

## THE ROTIFERA FAUNA OF THE BAYEZID BOSTAMI POND OF CHITTAGONG CITY

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**Abstract:** Rotifera fauna of Bayezid Bostami pond was studied for a period of one year from February 2013 to January 2014. *Brachionus diversicornis*, *B. angularis*, *B. quadridentatus*, *B. falcatus*, *B. calyciflorus*, *B. forficula*, *B. caudatus*, *Platyias patulus*, *Keratella cochlearis*, *Lecane luna*, *Trichocerca cylindrica*, *Polyarthra vulgaris*, *Asplanchna priodonta*, *A. brightwelli*, *Filinia longiseta* and *F. terminalis* were common species present throughout the year. Highest abundance of rotifer was observed in the month of September, and lowest was observed in the month of March. The responsible species for the peak were *Brachionus angularis* and *B. diversicornis*. Description of each species, monthly fluctuation and photographs are the content of this paper.

**Key words:** Rotifera, taxonomy, lorica. Bayezid Bostami pond

### INTRODUCTION

Rotifers are microscopic aquatic animals which can be found in freshwater environments and in moist soil (Örstan, 1999). Rotifers can serve as a food source for zooplanktivores, but they are generally too small for many planktivorous fishes to capture (Dodds, 2006). A number of works have been carried out by many researchers in different parts of the world on different aspects of rotifers Haring (1913), Reinhard (1931), Ahlstrom (1940), Pennak (1944), Green (1960), Williams (1966); Chengalath and Fernando (1974) etc. Even in India, a considerable number of works have been done on rotifer by Anderson (1889), George (1961), Arora (1962, 1963, 1965 and 1966), Nayar (1965), Nayar (1968), Nayar and Nair (1969), Laal and Nasar (1977), Patil (1978), Sharma (1978 a,b), Sharma (1979 a, b) and Banik (1998) etc. Taxonomic study on rotifera of Bangladesh have been done by Begum (1958), Rob (1966), Das and Bhuiyan (1974), Chowdhury and Bhoyain (1981), Bhoyain and Asmat (1992), Bhoyain *et al.* (2005), Naz and Najia (2008), Nahar *et al.* (2008), Siddique *et al.* (2011), Mozumder *et al.* (2010) and Mozumder *et al.* (2011) etc. Chittagong abounds with ponds, lakes, rivers, streams, marshes and other types of inland waters. Taxonomic study on ESA (Ecologically Sensitive Area) pond like Bayezid Bostami pond ecosystem and their role in the food chain remained to be determined. Keeping this in mind in the preliminary study on the rotifer faunal composition and their seasonal changes have been studied in the Bayezid Bostami, an ESA pond situated in Chittagong city, Bangladesh.

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\* Part of M.S. thesis of first author.

## MATERIAL AND METHODS

*Description of the area:* Chittagong is situated within latitude 20°23' N and longitude 91°92' E. Bayezid Bostami pond is one of the religiously protected pond in Chittagong and situated at the northern side of Chittagong city. The famous mazar of Hazrat Bayezid Bostami (R) is situated at the western side of the pond. The pond is so much famous in home and abroad for its turtles which are very much uncommon. It is a large size pond. It's bottom is formed by mud. The pond has no outlet or inlet. The pond compound is flat plain area. It includes the Bostami pond, pond's banks, Bostami mazar office and mosque. The Bostami pond is situated at the foot of an about 50 m high hill, the top of which has the "Astana" or "Chilla" of the shrine of Hazrat Bayezid Bostami. The pond was probably excavated in front of the mosque in the 17th century. It has been excavated and reexcavated several times and currently it is about 99 m × 64.5 m (6385.5 m<sup>2</sup>) and rectangular in shape. Due to reconstruction and repair of the pond walls of the bank in 1998 the length of the pond has been little bit expanded. The banks of the pond are surrounded by pucca walls so it looks like a tank. Everyday thousands of people visit the mazar and feed the turtles with banana, meat, bread and rice puffy (kholi). The people use this pond for various purposes. Fishing is done for several times in a year. People use this pond for bathing, washing and other household purposes. The Muslims perform ablution every day before going to their prayer (namaz). Recently, Bangladesh government has declared the pond as a sensitive water body (Ecologically Sensitive Area) and gives emphasis on its protection.

