

A NEW SPECIES OF GRAPE-VINE LEAFHOPPERS, GENUS
ARBORIDIA ZAKHVATKIN, 1946 (HOMOPTERA: CICADELLIDAE)
FROM IRAQ

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ABSTRACT

Among a collection of leafhoppers from Erbil Province in Kurdistan/Iraq, a new species of the genus *Arboridia* Zakhvatkin, 1946 was designated and described here as a new species to the science. The erection of this species was mainly built on the external characters included the male genitalia. Sites and dates of collections so as the host-plants were verified.

Keywords: Description, Cicadellidae, Homoptera, New species.

INTRODUCTION

The genus *Arboridia* Zakhvatkin, 1946 (Typhlocybinae: Erythroneurini) contains small, slender fragile and attractively colored and patterned leafhoppers. It was erected by Zakhvatkin, 1946. The overall length of males and females ranges from 2.5-3.4 mm. Members of this genus can be recognized by the inner apical cell of the forewing which is elongated with oblique base; two prominent circular deep brown spots on the vertex (Zakhvatkin, 1946; Young, 1952 and Le- Quesne and Payne, 1981). The taxonomic status of this genus in Iraq is still poorly known, while the only taxonomic works were made by Ghuari, 1964 and Al-Asady, 1999 who described with illustrations two new species *Arboridia hussaini* Ghari, 1964 and *Arboridia amalae* Al-Asady, 1999.

MATERIALS AND METHODS

A small collection of leafhoppers was collected from some regions of Erbil Province in Kurdistan District. The specimens were identified on the bases of their external morphological characters. They were compared with the leafhoppers collection kept in the Iraqi Natural History Museum. Taxonomic keys were used in the examination and identification such as: Dlabola (1958); Ribaut (1936) and Young (1952).

The genitalia were dissected then mounted and preserved in glycerine. They were kept in microvial then pinned accompanying to the holotype.

Examination and identification of specimens were done under dissecting stereomicroscope supplied with squared ocular micrometer for drawings under different suitable magnifications.

Specimens of leafhoppers under study were collected by using sweeping net from grape trees in different localities of Shaqlawa, Koyia and Kalak of Erbil Province.

A New Species Of Grape-Vine Leafhoppers

Arboridia kurdistani sp.nov.

The name of the new species has been derived from name of Kurdistan District of Republic of Iraq.

Body:

Small, slender, ground color varies from dusty to light brown with pale yellowish tinge. The overall length of males and females ranges from 2.3-3.1 mm.

Vertex (Fig.1a):

Bright yellow, smooth, its anterior margin distinctly arched and slightly protruded anteriorly away from the compound eyes; two prominent deep brown circular spots situated along the middle line between the compound eyes; posterior margin convex and wider than the anterior one; compound eyes large deep brown and some-times with faintly brown irregular spot.

Face (Fig.1b):

Triangular in shape; compound eyes appear protruded laterally; both frons and clypeus are smooth and bright yellow; labrum absent; gena elongated and slightly waving along its external and internal lateral margins including the genal suture; epistomal suture distinct, lorum enlarged, smooth, pale yellow and cup-like.

Pronotum (Fig.1c):

Smooth bright yellow the anterior margin narrow and approximately truncate; the posterior margin slightly waving and wider than the anterior one with notch on its middle; two large deep brown slightly oval spots each one attached to the lateral margin.

Forewing (Fig.2a):

Elongated; its base narrower than the apex which appear obtuse and slightly inclined internally; corium approximately small and faintly brown; corio-claval suture thick and deep brown; clavus varies from faintly brown to pale yellow; the inner apical cell much longer than the median and outer apical cells separately and its base oblique reaching the end of corio-claval suture; the median apical cell longer than the outer apical cell which is enlarged and appear bigger than inner and median apical cells; the subouter apical cell faintly brown and semicircular; the apical third including veins and cell are whitish.

Pterothorax (Fig.2b):

Enlarged varies in colors of spots distributed on mesonotum and metanotum, but in general each two spots are identical in shape, size and coloration; in mesonotum both prescutum and scutum are crescent like and the former is much deep brown and wider medially and smaller than scutum; the scutellum is cone like.

Male Genitalia (Fig.3)

Genital Style (Fig.3a):

Elongated; its apex forked in two similar in shape different in size processes, the inner one is bigger and beak like, while the outer one is smaller; the base of the apical third is narrow while that of the basal third is wider; the middle third contains enlarged tinge in its inner lateral margin.

