

## CURRICULUM VITAE OF CHARLES M. RUFFNER

### I. PROFESSIONAL AFFILIATION

Professor of Forestry, Department of Forestry, Southern Illinois University  
194C Agriculture Building, 1205 Lincoln Drive, Carbondale, IL 62901  
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### II. EDUCATION

The Pennsylvania State University

Ph.D. Forest Resources August 1999

\*M.S. Forest Resources May 1995

\*B.S. Forest Science with Honors May 1995

\*Simultaneous degrees via University Scholars Integrated Undergraduate/Graduate Program

### III. PROFESSIONAL EMPLOYMENT

**Professor of Forestry August 1999- Present**  
**Department of Forestry**  
**Southern Illinois University, Carbondale, IL**

Instructor and Field Site Coordinator October 2011-Present  
Agricultural Development for Armed Forces Pre-Deployment Training  
Jordan College of Agricultural Sciences and Technology, Fresno State University

Agribusiness Specialist in Afghanistan August 2012- May 2013  
Civilian Expeditionary Workforce, DOD GS-15  
Zabul Agribusiness Development Team-Mississippi National Guard

International Development Adviser-USAID August 2009- Present  
Watershed Assessment and Rehabilitation Missions to:  
Afghanistan, Dominican Republic, Morocco, South Sudan

SSG-Survey Party Chief Oct 1989-Aug 1994  
Battery F 109th Field Artillery, PA Army National Guard, York, PA

SGT-Chief of PADS Survey Party Oct 1986-Oct 1989  
1<sup>st</sup> Battalion, 39<sup>th</sup> Airborne Field Artillery Regiment, XVIII<sup>th</sup> Airborne Corps, Ft. Bragg

### IV. PROFESSIONAL SKILLS and CREATIVE PROJECTS

#### A. Technical Specialties

Aerial Photo Interpretation, GPS and topographic surveying, Forest Watershed and Agricultural Assessments, Land-use History and Land Tenure Issues, Karez-Irrigation Rehabilitation, Dendrochronology and Fire Scar Analysis, Fire Ecology and Prescribed Burning

#### B. Professional interests

international forestry and agricultural development, mapping, cartography, surveying and land tenure relations, erosion control and ground truthing remotely sensed data, ecological restoration, prescribed burning applications, climate-vegetation interactions, karez improvement and water delivery systems

C. Research Activities

<u>Pertinent International Projects</u>	<u>Investigators</u>	<u>Sponsor</u>	<u>Amount</u>
Development of Forest Biology and Silviculture Science Cluster	Vytautas Magnus University, Kaunas, Lithuania	European Union	1.5 M Euro
Agricultural Development for Afghanistan Pre-Deployment Training (ADAPT)	Groninger, Ruffner, Pense, Walters, Atkinson	USDA Foreign Ag Service	\$314,000
Afghan Water and Agricultural Tech Transfer (AWATT) – multiple TDYs	T. Winters, J.W. Groninger, P. Eberle, C. Ruffner, A. Walters	US Agency for International Development OAG	\$836,390
Erasmus Forestry Exchange-Vytautas Magnus Univ. Kaunas	Carver, Brazaitas, Nielsen, Ruffner	European Union-Ministry of Agric.	\$250,000

- Total Funded Projects (At SIUC) to date- \$4,237,924

D. Pertinent Publications

Zikria Zafar, Fahad Rasheed, Sylvain Delagrange, Muhammad Abdullah & Charles Ruffner. 2019. Acclimatization of *Terminalia Arjuna* saplings to salt stress: characterization of growth, biomass and photosynthetic parameters. *Journal of Sustainable Forestry*, DOI: 10.1080/10549811.2019.1614067

Mohammad Nasir Shalizi, Safiullah Khurram, John W. Groninger, Charles M. Ruffner, Owen T. Burney. 2018. Indigenous Knowledge and Stand Characteristics of a Threatened Tree Species in a Highly Insecure Area: Chilgoza Pine in Afghanistan. *Forest Ecology and Management*. 413: 1–8. <http://dx.doi.org/10.1016/j.foreco.2018.01.053>.

Jonathan W.F. Remo, Julia Ryherd, Charles M. Ruffner, Matthew D. Therrell. 2017. Temporal and spatial patterns of sedimentation within the batture lands of the middle Mississippi River, USA. *Geomorphology* 308 (2018) 129–141.

John M. Lhotka<sup>1</sup>, David L. Parrott, Charles M. Ruffner. 2016. A Dendroecological Investigation of an Upland Oak-Dominated Forest within the Grand Prairie region of Illinois. *Natural Areas Journal* 36: 310-322.

