A NEW SPECIES OF *ASPERGILLUS* FROM MANGROVE SWAMPS OF WEST BENGAL, INDIA*

DURING the course of tax-ecological studies of micro-fungi inhabiting mangrove swamps of West Bengal, India, the author came across a new species of the genus *Aspergillus* which is reported here.

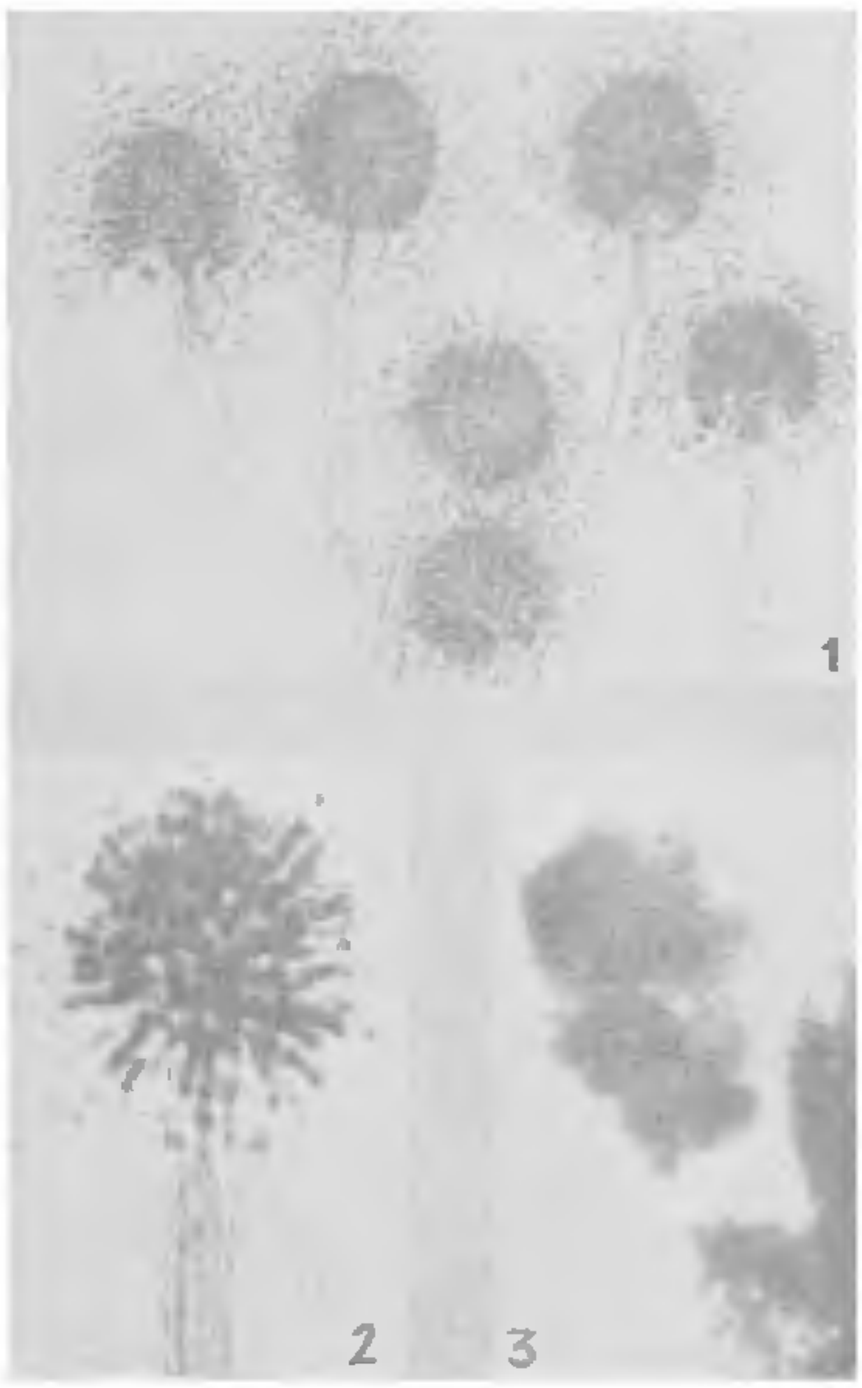
Aspergillus raianum Chowdhery sp. nov.

