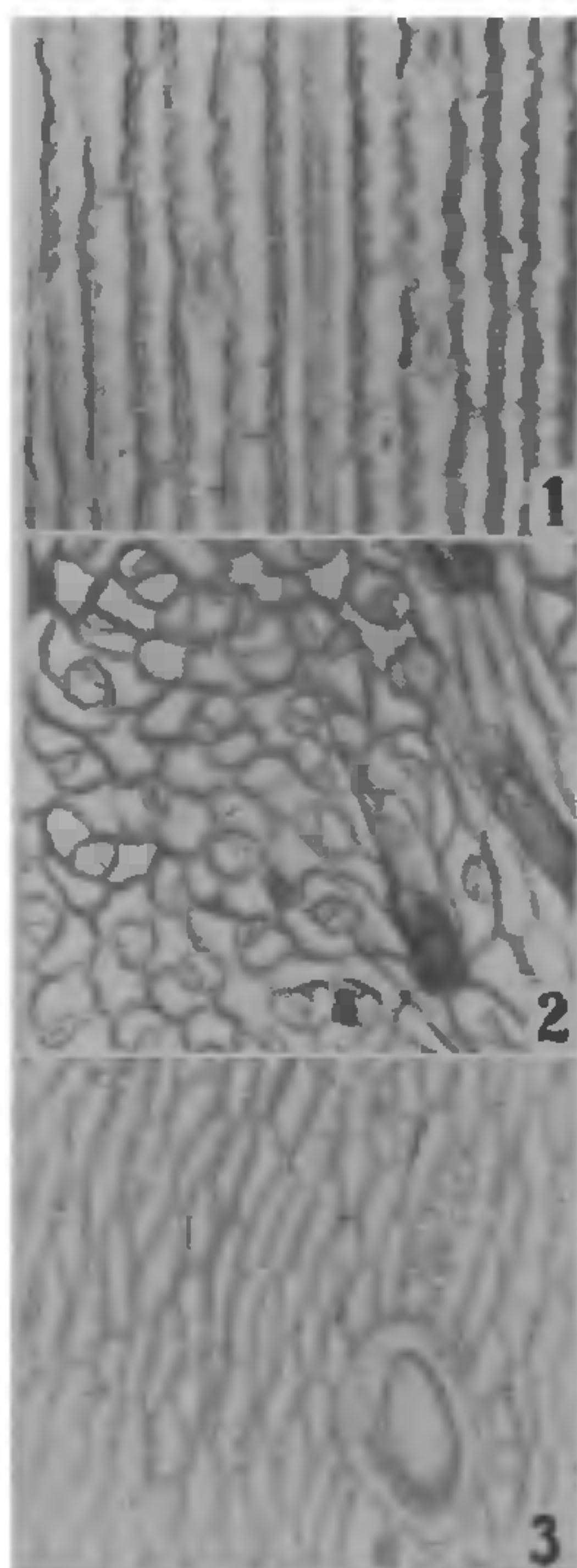


Adiantum sp., leaves of *Pleopeltis* sp., aerial axes of *Psilotum nudum*, and thalli of *Marchantia* sp. (Fig. 3).



FIGS. 1-3. Figs. 1 and 2. Lower surface of leaves of a grass and of *Crotalaria trifoliata* (note the hairs and fine pattern of venation near hairs), respectively. Fig. 3. Upper surface of thallus of *Marchantia* sp., showing an air pore and epidermal cells. (All figures, $\times 160$).

The technique has many advantages:

1. The peels are strong, flexible, waterproof and if at all, are little affected by alcohols, xylol, canada balsam, or euparal. The peels are heat-proof (boiling water resistant) and weather-proof as is the adhesive cement itself. They are, therefore, permanent and can be stored dry in paper envelopes, or in valets used to keep photograph negatives.

2. A number of imprints can be obtained from the same area of a leaf. The technique does not affect the fine morphological features of the cuticle as shown by the fact that there is no appreciable deterioration in the quality of six successive peels obtained from the same area of a leaf of *Rhoeo discolor* and *Zebrina pendula*. However, in leaves bearing trichomes

the latter come off embedded in the first peel (Fig. 2).

