

3.0–3.3 μm broad, swellings present at some places, hyphae upto 3.8 μm broad at such swellings. Fruit body: basidia hyaline, clavate, 4.7–5.0 μm broad, 2–4 sterigmate, sterigmata upto 4 μm long; basidiospores hyaline, acyanophilous, cylindrical, smooth, 5.0–7.0 \times 2.0–3.0 μm . Submerged mycelium: hyphae similar to advancing zone.

Pycnoporellus fibrillosus (Karst.) Murr., Torrey Bot. Club Bull., 32, 489, 1905.

Syn: *Polyporus fibrillosus* Karst., Syd. Finl. Polyp., p. 30, 1859. (Figures 1, 2 & 5 & 15–22).

Sporophore annual, soft and spongy when fresh, becoming firm and fragile on drying; pileus sessile or narrowly attached, dimidiate or effuso-reflexed, usually imbricate, 2.0–7.0 \times 3.0–9.5 \times 0.4–2.0 cm; upper surface orange-red to orange-brown, no change in colour on drying, fibrillose-tomentose or somewhat fibrillose-scaly, obscurely zonate; margin incurved on drying, narrowly sterile below; hymenophore poroid, pore surface light orange to brownish orange, remaining as such on drying; pores angular and unequal, 1–2 per mm. pore walls at first pubescent, soon slightly dentate and finally lacerate in old specimens; tubes 2–5 mm long; context pale saffron in colour, soft spongy, zonate, friable on drying, 0.2–1.5 cm thick, xanthochroic; hyphal system monomitic, hyphae hyaline, thin-walled, simple septate, without clamps, 3.0–4.5 μm in diameter, but the tramal hyphae thinner than the context hyphae; basidia hyaline, clavate, 3.0–4.5 μm broad; basidiospores hyaline, ellipsoidal, non-amyloid, cyanophilous, 4.5–6.5 \times 2.5–3.5 μm ; cystidia hyaline, cylindrical, 3.0–4.5 μm broad, projecting upto 45 μm beyond the hymenium.

Habitat: Collected on stumps of *Pinus roxburghii* Sarg., Papperseli, Almora (U.P.), December 6, 1978, N 17; Bhowali, Nainital (U.P.), August 1, 1979, N 394; Jageshwar, Almora, N 480 and Binsar, Almora, N 494.

Rot: Brown cuboidal rot of conifers.

Cultural characters: Key pattern: 1, 1, 2, 2, 1, 2, 2, 2, 2, 1, 2. Growth characters: Growth slow; advancing zone even, hyaline, appressed; mat white; growth in the beginning submerged, then appressed to slightly raised floccose to cottony mycelium; fruiting occurs after 5–6 weeks in the form of small granules and incomplete pores mixed with cottony mycelium; reverse changed; odour strong; no diffusion zone on tannic acid agar; no growth. Advancing zone: hyphae hyaline, branched, simple septate, 1.5–3.2 μm in diameter. Aerial mycelium: (a) hyphae similar to advancing zone, upto 4.5 μm in diameter, (b) hyphae apparently aseptate, branched, 4.5–5.5 μm broad. Fruit body: basidia hyaline, clavate, 4.5–6.0 μm broad; basidiospores hyaline, cylindrical to ellipsoid, cyanophilous, 4.5–5.8 \times 2.5–3.2 μm ; cystidia abundant, hyaline, thin-walled, cylindrical, 3.5–4.5 μm

broad. Submerged mycelium: (a) hyphae similar to advancing zone, (b) octahedral crystals present.

24 November 1981

1. Thind, K. S., *Indian Phytopathology*, 1973, XXVI(1), 2.
2. Bondartsev, A. S., *The Polyporaceae of the European USSR and Caucasia*, Leningrad, 1953, pp. 1106.
3. Lowe, J. L., *The Polyporaceae of New York State (except Poria)*, Syracuse, N.Y., 1942, pp. 128.
4. Overholts, L. O., *The Polyporaceae of United States, Alaska and Canada*, Ann. Arbor., Michigan, 1953, pp. 466.
5. Nobles Mildred, K., *Can. J. Res.*, 1948, C26, 281.

