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ROTATORIAN FAUNA OF KASU BRAHMANANDA REDDY NATIONAL PARK, HYDERABAD

S.V.A. CHANDRASEKHAR AND ARSID RAJESH

*Freshwater Biological Station, Zoological Survey of India,
1-1-300/B, Ashoknagar, Hyderabad-500 020*

INTRODUCTION

Rotifers (also called Rotatoria) are sessile, microscopic (40 microns to 250 microns in size), pseudocoelomate, free swimming, cosmopolitan organisms. 95% of the rotatorians occur in freshwater and the rest are found in sea. Most of the species of this group have got world wide distribution. In India 330 species of Rotifera have been reported out of which 91 species are from Andhra Pradesh (Dhanapathi, 2000). Rotifer studies in India were started by Anderson (1889) and later carried out by Dhanapathi (1974, 1975, 1976), Edmondson and Hutchinson (1934), Nasar (1968), Patil (1978, 1988, 2001), Sharma (1978, 1979) *etc.* This paper has gained significance due to its maiden effort to study the Rotifer fauna of ponds of a national park in India. The study has yielded 8 species (*Brachionus calyciflorus* with 3 varieties) of Rotifera belonging to 5 genera spread over 4 families in two orders.

STUDY AREA

Kasu Brahmananda Reddy National park with an area of 142.5 hectares is situated in the hill rocks of prestigious Jubilee hills, in the heart of the city between Cyberabad and Hyderabad (17°35' N and 78°25' E). It is named after the demise of former Chief Minister of Andhra Pradesh, Shri Kasu Brahmananda Reddy and this park had been declared as National Park in the year, 1994. It houses 3 small ponds with an area of 0.5 to 1 hectare, one of which is comparatively big (one hectare) and perennial one.

MATERIAL AND METHODS

During the course of fortnightly surveys to the park during 2002-2003, in connection with the Inventorisation of Faunal Resources of National Parks assigned to Freshwater Biological Station

(FBS), Zoological Survey of India (ZSI), Hyderabad, the authors have collected qualitative plankton samples, from undisturbed subsurface regions of all the ponds, with bolting silk conical net (No. 25) and preserved with 5% formaldehyde solution. Rotatorian fauna was identified with the aid of standard literature viz., Battish (1992), Dhanapathi (2000), Sharma (1978, 1979, 1980). The results of the study is given here and measurements of the specimens are given in microns.

SYSTEMATIC ACCOUNT

Phylum ROTIFERA

Class MONOGONONTA

Order PLOIMIDA

Family BRACHIONIDAE

Brachionus calyciflorus f. borgerti (Apstein, 1907)

This species can be identified from other *Brachionus* genera with its Median occipital spines slightly longer than laterals and posterior spines reduced or absent.

Measurements : Lorica length : 230, width 196, median occipital spines 54, lateral spine 50.

Status : Common.

Distribution : India, China and Japan.

Source : Dhanapathi (1977).

Brachionus calyciflorus var. dorcas Gosse, 1851.

This species had earlier been reported by Dhanapathi (1974) from Hussainsagar, Hyderabad and can be identified by median occipital spines much longer than laterals and posterior spines absent.

Measurements : Lorica length : 230, maximum width 175, anterior median spines 98, anterior lateral spine 52.

Status : Very Common.

Distribution : Europe, India, China and Japan.

Source : Dhanapathi (1974).

Brachionus calyciflorus var. hymani Dhanapathi, 1974

This species had earlier been reported by Dhanapathi (1974) from Vizianagaram and Rao and Chandra Mohan (1983) from Visakhapatnam of Andhra Pradesh and can be identified by the median spines slightly longer than laterals and posterior spines flanking the foot opening.

Measurements : Lorica length 225, maximum width 198, anterior median spine 50, anterior lateral spine 42, posterior lateral spine 25.

Status : Common.

Distribution : India.

Source : Dhanapathi (1974).

***Brachionus diversicornis* Daday, 1883**

This species can be identified by lorica with four occipital spines of which the laterals longer than medians; right posterior spine longer than the left.

Measurements : Lorica length 178, maximum width 120, anterior lateral spine 38, right posterior spine 62, left posterior spine 10.

Status : Uncommon.

Distribution : Cosmopolitan.

Source : Nasar (1968).

***Brachionus durgae* Dhanapathi, 1974**

This species can be identified by lorica with anterior margin with six saw like spines of equal length and 'V shaped sinus; ventral margin with projections having truncated edges.

Measurements : Lorica length : 235, maximum width 218, occipital spines 12.

Status : Common.

Distribution : India, Japan, Africa, S. America.

Source : Dhanapathi, 1974.

***Brachionus falcatus* Zacharias, 1898**

This species can be identified with six anterior dorsal unequal spines, the medians long and curved ventrally at the end; posterior spines very long and bent inwards.

Measurements : Lorica length : 110, maximum width 100, anterior intermediate spine 68, posterior spines 75.

Status : Very Common.

Distribution : Cosmopolitan.

Source : Brehm (1950).

Keratella tropica (Apstein, 1907)

This species can be identified from other *Keratella* species by the presence of right posterior spine.

Measurements : Lorica length : 135, maximum width 51, Posterior right spine 68, posterior left spine 13.

Status : Very Common.

Distribution : Asia, Africa, Australia, North and South America.

Source : Edmondson & Hutchinson (1934).

Family MYTILINIDAE

Mytilina ventralis Ehrenberg, 1832

Body cylindrical and laterally compressed; anterior end of lorica strippled and with curved spines; posterior ventral spines longer than the posterior dorsal spine.

Measurements : Lorica length : 195, posterior dorsal spine 40, posterior ventral spine 53.

Status : Uncommon.

Distribution : Cosmopolitan.

Source : Anderson (1889).

Family LECANIDAE

Lecane (Monostyla) bulla (Gosse, 1851)

Lorica elongate and ovate, anterior dorsal margin with 'V' shaped sinus and ventral margin with deep rounded sinus; toe long, slightly enlarged in the middle and ending in acute claw.

Measurements : Lorica length : 108, maximum width 85, toe 48, claw 5.

Status : Uncommon.

Distribution : Cosmopolitan.

Source : Anderson (1889).

Order GNESIOTROCHA

Family TESTUDINELLIDAE

Testudinella patina (Hermann, 1783)

This species can be identified by stripped lorica and anterior dorsal margin in bow shape; foot opening circular and at 1/3 of distance from posterior end.

Measurements : Lorica length : 165, Maximum width 163.

Status : Common.

Distribution : Cosmopolitan.

Source : Anderson (1889).

SUMMARY

A study had been undertaken on the Rotifer fauna from the plankton samples collected from the water ponds of Kasu Brahmananda Reddy National Park, Hyderabad. The results shows the presence of 8 species (*Brachionus calyciflorus* with 3 varieties) of Rotifera belonging to 5 genera spread over 4 families in two orders.

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