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EDUCATION

University of Virginia	Ph.D. Ecology	2011
University of Virginia	M.S. Ecology	2007
Kenyon College	B.A. English, Spanish, Biology and Environmental Studies	2004

APPOINTMENTS

University of Maryland	<i>Assistant Professor in Agricultural Ecology</i> Department of Plant Sciences and Landscape Architecture	2014-present
Columbia University	<i>Adjunct Associate Research Scientist</i> Agriculture and Food Security Center	2014-2016
Columbia University	<i>Earth Institute Postdoctoral Fellow</i> Agriculture and Food Security Center	2011-2014

PEER-REVIEWED PUBLICATIONS

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- Hickman JE, Palm CA, **Tully K**, Diru W, Groffman PM. 2017. Non-linear response of nitric oxide fluxes to fertilizer inputs and the impacts of agricultural intensification on tropospheric ozone pollution in Kenya. *Global Change Biology*. Online: DOI: 10.1111/gcb.13644
- Tully K**, M, Hickman JE, McKenna M, Neill C, Palm CP. 2016. Fertilizer application alters vertical distributions and temporal dynamics of soil inorganic nitrogen in continuous maize systems in East Africa. *Ecological Applications* 26:1907-1919.
- Kuyah S, Mbow C, Sileshi G, van Noordwijk M, **Tully K**, Rosenstock TS. 2016. Chapter 6: Quantifying carbon stocks and carbon stock changes in biomass on smallholder farms and in agricultural landscapes. In Rosenstock TS, Rufino MC, Butterbach-Bahl K, Wollenberg E, Richards M. (eds.), *Methods for Measuring Greenhouse Gas Balances and Evaluating Mitigation Options in Smallholder Agriculture*. Springer International, p 119-134.
- Tully K**, Wood SA, Neill C, Palm CP. 2015. The effect of African Green Revolution interventions on nitrogen balances in smallholder maize farms in Western Kenya. *Agriculture, Ecosystems & Environment* 214:10-20.
- Tully K**, Sullivan C, Weil R, Sanchez P. 2015 The state of soil degradation in sub-Saharan Africa: baselines, trajectories, and solutions. *Sustainability* 7(6):6523-6552. *Invited review article*.
- Hickman JE, **Tully K**, Groffman PM, Diru W, Palm CA. 2015. A potential tipping point in tropical agriculture: Avoiding rapid increases in nitrous oxide fluxes from agricultural intensification in Kenya. *JGR-Biogeosciences*. 120:938-951.
- Wood SA, Bradford MA, Gilbert JA, McGuire KL, Palm CA, **Tully K**, Zhou J, Naeem S. 2015. Agricultural intensification and the functional capacity of soil microbes on smallholder African farms. *Journal of Applied Ecology* 52:744-752.
- Wood SA, Almaraz M, Bradford MA, McGuire KL, Naeem S, Palm CA, **Tully K**, Zhou J. 2015. Farm management, not soil microbial diversity controls nutrient loss from smallholder tropical agriculture. *Frontiers in Microbiology* 6:1-10.
- Tully K**, Weil R. 2014. Ion selective electrode offers accurate, inexpensive method for analyzing soil solution nitrate in remote regions. *Communications in Soil Science and Plant Analysis*. 45:1974-1980.
- Rosenstock T, **Tully K**, Arias-Navarro C, Butterbach-Bahl K, Neufeldt H, Verchot L. 2014. Agroforestry with N-fixing trees: Sustainable development's friend or foe? *Current Opinion in Environmental Sustainability*, 6:15-21.

