AMAZONIAN FOLIICOLOUS FUNGI III (*). A PRELIMINARY LIST OF ASCOMYCOTINA, MOSTLY DOTHIDEALES, SENSU LATO.

M. L. Farr (**)

SUMMARY

This paper records 65 leaf-inhabiting sac fungi collected in Amazonas and Roraima during 1977-78 as part of Projeto Flora Amazonica. **Lembosia miconiae** (Ryan) Farr is a new combination.

INTRODUCTION

This is a report of the black mildew and fly speck fungi (along with their hyperparasites and a few other species) collected during the first two field trips of Projeto Flora Amazonica. Specimens whose number starts with "BR" were collected by K.P. Dumont and associates (I. Araujo, J.C. Bernardi, W.R. Buck, E.M.M. Freire, D.R. Hosford, M.A. Souza, G.J. Samuels, W.C. Steward) in Terr. Roraima (unless otherwise indicated), November and December, 1977. Numbers preceded by "AM" represent specimens gathered by M.L. Farr, usually accompanied by I. Araujo and J.F. Ramos, in Amazonas, along the Rio Negro (unless otherwise indicated), January, 1978. A few were collected by the author alone during her stay at the INPA campus in Manaus.

According to PFA protocol, the first set of specimens was deposited at INPA, the second and third at NY and BPI, respectively. All but 55 of the INPA set, however, was destroyed by fire (B. Nelson, personal comm., September, 1985).

Acanthotheciella barbata (Part.) Höhnel. Nr. Ilha do Carvão, on Violaceae in várzea forest, 13 Jan, **AM-70**, det. A. Rossman. **Gilmania pulchra** Bat.& Cavalc. is probably a synonym.

Acrogenotheca ornata Deighton & Piroz. Islands nr. Barcelos, on leguminous tree in capoeira, nr. sand beach, 15 Jan, **AM-114**; J. Bani nr. Tapuruquara and Vista Alegre, on scabrous leaves of small dilleniaceous tree nr. sand and rock beach, 19

(*) The first paper of this series was published in MYCOTAXON (1980): the second is nearing completion.

(**) Mycology Laboratory, Plant Protection Institute, U.S. Department of Agriculture, Agricultural Research Service, Beltsville Agricultural Research Center, Beltsville, Maryland 20705, USA.

Jan, **AM-157.**

Amazonia sp. Reserva Biologica de Campina INPA-SUFRAMA along Manaus- Caracarai Rd., on undet. host, 6 Nov, **Br-114a.** Hyperparasitized by **Trichothyrium reptans.**

Aphanostigme sp. (immature). Along Manaus-Boa Vista Rd., 240 km from junction with Manaus-Itacoatiara Rd., on Chrysobalanaceae, 8 Dec, **Br-958.**

Asteridiella sp. (possibly undescribed). Boa Vista-Dormida Rd., ca 5 km from Boa Vista, on Euphorbiaceae, 4 Dec., **Br-897.**

A. glabra (Berk. & Curtis) Hansf. var. **isertiae** (Stevens) Hansf. Manaus- Boa Vista Rd., ca 653 km from junction with Manaus-Itacoatiara Rd., on Rubiaceae, 22 Nov, **Br-693.** Partially hyperparasitized by **Trichothyrium reptans.**

A. hypelates Hansf. Boa Vista-Dormida Rd., ca 5 km from Boa Vista, on Sapindaceae, 4 Dec. **Br-900.** This fungus morphologically approaches **A.chardonii** Hansf.

A. sapii (Hansf.) Hansf. Boa Vista-Dormida Rd., ca 23 km from junction with Boa Vista-Bonfim Rd., ca 5 km from Boa Vista, on Euphorbiaceae, 4 Dec, **Br-902.** Phialides are not abundant in this material.

