

SEED-BORNE FUNGI

II. THREE NEW RECORDS AND A NEW SPECIES OF *Curvularia*

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INTRODUCTION

During our studies on seed-borne fungi of cauliflower SB 16 (*Brassica oleracea* var. *botrytis*), several fungi were isolated. The present paper describes three new records, viz. *Aphanocladium album*, *Microascus senegalensis* and *Schizophyllum commune* and a new species, viz. *Curvularia brassicae*.

Seed samples were procured from National Seeds Corporation Ltd, India and all the fungi were isolated by using 2,4-D Blotter method (Limonard, 1966).

Aphanocladium album (Preuss) Gams. 1971.

Cephalosporium artige Schimmelpilz

G. Fischer, Stuttgart, 262 pp.

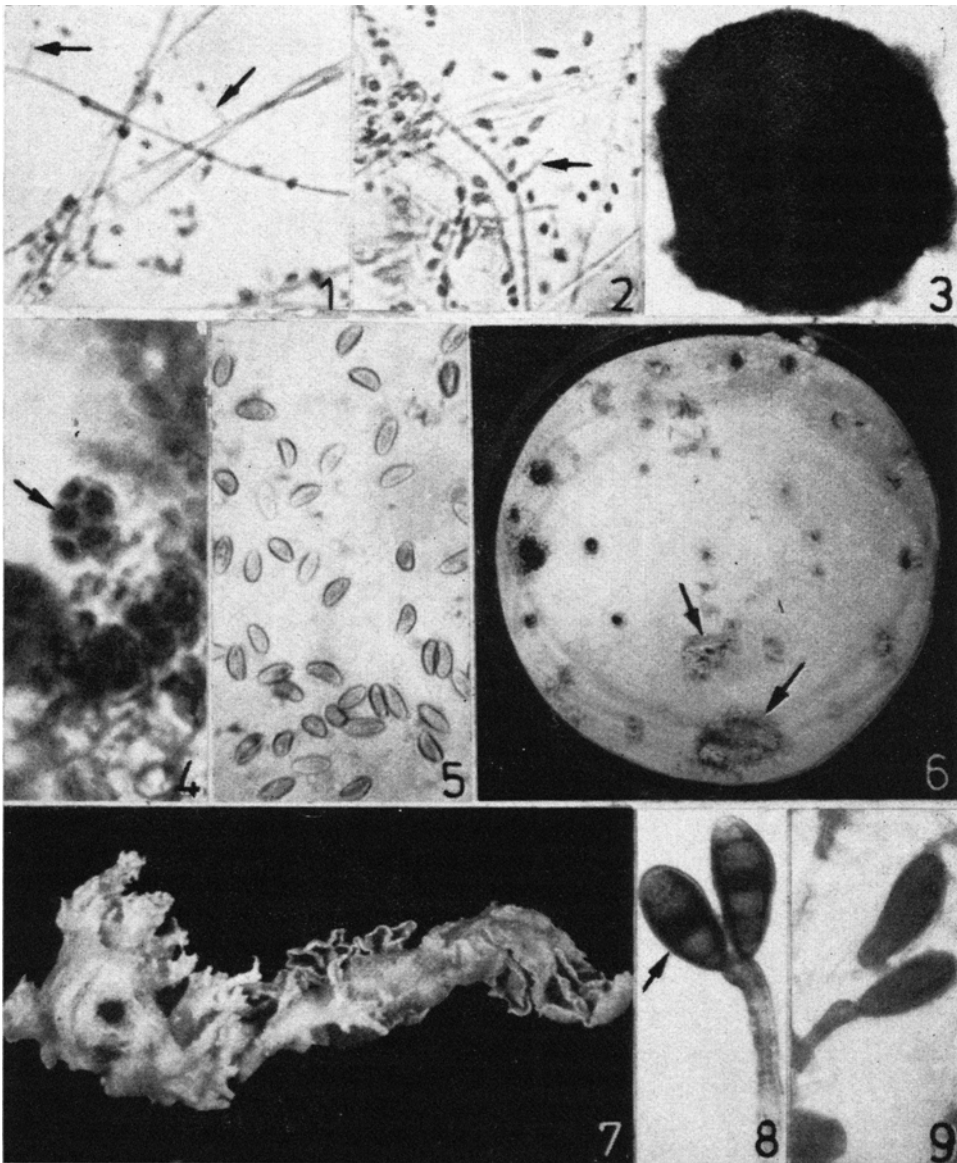
Colonies on Czapek-Dox agar growing rather slowly, reaching 1.0 cm in 7 days at $26 \pm 1^\circ$; deeply floccose and white becoming powdery with development of abundant conidia; reverse light grey; hyphae hyaline, smooth walled, 2.0–2.5 μm wide; conidiogenous cells generally single, arising at almost right angles from the supporting hyphae, 7.5–8.7 μm long, base swollen, 2.5 μm in diameter, narrowing towards tip, 1.00 μm wide (Figs. 1 & 2). Conidia always solitary, oval to ellipsoidal, hyaline, smooth, white in mass, deciduous, $5\text{--}7.5 \times 1.25\text{--}2.5 \mu\text{m}$ (Fig. 1). Chlamydo-spores not observed.

