BULL. BOT. SURV. INDIA
Vol. 35, Nos. 1-4 : pp. 1-5, 1993

STUDIES ON EUGLENOIDS OF RANCHI, INDIA-II. ADDITIONS TO BIHAR PHYCOFLORA

R. K. GUPTA AND O. N. SRIVASTAVA*

Botanical Survey of India, Shillong

ABSTRACT

The paper deals with 18 taxa of *Euglena* Ehren., collected from a wide variety of fresh water habitats in and around Ranchi. All the taxa described here are new to Bihar phycoflora. Key words: Taxonomy, *Euglena*.

INTRODUCTION

The genus *Euglena* belonging to the family Euglenaceae (Fritsch, 1935) is represented in India by *ca* 260 species belonging to 16 genera (Waghodekar and Patel, 1988). The studies on this group have received considerable attention in our country, but only 3 species were reported earlier from Bihar. Gupta and Srivastava (in press) in an earlier communication reported 9 species of this genus for the first time from India. The present paper deals with 18 taxa of *Euglena* that are new to Bihar phycoflora.

ENUMERATION

1. **Euglena charkowiensis** Swir. Huber-pestalozzi 37, f. 61. 1955.

Cells almost cylindric with pointed apex ; pellicle thin ; paramylon 2, ovate-shaped ; body 6.7 × 3.3 µm.

Habitat : Collected from a tank behind G.L.A. Shopping Complex, Ranchi.

Phenology : August.

Distribution : Kolhapur (Kamat, 1963); Maharashtra (Ashtekar, 1982).

2. **E. elongata** Schewiakoff, Huber-pestalozzi 40, f. 12.1955.

Cells fusiform ; chloroplast more or less parallel to the long axis ; paramylon 4, rod shaped ; body 70.7 × 10.1 µm.

Habitat : Collected from a Khaujharia pond (No. 2), Ranchi.

Phenology : January - August.

Distribution : Ludhiana (Pandhal and Grover, 1976).

3. **E. fundoversata** Johnson, Huber-pestalozzi 55, f. 28A. 1955.

Cells metaboly ; paramylon rod-shaped towards the pellicle ; flagella short ; body 87- 90 × 21- 25 µm.

Habitat : Collected from a tank behind G.L.A. Shopping Complex, Ranchi.

Phenology : August.

Distribution : South India (Naidu, 1962).

4. **E. geniculata** Duj. Huber-pestalozzi 50, f. 23. 1955.

Cells fusiform ; 4 paramylon ; chromatophores rounded and tuberculate, found all over the body; long flagella ; body 37- 43.8 × 13.4 - 20.2 µm.

Habitat : Collected from a Khaujharia pond (No. 1), Ranchi.

Phenology : March and November - December.

Distribution : South India (Naidu, 1962); Maharashtra (Kamat, 1964).

* Department of Botany, Ranchi University, Ranchi, Bihar.
Date of receipt : 16 07 92 Date of acceptance : 01.02.94.

5. Euglena gracilis Klebs, Huber-pestalozzi 71, f. 48. 1955.

Cells fusiform to ovoid; paramylon 2; chromatophores disc shaped, found throughout the body; body 60.6 - 67.4 × 20.2 µm.

Habitat : Collected from a Ranchi Central Jail pond.

Phenology : February - August.

Distribution : Maharashtra (Kamat, 1964); Mount Abu, (Kamat, 1967).

6. E. hemichromata Skuja, Huber- pestalozzi 56, f. 29. 1955.

Cells fusiform, with pointed apex; chromatophores in posterior part of the body; body 84.2 - 91 × 13.4 - 16 µm.

Habitat : Collected from a R.M.C.H. pond, Ranchi.

Phenology : January - August.

Distribution : South India (Naidu, 1962).

7. E. limnophila Lemm. Huber-pestalozzi 82, f. 59. 1955.

Cells fusiform ; tail needle like ; flagella short ; chromatophores disc-shaped ; paramylon 2, elongate ; body 40.4 × 10.1 - 26.9 µm.

Habitat : Collected from a permanent pond, near Ram Krishna Mission Ashram, Ranchi.

Phenology : December - April.

Distribution : Hyderabad (Suxena, 1955); Maharashtra (Kamat, 1964).

8. E. oxyuris Schmarda, Huber-pestalozzi 65, f. 42. 1955.

Cells elongate ; tail pointed, colourless; chromatophores disc-shaped ; pellicle spirally striated ; paramylon 2, elongated ; body 138.3 × 13.4 µm.

Habitat : Collected from a small puddle near Sarpantine Lake, Kanke, Ranchi.

Phenology : August.

