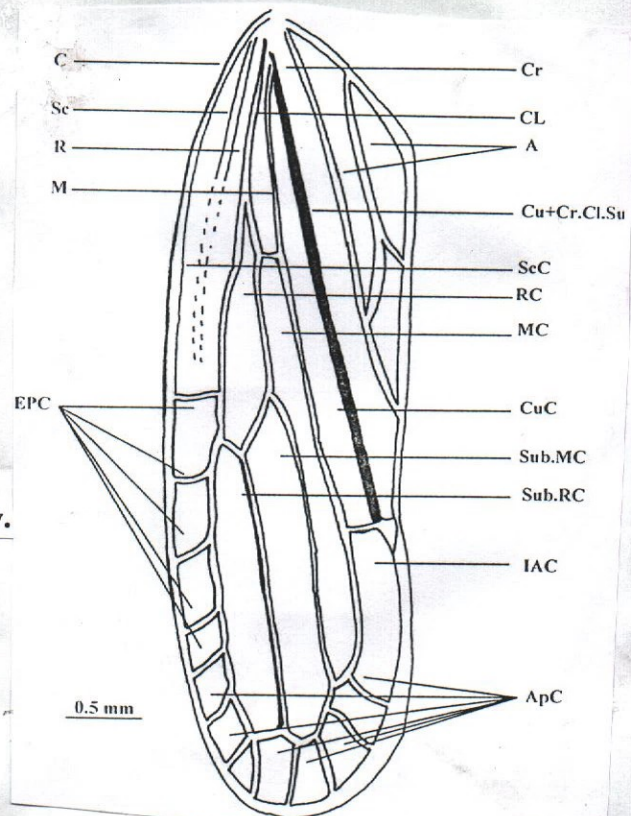
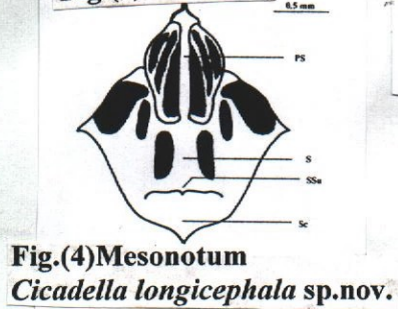
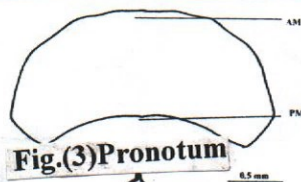
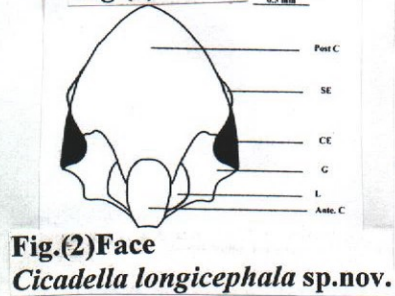
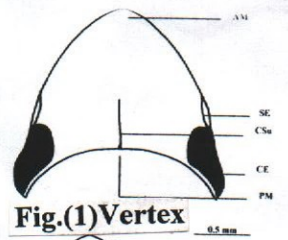


Fig.(5) Forewing
Cicadella longicephala sp.nov.

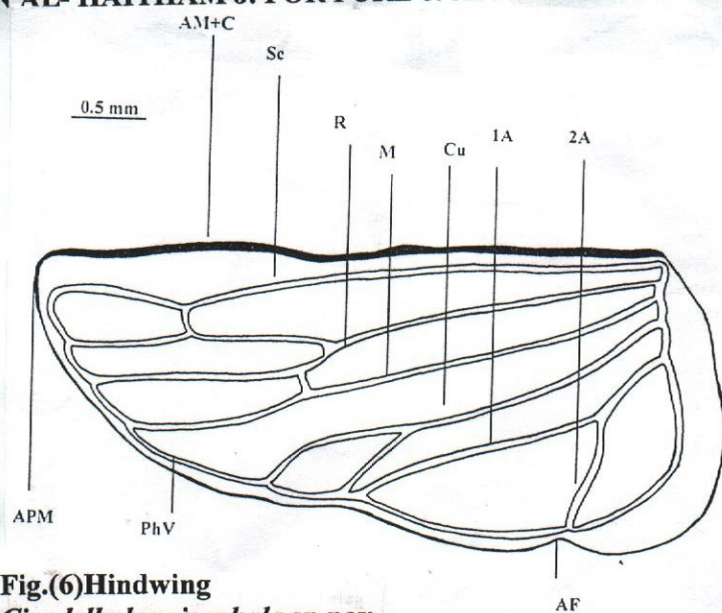


Fig.(6)Hindwing
Cicadella longicephala sp.nov. nov.

