Description of a new species of water Boatman, genus *Sigara* Fab. 1775 (Hemiptera: Corixidae) in Baghdad and Mesan / Iraq.

*Sigara* Fab. 1775 (Hemiptera: Corixidae) من بغداد وميلسان / العراق

**Abstract:**

The present study introduces detailed description of a new species of water Bootman, genus *Sigara* Fab. 1775 (Hemiptero: Corixidae) from Iraq. The external morphological characters of the three body regions and their appendages were studied supported by illustrations especially male genitalia.

**Key word:** Hemiptera, Corixidae, Description

**Introduction:**

The genus *Sigara* Fabricius, 1775 (Hemiptera: Corixidae: Corixinae) contains small to moderate cylindrical, dark brown to black species. The total length of males and females (4.5 – 6.2 mm) (1, 2). The head relatively large, its base cover the anterior margin of pronotum, the face covered by small few scattered hairs. The pronotum characterized by small lateral lobe with the presence of the Metaxyphus (Metasternal process) (3, 4, 5). The fore wing is divided into corium and clavus separated by Cario-claval suture. Usually the anterior tarsus is called Pala which in males like spatula provided with adhesive structures like suckers called page (6, 7, and 8).

The aim of this study is to describe a new species of water bootman belongs to the genus *Sigara*, Fab. 1775. The description based on several morphological characters including male genitalia.

**Materials and Methods**

Specimens were collected from different regions from Baghdad (Al.Tarmyiah, Al.Jadryiah, and University of Al.Mustansyria) and from Hur Al.Hwaza from Maisan province, by using light trap and water net. The specimens were preserved in suitable vials contain 70% alcohol or were mounted by pinning and kept in insect boxes for farther study. In addition to the collected specimens, preserved and dry specimens were used.

Dissection and studying external morphological characters including male genitalia were done according to (9, 10).

Several keys for isolation and identification of spears were used (4, 11, 12, 13, 14, 15, 16, 17, and 18).
Results and Discussion

**Sigara mesopotamicus** sp. nov.
This species has been described for the first time to the world. Its name was derived from the name of our great Iraq. (Mesopotamia)

**Head: Fig 1**
The facial side relatively large, triangular, distinctly wasted behind the compound eyes toward the rostrum, vertex wide with protrude obtuse margin, compound eyes relatively large, dark brown, triangular, its external margin obtuse, its external lateral angle distinctly protrude, the internal lateral margin straight, distance between the eyes equal to length of each eye, frons yellow and so as the clypeus, epistomol suture absent, width of rostrum less than the width of vertex, rostrum with six transverse grooves equally separated from each other with one longitudinal groove dividing them, genal suture absent.

**Thorax**

Prothorax: Fig 2A
Pronotum consist of two portions asymmetrical in size and shape, the anterior part represented by the anterior margin which is convex in its middle and lateral margins as two concave identical lobes, the posterior part bigger and appear in shape of angle, the upper surface of pronotum covered by eight transverse dark brown strips teaching the lateral margins, those strips are intersected with small dark brown double lines (Fig 2B) is triangular with wide obtuse apex.

**Mesothorax Fig 3, 5**
The mesonotum is represented by black lancoelate plate, its apex obtuse with small middle depression called scutum (Sct) from which extend the median suture (Ms) which divide the prescutum (Prsc) and scutum (Sct) into two halves in shape of two plates each one called nataulix (No), such plates separated by reversed natal suture in addition to triangular black plate slightly protruded to the posterior end and called scutellum (Scl).
From ventral side, the prothorax (Fig 5) consist of two elongated plates called prescutum (Prsc) separated by the middle suture (Ms), on both sides of prescutum there is elongated white oval plate divided into three parts which are from above, notaulix (No), scutum (Sct) and mesepisternum, the remaining of mesothorax is enclosed by two elongated plates each one called epimeron (Epm).

**Metathorax (Fig 4, 5)**
The Metanotum is represented by two harves each one in shape of triangular and those halves are called scutum (Sct) and scutellum (Scl).
The metasternum is consist of large middle plate called basisternum (Bs), on both sides of this plate there are two plates each one called epimeron (Epm).

