CONTRIBUTIONS TO OUR KNOWLEDGE OF THE FRESHWATER ALGÆ OF NORTHERN INDIA.

I. Oedogoniales.

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GROUP 5. OEDOGONIALES.

Genus Oedogonium Link.

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This alga is found in freshwater ponds, lakes and streams, nearly all over the world. The filaments have a well-developed basal cell by means of which they get attached to sticks and stones. The filaments are unbranched and the cells are usually cylindrical or barrel-like in appearance. The genus was described by Link in 1820.

A. SECTION Dioica nannandria.—

1. Oedogonium striatum sp. nov. Idioandrosaceous nannandrous.—Oogonia intercalary or terminal in position occurring singly or in pairs, also in threes (Figs. 2 and 3), pronouncedly oval or oval-ellipsoid in shape. Oospore chocolate in colour, oval, almost completely filling the oogonium. Oospore wall very thick bearing obliquely arranged or straight hyaline striations, 10–15 in number which often anastomose (Fig. 2). Basal cells flattened 45–50 μ broad (Fig. 4). Vegetative cells swollen with starch. Androsporangia in rows of 3–6 (Fig. 1 a). Nannandria 2–6 on the basal cells and the walls of the oogonium. Antheridia always internal. Oospores germinating to produce 4 zoospores oval in shape, 10 μ broad, 18 μ long (Fig. 7).

This alga very much resembles Oe. Wolleanum Wittrock in dimensions of cells and oospores but differs from that form in having an internal antheridium and in having no pore in the wall of the oogonium, the opening taking place by a superior lid, and its peculiar striations.

Diam. of veget. cells female plants.. 28–32 μ broad, 4–5 times as long.

" " " male " ".. 21–25 μ ".. 2–3 times long.

" oogonia.. 75–80 μ ".. 85–90 μ long.

" oospores.. 75 μ ".. 85 μ long.

" androsporangia.. 23 μ ".. 20–27 μ long.

" nannandria.. 18 μ ".. 72 μ long.
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Habit.—This alga was found epiphytic on submerged radial stems of waterplants, in Shahniwala Tank at Dasuya, during the second week of March 1930.


Dioecious nannandrous, oogonia 1-3, sub-ovoid or subglobose, pores superior, oospore globose nearly filling oogonia (Fig. 7a), spore-walls smooth, dwarf male a little curved near or on the oogonium, antheridium exterior 1-4 (Fig. 8).

Vegetative cell of the female plant .. 14-18 μ broad, 2-3 times long.
Oogonia .. 32-40 μ ,, 28-34 μ long.
Oospore .. 32 μ ,, 28 μ long.
Nannandria .. 14-18 μ ,, 2-3 times as long.

Habit.—Reported by Mr. Prem Lal from ponds in Lahore and Gujranwala in the first week of December 1933.

B. Section Dioica macrandria.—

3. Oedogonium capilliforme Kutz. var. nov. nanum.—op. cit., Heering, Susswasser Flora, Heft. 6.

Dioecious macrandrous, oogonia single or in pairs. Ovoid to sub-ovoid or even slightly ellipsoid in shape with a superior pore. Oospore globose or ovoid globose completely filling the oogonium (Fig. 9). Spore walls smooth. Antheridia 2-4 celled usually alternating with the vegetative cells, two sperms in each, division horizontal (Fig. 10). This differs from the type in the smaller dimensions of its vegetative cells, oogonia, oospores and antheridia.

Distribution.—So far this species has only been reported from Europe and United States of America.

Diam. of female veget. cells .. 18-20 μ 2-3 times as long.
,, male ,, ,, 10-12 μ 2-4 ,, .
,, oogonia ,, 30-36 μ broad, 32-40 μ long.
,, oospores ,, 34-36 μ ,, 32-40 μ long.
,, antheridia ,, 10 μ ,, 5 μ ,, .

Habit.—Found growing epiphytically on blades of rushes in a pond in village Shahpur, Tehsil Dasuya, District Hoshiarpur, in the middle of April 1936.


Dioecious macrandrous, oogonia single ovoid elliptical in shape. Broadened and bulging out laterally. Pore wide, situated a little above the middle.