

EXTERNAL MORPHOLOGICAL STUDY OF THE LEAFHOPPER
EMPOASCA DECEDENS PAOLI (HOMOPTERA: CICADELLIDAE)
FROM IRAQ

H. S. Al-Asady

Department of Biology, College of Education / Ibn Al-Haitham, Baghdad,
Iraq

ABSTRACT

This work presents external morphological study of the leafhopper *Empoasca decedens* Paoli, 1932 particularly male genitalia, which were dissected and illustrated.

The genus *Empoasca* Walsh (Typhlocybae: Empoascini) contains small, slender, fragile and generally green leafhoppers. The overall length ranges from 3-3.5 mm. Members of this genus are characterized by their uniformly green color, inner and outer apical cells of forewing not attaining wing apex, second and third apical cells are sessile or triangular or even short stalked, submarginal vein of hindwing extends around wing apex and turned beneath costal margin, apical thirds of tibiae and tarsal segments including claws are prominently green while other parts of legs are yellow (Ribaut, 1936; Young, 1952; Dlabola, 1958; Le Quesne and Payne, 1981).

In spite of the many check lists appeared about the insect fauna in Iraq, members of this genus are still poorly understood taxonomically. Derwesh (1965) was the only one to include *E. decedens* within the insect fauna of Iraq.

Empoasca decedens Paoli, 1932

Body small, slender, general coloration green with yellow tinge. Total length of males and females 3.1 to 3.3 mm.

Vertex (Fig.1) bright yellow; median anterior margin rounded slightly protruded anteriorly; pair of permanent faint to deep green crescent-like spots are present; posterior lateral angles pointed; posterior margin convex anteriorly; coronal suture distinct; compound eyes reddish brown relatively large in respect to size of vertex.

Head (Fig.2) from facial aspect the general coloration excluding anteclypeus is bright yellow sometimes with faintly brown markings restricted to the frontoclypeus; anteclypeus with blue markings their density decreases anteriorly toward anteclypeal suture; frontoclypeal suture extend anteriorly parallel to gena and ending at the ocelli.

Pronotum (Fig.3) bright yellow; apex truncate; lateral margins converging gradually from the posterior margin toward apical margin to make the later narrower than former; posterior lateral angles obliquely truncate.

Mesonotum (Fig.4) narrowing anteriorly and posteriorly; broad at its distal third; apex truncate; yellowish brown; scutum with large faintly brown spots close to the lateral margins; scutellum triangular distinctly elevated; multicolor: apex broad truncate; base pointed; median part green surrounded by brown triangular margin which is in turn surrounded by green triangular margin.

Forewing (Fig.5) uniformly green with yellowish tinge; costal margin curved; apex rounded; median and inner apical veins are approximately of same length but both are longer

Morphology of *Empoasca decedens*

than outer apical vein; radial vein ended nearly at the middle while median vein ended at the apical third.

Hindwing (Fig.6) whitish with bright silvery veins; apex narrow rounded; base wide obliquely truncate; submarginal vein extends around wing apex and confluent to apex of fusion of veins R+M; anal folds are indicated by two invaginations.

Male genitalia: Aedeagus (Fig.7) consists of the aedeagal shaft which is broad cylindrical with spherical base extends apically to a narrow tube ending to the apex which slightly protrude upward to a small process; the aedeagus of this species is characterized by the presence of L-like projection situated laterally and slightly beneath the apex. The shaft is attached firmly to the basal sclerotized part which is consist of two plates at both sides of the aedeagal base while from the dorsal side the aedeagal base is supported by an elongated plate extends basally to a capitate-like apex. Genital style (Fig.8) elongated; the apical half is narrow tube with a lateral flange near the anterior end; this is in a shape of small narrower process provided by 5 spines; the distal half is a carrot-like. Genital plate (Fig.9) elongated and approximately of same width; apex rounded obliquely turned internally; base slightly invaginated anteriorly; the middle and apical outer third are provided with strong irregularly shaped and sized and oriented setae; the inner margin and apex are provided with regular small spines.

Host plants and distribution: *Ricinus communis* L., Botanical Garden/College of Education: 18.7.1993, 28.7.1993, 15.9.1993; *Petroselinum hortense* Hoffm., Abu-Ghraib, 8.4.1993, 22.4.1993, Baghdad, 1.5.1993; *Apium graveolens* L., Baghdad, 8.4.1993, 22.4.1993, Kadmyiah, 20.5.1993, 27.5.1993.