- Tully K**, Lawrence D, Wood SA. 2013. Organically managed coffee agroforests have larger soil phosphorus but smaller soil nitrogen pools than conventionally managed agroforests. *Biogeochemistry*, 115:385-397.
- Tully, K**, Wood SA, Lawrence D. 2013. Fertilizer type and species composition affect nutrient leachate in coffee agroecosystems. *Agroforestry Systems*. 87:1083-1100.
- Tully K**, Wood TE, Schwantes AM, Lawrence D. 2013. Soil nutrient availability and reproductive effort drive patterns in nutrient resorption in *Pentaclethra macroleoba*. *Ecology*. 94:930-940.
- Tully K**, Lawrence D, Scanlon TM. 2012. More trees less loss: Nitrogen losses decrease with increasing biomass in coffee agroforests. *Agriculture, Ecosystems and Environment*. 161:137-144.
- Tully K**, and Lawrence D. 2012. Canopy and leaf composition drive patterns of nutrient release from pruning residues in a coffee agroforest. *Ecological Applications*. 22:1330-1344.
- Huang C-Y, **Tully K**, Clark DA, Oberbauer SF, McGlynn TP. 2012. The δ^{15} N signature of the detrital food web tracks a landscape-scale soil phosphorus gradient in a Costa Rican lowland tropical rain forest. *Journal of Tropical Ecology*. 28: 395-403.
- Tully K**, Lawrence D. 2011. Closing the Loop: Nutrient balances in organic and conventional coffee agroforests. *Journal of Sustainable Development*, 35: 671-695.
- Tully K**, Lawrence D. 2010. Declines in leaf litter nitrogen linked to rising temperatures in a wet tropical forest. *BIOTROPICA*. 42: 526-530.
- Goeghegan J, Lawrence D, Schneider L, **Tully K**. 2010. Accounting for Carbon in Models of Land Use and Implications for Payments for Environmental Services: An Application to SYPR. *Regional Environmental Change*. 42: 526-530.
- Lawrence D, Radel R, **Tully K**, Schmook B, Schneider L. 2010 Untangling a global decline in tropical forest resilience: constraints on the sustainability of shifting cultivation. *BIOTROPICA*. 40: 21-30.
- Vandecar K, Lawrence D, Wood TE, Das R, Oberbauer S, Schwendenmann L, **Tully K**. 2009. Diurnal fluctuations in labile soil phosphorus in response to climatic conditions and soil CO₂ efflux in a wet tropical forest, La Selva, Costa Rica. *Ecology*. 90: 2547-2555.
- Tully K**. 2002. *Tilting*. Kenyon Chapbook Series: Featured work for emerging authors. ISBN: 0-9726005-5-8.

MANUSRIPTS in REVIEW

- Michelson H, **Tully K**. *In revision*. The Millennium Villages Project and Local Land Values: Using Hedonic Pricing Methods to Evaluate Development Projects. *World Development*.
- Russo T, **Tully K**, Palm C, Neill C. *In review*. Modeling topsoil nitrate losses from agricultural soils: Comparing lysimeter and soil extraction methods. *Agriculture Ecosystems & Environment*.
- Tully K**, Abwanda S, Thiong'o M, Mutuo PM, Rosenstock TS. *In review*. Nitrous oxide and methane fluxes from cattle dung and urine deposition in African pasture. *Journal of Environmental Quality*.
- Tully K**, Ryals R. *In review*. Nutrient cycling in agroecosystems: Balancing food and environmental objectives. Invited Special Issue in *Agroecology & Sustainable Food Systems*.

MANUSRIPTS in PREPARATION

* indicates graduate student | ** indicates postdoctoral student

- Koivunen EE, Swett CL, **Tully K**. *In prep*. Crab meal and other amendments improve soil quality while promoting degradation and microbial antagonism of *Botrytis cinerea* sclerotia.
- Almaraz M, **Tully K**, Palm CA, Neill C, Porder S. *In prep*. Soil texture mediates nitrogen losses from intensifying agriculture in Western Kenya.
- Thapa R*, Ackroyd VJ**, Poffenbarger H, **Tully K**, Kramer M, Mirsky SB. *In prep*. Biomass production and nitrogen accumulation by hairy vetch-cereal rye biculture: a meta-analysis.