? A. vismiicola Hansf. Along Manaus-Boa Vista Rd., ca 533 km from junction with Manaus-Itacoatiara Rd., epiphyllous on Guttiferae, 22 Nov, **Br-682.**

Asterina sp. Manaus-Boa Vista Rd., ca 283 km from junction with Manaus-Itacoatiara Rd., on Melastomataceae, 8 Dec, **Br-957.**

A. acalyphae Sydow. Manaus-Boa Vista Rd., ca 452 km from junction of Manaus - Itacoatiara Rd., on Euphorbiaceae, 20 Nov, **Br-676.**

A. banisteriae Sydow. Manaus-Boa Vista Rd., ca 561 km from junction of Manaus-Itacoatiara Rd., on Malpighiaceae, 22 Nov, **Br-689.**

A. solanicola Berk. & Curtis. Boa Vista-Sta.Elena Venezuela Rd., ca 226 km N of Boa Vista, on Solanaceae, 2 Dec, **Br-869.**

A. cf. **vagans** Speg. INPA Forest reserve "Ducke" nr. Manaus, on scabrous leaves of undet. shrub in lowland tropical rain forest, 6 Jan, leg. M.L Farr & R. Singer, **AM-53;** Boa Vista-Sta.Elena Venezuela Rd., ca 226 km N of Boa Vista, 2 Dec, **Br-868.** along Manaus-Boa Vista Rd., ca 283 km from junction with Manaus-Itacoatiara Rd., on Solanaceae, 8 Dec, **Br-955a. Br-868** is hyperparasitized by **Phaeodimeriella** sp.

Asterinema caseariae Bat. & Gay. var.**amazonense** Farr. Boa Vista-Manaus Rd., 67 km S of Boa Vista, 7 Dec, on Flacourtiaceae, **Br-934.**

Brooksia tropicalis Hansf. Islands nr.Barcelos, on leguminous tree in capoeira nr. sand beach, 15 Jan, **AM-114;** Costa da Castanheira, on Lecythidaceae in capoeira, 18 Jan, **AM-149;** J. Bani nr. Tapuruquara & Vista Alegre, on small malpighiaceous tree nr. sand and rock beach, 19 Jan, det. K. Pirozynski; **AM-153,** same data, on **Astrocaryum** sp., **AM-155** & **156;** on Dilleniaceae, **AM-157;** on Polygalaceae, **AM-158;** on Myrtaceae, **AM-160;** ca 60 km W of Tapuruquara, on Myrtaceae, 21 Jan. **AM-186;** Reserva Biol. de Campina INPA-SUFRAMA, Manaus-Caracarai Rd., 45 km from junction with Manaus-Itacoatiara Rd., on undet, dead leaves, 6 Nov, **Br-114b** & **130;** same data, on living undet. leaves, **Br-132** & **133;** Manaus-Boa Vista Rd., ca 354 km from junction with Manaus-Itacoatiara Rd.,amphigenous on undet. living leaves, 17 Nov, **Br-491** ;

Manaus-Boa Vista Rd., ca 240 km from junction with Manaus-Itacoatiara Rd., on Chrysobalanaceae, 8 Dec, **Br-958**.

Chaetothyrium vermisporum Hansf. Boa Vista-Dormida Rd., ca 5 km from Boa Vista on Sapindaceae, 4 Dec, **Br-899** (sparse).

Ciferrusia womersleyi (Hansf.) Bat. (Collection data as for **Brooksia tropicalis**), **AM-160**.

Cirsosia sp. Possibly **C. manaosensis** (P.Henn.) Arn. or **C. irregularis** (Sydow) Arx, but too poorly developed to be sure, **Br-132**. See **Brooksia tropicalis** for collection data. Amphigenous, hyperparasitized on upper leaf surface by **Dimerium scabrosum**.

Dimerium sp. Boa Vista-Sta. Elena Venezuela Rd., ca 226 km N of Boa Vista, on Zingiberaceae, hyperparasitic on **Schizothyrium rufulum**, 2 Dec, **Br-873**.

D. scabrosum Sydow. Collection data as for **Cirsosia** sp., **Br-132**, on which it is hyperparasitic.

Dysrhynchis pulchella (Sacc.) Clem. Collection data as for **Brooksia tropicalis**, **AM-153**.

