

They vary in size from 4 to 14" in diameter. The laminae are 5 to 15 in number and individual lamina measures a few mm to 3 cm in thickness. The nucleus is not distinct. Such forms belong to genus—*Cryptozoon* and species—*Onkolite*. They are very similar to SS-C type described by Logan, Rezak and Ginsburg¹. The elongated forms may be current deformed *Onkolite*².

Under the microscope stromatolitic dolomitic limestone shows a fine- to medium-grained matrix of carbonate material (calcite and dolomite as evidenced by infra-red absorption spectra). However no recognizable cellular structure is noticed. Fine- to medium-grained carbonate material alternates with quartz laminae constituting the stromatolitic dolomitic limestone.

The presence of stromatolites in the Vempalli formation is significant as they indicate the paleo-environmental conditions at the time of formation. There is a general consensus among the paleontologists that the stromatolites are characteristic of shallow intertidal and subtidal environment. Logan, Rezak and Ginsburg¹ opined that the *Cryptozoon* structures, especially *Onkolite*, seem to have been formed in low intertidal—agitated—shallow marine water zone. This signifies the shallow marine origin of Vempalli dolomitic limestone, which is further evidenced by its nature, chemical composition, occurrence of oolites and identification of sedimentary structures and features of the overlying (Pulivendla quartzite) and underlying (Gulcheru quartzite) stratigraphic units.

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1. Logan, B. W., Rezak, R. and Ginsburg, R. N., *Jour. Geology*, 1964, 72, 68.
2. Viswanathiah, M. N., Personal Communication, 1979.

TWO UNRECORDED STORAGE DISORDERS OF *CITRUS RETICULATA* L. AND *SOLANUM TUBEROSUM* L.

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A SYSTEMATIC survey of the fruits and vegetables in Delhi market was undertaken to assess the losses due to post-harvest fungal diseases in respect of oranges fruits and potato tubers. The survey was conducted at 30-day intervals over a period of twelve months

(September to August) and eight months (September to April) for potato and oranges respectively. During the survey three crates of oranges and three baskets of potatoes were examined each time. Consequently, two hitherto unrecorded diseases, one each of potato and orange, were discovered.

A soft rot of orange was responsible for causing an average loss of 1.3% on the basis of eight month survey from September 1973 to April 1974 (Fig. 4). The disease incidence was highest in the month of April (2.6%) while it was lowest in the month of October (0.5%).

The infected fruits become soft but neither they are pulpy nor produce any leak in nature. The surface of the fruit does not show any marked symptom of the disease except some black mass of spores around the point of entry of the pathogen. There is no fungal growth on the surface of the fruit (Fig. 1) but on cutting open black mass of spores is seen (Fig. 2)-

