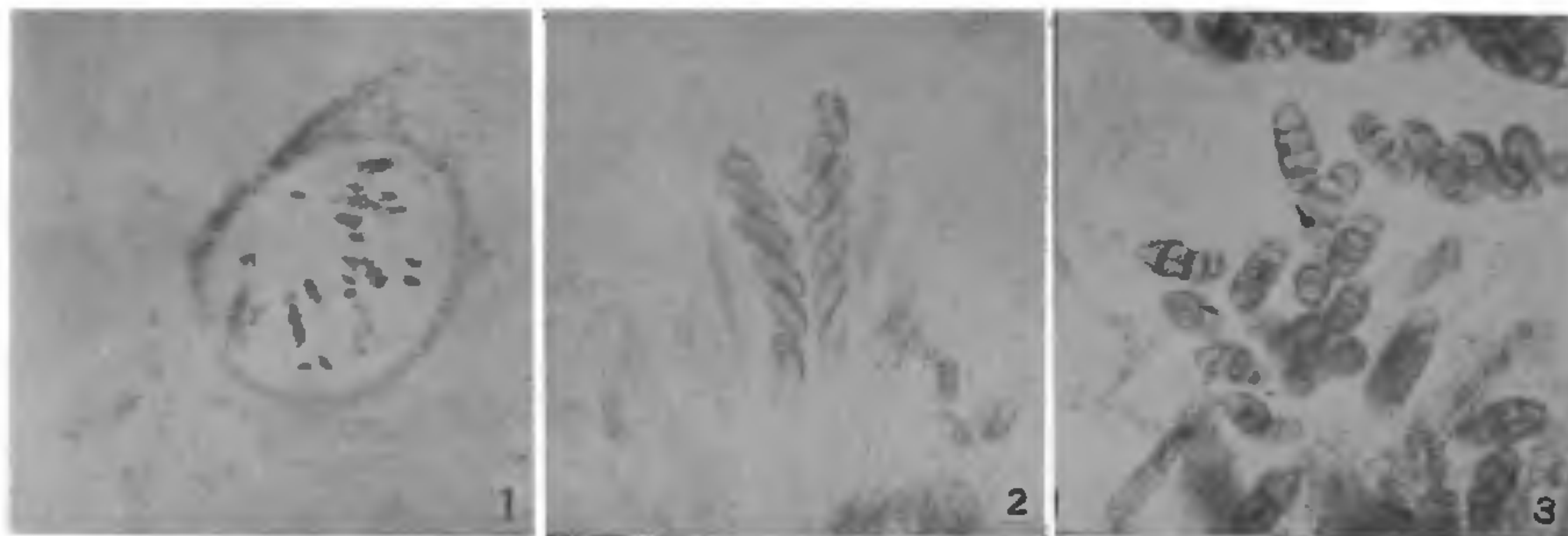


#### A NEW FUNGUS ON THE LEAFLETS OF *CYCAS REVOLUTA*

WHILE studying the leaf-spot diseases at Allahabad, the authors recorded the presence of an ascomycetous fungus on the dried portions of the leaflets of *Cycas revoluta*. So far only two imperfect fungi, viz., *Phyllosticta cycadina* and *Ascochyta cycadina* had been reported from this host.

The perithecia of this fungus are always separate, never aggregated, they are usually globose and black in colour. Generally they are mixed with the pycnidia of *Phyllosticta* and *Ascochyta* but can easily be distinguished on account of their superficial nature and jet black colour. Microtome sections of the host showed that only the bases of perithecia were slightly immersed in the palisade of the host (vide Fig. 1). The range of perithecial size varies from 108.8-216.7  $\times$  95.2-185.6  $\mu$  (Average 143.6  $\times$  127.9  $\mu$ ).

Asci are long, hyaline, cylindrical with eight ascospores arranged obliquely in each ascus (vide Fig. 2). The ascospores are dark-brown,



FIGS. 1-3. Fig. 1. Transverse section of leaflet of *Cycas revoluta* showing a perithecium with several asci and ascospores,  $\times 350$ . Fig. 2. Asci of various age with hyaline wall and obliquely arranged ascospores,  $\times 870$ . Fig. 3. Some mature ascospores showing three transverse septa and one longitudinal septum,  $\times 870$ .

muriform with three transverse septa and only one longitudinal septum (4 septa in all, vide Fig. 3). The range and average size of mature asci and ascospores is recorded below.

Asci  $64-65 \times 15-17 \mu$  (average  $64.65 \times 16.3 \mu$ ).

Ascospores  $14-16 \times 5-6 \mu$  (average  $15.23 \times 5.46 \mu$ ).

Detailed morphological studies were undertaken and it was concluded that the organism was some species of *Teichospora*. This genus was created by Fuckel<sup>1</sup> in 1870. Saccardo<sup>2</sup> in his first treatment divided *Teichospora* in three subdivisions: *Eu. Teichospora* with perithecia not collapsing and spores coloured; *Strickeria* with perithecia finally collapsed—concave and spores coloured and *Teichosporella* with subhyaline spores and perithecia not collapsing. The descriptions of all the known species of *Teichospora* were compared and it was found that the organism did not agree fully with any of them. It shows some resemblance with *T. celicola* (Pass) but the asci of the present species are much shorter in length and slightly thicker in breadth. Further the spores of the present species are smaller in breadth though there is no difference in length. In *T. celicola* the number of septa vary from 3-5 but in this fungus the mature ascospores develop four septa only. It thus appears that the present organism is some new species of *Teichospora* and it is proposed to name it as *Teichospora indica*. So far this genus has not been reported from India.

*Teichospora indica* sp. nov.—The Latin description is given below:—

Perithecia semper distincta, numquam aggregata, ut plurimum globosa et nigra, sæpe

intermixta pycnidiiis *Phyllostictæ* et *Ascochytae*, a quibus tamen sat faciliter distingui potest colore penitus nigro et natura superficiei; bases tantum perithecorum immersæ sunt in textus vallares plantæ hospitis. Asci longi, hyalini, cylindrici et octospori. Maturæ ascosporæ fusce brunneæ, muriformes, ter transverse, semel longitudinaliter septatæ. Ex morphologia patet organismum ad genus *Teichosporam* pertinere. Perithecia  $108.8-216.7 \times 95.2-185.6 \mu$ ; asci  $65-64 \times 15-17 \mu$ ; ascosporæ  $14-16 \times 5-6 \mu$ .

Descriptione omnium specierum cognitarum *Teichosporæ* comparata, claruit nostram speciem nulli earum convenire omnibus in partibus, quare nova species esse videtur. Nulla huius generis species ex India descripta est hucusque. Nostra species *Teichospora indica* nov. spec. hic nominatur.

In order to find out its relationship with other two organisms (*viz.*, *Phyllosticta cycadina* and *Ascochyta cycadina*), numerous attempts were made to grow it at various pH ranges, different temperatures and on a number of synthetic and semi-synthetic media but the perithecia were never developed in culture. Only sterile mycelium was produced. Few perithecia were, however, produced when the organism was grown on sterilized leaves of *Cycas revoluta* but even under such conditions the conidial stages were not observed. Detailed cultural and pathological studies are in progress.

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Department of Botany,  
University of Allahabad,  
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R. N. TANDON.  
K. S. BILGRAMI.

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