Echidnodella sp. Collection data as for **Brooksia tropicalis**, **AM-186**.

Irenopsis selaginellarum (Cif.) Hansf. Manaus, Hotel Tropical grounds, on **Selaginella** sp., 1 Jan, **AM-7**, hyperparasitized by **Trichothyrina** cf. **asterophorum** (Berk. & Curtis) Höhnel.

Lembosia byrsonimae P. Henn. Boa Vista-Dormida Rd., 23 km from junction with Boa Vista-Bonfim Rd., ca 5 km from Boa Vista, epiphyllous on Malpighiaceae, 4 Dec, **Br-901**.

L. miconiae (Ryan) Farr comb. nov. Basionym: **Morenoella miconiae** Ryan, Mycologia 16: 191.1924. INPA forest reserve "Ducke" nr. Manaus, on **Miconia longifolia** (Aubl.) DC (probably, **fide** J. Wurdack, 1982) in lowland tropical rainforest, 6 Jan, leg. M. L. Farr & R. Singer, **AM-61**. This new combination is necessitated by the fact that **Morenoella** Speg. is a synonym of **Lembosia** Lév. (Müller & Arx, 1962). The Amazonian collection agrees well with BPI isotype and paratype material of **M. miconiae** (Stevens **8145** and **8137**, respectively).

Lembosina sp. INPA grounds, epiphyllous on **Miconia longifolia** (Aubl.) DC. (probably, **fide** J. Wurdack), 4 Jan, **AM-36**.

Linotexis argentinensis Petrak. Manaus-Boa Vista Rd., 561 km from junction with Manaus-Itacoatiara Rd., on undet. host, 22 Nov, **Br-687**.

Meliola sp. Manaus-Boa Vista Rd., ca 462 km from junction with Manaus-Itacoatiara Rd., epiphyllous on Annonaceae? (**fide** J. Wurdack, 1983; "Auraccaceae" on label) 8 Dec, **Br-945**. The fungus does not fit any **Meliola** species on Annonaceae, but since the host determination is uncertain, no new taxon is named. The following brief description may be useful to future investigators. Beeli formula: 3112.4231. Ascomata 176-240 µm diam; setae 160-280 µm long; capitate hyphopodia opposite, entire, broadly rounded to broadly clavate, 12-18 µm long; head cell 10-12 (-14) x 10 µm; phialides ("mucronate hyphopodia") rare, ca 24 µm long, one-half of which constitutes

the beak.

Meliola sp. Collection data as for **Brooksia tropicalis**, **Br-958**.

M. bignoniacearum Stevens var. major Hansf. INPA *grounds*, epiphyllous on smooth, coriaceous leaves of bignoniaceous vine, 4 Jan, **AM-38**.

M. cf. cibaoensis Hansf. Collection data as for **Lembosia byrsonimae**, **Br-901**.

M. clavulata Winter. Manaus-Boa Vista Rd., ca 561 km *from* junction with Manaus-Itacoatiara Rd., on Convolvulaceae, 22 Nov, **Br-683**.

M. dentifera Sydow. Boa Vista-Manaus Rd., ca 77 km S of Boa Vista, on Bigno - niaceae, 7 Dec, **Br-936**.

M. ?maniNoticola P. Henn. Collection data as for **Asterina acalyphae** Sydow, **Br-676**. The fungus fits the description except that the hyphopodia are alternate or unilateral instead of opposite.

M. pallida Stevens. Collection data as for **M. clavulata**, **Br-683**.

M. cf. protii Stevens. J. Bani nr. Tapuruquara & Vista Alegre, on small bursera ceous tree nr. sand and rock beach, 19 Jan, **AM-154**.

M. trichostroma (Kuntze) Toro. Barcelos, on cultiv. myrtaceous tree along street; 26 Jan, **AM-239**.

Mendogia manaosensis (P. Henn.) Theissen & Sydow. J. Bani. nr. Tapuruquara & Vista Alegre, on undet. host nr. sand *and* rock beach, 19 Jan, **AM-159**.

