



**Science Outreach – Athabasca in
collaboration with ARBRI presents...
“ Mosses and Muskeg Matter
More than you Might Imagine”**



Speaker: Dr. Kelman Wieder
Biology Professor, Villanova University

Date: April 17, 2014

Place: Athabasca University
Governing Council Chambers

Time: 7:00 to 8:30 PM

Refreshments will be available after this presentation. Admission is free.
Door Prizes!

This presentation will focus on peatlands, a major feature of northern Alberta, covering about 30% of the landscape. Peatlands, which include bogs and fens, are more generally known as muskeg. The talk will focus the ecological role and importance of Alberta bogs. Bogs are characterized by a nearly continuous cover of Sphagnum mosses and small plants that have no roots. These plants grow upward, burying older portions of the plants and leading to the accumulation of peat deposits that can be over 7 meters thick. Peatlands are generally regarded as long-term sinks for atmospheric carbon dioxide, a major greenhouse gas, removing more carbon dioxide from the atmosphere by plant photosynthesis than they release. Peat is about 50% carbon on a dry weight basis, so the amount of peat on the landscape reflects the long-term storage of carbon over the past several thousand years. He will discuss how wildfires affect bogs, especially with respect to their carbon storage ability, and how the relationships between wildfire and carbon storage are expected to be influenced by ongoing climate change. In addition, he will discuss the potential deleterious effects of elevated nitrogen and sulfur deposition in rain and snow, on the region's once pristine bogs.

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**This presentation is a collaborative effort with
Science Outreach – Athabasca and ARBRI**



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