

gametophytes. Klekowski² described such cases as the consequence of leaky lethals in *Osmunda regalis*. But such is not the case in our material under the experimental condition permitted. It may be that during the prolonged life of a few prothalli which passed into the secondary stage of reproduction by adventitious proliferation of gametophytic branches the probability of the production of a mutant gamete would be significant on the numerical strength of gametes produced. With such a mutant gamete having altered lethality the chances of the lethal genes to become homozygous would lessen thereby encouraging the formation of the sporophyte under exceptional cases. At any rate, such sporophytes would also be heterozygous and therefore the plants would continue to prefer cross-breeding. In such conditions an even distribution of the members of the species under any ecological niche cannot be expected.

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1. Klekowski, E. J. Jr., *Bot. J. Linn. Soc.*, 1969, 62, 347.
2. Klekowski, E. J. Jr., *Am. J. Bot.*, 1973, 60, 146.

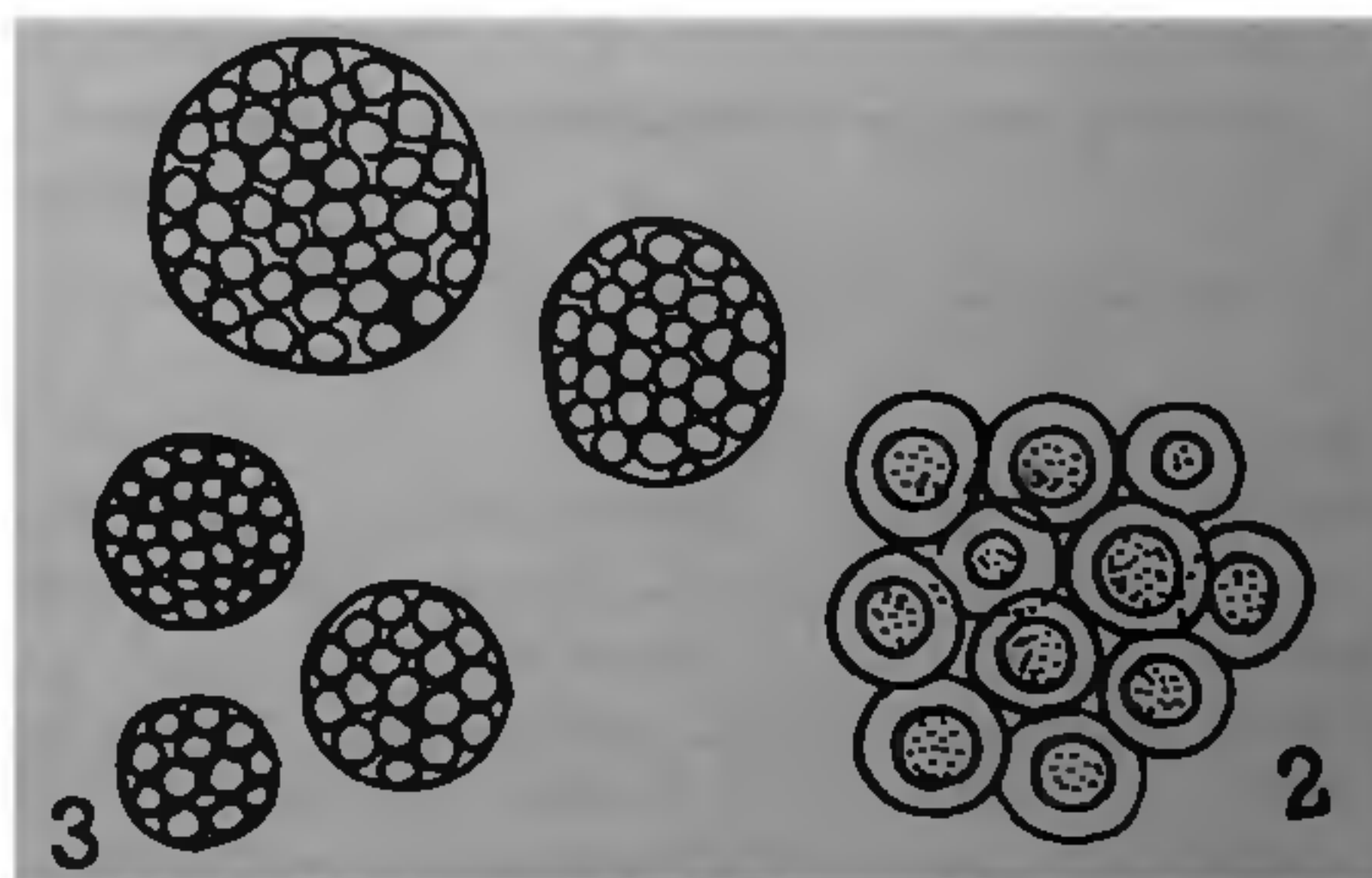
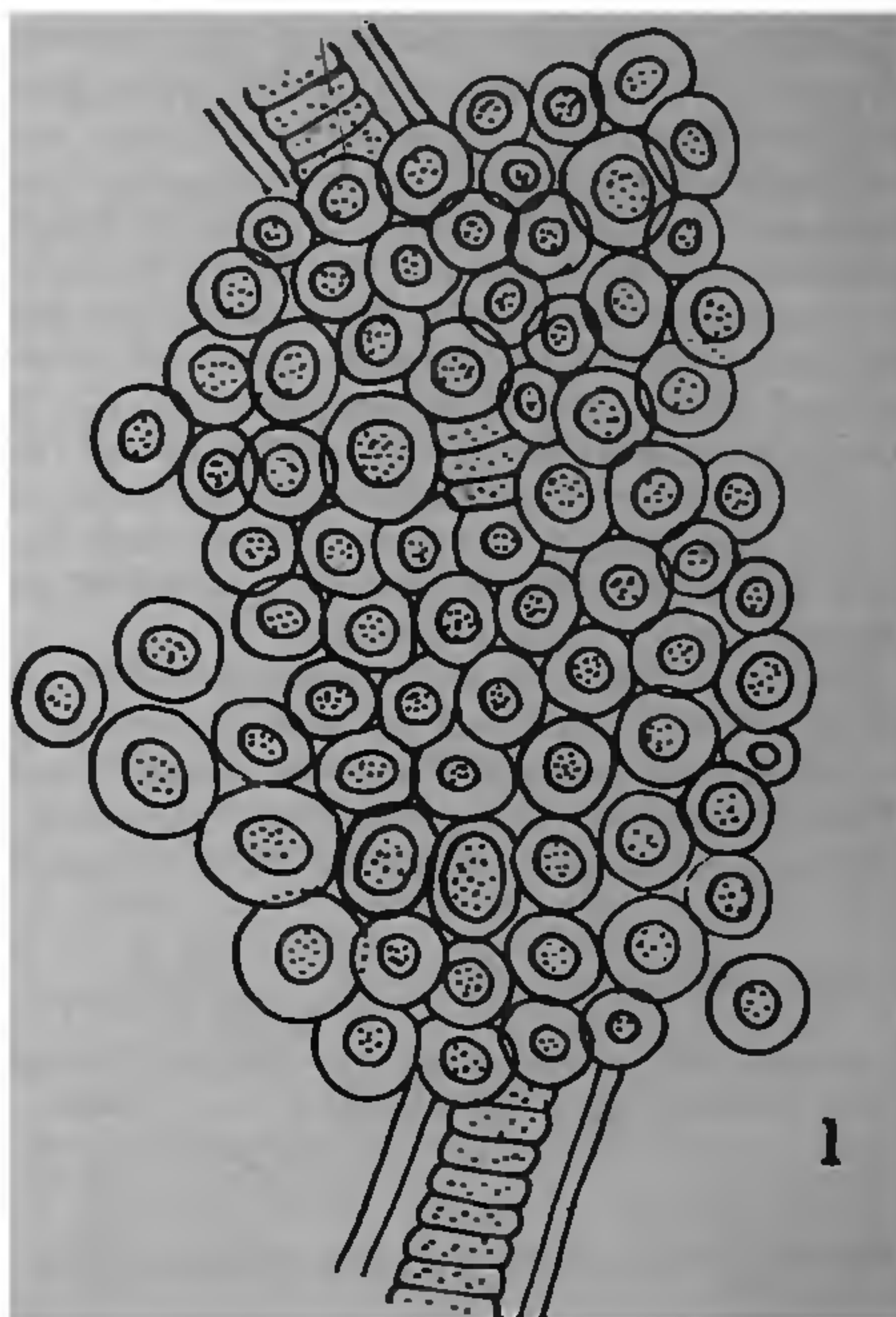
***XENOCOCCUS SCHOUSBOEI* THURET (PLEUROCAPSALES, CYANOPHYTA) FROM INDIA**