Groninger, J.W., C.M. Ruffner, and L. Christenson. 2015. Water resources development considerations for civilian and military institutions working in highly insecure areas: Lessons from Afghanistan. *Int. J. of Water Resources Development*. DOI [10.1080/07900627.2015.1004304](https://doi.org/10.1080/07900627.2015.1004304)

Groninger, J., and C. M. Ruffner. 2014. Learning Rural Engagement: Afghan Agriculture and the Future of Rural Stabilization. *Small Wars Journal*, online 3/13/14. URL <http://smallwarsjournal.com/search/node/groninger%20and%20ruffner>

Jesse A. Riechman, Logan O. Park, Charles M. Ruffner, and John W. Groninger. 2014. Challenges and Motivations behind Sustaining a Volunteer-Based Forest Management

Organization: A Case Study of the Southeastern Illinois Prescribed Burn Association. *J. For.* 112(2):215-220 <http://dx.doi.org/10.5849/jof.12-110>

Eric J. Holzmüller \*, John W. Groninger and Charles M. Ruffner. 2014. Facilitating Oak and Hickory Regeneration in Mature Central Hardwood Forests *Forests*, 5, 3344-3351; doi:10.3390/f5123344.

Groninger, J., Ruffner, C., Brewster, R., and P. Sommers. 2013. ADAPT: Training for Agriculture's Seminal Role in Stability Operations for Afghanistan and Beyond. *Small Wars Journal* 9 (8): 8/22/13

Groninger, J., Ruffner, C., and S. Alan Walters. 2013. Sustaining Rural Afghanistan under Limited Central Government Influence. *Stability: International Journal of Security and Development*. 2(2): 24, 1-13.

Groninger, J.W. and C.M. Ruffner. 2010. Hearts, minds, and trees: Forestry's role in Operation Enduring Freedom. *Journal of Forestry* 108: 141-147.

Nelson, J.L., C.M. Ruffner, J.W. Groninger. 2008. Drainage and agricultural impacts on fire frequency in a forested bottomland. *Canadian Journal of Forest Research* 38: 2932-2941.

Black, B., C.M. Ruffner, and M.D. Abrams. 2006. Native American Influences On The Forest Composition Of The Allegheny Plateau, Northwest Pennsylvania. *Canadian Journal of Forest Research* 36: 1266-1275.

Ruffner, C.M. and J.W. Groninger. 2006. Making the Case for Fire in Southern Illinois Forests. *Journal of Forestry* 104: 78-83.

Ozier, T. B., J.W. Groninger, and C. M. Ruffner. 2006. Community Composition and Structural Changes in a Managed Illinois Ozark Hills Forest. *American Midland Naturalist* 155: 253-269.

Ruffner, C.M. and M.D. Abrams. 2003. Disturbance History and Stand Dynamics along a Topographic Gradient in Old-Growth Hemlock-Northern Hardwood Forests of the Allegheny Plateau, USA. *Natural Areas Journal*. 23: 98-113.

Ruffner, C.M and M.D. Abrams. 2002. Dendrochronological investigation of disturbance history for a Native American site in northwestern Pennsylvania. *Journal of the Torrey Botanical Society*. 129: 251-260.

Shumway, D., M.D. Abrams, and C.M. Ruffner 2001. A 400-year history of fire and oak recruitment in an old-growth oak forest in western Maryland, USA. *Canadian Journal of Forest Research* 31: 1437-1443

Ruffner, C.M. and K. Borza Arabas. 2000. Post European settlement land-use alters prairie/savanna vegetation in central Pennsylvania. *Castanea* 65: 9-20

PSUCLIM 1999 . Storm activity in ancient climates, 1, Sensitivity of severe storms to climate forcing factors on geologic timescales. *Journal of Geophysical Research* 104 , No. D22 , p. 27,277. (Listed as co-author with 16 other researchers).

PSUCLIM 1999. Storm activity in ancient climates, 2, An analysis using climate simulations and sedimentary structures. *Journal of Geophysical Research* 104 , No. D22 , p. 27,295. (Listed as co-author with 16 other researchers).

Ruffner, C.M. and M.D. Abrams. 1998. Lightning strikes and resultant fires from archival (1912-1917) and current (1960-1997) information in Pennsylvania. *Journal of the Torrey Botanical Society* 125: 249-252.

Ruffner, C.M. and M.D. Abrams. 1998. Relating land-use history and climate to the dendroecology of a 326 year old *Quercus prinus* talus slope forest. *Canadian Journal of Forest Research* 28: 347-358.

Abrams, M.D., C.M. Ruffner, and T.A. Morgan. 1998. Tree-ring responses to drought across contrasting species and sites in the Ridge and Valley of central Pennsylvania. *Forest Science* 44: 550-558.