CONFERENCE and MEETING PRESENTATIONS

* indicates graduate student | ** indicates postdoctoral student

- The effects of saltwater intrusion on nutrient transport in agroecosystems of the Atlantic Coastal Plain. RAE-TCS Annual Meeting, New Orleans, LA. Dec 2016 (INVITED)

Ackroyd VJ**, Mirsky SB and **Tully K.** *The Northeast Cover Crops Council: Encouraging and Supporting Cover Crop Use in the Northeast US.* ASA-CSA-SSSA Annual Meeting, Phoenix, AZ. Nov 2016

Otte B*, Mirsky SB, Schomberg H, **Tully K.** *Managing Water and Nitrogen in No-till Corn Production with a Cereal Rye Cover Crop.* ASA-CSA-SSSA Annual Meeting, Phoenix, AZ. Nov 2016

Tully K, Weissman D*, Gedan K, Jordan T. *The effects of saltwater intrusion on phosphorus transport in agroecosystems of the Atlantic Coastal Plain.* ASA-CSA-SSSA Annual Meeting, Phoenix, AZ. Nov 2016

Tully K. *Balancing food and the environment: local strategies in a global food system.* Department of Entomology, College Park, MD. Sep 2016 (INVITED)

Tully K. *Research as an agroecologist and community farmer.* Northeast Region Urban Agriculture and Sustainability Meeting, University of DC, Washington DC, Jun 2016 (INVITED)

Tully K, Weissman D*, Gedan K, Jordan T. *Saltwater-induced nutrient transport from agricultural landscapes in the Atlantic Coastal Plain.* Romanian Delegation for the World Bank, College Park, MD. May 2016 (INVITED)

Tully K. *Balancing food and the environment: local strategies in a global food system.* National Socio-environmental Synthesis Center, Annapolis, MD. Apr 2016 (INVITED)

Weissman D*, Gedan K, Jones, K, **Tully K.** *Salt-water intrusion and legacy phosphorous release from coastal farmland.* From Farm to Phrag: Eastern Shore Research Network Workshop: University of Maryland/SESYNC: Annapolis, MD. February 2016.

Griffith K*, Tully K. *Cover Crop Mixtures to Reduce Agricultural Nitrate Loss to the Chesapeake Bay.* Third Annual Graduate Student Rural Sociology Conference. Pennsylvania State University: State College, PA. Feb 2016.

Weissman D*, Gedan K, **Tully K.** *Salt-water intrusion and legacy phosphorus release from coastal farmland.* Third Annual Graduate Student Rural Sociology Conference. Pennsylvania State University: State College, PA. Feb 2016.

Otte B*, Mirsky S, Rice C, Tully K, Schomberg H. *Allelochemicals from Cereal Rye for Weed Suppression.* Northeastern Weed Science Society Annual Meeting, Philadelphia, PA. Jan 2016.

Tully K. *Climate Change and Agriculture: Adaptation and Mitigation.* American Embassy, Hanoi Vietnam, Dec 2015 (INVITED)

Tully K, Gedan K, Jordan T. *Rising sea-level effects on plant-nutrient interactions at the boundary of migrating tidal marsh and farmland.* ASA-CSA-SSSA Annual Meeting, Minneapolis, MN. Nov 2015 (INVITED)

Tully K, Russo T, Hickman J, Neill C, Palm C. *Greening the African Green Revolution: Exploring agroecological transitions in East Africa.* Ecological Society of America Annual Meeting, Baltimore, MD. Aug 2015 (INVITED)

Tully, K. *Growing maize efficiently in sub-Saharan Africa: the interactions of soils and fertilizer.* Annual Symposium in Plant Biology. College Park, MD. May 2015 (INVITED).

Tully K, *Sustainable intensification of agriculture: Balancing food and environmental objectives.* Dept. of Biology - University of Maryland, MD. Feb 2015. (INVITED)

Tully K, *Sustainable intensification of agriculture: Balancing food and environmental objectives.* PSLA - University of Maryland, MD. Mar 2014. (INVITED)

Tully K, *Sustainable intensification of tropical agriculture: Balancing yields, the environment, and human well-being.* Earlham College: Richmond, IN. Feb 2014. (INVITED)

Tully K, *Nutrient management for food and the environment.* University of Guelph: Canada. Feb 2014. (INVITED)

Tully K, *Sustainable intensification of agriculture: Balancing food and environmental objectives.* University of California Berkeley: Berkeley, CA. Feb 2014. (INVITED)

Tully K, Hickman J, and Palm C, *The effects of the African Green Revolution on nitrogen losses from two contrasting soil types in sub-Saharan Africa.* Ecological Society of America: Minneapolis, MN. July 2013.

