

Sommersemester 2009

BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung

Donnerstag 23.04.2009, 16:15 Uhr, H6

Anschließend Postkolloquium mit Bier und Brezeln im Foyer H6

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¹⁵N natural abundance in soil-plant systems of the alpine communities in the Northern Caucasus

We studied ¹⁵N natural abundance in different soil N pools and plant leaves in the toposequence of alpine ecosystems in the Northern Caucasus.

The toposequence was represented by

- (1) low-productive alpine lichen heath of wind-exposed ridge and upper slope;
- (2) more productive *Festuca varia* grassland of middle slope;
- (3) most productive *Geranium gymnocaulon*/*Hedusarum caucasicum* meadow of lower slope;
- (4) low-productive snow-bed community of the slope bottom.

We found that $\delta^{15}\text{N}$ of soil N pools correlate with N mineralization and nitrification, and concluded that these values of soil N are useful to evaluate the relative N transformation activity in alpine soils of the Northern Caucasus. Nitrogen isotopic composition of 22 plant species from all investigated communities demonstrated significant response to input of different N sources with different $\delta^{15}\text{N}$ into the soil.

Our results demonstrate that $\delta^{15}\text{N}$ of alpine plants may reflect the $\delta^{15}\text{N}$ of soil N sources to some degree.

Die Vortragsreihe ist eine interdisziplinäre Plattform zur Information und Diskussion für Studierende, Forschende und Lehrende

Gäste sind herzlich willkommen