PHYLLOSTICTA CYCADINA (PASSER) ON *CYCAS REVOLUTA*

ALTHOUGH Chibber reported *Phyllosticta cycadina* on *Cycas* sp from Poona for the first time in India, symptoms were not described and pathogenicity not established by him Infected portion of a leaflet first become yellowish, later changing to light brown. In a large number of cases, the disease starts from the tip proceeding towards the base but in some, it appears as irregularly distributed brown spots. Finally, the infected portion from the tip becomes ash-coloured and may develop black pycnidia, which are more numerous on the lower than on the upper surface. The ash-coloured portions with or without pycnidia get crumpled and fall off, the whole process taking about 4-5 months. The disease is more marked from October to February.

Isolations from the infected regions invariably gave *Phyllosticta cycadina*. The pathogenicity was tested on *Cycas revoluta, C. rumphii*, *Cladium* sp., *Dracæna* sp., palm, *Canna indica*, *Chenopodium album* and *Solanum nigrum*, but it was found to infect *Cycas revoluta* only. Symptoms similar to those observed in nature were produced by artificial inoculations, only when sufficient moisture was available. The disease appeared earlier if the inoculations were made in the evening but the process was slower whenever the inoculations were made in the morning. The first symptoms of the disease appeared 8 days after inoculation, provided moist cotton pads were regularly placed for 4 days. They appeared after 12 days when the plants were kept in the

moist chamber, but not at all if sufficient moisture was not maintained near the inoculum. The infection was earlier during winter and on the fifth day, the mycelium could be traced inside the host tissues. No infection developed on the uninjured upper surface, but the disease appeared without any injury on the lower surface. This difference may be due to the presence of thick cuticle on the upper surface as against numerous stomata on the lower surface. Sections revealed that except in the injured regions, the fungus generally entered through the stomata.

Asthana[1] suggested that Diathane or Cuprovit reduced the incidence of disease but not fully. Ramakrishnan[2] and Choudhury[3] found that leaf-spot diseases caused by *Phyllosticta* could be controlled with Bordeaux mixture. The present disease was not, however, amenable to it. Many mercurial and copper fungicides were tried at various intervals, both before and after artificial inoculations. Copper sandoz and Tillex were found more effective than any other but even these could not control the disease fully. Dusting within three days of inoculation gave more efficient control. The detailed results will be published in due course.

Botany Dept, Univ of Allahabad,
August 19, 1954.

R. N. TANDON.
K. S. BILGRAMI.

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3. Choudhury, S., *Ind. Jour. Agr. Sci.*, **1944, 14, 395.**