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The Rotifera Community in the south Marshes of Iraq

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Abstract

Samples of rotifera species were collected from 12 stations represent the marshes of Basrah (7stations), Emara (3stations), and Nasria (2stations), during the period of December 2003 and August 2004. The density of rotifera were its at highest value (9694 ind./m³) in the st.2 of Nasria marshes while the lowest value was (1ind./m³) in the st.6 of Basrah marshes. From this study it was obvious that the species *Brachioums urcelaris* was the most occurrences and abundance in all stations.

1.Introduction

Microzooplankton as rotifera, have a very important role in the production ecology of aquatic ecosystem (Beers *et al.*,1980 ; Chang, 1983). Rotifera means "Wheeled animals" and when viewed under a microscope these organism appear to have wheels rotating about the tops of their heads. The Phylum Rotifera consist of 3 classes, 120 genera and approximately 2000 described species (Mrini,2003). In the southern part of Iraqi waters a few studies had done on the ecology and taxa-composition of the planktonic rotifers . Gurney (1921) was the first to describe three species of rotifera in Iraqi marshes .Al-

Saboonchi *et al.* ,(1986) reported 19 species and seasonal density of rotifera in Garma marshes, southern Iraq .Abdual-Hussein *et al.* , (1989) investigated the *Brachionus* rotifera in the Shatt Al-Arab River , Sabri *et al.* (1989) studied the faunal composition of rotifera species in Tigris and described about 60 taxa. Ali and Abdulla (1999) investigated the relationship between the rotifers biomass and the phytoplankton . Ahmed *et al.*, (in press) investigated the rotifers community qualitatively and quantitatively in another site of the Shatt Al-Arab river located between Al-Dair and Khalid bridges .That was

the first study about rotifera community in the

south marshes of Iraq after water return .

2. Material and Methods

Samples of rotifera were collected from 12 stations on the south marshes of Iraq including the marshes of Basrah (7 stations) , Emara (3 stations) and Nasria (2 stations), during December 2003 and August 2004. Collections were made by towing a plankton net of 50µ aperture size. The samples were preserved in

4% formalin. Identification and counting were made in the laboratory by using a dissecting and compound microscope. The main references used for identification were Edmondson (1959) and Abdul-Hussein *et al.* (1989).

3. Results and Discussion

A total of 12 species of rotifera belonging to 8 genera have been identified. Table 1. Shows stations of the study, species of rotifera, date of collection , density of rotifera (ind./m³) and the percentage of species dominant in each station. In all stations the species *Brachioums urcelaris* was found almost in a high density which can be considered as the dominant in south marshes , then *B. quadridentuts* and *Keratella tropica* , while Al-Saboonchi *et al.*(1986) found that *Lecan* spp., was the dominant in Garma marshes. Other species like *Colurella abtusa* was recorded in st.3 of Basrah and st.2 of Emarah marshes . The species *Gastropods hyptopus* was found in st.6 of Basrah and st.1 of Nasria marshes, Whereas *Lecan luna* was found

in st.1 and st.2 of Emara marshes, another species as *Lepadella patella* and *Asplanchna prodonta* recorded in st.3 of Basrah marshes , while the species *Polyarthra vulgaris* was found only in st.3 of Emara marshes .The density ranged between (1 and 9694 ind./m³) in all stations, the highest value found in the st.2 of Nasria marshes ,where it was touched by a nutrients coming from the houses which was built around (personal observation), at the same time, the lowest value of density was recorded in st.6 of Basrah marshes. The rotifera species in this study were previously described and recorded in Iraqi water at which mentioned in the introduction, thus a redrawn figures from the sources , were illustrated in plate (1).

Table (1):

The taxa-composition and density of rotifera community at the south marthes of Iraq.

Seriatic	Stations of the study	The species	Date of collection	Rotifera density (ind./m ³)	Percentage of species dominant
<u>The Marshes of Basrah</u>					
<u>St.1</u>	Al-Nasrania	<i>Brachionus urceolaris</i>	20/12/2003	33	100%
<u>St.2</u>	Al-Masehab	<i>Keratella tropica</i>	20/12/2003	23	100%
<u>St.3</u>	Al-Depon	<i>Lepadella Patella</i>	20/12/2003	1.9	45%
		<i>Asplanchna priodonta</i>			55%
	Al-Depon	<i>Brachionus urceolaris</i>	3/8/2004	16.6	75.9%
		<i>B. quadridentatus</i> (1)			12.6%
		<i>Colurella obtuse</i>			12%
<u>St.4</u>	Al-Dawoody	<i>Brachionus urceolaris</i>	20/12/2003	5.2	40%
		<i>B. quadridentatus</i> (1)			35%
		<i>Keratella quadrata</i>			25%
<u>St.5</u>	Al-Nakara	<i>Brachionus urceolaris</i>	20/12/2003	1.1	50%
		<i>B. quadridentatus</i> (1)			50%
<u>St.6</u>	Al-Barka	<i>Brachionus urceolaris</i>	20/12/2003	1	100%
	Al-Barka	<i>Brachionus urceolaris</i>	3/8/2004	22.9	86%
		<i>Gastropus hyptopus</i>			14%
<u>St.7</u>	Al-Salal	<i>Keratella tropica</i>	3/8/2004	31.5	33.3%
		<i>Brachionus urceolaris</i>			33.3%
		<i>B. quadridentatus</i> (1)			23.8%
		<i>B. quadridentatus</i> (2)			9.52%
<u>The Marshes of Emar</u>					
<u>St.1</u>	Hor Al-Hwiza (Al-Adil)	<i>Brachionus urceolaris</i>	20/12/2003	33	100%
	Hor Al-Hwiza (Al-Adil)	<i>lecan luna</i>	3/8/2004	84.8	100%
<u>St.2</u>	Hor Al-Hwiza (Al-Teraba)	<i>Colurella abtusa</i>	20/12/2003	18	100%
	Hor Al-Hwiza (Al-Teraba)	<i>Lecan luna</i>	3/8/2004	9	100%
<u>St.3</u>	Naher Al-Aiz	<i>Brachionus urceolaris</i>	20/12/2003	41	50%
		<i>B. quadridentatus</i> (1)			50%
		<i>Polyarthra vulgaris</i>	3/8/2004	31	50%
<u>The Marshes of Nasria</u>					
	Hor Al-Hamar	<i>Brachionus urceolaris</i>			50%
<u>St.1</u>	Garma bany saeed	<i>Brachionus urceolaris</i>	20/12/2003	2614	75%
		<i>Gastropas hyptopus</i>			25%
<u>St.2</u>		<i>Brachionus urceolaris</i>	20/12/2003	9694	100%