Colonies in Czapek-dox agar ad 29 ± 1° C lante crescentes, attingentes diametrum 3·5 cm post dies 10, hyphis aeriis inter-textis conspicuis, conidicas densas, conidiophora brevia et deminuta forentibus, flavo-virides demum atrovirides, capitula conidialia viridia, radiata, at 35·0–168·0 μm diam. Conidiophora levia pariete tenui, longitudinis variae sed at plurimum usque ad 482·0 μm longa et 2·8–5·0 μm lata. Vesiculae subglobosae vel elongatae, fertiles per totam superficiem, 10·0–17·0 μm × 8·0–11·5 μm; metulae 7·0 μm × 2·5 μm; phialides 3·4 × 2·0 μm Conidia globosa, echinulata, viridia 1·7–2·5 μm diam. Coloniis production albarum-vel albotrunnearum instar sclerotiorum structurarum. Cellulae 'hulle' vel cleistothecia nulla notata.'

Typus lectus in solo silvarum ad oras maritimas (pH 7·5) insulae Kagh (West Bengal) in India. Dry cultura holotypus positus in herbario mycologico, sectione botanica, Universitatis Lucknowensis, Lucknow, India, numero MLLU 110.

Colonies on Czapek-dox agar growing restrictedly attaining a diameter of 3·5 cm in 10 days at 29 ± 1° C, showing a marked development of aerial hyphae and bearing abundant conidiophores, yellowish-green becoming brownish-green on aging, exudates light wine red in colour. Conidial heads green, radiate 35·0–168·0 μm in diameter. Conidiophores yellowish, smooth-walled, aseptate, unbranched. long upto 482·0 μm × 2·8–5·0 μm, near vesicular region wall thickness is upto 0·8 μm. Vesicles subglobose to elongate, 10·0–17·0 μm × 8·2–11·5 μm, fertile all over the surface; metulae 7·0 μm × 2·5 μm; phialides 3·4 μm × 2·0 μm; conidia globose, roughened, green in mass, often produced in small chains, 1·7–2·5 μm in diameter. Numerous small penicillate and diminutive conidial structures may also be seen on the aerial hyphae. Soft pseudosclerotia-like bodies are produced irregularly throughout the colony, limited in number, white to cream or flesh-coloured, globose to subglobose, 256·0–356·0 μm in diameter surrounded by sterile hyphae. Cells of the pseudosclerotia are irregular in shape, possessing abundant oil droplets. Cleistothecia and hulle cells are lacking.

Isolated from samples of mangrove mud (pH 7·5) collected from Kagh island (West Bengal), India. Type in the form of dried culture, deposited in the Department of Botany, Lucknow University, Lucknow, India, as MLLU 110.



FIGS. 1–3. Fig. 1. Conidial heads, × 450. Fig. 2. Conidial head, × 600. Fig. 3. Crushed sclerotium, × 100.

The described species resembles *A. versicolor* Raper and Fennell[1] in its conidial structure which are yellowish-green in colour and having subglobose to hemispherical vesicles which are fertile throughout their surface. It resembles closely with *A. malodoratus* and *A. crystallinus* of the same group due to production of white or cream-coloured, compact thin-walled, soft masses of cells apparently resembling sclerotia. However, the conidial structure of the described species is very much different from these two above-mentioned species.

The species is named in honour of Prof. J. N. Rai for his outstanding contribution to the field of Mycology.

Department of Botany,
Lucknow University,
Lucknow, India,
May 21, 1979.

H. J. CHOWDHERY.**

* Part of the thesis approved by the University of Lucknow, Lucknow, for the degree of Doctor of Philosophy.

** Present Address: Botanical Survey of India, Northern Circle, 3, Lakshmi Road, Dehra Dun, India.

1. Raper and Fennell, *The Genus Aspergillus*, The Williams and Wilkins Company, 1965, p. 686.