

Preliminary results of leaf litter-decomposing microfungi survey

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As part of an OEA-sponsored collaboration with Dr. Rolf Singer, I have been collecting microfungi from decomposing Dicotyledonous leaf litter. Eight collections were made from four Terra Firme communities, tree collections from an Igapó, and two each from Campinarana and Varzea communities. In addition, there was a collection of permanently submerged litter from Tarumãzinho. Each collection contained approximately 300 fungal isolates. In this preliminary survey 4,500 fungi were isolated.

Among the dozen taxa recovered at all sites there were members of the cosmopolitan genera *Acremonium*, *Aspergillus*, *Cloridium*, *Paecilomyces*, *Penicillium*, *Pestalotia*, *Scolecobasidium*, and *Trichoderma*. Other ubiquitous taxa include *Beltrania rhombica*, *Thozetella* spp, unidentified dematiaceous Hyphomycete D 6436 and unidentified Ascomycete 7512.

Besides the above-mentioned taxa, only seven taxa were isolated from two or more plant community types. These include the unusual dematiaceous Hyphomycetes *Chaetopsina fulva*, *Gliocephalotrichum bulbiferum*

and *Phaeoisaria clematididis*. Preliminary examination of the other taxa failed to produce appropriate generic dispositions.

There were more than one hundred taxa of sporulating fungi which were isolated from individual plots. These include species of *Charala*, *Cladosporium*, *Codinaea*, *Dactylaria*, *Exophiala*, *Fusarium*, *Geotrichum*, *Gliocladium*, *Monodictys*, *Phialocephala*, *Phialophora*, *Rhino-cladiella*, *Scolecobasidium*, *Septonema*, *Sporothrix* & *Stachybotrys*. The distribution of Basidiomycetous hyphae isolated with clamp connections was also restricted to individual collecting sites.

While 300 isolates per collection appears to be inadequate to monitor total diversity there is a great deal of localization of fungi. Sporulating taxa from duplicate collections of a plot were as different from each other as collections from different community types. While future collections will inevitably show that many more fungi are widely distributed, other localized "endemics" are certain to be isolated as well. These preliminary results should alert the reader of the mycological lite-

ature to view general statements about Tropical litter-decomposing fungi with caution. Future work will focus on the distribution patterns of microfungi in Terra Firme and Igapó communities. Leaf colonization in the canopy will be examined, also.

RESUMO

Nas observações iniciais dos microfungos decompositores de folhas de dicotiledôneas da liteira, coletados na terra firme, igapó, campinarana e várzea, além da liteira submersa do Tatumãzinho, foram isolados 4.500 fungos. Representantes dos gêneros cosmopolitas *Acremonium*, *Aspergillus*, *Cloridium*, *Paecilomyces*, *Penicillium*, *Pestalotia*, *Scolecobasidium* e *Trichoderma*, assim como *Beltrania rhombica*, *Thozetella* spp., Hyphomycetes D 6436 e Ascomycetes 7512 foram encontrados em todos os ambientes. Em dois ou mais ambientes foram

encontrados os não comuns *Chaetopsina fulva*, *Gliophalotrichum bulbiferum* e *Phaeoisaria clematidis*. Entre os mais de cem isolados de uma única amostra, estão incluídas espécies de *Charala*, *Cladosporium*, *Codinaea*, *Dactylaria*, *Exophiala*, *Fusarium*, *Geotrichum*, *Gliocladium*, *Monodictys*, *Phialocephala*, *Phialophora*, *Rhinocladiella*, *Scolecobasidium*, *Septonema*, *Sporothrix* e *Stachybotrys*. Hifas de Basidiomycetes com fíbulas também foram encontradas em um único local. Os 300 fungos isolados por coleção parecem não ser suficientes para demonstrar a diversidade dos mesmos. Taxa de coleções duplicadas de um mesmo local eram tão diferentes quanto as de coleções de tipos vegetacionais diferentes. Futuras coleções demonstrarão inevitavelmente que muitos fungos são largamente distribuídos e outros "endêmicos". Estes resultados preliminares deverão servir como alerta aos especialistas em Micologia a terem cuidado quanto aos seus pontos de vista com relação aos fungos tropicais decompositores da liteira.

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