Description of A new Species Belong to the Genus *Hemicypris* Sars , 1903 (Crustacea/Ostracoda) from Iraq

H. Z. M. AL-Da'amy
Department of Biology ,College of Education,University of Karbala'a
Taxonomy of crustacean (Ostracoda)

Abstract

The present study introduces description of a new species of class Ostracoda genus *Hemicypris* Sars, 1903. External morphological characters particularly shape, size and structure of left and right valves of carapace and body appendages were discussed and illustrated. Locality and date of collection were given.

Introduction

Members of the class Ostracoda are small tiny organisms , the majority are freshwater species in which the length of adults is ranging from 0.5-2.5 mm [1,9] . Usually, they are found in every aquatic habitates including marine and non-marine , while others appear as semi – terrestrial , but no species known to be terrestrial [10] . It was found that the occurrence of Ostracods is related to water nature, air temperature and even water chemistry [4,6,7,8] . The taxonomy of freshwater Ostracods is based mainly on shape and size of left and right carapace [12] .

Species of the genus Hemicypris Sars 1903 are characterized by the followings: carapace relatively stout laterally, left valve of carapace is crenulated anteriorly and posteriorly , right valve larger and overlapping the left one [10] .

Material and Methods

Specimens were collected by using zooplankton net during May , 2004, from different regions of Karbala'a governorate. They were preserved in vials contain 70% alcohol with few drops of glycerol . For dissection , both right and left valves were removed carefully by using fine dissection needles and the appendages . The dissected body parts were isolated from each other and mounted on microscopic slide with a drop of glycerine . They were drawn by using compound microscope with ocular micrometer.

Keys for identification were used according to [3,5,10,11] .

Results and Dissection

Hemicypris irarkensis sp. nov.

This species was firstly described to the science . Its name was derived from the name of our country .

Carapace:Fig.1

Oval, total length 0.65mm; light brown and hyaline. Outer surface is smooth and covered with regularly distributed small hairs; its posterior end is rounded, much broader in the middle and would become narrower gradually toward the anterior end which is distinctly pointed. Right valve larger than left valve and overlapping the latter ventrally and anteriorly, the free margins of the two valves overlap to realize a tight closure . Eyes fused.

Right Valve:Fig.2

The right valve is larger and broader than the left one. Approximately oval approximately, outer surface smooth and hairy. Posterior margin narrowly rounded, Anterior margin is broadly rounded with hair on two long margins. Adductor muscles scar five differently arrangements.

Left valve:Fig.3

Approximately oval, outer surface smooth and hairy. Anterior margin is rounded mare than the posterior end with small pustules and hair. Five adductor muscles scar variable arrangements.

First Antenna:Fig.4

Eight segmented; first (Basal) segment polygonal is bearing one long setae on its inner margin, second segment is the larger bearing two long setae on both inner and outer margins, third segments to eighth are graduating in size toward the smallest terminal (eight) segment which bears long terminal setae . There are ten long plumose natatory setae attached to the segments five to eight.

Second Antenna:Fig.5

Five segments , terminal segment subdivided . First segment (Basal) is elongated and enlarged hummer –shaped; Second segment is enlarged with line shaped letter T ,bearing one long setae attached to the lower narrow margin. Endopod composed two segments, the first bear two short sensory setae and long other setae, the end of the segment which is attached to the second segment bears(5+1) ntatory setae well developed distinctly extending beyond the base of the terminal claws. Terminal segment subdivided, last bearing 5 terminal unequal claws and two terminal equal setae, at the lower(inner)margin attached with three setae. Exopod; reduced to small lobe bearing one very long seta and other small.

Mandible:Fig.6

Basal segment elongated, much broader in the middle and narrowing gradually toward the apex which bears two identical setae, its base would protrude to form short broad process bears five sharp identical teeth and one terminal short seta . Palp consists of four segments, the first elongated and bearing single seta on the outer margin and vibratory plat which is consist of four long identical plumose filaments and one short plumose filament and all are attached to the basal segment of the mandibular palp, second segment of the mandibular palp is a small triangular with three long identical setae, third segment elongated, its outer margin with single short setae in addition to four long identical seta , there are two groups of setae consist of three plumose setae, setal group1 is attached to the inner margin of the first mandibular palp segment and setal group2 is attached to the inner margin of the third mandibular palp segment, fourth segment is very small square like and its apex bears three identical setae.

Maxilla:Fig.7

Two segmented, the vibratory plate elongated and curved, its apex bears 12 plumose setae four of them are long identical while the others eight are shorter, the base of the vibratory plate bears five equal setae, the basal segment short and swollen, its outer margin is much curved and bears two setae ending basally with three mastigatory processes which contain short setae arranged 3-3-5 respectively, the maxillary palp narrow and elongate ending with six setae, with three long setae on the inner margin.

