The pathogen was able to decay 40% fruit tissue at 20–22° C incubation temperature which was further enhanced, though marginally to 45–50% at 28° C within the same period (*i.e.*, 8 days). Still a higher temperature of 35° C was found to be detrimental to the pathogen activity as evident by only 5·7% rot induced. The pathogen thus exhibited a wide range of optimum temperature, *i.e.*, 20–28° C which is also a favourable factor for disease development in India for a longer duration. The hard 'Nukh' fruits are stored for a long period and transported over long distances from the site of production; they are thus liable to be injured and consequently spoiled.

Trichoderma viride is a notorious rot pathogen of *Citrus* fruits and vegetables[2,4] though it has been reported that *T. viride* infected-*Citrus* fruits are not infected by *Penicillium digitatum*, another *Citrus* fruit rot pathogen[1]. The perusal of literature indicates that *T. viride* is a new fruit rot pathogen of 'Nukh' fruits.

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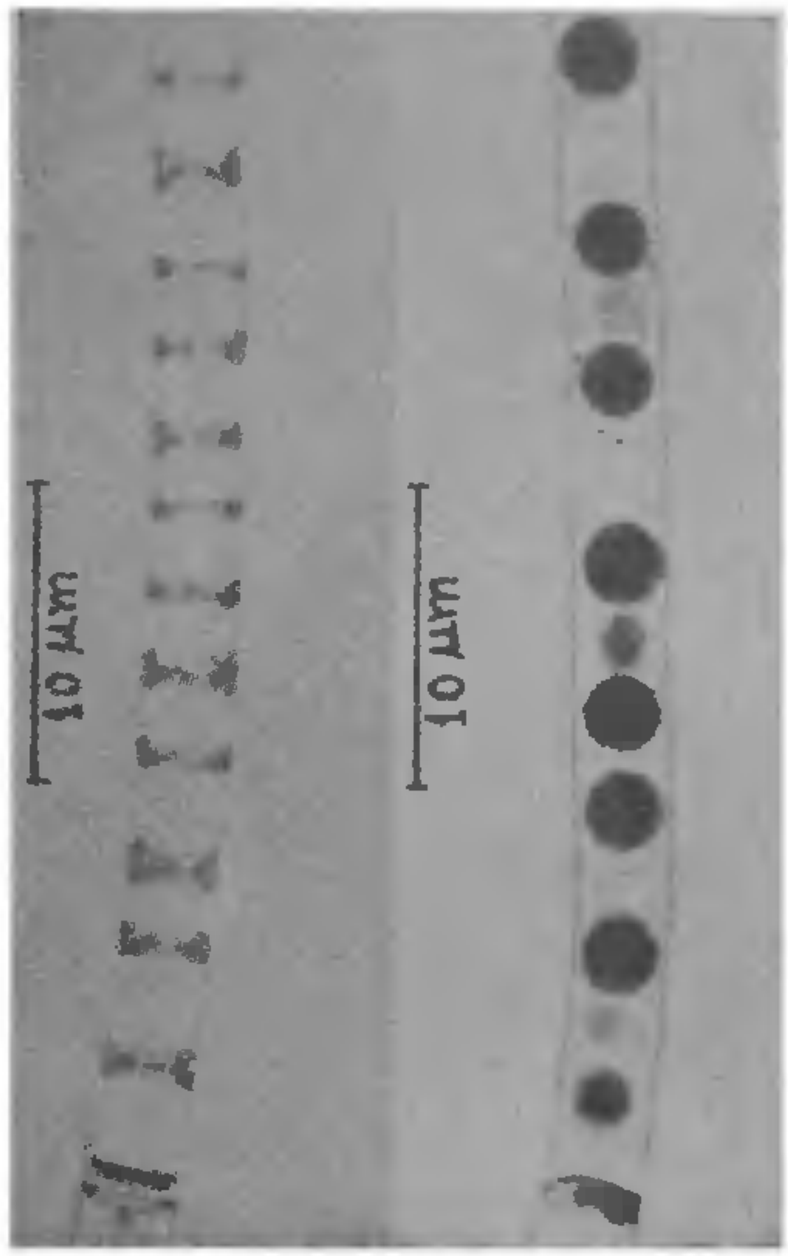
ON *SPHAEROPLEA ANNULINA* (ROTH) AG., AN INTERESTING GREEN ALGA

Of the six known species of *Sphaeroplea*, *S. annulina* is cosmopolitan in distribution[1] and has been reported from a variety of climatic conditions on all continents. In India, Randhawa[2] recorded this alga in a lake situated at an altitude of 3,000 metres in the Lahul Valley in Punjab Himalayas. Recently, the author collected it from Meerut. This appears to be the first report of this alga from the Indian plains.