Genital Plate (Fig.3b):

Al-Asady, *et al.*

Short flattened; its apex rounded; the base obliquely truncate; the inner lateral margin slightly invaginated in its middle, no spines and bristles neither on the surface nor along the surface.

Connective (Fig.3c):

Triangular; its apex narrow with small slightly deep invagination; the whole surface smooth and whitish.

Aedeagus (Fig.3d):

Much smaller; a tubular part slightly narrowing apically to form pointed apex; its base surrounded by an envelope like chitinized structure, the upper apical end of this envelope is concave in which the aedeagus resting while its lower basal margin convex bearing a small tubular process which inters in the invagination of the apex of the connective.

Comparison Notes:

The studied new species is closely related to *Arboridia hussaini* Ghuari, 1964 but it differs by the following characters:

1. Two prominent spots on the pronotum.
2. The presence of subouter apical cell in the forewing.
3. No anal veins on the corium.
4. Genital plate without spines and bristles.
5. Vertex distinctly arched.
6. No lateral processes originated from the phallus.
7. The aedeagus smaller, narrow with pointed apex.

Examined Specimens:

Holotype: 1 Male

Paratypes: 4 Males and 5 Females

The holotype and paratypes preserved in the Department Of Invertebrate and Insects/Iraqi, Natural, History, Museum, University Of Baghdad.

The specimens were collected by using sweeping net. Sites of collection: Shaqlawa, Kala and Koyiah, Erbil Province, Kurdistan/Iraq. Dates of collection: 21, 23 and 24 of November 2013.

Host-plant: *Vitis vinifera* L.

ACKNOWLEDGEMENTS

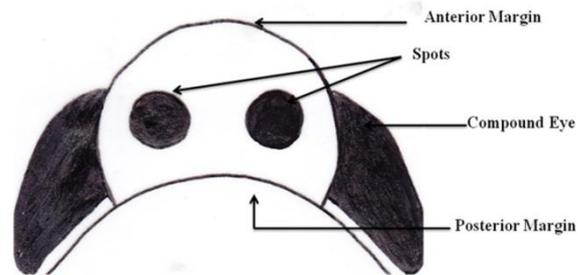
We are very much grateful to the authority of Iraqi, Natural, History, Museum for making available their collection and library. We would like to thank Assistant Professor Dr. Razzak.Sh.Augul and Lecturer Dr. H.H.Al-Saffar the keepers of the Cicadellidae collection in the Department of Invertebrate and Insects of the Iraqi, Natural History Museum for allowing us in comparing and examination of specimens.

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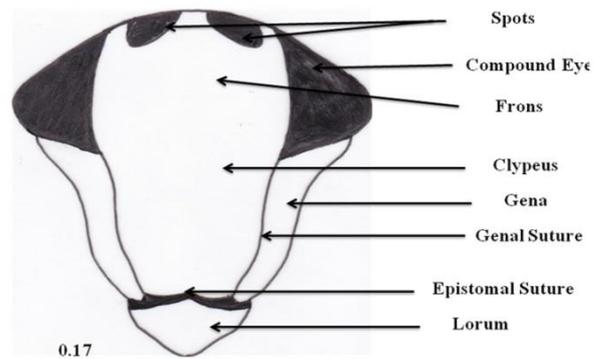
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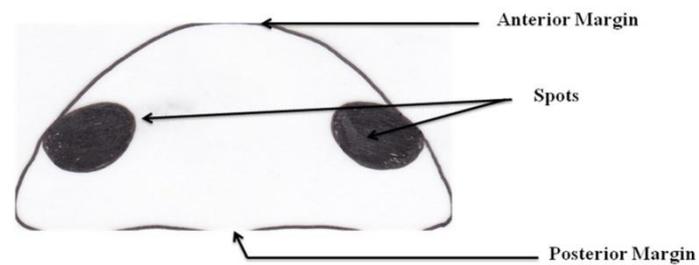
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0.17
Fig. 1.a. Vertex



