Description of a New Species of Ostracoda (Crustacea/Ostracoda) Belong to the Genus *Cyprinotus* Brady,1885 from Governorate of Karbala /Iraq with some Ecolological Observations.

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Abstract
The work involved external morphological study and description of a new species of the Class Ostracoda belongs to the genus *Cyprinotus* Brady,1885 from Governorate of Karbala. The diagnosis depended on the following characters: shape of anterior and posterior ends of carpace ,the overlapping between anterior and posterior ends of left and right valves, number of 2nd antennal segments ,eeth of third masticatory process. Keywords: Crustacea,Ostracoda, *Cyprinotus sp.* , Taxonomy ,Iraq

Introduction
Class Ostracoda is regarded as the most important and larger group of Crustacea in which their members have important role in the aquatic system and the food chain. They are the main source of food to small fishes and larvae(Victor,2004)(Neale,1984).The size of species range from0.3-5mm and is mostly available in all marine ,freshwater and brackish ecosystems, but it has been found that their specificity and abundance is more interesting in freshwater than that in marine waters (Jocque *et al.*,2013).There are about 2000 living freshwater species  and 13familllies in worldwide ,family Cyprididae form 50% of all (Martens *et al.*, 2008; Savatenalinton & Martens 2009). The taxonomic procedure of freshwater Ostracoda is mainly depend on the Carapace Surrounding the body, such carapace consist of right and left valves and their delicate appendages and internal viscera(Mahar&Jafri,2012; Victor&Fernando,1981).

The features of the carapace and appendages are very important in diagnosis of Ostracoda.(DeDeckker &Martens,2013)
Members of the genus *Cyprinotus* Brady, 1885 are characterized by the followings:

- Living brackish and saline water. The carapace flattened laterally, delicate, triangular and its anterior and posterior ends rounded. The posterior ends of the carapace narrower than its anterior end. The dorsal margin of the carapace slightly or mostly arched (concave).
- The ventral margin convex. Both right and left valves and non-identical in shape and size but both overlapped from their anterior and posterior ends. The terminal (free) margin of right valve bear some tubercles shape processes. (Osorio, 1978; Delow, 1970; Bronshtien, 1947).

**The aim of study:** Due to the lack of Iraqi fauna to detailed Taxonomic Morphological Study on Species of Class: Ostracoda and Reality taxonomic evaluation through external morphological study of species and diagnosis, description and Supported with illustrations.

**Materials And Methods**

Four females from Al-Hindiya Region / Holy Karbala Governorate / Euphrates river on 2-9-2004 by using the net of zooplankton collection. The specimens were kept in 70% Ethyl alcohol with some drops of Glycerol. The study and examination of specimens were done by using Dissecting Stereo Microscope type Bush and Lamp manufactured by Altay Company. Dissection was done by using special fine pins by which the two valves separated and so as other appendages. The dissected parts were mounted on microscopic slides with drop of glycerol. Drawings were performed by using compound microscope supplied with ocular micrometer while the measurements of length, width and height were done by using stage linear micrometer. The following taxonomic keys were used in diagnosis and identification, such keys are: (Bronshtien, 1947; Edmondson, 1959; Henderson, 2002; Meisch, 2000; Pennak, 1978)

**Results And Discussion**

**Taxonomic Position of Species**

- Phylum: Arthropoda
- Subphylum: Crustacea Pennant, 1777
- Class: Ostracoda Latreille, 1806
- Order: Podocopida Sars, 1866
- Superfamily: Cypridoidea Baird, 1845
- Family: Cyprididae Baird, 1845
- Subfamily Cyprinotinae Baird, 1845
- Genus: *Cyprinotus* Brady, 1885
- Species: *Cyprinotus* sp.
Description of *Cyprinotus sp.* Sp.nov.

**Carapace; Surface view. Fig. 1**

Oval, flattened laterally, 0.65 mm length; deep yellow and covered by minute hairs; eyes are connected; anterior and posterior ends of both valves are overlapped.

**Carapace; Lateral view. Fig. 2**

Laterally, the right valve differs in shape and size from the left valve in spite of the presence of lateral brown strips or regions.

**Right Carapace. Fig. 3**

Semi-triangular; its dorsal margin has pointed arch; its ventral margin flattened; anterior and posterior margins rounded with small tubercles and hairs extend to the center of the ventral end; the surface smooth and covered with hairs; the Adductor Muscle Scars are six large and oval, and situated in the middle.

