



REVIEW ARTICLE

SOME DIATOMS OF JURALA RESERVOIR, MAHABUBNAGAR DISTRICT, TELANGANA

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ABSTRACT

The water samples were collected from Jurala Dam situated on Krishna river at. The present paper deals with the taxonomic enumeration of 10 taxa belonging to 3 genera namely –Nitzschia, Amphora and Cymbella which were investigated from Jurala Reservoir in Mahabubnagar district Telangana.

Key words:

Diatoms, Jurala Dam, Telangana.

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INTRODUCTION

In Mahabubnagar District of Telangana the work of diatoms is known through Barhate and Tarar (1981); Sarode and Kamat (1984); Bhoge and Raghathan (1986, 2003, 2005); Rathan and Jaiswal (1995); Jawale and Kumawat (2000, 2001); Narkhede and Raghathan (2003). The present paper deals with the taxonomic enumeration of 10 taxa of diatoms belonging to 3 genera, 9 species, 5 varieties and 1 forma.

MATERIALS AND METHODS

Water samples were collected fortnightly in the morning between 8.00 to 10.00 A.M monthly through the year from March 2013 to February for phytoplankton analysis water samples were collected by plankton net. 20 litres of surface water was collected (by standing in the dam-back water where the bed was 3' to 4' deep) by Deeping the mouth of jug about an inch and was filtered through the plankton net. Concentrated water with plankton (one litre) was collected in 1 liter wide mouth bottle. For diatoms study 20 ml. Known quantity of about plankton samples were preserved in 4% formalin with few drops of iodine. The permanent slides of diatoms are prepared by acid treatment method preserved in the Botany Department Osmania university College for women, Hyderabad Identification of taxa is based on the monographs by Hustedt (1930); Sarode and Kamat (1984) and

research publication of Venkataraman (1939); Subramanian (1946); Gonzolves and Gandhi (1953 and Gandhi (1960-64).

Systemic enumeration

Table 1. List of Species

1. Amphora venata (kuetz) Zellen.
2. Amphora ovalis Kuetz. V. Pediculatus Kuetz.
3. Cymbella Gracilis (Rabh) Cleve.
4. Cymbella Gracilis (Rabh) Cleve v. aurangabadensis Sarode and Kamat.
5. Cymbella pusilla Grun.
6. Cymbella affinis Kuetz.
7. Cymbella tumidula Grun.
8. Cymbella negpurensis Sarode and Kamat.
9. Cymbella ventricosa Kutez.
10. Nitzschia denticulate Grun. V.curta Grun.

Striae radial, 9-15 in 10u, convergent at the ends.

Observed length 60u; breadth 8u, f.2. (Colle.No.23)

Sarode and Kamat 1984, p.145, pl.17, f.381.

Valves 32.5-37u long, 7.5-8u broad, sublinear with feeble convex margins and slightly constricted, produced truncate rounded ends, raphe thin, straight, axial area linear, central

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area wide, rhomboid, reacting the margins, striae radial, 12-23 in 10u.

Observed length 36u; breadth 7.5u, f.6. (Colle.No.17)

1. *Amphora venata* (Kuetz) Zellen.

Husetdt 1930, p.345, f.631; Sarode and Kamat 1984, p.163, pl.19, f.437. Frustules elliptic, broad.

Valves 12-60u long, 7-18 broad, convex at dorsal side, concave at ventral side, ends bent, rounded, raphe thin, striae radial throughout, ventral margin very strongly punctuate, 20-26 in 10u.

Observed length 18-30u; breadth 7.5u; f.7. (Colle.No.13).

2. *Amphora Ovalis* Kuetz. V. *Pediculatus* Kuetz. Husetdt 1930, p.342, f.629; Sarode and Kamat 1984, P.163, pl.119, f.426.

Frustules 4-45u long, 4-20u broad, broadly elliptic with truncate rounded ends in girdle view.

Valves lunate, dorsally convex, ventrally slightly concave, raphe thin, arcuate, axial area narrow, central area very large, reaching dorsal and ventral margin, striae radial, punctuate, 10-13, in 10u; convergent at the ends on the ventral side.