MALBRANCHEA SULFUREA (MIEHE) SIGLER AND CHARMICHAEL: A NEW RECORD FROM INDIA

S. K. DESHMUKH AND S. C. AGARWAL
Department of Botany, University of Saugar,
Sagar 470 003, India.

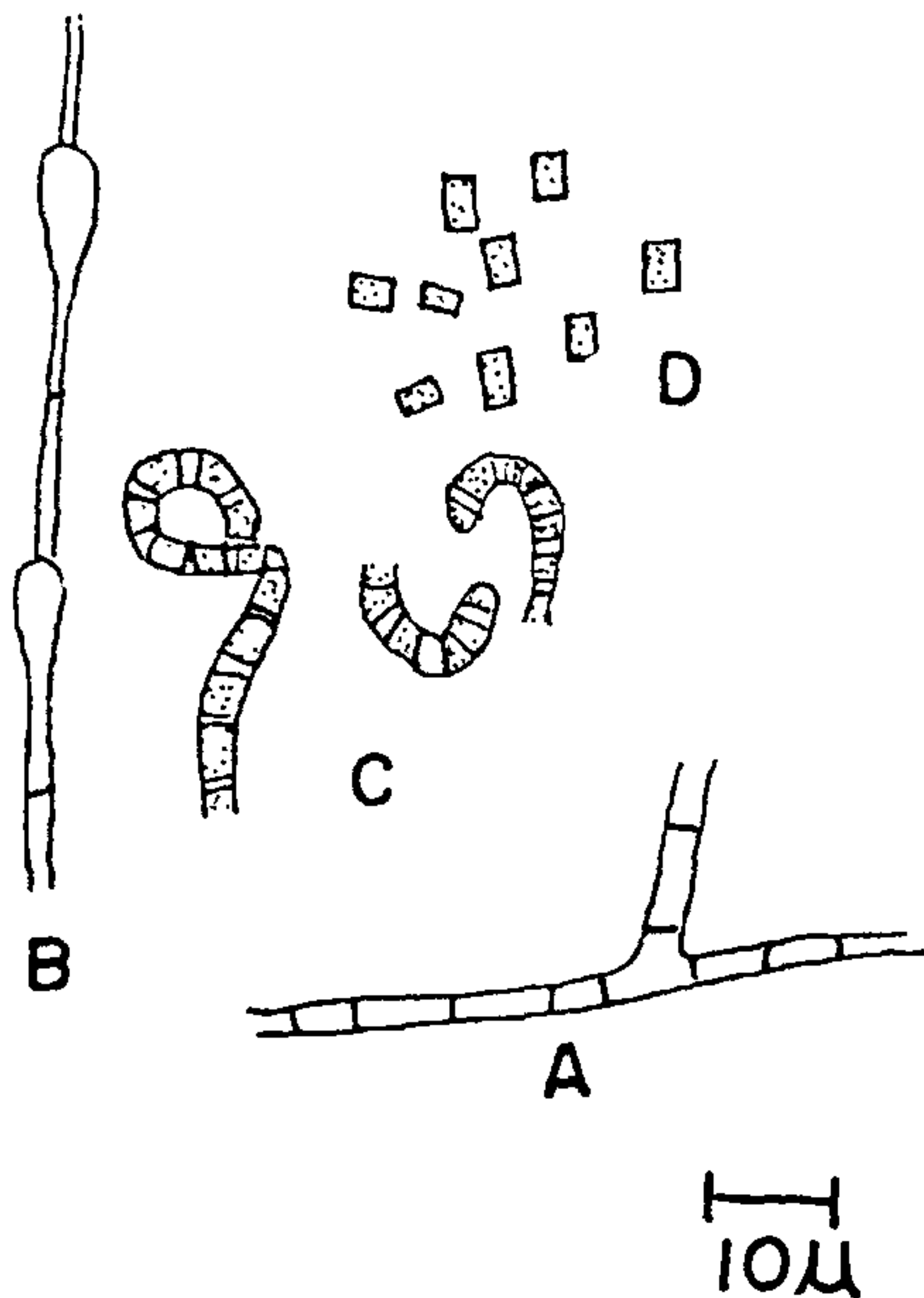
DURING the survey of thermophilic mycoaerospora of Saugar this fungi showing the following characters was isolated.

