

# CONTRIBUTIONS TO THE ROTIFER FAUNA OF ORISSA, INDIA

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Received April 25, 1979

Keywords: Eurotatoria, Orissa, India

## Abstract

This paper deals with 36 species of monogonont rotifers (belonging to 10 eurotatorien families) collected from Sambalpur (Orissa State) in Eastern India. Of the reported taxa, 15 species have been added as new records to the previous list from this region while one species represents a new record from this country.

## Introduction

In an earlier communication, the author (Sharma, 1977) dealt with a small collection of rotifers (obtained between November-December, 1976) from Sambalpur (Orissa State) in Eastern India and listed 21 species of monogonont rotifers. Further studies on more samples from Sambalpur (between March-April, 1977; November-December, 1977 and April-May, 1978) have added 15 species to the previous list. All the additionally reported species are new records from the area investigated and one species represents a new record from this subcontinent.

As a result of this study, a total number of 36 species of monogonont rotifers, spread over 10 eurotatorien families, have been revealed from this state. All the species dealt here are briefly commented and their distribution in India is also mentioned.

## Material and methods

The material was collected from various freshwater tanks/ponds in and around Sambalpur (20°28'N, 84°1'E), Orissa in Eastern India. The methods used for the collection and study of this material are the same as detailed by (Sharma, 1978a). All the drawings, except cross-sections, are made with a camera lucida and measurements are given in microns ( $\mu$ ).

## List of species

Class : Rotifera  
Subclass : Eurotatoria Bartos, 1959  
Superorder: Monogononta Wesenberg-Lund, 1889  
Order : Ploimida Delage, 1897

Family: Brachionidae Hudson & Gosse, 1888

- \* *Anuraeopsis coelata* (De Beauchamp, 1932)
- \* *Brachionus angularis* Gosse, 1851
- Brachionus bidentata* Anderson, 1889
- \* *Brachionus calyciflorus* Pallas, 1776
- \* *Brachionus caudatus* Borris & Daday, 1894
- \* *Brachionus diversicornis* (Daday, 1893)
- Brachionus forficula* Wierzejski, 1891
- \* *Brachionus fulcatus* Zacharias, 1898
- \* *Brachionus patulus* (Müller, 1786)
- \* *Brachionus quadridentatus* Hermann, 1783
- Brachionus rubens* Ehrenberg, 1838
- Keratella procurva* (Thorpe, 1891)
- \* *Keratella tropica* (Apstein, 1907)
- \* *Platylabus quadricornis* (Ehrenberg, 1832)

Family: Euchlanidae Bartos, 1959

\* *Euchlanis dilatata* Ehrenberg, 1832

Family: Mytilinidae Bartos, 1959

*Mytilina ventralis* (Ehrenberg, 1832)

Family: Trichotridae Bartos, 1959

\* *Trichotria tetractis* (Ehrenberg, 1830)

Family: Colurellidae Bartos, 1959

*Lepadella longiseta* Myers, 1934

\* *Lepadella ovalis* (Müller, 1786)

\* *Lepadella patella* (Müller, 1773)

*Lepadella rhomboides* (Gosse, 1884)

Family: Lecanidae Remane, 1933

*Lecane (L.) crepida* Murray, 1913

\* *Lecane (L.) leontina* (Turner, 1892)

*Lecane (L.) ludwigii* (Eckstein, 1883)

\* *Lecane (L.) luna* (Müller, 1786)

*Lecane (L.) unguata* (Gosse, 1887)

\* *Lecane (M.) bulla* (Gosse, 1851)

\* *Lecane (M.) closterocerca* (Schmarda, 1859)

*Lecane (M.) decipiens* (Murray, 1913)

\* *Lecane (M.) hamata* (Stokes, 1859)

\* *Lecane (M.) quadridentata* (Ehrenberg, 1832)

Family: Synchaetidae Harring & Myers, 1926

\* *Polyarthra vulgaris* Carlin, 1943

Order : Gnesiotrocha De Beauchamp, 1965

Suborder : Flosculariacea Remane, 1933

Family : Testudinellidae Harring & Myers, 1926

*Testudinella patina* (Hermann, 1783)

Family: Filinidae Bartos, 1959

*Filinia longiseta* (Ehrenberg, 1834)

*Filinia opoliensis* (Zacharias, 1898)

Family: Trochosphaeridae Baros, 1959

*Höraella brehmi* Donner, 1949

\* Reported earlier from Sambalpur, Orissa (Sharma, 1977).