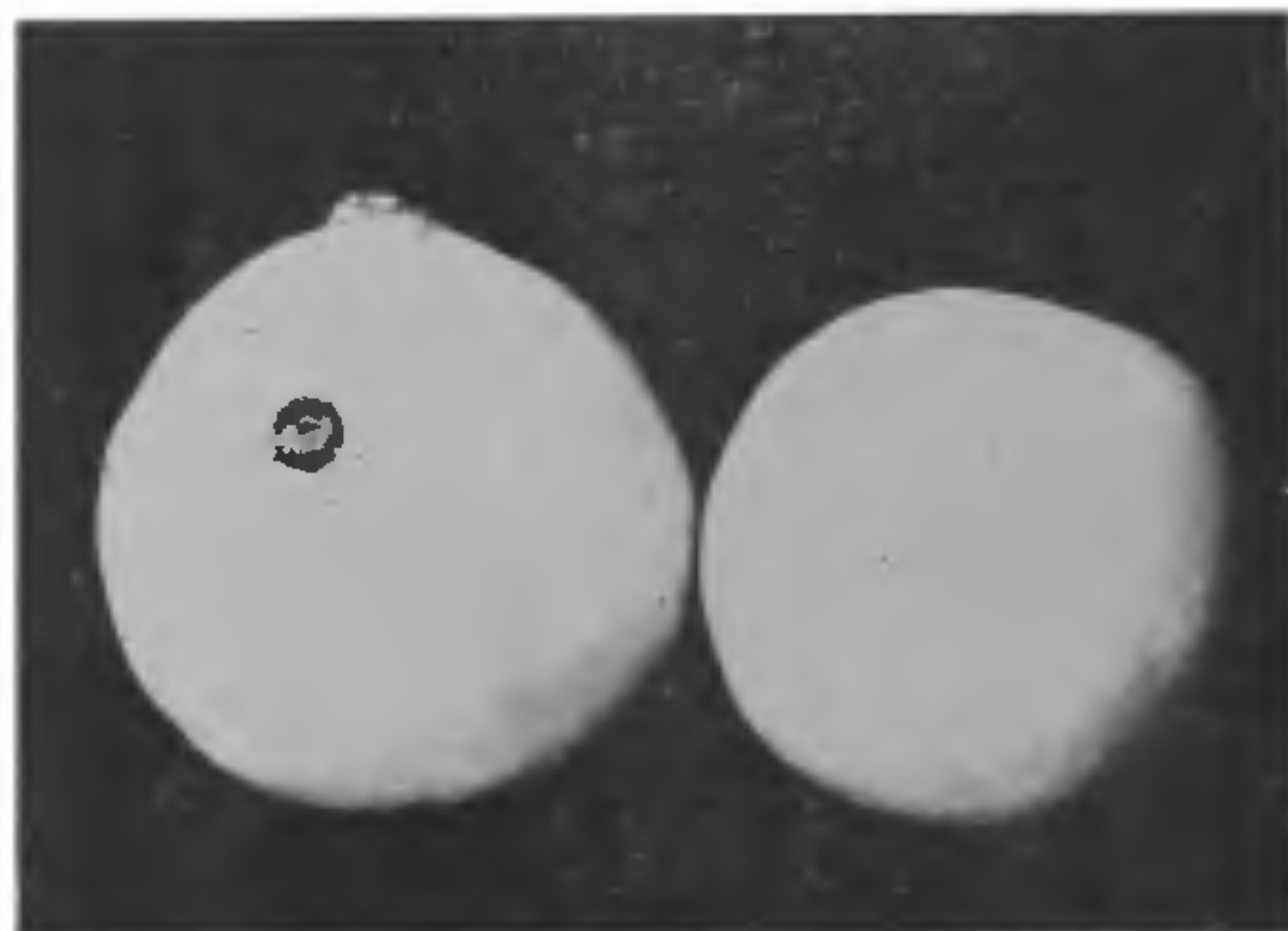


FIG. 1. Left—Orange fruit inoculated with *Cladosporium sphaerospermum*. Right—Healthy fruit.



FIG. 2. Inoculated orange fruit showing internal infection of *C. sphaerospermum*.