Colonies on Emerson's YpSs agar medium reach 58–65 mm in diam. after 7 days at 45°C, colonies dense, thick with few outwards radiating folds, coarse, yellow tufts of hyphae. The colour of colony is sulphur yellow with yellow margin, reverse dark brown. The arthroconidia are born on curved or loosely coiled lateral branches arising from broad vegetative hyphae (2.8–5.6 μ in diam.). The vegetative hyphae hyaline, later yellowish brown with prominent recket hyphae. Arthroconidia are cylindrical, often curved, thick walled, often attached with hyaline frill from the inter hyphal wall of the separating empty cell, hyaline at first later yellow 2.8–4.8 \times 3.8–7.6 μ . The present isolate agrees with the type description of *M. Sulfurea* Sigler and Charmichael¹.

Malbranchea sulfurea is reported here for the first time from India. The living culture of this fungus has been deposited at C.M.I., Kew, England (IMI 260892). Hudson² also reported this fungi from Cambridge (England).

The authors thank Prof. G. P. Mishra, for facilities and Dr. P. M. Stockdale, C.M.I., Kew for identification. SKD acknowledges the award of a fellowship by I.C.M.R., New Delhi.

14 December 1981



Figures A-D. *Malbranchea sulfurea*. A. Mycelium, B. Racket hyphae, C. Arthroconidia in chain, D. Arthroconidia.

1. Sigler, L. and Charmichael, J. W., *Mycotaxon*, 1976, 4, 349.
2. Hudson, H. J., *Trans. Br. Mycol. Soc.*, 1973, 60, 596.

OIDIUM VERNONIAE—A NEW SPECIES FROM MADHYA PRADESH

A. K. SAXENA AND S. B. SAKSENA
School of Studies in Botany, Jiwaji University,
Gwalior 474 011, India.

VERNONIA divergens Edgew. (Family—Compositae), an ornamental plant, was found to be suffering from a powdery mildew disease in the campus of Jiwaji University, Gwalior, during January–April 1980 and 1981. The disease appeared as small irregular, greyish-white powdery spots with very thin effused mycelium on the upper surface of the leaves. The spots gradually increased in size and covered entire surface of the affected leaves. Leaves infected in young stage got deformed and showed irregular chlorotic patches.

Early shedding of the severely diseased leaves was also observed. The pathogen produced conidia on simple conidiophores. The pathogen was identified as *Oidium* Link.

There has been some controversy regarding the terminology of *Oidium*¹⁻⁶. On the basis of morphology of conidiophores and number of conidia present on them at a time Blumer⁷ splitted *Oidium* in three form genera viz., *Oidium*, *Euoidium* and *Pseudoidium* using the work and terminology of previous workers^{8,9}. According to this classification the present fungus falls in the form genus *Pseudoidium* due to simple non-chain forming type of conidiophores. But so far this classification has not been widely accepted as it is clear from the recently published taxonomic accounts of the powdery mildews^{10,11}. In view of this, the earlier conventional classification as adopted by Yarwood¹¹ and Boesewinkel¹⁰ has been followed in this case also. The present fungus is being described as a new species of *Oidium*.

Oidium vernoniae Saxena and Saksena sp. nov. (figures 1A, B):

Mycelium superficial, hyaline, septate, 3–6.5 μ m (4.7 μ m) wide; haustoria simple; conidiophores erect, cylindrical, 2–5 septate, 70–120 \times 3.5–7 μ m (90 \times 5.2 μ m); conidia unicellular, hyaline, ellipsoid to cylindrical, solitary on conidiophores, 21.5–26.2 \times 11.5–15 μ m (23.3 \times 12.8 μ m), germinate through simple short germ tube; perithecial stage was not found.

