

NOTES ON SOME FUNGI FROM SOUTH INDIA-VII

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Pythium vexans de Bary

On the stem of *Hevea brasiliensis* M. Arg. causing canker, Kanjirapally (Kerala), 15-9-1955, T.S.R.

This disease was prevalent on three-year old plants in a budwood nursery in the rainy months of the south-west monsoon period. From minute cracks in the bark drops of latex had oozed out and dried as black streaks on the surface. The diseased bark was depressed and later infested with boring beetles. Below the bark the tissues had turned brown, the discolouration extending to the wood in some instances. Linear spread was either extensive or limited.

The infection was noticed in different regions of the plant. The upper portions of the tap-root of the root-stock, the collar region or the stem of the scion were affected in discontinuous or extensive patches. The latex flowing out of the affected portions had an offensive odour. The leaves often exhibited a bronzed appearance.

P. vexans was repeatedly isolated from the diseased bark. Oospores were produced in abundance in agar cultures. Sporangia were rare on solid media but were developed readily when bits of culture were floated in water. Successful infection was obtained when healthy shoots were inoculated through wounds. This fungus (as *P. complectins* Br.) has been reported to be responsible for bark canker on rubber in Malaya also (Sharples, 1937). In India this pathogen has been recorded on other hosts (Ramakrishnan, 1948) but this is the first report on rubber.

Uncinula religiosa sp. nov.

Mildew patches white, epiphyllous, at first isolated and circular later coalescing and covering the whole surface; conidia formed in chains, hyaline, oblong or barrel-shaped, $30-38 \times 14-20 \mu$. Ascocarps numerous, epiphyllous, spherical, dark brown, $75-90 \mu$ in diameter, appendages hyaline, uncinate, 16-20 in number and $140-170 \mu$ long; ascii 4-6 in each ascocarp, hyaline, ovate, $45-60 \times 28-35 \mu$, often evanescent; ascospores usually 4 in each ascus, oblong, hyaline, $24-28 \times 10-15 \mu$.

Maculae albæ, epiphyllæ, primo separatæ atque circulares, tum coalescentes atque operientes totam paginam; conidia efformata in catenulis, hyalina, oblonga vel doliiformia, $30-38 \times 14-20 \mu$. Ascocarpi plures, epiphylli, sphærici, fusce brunnei, $75-90 \mu$ diam., appendicibus hyalinis, uncinatisque, 16-20 numero, $140-170 \mu$ longitud.; asci 4-6 in singulis ascocarpis, hyalini, ovati, $45-60 \times 28-35 \mu$, sæpe evanescentes; ascosporæ ut plurimum 4 in singulis ascis, oblongæ, hyalinæ, $24-28 \times 10-15 \mu$.

On living leaves of *Ficus religiosa* L. (Moraceæ), Glenburn Estate, Nilgiris, 12-3-1958, T.S.R.

This mildew was severe on this estate and caused heavy defoliation of even young leaves. Numerous ascocarps were seen as minute dark round bodies embedded in the white mildewy growth. But on storage these are usually shed so that in the herbarium specimens they may be missing after six months. The appendages are simple and uncinate at the apex. The wall is thickened in the lower half of the appendage and thin in the upper portion.

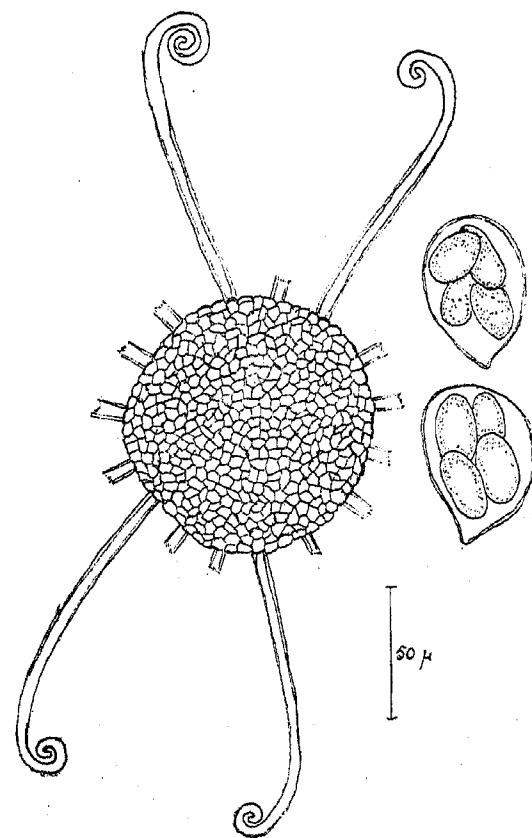


FIG. 1. *Uncinula religiosa* sp. nov.—Ascocarp and ascus.

Aecidium travancoricum sp. nov.

Infected portion yellow, indefinite, slightly convex on the upper surface; pycnia mainly epiphyllous, sometimes hypophyllous, minute, dome-shaped, subcuticular, reddish orange when young, $40-80\ \mu$ high and $250-300\ \mu$ wide; aecia hypophyllous, cupulate, irregularly gregarious, deep-seated, $270-300\ \mu$ wide and up to $500\ \mu$ high; peridia whitish, laciniate, reflexed, peridial cells globose to rhomboid, thick-walled, verrucose, subhyaline to brown according to age, $30-37 \times 28-32\ \mu$; aeciospores catenulate, globose to subglobose, thin-walled smooth, $25-35 \times 25-28\ \mu$ and yellowish brown.