*Collection:* The samples of plankton for investigation were collected from Bayezid Bostami pond by towing a plankton net made of bolting silk (mesh size 70 µm), once in a month, during the period from February, 2013 to January, 2014. The sampling net was thrown to the desired distance from the bank and allowed to reach the desired depth of the sampling station from the raft. Then the thrown rope with net was pulled quickly towards the raft for the collection of the samples. The net was pulled five times from several places of each station. between 8 A.M. to 10 A.M.

*Preservation:* The collected plankton samples were preserved in 5% formalin. The water samples were then transferred to the measuring cylinder and the volume was made 110 ml for the quantitative analysis. An aliquot measuring 1 ml was taken into a plankton-counting chamber (Sedgwick-Rafter (S-R cell) and the numbers of the organism (rotifers) were counted under a binocular microscope. One millilitre (ml) of plankton sample was taken in S-R cell that was kept few minutes to settle the plankton and then the planktons were counted the microscope. The S-R is equally divided into 1000 divisions, each having a volume of 0.001 ml. The rotifers counting was then performed by using the formula:

$$\text{No/ml} = \frac{C \times 1000 \text{ mm}^3}{L \times D \times W \times S}$$

Where, C=number of organisms counted; L=Length of each strip (S-R cell) in mm; W= Width of each strip (S-R cell) in mm; D= Depth of each strip (S-R cell) in mm; and S= number of strips counted. The average of 5 aliquots were taken and the result was extrapolated for a cubic meter of water.

*Mounting and Identification:* The preserved samples were taken in petridish and sorted out with the help of fine needles under a binocular microscope ( $\times 10$ ). Then from the petridish a little amount of water was taken on a glass slide where a simple drop of lactophenol was placed earlier. Lactophenol was used as a clearing agent as well as temporary mounting reagent for the study of the internal structures of the organisms. After that the specimens were covered with a cover slip. The margins of each cover slip were attached on the slide with the help of Canada balsam or Laquer for temporary mounting to facilitate easy identification. Photographs were taken with the help of a camera (Yashica, model-EZ; made in China).

The identification of specimens were done following the keys provided by Ahlstrom (1940), Pennak (1944), Edmondson (1959), Arora (1963), Nayar (1965a), Mizuno (1968), Nayar and Nair (1969), Das and Bhuiyan (1974), and Bhouyain and Asmat (1992).

## RESULTS

*Taxonomic account:* During this study a total 16 species have been identified from Bayezid Bostami pond. A key is prepared for the identification of these rotifer organisms. The key is given below with description of each species.

### Key to species of rotifer

- |   |  |
|---|--|
| A. Genus <i>Brachionus</i> (Pallas, 1766) |  |
| 1. Posterior spines present               | 2  |
| Posterior spines absent                   | 3  |
| 2. Lorica with 6 anterior spines          | 4  |
| Lorica with 4 anterior spines             | 6  |
| 3. Lorica with 4 anterior spines          | <i>Brachionus diversicornis</i> (Plate.1( a) |
| Lorica with 2 anterior spines             | <i>B. angularis</i> (Plate.1( b)             |
| 4. Spines equal in length                 | <i>B. quadridentatus</i> (Plate.1( c)        |
| Spines not equal in length                | 5  |
| 5. Intermediate ones longest              | <i>B. falcatus</i> (Plate.1(d)               |
| 6. With 2 posterior spines                | 7  |
| With 4 posterior spines                   | <i>B. calyciflorus</i> (Plate.1(e)           |
| 7. Posterior spines long                  | <i>B. forficula</i> (Plate.1(f)              |
| Posterior spines short                    | <i>B. caudatus</i> (Plate. 1(g)              |
| B. Genus <i>Platyias</i> (Harring, 1913)  |  |
| Ten anterior spines present               | <i>Platyias patulus</i> (Plate.1(g)          |