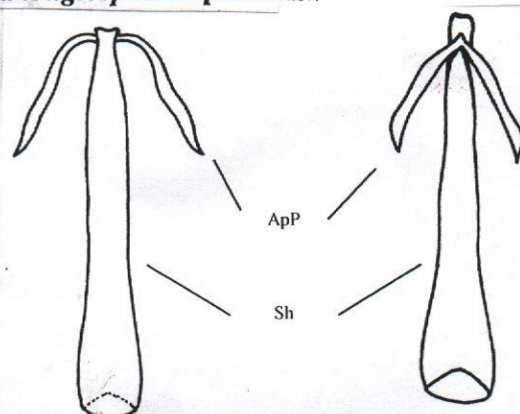


Fig.(7)Aedeagus

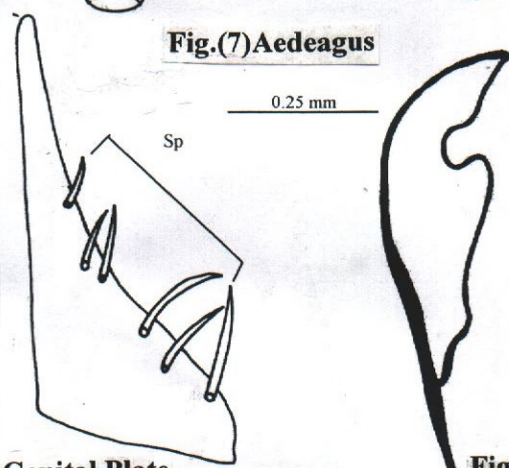


Fig.(8)Genital Plate

Fig.(9)Genital Style

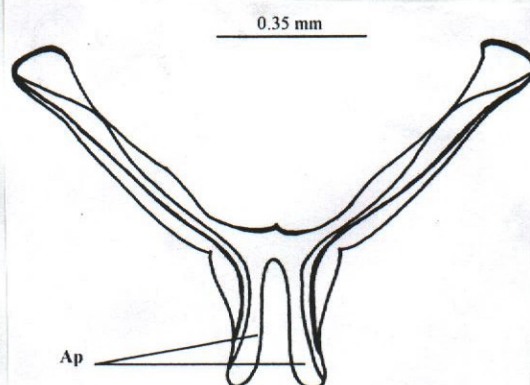


Fig. 10 Male Abdominal Apodeme

Cicadella longicephala sp. nov.

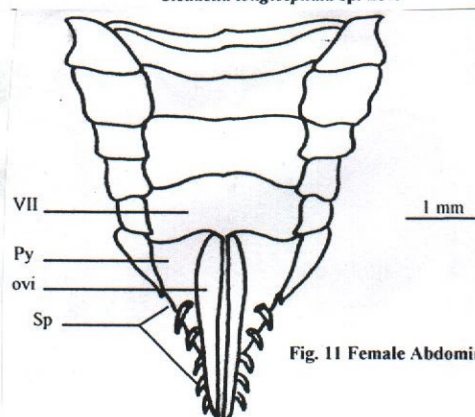


Fig. 11 Female Abdominal Sterna

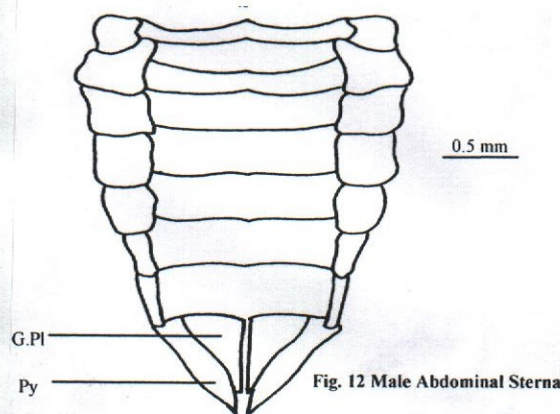
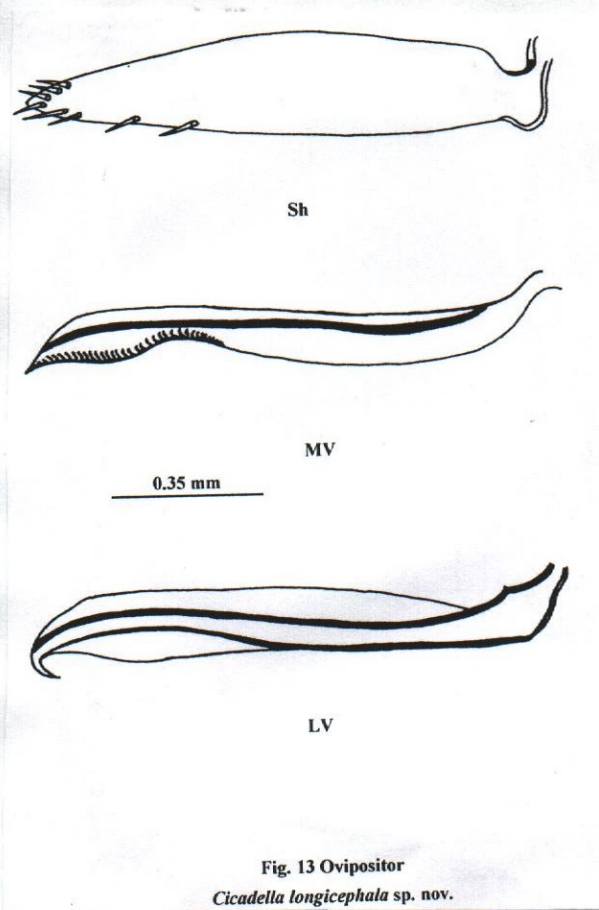


Fig. 12 Male Abdominal Sterna

Cicadella longicephala sp. nov.



مجلة ابن الهيثم للعلوم الصرفة والتطبيقية المجلد 20 (2) 2007

**وصف نوع جديد من قفاز الاوراق جنس *Cicadella*
Latreille, 1817(Homoptera: Cicadellidae)
من العراق**

حسن سعيد الاسدي ،نوال صادق مهدي
قسم علوم الحياة ،كلية التربية- ابن الهيثم ،جامعة بغداد

الخلاصة

تقدم الدراسة الحالية وصفا لنوع جديد من قفاز الاوراق يعود للجنس
Cicadella Latreille, 1817 . اوضحت الدراسة وصفا تفصيليا واشكالا توضيحية
لصفات المظهر الخارجي ولاسيما السؤتين الذكرية والانثوية .