Tully, K, *Nutrient use and the sustainable intensification of agriculture.* University of California Davis: Davis, CA. May 2013. (INVITED)

Tully K and Lawrence D, *Effects of management and canopy trees on nutrient pools, retention and loss from coffee agroforests.* Environmental Sciences Seminar Series: Charlottesville, VA. May 2011.

Tully K and Lawrence D. *Canopy and leaf diversity regulate patterns of decomposition and nutrient release in a coffee agroforest*. Ecological Society of America Annual Meeting: Philadelphia, PA. Aug 2010.

Tully K and Lawrence D. *Litter nutrients in tropical secondary forests in response to climate variability*. Ecological Society of America Annual Meeting: San Jose, CA. Aug 2007.

PANELS AND WORKSHOPS

Northeast Cover Crop Council Meeting: National Agricultural Library, Beltsville, MD. Nov 2016. (ORGANIZER)

From Farm to Phrag: Eastern Shore Research Network Workshop: University of Maryland/SESYN: Annapolis, MD. Feb 2016. (ORGANIZER)

Environmental Defense Fund. A nitrogen surplus framework application to EDF's supply chain work. Washington DC. Jul 2016 (INVITED)

SPONSORED RESEARCH PROGRAMS

Active Competitive Funding

2016-2019	Northeast Sustainable Agriculture Research and Education <i>The Northeast Cover Crops Council: Building the network and online decision support tools</i>	PI \$144,859
2016-2017	North American Strawberry Growers Association <i>Developing sustainable soil management strategies that suppress strawberry Anthracnose and improve soil health. Year 2.</i>	Co-PI \$8,400
2016-2018	United States Dept of Agriculture – National Institute for Food and Agriculture <i>Postdoctoral Fellows program: Its time has come – Creation of multi-state, multi-agency council to support cover crop use in the mid-Atlantic region - Supports postdoctoral research fellow, Victoria Ackroyd</i>	PI \$76,000
2016-2017	Garden Club of America <i>Coastal Wetlands Scholarship (awarded to masters student, Danielle Weissman*)</i>	\$5,000
2017	National Socio-environmental Synthesis Center <i>Workshop Funding: The effects of sea-level rise and saltwater intrusion on wetland nutrient transport and vegetation dynamics in the Atlantic Coastal Plain</i>	PI \$10,000
2017-2018	Maryland Grain Producers Utilization Board <i>Evaluation of Cereal/Clover Cover Crop Mixtures in Corn Production System</i>	PI \$11,095
2016-2018	United States Dept of Agriculture – Conservation Innovation Grant <i>Decision support tool for cover crops: Crediting water and nitrogen conservation</i>	Total \$998,469 UMD PI \$350,250

Active Non-competitive funding

2015-2018	United States Dept of Agriculture – Beltsville Agricultural Research Center <i>Special Cooperative Agreement: Effect of cover crop growth stage and quality on allelochemical bioavailability in soil rhizosphere</i>	PI \$48,000
2015-2017	United States Dept of Agriculture – Beltsville Agricultural Research Center	PI \$60,000

Special Cooperative Agreement: Evaluating cover crop for nitrogen recycling in Maryland Grain Crop Systems

Pending Funding

2017-2020	NASA ROSES - Interdisciplinary Sciences	Co-PI \$1,135,393 UMD PI \$299,059
	Ecotone transitions in the coastal zone in response to sea level rise and saltwater intrusion	
2017-2021	National Science Foundation - Coupled Natural Human Systems	Co-PI \$1,699,590 UMD \$467,928
	Competition between livelihood security and environmental needs: multilevel assessment of trade in Eastern Africa	

Past Funding

2015-2016	North American Strawberry Growers Association	Co-PI \$8,400
	<i>Developing sustainable soil management strategies that suppress strawberry Anthracnose and improve soil health. Year 1.</i>	
2014-2015	ADVANCE – University of Maryland Seed Grant	PI \$20,000
	<i>Rising sea-level effect on plant-nutrient interactions at a novel boundary between tidal marsh and chicken farm</i>	
2014-2015	Maryland Agricultural Experiment Station	PI \$30,000
	<i>Mapping nitrogen storage and release from cover crops for variable rate fertilization in corn using multispectral imagery</i>	