First Thoracopod: Fig.8

Triangular in shape ,the mastigatory process is slightly elongated ending with eight setae, the two on both sides are longer than the others which are equal in length, its outer margin bears one long setae, the mastigatory process jointed palp-like endopode ending with three setae, two long setae and one short and vibratory plate bear five slightly equal plumose setae.

Second Thoracopod: Fig.9

Five segmented , basal segment approximately square ,second segment bears in apex a single long seta and the inner margin contains few irregularly distributed small hairs, third and fourth segments bear a single long setae ,fifth segment is the smallest one triangular in shape and bears a well developed apical claw and two short setae on its sides.

Third Thoracopod:Fig.10

Three segmented. basal segment elongated and narrow forming right angle with the other two segments, there are two reversed long setae at the junction between the basal(first) and second segments, the inner margin of the basal segment bears single plumose seta . Second segment is slightly winding its apex which bears long single seta, third segment more winding its apex which bears long lateral seta and other small swollen one .

Uropod: Fig.11

Consists of T-shaped apical rod representing the apical half of the whole uropod . The other basal half appears as an elongated plate much narrow in the middle , its free end bears four unidentical claws.

Comparision notes :

The new species is closely related to the species ***Hemicypris posterotruncata*** Sars,1903 ,but differ by the following notes:

1-Posterior margin narrowly rounded.
2-Surface smooth and hairy .
3-Adductor muscle scars five differently arrangements.
4-Second antenna,A2-endopod terminal segment is subdivided

Materials Examined

*1 Female Holotype
*1 Female Allotype
*4 Females Paratype
*Karbala'a _Iraq
Coll ,May.2004.(Leg.Hanan Zwair)

Acknowledgments

I would like to introduce my appreciation to Dr. Wajeeh Al- Jumaily / University of Markab / Libya and Dr. Richard M. forester University of Denver United States , for their favor in identification of species and to certify the new species .

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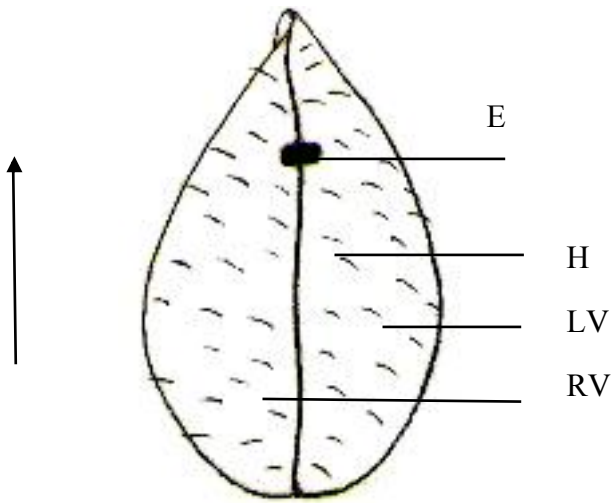
Table I

Sympols	English Term
A1	1st Antenna
A2	2nd Antenna
AM	Anterior Margin
AMS	Addactor Muscle Scars
AC	Apical Claw
AS	Anterior Setae
BS	Basel Segment
Ca	Carapace
Cl	Claws
DE	Distal End
DM	Dorsal Margin
E	Eye
EXP	Exopod
ENP	Endopod
FI	Filaments
H	Hairs
L	Loop
LV	Left Valve
Md	Mandible
MP	Masticatory Process
MX	Maxilla

3rd MP	Therd Masticatory Process
NS	Natatory Setae
Pa	Palp
PM	Posterior Margin
PS	Posterior Setae
Pu	Pustuls
RV	Right Valve
SG1	Setal Group 1
SG2	Setal Group 2
Sc	Scale
SS	Sensory Setae
T1	1st Thoracopod
T2	2nd Thoracopod
T3	3rd Thoracopod
Te	Teeth
TS	Terminal Segment
UA	Uropodal Attachment
U	Uropod
UR	Uropodal Ramuse
VP	Vibratoru Plate
VM	Ventral Margin



0.1mm

Fig.(1): Surface view of carapace(Female)