Distribution : Kashmir (Bhatia, 1930); Hyderabad (Suxena, 1955) ; Kolhapur (Kamat, 1963).

9. E. oxyuris var. **charkowiensis** Swirenko Huber-pestalozzi 65, f. 42a. 1955.

Cells fusiform ; chromatophores 2, large, spirally arranged ; paramylon 2, one on upper disc the other on the lower side ; pyrenoids throughout the body ; body 170 - 180 × 24 - 25 µm.

Habitat : Collected from a small puddle near Line Tank pond.

Distribution : South India (Naidu, 1962).

10. E. oxyuris var. **minor** Prescott, Huber-pestalozzi 65, f. 42b. 1955.

Cells metabolic ; tail-piece short ; periplast striated ; chloroplast disc-like ; body 69 × 16 µm.

Habitat : Collected from Ram Krishna Mission Ashram pond, Ranchi.

Phenology : September - March.

Distribution : Shillong (Alfred, 1978).

11. E. pisciformis Klebs, Huber-pestalozzi 41, f. 15. 1955.

Cells fusiform ; flagella short ; chromatophores with double pyrenoids ; body 43.8 70.7 × 10.1 16 µm.

Habitat : Collected from a puddle near Karamtoli pond, Ranchi.

Phenology : January, October - December.

Distribution : Maharashtra (Carter, 1926).

12. E. polymorpha Dangeard, Huber-pestalozzi 85, f. 62. 1955.

Cells pyriform to sub-cylindric ; striations spiral; chromatophores many, disc-like ; body 84.2 × 23.5 µm.

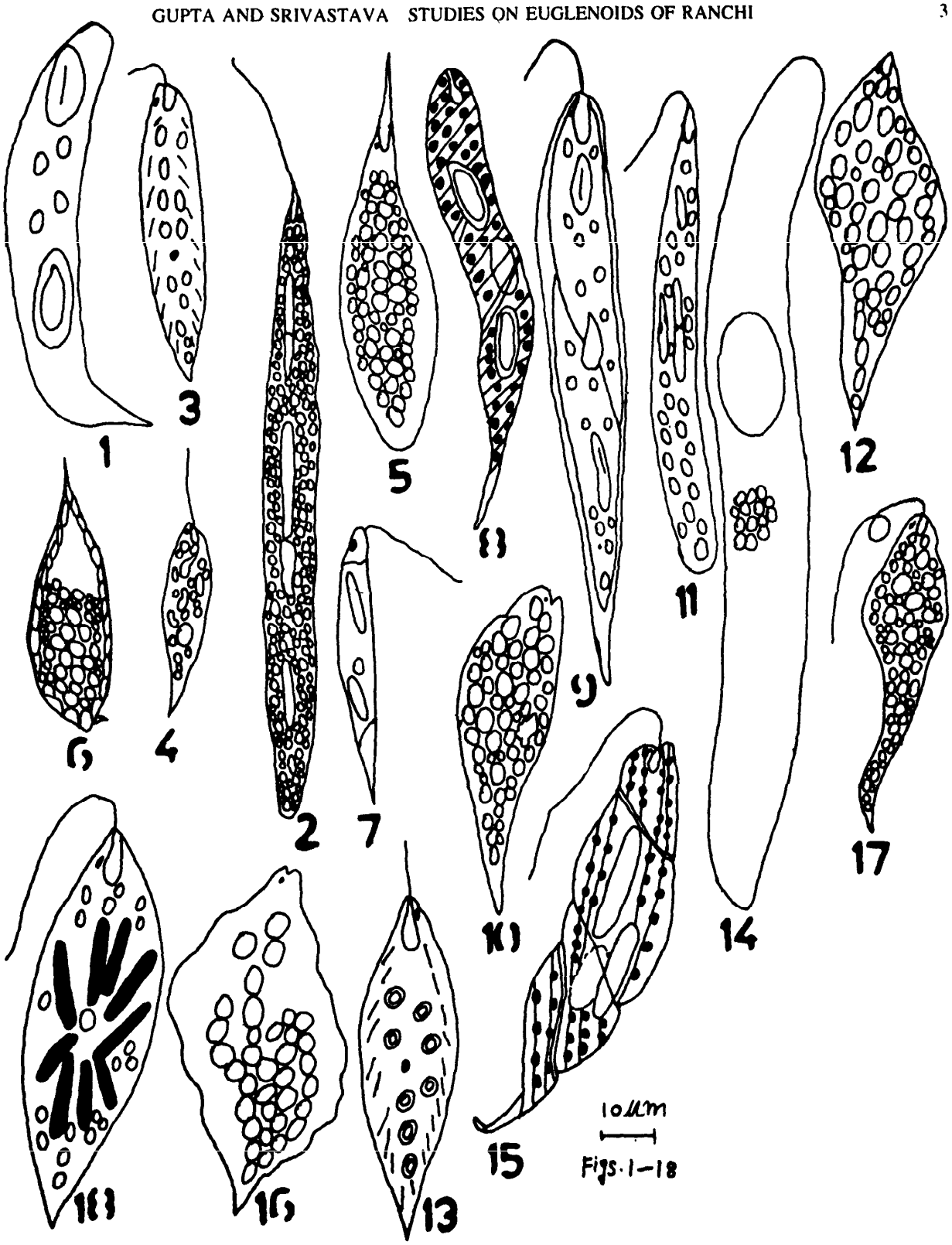
Habitat : Collected from a pond near Ram Krishna Mission Ashram, Ranchi.

