Treseder, K. K., Y. Marusenko, A. L. Romero-Olivares, and M. R. Maltz. 2016. Experimental warming alters potential function of the fungal community in boreal forest. Global Change Biology, DOI: 10.1111/gcb.13238

Supporting figures



Figure S1. Sample calculations of warming response and lignin use for individual OTUs, and analysis of lignin use by wood decay fungi. (A) OTU0054 was identified as a Friedmanniomyces species and assigned to the "free-living filamentous fungi" functional group (Table S1). It was detected in two (40%) of the unwarmed plots and five (100%) of the warmed plots. Its warming response was calculated as the change in percentage of plots occupied in response to warming (+60%). (B) OTU4578 was classified as a species of Trechispora, which are known wood saprotrophs (Nguyen et al., 2015). Its lignin use was calculated as +40%, which was the percentage of lignin enriched plots (40%) minus no-substrate-added plots (0%) occupied by the OTU. (C) We obtained lignin use values for eight additional OTUs that matched known wood decay fungi (Table S1). Their lignin use ranged from +20% to +40%. The mean lignin use of these nine OTUs was significantly greater than zero (t = 8.315, df =8, P < 0.001), suggesting that this functional group can break down lignin.



Figure S2. Relationships between warming response and substrate use across fungal taxa. Each symbol represents a fungal order. Positive values indicate an increase in prevalence in response to warming or substrate addition; negative values, a decrease. For each relationship, the analysis was restricted to fungal orders that were detected in both the warming experiment and that substrate's enrichment trial. Thus, n = 46 orders for cellulose use, n = 49 orders for glucose use, and n = 49 orders for hemicellulose use. None of these relationships were significant (P > 0.05). Order-level means for warming responses and substrate use are reported in Table S4.



Figure S3. Substrate use profiles of fungal functional groups. Bars are means ± 1 SE of the change in prevalence in response to substrate additions for all OTUs within each functional group. Positive values indicate an increase in prevalence in response to substrate additions; negative values, a decrease. Colors represent significant increases (red) or decreases (blue) in prevalence (*P < 0.05).

Reference

Nguyen NH, Song Z, Bates ST *et al.* (2015) FUNGuild: An open annotation tool for parsing fungal community datasets by ecological guild. Fungal Ecology,

doi:10.1016/j.funeco.2015.1006.1006.