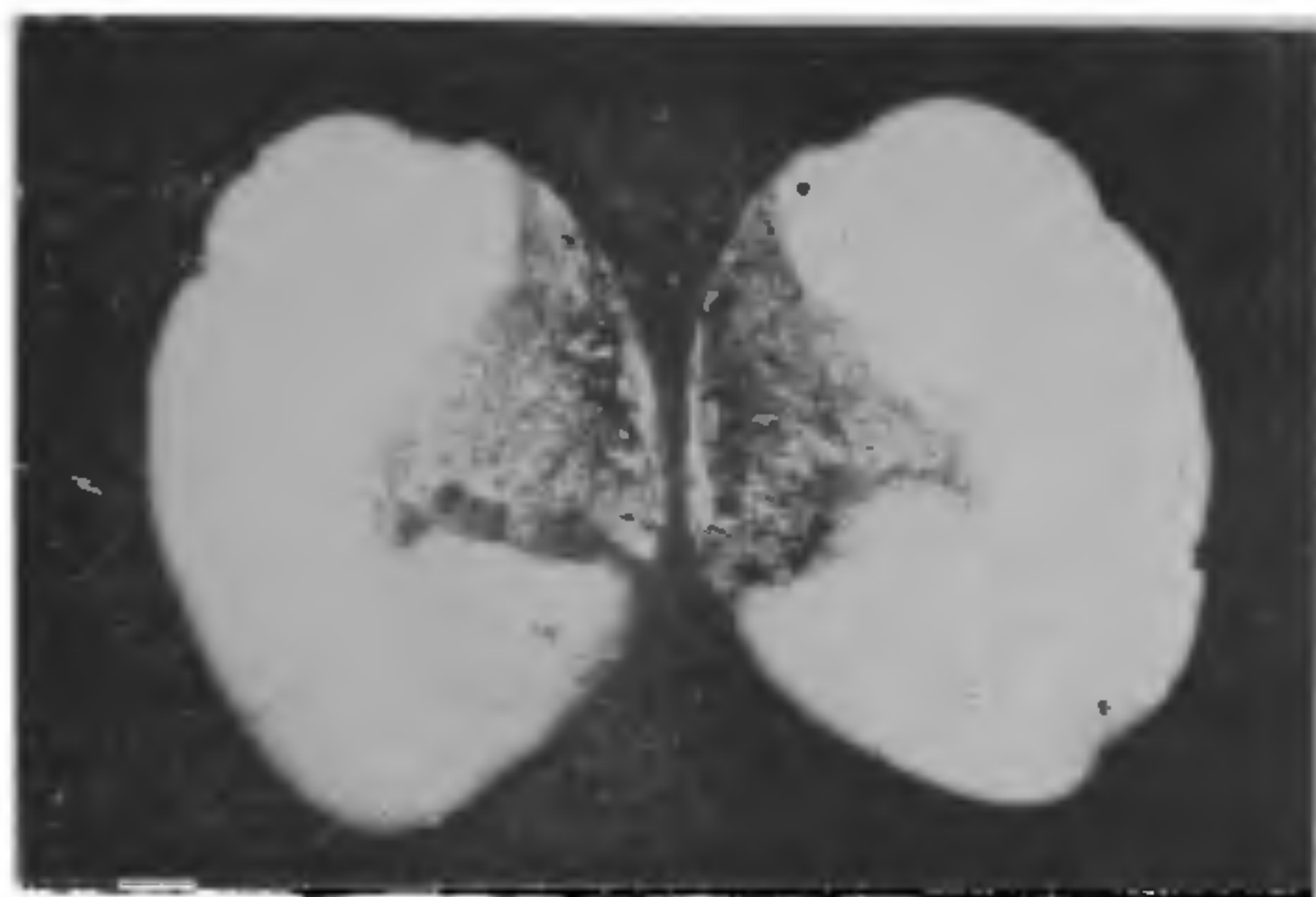


FIG. 3. Inoculated potato tuber showing internal infection of *Pestalotia versicolor*.

survey. The disease incidence was as high as 3.2% during the month of July when the climate is warm and humid. Minimum incidence of the disease was observed in the month of November (1.6%).

The symptom appears as a light brown patch around the injury. On cutting open the tubers, white mycelial mat along with black, shining cushion-shaped acervuli were seen containing the dark coloured conidia (Fig. 3).

The fruiting bodies are black and carbonaceous. Conidia are curved, fusiform and 5 celled. The exterior cells are hyaline while the intermediate ones are pale brown to black in colour. Conidia are 7-10 μ wide, normally with three setulae which are coarse and measure from 15-30 μ in length. The pathogen was identified as *Pestalotia versicolor* Speg.