3. Preparations from herbarium specimens can be made without removing them from the sheets, or destroying the leaves.

4. A single peel can be obtained from the entire surface of a leaf when the leaf is not too large.

Species with sunken stomata are less amenable to this technique, only as far as the stomatal apparatus is concerned.

This technique can be usefully employed to obtain imprints of surface features of most plant organs and in taxonomic studies concerned with various qualitative and quantitative aspects of stomata, epidermal cells, finer patterns of venation (Fig. 2), etc. It is very serviceable in routine class work also.

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STUDIES ON SEED-BORNE FUNGI OF STORED GROUNDNUT AND THEIR CONTROL WITH METADINITROBENZENE

GROUNDNUT in storage is amenable to attack from various fungi which result in deterioration of seed quality and consequently reduction in oil content apart from the loss in germination. If the moisture content of the seed at the time of storage is relatively higher, the fungi are capable of bringing about complete destruction of the produce. We report the results of our preliminary studies on the control of these fungi by VFI tablets.

Seed samples of stored groundnut were collected from various sources and studied for seed-borne fungi. The fungi found associated with diseased kernels included species of *Aspergillus* particularly *A. niger* and *A. flavus*, *Fusarium oxysporum*, *F. semitectum*, *Rhizopus nigricans*, *Curvularia lunata*, *C. pallescens*, and *Cladosporium* sp. Most of these fungi were found to cause rotting of seeds. *Aspergillus flavus* is well known to produce aflatoxin which has harmful toxic effects on human beings and animals.

For checking the fungal deterioration of stored groundnut, experiments were laid with VFI tablets. These tablets which are based

on metadinitrobenzene have recently been formulated by the Defence Research Laboratory, Kanpur, for protection of defence material and have been shown by Dharam Vir and Gaur¹ to be effective against a number of plant pathogens. Heavily contaminated seed lots of groundnut were stored in polythene bags with and without VFI tablets and examined after a storage period of about four months. The seeds stored in the absence of tablets had profuse growth of various fungi while treated ones were free from infestation (Fig. 1). Experiments were also conducted



FIG 1. Showing effectiveness of VFI tablets against fungal deterioration of stored groundnut kernels 1 represents seed stored with VFI tablets while 2 is untreated seed lot.