- C. Genus *Keratella* (Borg De St. Vincent, 1822)  
 One posterior spine present *Keratella cochlearis* (Plate.1(i))
- D. Genus *Lecane* (Nitzsch, 1827)  
 Foot with 2 toes, not spine-like *Lecane luna* (Plate.1(j))
- E. Genus *Trichocerca* (Lamarck, 1801)  
 Body cylindrical; toes unequal *Trichocerca cylindrica* (Plate.1(k))
- F. Genus *Polyarthra* (Ehrenberg, 1832)  
 Swimming fins very narrow *Polyarthra vulgaris* (Plate.1(l))
- G. Genus *Asplanchna* (Gosse, 1850)  
 1. Vitellarium rounded with 8 nuclei *Asplanchna priodonta* (Plate.1(m))  
 Vitellarium U-shaped *A. brightwelli* (Plate.1(n))
- H. Genus *Filinia* (Borg De St. Vincent, 1824)  
 1. Posterior setae situated ventrally *Filinia longiseta* (Plate.1(o))  
 Posterior setae situated terminally *F. terminalis* (Plate.1(p))

## 1 Description of the species of rotifera

### 1.1 Genus *Brachionus* Pallas, 1766

#### 1.1.1 Species *Brachionus diversicornis* Daday, 1883 (Plate.1(a))

*Morphology:* Lorica firm, divided into dorsal and ventral plates, quite compressed dorso-ventrally. Occipital margin with four spines; medians short, laterals long, curved inwardly, intermediates completely obliterate. Mental margin less rigid, median sinus shallowly developed. Posteriorly the lorica becomes narrowed and carries two diverging spines, the right spines usually long. The left one short in length to the right. Foot opening between bases of posterior spines; rounded tongue-like projection of dorsal plate overhang foot opening. Toes elongated, shouldered at the end, each terminating in two soft fleshy points. Lorica stippled.

*Distribution:* Reported from Bangladesh by Chowdhury and Bhoyain (1981) from the river Karnaphuli, Kabir and Naser (2008) from Meherpur, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2010) from Bakerganj, Mozumder *et al.* (2011) from Mathbaria; from India by Laal and Nasar (1977) from Bihar and Nasar (1978) from Bhagalpur.

#### 1.1.2 Species *Brachionus angularis* Gosse, 1851 (Plate. 1(b))

*Morphology:* Lorica firm, divided into a dorsal and a ventral plate. Lorica moderately compressed dorso-ventrally. Anterior dorsal margin with two median spines divided by a U shaped sinus; lateral and median occipital spines usually obliterate. Intermediates more commonly developed than laterals. Mental margin rigid, with a shallow median sinus. Foot opening large. Large aperture in ventral plate, flanked laterally by cuticular protuberances. Posterior spines wanting. Lorica lightly stippled; dorsal plate with a pattern of cuticular ridges.

*Distribution:* It is earlier reported from Bangladesh by Das and Bhuiyan (1974) from some ponds of Dacca city, Kabir and Naser (2008) from Meherpur, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2010) from

Bakerganj, Mozumder *et al.* (2011) from Mathbaria; from India by Arora (1963, 1965) from Nagpur; by Laal and Nasar (1977) from Bihar and from Srilanka by Chengalath *et al.* (1974).

### 1.1.3 Species *Brachionus quadridentatus* Hermann, 1783 (Plate.1(c))

*Morphology:* Lorica firm, divided into a dorsal and a ventral plate, moderately compressed dorso-ventrally. Occipital margin with six spines 2 laterals, 2 medians and 2 intermediates; medians longest, curved outward; laterals larger than the intermediates. Mental margin rigid, elevated, wavy, with a median notch flanked on either side by a small tooth-like papilla. The lorica usually terminates posteriorly in two lateral spines. The ventro-posterior portion of the lorica is prolonged and forms a tubular foot sheath around the base of the retractile foot. Body usually stippled, ornamentation arranged in regular lines.

*Distribution:* Reported from Bangladesh by Das and Bhuiyan (1974) from Dacca, Chowdhury and Bhuyain (1981) from the river Karnaphuli, Kabir and Naser (2008) from Meherpur, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2010) from Bakerganj, Mozumder *et al.* (2011) from Mathbaria. Earlier Anderson (1889) from Calcutta, George (1961) from Delhi, Arora (1963, 1965) from Nagpur, Laal and Nasar (1977) from Bihar, Nasar (1978) from Bhagalpur, India and Chengalath *et al.* (1974) from Srilanka.

### 1.1.4 Species *Brachionus falcatus* Zacharias, 1898 (Plate.1(d))

*Morphology:* Lorica firm, divided into dorsal and ventral plates, quite compressed dorso-ventrally. Anterior dorsal margin with six unequal spines two laterals, two medians and two intermediates; the intermediates are much longer than the other spines and curved ventrally; the laterals and median spines are short and equal in size. Mental edge moderately firm, with lateral sinusities and a undulate raised portion at times with a slight median sinus. Body terminates posteriorly with two long spines, widely separated at their bases, bowed and usually converging toward their free ends. A piece of posterior spines twisted. Foot opening between bases of posterior spines, a small aperture present. Lorica lightly stippled, extremities of spines serrated.