Abrams, M.D., C.M. Ruffner, and T. E. DeMeo. 1998. Dendroecology and species co-existence in an old-growth *Quercus-Acer-Tilia* talus slope forest in the central Appalachians, USA. *Forest Ecology and Management* 106:9-18.

Abrams, M.D. and C.M. Ruffner. 1995. Physiographic analysis of witness tree distribution (1765-1798) and present forest cover through north-central Pennsylvania. *Canadian Journal of Forest Research* 25(4): 659-670.

#### E. International Experience

##### **Afghanistan:**

- Civilian Expeditionary Workforce, Combat Hydrologist (GS-15), Assigned to Zabul Agribusiness Development Team (ADT4), FOB Apache (2012-2013)
- Agricultural Development for Afghanistan Pre-deployment Training (ADAPT) funded by USDA FAS Curriculum Developer and Instructor. Have taught and led field exercises at twenty (20) separate training sessions at either Fresno State or San Diego facilities. (2011-Present)
- Afghanistan Water Agriculture and Technology Transfer (AWATT) program funded by USAID (2008-2011)

##### **Germany, Austria, and Switzerland**

- Natural Resources of the Bavarian and Bohemian Forests Study Abroad Teaching Program (summer 2014)

##### **Ireland & Scotland:**

- Natural Resources of Ireland and Scotland Study Abroad Teaching Program every other year during summer semesters (2001-2018)
- Sabbatical volunteering with National Heritage Conservation Rangers at Killarney National Park, Co. Kerry (spring 2006)

##### **Lithuania**

- Established professional exchanges with the VMU Forestry Faculty in Kaunas, Lithuania. Taught several lectures, hosted to visit nearly every corner of that country to understand its broad geographic range and forest types (spring 2017)
- Dzukija National Park Fire History Project (Spring /Summer 2019) – collected 90 sample fire scar samples from recent clearcuts, established 200 year history of recurring fire, with MFI = 4.3 yr; publication forthcoming

##### **Panama & Venezuela:**

- Established survey control points across the Venezuelan landscape with 18<sup>th</sup> Airborne Corps Artillery Mission to Caracas, Venezuela and environs via Panama (summer 1988)

**Dominican Republic:**

- Implemented agroforestry planting schemes and erosion control measures with village cooperatives in mountainous western provinces near Haitian border (summer 2013)

**Kingdom of Morocco:**

- Presented at the Second International American Moroccan Agricultural Sciences Conference and touring significant forest reserves and geologic and cultural sites across the Atlas Mtns and Saharan desert landscape (Fall 2014)

**F. Military & Professional Training Experience**

- Survey Party Chief Oct 1989-Aug 1994  
Battery F- TAB (Target Acquisition Battery)- 109th Field Artillery  
PA Army National Guard, York, PA  
-Non-commissioned Officer (NCO) of the Year (1990-1991), Honorable Discharge after 8 years service, National Defense Service Medal, AAM, Army Reserve Components Achievement Medal
- Chief of PADS Survey Party Oct 1986-Oct 1989  
1<sup>st</sup> Battalion, 39<sup>th</sup> Airborne Field Artillery Regiment- 18<sup>th</sup> Airborne Corps Artillery  
US Army, Ft. Bragg, NC  
-MOS 82C2P Field Artillery Surveyor w/ Good Conduct Medal, Army Commendation Medal (w/ oakleaf cluster), Army Achievement Medal (w/ 2 oakleaf clusters), Basic Parachutist Wings
- Professional Development Training  
2013 USAID Farmer 2 Farmer Agroforestry development project in Dom. Republic  
2012 Civilian Expeditionary Workforce Deployment Training, Camp Atterbury, IN  
2010 Certified Prescribed Burn Manager, IDNR  
2010 AWATT Afghanistan TDY to Khost w/ IN & OK ADT @ Khost and Gardez  
2009 AWATT Afghanistan TDY to Paktika w/ PRT Paktika @ FOB Sharana  
2008 AWATT Afghanistan TDY to Mazar-e-Sharif  
2004 Certified Prescribed Burn Boss -Mississippi State University, Starkville, MS.

**G. Honors and Awards:**

- Global War on Terror Medal for Civilians
- NATO Medal w ISAF bar
- Mississippi Distinguished Civilian Service Medal
- Governor Appointment-Illinois Nature Preserves Commission Member 2014-present
- Seven Seals Award- nominated by the Illinois National Guard Bureau, awarded by the Department of Defense  
*For Meritorious leadership and initiative in the training and readiness of the men and women of the Guard and Reserve Forces of the United States. Dec 11, 2011.*
- IL State FOID and CCL cardholder
- 3<sup>rd</sup> Degree Master Mason, A.F.& A.M., Shekinah Lodge #241, Carbondale, IL