



COLLEGE OF NATURAL
RESOURCES AND ENVIRONMENT
FOREST RESOURCES AND
ENVIRONMENTAL CONSERVATION
VIRGINIA TECH™

Spring 2019
Seminar Series

Friday, March 8, 2019

Location: Fralin Auditorium

Seminar 10:00 AM – 11:00 AM

Refreshments 9:30 AM



Christine (Christy) Goodale

Professor, Department of Ecology and
Evolutionary Biology, Cornell University

**Title: *Nitrogen sources, sinks, and impacts in
northeastern hardwood forests***

Bio: Christy Goodale's research centers on understanding the effects of human activities on forest ecosystems, as well as the role of forests in sustaining clean water and regulating atmospheric greenhouse gases. She studies processes that affect forest cycling and storage of carbon and nitrogen, focusing on how these cycles interact and respond to human-driven changes in climate, land use, and atmospheric chemistry, with particular emphasis on the response of ecosystems to atmospheric deposition of N from air pollution. Nitrogen emitted through fossil fuel combustion and agricultural activities eventually deposits onto downwind ecosystems: much of the work in her lab focuses on understanding the mechanisms by which ecosystems retain or remove these elevated N inputs, and the consequences of these N inputs on ecosystem processes. These consequences include acidification of soils and streams, shifts in species composition, changes in the rates of growth and decomposition, and production of smog and multiple greenhouse gases that have large effects on future climate. Working with a range of collaborators, Christy's lab group uses a range of tools to address many of these processes, at scales ranging from microbial decomposition in soil cores, to plot-scale measurements of isotopic tracers, to whole-catchment recovery from acid rain, to modeled dynamics of N effects on regional carbon storage and the earth climate system.