*Distribution:* Reported from Bangladesh by Das and Bhuiyan (1974) from Dacca, Chowdhury and Bhuyain (1981) from the river Karnaphuli, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2010) from Bakerganj, Mozumder *et al.* (2011) from Mathbaria. Earlier George (1961) from Delhi, Arora (1963, 1965) from Nagpur, Laal and Nasar (1977) from Bihar, Nasar (1978) from Bhagalpur, India. It was also reported from Srilanka by Chengalath *et al.* (1974).

### 1.1.5 Species *Brachionus calyciflorus* Pallas, 1766 (Plate. 1(e))

*Morphology:* Lorica is rather flexible, oval, not separated into a dorsal and a ventral plate. But body little compressed dorso-ventrally. Anterior dorsal margin with four pointed spines of variable length, medians longer with broad bases than laterals. Mental margin rather flexible, elevated with U shaped notch which is unflanked. Four posterior spines-laterals longer than the medians.

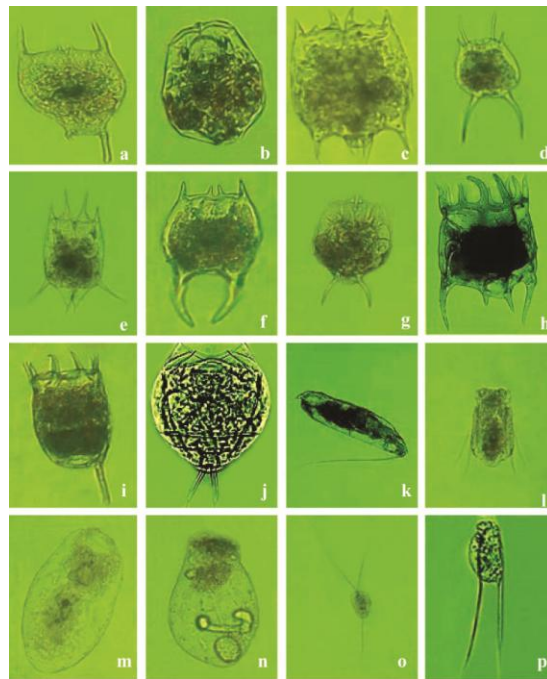
*Distribution:* Reported from Bangladesh by Das and Bhuiyan (1974) from Dacca, Chowdhury and Bhuyain (1981) from the river Karnaphuli, Nahar *et al.*

(2008) from south-western part, Mozumder *et al.* (2010) from Bakerganj, Mozumder *et al.* (2011) from Mathbaria; by Arora (1965) from Nagpur; by George (1961) from Delhi and by Nayar (1965b) from Pitani, India and by Chengalath *et al.* (1974) from Srilanka.

### 1.1.6 Species *Brachionus forficula* Wierzejski, 1891 (Plate. 1(f))

**Morphology:** Lorica firm divide into a dorsal and a ventral plate, moderately compressed dorso-ventrally. Occipital margin with four pointed spines-two laterals and two medians; laterals longer than medians. Mental margin rigid, elevated, undulate, with a shallow, unflanked median sinus. The lorica terminates posteriorly with two stout, usually long, sub-equal spines, widely separated at their bases and tapering to blunt points. Foot opening between the bases of the posterior spines. Lorica finely stippled.

**Distribution:** Reported from Bangladesh by Das and Bhuiyan (1974) from Dacca, Chowdhury and Bhoyain (1981) from the river Karnaphuli, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2011) from Mathbaria. Arora (1965) noted it from Nagpur, and Laal and Nasar (1977) from Bihar, India. It also appears to be fairly common in lake water of Srilanka, Chengalath *et al.* (1974).



**Plate.1.** (a) *Brachionus diversicornis*; (b) *B. angularis*; (c) *B. quadridentatus*; (d) *B. falcatus*; (e) *B. calyciflorus*; (f) *B. forficula*; (g) *B. caudatus*; (h) *Platyias patulus*; (i) *Keratella cochlearis*; (j) *Lecane luna*; (k) *Trichocerca cylindrica*; (l) *Polyarthra vulgaris*; (m) *Asplanchna priodonta*; (n) *A. brightwelli*; (o) *Filinia longiseta* and (p) *F. terminalis*.

