MSA ~~ ABSTRACTS

root tips can be determined by the use of restriction fragment length polymorphism (RFLP) of DNA. A database of unknown EM morphotypes was created that contains corresponding ITS RFLP patterns. Mushrooms and truffles were also collected from the sites. Many of these mushrooms have not been identified to species because of insufficient taxonomic keys for certain groups. Inocybe is a large genus that is poorly understood taxonomically, but is ecologically important in our forests. DNA was extracted from 114 Inocybe collections and amplified using PCR. The PCR product was used to create ITS RFLP patterns. These patterns were then compiled into a database for comparison and delineation of taxonomic groups. EM morphotypes can then be matched to sporocarp taxonomic groups by comparing the EM morphotype database to the sporocarp database. Nearly 40 different RFLP patterns have been identified from Inocybe sporocarps. Of these, 10 have been shown to match a specific root morphotype. Poster

*McKAY, D.¹, SMITH, J.E.¹, LeFEVRE, C.². ¹USDA Forest Service, Pacific NorthWest Research Station, Corvallis, OR; ²Dept. of Forest Science, Oregon State Univ, Corvallis OR 97331. **DNA files of stalked and stalk-less fungi from the H.J. Andrews LTER site.**

Preceding the application of molecular tools to investigate ectomycorrhizal (EM) community structure, nearly 4600 collections of mushrooms and truffles were identified and dried. More than 260 species from our four-year study in the western Cascade Range of Oregon in the H.J. Andrews Long Term Ecological Research Site await the next chapter in their journey. We are now obtaining molecular fingerprints from these species that will help us reveal the identities of EM symbionts hidden belowground. Sequence information of the complete internal transcribed spacer (ITS) region will be submitted to GenBank. The ITS region will also be characterized by restriction fragment length polymorphism (RFLP) analysis using primers ITS-1F and ITS-4 and restriction enzymes HinfI, DpnII, and AluI. Molecular data of this type is essential for increasing our understanding of EM fungal community dynamics. One application will be to determine whether or not fungi we see in old-growth forests are present in younger managed forests on tree roots but not seen as sporocarps. Such knowledge contributes to our understanding of habitat factors that influence sporocarp occurrence. Poster

McKEMY, J.M. USDA-APHIS, Systematic Botany and Mycology Lab, Beltsville, MD 20705. Fungi occurring on *Viburnum*, with a new species of *Lewia* and its anamorph *Alternaria*.

Viburnum is imported into the US for decorative use in bouquets and for propagation and sale in the nursery industry. A number of fungi have been found associated with these *Viburnum* spp. as a result of inspection by USDA Animal and Plant Inspection Service. In 2001 an undescribed species of *Lewia* and its *Alternaria* anamorph were discovered in a shipment being exported by The Netherlands. Additionally, the following species have been observed: *Ascochyta* sp., *Coniothyrium* sp., *Leptosphaeria lonicerae, Leptosphaeria* sp., *Phomopsis* sp., *Phoma exigua* var. *viburni, Phoma* sp., *Pleospora herbarum*, and *Sirophoma singularis*. The purpose of this presentation is to list the fungi known to occur on *Viburnum* spp. and to illustrate some of the more interesting ones. *Poster*

*METHVEN, A.S.¹, MORT, M.E.², HUGHES, K.W.³, and PETERSEN, R.H.³. ¹Dept. Biological Sciences, Eastern Illinois Univ., Charleston, IL 62910; ²Dept. Ecology and Evolutionary Biology and the Museum of Natural History and Biodiversity Research Center, Univ. Kansas, Lawrence, KS 66045; ³Botany Dept., Univ. Tennessee. **Interspecific hybrids of** *Flammulina*.

Laboratory generated interspecific hybrids of *Flammulina* (Basidiomycetes, Agaricales, Tricholomataceae) were examined by RFLPs of the nrDNA internal transcribed spacer regions (ITS1 and ITS2). Digestion with two restriction enzymes, Hae III and Bst F51, distinguished among the interspecific hybrids and produced distinctive RFLP signatures. Results of these analyses reveal a complicated pattern of ITS evolution; additivity and concerted evolution were observed in the ITS hybrids. *Poster*

*MIADLIKOWSKA, J. and LUTZONI, F. Dept. Biology, Duke Univ., Durham, NC 27708. New approach to an old problem resolving the *Peltigera canina* species complex (Peltigeraceae, lichenized Ascomycota).

The Peltigera canina species complex represents the most recently derived section within the genus Peltigera. Morphology and secondary compounds were the only taxonomic evidences used to circumscribe species forming this complex of highly polymorphic group of foliose lichens. To evaluate the putative morphospecies within the canina complex, maximum parsimony (MP) and maximum likelihood (ML) phylogenetic analyses were conducted on separate and combined ITS and LSU nrDNA sequences for 17 recognized species and eight potential taxa, represented by 65 individuals. Patterns of variation in length and structure found within a hypervariable region of ITS1 were used as supplementary data for delimiting genetic boundaries among closely related species. In addition to the coded characters derived from ambiguously aligned portions of alignments (INAASE), 24 coded discrete characters were provided by the ITS1 marker. Based on optimal topologies we found complete concordance between phylogenetic and morphological species circumscription for 13 Peltigera species from this complex. Phylogenetic distinctness between North American and European populations of the morphologically uniform species P. degenii was detected and highly supported. Our results confirm recognition of three newly proposed undescribed species. No evidence for recombination was found within the P. canina complex. Contributed presentation

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An Interview With Dr. William Dudley Gray April 3, 1987 -- Lancaster, Ohio

by Karl Leo Braun

Questions or comments should be sent to Karl L. Braun at 5460 Ballentine Pike, Springfield, OH 45502 or email: < kbraun25@aol.com >.

FIRST MET DR. GRAY while working in a mycology lab at Wright Field in Dayton, Ohio. I was in my middle twenties and he was a visiting professor from The Ohio State University who had come to Wright Field to teach a course in Industrial Mycology. I took the course – a wise decision because what I learned there helped shape the rest of my life. It was in that course I learned what a Myxomycete was. He encouraged me to return to Ohio State and work under him as a lab assistant. I did so and went on to receive a Master of Science degree and my thesis was on the Myxomycetes of Ohio. What I learned there became invaluable to me as a high school biology teacher. He was a great teacher and a wonderful friend until his death in 1990.



Dr. William Dudley Gray, 1987. (Photo by Karl Braun)

THE INTERVIEW

- KLB: I'd like to know when and where you were born and a little bit about your parents.
- WDG: I was born in Clarksville, Indiana, September 21, 1912, about a half mile from where George Rogers Clark spent a good many of his last days. My father was an accountant and my mother was a stenographer. Of course, I never knew my mother very well. She died when I was about 6 years old, during the flu epidemic in WWI.
- KLB: When you were growing up, did anything particularly interesting happen that made an impression on you?