

TITLE

Forest Response to Stress and Damage (FORSTAD) N-Mineralization Data 1994-2005

PRINCIPAL INVESTIGATORS

Gary Lovett  
Charles Canham  
Clive Jones  
Rick Ostfeld

BEGIN DATE

1994

END DATE

2005

LOCATION

In the Cannoo Hills on the property of the Institute of Ecosystem Studies, on the Cary Arboretum, in Millbrook, New York. (41° 47'N, 73° 44'W)

LOCATION DESCRIPTION

Nutrient cycling sites are circular plots, 25.24 meters is diameter (area = 1/20 hectare). Site A is in a sheltered location on Cannoo (Tea House) Hill, elevation 180 meters, and Site B is on the western slope of North Cannoo Hill, elevation 200 meters. The canopy trees on each site are a mix of oak, maple, and pine. Nutrient cycling sites were established in 1992.

ACCESS

Public

DATA LOCATION

Institute of Ecosystem Studies, Millbrook, New York

LAST UPDATED

January, 2006

CONTACT PERSON

Gary Lovett  
Institute of Ecosystem Studies  
PO Box AB  
Millbrook, NY 12545  
Telephone: (845) 677-5343

CODES

Year = calendar year  
Site = Site A or Site B  
Horizon = soil horizon O (organic horizon)  
          soil horizon A (mineral horizon)  
ugnh4n = mean extractable ammonium  
ugno3n = mean extractable nitrate  
nminn = mean rate of nitrogen mineralization  
nnitrn = mean rate of nitrification

DATA DESCRIPTION

The data presented here are extractable amounts of ammonium and nitrate (expressed as the concentration of N in micrograms N/gram dry weight soil), and the rates of nitrogen mineralization and

nitrification (expressed as a rate of micrograms N/ gram dry weight soil/ day). Data are site-wide means for each soil horizon.

#### SAMPLING DESIGN

In each year that the sampling is performed, soils are collected in late July. Cores are taken with a 2 cm corer to a depth of 10 cm, and the core is split into the O horizon (0-3 cm depth) and the A horizon (3-10 cm depth). Eight samples are taken per plot. Samples are split into two sub-samples: the first is extracted with 2 M KCl, and the second is allowed to incubate in the dark at room temperature for 14 days, at which time it is extracted with 2 M KCl. Potassium chloride extracts are analyzed for  $\text{NH}_4\text{-N}$  and  $\text{NO}_3\text{-N}$  in mg/L.

#### NOTES

Although these measurements were also made in 1992, the data from that year are not included in the dataset due to a difference in the incubation method used.

#### DATA