Phenology : September - March.

Distribution : Karnataka (Hegde and Bharati, 1983).

13. E. splendens Dangeard, Huber-pestalozzi 55, f. 28. 1955.

Cells metabolic ; flagella short ; paramylon rod-shaped towards the pellicle ; nucleus round,



Figs. 1-18 : 1. *Euglena charkowiensis* Swir. 2. *E. elongata* Schewiakoff. 3. *E. fundoversata* Johnson. 4. *E. geniculata* Duj. 5. *E. gracilis* Klebs, 6. *E. hemichromata* Skuja. 7. *E. limnophila* Lemm. 8. *E. oxyuris* Schmarda. 9. *E. oxyuris* var. *charkowiensis* Swirenko, 10. *E. oxyuris* var. *minor* Prescott, 11. *E. pisciformis* Klebs, 12. *E. polymorpha* Dangeard, 13. *E. splendens* Dangeard, 14. *E. subeherenbergii* Skuja, 15. *E. tripteris* (Duj.) Klebs, 16. *E. tuberculata* Swir. 17. *E. variabilis* Klebs, 18. *E. viridis* Ehrbg.

encircled by double walled chromatophores ; body 80 - 84 × 23 - 24 µm.

Habitat : Collected from a small tank behind G.L.A. Shopping Complex, Ranchi.

Phenology : August.

Distribution : South India (Naidu, 1962).

14. Euglena subeherenbergii Skuja, Huber-pestalozzi 54, f. 33. 1955.

Cells cylindrical ; pellicle thin ; nucleus ovate, 6.7 × 3.3 µm; body 128 - 185.6 × 23.5 - 40.4 µm.

Habitat : Collected from a puddle near Karamtoli pond, Ranchi.

Phenology : March - April.

Distribution : Maharashtra (Kamat, 1964).

15. E. tripteris (Duj.) Klebs, Huber-pestalozzi 62,f. 39. 1955.

Cells ribbon-shaped ; pellicle striate ; flagella long ; chromatophores disc-shaped ; paramylon 2, rod-shaped, one anterior and the other posterior to the nucleus ; body 75 - 80 × 9 - 11 µm.

Habitat : Material collected from a ditch near one paddy field, Ranchi.

Phenology : December - January.

Distribution : Hyderabad (Suxena, 1955); Maharashtra (Kamat, 1964).

16. E. tuberculata Swir. Huber-pestalozzi 83, f. 60. 1955.

Cells metabolic ; pellicle thin, delicate ; chromatophores throughout the body ; body 40.4 × 15 µm.

Habitat : Collected from a pond near Tagore Hill, Ranchi.

Phenology : December - January.

Distribution : Kolhapur (Kamat, 1963).

17. E. variabilis Klebs, Huber-pestalozzi 73, f. 49. 1955.

Cells fusiform ; metaboly pronounced ; striations present ; paramylon grain scattered ; body 33.7 - 37 × 13.4 - 16 µm.

Habitat : Collected from Hatma pond, behind Ranchi College, Ranchi.

Phenology : November - December.

Distribution : Himachal Pradesh (Gupta, 1950).

18. E. viridis Ehrbg. Huber-pestalozzi 45, f. 19. 1955.

Cells fusiform ; flagella long ; paramylon rod-shaped and encircling the nucleus ; pellicle colourless ; body 40 - 73 × 12 - 13 µm.

Habitat : Collected from a puddle in Morabadi, Ranchi.

Phenology : December.

Distribution : Kashmir (Bhatia, 1930) ; Damodar-Valley (Kachroo, 1983).

ACKNOWLEDGEMENTS

The authors are grateful to Prof. K. K. Nag, Professor & Head, Department of Botany, Ranchi University for the facilities, and to the Scientist "SD", In-charge, Botanical Survey of India, Eastern Circle, Shillong for encouragement and valuable suggestions.

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