

AMANITA FULVA (SCHAEFF. EX) PERS.—AN EDIBLE MUSHROOM NEW TO INDIA

R. P. BHATT* and T. N. LAKHANPAL

Department of Biosciences, Himachal Pradesh University, Summer-Hill, Shimla 171 005, India.

*Present address: Department of Botany, Garhwal University Campus, Pauri, Garhwal 246 001, India.

Out of a large number of mushroom specimens collected from the North-Western Himalayas during 1981–83, *Amanita fulva* (Schaeff. ex) Pers. was found to be unrecorded from India so far¹. The specimens were deposited in the Herbarium, Department of Biosciences, Himachal Pradesh University, Shimla (HPUB) and as also with Dr M. Locquin, France. *Amanita fulva* (Schaeff. ex) Pers., Synopsis Methodica Fungorum, p. 248.1801. Figure 1A–E.

Pileus 4–10 cm diam., convex when young, becoming plane with age, slightly viscid, umbonate, smooth, reddish orange to reddish brown²; margin striated. Lamellae broad, thin, free, white, lamellulae present between the lamellae; edges entire. Stipe

8–13 cm long and 0.8–1.5 cm diam., central, cylindrical, broad at base, tapering above, white to pale orange, finely squamulose, solid when young, hollowing with age. Annulus absent. A white, free, saccate volva present at the base of stipe. Flesh white. Taste and odour not distinctive. Spore colour in mass white. Spores 9–12 μm diam., globose, smooth, apiculate, hyaline, non-amyloid, containing one to many refractive guttules. Basidia 50–80 \times 16–20 μm , clavate, bearing 2–4 sterigmata; sterigmata length 2.5–6 μm . Margin of lamellae is composed of hyaline, thin-walled, clavate cells, 25–70 \times 10–16 μm . Subhymenium distinct, made up of pseudo-parenchymatous cells. Hymenophoral trama bilateral, made up of hyaline, thin-walled hyphae, 2–7 μm diam., inflated to 40 μm diam. Pileus cutis is made up of hyaline, thin-walled, septate, branched, interwoven hyphae, 2.5–7 μm diam., inflated to 18 μm diam. Pileus context consisting of hyaline, thin-walled, septate, branched hyphae, 3–40 μm diam. Stipe cutis is made up of hyaline, thin-walled, branched hyphae, 2–7 μm diam., inflated to 22 μm diam. Stipe context consisting of hyaline, thin-walled, septate, branched, interwoven hyphae, 3–36 μm diam. Volva consisting of hyaline, thin-walled, septate, branched hyphae, 2.5–9.5 μm diam., terminal cells 15–50 \times 8–40 μm that are clavate, ellipsoid or globose and sphaerocysts up to 75 μm diam. Clamp connections absent in all the hyphae.

Habit and Habitat: Solitary-scattered. Growing on the ground in coniferous and mixed woodlands, associated with *Cedrus deodara*, *Pinus roxburghii*, *Quercus incana* and *Rhododendron arboreum*.

Specimens examined: Acc. Nos. Shimla; HPUB 1098, 1184, 1465, 1593, 1665.

Remarks: This species is characterized by reddish orange to reddish brown cap with striated margin, lack of annulus and a white, free, saccate Volva. It is distinguished from the closely related *Amanita vaginata* (Bull. ex Fr.) Vitt. by its cap colour. The species is reported to be edible by Lincoff³ and Wakefield and Dennis⁴ but it should be used with caution.

One of the authors (RPB) thanks UGC and DST, New Delhi for financial assistance.