**Forewing: Fig (6)**
Large and elongate, yellow, clavus with short transverse, dark brown strips connected by each other especially in the middle to from net-work, corium with short longitudinal and cross dark brown strips connect to each other to from network decreasing in density toward apex, apical third of the wing with yellow pale strip parallel to the costal margin, the internal and apical margins are waving, the basal third of Cario-claval suture wide suddenly narrowing, wing apex wide and obtuse.
The First Scientific Conference the Collage of Sciences 2013

Legs
Fore leg: Fig 7A
Its parts short and flattened, bright yellow, width of femur (Fe) equal to half of its length, its end connected with the trochanter wide with truncate margin, its part near this margin contains seven wide rows of fine spines called stridulation area (Str), tibia (Ti) short, smooth, its length equal to half the length of femur, tarsus which also called pala (P) as long as the femur but narrower, its end connected with tibia has invaginated margin, its apical end obliquely truncate, the upper surface of the pala with central longitudinal two of suckers called pegs (Pg) especially founded in males.

Mid leg: Fig 7B
Totally bright yellow, coxa (Cx) oval and smooth, trochanter (Tr) small, triangular and smooth, femur (Fe) cylindrical elongated, its external lateral margin with 4 identical spines directed toward the tibia while its internal lateral margin with single row of long identical hairs, tibia (Ti) equal to the femur in shape and length and its length as half as the length of femur, its external lateral margin with longitudinal row of long hairs directed toward the tarsus (Ta) which like the tibia in shape, its external lateral margin with single row of long oblique hairs.

Hind leg: Fig 7C
Bright yellow, coxa (Cx) large kidney shape, trochanter (Tr) small triangular, femur (Fe) short and wide, its end connected to the tibia, its external lateral margin with four identical spines directed to the tibia, its internal lateral margin with six long hairs near its end connected to the tibia (Ti) and this narrower but the same length of the femur, the external lateral margin with longitudinal row of 9 identical spines and so as its internal lateral margin, tarsus (Ta) consist of tow segments, the first long, its external lateral margin arched with longitudinal row of 12 spine, its internal lateral margin straight, the second segment called pretarsus (Ptar) small, stylate its length as third as the length of first and segment, the external lateral margin of both first and second tarsal segments have row of long hairs covering the upper surface.

Abdomen: Fig 8
Dorsally its end in the male is asymmetrical from right side and called dextral asymmetry, the strigils (St) on the right side consist of abdominal comb like teeth.

Genital capsule: Fig 9
1. Claspers
The left clasper (Lc) as a plate its base wide connected with the connective (Con) by cervical like end, its apex in shape of small narrow lobe with truncate margin, the right clasper (Rc) as waving plate, its apex slightly like a hummer and its totally narrowing toward the connective.
2. Aedeagus (Ae)
Small tubular part, narrow in its middle part, and become widely toward the connective, its apex wide consist of three non identical lobes.
3. Connective (Co)
Spherical, its margin which bear the claspers and aedeagus wide and truncate while its apex narrower but obtuse.

Comparison Notes:
This species is closely related to Sigara lateralis but differ by the followings:
1. Vertex strongly protrudes.
2. Clypeus with three distinct groups of hairs.
3. Wing apex obliquely truncate.
4. The anterior femoral margin connected to the trochanter has group of small scattered hairs.
The First Scientific Conference the Collage of Sciences 2013

Examined specimens:
Three males collected from Mesan province in 20-April-2007 and Baghdad province in 1-May-2007

References:
Fig. 1 Head capsule, Anterior view

Fig. 2 B Lateral lobe of pronotum

Fig. 2 A pronotum

Fig. 3 Mesonotum

Sigara mesopotamic
Fig. 7 Legs A. Fore leg  B. Mid leg  C. Hind leg
*Sigara mesopotamica* sp. Nov.

Fig. 8 End of Abdomen ventral view

Fig. 9 Male genital capsule
*Sigara mesopotamica* sp. Nov.