This was isolated on 25 April, 1978. Living culture of this fungus has been deposited in the Centraalbureau voor Schimmelcultures, Baarn, The Netherlands, (CBS) under reference No. DU/KM-440. Characters of this isolate tally with the type description. This is the first record of this fungus from India.

Microascus senegalensis v. Arx. 1975. (*Persoonia* 1948)

Colonies moderately growing, reaching 2–3 cm in 7 days on Czapek-Dox agar at $26 \pm 1^\circ\text{C}$. Initially white, later becoming light brown with development of ascocarps. Ascocarps scattered to aggregated, superficial to slightly immersed, spherical, black, 120–320 μm in diameter with a short ostiolate neck (Fig. 3). Asci pyriform to clavate, truncate at the base, $15\text{--}20 \times 7.5\text{--}10 \mu\text{m}$, 8-spored, evanescent; stipe long (Fig. 4). Ascospores reniform, dextrinoid when young, light yellowish with a prominent germ pore at the basal end, $7.5\text{--}10 \times 4\text{--}5 \mu\text{m}$ (Fig. 5). Conidial state not observed.

This was isolated on 24 March 1978. Living cultures of this fungus have been deposited in the CBS under reference Nos. DU/KM-438 and DU/KM-439. Characters



FIGS. 1-8. 1 & 2. *Aphanocladium album*. Conidiogenous cells (arrow) and Conidia $\times 575$. Figs. 3-5 *Microascus senegalensis*; 3, Ascocarp $\times 135$; 4, Asci (arrow) $\times 1000$; 5. Ascospores $\times 600$. 6 & 7. *Schizophyllum commune*. 6, Isolation plate showing the growth of this fungus on seed surface (arrow). 7. Enlarged basidiocarp. 8 & 9. *Curvularia brassicae* Conidiophore and conidia $\times 857$. Middle thick septum visible (arrow) distinctly in Fig. 8.

of this isolate resemble type description. However, the present isolate has slightly bigger ascocarps and smaller asci and ascospores. This is the maiden record of this fungus from India.

Schizophyllum commune Fr. (Singer, R. 1962. The Agaricales; in *Modern Taxonomy*. Hafner Publishing Co., New York. pp. 915.)

This is one of the most common wood-decaying fungi known from India. On seeds this is of very rare occurrence. Generally this has been reported on cones of gymnosperms and seeds of oil palm, *Elaeis guineensis* (Neergaard, 1977). On cauliflower seeds, this is present in the form of thick mycelium which on incubation at $29 \pm 1^\circ$ develops basidiocarps (Figs. 6 & 7).

Curvularia brassicae Mohan & Mukerji. sp.n.

Conidiophori simplicis, pallid cinereo-brunneis, septatis, recti vel parvo curvatigeniculati ad apicem, $95-100 \times 2.5-3.5 \mu\text{m}$. Conidia ubique atro-brunneis, triseptatis, medium septae crassis et bruneo-nigris, $20-27.5 \times 7.5-12.5 \mu\text{m}$.

Colonies moderately growing on Czapek-Dox Agar, light greyish black, reaching 2-3 cm in 7 days at $26 \pm 1^\circ\text{C}$. Hyphae light greyish brown, $1.25-3.75 \mu\text{m}$ wide, septate, highly branched; conidiophores simple, $95-100 \times 2.5-3.5 \mu\text{m}$, of the same color as mycelium, erect to slightly bent, septate, geniculate at the tips (Fig. 8), conidia dark brown throughout, $20-27.5 \times 7.5-12.5 \mu\text{m}$, three septate, middle septum thickest and deep brown, tapering towards base. Cells unequal, second cell from tip is the widest $7.5 \times 12.5 \mu\text{m}$ (Figs. 8 & 9).

This species was isolated on 24th September 1977. Living culture of this has been deposited in Indian type culture collection. This species varies from all the known species of this genus in its conidia size and color. The specific epithet of this genus is based on the source of its isolation.

This species slightly resembles *C. prasadii* (Mathur & Mathur, 1959), but is different from it in many ways. In *C. prasadii*, the conidia are 4-5 celled, basal cell is slightly light colored and all the septa are equally thick whereas in *C. brassicae*, the conidia are always 4-celled, all the cells are of the same color and only the middle septum is thick.

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