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***Research Article** (Open Access)*

EUGLENOPHYCEAE FROM ANJANI DAM OF JALGAON DISTRICT, MAHARASHTRA

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ABSTRACT
During the studies on fresh water algal flora of Anjani dam, Erandol tahsil of Jalgaon district, Maharashtra the authors were reported 07 taxa of Euglenophyceae from Anjani dam; these are *Euglena acus* var. *acus, E. antefossa, E. oxyuris* var. *charkowiensis, E. proxima, E. Spirogyra, Phacus meson* and *P. orbicularis.* All the taxa are being reported for the first time from this dam.

Keywords: *Euglenophyceae, taxa, Anjani dam, Erandol, Maharashtra*

INTRODUCTION

The contribution of taxonomical studies of Euglenophyceae in Maharashtra is known through the work of Gonzalves and Joshi (1943), Kamat (1963, 1964), Kamat and Freitas (1976), Ashtekar (1982), Barhate and Tarar (1985), Bhoge and Ragothaman (1986), Tarar and Bodkhe (1998), Waghodekar and Jawale (2001) Nandan and Mahajan, (2002a,b) Jawale *et al.* (2003), Mahajan and Nandan (2004, 2007), Nerpagar and Nandan, (2005), Narkhede (2006, 2007), Kumawat *et al.* (2007), Kumawat and Patil (2011, 2012), Suryavanshi *et al.* (2011), Jadhavar (2014), Shastri (2014), Patil (2015), Dhande *et al.* (2019).

MATERIALS AND METHODS

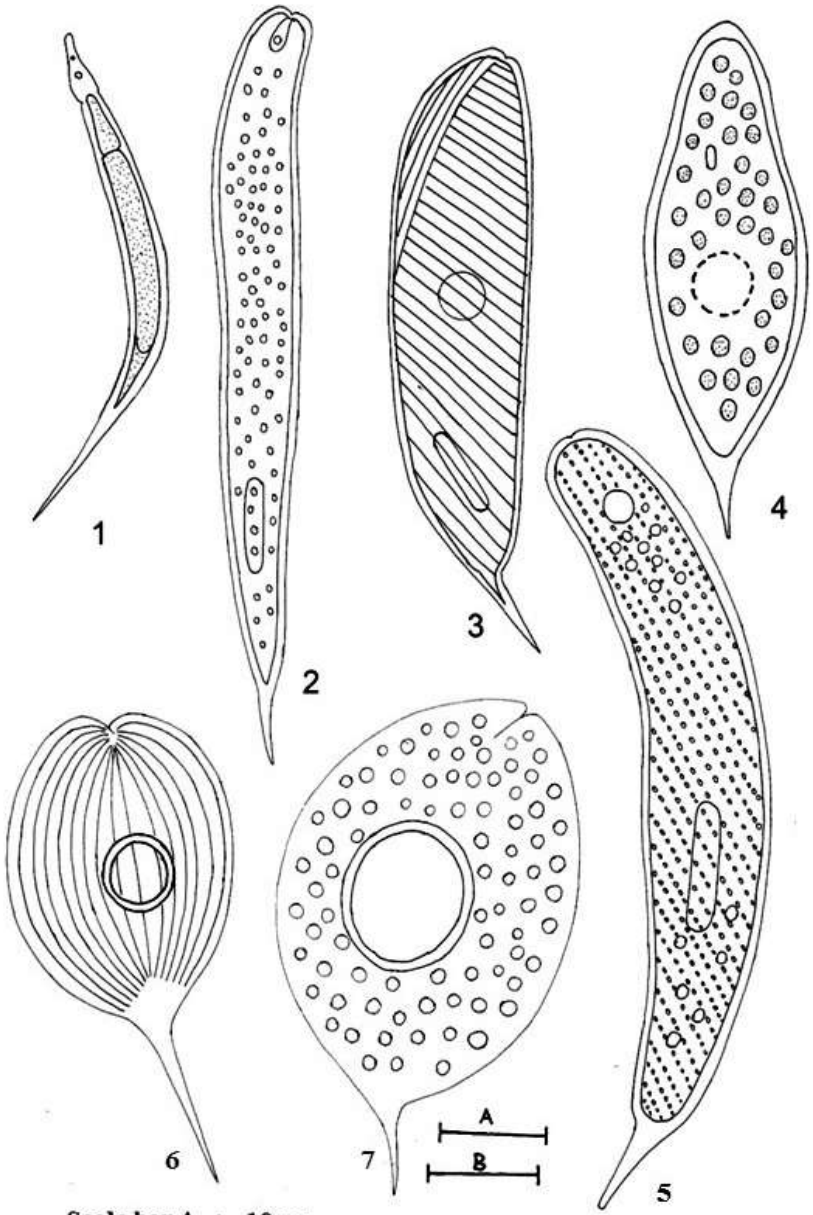
Anjani dam is located near the Palasdal village (20^0 54' North latitude and 75^0 19' East longitude) situated on Anjani, river in the Erandol Tahsil of Jalgaon district, Maharashtra. The algal collections were made early in the morning between 7.00 to 09.00 am during May, 2017 to April, 2019 from Anjani dam Tal.Erandol, Dist. Jalgaon, Maharashtra. All the collected samples were studied fresh as far as possible and later preserved in 4 % formalin for further morphological studies. Line drawings were made with the help of mirror type of camera lucida. The identification of taxa is based on the consultation of keys and description given in authentic literature viz. Philipose (1982), Wolowski (1998) and relevant research publications.