### Systematic account

*Anuraeopsis coelata* (De Beauchamp, 1932) (Fig. 1)  
Lorica granulated, with U-shaped sinus at the anterior end. The present specimens are identical with those reported from West Bengal (Sharma, 1979a).

Reported earlier from Baroda (Wulfert, 1966), N.W. India (Sharma, 1976) and West Bengal (Sharma, 1979a).

Measurements: Lorica length 74; maximum width 42.

*Brachionus angularis* Gosse, 1851 (Figs. 2 & 3)  
Lorica stippled, with a pattern of cuticular plates on dorsum; anterior occipital margin with two median spines, flanked by a U-shaped notch.

It is one of the variable species of genus *Brachionus*. Widely distributed in India and has been reported from Punjab & Kashmir (Edmondson & Hutchinson, 1934), Rajasthan (Nayar, 1968), Kerala (Nayar & Nair, 1969), N.W. India (Vasisht & Battish, 1971a and Sharma, 1976), Andhra Pradesh (Dhanapathi, 1974 and Chandra Mohan & Rao, 1976) and West Bengal (Sharma, 1979a).

Measurements: Total length 82-94; maximum width 62-68; anterior width 50-55.

*Brachionus bidentata* Anderson, 1889 (Fig. 4)  
Identical with the specimens from West Bengal (Sharma, 1979a). This species has been reported so far from West Bengal (Anderson, 1889 and Sharma, 1979a), Kashmir (Edmondson & Hutchinson, 1934); N.W. India (Vasisht & Gupta, 1967; Vasisht & Battish, 1971a and Sharma, 1976) and Andhra Pradesh (Dhanapathi, 1974).

Measurements: Total length 160; maximum width 110; anterior width 90.

*Brachionus calyciflorus* Pallas, 1776

This species is extremely variable in its size, length of occipital spines and the presence and length of posterior spines. In the present material, *B. calyciflorus* is represented by the mentioned variety and forms:

Measurements

Type	Max. length	Max. width	Ant. spines middle	Ant. spines lateral	Posterior spines	Postero- lateral spines
<i>V. dorcas</i>	310	210	120	60	—	—
f. <i>anuraeiformis</i>	290	150	56	40	15	30
f. <i>borgerti</i>	300	175	50	30	—	—

*Brachionus caudatus* Borris & Daday, 1894 (Figs. 5 & 6)

This is another variable species of genus *Brachionus*. It is represented by v. *personatus* (Fig. 5) and v. *aculeatus* (Fig. 6) in the material examined.

Measurements

Variety	Total length	Max. width	Anterior width
v. <i>aculeatus</i>	134	85	65
v. <i>personatus</i>	175	92	70

*Brachionus diversicornis* (Daday, 1893) (Fig. 7)

With four occipital spines; the laterals longer than the medians. Two unequal and divergent posterior spines, the right spine usually long.

Reported earlier from N.W. India (Vasisht & Battish, 1971a and Sharma, 1976), Andhra Pradesh (Dhanapathi, 1974) and West Bengal (Sharma, 1979a).

Measurements: Total length 360; maximum width 130; anterior occipital spines 75-80; right posterior spine 80; left posterior spine 40.

*Brachionus forficula* Wierzejski, 1891 (Fig. 8)

Occipital margin with four spines; laterals longer than medians. Posterior spines stout, unequal, bent and with knee-like swellings on inner sides of their bases.

