

New Records of *Penicillia* from Indian Soils.

By Km. S. Gupta, M. C. Sharma and K. C. B. Chaudhary *).
(Botany Department, Agra College, Agra, India.)

Penicillia are widely distributed soil fungi and a large number of species have been recorded from Indian soil. During a study of mycoflora of soils under *Acacia mollissima* Willd. at Yercud of Salem South Forest Division of Madras State, 13 species of *Penicillium* were isolated out of which five species viz. *Penicillium egyptiacum*, *P. megasporum*, *P. simplicissimum*, *P. vermiculatum* and *P. janthinellum* are new records to Indian soils. *Penicillium vermiculatum* and *P. janthinellum* have been reported earlier from this country on rotting jute (Basu 1951) and on parachute nylon fabric (Dayal et al 1962) respectively. The remaining three species are entirely new to India. The descriptive accounts of the five species are given below.

1. *Penicillium egyptiacum* van Beyma.

Colonies slightly raised in the centre, with a white wooly, mycelium, yellowish green at maturity, with a white margin, zonate, odour slightly mouldy. Reverse yellowish green. Conidiophores occurring as short lateral branches $30 \times 4 \mu$, smooth, enlarging slightly towards the apex. Metulae usually absent, phialides flask shaped with a short neck, $6-12 \times 2-3 \mu$; conidia in long chains without disjunctures, globose, smooth, $2.5-3.0 \mu$. Perithecia spherical, upto 60μ in diameter; asci evanescent; ascospores hyaline, 5μ in diameter.

2. *Penicillium megasporum* Orpet & Fennell.

Colonies growing moderately at 30°C on Czapek's agar, velvety, grey, with white margins becoming almost black at maturity. Reverse light brown. Mycelium hyaline, branched, septate, 2.5μ in diameter. Conidiophores erect, septate, unbranched, light brown, $40-50 \times 2.5 \mu$. Phialides few in number, $7.5 \times 3 \mu$. Conidia in long chains, globose, light brown, echinulate, 6.0μ .

3. *Penicillium janthinellum* Biourge.

Colonies growing well at 30°C on Czapek's agar, velvety, with a tendency of becoming floccose, white when young, grey at maturity. Reverse in shades of cream to orange. Mycelium submerged branched, septate, hyaline, 2.4μ in diameter. Conidiophores erect, hyaline, $30-40 \times 2 \mu$. Metulae $10-20 \times 3 \mu$; phialides $5.5-9.0 \times 1.5-2.0 \mu$. Conidia light green in mass, globose, $2.4-3 \mu$.

*) Now at the Institute of Phytopathological Research, Wageningen. The Netherlands.

4. *Penicillium simplicissimum* (Oudemans) Thom.

Colonies growing well at 30° C on Czapek's agar, loosely floccose, white to grey in colour or in the denser conidial areas with a tinge of green. Reverse colourless. Mycelium creeping, septate, hyaline, branched. Conidiophores erect, hyaline, arising from submerged mycelium, $185 \times 2,5 \mu$. Penicilli either monoverticillate or with a group of few to several metulae, metulae $10-15 \times 2,5 \mu$; sterigmata $10 \times 3 \mu$, diverging at tips bearing diverging chains of conidia. Conidia elliptical to oval, light green in mass, showing connections in chains, 3μ in diameter.

5. *Penicillium vermiculatum* Dangeard

Colonies growing well at 30° C on Czapek's agar, floccose with dull yellow coloured perithecia dominating. Reverse white to cream when young, changing to yellow to orange at maturity. Mycelium white, branched, septate, $2,5 \mu$ in diameter. Conidiophores few, scattered, erect, slender, light blue in colour, short, made up of a few cells only. Metulae biverticillate and phialides of varying size. Conidia elliptical, echinulate, $3 \times 2,5 \mu$. Perithecia globose to oval, $350 \times 225 \mu$ in diameter; asci oval, 6-8 spored, $10 \times 8 \mu$ in size; ascospores spherical, hyaline to pale green, smooth, $2,5 \mu$.

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Autor(en)/Author(s): Gupta Km. S., Sharma M. C., Chaudhary K. C. Basu

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