Pars infecta lutea, indefinita, paulum convexa in pagina superiore; pycnia ut plurimum epiphylla, minuta, cupuliformia, subcuticularia, juvenilia quidem rubro-aurantiaca, $40-80\ \mu$ alta, $250-300\ \mu$ lata; aecia hypophylla, cupulata, irregulariter gregaria, alte infixa, $270-300\ \mu$ lata et usque ad $500\ \mu$ alta; peridia albida, laciata, reflexa, cellulis peridialibus globosis vel rhomboideis, crassis parietibus praeditis, verrucosis, subhyalinis vel brunneis pro aetate, $30-37\ \mu \times 28-32\ \mu$; aeciosporae catenulatae, globosae vel subglobosae, tenuibus parietibus praeditae, leves, luteo-brunneae, $25-35\ \mu \times 25-28\ \mu$.

On living leaves of *Coffea travancorensis* W. & A. (Rubiaceae), 28-5-1958, Kottayam, T.S.R.

The pycnial and aecial stages of the rust have been observed. The affected leaves could be easily recognised by the raised yellowish patches conspicuous among the dark green foliage. *Aecidium nobile* Syd. was originally recorded on *Coffea arabica* from Mysore (Sydow, H. & P. and Butler, 1906). Later Mundkur and Thirumalachar (1946) who re-examined the specimen have reported that the host plant was not *Coffea* but *Pavetta* and have made the rust a synonym of *A. pavettæ* Berk. The present host is definitely *C. travancorensis* and the rust is different.

Pellicularia filamentosa (Pat.) Rogers

Rogers, D. P. 1943, *Farlowia*, 1, 95-118.

On living leaves and twigs of *Lagerstræmia indica* (Lythraceae), Mundakayam (Kerala), 25-5-1958, T.S.R.

The host is cultivated as an ornamental plant. During the south-west monsoon many of the branches are affected by the fungus. Some of the leaves are blighted by the formation of large indefinite water-soaked brownish lesions. On other leaves which remain green a white powdery growth of the fungus develops on the lower surface. On this growth the basidia and

basidiospores are formed. This is a new host for the fungus which is widely prevalent in this region.

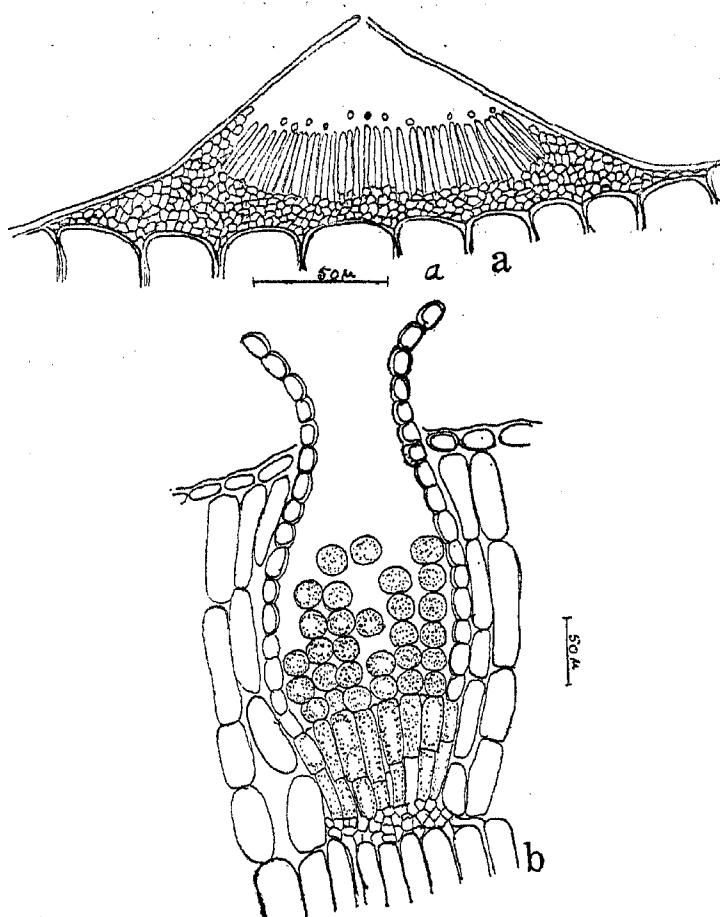


FIG. 2. *Aecidium travancoricum* sp. nov. (a) Section of pycnium, (b) Section of aecium.

Trametes corrugata (Pers.) Bres.

Syn., *T. persoonii* (Fr. ex Cooke) Pat.

On stumps of *Hevea brasiliensis* M. Arg. (Euphorbiaceæ), Pathanapuram (Kerala), 15-9-1957, T.S.R.

Numerous sporophores develop on the stumps of trees cut down for replanting. Evidently it grows as a saprophyte only. No instance of actual death of rubber trees due to infection by this fungus has been observed.

I am indebted to Dr. S. N. Banerjee, Professor of Botany, Calcutta, for the identification of *Trametes*. Rev. Fr. H. Santhapau of St. Xavier's College, Bombay, has kindly made the Latin translation of the diagnoses of new species.

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