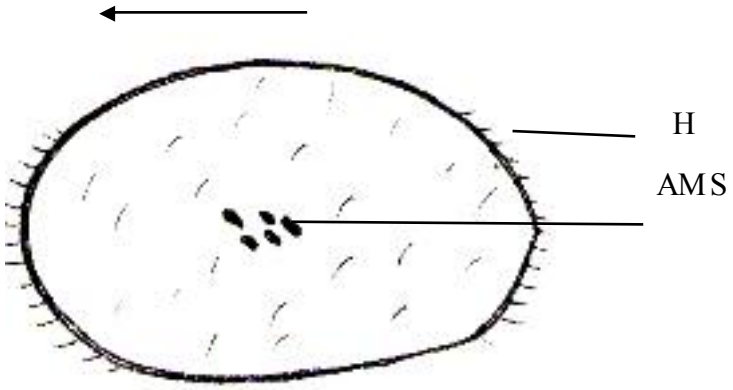


Fig.(2): Lateral view of Right valve(Female)

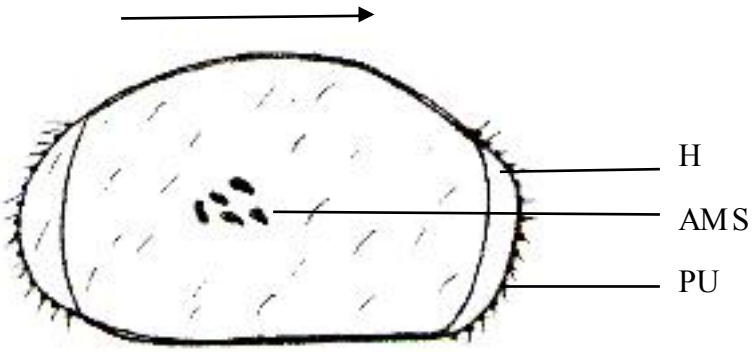


Fig.(3): Lateral view of left valve(Female)