Micropeltis sp. EMBRAPA experimental plot 10 km N of Manaus, km 30 on Manaus - Itacoatiara Rd., on rubiaceous shrub in lowland tropical rainforest, 2 Jan, **AM-9**.

?Microthyriella vagabunda Bat. & Cavalc. INPA grounds, on **Vismia** sp., 4 Jan, **AM 35**. This *fungus*, found only on one leaf, generally fits the description of the species, but no ripe material of the latter was available for comparison. *Müller & Arx* (1962) equated **Microthyriella** Höhnel with **Schizothyrium** Desm., but since I did not see type material of M. vagabunda, no transfer is made.

Microthyrium sp. Nr. Tapuruquara, on Astrocaryum sp., 22 Jan, **AM-209a**. This fungus does not correspond with **M. palmarum** Cke. or **M. carludovicae** P. Henn., but is too scanty to characterize as a new species.

Mycerema sp. Ca 73 km W of Barcelos, on scabrous leaves of melastomataceous tree 25 Jan, **AM-237**. Sparse.

M. vochysiacearum Bat. et al. Ca 60 km W of Tapuruquara, on Myrtaceae, 21 Jan, **AM-186**. Possibly also nr. Tapuruquara, on upper portion of apocynaceous tree in low, inundated thornless palm scrub, 18 Jan, **AM-144**. **Mycerema** Bat. et al. was listed by Müller & Arx (1962) as a synonym of **Schizothyrium**, but the scutellum texture appears to differ in the two genera.

?Mycolangloisia tetracerae (Hansf.) Arx. INPA *grounds*, hyperparasitic on **?Prillieuxina** sp. on **?Doliocarpus** sp., 4 Jan, **AM-28**.

?Niesslia sp. Collection data as for **Brooksia tropicalis**, **AM-155**. Det. A. Rossman.

Phaeodimeriella *sp.* Collection data as for **Asterina vagans**, **Br-868**, on which it is hyperparasitic.

P. guarapiensis (Speg.) Speg. INPA grounds, hyperparasitic on **Prillieuxina** sp. on undet. host, 4 Jan, **AM-32**.

?Phyllachora **guavirae** Speg. Collection data as for **Brooksia tropicalis, AM-186.** Possibly this is a species of **Stigmochora**, but the fungus is too poorly developed for a positive identification.

Plectomyriangium atrum Mor. & Mor. Collection data as for **Brooksia tropicalis**, Br-132. Hypophylous.

Plochmopeltis graminicola (Höhnel) Arx, new var.? Collection data as for **Mycerema** sp., **AM-237**. Hypophyllous on dense layer of stellate hairs. Although diverging from the species description and a ZT specimen of **P. graminicola** by larger, more elongate asci, and ascospores 1 µm wider, the fungus is too scanty to typify a new taxon.

Prillieuxina sp. Collection data as for **Phaeodimeriella guarapiensis**, AM-32.

Schizothyrium ?phoebes (Sydow) Arx. Ca 20-30 km E of Tapuruquara, on araceous vine in dry capoeira, 23 Jan, **AM-227**. Although no material of Sydow's species was available, the Amazonian fungus compares well with the description, differing only in having ascospores 1-1.5 µm narrower.

S. rufulum (Berk. & Curtis) Arx. INPA grounds, epiphyllous on prostrate, creeping malpighiaceous vine, 3 Jan, **AM-25**; collection data as for **Dimerium** sp., BR-873; coll. data as for **Chaetothyrium vermisporum, Br-899**; collection data as for **Lembosia byrsonimae**, Br 901.

Seuratia cf. **globulifera** (Ell. & Ev.) Meeker. Collection data as for **Mycerema** sp., **AM-237**. Epiphyllous.

