

easy staining and squashing. The whole process of fixation and staining requires not more than 12 min. The staining of chromosomes was intense preserving their structure without producing any artefacts. It reduced the staining of cytoplasm rendering a clear background for viewing the chromosomes with increased contrast (figures 1-3). As the chromosomes of these plants are small addition of formalin to the fixative is not essential for reducing bubble effect. Further, formalin caused hardening of tissue. The root meristems of these plants are soft enough for squashing after fixation in Carnoy's fluid and further softening by maceration in HCL is not necessary. Further elimination of cytoplasmic stain is achieved by warming the material in lactopropionic orcein during squashing. Addition of ferric acetate during fixation facilitates increased stainability of chromosomes providing greater contrast. Lactopropionic orcein is recognized as a more useful alternative to acetic orcein for delicate materials^{4,8}. Propionic acid readily dissolves orcein and the stain penetrates cytoplasm without staining it. At the same time it stains the chromosomes more effectively and uniformly. Rupturing of cell membranes, scattering of chromosomes and deterioration of stain are avoided by addition of lactic acid as observed by Dyer⁶. The fixed material should not be stored for more than 12 hr as it increases staining of cytoplasm. Best results are obtained by staining immediately after 8 min fixation.

The modified lactopropionic orcein staining method is rapid, convenient and particularly useful for chromosome counts in root tips of all species of Oleaceae investigated presently.

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CONOCHAETE COMOSA KLEBAHN (CHLOROPHYTA)—A NEW ADDITION TO THE INDIAN FLORA

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THE genus, *Conochaete* Klebahn of the order Chaetophorales, Chlorophyta is rare in occurrence and known to have only four species¹. Only *C. klebahnii* Schmidle has been reported from India². *C. comosa* Klebahn communicated in this note is the first report from India. The alga collected in January 1983 from a permanent pond near Bihar village in Pratapgarh (UP) was found growing as an epiphyte on leaves and stems of certain aquatic angiosperms.

This alga formed scattered, mucilaginous patches of loosely aggregated cells and is usually grouped in 4 to 16 cells. The cells are globose and each of them has 2-3 delicate long setae radiating in different directions. The setae arise from protruded and prolonged conical

