PITHOSIRA AND XENOPLACA, TWO DEMATIACEOUS HYPHOMYCETE GENERA FROM SOUTH AMERICA

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The genera *Pithosira* and *Xenoplaca* were described but not illustrated by Petrak (*1949*). The following notes and figures are based on a study of the type specimens, which were collected by H. Sydow in 1937 during a field trip in Ecuador and which are maintained in the 'Naturhistorisches Museum' in Vienna.

1. PITHOSIRA SYDOWII Petrak—Fig. 1

The fungus is the causal agent of scab on leaves of *Passiflora alnifolia*. A membranaceous, thin, pellicle-like stroma is formed between the epidermis and the cuticle of the leaves. It is 3–10 µm thick and composed of light brown, thin-walled, 3–6 µm sized cells or of filaments. The stroma is connected with the superficial hyphae by narrow pegs perforating the cuticle. The superficial hyphae are branched, septate, brown-walled, 2.5–3.5 µm broad and expand

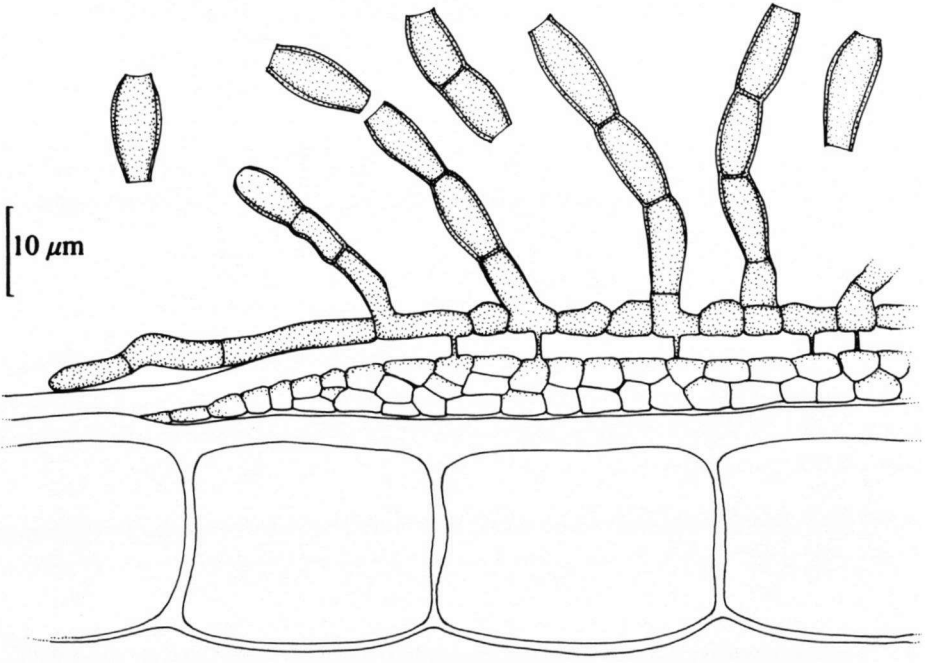

Fig. 1. *Pithosira sydowii*, subcuticular stroma, conidiogenous hyphae, and conidia.

radially over the leaf surface. Erect or suberect branches become rather densely septate and desintegrate into arthroconidia, which are cylindrical or swollen, rather thick-walled, usually 1-celled, and measure 10–17 × 5–8 µm.

Pithosira sydowii is an anamorph of a Stigmateaceae (Venturiaceae) and is related to the genera *Spilocaea* Fr., *Fusicladium* Bon., and *Karakulinia* Golovina, all anamorphs of *Venturia* species. In *Karakulinia* the conidia are also catenate, but are formed in acropetal chains and show distinct scars on release. No other Stigmateaceae are known on Passifloraceae.

2. XENOPLACA AEQUATORIENSIS Petrak—Fig. 2

The fungus was collected on fallen leaves of *Clusia,* but may be parasitic, because an intraepidermal stroma is present. This is composed of subhyaline or light brown, 4–8 µm broad hyphal cells and is connected with the superficial structures by stomatal bodies of thick-walled, brown cells. The superficial structures are flat, scutate, appressed to the cuticle, roundish or irregular in outline, dark brown, 500–1100 µm diam. and 26–40 µm high.

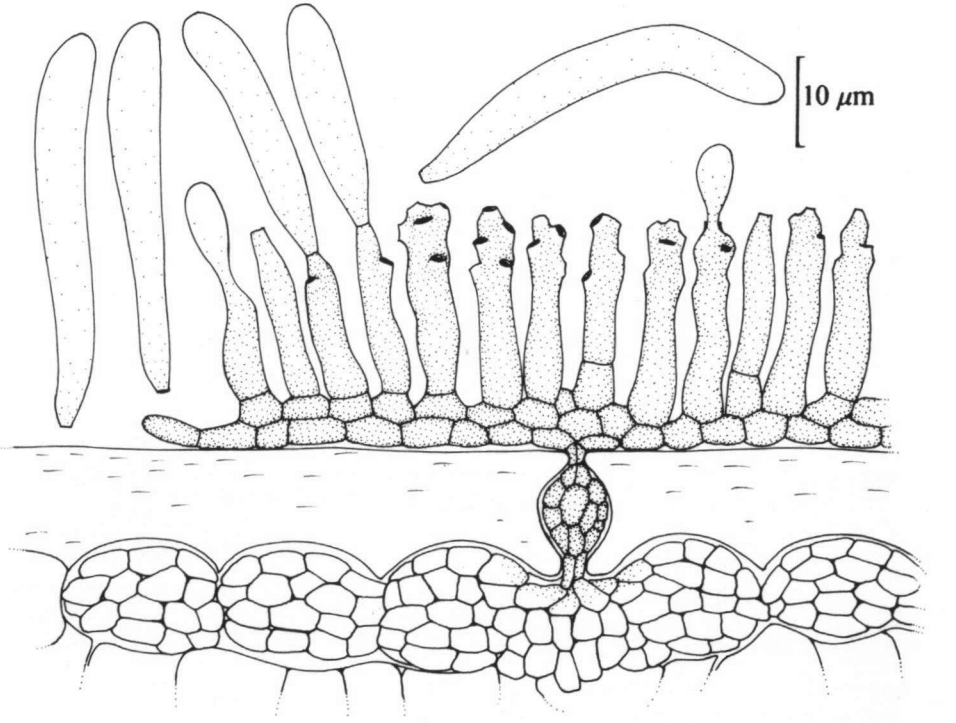

Fig. 2. *Xenoplaca aequatoriensis,* intraepidermal, stomatal and superficial stroma, conidiogenous cells and conidia.

They are composed of a basal layer of dark brown, 5–8 µm broad hyphal cells, from which densely packed conidiogenous cells or short, micronematous conidiophores arise. The conidiogenous cells are irregularly cylindrical or geniculate, either attenuated or slightly swollen at the tip, brown, measuring 20–26 × 4–6 µm. The conidia develop successively and sympodially, are cylindrical clavate, often slightly curved, rounded at the tip, truncate at the attenuated base, 1-celled, subhyaline, thin-walled, 40–70 × 5–7 µm. Old conidiogenous cells show several rather distinct scars in the upper region.

The fungus is rather distinct in the dematiaceous Hyphomycetes, no relatives being known. *Hadrotrichum phragmitis* Fuckel and *Asperisporium caricae* (Speg.) Maublanc show a similar kind of conidiogenesis, but the conidiogenous cells develop on erumpent stromata (Ellis, *1971*; Carmichael *& al., 1980*) and the conidia are much smaller.

References

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