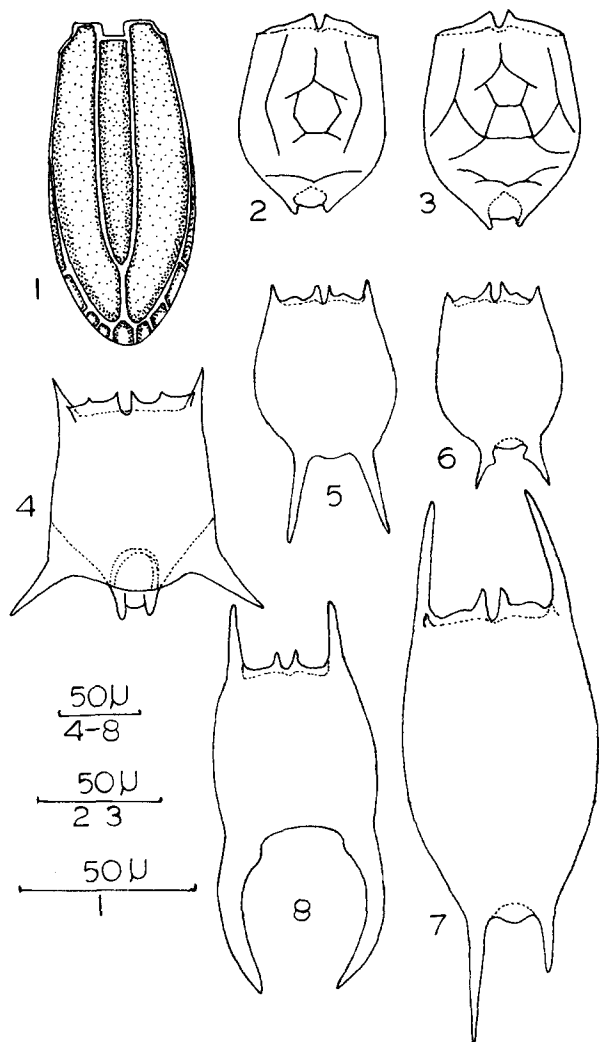
This species has been reported so far from Baroda (Wulfert, 1966), N.W. India (Vasisht & Battish, 1971a), Andhra Pradesh (Dhanapathi, 1974), and West Bengal (Tiwari & Sharma, 1977 and Sharma, 1979a).

Measurements: Total length 275; maximum width 108; anterior width 78; anterolateral spines 40; posterior spines 110.

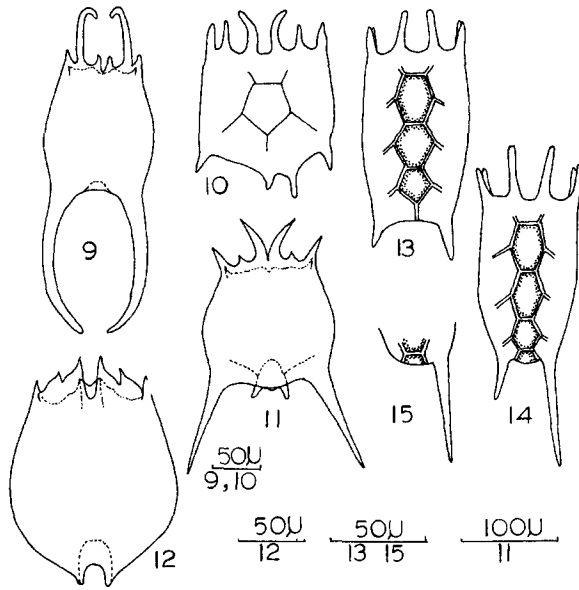
*Brachionus fulcatus* Zacharias, 1898 (Fig. 9)

The specimens examined are less broad than those from West Bengal (Sharma, 1979a).

Widely distributed in India and reported from Nagpur



*Anuraeopsis coelata* (De Beauchamp): Fig. 1, dorsal view; *Brachionus angularis* Gosse: Fig. 2, dorsal view; Fig. 3, dorsal view; *Brachionus bidentata* Anderson: Fig. 4, dorsal view; *Brachionus caudatus* v. *personatus* Ahlstrom: Fig. 5, dorsal view; *Brachionus caudatus* v. *aculeatus* (Hauer): Fig. 6, dorsal view; *Brachionus diversicornis* (Daday): Fig. 7, dorsal view; *Brachionus forficula* Wierzejski: Fig. 8, dorsal view.



*Brachionus fulcatus* Zacharias: Fig. 9, dorsal view; *Brachionus patulus* O. F. Müller: Fig. 10, dorsal view; *Brachionus quadridentatus* Hermann: Fig. 11, dorsal view; *Brachionus rubens* Ehrenberg: Fig. 12, dorsal view; *Keratella procurva* (Thorpe): Fig. 13, dorsal view; *Keratella tropica* (Apstein): Fig. 14, dorsal view (typical form); Fig. 15, posterior end (*f. monostrosa*).