**1\textsuperscript{st} Antenna. Fig. 4**

Consists of seven segments graduated in shape. The natatory setae are feathery and well developed. The basal segment large and has oblique line in the shape of the letter. With three small setae. The second segment bears two setae; each of third and four the segment has short seta and pair of feathery long setae; the fifth segment bear two pairs of feathery long setae; the sixth segment bears one pair of feathery long setae; the seventh segment is narrow and its tip bear pair of feathery long setae.

**2\textsuperscript{nd} Antenna. Fig. 5**

Consists of six segments, the basal segment is short and surrounded by delicate membrane and bear three smooth seta, small two short setae at the junction between first and second segment, the second segment has membranous structure along its ventral surface, the exopod reduced to scaly structure bear long spiny seta and two short lateral setae; the endopod consist of four segments, the first one has membranous structure along its surface and such structure supplied by short sensory seta, the base of first segment as one seta its base enlarged and supplied by minute spines, the second segment supplied by natatory setas (5+1) well developed, feathery and extend away from the claws also there is small short seta on the dorsal surface of the segment, the third segment short bear three smooth setae and other three spiny setae; the fourth terminal segment is narrow rectangular with pair of spiny claws.

**Mandible. Fig. 6**

The basal segment flattened, its tip pointed and bear three short seta. Enlarged gradually toward the lower to form flattened structure with truncate end oblique toward the upper side and bear six teeth; the palp consists of four segments, the first one enlarged its dorsal surface in the form of vibrating plate its base cylindrical short and bear four identical lines; the second segment is short and narrow, its base and external margin with hairs its ventral surface bear the one setal group which consist of three seta one of them smooth and other two feathery; the third segment elongated its ventral surface bear the second setal group which consists of three setae, two of them smooth
and the other with setae; the fourth terminal segment short, its dorsal surface with pair of smooth setae, its apex with pair of spines and pair of short smooth setae.

**Maxilla. Fig. 7**

The posterior surface of the basal segment slightly. Arched; the first and second masticatory processes with five terminal setae; the third masticatory process with pair of spiny thick teeth and four setae; the palp thin and long consist of two segments bear with pair of smooth thick teeth and one terminal seta; the vibrating plate is semi-rounded, its anterior narrow in the middle with 20 line graduated. In length followed by a region without setae and ending by four identical setae.

**1st Thoracopod. Fig.8**

The masticatory process bear eight short setae; the palp not separated and bear three setae. Two of them are long and the third one short; the vibrating plate with four setal lines; the surface of the thoracopod with three scattered setae.

**2nd Thoracopod. Fig.9**

Consists of five segments, the first basal large with smooth surface; the second large and long with number of hairs arranged in rows, its terminal and bear one terminal seta at the junction with the third segment; each of the third and fourth segment short with terminal seta. The last segment semi triangular bear two short seta and large one claw.

**3rd Thoracopod. Fig.10**

Consists of three thin and long segments; the basal segment has two smooth setae; the penultimate segment with one terminal hairy seta; the terminal segment bear one hairy seta; its apex supplied by short enlarged seta and other long reversed smooth seta.

**Uropod. Fig. 11**

The stem wide in its apex and becomes narrow gradually toward the posterior end which pair of spiny claws not identical in length and one hairy seta. Uropodal attachment with two branch.

**Material Examined**

- 1 Female Holotype
- 1 Female Allotype
- 2 Female Paratype

Karbala-Iraq.Coll, September.2004

**Some Ecological Observations**

- Temperature of Air: 30°C.
- Temperature of Water: 22°C.
- Speed of Current Velocity: 0.008 m/sec.
- Electrical Conductivity: 2.26 Micro/cm.
- PH: 7.47.
- Salinity: 0.1440 %.

**Acknowledgements**

I would like to thank Prof. Dr. Reginald Victor / University of Sultan Qaboos /Oman and Dr. Robin James Smith / Lake Biwa Museum / Japan for their Kindly help in identification of Specimens.
Fig. 1. Carapace; Surface view.

Fig. 2. Carapace; Lateral view.

Fig. 3. Right Carapace.

Species *Cyprinotus* sp. *Sp.nov*
Fig. 4. 1st Antenna.

Fig. 5. 2nd Antenna.

Species *Cyprinotus sp.* Sp.nov
Fig. 6. Mandible.

Fig. 7. Maxilla.

Fig. 8. 1st Thoracopod.

Species *Cyprinotus* sp. Sp.nov
Species *Cyprinotus sp.* Sp.no
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References