Sydowiellina paulliniae Bat. & Lima. Collection data as for **Chaetothyrium vermisporum, Br-899. Sydowiellina** Bat. & Lima is listed by Arx & Müller (1975) as a synonym of **Myriangiella** Zimm.; however, a comparison of S. **paulliniae** with **M. arcuata** Toro showed that these two taxa are not conspecific, as stated by Arx & Müller. It is not known whether **S. paulliniae** fits any other species of **Myriangiella**, or whether it needs to be recombined in that genus.

Trichopeltis pulchella Speg. Collection data as for **Asteridiella vismiicola, Br 682.**

Trichopeltis reptans Speg., **sensu** F.L. Stevens (1925, pp. 78-86). **Collection** data as for **Brooksia tropicalis, AM-156** and **Br-133**; collection data as for **Mycerema** sp. AM-237; ca 73 km W of Barcelos, on Flacourtiaceae, 25 Jan, **AM-238**; igarapé de Tarumã Grande, hypophyllous on undet. host in igapó, 8 Nov, **Br-175.**

Spegazzini's taxon has been investigated and discussed by numerous authors and has become a case of taxonomic confusion, because the type collection apparently contains several superficially similar fungi. The Amazonian specimens, like the Hawaiian ones cited by Stevens (l.c.), grow directly on the leaf and are not hyperparasitic. **Trichopeltum hawaiiensis** Bat. & Costa may be the same fungus.

?Trichopeltospora reticulata Batista et al. INPA grounds, epiphyllous on undet. host, 2 Jan, **AM-23**; INPA forest reserve "Ducke" nr. Manaus, epiphyllous on **Maripa** sp.,

6 Jan, **AM-60**.

Trichothallus sp. Collection data as for **Brooksia tropicalis**, **AM-158**. Epiphyllous.

Trichothyrina cf. **asterophorum** (Berk. & Curtis) Höhnel. Collection data as for **Irenopsis selaginellarum**, **AM-7**, on which it is hyperparasitic.

Trichothyrium reptans (Berk. & Curtis) Hughes. Hyperparasitic on **Amazonia** sp., **Br-114**. See **Brooksia tropicalis** for collection data. Collection data as for **Asteridiella glabra** var. **isertiae**, **Br-693**, on which it is hyperparasitic.

Viegasia sp. Collection data as for **Brooksia tropicalis**, **Br-130**.

Vizella sp. Ca 20-30 km E of Tapuruquara, hypophyllous on Lacistemaceae in dry capoeira, 23 Jan, **AM-228**.

Vizella ?gomphispora (Berk. & Curtis) Hughes. Collection data as for **Brooksia tropicalis**, **AM-157**; collection data as for **Vizella** sp., **AM-228**. Epiphyllous.

RESUMO

Este trabalho relaciona 65 fungos epifoliares coletados no Amazonas e Roraima no período 1977-1978 pelo Projeto Flora Amazonica. ***Lembosia miconiae*** *(Ryan) Farr é uma combinação nova.*

ACKNOWLEDGMENTS

I Thank J. Wurdack and J. F. Ramos for identifying host plants; S. J. Hughes, K. A. Pirozynski, and A. Y. Rossman for assistance with certain fungus identifications; and the directors and curatorial staff of herbaria K, LPS, S, and URM for lending me critical specimens for study. My sincere appreciation is extended to R. Singer for enabling me to collect fungi at the EMBRAPA experimental plot and other localities near Manaus. Projeto Flora Amazonica is funded by NSF grant INT77-17704.

References

Arx, J.A. von, and E. Müller. - 1975. A re-evaluation of the bitunicate Ascomycetes with keys to families and genera. **Stud. Mycol.** (Baarn), No. 9:1-159.

Müller, E., and J.A. Von Arx. - 1962. Die Gattungen der didymosporen Pyrenomyceten. **Beitr. Kryptogamenfl.** Schweiz, 11(2):1-922.

Stevens, F.L. - 1925. Hawaiian Fungi. **Bull. Bernice P. Bishop Mus.**, 19:1-189.