Systematic Enumeration:

Euglena acus Ehrenberg var. ***acus*** Starmach **Pl.1 Fig.1**
Wolowski Konrad, 1998, P.13, Pl.2, Figs.8-11
Cell long, elongated, spindle shaped; cell slightly narrow at the anterior end, gradually tapered to long, sharp thin tail at the posterior end, cell 121.1µm long, 9.2 µm broad.
Habitat: Coll. No.165.

Euglena antefossa L. P. Johnson **Pl.1 Fig.2**
Wolowski Konrad, Poniewozik Malgorzata and Walne Patricia L., 2013, P.662, Fig.3.
Cell long, cylindrical, with longitudinally striated pellicle; cell 168.3 µm long and 19.4 µm wide with 24.9 µm long tail; chloroplasts plate-shaped small; paramylon grains on both sides of nucleus.
Habitat: Coll. No.153

PLATE-1



Scale bar A : 10µm
Scale bar B : 25 µm
Scale A : Figs. 4, 5, 7
Scale B : Figs. 1,2,3,6

1. *Euglena acus* var. *acus* 2. *Euglena antefossa* 3. *Euglena oxyuris* var. *charkowiensis* 4. *Euglena proxima* 5. *Euglena spirogyra* 6. *Phacus meson* 7. *Phacus orbicularis*

Euglena oxyuris Schamarda var. ***charkowiensis*** Swirenko **Pl.1 Fig.3**
Philipose M.T., 1982, P.577, Fig.12 c-d.
Cell cylindrical green, elongated, bent twisted; anterior end curved, posterior end blunt with a pointed tail; pellicle yellowish green with spiral rows; chloroplast numerous, small, ovoid; 2 large paramylon bodies (18.5 µm long, 4.6 µm broad) numerous; stigma prominent; cell 132.2 µm long (with tail), 33.3 µm broad, tail 16.6 µm long.
Habitat: Coll. No.293

Euglena proxima Dangeard **Pl.1 Fig.4**
Wolowski Konrad, Poniewozik Malgorzata and Walne Patricia L, 2013, P.664, Fig.14.
Cell 46.1 µm long and 15.0 µm broad, spindle shaped, slightly narrow at anterior end and pointed at posterior end. Nucleus is at central part of cell with small numerous and disc shaped chloroplasts
Habitat: Coll. No.236

Euglena spirogyra Ehrenb. **Pl.1 Fig.5**
Wolowski Konrad, Poniewozik Malgorzata and Walne Patricia L, 2013, P.671, Fig.38, 86
Cell 69.7 µm long and 11.2 µm broad, cell elongated cylindrical; anterior end slightly tapering with a rounded end; posterior end also somewhat rounded and usually ending with sharp hyaline tail piece; pellicle spirally striated and verrucose.
Habitat: Coll. No.264.

Phacus meson Pochm. **Pl.1 Fig.6**
Philipose, M.T., 1982, P.533, Figs.35 a-d.
Cell 50.8 µm broad, 97.1 µm long, broadly ovoid with round, slightly narrowed anterior end; posterior end tapering into a long, straight pointed tail, about 32.3 µm long; margins entire; pellicle distinctly longitudinally striated; paramylum large ring or disc, situated more or less on long axis.
Habitat: Coll. No.293

Phacus orbicularis Hueb. **Pl.1 Fig.7**
Prescott, G.W. 1955, P.110, Pl.3 Fig. 18, Pl.4 Fig.11.
Cells 26.6 µm broad, 45.0 µm long, ovoid orbicular in outline with dorsal side convex, ventral side flat or little concave; anterior end broadly rounded, posterior end either broad or narrowed, ending in a short sharp oblique caudus; sometimes dorsal fold prominent reaching up to the tail; pellicle longitudinally striated, with cross striae; paramylum 1-2 disc or rings, unequal, showing different position from species to species.
Habitat: Coll. No.293

Conclusion:
There are 07 taxa of euglenoids representing 03 species and 02 varieties of Genus *Euglena* and 02 species of Genus *Phacus* .All these taxa were recorded for the first time from the study area.

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