### 1.1.7 Species *Brachionus caudatus* Ahlstrom, 1940 (Plate. 1(g))

*Morphology:* Lorica firm, oval, divided into a dorsal and a ventral plate. Both lateral and median occipital spines well developed. Pattern rather indistinct, lorica lightly stippled. Dorsal plate quite elevated and the posterior spines arise at an angle ventrally.

*Distribution:* Reported from Bangladesh by Chowdhury and Bhoyain (1981) from the river Karnaphuli, Kabir and Naser (2008) from Meherpur, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2010) from Bakerganj, Mozumder *et al.* (2011) from Mathbaria. Arora (1963, 1965), Laal and Nasar (1977) reported *B. caudatus* from India. It also appears in Chengalath *et al.* (1974) from Srilanka.

## 1.2 Genus *Platyias* Harring, 1913

### 1.2.1 Species *Platyias patulus* Muller, 1786 (Plate. 1(h))

*Morphology:* Lorica firm, sub rectangular, compressed dorso-ventrally. Both anterior dorsal and ventral margins with pronounced spine; ten anterior spines present, two occipital median spines are longest, curve ventrally and blunt. Pectoral medians shortest, straight; intermediates on both margins and laterals about equal in length. Median sinus between pectoral medians usually broader than sinus separating occipital median spines. Posteriorly the lorica narrows but little. Foot openings in ventral plate asymmetric in shape and position.

*Distribution:* Reported from Bangladesh by Chowdhury and Bhoyain (1981) from the river Karnaphuli, Chowdhury and Hasan (1982) from Chittagong region, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2010) from Bakerganj; from India by Anderson (1889), Pasha (1962), Laal and Nasar (1977), Joyti and Sehgal (1979); from Japan by Mizuno (1968); from Srilanka by Fernando (1980) and from U.S.A. by Edmonson (1959).

## 1.3 Genus *Keratella* Bory de St. Vincent, 1822

### 1.3.1 Species *Keratella cochlearis* Gosse, 1851 (Plate.1(i))

*Morphology:* Lorica terminating in a single stout median posterior spine which is usually as long as the body proper, but may be one-third the same more reduced. Anterior dorsal margin with six spines; medians longest, curved ventrally; intermediates usually slightly divergent and shorter than lateral spines which are convergent at their tips and which arise at a single point. Dorsal plate with distinct sculpture, characterized by a median line extending longitudinally from behind the median frontal area to the base of the posterior spine.

*Distribution:* Reported from Bangladesh by Das and Bhuiyan (1974) from Dacca, Chowdhury and Bhoyain (1981) from the river Karnaphuli, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2010) from Bakerganj, Mozumder *et al.* (2011) from Mathbaria; from India by Anderson (1889), Pasha (1962), Joyti and Sehgal (1979); from Japan by Mizuno (1968) and from U.S.A. by Edmonson (1959).

#### **1.4 Genus *Lecane* Nitzsch, 1827**

##### **1.4.1 Species *Lecane luna* Muller, 1776 (Plate. 1(j))**

**Morphology:** Lorica broadly pyriform of sub-circular. Dorsal plate broader than ventral plate; both the plates with a deep lunate anterior sinus each, which cuspidate at its external angles. Posterior segment very small and rounded, projecting very little beyond the dorsal plate. Toes stout, parallel-sided, about one-third of the total length, terminating in a distinct claw, with a minute basal spicule.

**Distribution:** Reported from Bangladesh by Das and Bhuiyan (1974) from Dacca, Chowdhury and Hasan (1982) from Chittagong region, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2011) from Mathbaria; from Srilanka by Chengalath and Fernando (1974), from India by Anderson (1889), Laal and Nasar (1977) and from U.S.A. by Edmonson (1959).

#### **1.5 Genus *Trichocerca* Lamarck, 1801**

##### **1.5.1 Species *Trichocerca cylindrica* Imhoff, 1891 (Plate. 1(k))**

**Morphology:** Lorica thin. Body elongated and cylindrical. Anterior end with a median dorsal spine called mucron which is bent but it is not prominent. Trophi asymmetrical. Toe long.

