Changes in Nitrogen Cycling in Reciprocally Transplanted Soil from Meadows and Forests. (S07-cromack193005-Poster)

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Abstract:

In September 2000, we established a reciprocal soil core transplant study at two sites, Carpenter and Lookout, at the HJ Andrews Experimental Forest located in the western Cascade Mountains of Oregon. Each site had adjacent areas of high-elevation forest and meadow differing significantly in soil C and C:N ratio. At each site, soil cores from the meadow were either kept in the meadow or transferred to the adjacent forest site; the same was done for soil cores from the forest. Half of the cores were enclosed in PVC pipe to limit root growth, half were placed in mesh bags to allow root ingrowth. Our first complete sampling was done in September 2001. We measured nitrification and denitrification potentials using standard soil slurry assays. After one year, no difference was observed between the open and closed cores, suggesting that root ingrowth had not had an impact. Cores transfered from the meadow to the forest at the Lookout site were similar in nitrification and denitrification activities similar to their source.

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