(Arora, 1963), Baroda (Wulfert, 1966), Rajasthan (Nayar, 1968), Kerala (Nayar & Nair, 1969), N.W. India (Vasisht & Battish, 1971a and Sharma, 1976), Andhra Pradesh (Dhanapathi, 1974) and West Bengal (Tiwari & Sharma, 1977 and Sharma, 1979a).

Measurements: Total length 330; maximum width 115; anterior width 80; anterior occipital spines 18-75-20; posterior spines 150.

*Brachionus patulus* (Müller, 1776) (Fig. 10) Identical but smaller than the specimens described by the author (Sharma, 1979a) from West Bengal.

It is also wide spread in India. Earlier reports from this country are from Kashmir & Nilgiri Hills (Edmondson & Hutchinson, 1934), Nagpur (Arora, 1966a), Baroda (Wulfert, 1966).

Measurements: Total length 190; maximum width 138.

*Brachionus quadridentatus* Hermann, 1783 (Fig. 11) It is also a variable species. Anterior and posterior spines are well developed in the examined specimens.

Shows wide distribution in India. Reported earlier from West Bengal (Anderson, 1889; Sewell, 1935; Shar-

ma, 1979a), Nagpur (Arora, 1963), Rajasthan (Nayar, 1968), Kerala (Nayar & Nair, 1969), N.W. India (Vasisht & Battish, 1969 and Sharma, 1976) and Andhra Pradesh (Dhanapathi, 1974).

Measurements: Total length 250; maximum width 140; occipital spines 16-10-40; posterior spines 96.

*Brachionus rubens* Ehrenberg, 1838 (Fig. 12) Occipital margin with six spines; each median and intermediate spine with a narrow anterior part, then rounded outwards and forming a broad base; four inner spines with short strengthening ridges.

Reported till now from West Bengal (Sewell, 1935; Tiwari & Sharma, 1977 and Sharma, 1979a); Rajasthan (Nayar, 1968) and N.W. India (Vasisht & Battish, 1971a and Sharma, 1976).

Measurements: Total length 180; maximum width 130; anterior width 92; occipital spines 14-12-20.

*Keratella procurva* (Thorpe, 1891) (Fig. 13) Dorsum with three median plaques; posteromedian plaque pentagonal and terminates in short median line which extends up to posterior end of lorica. Posterior spines small and subequal.

This species has been recorded from Punjab (Edmondson & Hutchinson, 1934), Rajasthan (Nayar, 1968), Kerala (Nayar & Nair, 1969), N.W. India (Vasisht & Battish, 1971c and Sharma, 1976) and West Bengal (Sharma, 1979a).

Measurements: Lorica length 88; maximum width 68; left posterior spine 18; right posterior spine 20.

*Keratella tropica* (Apstein, 1907) (Fig. 14 & 15) Typical specimens with two unequal posterior spines were found in the present samples. A few specimens with only one posterior spine (= *f. monostrosa*) were also encountered.

This rotifer is also wide spread in India and has been recorded from Kashmir, Punjab & Nilgiri Hills (Edmondson & Hutchinson, 1934), West Bengal (Sewell, 1935; Tiwari & Sharma, 1977 and Sharma, 1979a), Nagpur (Arora, 1966a, 66b), Baroda (Wulfert, 1966), N.W. India (Vasisht & Gupta, 1967; Vasisht & Battish, 1971c and Sharma, 1976), Kerala (Nayar & Nair, 1969) and Andhra Pradesh (Dhanapathi, 1974).

Measurements: Lorica length 120; maximum width 75; left posterior spine 32; right posterior spine 85.

*Platylas quadricornis* (Ehrenberg, 1832)

Identical with the description given by Ahlstrom (1940).

Reported so far from West Bengal (Anderson, 1889; Tiwari & Sharma, 1977 and Sharma, 1979a), Kashmir & Ladak (Edmondson & Hutchinson, 1934), Kerala (Nayar & Nair, 1969) and N.W. India (Vasisht & Battish, 1971c and Sharma, 1976).

Measurements: Total length 290; maximum width 160; anterior spines 45; posterior spines 36.

*Euchlanis dilatata* Ehrenberg, 1832

These specimens agree with those described from Lower Bengal (Sharma, 1979a).

