Below ground carbon and nutrient distribution in unmanaged subalpine conifer forests in the Central European Alps. (S07-risch103256-Oral)

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Abstract:

Mountain regions contain more than 30% of the worlds terrestrial ecosystems. Climate projections have indicated that the amount of subalpine forests will increase if the climate becomes warmer. Also the percentage of forests in many mountain regions of Europe is increasing as agriculture becomes less important in these areas. Consequently, mountain forest soils have a potential to be a major sink for C and other soil nutrients. This is especially true for Switzerland where nearly 70% of the country is covered by mountain ranges. Therefore, a study was established to measure below-ground C in four different coniferous ecosystems on alkaline and acidic soils in the Swiss Alps. Preliminary results indicate below-ground C in both mineral soil and forest floor decrease from early successional mountain pine (Pinus montana Miller) to late successional Swiss stone pine (Pinus cembra L.) stands. Forests growing on alkaline soils have considerable higher below-ground C pools than stands growing on acidic soils.

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