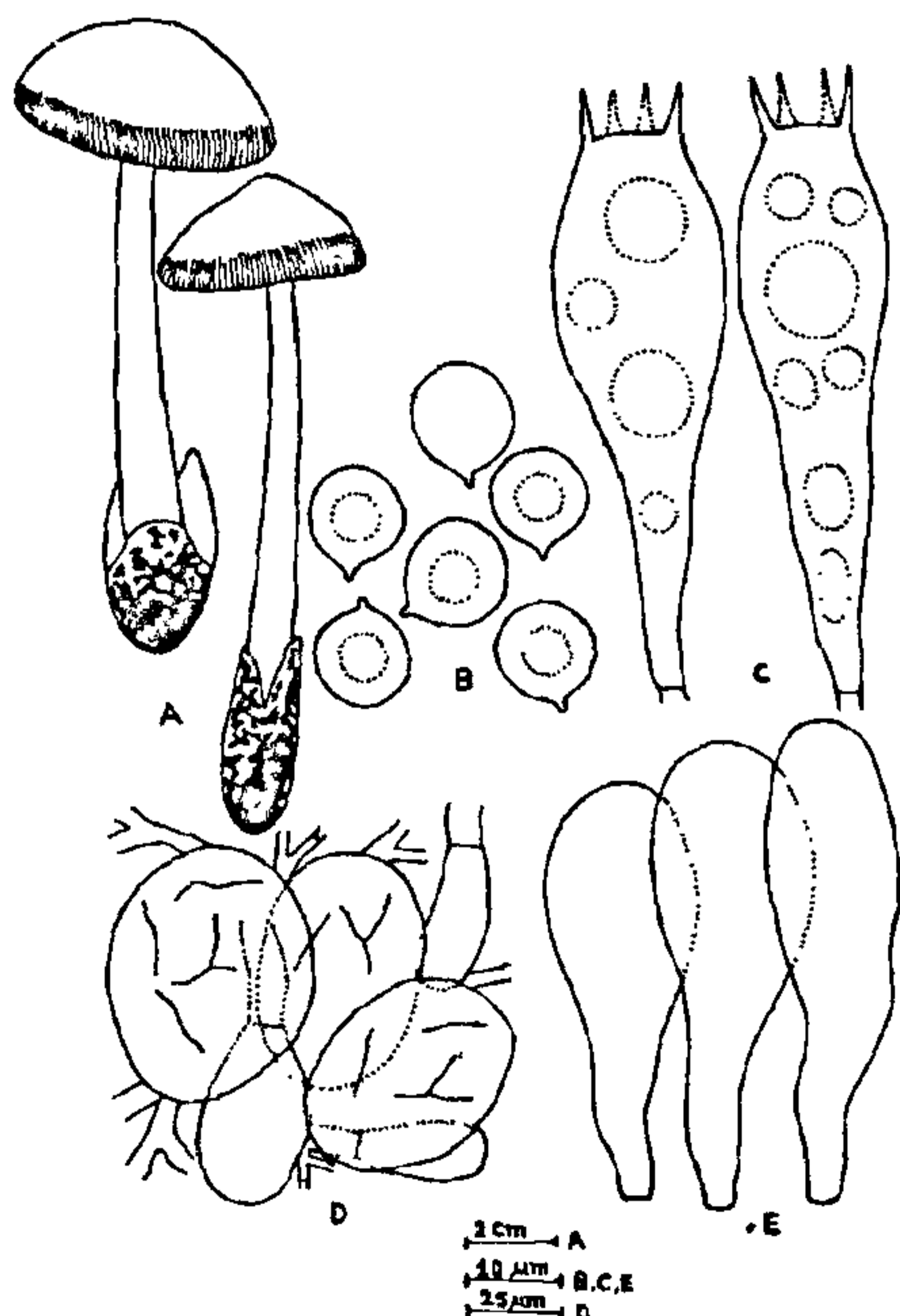


Figure 1A–E. *Amanita fulva* (Schaeff. ex) Pers. A. Basidiocarps; B. Basidiospores; C. Basidia; D. Cells of Volva, and E. Marginal cells of lamellae.

8 April 1988

1. Manjula, B., *Proc. Indian Acad. Sci. (Plant Sci.)*, 1983, **B92**, 81.
2. Kornerup, A. and Wanscher, J. H., *Methuen*

handbook of colour, 3rd edn. Eyre Metnuen, London, 1978, p. 252.

3. Lincoff, G. H., *The Audubon Society field guide to North American mushrooms*, Alfred A. Knopf, New York, 1981, p. 926.
4. Wakefield, E. M. and Dennis, R. W. G., *Common British Fungi*, Saiga Publishing Co. Ltd., Surrey, England, 1981, p. 216.