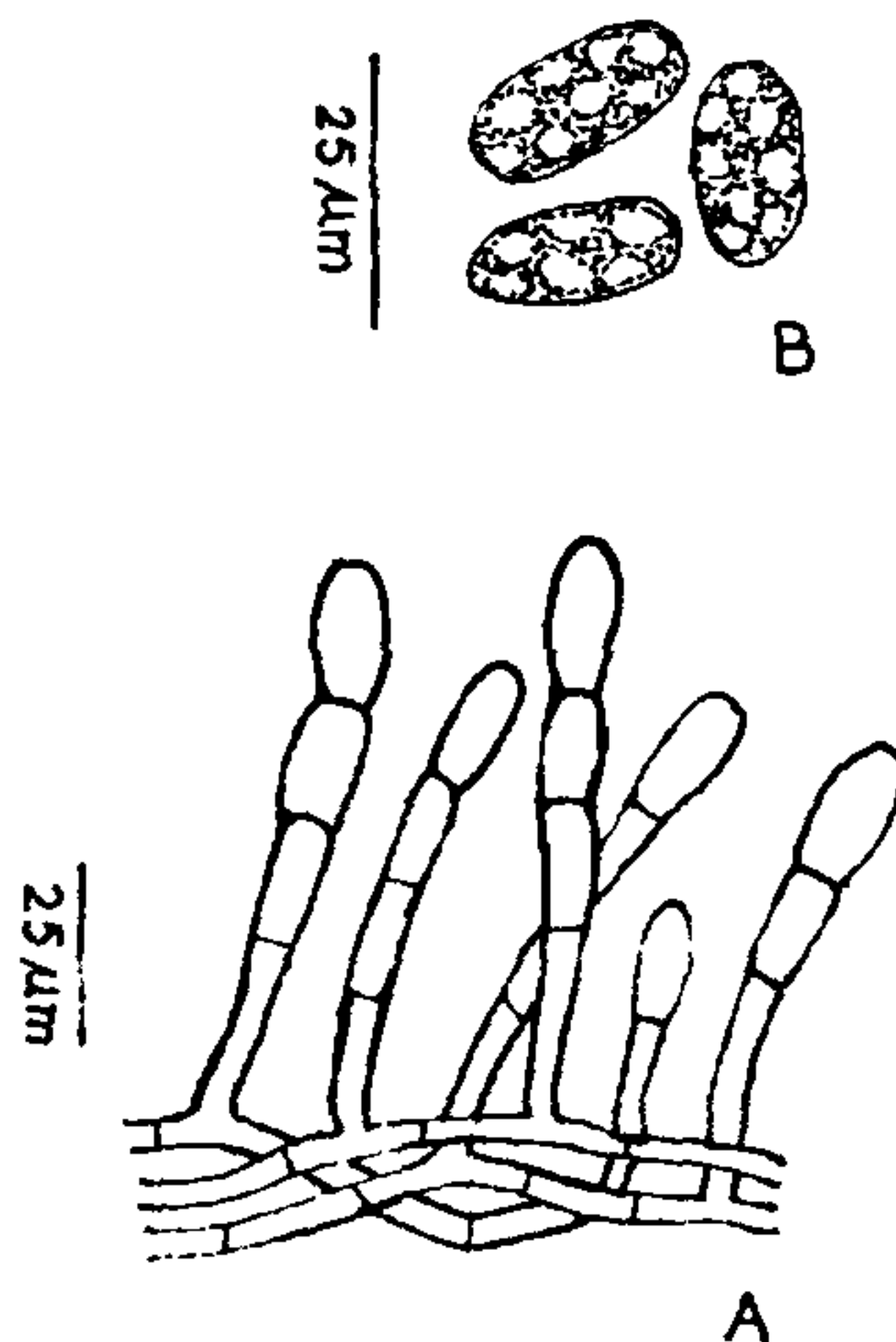


Figure 1. Camera lucida sketches of *Oidium vernoniae*, A. mycelium and conidiophores, and B. conidia.