Species: *Hemicypris irakensis* sp.nov

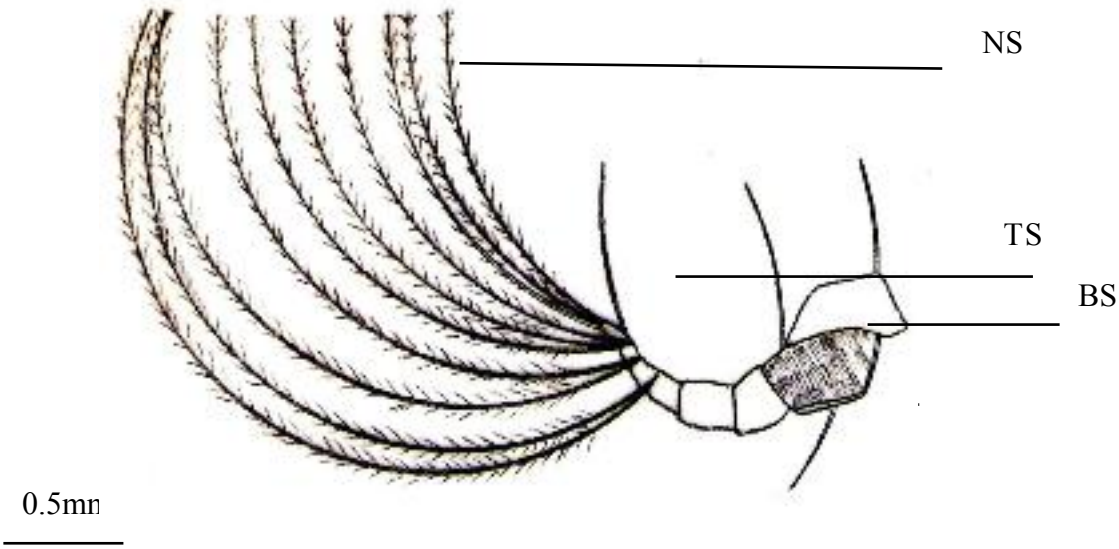


Fig.(4): First Antenna

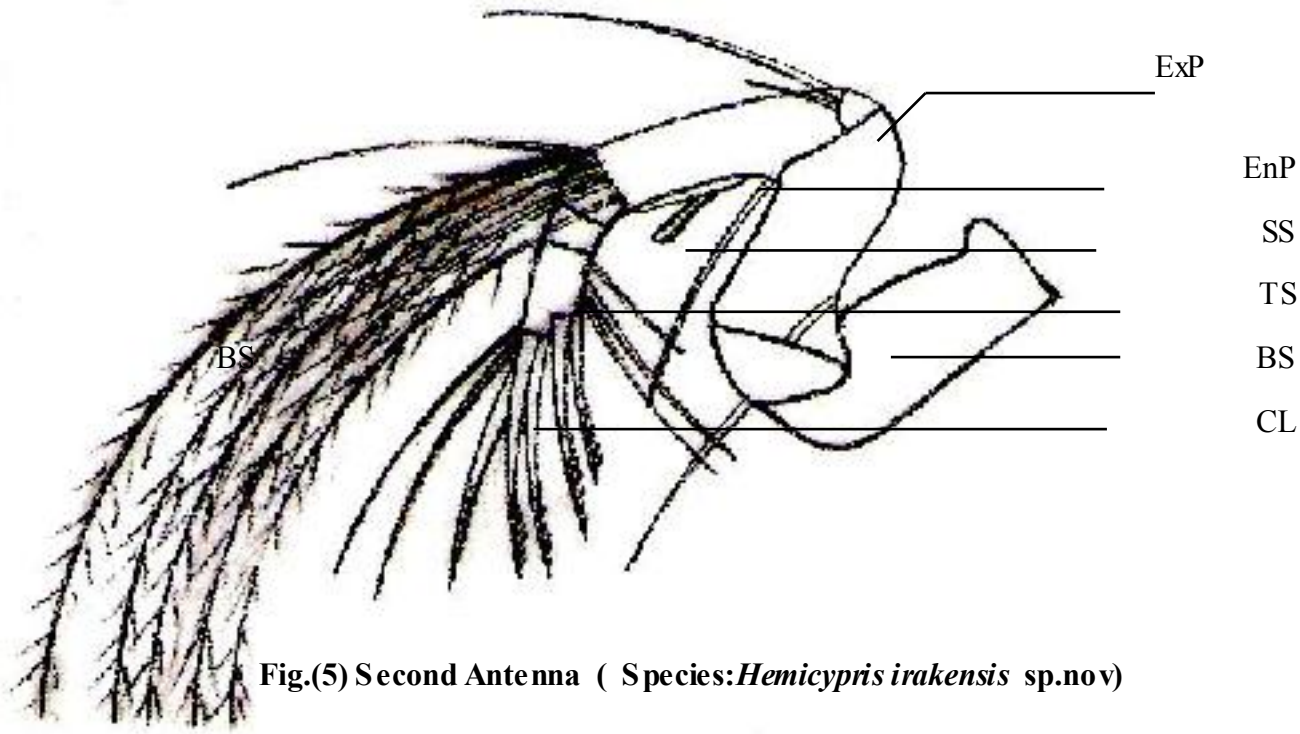


Fig.(5) Second Antenna (Species:*Hemicypris irakensis* sp.nov)

