

## Studies on Rotifer Fauna in the Panchganga river near Ichalkarnji M.S. India

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### Abstract

Scientists all over the world and in India have contributed in study of the rotifers (Dhanapati 2000). However studies on the rotifer fauna from Maharashtra State are scanty (Malu 2000; Mukhopadhyaya et al; 1981 and Patil 1978). The present paper describes 7 species of rotifers from different rivers of India. Seven species of rotifers belonging to two genera viz. brachionus and keratella belonging to family brachionidae were recorded during the study. The study further revealed that brachionus was the dominant genus and Brachionus calyciflorus as numerically abundant species. Occurrence of Brachionus is definite indication of eutrophic status of the water turbidity. Taxonomic notes and a key for their identification are appended and their bio indicator value in the aquatic pollution studies is discussed.

**KEYWORDS:** Rotifer Fauna, From Different, Indian Rivers

### Introduction.

Rotifer fauna in Indian waters has been studied by number of authors ( Anderson, 1889, Edmondson and Hutchinson, 1934, Donner, 1949 Brehm,1950. Pasha, 1961, George 1961. Arora 1962-1966, Nayar, 1974, Dhanapati 1974 Kodarkar and Chandrasekar, 1995). However most of the studies are from Northern and Southern parts of India and relatively less work has been done on the rotifer fauna from Maharashtra located in the central part of India. Among aquatic habitat relatively less work is done on zooplankton in general and rotifers in particular from Sangli district in different water bodies M.S. India. In the present study seven species of rotifers belonging to one family, Brachionidae, and its two genera viz. Brachionus and Keratella are described from the sample collected from Kalikhan water Sangli from April to October 2008.

Rotifer species have been identified as indicators of water pollution (Arora, 1966). Several species of Brachionus are recorded from highly polluted fresh water, water bodies, lakes, natural reservoirs, water tanks etc. Hussainsagar, Hyderabad by Malathi et al. (1998). Varma and Datta (1987) reported eutrophication of water bodies on basis of Brachionus species. During the present study Brachionus was represented by five species B. falcatus, B. Calyciflorus, B. Caudatus, B. Diversicornis, and B. Farficula. Keratella was represented by two species Keratella tropica and keratella cochleares. Brachionus was found to be numerically abundant then keratella. Among brachionids, Brachionus calyciflorus was the most dominant species. The observation is supported by earlier studies by Malathi (1999). Occurrence of Brachionus species is definite indicator of eutrophic nature of water bodies.

## Material and Methods

The samples were collected from sampling station between April to October 2008 from different rivers like Ganga, Yamuna, Narmada, Mahananda, Brahmaputra, Krishna, Kaveri, Water was passed through bolting silk net and concentrate was collected in a plastic bottle at the bottom of the net. The collected organisms were fixed in 4% formalin. This method of fixation was found to be more effective as the lorica remains more pronounced thus making identification of the species easier.

## Discussion and Results.

During the studies seven common species of Rotifers were recorded from each rivers.

### Taxonomic Notes:

Class : Rotifers  
Sub Class : Monogononta  
Order : Ploima  
Family : Brachionidae.

#### 1. *Brachionus falcatus zacharias*, 1998.

Six unequal anterior spines, lateral and median of same length, long intermediate and curved ventrally. Long invert posterior spine Lorica strippled.

#### Measurement :

1. Total Length - 220mewM.  
2. Maximum width - 108mewM.  
3. Posterior spine - 68mew M  
4. Intermediate spine - 68mewM.  
5. Length of Lorica – 114mewM.

#### Distribution.

Asia, Europe, Africa, South America and Australia.

#### 2. *Bradchionus caudatus barrois and daday*, 1894:

Lorica firm stippled, anterodorsal margin with two median spines sepersted by V or U shaped notch, lateral mostly longer than medians, intermediate spines reduced or wanting generally postero-lateral spines well developed.

#### Measurements:

1. Total Length – 187mewM.

2. Width of anterior margin – 97mewM.
3. Posterior spine – 51mewM.
4. Anterior lateral spines – 50-75mewM.

**Distribution.**

Asia, America.

**3. *Brachionus calyciflorus* Hymanivar. Nov.**

Lorica is not hard but stippled, anterior margin with generally four spines of variable or nearly equal length median spine, slightly longer than lateral spines. Postrial spine flankin the foot opening.

**Measurement**

1. Total length - 332mewM.
2. Maximun width - 210mewM.
3. Length of anterior spine - 78mewM.
4. Posterior lateral spine - 46mewM.
5. Length of lateral spine - 36mewM.

**Distribution.**

Asia, America.

**4. *Brachionus forticula .f. typicus wirzeski*, 1891.**

Lorica with four occipital spines, posterior spines postulated. Posterior spines bowed inwards with characteristics knees like swelling at the inner side near their base.

**Measurement.**

1. Total length - 186mewM.
2. Maximum width – 87mewM.
3. Width of anterior margin - 65 mewM.
4. Posterior spine - 78mewM.
5. Length of Lorica - 96-105mewM.

**Distribution.**

India and Japan.

## 5 **Brachionus diversicornis daday 1883**

Four occipital spines, the lateral longer than the median ,right posterior spine longer than left. Toes characteristically with claws.

### **Measurements.**

1. Total length - 276mewM.
2. Maximum width - 112mewM.
3. Anterior lateral spines - 48mewM.
4. Posterior spine - 12-- 62mewM.
5. Length of Lorica - 168mewM..
6. Length of Toe - 23mewM.

### **Distribution.**

Asia, Africa Europe.

## 6 **Keratella tropica Apstein 1907.**

Presence of right posterior spines only.

### **Measurements.**

1. Total length - 214mewM.
2. Width of anterior margin - 58mewM.
3. Width of posterior margin- 38mewM.
4. Posterior spine -- 18- 86mewM.

### **Distribution**

Asia, Africa, Australia, North and South America.

## 7. **Keratella Cochlearis Gosse 1851.**

Lorica with short median posterior spine sussum with characteristics median longitudinal line.

### **Measurements.**

1. Total length -- 166mewM.
2. With of anterior margin -- 58MEWm.

3. Width of posterior margin -- 48mewM.
4. Posterior spine -- 64mewM.
5. Length of Lorica -- 78mewM.

### **Distribution**

Asia Europe and America.

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