This is followed by the development of a blackish brown discolouration spreading to the leaf lamina and defoliation.

*Identity of the Pathogen*

The pathogen inciting the leaf spot of betelvine is identified as *X. betlicola* Patel *et al.*[1]. Important and routine bacteriological tests, Breed *et al.*,[3] were conducted. Colony morphology, colour, motility, shape and gram reaction were suggestive of the genus *Xanthomonas*. Pertinent physiological properties of the isolate were studied as per Dye[4]. The observations are given below.

A. *Morphological and Cultural Characters of the Organism*

Colony colour—yellow and slimy; colony shape—circular and shiny; shape of the organism—short rods; motility—motile; temperature range—26–30° C; temperature optimum—28° C; gram reaction—gram negative; growth on nutrient broth—turbid yellow growth.

B. *Physiological and Biochemical Properties*

Starch hydrolysis—strong and positive; Catalase production—positive; Kovac's Oxidase test—negative; Nitrate reduction—negative; $H_2S$ production—positive; Fermentation of sugars, Lactose—fermented with acid production and no gas formation; Sucrose—fermented with acid production and no gas formation.

The properties of strong starch hydrolysis, negative Kovac's Oxidase test, negative nitrate reduction, and the fermentation of lactose with production of acid coupled with yellow colony colour, negative gram reaction, rod shape and motility are suggestive of the identity of the pathogen as *X. betlicola* Patel *et al.*[1]. Singh and Chand[2] also got similar results in their studies. So the pathogen is identified as *X. betlicola*. This is the first authentic report of the disease and pathogen from Kerala.

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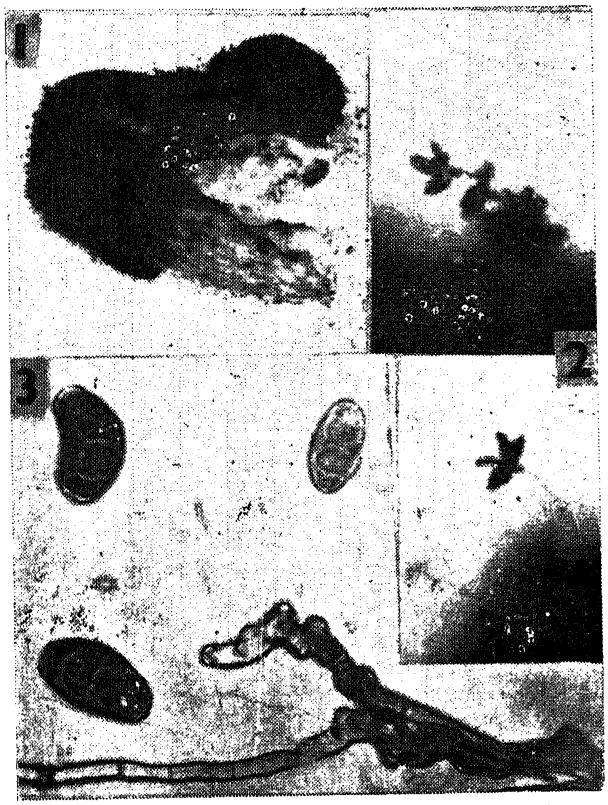
## *DRECHSLERA SUBPAPENDORFII* MOUCHACCA —A NEW RECORD FROM INDIA

WHILE investigating the seed-borne fungi of Leguminous plants from India, an unrecorded species of *Drechslera*, viz., *D. subpapendorfii* was found growing on seeds of *Phaseolus aconitifolius* L. collected from Vadgaon (Rajasthan), by B. L. Jain, 1975 (RUBL. 1701).

This species was originally isolated from soils of arid regions from Egypt by Mouchacc [1]. The present report is the first record of this species on seeds and also a new record for India. The growth characteristics of this fungus are briefly described since they are important in seed pathological studies.




FIGS 1–3. Fig. 1. Growth of *D. subpapendorfii* on the seed coat and cotyledons, × 72. Fig. 2. A conidiophore bearing conidia, growing on the seed, × 316. Fig. 3. Conidiophores and conidia, × 720.

Colonies on seeds (Fig. 1) amphigenous, wooly and brown to dark brown. Conidiophores (Figs. 2, 3) produced singly or in clusters of 2–4, straight or flexuous, simple or branched, sharply geniculate pale to medium brown, upto 520 mμ long ; 5·2–8·5 mμ wide at the apex and 2·2–6·2 mμ wide at the base. Conidia small, borne in clusters of 3–4, produced acropleurogenously at the tips of conidiophores ; curved or straight, obpyriform, navicular or ellipsoidal, light to dark brown with the end cells slightly pale, (2) 3-pseudoseptate, 20·0–33·2 mμ long, 10·0–15·9 mμ wide (av. 27·1 × 13·15).