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THE occurrence of blue-green alga *Xenococcus schousboei* Thuret, a member of the order Pleurocapsales Geitler, (Cyanophyta), has not been reported from India^{1,2}. During the course of a survey of some interesting forms of algae from the environment of Allahabad, the authors came across this interesting colonial blue-green alga viz *X. schousboei* Thuret from a cemented pond at the Sarojini Naidu Hostel, University of Allahabad. The alga was kept in culture for over a year in 1982 and the characters mentioned below were found to be constant.

The alga *X. schousboei* grew as epiphyte on another blue-green alga viz *Lyngbya* sp. (figures 1 & 2). The colonies are spherical solitary and scattered or grouped in confluent masses forming a pseudoparenchymatous, one celled layer, later becoming several cells in thickness, which completely covered the

filament of *Lyngbya* sp. The cells are 4-8 μ m in diameter, spherical or flattened and cell contents light bluish green in colour. Reproduction by cell division in three planes or by means of Endospores developed in large peripheral cells (figure 3). Endospores are usually spherical and vary in number up to 32 in a mature colony.



Figures 1-3. *X. schousboei* Thuret. 1. Epiphytic nature, 2. showing individual cells, 3. showing endospore forming cells ($\times 800$).

The present form of *X. schousboei* agrees well with the type species in diameter and in all essential morphological characters. The species *X. schousboei* was distinguished from its allied species i.e. *X. kernerii* Hansgirg because of the former's of epiphytic habit and colonies being not irregularly expanded.

The authors are grateful to the Head of the Botany Department for facilities and to Dr G. L. Tiwari for valuable suggestions.

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1. Tilden, J. B., *Minnesota Algae*, 1910, p. 50.
2. Geitler, M., *Synopt. Darst. Cyano., Beih. Bot. CbL.*, 1925, 41, 244.

OCCURRENCE OF THE CYST-FORMING NEMATODE, *HETERODERA GRAMINIS* IN INDIA.

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DURING a course of studies on the cyst-forming nematode species recorded in the country, two populations, one from the Golf Links, New Delhi and the other from a private garden lawn at Jaipur, were obtained. Both these were identified as *Heterodera graminis*. Cysts are light to dark brown in colour and are basically lemon-shaped. It is ambifenestrated, with the vulval bridge possessing knob-like structure at the periphery (figures 1 and 2).



Figure 1. Cysts of *H. graminis*.



Figure 2. Vulval cone of *H. graminis*

The species was first described by Stynes¹ from roots of *Cynodon dactylon*, from Australia and this is the first record of the occurrence of the species in India. At Delhi as well as at Jaipur, the grass (*C. dactylon*) exhibited patchy spots of pale yellowish, unthrifty growth which gradually spread to bigger patch the following year.

1. Stynes, B. A., *Nematologica*, 1971, 17, 213.

OBSERVATIONS ON FUNGAL INFECTION OF *CYPRINUS CARPIO* VAR. *COMMUNIS*

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DURING the course of investigation on fungi associated with fish diseases some diseased specimens of cultivated fish bearing fungal infections were observed in the garden water-tank of N. E. Railway, Gorakhpur in January 1983. The infected fish showed white cottony patches and black and yellow galls scattered on their body (figure 1). These infections usually resulted in the death of the host.

The fungus causing infection was isolated from the host and raised on the sterile hemp seed halves in sterilized distilled water. Unifungal bacteria-free cultures of the fungus were prepared on the lines des-