0.17
Fig. 1.b. Face



0.17
Fig. 1.c. Pronotum

Arboridia kurdistani sp. nov. Male

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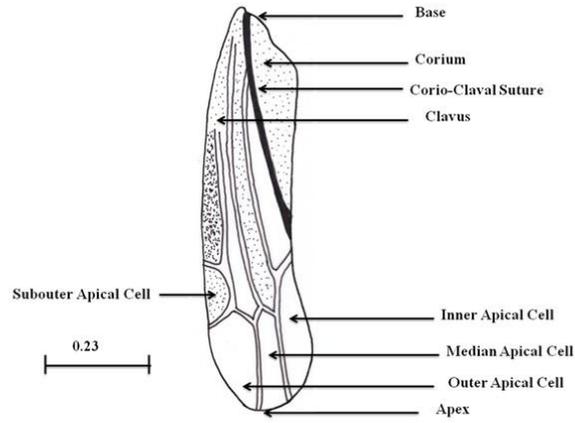


Fig. 2.a. Forewing

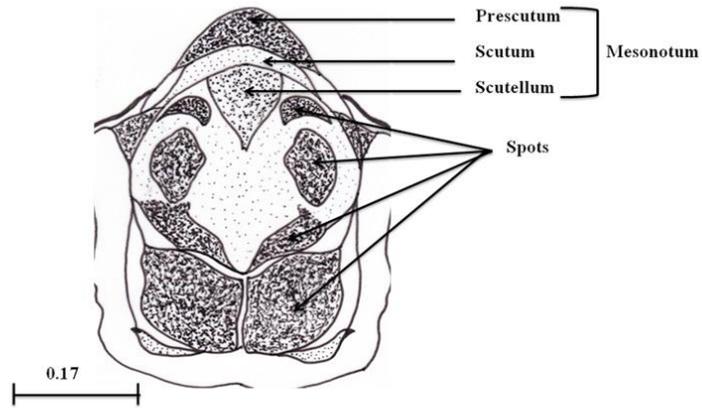
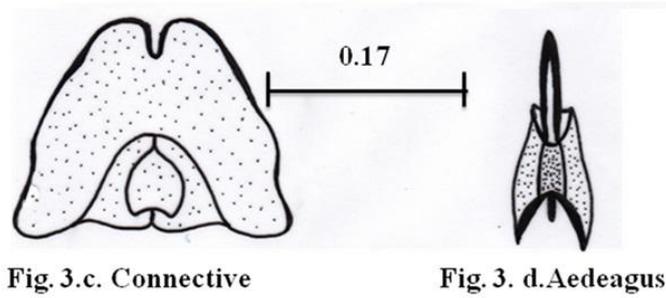
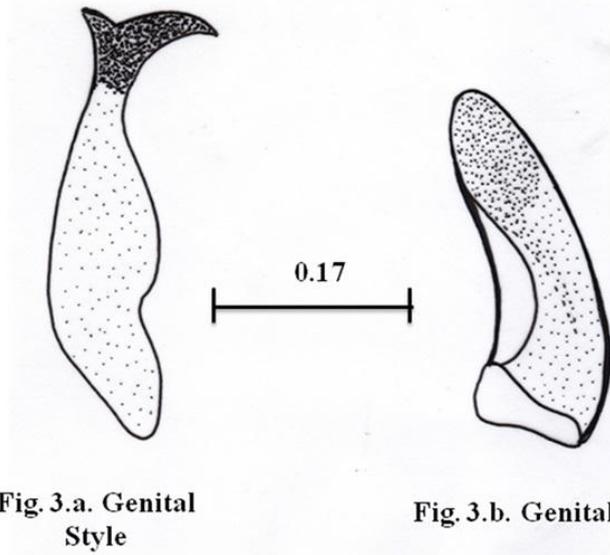


Fig. 2.b. Pterothorax

Arboridia kurdistani sp. nov. Male



Arboridia kurdistani sp. nov. Male

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نوع جديد من قفازات الأوراق جنس *Arboridia* Zakhvatkin, 1946 عائلة Cicadellidae ، رتبة متشابهة الأجنحة Homoptera في العراق.

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الخلاصة

جمعت العينات من مناطق مختلفة من محافظة أربيل في إقليم كردستان العراق. تم وصف النوع *Arboridia kurdistani* sp.nov. كنوع جديد للعلم. أعتمد في عملية التشخيص والوصف على صفات المظهر الخارجي مع التأكيد على السؤة الذكرية. تم تحديد مناطق و تواريخ الجمع والعائل النباتي.

الكلمات المفتاحية: وصف، قفازات الاوراق، متشابهة الاجنحة ، نوع جديد .