

FIVE MORE MYXOPHYCEAE FROM BURMA.

BY

S. L. GHOSE, M.Sc., Ph.D., F.L.S.

Government College, Lahore.

During the years 1925-28 the writer made a collection of some blue-green algae from various places in Burma. Most of these algae have already been described and identified (Ghose 1926, 1927, 1927a, 1927b, 1927c). The present paper deals with five more forms which have not been described from Burma before. These are:—(1) *Chamaesiphon filamentosa* Ghose, (2) *Aulosira fertilissima* Ghose, (3) *Tolypothrix limbata* Thur., var. *cylindrica* var. nov., (4) *Scytonema leptobasis* sp. nov., (5) *Rivularia natans* (Hedw.) Welw.

(1) *Chamaesiphon filamentosa* Ghose (1923, p. 337); Pascher 1925, p. 150.

Plants usually solitary, sometimes fasciculate. Mature gonidia 4-6 μ thick, long, filamentous, slightly attenuated at the base. Sheath colourless. Gonidia numerous, 4-5 μ thick, barrel-shaped or cylindrical. Cell-contents granulose.

Habit. Mandalay, growing on a species of *Oedogonium* in a stagnant pond; December 1927.

(2) *Aulosira fertilissima* Ghose (1923, p. 342); Pascher 1925, p. 285.

Stratum expanded, dark blue-green, membranous. Trichomes straight or a little flexuous, parallel or densely intricate, rarely with very short pseudo-branches. Cells 4-9 μ broad and 5-8 μ long, cylindrical or barrel-shaped when young; contents granular. Sheath thick, at first gelatinous and hyaline, later on firm and brown. Heterocysts intercalary, oblong or elliptical, 8-9 μ broad and 10-14 μ long. Spores in series usually alternating with dead cells, generally oblongo-elliptical, sometimes angular due to compression, 18-24 μ long, 10-13 μ broad.

Habit. Mandalay, in a stagnant pond of water, living epiphytically on dead leaves and twigs which float in the water; December 1927.

(3) *Tolypothrix limbata* Thur., Pascher 1925, p. 260; variety *Cylindrica* var. nov.

Stratum floccuous, blue-green. Filaments 10–16 μ broad, occasionally branched. Sheath colourless or brown, thick, lamellose. Cells 5.5–10 μ broad, cylindrical, as long as broad or longer than broad. Heterocysts single or double, globose.

Habit. Kamayut, near Rangoon, in stagnant water; December 1927.

In habit and structure the new variety resembles the type-form greatly, but differs from it in two things (1) the cells are not barrel-shaped but cylindrical, and (2) the pseudo-branching is not so copious as in the type-species.

(4) *Scytonema leptobasis* sp. nov.

Filaments about 14 μ broad, occasionally pseudo-branched. Sheath thick, colourless or yellowish-brown, lamellose. Cells about 3 μ thick, those near the apex up to 10 μ broad, cylindrical, generally longer than broad. Pseudo-branches swollen at the tip; apex rounded. Heterocysts usually single. Intercalary, cylindrical, 8–18 μ long, 5–6 μ broad.