*E. dilatata* has been reported earlier from Punjab, Kashmir and Ladak (Edmondson & Hutchinson, 1934), West Bengal (Sewell, 1935 and Sharma, 1979a), Baroda (Wulfert, 1966) and N.W. India (Vasisht & Battish, 1971c; Das & Akhtar, 1976 and Sharma, 1976).

Measurements: Length of dorsal plate 178; length of ventral plate 166; width dorsal plate 135; width ventral plate 115; toes 60.

*Mytilina ventralis* (Ehrenberg, 1832)

Anterior end of lorica heavily stippled. Posterior end narrow. With two well developed toes.

Widely distributed in India and recorded from West Bengal (Anderson, 1889 and Sharma, 1979a), Punjab, Kashmir & Ladak (Edmondson & Hutchinson, 1934), Baroda (Wulfert, 1966), Rajasthan (Nayar, 1968), Kerala (Nayar & Nair, 1969 and Nair & Nayar, 1971), N.W. India (Vasisht & Battish, 1971c) and Andhra Pradesh (Dhanapathi, 1974).

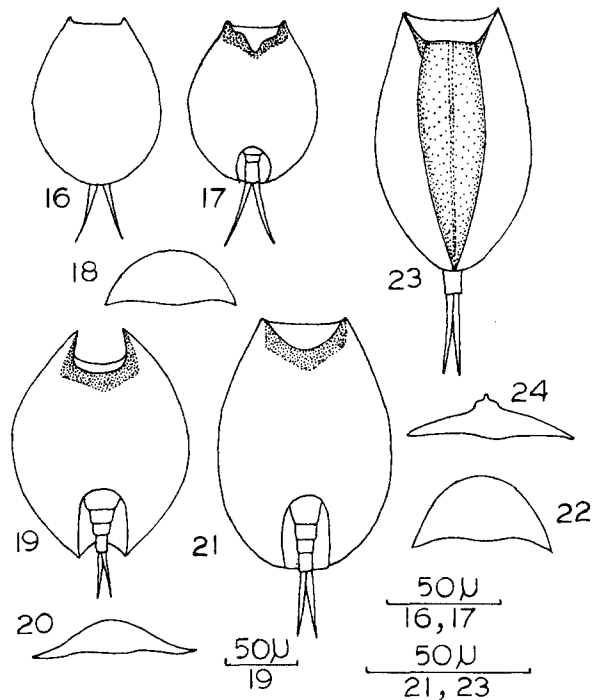
Measurements: Total length 210; maximum width 95; toes 75.

*Trichotria tetractis* (Ehrenberg, 1830)

These forms are identical with those from Sri Lanka (Chengalath *et al.*, 1973).

This species is also widely distributed in India. Till now it has been reported from Punjab, Kashmir & Nilgiri Hills (Edmondson & Hutchinson, 1934), Nagpur (Arora, 1966a), Baroda (Wulfert, 1966), Kerala (Nayar & Nair, 1969 and Nair & Nayar, 1971), Andhra Pradesh (Dhanapathi, 1974), N.W. India (Das & Akhtar, 1976 and Sharma, 1976) and West Bengal (Sharma, 1979b).

Measurements: Lorica length 115; length of foot 70; toes 90.



*Lepadella longiseta* Myers: Fig. 16, dorsal view; Fig. 17, ventral view; Fig. 18, cross-section; *Lepadella ovalis* (Müller): Fig. 19, ventral view; Fig. 20, cross-section; *Lepadella patella* (Müller): Fig. 21, ventral view; Fig. 22, cross-section; *Lepadella rhomboides* (Gosse): Fig. 23, dorsal view; Fig. 24, cross-section.

*Lepadella longiseta* Myers, 1934 (Figs. 16-18)

Lorica almost oval in outline; dorsal plate convex. Dorsal sinus very shallow, ventral sinus v-shaped and with a prominent stippled collar. Foot groove short. Terminal foot joint long. Toes long, slender and tapering to acute points.

This species represents a new record from the Indian subcontinent.

Measurements: Length of lorica 72; width of lorica 60; anterior width 25; length of foot groove 18; length of toes 30.

*Lepadella ovalis* (Müller, 1786) (Figs. 19 & 20)

Lorica broadly ovate; dorsal plate slightly convex, ventral plate almost flat. Dorsal sinus U-shaped, ventral sinus large and deep. Foot groove almost parallel sided.