**Distribution:** Reported from Bangladesh by Das and Bhuiyan (1974) from Dacca, Chowdhury and Bhoyain (1981) from the river Karnaphuli, Chowdhury and Hasan (1982) from Chittagong region, Kabir and Naser (2008) from Meherpur, Mozumder *et al.* (2011) from Mathbaria; from India by Anderson (1889), Pasha (1962), Joyti and Sehgal (1979); from the Philippines by Mamarial and Fernando (1978); from Japan by Mizuno (1968) and from U.S.A. by Edmonson (1959).

#### **1.6 Genus *Polyarthra* Ehrenberg, 1832**

##### **1.6.1 Species *Polyarthra vulgaris* Carlin, 1943 (Plate. 1(l))**

**Morphology:** Moderate size body more or less broadly cylindrical and oblong. Antennae emerging from the lateral side of the body in front of the posterior end. Leafy appendage of variable length, usually as long as the body, spear shaped, laterally slightly toothed. Median rib well developed, only about two-third of the length of appendage.

**Distribution:** Reported from Bangladesh by Chowdhury and Bhoyain (1981) from the river Karnaphuli, Chowdhury and Hasan (1982) from Chittagong region, Kabir and Naser (2008) from Meherpur, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2010) from Bakerganj, Mozumder *et al.* (2011) from Mathbaria; from India by Anderson (1889), Joyti and Sehgal (1979); from Japan by Mizuno (1968); from the Philippines by Mamarial and Fernando (1978) and from U.S.A. by Edmonson (1959).



## 1.7 Genus *Asplanchna* Gosse, 1850

### 1.7.1 Species *Asplanchna priodonta* Gosse, 1850 (Plate. 1(m))

*Morphology:* Body large, thin, transparent, shape rounded. Anus has shifted and lies on the same side as the mouth. The trophi are characteristic and the inner edge of the rami has 6 teeth at the anterior end. Two lateral prolongations present at the base of the rami. Fulcrum narrow. Vitellarium rounded with 8 nuclei.

*Distribution:* Reported from Bangladesh by Das and Bhuiyan (1974) from Dacca, Chowdhury and Bhuiyan (1981) from the river Karnaphuli, Chowdhury and Hasan (1982) from Chittagong region, Kabir and Naser (2008) from Meherpur, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2011) from Mathbaria; from India by Anderson (1889), Pasha (1962), Laal and Naser (1977), Joyti and Sehgal (1979); from Japan by Mizuno (1968) and from U.S.A. by Edmonson (1959).

### 1.7.2 Species *Asplanchna brightwelli* Gosse, 1850 (Plate. 1(n))

*Morphology:* Body cavity generally large, the stomach lying well away from the epidermis, trophi incudate. Without lorica. Vitellarium U-shaped.

*Distribution:* Reported from Bangladesh by Chowdhury and Hasan (1982) from Chittagong region; from India by Anderson (1889) and from U.S.A. by Edmonson (1959).

## 1.8 Genus *Filinia* Bory de St. Vincent, 1824

### 1.8.1 Species *Filinia longiseta* Ehrenberg, 1834 (Plate.1(o))

*Morphology:* Body barrel shaped, fairly broad. Anterior setae usually folded ventrally. The posterior seta is almost invariably ventrally situated.

*Distribution:* Reported from Bangladesh by Das and Bhuiyan (1974) from Dacca, Chowdhury and Hasan (1982) from Chittagong region, Kabir and Naser (2008) from Meherpur, Nahar *et al.* (2008) from south-western part, Mozumder *et al.* (2010) from Bakerganj, Mozumder *et al.* (2011) from Mathbaria; from India by Anderson (1889) and from U.S.A. by Edmonson (1959).

### 1.8.2 Species *Filinia terminalis* Plate, 1886 (Plate. 1(p))

*Morphology:* Body rather cylindrical. Posterior end narrow with setae situated terminally, slightly away from the caudal end. Two movable antero-lateral setae present.

*Distribution:* Reported from Bangladesh by Das and Bhuiyan (1974) from Dacca, Chowdhury and Hasan (1982) from Chittagong region, Kabir and Naser (2008) from Meherpur, Mozumder *et al.* (2010) from Bakerganj, Mozumder *et al.* (2011) from Mathbaria; from India by Anderson (1889) and from U.S.A. by Edmonson (1959).