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H. S. Al-Asady

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Morphology of *Empoasca decedens*

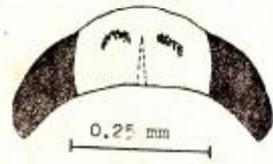


Figure 1 Vertex Top View

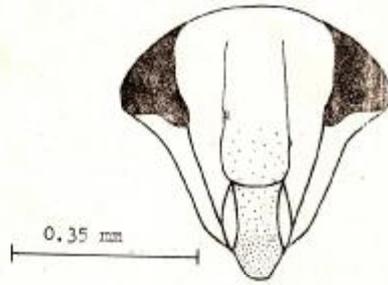


Figure 2 Head Facial View

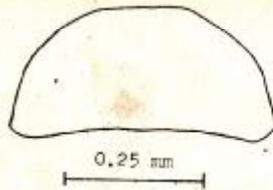


Figure 3 Pronotum

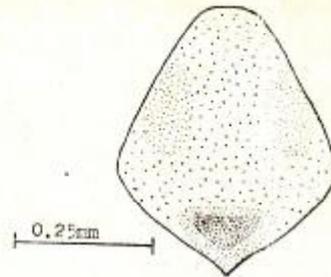
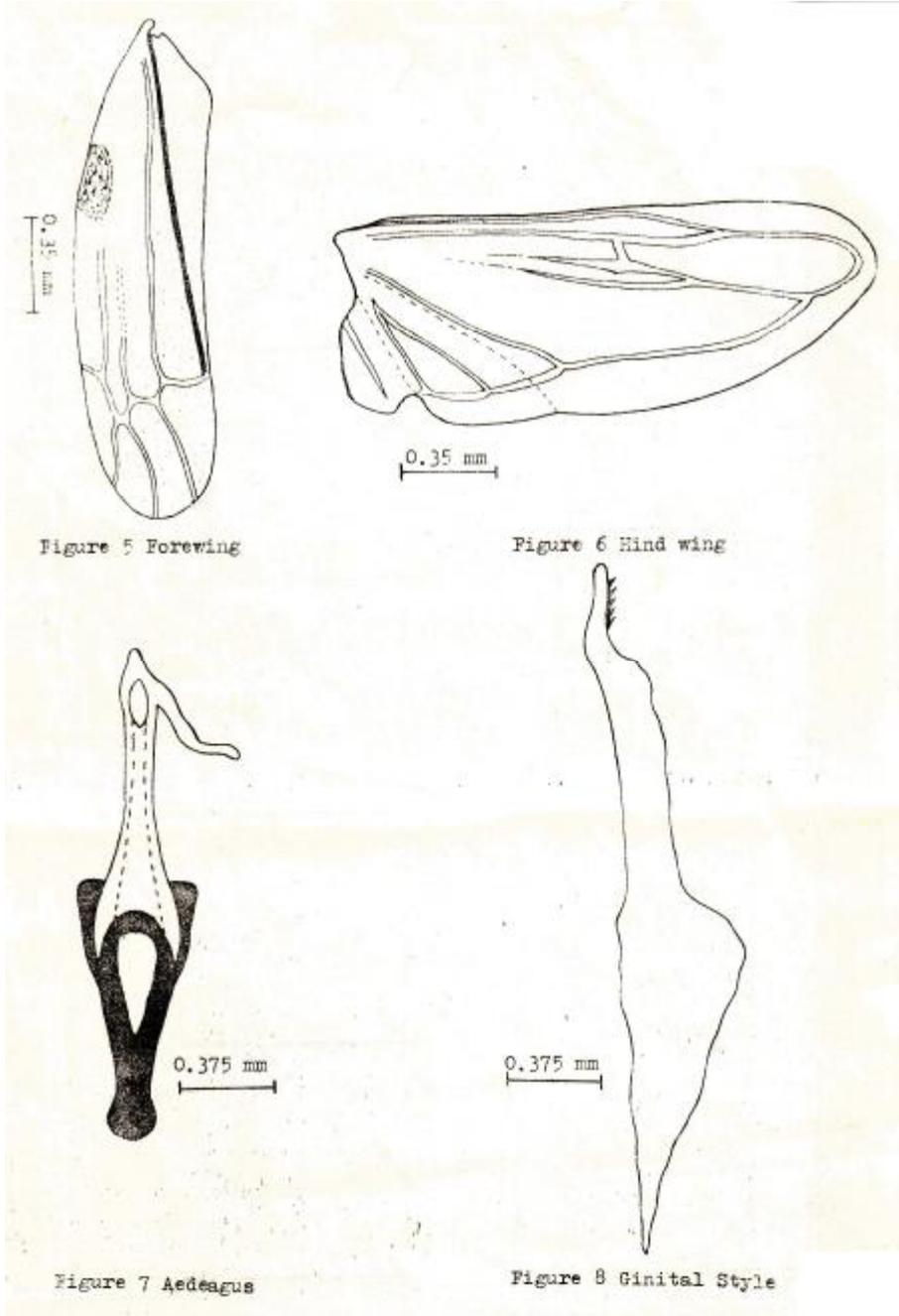


Figure 4 Mesonotum



Morphology of *Empoasca decedens*