Reported earlier from West Bengal (Anderson, 1889 and Sharma, 1978b), Kashmir & Ladak (Edmondson & Hutchinson, 1934) and N.W. India (Vasisht & Battish, 1971b and Sharma, 1976).

Measurements: Length of lorica 153; width of lorica

122; anterior width 30; length of foot groove 30; toes 30-32.

*Lepadella patella* (Muller, 1773) (Figs. 21 & 22)

It can be distinguished from *L. ovalis* by its smaller size, strongly arched and convex dorsal plate.

*L. patella* has been previously reported from Punjab, Kashmir & Ladak (Edmondson & Hutchinson, 1934), Baroda (Wulfert, 1966), Rajasthan (Nayar, 1968), N.W. India (Vasisth & Battish, 1971b and Sharma, 1976) and West Bengal (Sharma, 1978b).

Measurements: Length of lorica 75; width of lorica 54; anterior width 25; length of foot 28; length of toes 20.

*Lepadella rhomboides* (Gosse, 1884) (Figs. 23 & 24)

The forms from Orissa are identical with those described from West Bengal (Sharma, 1978b).

Earlier records from India are from Punjab & Nilgiri Hills (Edmondson & Hutchinson, 1934), Baroda (Wulfert, 1966) and West Bengal (Sharma, 1978b).

Measurements: Length of lorica 78; width of lorica 27; anterior width 28; length of foot groove 23; toes 24.

*Lecane (L.) crepida* Murray, 1913 (Figs. 25 & 26)

The present specimens resemble those described from the United States (Harring & Myers, 1926).

Reported earlier from Madras (Pasha, 1961), Baroda (Wulfert, 1966) and West Bengal (Sharma, 1978a).

Measurements: Length dorsal plate 73; length ventral plate 82; width dorsal plate 45; width ventral plate 52; toes 30; claw 8.

*Lecane (L.) leontina* (Turner, 1892) (Fig. 27)

Identical with the forms from the United States (Harring & Myers, 1926).

*L. leontina* has been reported so far from Nagpur (Aroara, 1965), Andhra Pradesh (Dhanapathi, 1976) and West Bengal (Sharma, 1978a).

Measurements: Length dorsal plate 180; length ventral plate 205; width dorsal plate 140; width ventral plate 140; claws 15.

*Lecane (L.) ludwigii* (Eckstein, 1883) (Figs. 28 & 29)

Present specimens are smaller than those from West Bengal (Sharma, 1978a).

Reported earlier only from Andhra Pradesh (Dhanapathi, 1976) and West Bengal (Sharma, 1978a).

Measurements: Length dorsal plate 100; length ventral plate 130; width dorsal plate 71; width ventral plate 62; toes 40.

*Lecane (L.) luna* (Muller, 1786) (Figs. 30 & 31)

Agrees with the description given by Harring & Myers (1926).

This rotifer has been recorded earlier from West Bengal (Anderson, 1889 and Sharma, 1978a), Punjab Kashmir & Ladak (Edmondson & Hutchinson, 1934), Baroda (Wulfert, 1966) and Rajasthan (Nayar, 1968).

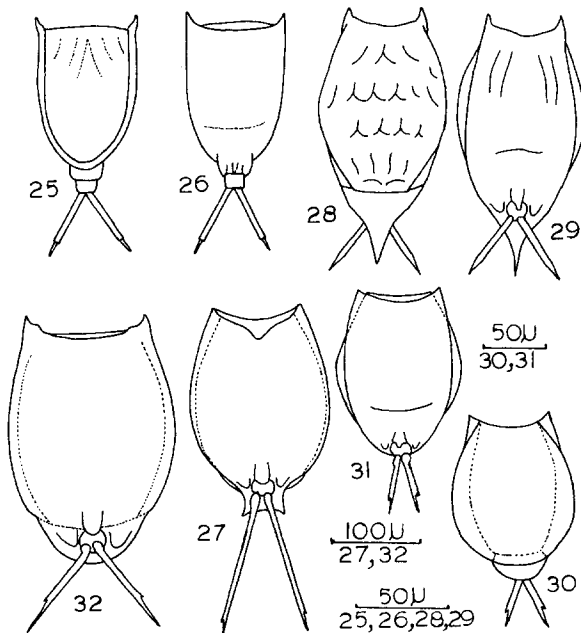
Measurements: Length dorsal plate 118; length ventral plate 125; width dorsal plate 108; width ventral plate 90; toes 32; claws 8.