**Table 1. Monthly variation of the rotifera (individual/l) of Bayezid Bostami pond during February 2013 to January 2014.**

Species	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Total species
<i>Brachionus diversicornis</i>	16	9	14	5	22	17	28	21	28	28	31	22	241
<i>B. angularis</i>	28	11	9	14	10	15	24	30	29	44	24	22	260
<i>B. quadridentatus</i>	5	4	6	4	4	4	3	5	6	3	5	7	56
<i>B. falcatus</i>	3	1	4	2	3	3	4	6	5	4	5	4	45
<i>B. calyciflorus</i>	7	2	4	0	4	3	5	3	9	5	6	5	53
<i>B. forficula</i>	2	1	1	7	3	3	6	5	8	2	5	8	51
<i>B. caudatus</i>	7	5	1	7	3	12	6	15	7	4	3	8	78
<i>Platyias patulus</i>	0	2	5	5	3	5	3	2	3	3	2	2	35
<i>Keratella cochlearis</i>	3	1	7	1	1	3	1	3	3	2	2	2	29
<i>Lecane luna</i>	1	2	3	4	0	2	2	3	1	4	3	0	25
<i>Trichocerca cylindrica</i>	0	3	2	1	2	3	2	4	2	0	2	1	22
<i>Polyarthra vulgaris</i>	1	3	1	2	3	2	2	2	2	1	3	1	23
<i>Asplanchna priodonta</i>	2	1	1	1	2	2	2	3	1	2	2	3	22
<i>A. brightwelli</i>	2	1	1	4	5	2	1	3	2	0	2	2	25
<i>Filinia longiseta</i>	2	2	1	3	2	2	2	2	1	2	2	2	23
<i>F. terminalis</i>	2	1	1	3	1	2	1	1	1	1	2	2	18
<b>Total rotifers</b>	81	49	61	63	68	80	92	106	103	101	98	91	993

### DISCUSSION

During the present investigation the number of rotifera ranged from 49 individual/l in March to 106 individuals/l in September (Table 1 and Fig. 1). The highest rotifer population of Bayezid Bostami pond (106 individual/l) was recorded in September, 2013. Bhoyain *et al.* (2005) recorded the highest density of rotifer in November from the Bayezid Bostami pond. Chowdhury and Raknuzzaman (2005) recorded the highest density of rotifera in May (786 indiv./l) and lowest in the month of September (95 indiv./l) from the Buriganga river. Rahman and Hussain (2008) found peak season of rotifers in January from pond of the Rajshahi University campus. Siddique *et al.* (2011) recorded the highest density of rotifera in February from the ponds of Rajshahi. The highest number of rotifera during this study were found due to the suitable environment, favourable conditions of physico-chemical parameters and the availability of food and nutrients in the pond.

The lowest density of rotifera (49 individual/l) was recorded in March, 2013 in Bayezid Bostami pond. Bhoyain *et al.* (2005) recorded the lowest density of rotifera in March from the Bayezid Bostami pond. Chowdhury and Raknuzzaman (2005) recorded the lowest density of rotifera in September from the Buriganga river. Siddique *et al.* (2011) recorded the lowest density of rotifera in October from the ponds of Rajshahi. The lowest number of rotifera was found in March possibly due to high pH and comparatively high free carbon dioxide. Kabir and Naser (2008) recorded highest 4460 individual/l. of zooplankton in February and lowest 393 individual/l. in July from Chandbeel baor.

Total 16 species of rotifer have been identified from this pond (Table 1 and Fig. 1). Among them *Brachionus diversicornis*, *B. angularis*, *B. quadridentatus*, *B. falcatus*, *B. calyciflorus*, *B. forficula*, *B. caudatus*, *Platyias patulus*, *Keratella cochlearis*, *Lecane luna*, *Trichocerca cylindrica*, *Polyarthra vulgaris*, *Asplanchna priodonta*, *A. brightwelli*, *Filinia longiseta* and *F. terminalis* found throughout the study period. *Brachionus angularis* was most abundant and highly diversified species in the pond. *Filinia terminalis* was lowest species in this pond. Mozumder *et al.* (2011) recorded 22 species of rotifer from three ponds of Mathbaria area belongs to nine families. Moreover, Kabir and Naser (2008) listed 59 species of zooplanktonic organisms from Chandbeel baor of Meherpur district.

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