

From: Dr. William Schuster [schuster@ldeo.columbia.edu]
Sent: Wednesday, January 31, 2001 9:46 AM
To: blackroc@ldeo.columbia.edu
Subject: FW: esa poster abstract

Barb,
This should be entered as a BRF publication for 2001, added to my c.v, filed in our Research Folder on S, and a hard copy put in the research file for J.D. Lewis and J.T. Mates-Muchin.
Bill

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-----Original Message-----

From: Gregory D. Turner [mailto:gturner@fordham.edu]
Sent: Tuesday, January 30, 2001 4:29 AM
To: schuster@ldeo.columbia.edu
Subject: esa poster abstract

Hello Bill,

Here is the second draft of my poster abstract. Jim and I would appreciate your comments if you can read this over. Hope its not too late. I'll try to give you more notice in the future when I send you these sort of things. Hope all is well. Looking forward to field season.

Thanks a bunch,

Greg Turner

TURNER, G. D.,¹ J. D. LEWIS¹ and W. SCHUSTER². ¹Louis Calder Biological Field Station, Fordham University, Armonk, NY 10504 USA; ²Black Rock Forest Consortium, Cornwall, NY 12518 USA. Northern red oak (*Quercus rubra* L.) seedling response to community ectomycorrhizal diversity in declining eastern hemlock (*Tsuga canadensis*) stands.

We examined the role of ectomycorrhizal fungi (ECM) on oak seedling recruitment in declining eastern hemlock stands. ECM fungal communities often vary between hardwood and coniferous forests, and these differences may negatively affect the recruitment of hardwood species into stands dominated by conifers. We hypothesized that oak seedlings would be colonized by different fungal species in hemlock stands compared to hardwood stands, and that oak seedling growth would be greater in soils from hardwood versus hemlock stands. Soil cores were taken from four hardwood and four hemlock stands. Acorns of varying mass were planted in the cores and grown for 20 weeks in a greenhouse with seedling growth and physiological variables monitored weekly. At 20 weeks seedlings were harvested for

comparisons of growth and ECM measures. Differences were found in ECM morphotype composition between stands. Despite this, no stand differences were found for plant growth and physiological responses or for ECM root tip number and percent colonization. A positive correlation was found between seed mass and seedling size independent of stand type. These results suggest that ECM communities differ between stand types in this forest, but that such differences do not influence oak seedling growth or ECM colonization under the conditions of this study. Further studies are planned to include environmental conditions and stressors that may alter the outcome found in the greenhouse.

P.S. I tried sending this to you yesterday but the address I had for you was wrong. So, you don't have to respond unless you want to. At this point I think it is just good for you to see what I'm doing with my poster.

Thanks, Greg