*Lecane (L.) ungulata* (Gosse, 1887) (Fig. 32)

Antero-lateral projections of lorica prominent in the specimens examined.

Reported earlier from Baroda (Wulfert, 1966), Andhra Pradesh (Dhanapathi, 1976) and West Bengal (Sharma, 1978a).

Measurements: Length dorsal plate 215; length ventral plate 264; width dorsal plate 160; width ventral plate 180; toes 80; claws 40.



*Lecane (L.) crepida* Murray: Fig. 25, dorsal view; Fig. 26, ventral view; *Lecane (L.) leontina* (Turner): Fig. 27, ventral view; *Lecane (L.) ludwigii* (Eckstein): Fig. 28, dorsal view; Fig. 29, ventral view; *Lecane (L.) luna* (Müller): Fig. 30, dorsal view; Fig. 31, ventral view; *Lecane (L.) ungulata* (Gosse): Fig. 32, ventral view.

*Lecane (M.) bulla* (Gosse, 1851) (Figs. 33 & 34)

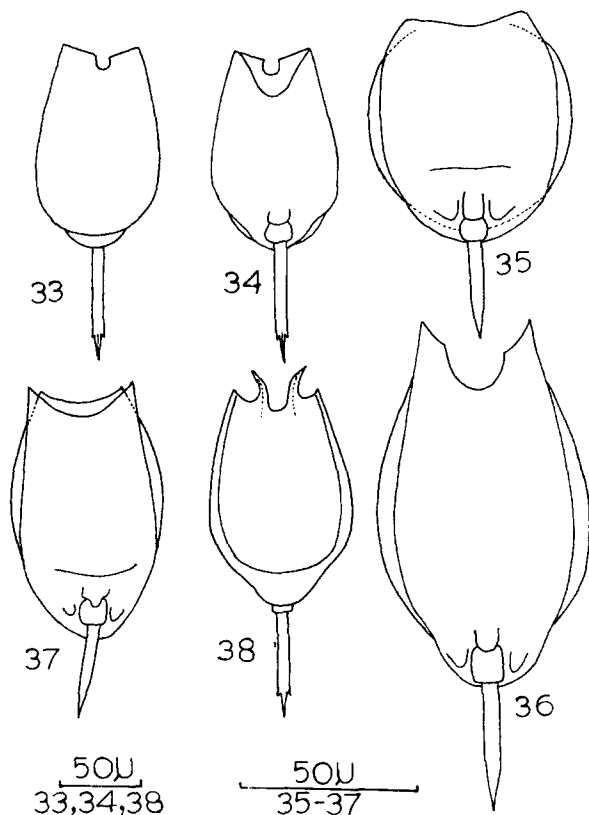
Identical with the specimens from Canada (Chengalath & Mulamottil, 1974) except that the present forms are less broad.

Widely distributed in India and reported from West Bengal (Anderson, 1889 and Sharma, 1978a), Punjab, Kashmir & Ladak (Edmondson & Hutchinson, 1934), Madras (Pasha, 1961), Nagpur (Arora, 1965), Baroda (Wulfert, 1966), Rajasthan (Nayar, 1968), N.W. India (Vasisht & Gupta, 1967 and Vasisht & Battish, 1971d) and Andhra Pradesh (Dhanapathi, 1976).

Measurements: Length dorsal plate 118; length ventral plate 122; width dorsal plate 80; width ventral plate 80; toes 57; claw 18.

*Lecane (M.) closterocerca* (Schmarda, 1859) (Fig. 35)

Forms small and identical with the description of Harring & Myers (1926).



*Lecane (M.) bulla* (Gosse): Fig. 33, dorsal view; Fig. 34, ventral view; *Lecane (M.) closterocerca* (Schmarda): Fig. 35, ventral view; *Lecane (M.) decipiens* (Murray): Fig. 36, ventral view; *Lecane (M.) hamata* (Stokes): Fig. 37, ventral view; *Lecane (M.) quadridentata* (Ehrenberg): Fig. 38, dorsal view.

