

Winners of the New England Botanical Club Graduate Student Research Awards for 2001

Michael Moody (University of Connecticut)

Phylogenetics, phenotypic plasticity, and potential hybrids in the aquatic plant genus *Myriophyllum* (Haloragaceae)

The award will be used to aid in collection of specimens, in visiting herbaria, and in collection of preliminary data for a research project that 1) uses an explicitly phylogenetic approach to help identify relationships among species and limits between putative species among *Myriophyllum*; and 2) uses the phylogenetic hypotheses to a) examine the limits and evolution of plasticity in the “North American” clade and b) investigate the role of hybridization in this prolific invasive species.

Valérie Reeb (University of Illinois at Chicago)

Phylogenetics of the Acarosporaceae (lichen-forming Ascomycetes) and *Acarospora*, and worldwide revision of the species complex *A. cervina*-*A. glaucocarpa*

The award will support field work and collecting in New England. Members of the lichen-forming fungi family Acarosporaceae and genus *Acarospora* have putative ancestral character states suggesting a basal position within the lichenized ascomycetes. Therefore, the study of this family and genus is likely to provide information essential to our understanding of the diversification of lichens. However, diagnostic features of the family and genus are also found in others families and genera, which render the circumscription of Acarosporaceae and *Acarospora* controversial. The genus *Acarospora*, subject to broad morphological variations, shows numerous species complex as the *Acarospora glaucocarpa* - *A. cervina* complex. It is not known if the complexity of the genus represents environmental modifications or genetic variation. The proposed study is to 1) reconstruct the phylogeny of the family Acarosporaceae and genus *Acarospora* within the Ascomycota, based on multiple molecular data sets, and 2) undertake a worldwide revision of the *Acarospora cervina* – *A. glaucocarpa* species complex, using morphological, anatomical, chemical, and molecular data.

Rachel Williams (Michigan State University)

Phylogeny of *Pycnanthemum* (Lamiaceae) with emphasis on high level polyploidy in the Virginianum complex.

The award will support field collection in New England of fresh specimens to study the diploid, tetraploid, and higher level polyploid races in the *Pycnanthemum virginianum* complex. The research is aimed at determining the origin of high level polyploidy, understanding the process and frequency of formation of the polyploids, and providing taxonomic insight into the group whose species limits are poorly understood, including how common hexaploids are in the complex.