TEACHING, MENTORING and ADVISING

Courses Taught

Course ID	Course Name	Credits	Semester	# Enrolled
PLSC303	<i>Global Food Systems</i>	3	Fall 2015	19
PLSC405	<i>Agroecology</i>	3	Spring 2016	12
PLSC605	<i>Advanced Agroecology</i>	3	Spring 2016	4
PLSC405	<i>Agroecology</i>	3	Fall 2016	9
PLSC605	<i>Advanced Agroecology</i>	3	Fall 2016	4
PLSC619	<i>Seminars in Plant Science</i>	1	Fall 2016	7
ENST471	<i>Capstone in ENST</i>	3	Fall 2016	1

Teaching Innovations

Course development: PLSC 405 & 605 Agroecology
Course development: PLSC 303 Global Food Systems

Graduate and Post Doctoral Mentoring

Name	Degree	Expected Date	Role	Project Title
Resham Thapa	PhD	Spring 2020	Primary advisor	<i>Decomposition and nitrogen release from cover crops: Timing supply with demand</i>
Danielle Weissman	MS	Fall 2017	Primary advisor	<i>The effects of salt-water intrusion on the release of legacy phosphorous from coastal farmland</i>
Briana Otte	MS	Fall 2017	Primary	<i>Managing Water and Nitrogen in No-till Corn</i>

			advisor	<i>Production with a Cereal Rye Cover Crop</i>
Victoria Ackroyd, PhD	Postdoc	Spring 2020	Co-advisor with USDA	<i>Its time has come – Creation of multi-state, multi-agency council to support cover crop use in the mid-Atlantic region</i>

Undergraduate mentoring

Mentored over 12 undergraduate students majoring in Environmental Science, Plant Science, Biology and Computer Science for over 27 credit hours of mentoring. I have also supervised two SESYNC summer interns in the summers of 2015 and 2016.

Graduate Committees

* Indicates degree complete

Name	Degree	Expected Date	Project Title
Alec Armstrong	PhD, MEES	Spring 2020	<i>Dissolved organic matter functions of depressional freshwater wetland ecosystems on the Delmarva Peninsula</i>
Nate Richards	MS, ENST	Spring 2020	<i>High residue cover crop systems and its influence on soil health, soil fertility, and grain yield</i>
Jason Berg	PhD, BIO	Spring 2017	<i>Genetic diversity and evolution in a mixed-mating plant, <i>Mimulus guttatus</i>, during two stages of the invasion process</i>
Sarah Hirsh	PhD, ENST	Fall 2017	<i>Deep soil nitrogen: Benefits of cover crop mixtures with forage radish</i>
Claire Muerdter*	MS	Fall 2015	<i>Multi-criteria vegetation selection for Maryland bioretention, with nitrogen focus</i>

ACADEMIC SERVICE, OUTREACH and SKILLS

Peer-Reviewer	Agriculture; Agriculture, Ecosystems & Environment; Agricultural and Forest Meteorology; Agriculture; Agricultural Systems; Agroforestry Systems; Ecological Applications; Ecosystems; Environmental Research Letters; Environmental Health & Sustainability; Geoderma; Oecologia
Grant Reviewer	National Science Foundation, Ecosystems Cluster pre-proposals, Apr 2015 National Science Foundation, Ecosystems Cluster Full proposals, Oct 2015
Membership	Ecological Society of America American Geophysical Union Soil Science Society of America Association for Women in Science UMD ADVANCE 2016 Cohort UMD Chesapeake Fellows Alum
Other Service	PSLA Coffee Pot Co-organizer – Fall 2015 to present PSLA Weekly Seminar Social organizer– Fall 2015 to present PSLA Seminar in Plant Science Committee member – Fall 2014 to present PSLA Graduate Admissions Committee member – Spring 2015 to present PSLA Merit Pay Committee – Spring 2016 to present PSLA Graduate Student Award Committee – Spring 2015 to present
Language Proficiency	Fluency in Spanish Intermediate Swahili Intermediate programming in R