Observed length 16-25u; breadth 6u; f.8. (Colle.No.27)

3. *Cymbella Gracilis* (Rabh) Cleve.

Sarode and Kamat 1984, P.170, pl.20, f.451; Husetdt 1930, P.359, f.663.

Valves 25-33u long, 4.5-6u broad, asymmetrical, semilanceolate with dorsiventrally uniformly convex, ventral margin straight, ends slightly constricted, raphe thin, straight, axial area very small, striae punctuate, radial, slightly convergent at the ventral side, striae 10-12 in 10-u.

Observed length 30u; breadth 6u, f.9. (Colle.No.33)

4. *Cymbella gracilis* (Rabh) Cleve V. *aurangabadensis* Sarode and Kamat-Sarode and Kamat 1984, P.170, pl.20, f.452.

Valves 34.4-52u long. 6.7-8u broad, dorsal margin convex, ventral margin straight, with strong inflation in the middle, ends produced and rounded, raphe thin and straight radial, slightly convergent at the ends, 12-14 in 10u.

Observed length 45u; breadth 7u, f.10. (Colle.No.9)

5. *Cymbella pusilla* Grun.

Husetdt 1930, P.354, f.646; Sarode and Kamat 1984, P.175, pl.20, f.464.

Valves 20-40u long, 4-7.5u broad, asymmetrical, dorsal margin smoothly convex ventral margin straight, slightly convex, ends constricted, somewhat acutely rounded, raphe thin, straight, axial area narrow, linear, central area dilated and elliptical in longitudinal axis, striae lineate, radial, 15 to 18 in 10u.

Observed length 20-25u; breadth 5u, f.11 (Colle.No.41).

6. *Cymbella affinis* Kuetz.

Husetdt 1930, P.362, f.671; Sarode and Kamat 1984, P.166, pl.19, f.440.

Valves 20-70u long, 7-16 broad, asymmetrical dorsal side strongly convex, ventral side slightly convex, ends constricted, subcapitate raphe closer towards the ends, 24-30 in 10u.

Observed length 15-43u; breadth 8 u, f.12. (Colle.No.43)

7. *Cymbella tumidula* Grun.

Husetdt 1930, P.361, f.669; Sarode and Kamat 1984, P.177, pl.21, f.470.

Valves 25-35u long, 6-9u broad, asymmetrical, lanceolate, dorsally strong convex margin, ventrally slightly convex, ends constricted, producte and rounded raphe thick, excentric, axial area very narrow, ventral side with two distinct punctae, striae radial, punctuate, 13-18 in 10u.

Observed length 24-38u; breadth 6u. f.13. (Colle.No.37).

8. *Cymbella nagpurensis* Sarode and Kamat. Sarode and Kamat 1984, P.173, pl.21, f.481.

Valves 22-33u long, 8-9u broad, asymmetrical, dorsal margin strongly convex, ventrally slightly convex with a median notch, ends rostrate round, raphe excentric, slightly curved, axial area very narrow, central area round, striae radial, 12-14 in 10u.

Observed length 22u; breadth 8u; f.14. (Colle.No.3).

9. *Cymbella ventriwsa* Kuetz.

Husetdt 1930, P.359 f.661; Sarode and Kamat 1984, P.178, pl.21, f.473.

Valves 10-40u long, 5-12u broad, strongly convex on the dorsal side, straight or slightly convex on the ventral side with acutely rounded ends, raphe thin and straight, axial area narrow, central area small, striae radial, coarse, lineate 12-18 in 10u.

Observed length 24-39u; breadth 5.5u, f.15. (Colle.No.39).

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- Valves 14.6-20u long, 4-5.3u broad, lanceolate with some what acutely rounded ends, keel excentric, keel punctuate 7-8 in 10u, large, prolonged up to ½ or more than breadth of the valve, strae punctuate, 14-16 in 10u. Observed length 15-20u, breadth 3u, f.u. (Colle.No.12)
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