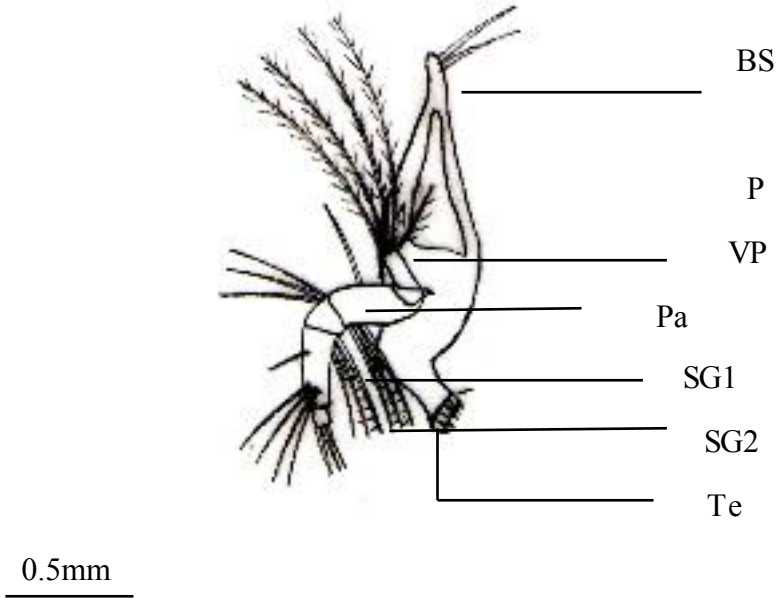


Fig.(6): Mandible

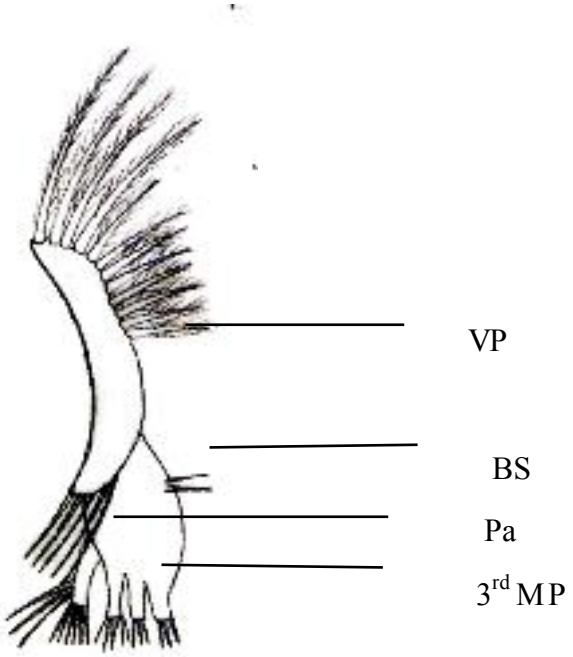


Fig.(7): Maxilla

Species:*Hemicypris irakensis* sp.nov

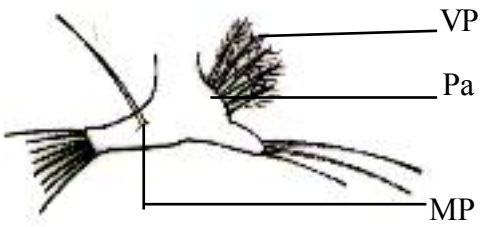


Fig.8 First Thoracopod

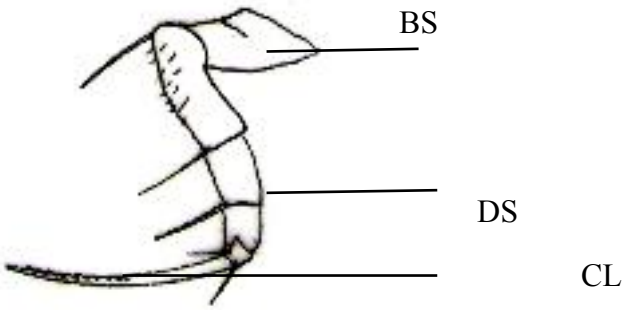


Fig.(9): Second Thoracopod

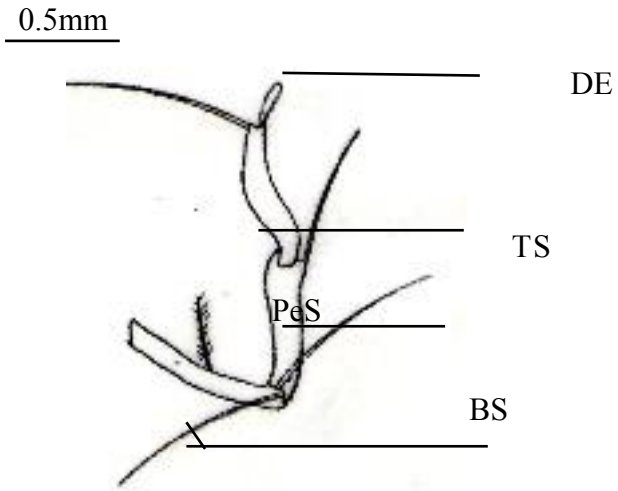


Fig.(10): Third Thoracopod

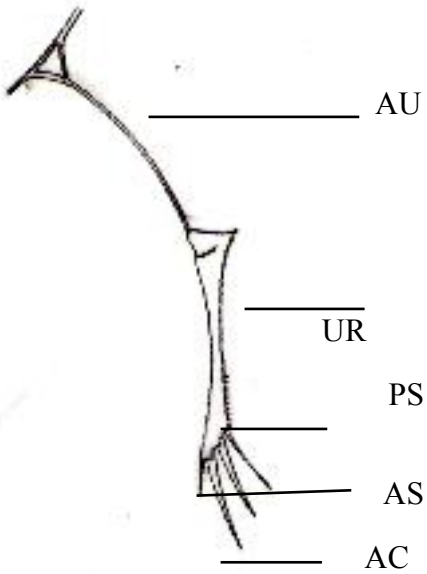


Fig.(11): Uropod

Species: *Hemicypris irakensis* sp.nov

مجلة ابن الهيثم للعلوم الصرفة والتطبيقية المجلد23 (1) 2010

وصف نوع جديد يعود للجنس *Hemicypris* Sars , 1903 من العراق (Crustacea / Ostracoda)

حنان زوير مخلف الدعمي
كلية التربية، جامعة كربلاء

الخلاصة

تقدم الدراسة الحالية وصفا لنوع جديد من القشريات صنف الدرعيات يعود للجنس*Hemicypris* Sars,1903 .تم دراسة صفات المظهر الخارجي وخاصة شكل وحجم وتراكيب المصراعين الأيمن والأيسر للدرع وباقي لواحق الجسم.