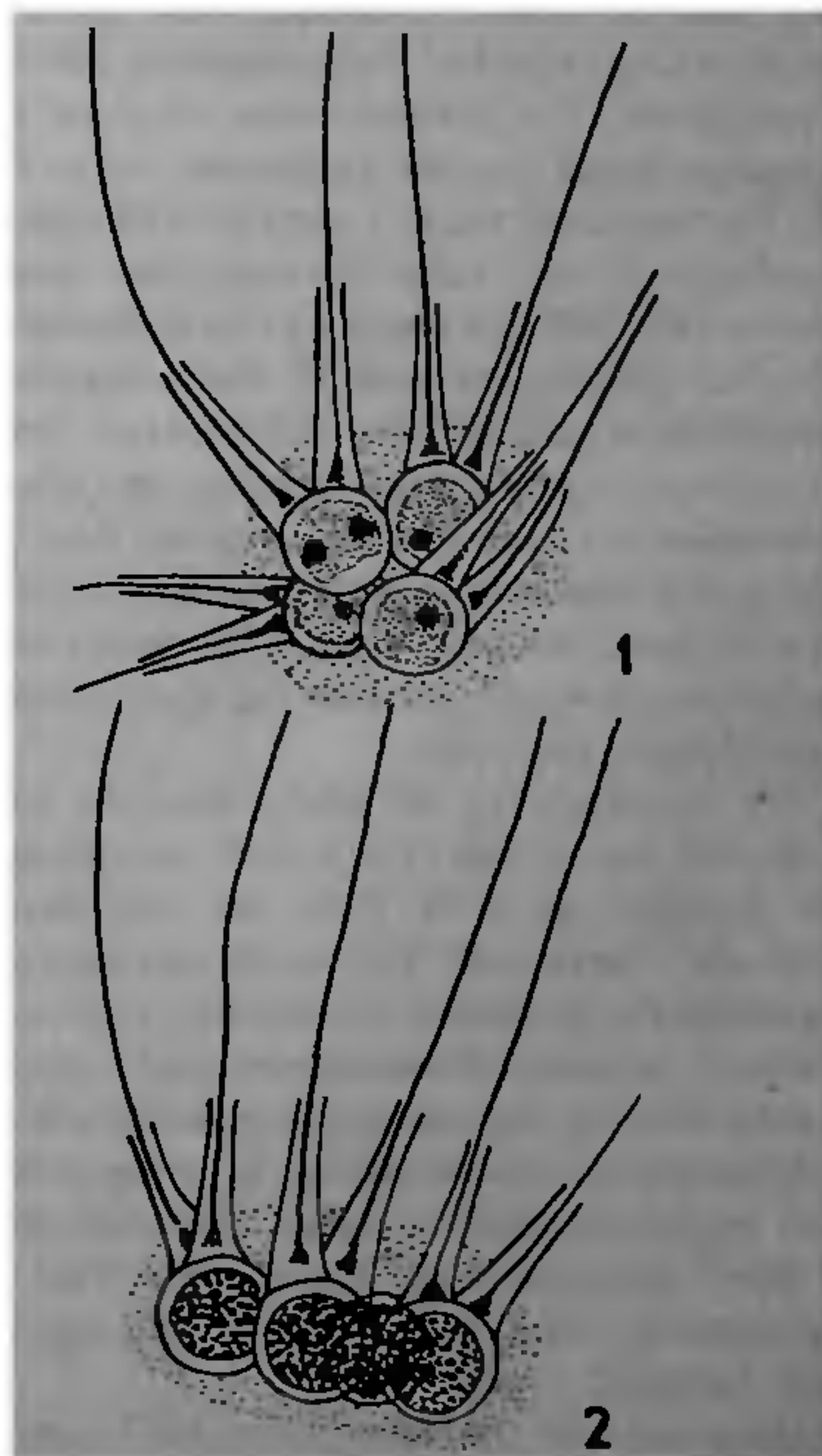


Figure 1 & 2 *Conochaete comosa* Klebahn (×350) 1. A thallus showing vegetative cells 2. A thallus showing perennating cells.

gelatinous sheath. Each seta possesses a delicate, cytoplasmic, filamentous and hair-like prolongation. Each cell contains a single parietal chloroplast with one or two pyrenoids (figure 1). Occasionally cells of certain cluster are enlarged and contain granular contents (figure 2) and may be perennating. The cells measure 19–22 μm in diameter. Sheath of the setae are 3–6 μm in diameter and 15–30 μm in length and setae are usually more than 100 μm in length. The perennating cells are 22–27 μm in diameter.

The present alga resembles *Conochaete comosa* in most of the morphological features and dimensions as given for the type species¹. The alga collected has narrower dimensions but the enlarged perennating cells, come upto the range of type description.

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DACTYLOSPORA KÖRBER PATELLARIACEAE: A NEW GENERIC RECORD FOR INDIA

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DACTYLOSPORA stygia (Berk. & Curt.) Hafellner was collected from Mussoorie hills in North-Western Himalayas at an altitude of 1800 m., m.s.l. There is no previous record of a fungus belonging to *Dactylospora* Körber¹ = *Leciographia* Massalongo, Helt. fide Nannfeldt², as verified earlier³⁻⁵. This is, therefore, the first record of the occurrence of this species in Mussoorie hills.

Observations Ascocarps up to 1 mm across, highly gregarious, sessile to subsessile, discoid, dark-brown, black after drying; hymenium concave, smooth; margin entire. Asci 8 spored, 3+, clavate-cylindrical. Ascospores 11–21 \times 3–4.5 μm , fusoid, brown, smooth, 2-celled, guttulate. Paraphyses filiform. Excipulum two-layered of angular brown cells.

Collection examined: 11825 (PAN, K), on dead wood (Angiospermous) under mixed forest, Spring Road, Mussoorie, U.P., September 30, 1981, leg. M. P. Sharma.

Single Indian specimen examined is quite typical of the species. *Karschia stygia* (B. & C.) Masee var. *tenuispora* Dennis, differs in its smaller ascospores: 10–13 \times 2.5–3 μm , fide Dennis⁶.

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PYTHIUM VEXANS VAR. MINUTA VAR. NOV. FROM KUMAUN, THE HIMALAYAS, INDIA.

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The fungus *Pythium Vexans* Var. *Minuta* Var. *Nov.* was isolated during a study on soil inhabiting water-molds (zoosporeic fungi) carried out over two years. After detailed and careful examination, this isolate is being described as a new variety of *Pythium vexans* de Bary.

Pythium vexans var. *minuta* var. *nov.*

Hyphe delicatae, ramosae, 2–9 μm in diameter; zoosporangia pleura, terminalis vel intercalaria, globosis, subglobosis vel pyriformis 12.5–25 μm diametro, plerumque 16–18 μm , zoosporangia 1–2 tubis germinantia; chlamydosporae terminalis, globosis, subglobosis vel pyriformis, 14–28.5 μm diametro, tubis germinantia; oogonia pleura, terminalia raro intercalaria, globosis, tunica levibus, 13–2–31 μm diametro, plerumque 15–18 μm ; antheridia ple-