S. annulina (Ulotrichales, Chlorophyceae) is a filamentous, unbranched and coenocytic green alga (Fig. 1) occurring as dark green free-floating masses exclusively in freshwater habitats. Though worldwide in distribution, it is rather rare, occurring sporadically, abundant in some years and totally absent in other years. Further, the vegetative life span of the alga is very short and the oospores (Fig. 2) are reported to have a long dormancy period (several years)[1].



1 2

Figs. 1–2. Fig. 1. Portion of a cell showing annular chloroplast. Fig. 2. Portion of a cell showing oospores.

In view of the above interesting facts and also the existing discrepancies in accounts of the cytology as well as life-cycle of this alga[3], an intensive search in and around Varanasi was made during the last several years, but unfortunately without success. Recently, it was collected from Meerut and an investigation was undertaken.

The alga grew well in Godwards' inorganic nutrient medium fortified with 10% soil-extract (1 : 1) in a light intensity of 1400–2000 lux, a 16 : 8 h. photoregime at 22 ± 1° C. The vegetative period was exceedingly short (nearly a week in culture), after which the alga entered the reproductive phase. It was amazingly fertile, the whole algal mat soon getting converted into a mass of oospores. The ripe oospores were bright orange spherical structures, with a thick membrane bearing slightly blunt, conical and hollow spines. Since the oospores did not germinate under culture conditions and the accidental breaking of vegetative filaments and regeneration of the fragmented bits happened to be the only mode of propagation, the maintenance of the alga in cultures was a difficult task. However, this problem was overcome by frequent subculturing at very short intervals.

Actively growing material from cultures was fixed and studied cytologically employing Godward's iron alum acetocarmine technique[5]. Nuclear divisions followed the normal pattern of mitosis and $n = 16$ chromosomes were determined at late prophases and metaphases.

Some concerted attempts were also made to break the dormancy of oospores with a view to studying meiosis, since meiosis in this alga is assumed to be zygotic as in all haplonts although there is no direct cytological evidence. Oospores of varied age groups were subjected to both physical (temp., light, drying and flooding, UV light) and chemical (sulphuric acid, pH, gibberellic acid, indole-acetic acid, potassium nitrate, thiourea, kinetin) agents from time to time over a period of eighteen months; the results were totally negative. However, earlier work in algae[6–15] has shown that the factors inducing zygospore germination in one case need not necessarily be successful in others. It may be that germination of oospores in *S. annulina* either requires a more complex treatment or is not at all inducible before the natural dormancy period expires. It also appears probable from the present study that the extremely short vegetative period and a highly prolonged dormancy of oospores may be the chief reasons for the rare and discontinuous occurrence of this alga in nature.