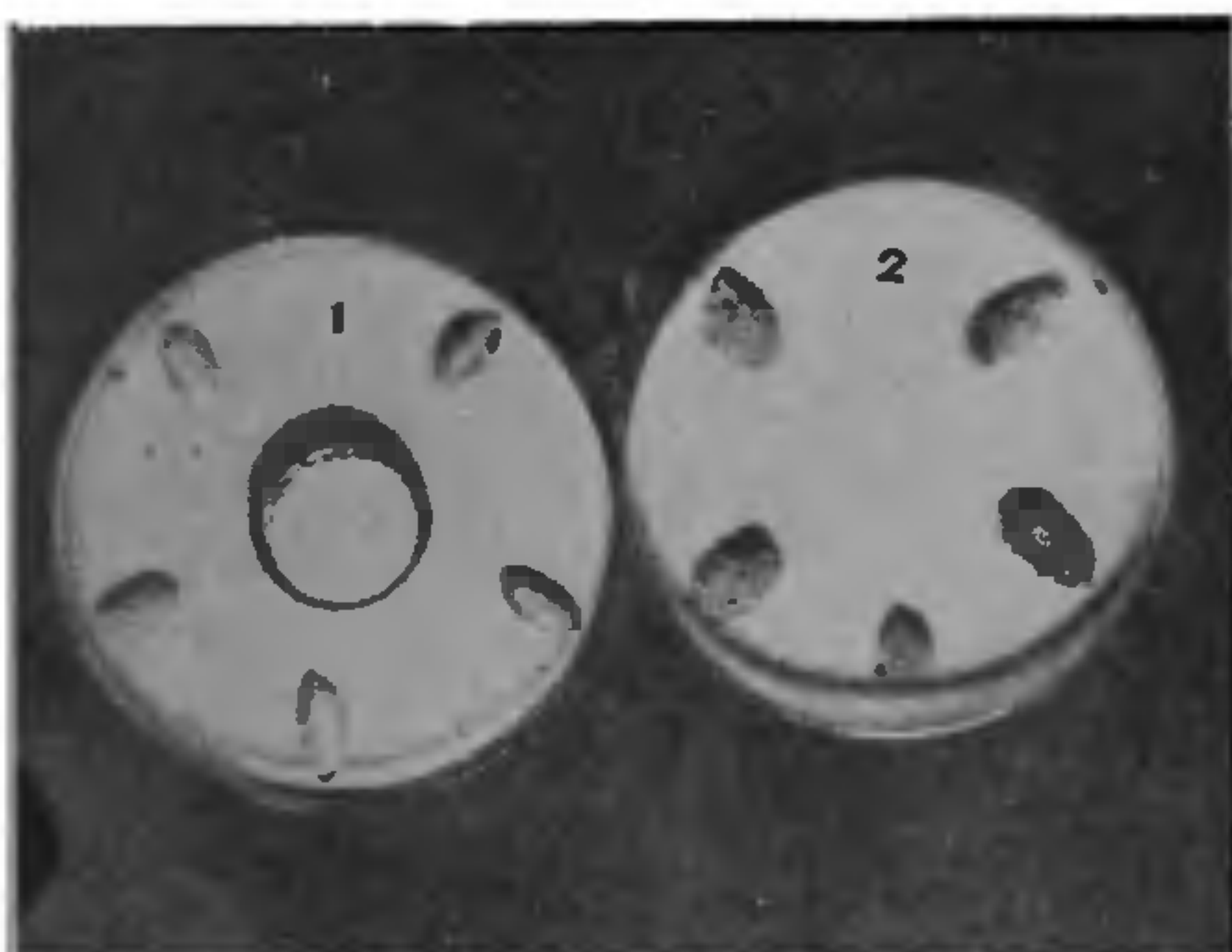


FIG. 2. Showing effectiveness of VFI tablets under humid conditions of seed storage. 1 and 2 represent treated and check respectively.

to evaluate the efficacy of this compound when kernels are stored under high humidity where conditions for the growth and development of fungi are much favourable. For this purpose, contaminated seeds were plated on

moist blotters in petri plates and in the centre of each plate a VFI tablet was placed. Suitable checks were maintained. After an incubation period of one week, examination of plates revealed heavy fungal growth around the seeds in plates where the VFI tablet had not been provided while seeds in presence of tablets lacked this fungal spoilage (Fig. 2).

These studies show that VFI tablets are effective against multiplication and spread of fungi associated with stored groundnut and thereby check the spoilage and deterioration of seeds in storage.

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SESAMIA CRETICA LED. (LEPIDOPTERA : NOCTUIDAE) A POTENTIAL PEST OF GRAMINAE IN INDIA*

THE genus *Sesamia* Guenee (Lepidoptera: Noctuidae) is known to be represented in India by three species—*S. inferens* (Walker), *S. uniformis* (Dudgeon) and *S. cretica* Led. The highly polyphagous and well-known *S. inferens* is distributed throughout India while *S. uniformis* has a limited distribution and fewer hosts (Rao and Nagaraja, 1969). *S. cretica* has virtually remained unknown in India since its record by Hampson (1910) from maize in Punjab and Himachal Pradesh as well as from Sikkim. It is also recorded from a number of countries in North and North-East Africa, France, Greece, Italy, Yugoslavia, West Pakistan, Iran, Iraq, Egypt, Israel, Jordan, Turkey, Syria and U.S.S.R.

While searching for alternative host plants of sugarcane borers at Motipur (Bihar) in 1970, *S. cretica* was reared together with *S. inferens* and *S. uniformis* from *Erianthus munja* Roxb., *E. ravennae* Beauv. and *Sclerostachya fusca* (Roxb.) A. Camus. The specimens were determined by Mr. W. H. T. Tams and Dr. I. W. B. Nye of the British Museum (Natural History), London.

S. cretica has been recorded as a major pest of *Sorghum* and to a lesser extent of maize wherever it occurs (Tams and Bowden, 1953). It also appears to be an important pest of