DISEASE INCIDENCE OF POTATO AND ORANGE IN DELHI MARKET

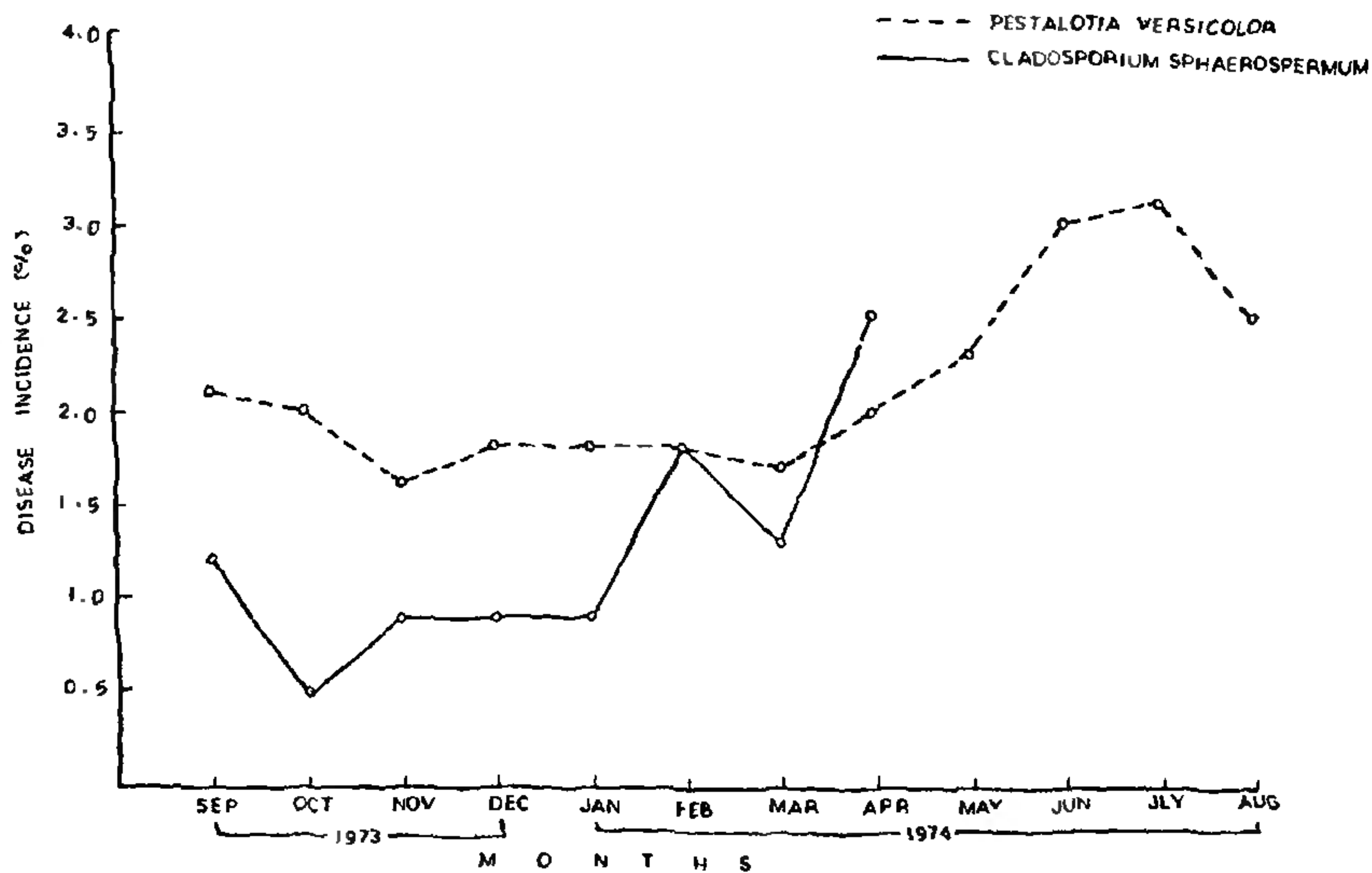


FIG. 4

The colonies of the pathogen are olive green to olivaceous brown but it appears greenish black on the reverse side when the pathogen is grown on malt agar medium. The conidiophores are usually small but it may be as long as 300 μ . It is 3-5 μ thick and pale to dark olivaceous brown in colour. The conidia are globose, verrucose and dark olivaceous brown. The pathogen was identified as *Cladosporium sphaerospermum* Penz.

A soft rot of potato was responsible for causing an average loss of 2.2% on the basis of twelve months

The respective organisms were isolated from the diseased fruits and tubers and their single spore cultures were prepared by the method suggested by Keyworth¹. The pathogenicity of the respective organisms was established following Koch's postulates.

June 19, 1980.

1. Keyworth, W. G., *Trans. Brit. Mycol. Soc.*, 1959, 42, 53.