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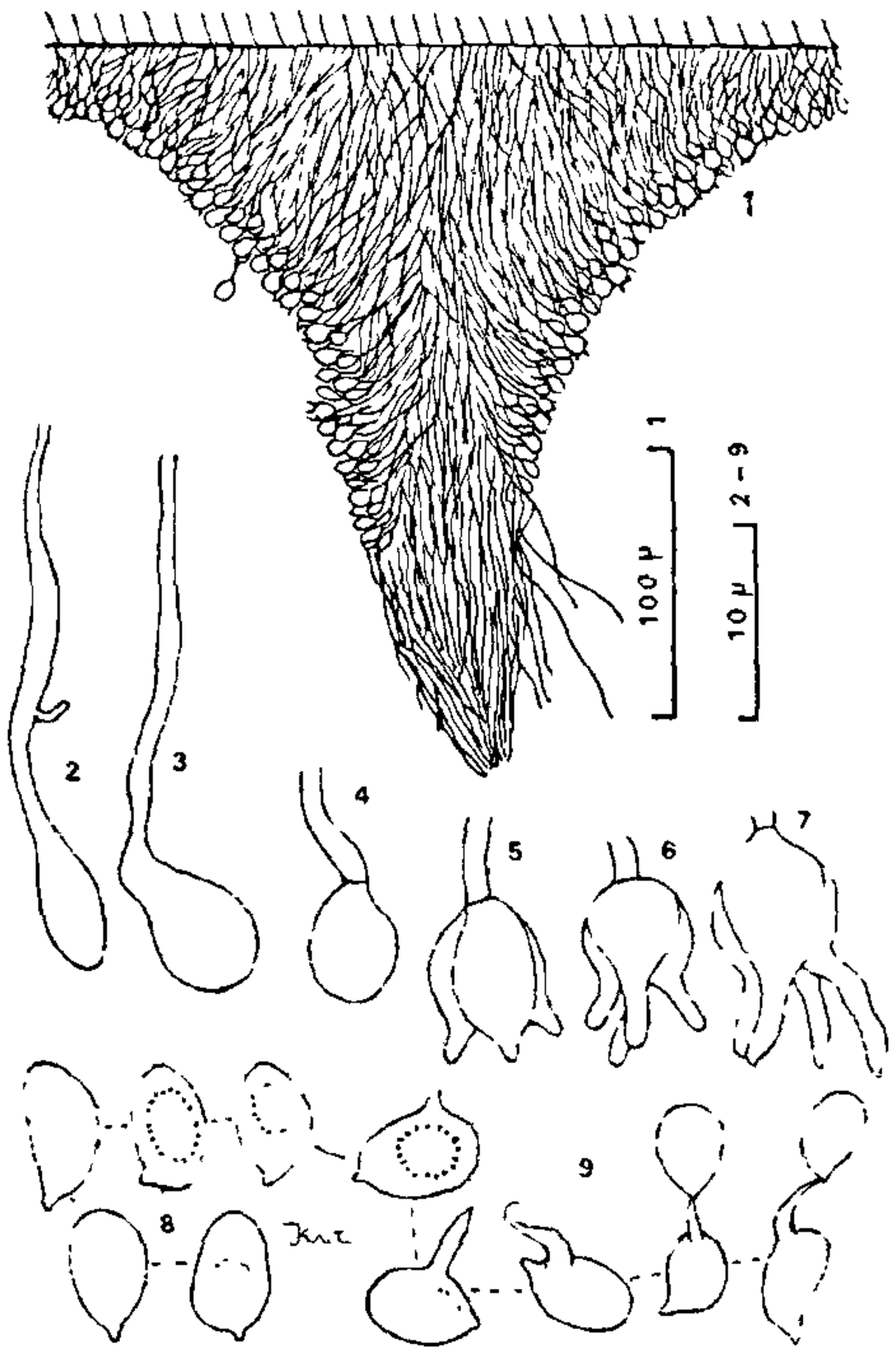
* Original not seen.

PROTODONTIA UDA IN INDIA

Protodontia uda v. Hähnel, an interesting tremellaceous fungus, was recently collected from Kodaikanal, Tamil Nadu. A brief description of the same with illustrations is given in this note, since the fungus is a new record for India.



FIGS. 1–9. *Protodontia uda*. Fig. 1. Habit. Figs. 2–7. Stages in the development of basidium. Fig. 8. Basidiospores. Fig. 9. Germination of basidiospores by repitition.

Protodontia uda v. Höhnel, 1907, *Sitzungsb. k. Acad. Wiss. Wien. Math. Nat. Kl. I.* **116**, 83.

Fruit-bodies resupinate, indeterminate, white when fresh, becoming yellowish on drying, consisting of slender, waxy, spine-like structures arising from a thin subiculum. The subiculum and the spines made up of thin-walled, hyaline, 1·3–2·6 μm wide hyphae which are simple-septate. Spines 100–180 μm long, cylindrical, up to 100 μm wide at the base, gradually tapering towards the apex to a diameter of about 25 μm, and fertile up to about 3/4 of the length; tips of spines sterile. Basidia forming an indistinct hymenium along the sides of the spines which may extend to the subiculum also; they consist of a globose to