Reported earlier from Punjab, Ladak and Nilgiri Hills (Edmondson & Hutchinson, 1934), Baroda (Wulfert, 1966), Rajasthan (Nayar, 1968), N.W. India (Vasisht & Battish, 1971d) and West Bengal (Sharma, 1978a).

Measurements: Length dorsal plate 58; length ventral plate 64; width dorsal plate 56; width ventral plate 50; toe 25.

*Lecane (M.) decipiens* (Murray, 1913) (Fig. 36)

The specimens examined are slightly larger than those reported from West Bengal (Sharma, 1978a).

In addition to W. Bengal (Sharma, loc. cit.), this species has only been reported from N.W. India (Vasisht & Gupta, 1967 and Vasisht & Battish, 1971d).

Measurements: Length dorsal plate 94; length ventral plate 100; width dorsal plate 60; width ventral plate 52; toe 38.

*Lecane (M.) hamata* (Stokes, 1859) (Fig. 37)

Identical with the specimens from West Bengal (Sharma, 1978a).

Also reported from Punjab Kashmir & Nilgiri Hills (Edmondson & Hutchinson, 1934), Madras (Pasha, 1961), Baroda (Wulfert, 1966), Rajasthan (Nayar, 1968) and N.W. India (Vasisht & Battish, 1971d).

Measurements: Length dorsal plate 65; length ventral plate 72; width dorsal plate 45; width ventral plate 40; toe 24.

*Lecane (M.) quadridentata* (Ehrenberg, 1832) (Fig. 38)

Present forms agree with the description given by Harring & Myers (1926).

This species has been reported earlier from Punjab, Kashmir & Nilgiri Hills (Edmondson & Hutchinson, 1934), Madras (Pasha, 1961), Baroda (Wulfert, 1966), Rajasthan (Nayar, 1968), N.W. India (Vasisht & Battish, 1971d) and West Bengal (Sharma, 1978a).

Measurements: Length dorsal plate 112; length ventral plate 128; width dorsal plate 75; width ventral plate 90; toe 50; claw 18.

*Polyarthra vulgaris* Carlin, 1943

Body with six appendages; appendages long, spear-shaped and with lateral teeth.

Only reported from West Bengal (Sharma, 1979b).

Measurements: Body length 192; maximum width 68.

*Testudinella patina* (Hermann, 1783)

Body transparent, almost rounded and dorso-ventrally

flattened. Foot opening circular, almost  $\frac{1}{3}$  from the posterior end of lorica.

Reported so far from West Bengal (Anderson, 1889; Tiwari & Sharma, 1977 and Sharma, 1979b), Punjab & Kashmir (Edmondson & Hutchinson, 1934), Baroda (Wulfert, 1966), Andhra Pradesh (Naidu, 1967) and N.W. India (Sharma, 1976).

Measurements: Lorica length 172; maximum width 169.

#### *Filinia longiseta* (Ehrenberg, 1834)

Body fairly long and cylindrical. Posterior seta inserted ventrally.

It has been recorded previously from Nagpur (Arora, 1962), Baroda (Wulfert, 1966), Chandigarh (Vasisht & Gupta, 1967), Rajasthan (Nayar, 1968) and West Bengal (Sharma, 1978b).

Measurements: Body length 180-195.

#### *Filinia opoliensis* (Zacharias, 1898)

With two long broad-based anterior setae; posterior seta with an additional small seta (= spine).

Earlier reports are from Nagpur (Arora, 1962), Baroda (Wulfert, 1966), Chandigarh (Vasisht & Gupta, 1967), Rajasthan (Nayar, 1968) and West Bengal (Sharma, 1979b).

Measurements: Body length 150-166.

#### *Höraella brehmi* Donner, 1949

Body transparent, almost oval; with a short neck bearing circular corona. Foot absent.

*H. brehmi* was described by Donner (1949) from Banikpore (Bihar) and it has also been reported from West Bengal (Sharma, 1979b).

Measurements: Total length 280; maximum width 200.

#### Acknowledgements

Thanks are due to Govt. of India (Department of Science and Technology) for the award of a Senior Research Fellowship and to the Director, Zoological Survey of India, Calcutta for providing me the necessary facilities for this work. Thanks are also due to Dr. K. K. Tiwari, Joint-Director, Zoological Survey of India, Calcutta for his valuable suggestions.

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