ADDITIONAL NOTES ON HAPLOGRAPHIUM HELIOCEPHALUM

M. DORAI and B. P. R. VITTAL
*Centre for Advanced Studies in Botany,
University of Madras, Madras 600 025, India.*

HAPLOGRAPHIUM HELIOCEPHALUM was earlier described¹ to accommodate a fungus collected on rotten leaves from India. This species is characterized

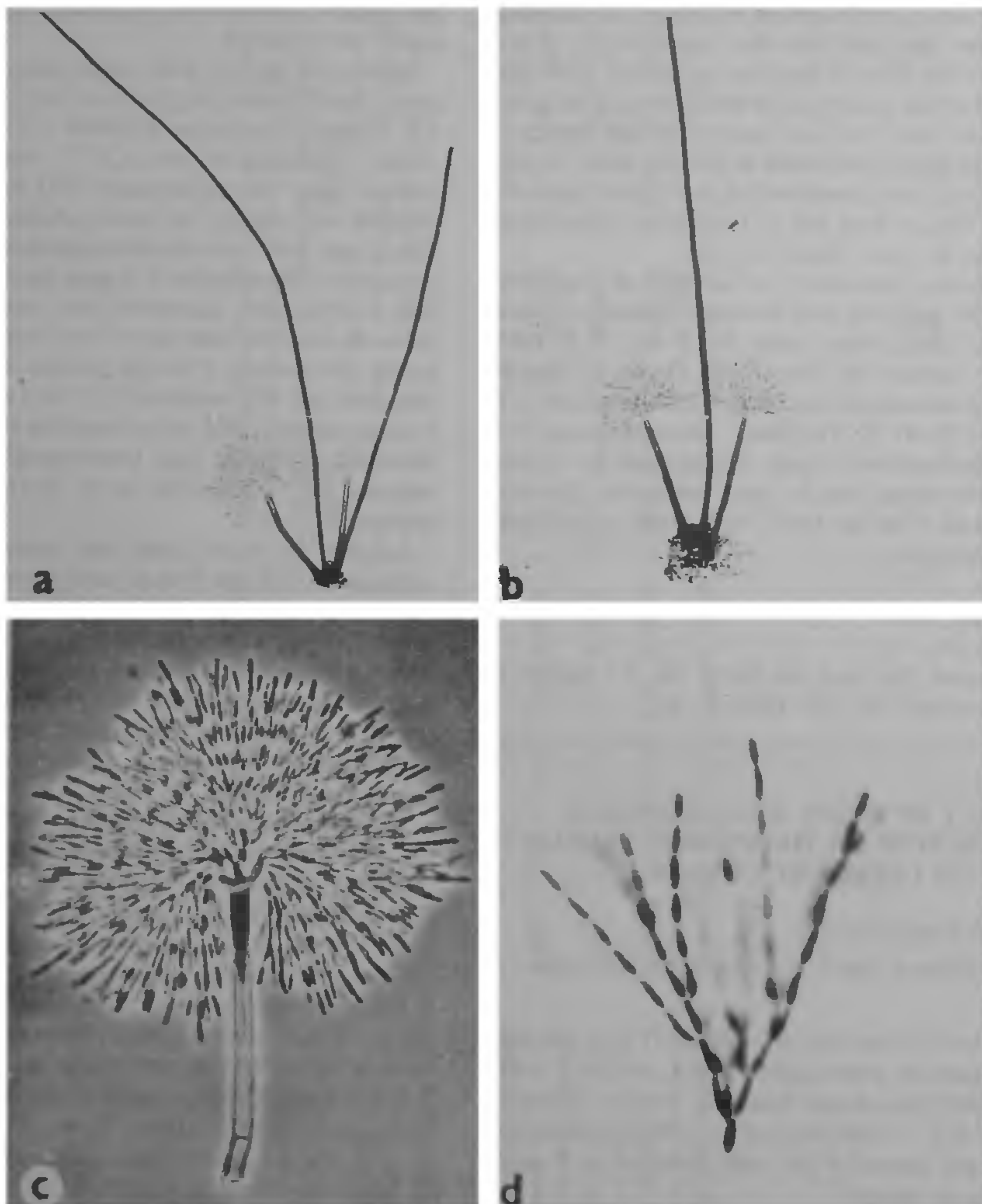


Figure 1A-D. A, B. Conidiophores and setae ($\times 175$); C. Conidiophore with conidial head ($\times 550$) and D. Branched conidial chain ($\times 930$).