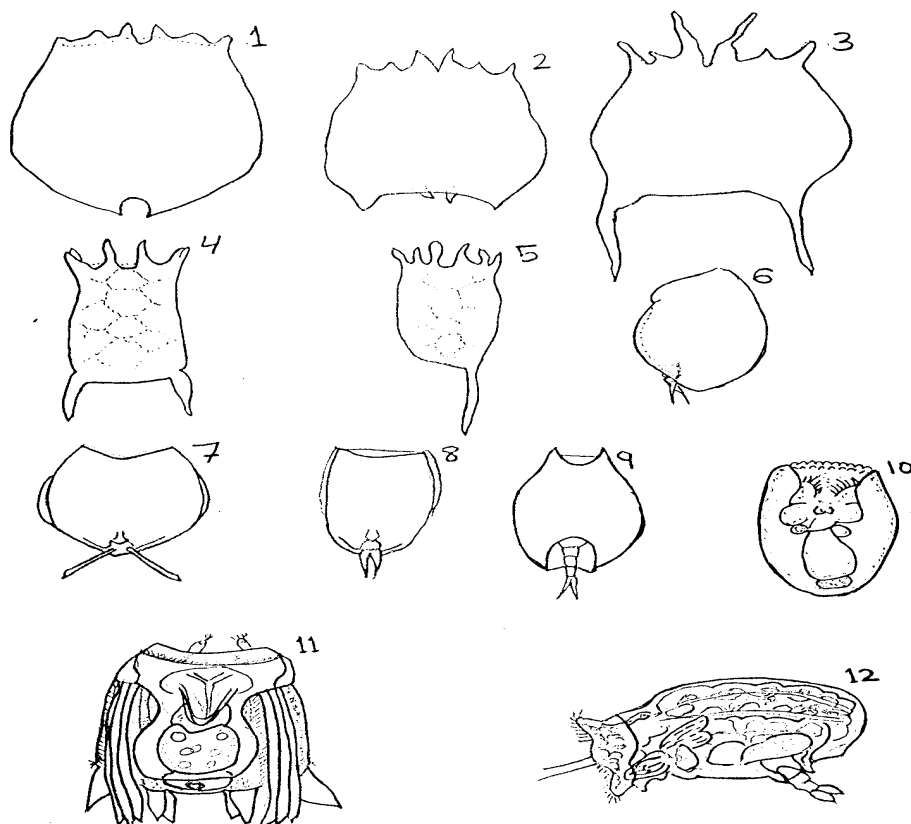


Plate 1. Rotifera from south Iraqi marshes : 1- *Brachionus urcellaris* ,2- *B. quadridentus* (short spines form) , 3- *B. quadridentus* (long spines form) , 4- *Keratella quadrata* (short posterior spines form), 5- *K. tropica* (with left posterior spine), 6- *Colurella obtusa* , 7- *Lecan luna* , 8- *L. depressa* , 9- *Lepadella patella* , 10- *Asplanchna priodonta* , 11- *Polyarthra vulgaris* , 12- *Gastropas hyptopus* .

4.References

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مجتمع الدولابيات في احوار جنوب العراق

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الخلاصة

شملت الدراسة جمع عينات الدولابيات من 12 محطة تمثل كل من احوار البصرة (7 محطات) و احوار العمارة (3محطات) و احوار الناصرية (محطتان) خلال شهري كانون الاول 2003 و آب 2004. تم تشخيص 12 نوع من الدولابيات التي تعود الى 8 اجناس ، كان اكثر . سجلت اعلى قيمة لكثافة الدولابيات (9694 فرد/م³) في *Brachioums urceolaris* الانواع تواجداً و ظهوراً في جميع المحطات هو النوع المحطة (2) في احوار الناصرية بينما سجلت ادنى قيمة للكثافة (1 فرد/م³) في المحطة (6) في احوار البصرة.