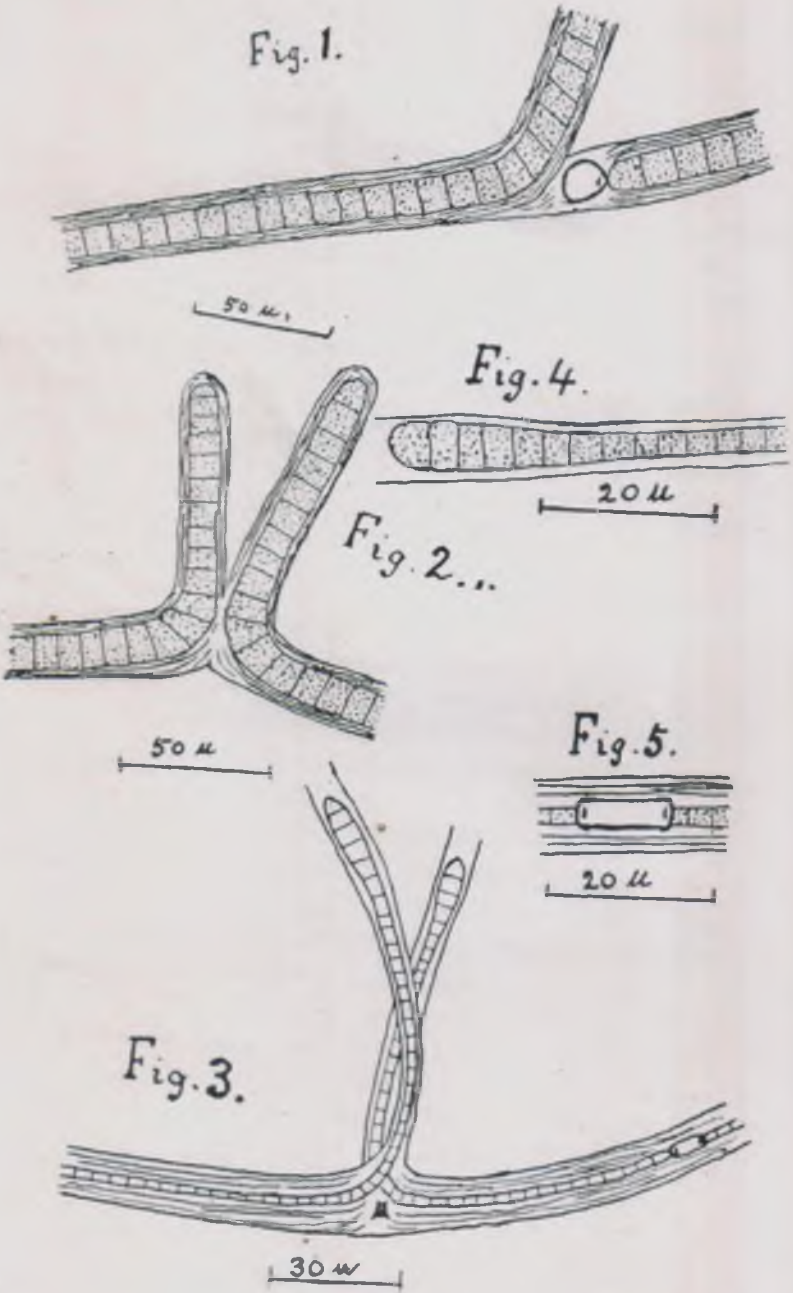
Habit. Maymyo, in stagnant water, growing on aquatic higher plants; May 1927.

Two noteworthy features characterise this new species; (1) the sheath is very thick and the trichome is quite narrow in comparison with it, (2) the tips of the pseudo-branches gradually swell out like those of *Leptobasis*.

(5) *Rivularia natans* (Hedw.) Welwitsch; Born. & Flah. 1886, p. 369; Ghose 1923, p. 345; *Gloeotrichia natans* (Hedw.) Rabh., Pascher 1925, p. 234.

Stratum small, more or less spherical, white. Trichomes ending in a long hair. Cells cylindrical, 9–10 μ broad at the base. Sheath up to 30 μ broad. Heterocysts 6–12 μ broad. Spores cylindrical, 10–18 μ broad, 60–70 μ long.

Habit. Taungyi, in the Southern Shan States, occurring on roadside ponds, the water of which is continually replenished by run-in from adjacent higher places; October 1927. Collected by Mr. M. R. Handa of Agricultural College, Mandalay.



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Explanation of Figures.

- Fig. 1. *Tolypothrix limbata* Thur., variety *cylindrica* var. nov. Single branching.
- Fig. 2. *Tolypothrix limbata*, variety *cylindrica*. Double branching.
- Fig. 3. *Scytonema leptobasis* sp. nov. Pseudo-branching.
- Fig. 4. *Scytonema leptobasis*. A pseudo-branch enlarged, showing the swollen apex.
- Fig. 5. *Scytonema leptobasis*. A heterocyst.