TABLE I

Fungi isolated from maize grain samples collected from Banswara District of Rajasthan in October 1975

Species	Maize grains of 1974	Maize grains removed from cobs
Acremonium strictum W. Games	—	+
Alternaria tenussima (Kunee ex Pers.) Wiltshire	—	+
Aspergillus amstelodami Thom and Church	—	+
A. flavus	+	+
A. niger van Tiegh	+	—
A. ruber Thom and Church	+	—
A. sejunctus Bainier and Sartory	+	—
A. tamarii Kita	+	+
A. terreus Thom	+	+
A. ustus (Bainier) Thom and Church	+	—
Botryodiplodia theobromae Pat.	+	+
Cochliobolus spicifer Helson	+	+
Curvularia clavata Jain	+	—
C. lunata (Wakker) Boedijin	+	+
Curvularia state of *Cocohlibolus lunatus*	—	+
Cystosphaera mangifera Died	+	—
Drechslera australiensis (Bugnicourt) Subram. and Jain ex M. B. Ellis	—	+
Drechslera state of *Setoshaeria rostrata* Leonard	—	+
Drechslera state of *Cochliobolus carbonus* Nelson	—	+
Drechslera holodes (Drechsler) Subram. and Jain	+	—
Fusarium acuminatum Ell. and Ev.	+	+
F. equiseti (Corda) Sacc.	+	—
Fusarium moniliforme Sheld.	+	+
F. semitectum Berk and Rav.	+	—
Macrophomina phaseoli (Tassi) Eoid.	+	—
Macrophomina sp.	—	+
Nigrospora sphaerica	—	+
Penicillium funiculosum Thom	—	+
Penicillium guniculosum Thom	+	—
Penicillium sp.	—	+
Phoma glomerata (Corda) Wollenw and Hochapf	—	+
Phoma sorghina (Sacc.) Boerema	+	—
Syncephalastrum racemosum Cohn ex Schroeter	—	+

compounds such as aflatoxins. Wogan asd Mateles[10] (1968) have reported that rubratoxin and aflatoxin B_1 act synergistically. Occurrence of several fungi particularly those known to produce toxins, pose this problem on maize. Further investigations are under way to discover as to how the various mycotoxins react with one another when the fungi producing them occur in the same grain lot.

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TWO NEW SOFT ROT DISEASES OF ONION BULBS IN STORAGE

SOME diseased onion bulbs (*Allium cepa* L.) were covered with black spores which were present even in between the scales showing rotting symptoms. Small bits of the diseased bulb scales were surface sterilized with 0·1% $HgCl_2$, washed thoroughly and plated on Czapek's and PDA media. The plates were incubated at 28° C (± 2° C). The fungi showing consistent growth on the bits were isolated, purified and main-

tained on PDA. The isolates were identified by authentic cultures maintained in the laboratory. The pathogenicity of the isolated fungi were tested on healthy bulbs by shallow pin pricking and knife injury methods of Tandon and Mishra[1]. The uninjured healthy bulbs were also dipped in spore suspension of the respective fungi for a few minutes to serve as control. All inoculated bulbs were incubated at 28° C (±2° C). Corresponding controls were also maintained. Where a part of the bulb showed rotting, the disease intensity was calculated by the modified formula of Weaver and Clements[2].

Two fungal species, *viz.*, *Aspergillus niger* Van tieghem and *Cephalosporium curtipes* Saccardo fully satisfied the Koch's postulate when inoculated after pin pricking and knife injury methods. The uninjured bulbs dipped in spore suspension did not develop rotting, indicating that the intact bulbs are not affected by either of the fungi.

The bulbs, when inoculated by pin pricking method, exhibited maximum rot in terms of colour changes and tissue maceration. *Aspergillus niger* first developed white mycelia on the surface which were soon covered with black spores. In about 10 days time, the bulb was deshaped, turned black and pulpy. With a little bit of pressure the entire bulb was crushed including the stem and roots and bad smelling liquid secretion resulted. *Cephalosporium curtipes* induced dark brown colouration and within the above period, the rotting though spread into entire bulb, was not so severe. In this case, when the pressure is applied, the scales get easily separated. The scales, still maintained their identities but the beginning of rotting was visibly evident by association of the yellowish brown liquid secretion with bad odour.

When the bulbs were inoculated by single shallow knife incision, a lesser amount of rotting occurred. In 10 days, 20·8 and 26·6% rotting was induced by *Aspergillus niger* and *Cephalosporium curtipes* respectively. Both fungi macerated tissue and formed shallow cavities (about 2 mm. dia. and 1–1·5 mm. depth) at the site of the inoculation. The bordering tissue of the cavities become slightly pulpy with a little bit of liquid secretion.

These two rot diseases of onion are new records for India and are of considerable commercial importance because the onions are stored for a pretty long time. Since the present causal pathogens are abundantly present in the air spora, any minor damage(s) to the outer skin may spoil the bulb and cause considerable loss.

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A NEW SPECIES OF *HIPPOPORINA* (ECTOPROCTA, ASCOPHORA) FROM BOMBAY COAST*

A NEW species of the genus *Hippoporina* Neviani[1] found to occur abundantly at the Trombay area of Bombay port, is described. Incidently, this is the first record of the genus *Hippoporina* from Indian waters.

Hippoporina indica sp. nov.
(Figs. 1 to 4)

Several colonies were collected from Trombay, (a part of Bombay port, long. 72° 54′ E and lat. 18° 54′ N,) on different dates from 1968 onwards.

Diagnosis

Zoarium cream coloured, developing a reddish tinge on maturity, forming unilaminar or multilaminar encrustations; Zooids distinct, rectangular to hexagonal in shape, arranged in longitudinal rows, separated by prominent furrows; orifice oblong, with a pair of proximal lateral denticles forming a crescent shaped sinus; denticles robust; orificial collar rather low and simple; operculum with a narrow sclerite encircling its border; frontal wall inflated and perforated by evenly spaced moderate sized pores, except for a granular elevated shelf proximal to the orifice, projecting as a well-developed umbo suborally. pseudopores 16–34 in number, average being 24; frontal surface roughened by thickenings of calcifications between the pores; these become costate giving rise to two or three blunt processes, one laterally and another proximally to the orifice; lateral walls with 4–6 communication pores (septula) in a row situated close to the base; distal wall with 10–17 pores scattered near the base.

Avicularium adventitious, sometimes wanting; usually single (rarely double) located laterally to the orifice, rarely suboral; rostrum short acuminate and directed towards orifice; chambers swollen with a