

# CHARLENE N. KELLY

West Virginia University  
337 Percival Hall  
Morgantown, WV 26506  
ckelly1@mail.wvu.edu  
(304) 293 - 6465

## EDUCATION AND TRAINING

| <b>Institution</b>                           | <b>Major/Focus</b>                      | <b>Degree</b>      | <b>Year</b> |
|--|---|--------------------|-------------|
| University of Dayton                         | Environmental Biology                   | B.S.               | 2001        |
| West Virginia University                     | Environmental Biology                   | M.S.               | 2004        |
| Virginia Tech University                     | Forestry, Soil science                  | Ph.D               | 2010        |
| Virginia Tech/USFS<br>Coweeta Hydrologic Lab | Climate change and forest<br>management | Post-<br>doctorate | 2010-2011   |
| U.S. Geological Survey,<br>Denver, CO        | Mendenhall Fellow-Soil carbon           | Post-<br>doctorate | 2011-2013   |

## RESEARCH AND PROFESSIONAL EXPERIENCE

- Visiting Assistant Professor, College of Forestry and Natural Resources, West Virginia University, 2015 to present. Teach courses, train students, and lead a research group in applied soil science.
- Assistant Professor, Department of Geosciences and Natural Resources, Western Carolina University, 2013 to 2015. Taught courses and trained undergraduate students to do research in applied soil science.

## PUBLICATIONS

- **Kelly CN**, Benjamin J, Calderon FC, and MM Mikha. The incorporation of biochar carbon into stable soil aggregates: the role of clay mineralogy and other soil characteristics. *Pedosphere*. accepted May 2106.
- **Kelly CN**, McGuire KJ, Ford-Miniat C, and JM Vose. 2016. Streamflow response to increasing precipitation extremes altered by forest management. *Geophysical Research Letters*. 43(8): 3727-3736.
- **Kelly CN**, Calderon FC, Acosta-Martinez V, Mikha MM, Benjamin J, Rutherford DW, and CE Rostad. 2015. Switchgrass biochar effects on soil microbial dynamics and wheat yield in two soils from different regions. *Pedosphere*. 25(3): 329-342.
- **Kelly CN**, Rutherford DW, and CE Rostad. 2014. Biochar application to hardrock mine tailings: Soil quality, microbial activity, and toxic element sorption. *Applied Geochemistry*. 43(35-48).
- Cornelissen G, Arp HP, Rostad CE, **Kelly CN**, and DW Rutherford. 2013. Sorption of pure N<sub>2</sub>O to biochars and other organic and inorganic materials under anhydrous conditions. *Environmental Science and Technology*. 47(14): 7704–7712
- Gurwick N, Moore L, Elias P, **Kelly CN**. 2013. A systematic review of biochar research, with a focus on its stability *in situ* and its promise as a climate mitigation strategy. *PlosOne*. 8(9): e75932.
- Rutherford DW, Wershaw RL, Rostad CE, **Kelly CN**. 2012. Effect of formation conditions on biochars: Compositional and structural properties of cellulose, lignin, and pine biochars. *Biomass and Bioenergy*, 46: 693-701.

- **Kelly CN**, Schoenholtz SH, and MB Adams. 2011. Soil properties associated with net nitrification following watershed conversion to Norway spruce from Appalachian hardwoods. *Plant and Soil*. 344(1-2): 361-376.
- Cumming JR, **Kelly CN**. 2007. *Pinus virginiana* invasion influences soils and arbuscular mycorrhizae of a serpentine grassland. *Journal of the Torrey Botanical Society*. 134(1): 63-73.
- **Kelly CN**, Morton JB, and JR Cumming. 2004. Variation in aluminum resistance among arbuscular mycorrhizal fungi. *Mycorrhiza*. August 14(3): 193-201.

### **GRANTS AWARDED**

- *Prescribed grazing impacts on grassland rooting and soil microbial population dynamics: Implications for soil organic matter development and nitrous oxide emissions*. Co-PI with Thomas Griggs (WVU). Grant awarded by NRCS 2016-2018. Total Amount: \$123,539.
- *Quantifying ecosystem changes following American chestnut restoration in mixed hardwood forests*. Principal Investigator. Grant awarded by USDA-NIFA McIntire-Stennis 2016-2020. Total Amount \$145,000.

### **COURSES TAUGHT**

- Forest Management (FMAN 433 at WVU)
- Natural Resources of West Virginia (FOR 140 at WVU)
- Soil Conservation (NRM 320 at WCU)
- Soil Genesis and Classification (NRM 420 at WCU)
- Watershed Management (NRM 460 at WCU)
- Natural Resources Conservation and Management (NRM 140 at WCU)

### **SYNERGISTIC ACTIVITIES**

- Peer reviewer for *Plant and Soil Science*, *Soil Science Society of America*, and *Journal of Environmental Quality*, and *Urban Forestry* scientific journals (since 2011)
- Member of Ecological Society of America, American Water Resources Association, and Soil Science Society of America professional societies (since 2006)