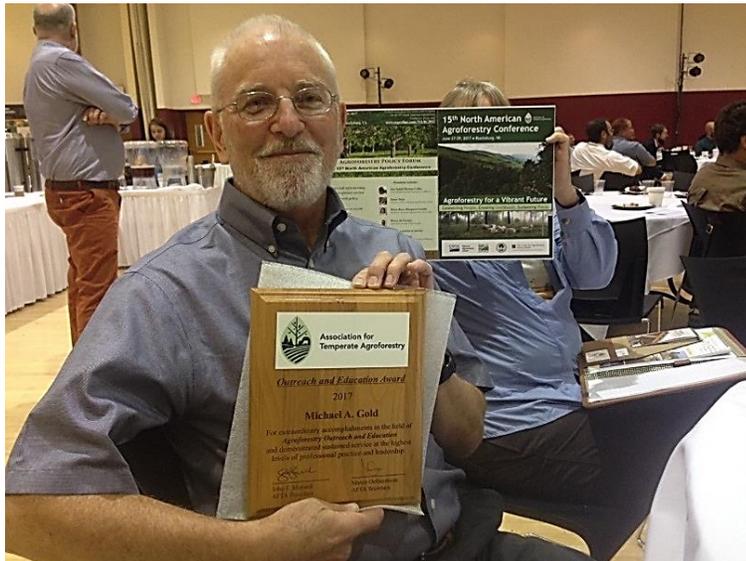




AWARDS and HONORS



This week at the 2017 North American Agroforestry Conference in Blacksburg, Virginia on the Virginia Tech University campus **Dr. Michael A. Gold** was awarded the prestigious Outreach and Education Award from the Association for Temperate Agroforestry. Dr. Gold has had extraordinary accomplishments and demonstrated continuous service at the highest level of professionalism and leadership in the field of agroforestry. Mike is a Research Professor in Forestry and Interim Director of the MU Center for

Agroforestry (UMCA). Mike has been active in UMCA’s outreach and training programs for the past 19 years. He was a founding member and first president of Association for Temperate Agroforestry (AFTA) back in 1993 and has worked in both temperate and tropical agroforestry since 1984. Recent accomplishments have included creation of UMCA’s annual weeklong Agroforestry Academy and High School Agroforestry Institute. He and his fellow Co-PIs received two “Paula Ford Professional Development Program Proposal of the Year” awards from USDA NCR-SARE for the Agroforestry Academy and Agroforestry Summer Institute proposals. Mike teaches the kickoff agroforestry course in UMCA’s one-of-a-kind, 100% online, Agroforestry MS degree and graduate certificate program. He currently advises ~15 students enrolled in the online agroforestry MS and graduate certificate program. (Photo by Greg Judy, Owner of Green Pasture Farms in northern Boone County and he practices Silvopasture)

Vidya Balasubramanyam (HDNR, advisor: **Dr. Sonja Wilhelm Stanis**) was selected as a finalist for the prestigious Knauss Marine Policy Fellowship offered by NOAA Sea Grant. This fellowship places highly qualified graduate students at Executive and Legislative offices in Washington, D.C. and gives them an opportunity to apply their skills towards national policy decisions affecting marine resources. (Because of another conflict Vidya declined the fellowship.)

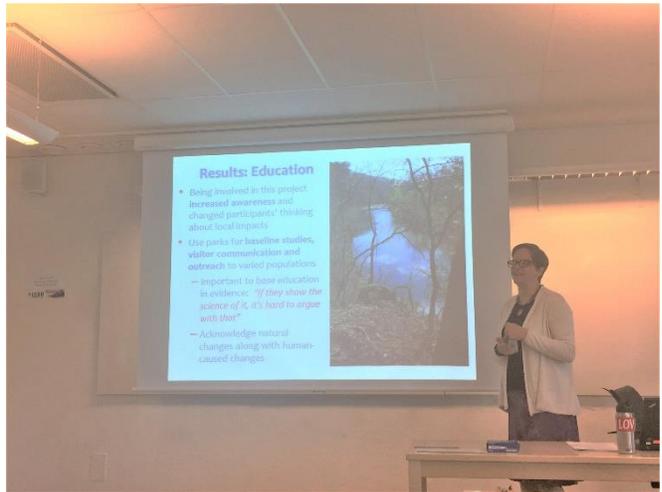
PRESENTATIONS/PUBLICATIONS/RESEARCH HIGHLIGHTS

Sara Thuston, an MU undergraduate in Environmental Science is completing an internship at the hydroponic facility at Epcot Center. For more information and a look at the internship, please check out the YouTube link below as well as the CAFNR article she was profiled in. (Submitted by Peter Motavalli and Keith Goyne.) <https://youtu.be/77QLBmjppCo> [CAFNR article](#)

Dr. Mark Morgan (bottom left photo), **Lisa Groshong** (top right photo) (HDNR: Advised by **Dr. Sonja Wilhelm Stanis**) and **Vidya Balasubramanyam** (bottom right photo) (HDNR: Advised by Dr. Sonja Wilhelm Stanis) presented their research at the International Symposium on Society and Resource Management in Umea, Sweden held between June 17, 2017- June 23, 2017. Their presentations were organized under the session "National Parks and Climate Change" and were on the following topics:

1. Balasubramanyam, V., Wilhelm Stanis, S.A., & Morgan, M. (2017, June). Climate Change Communication in Missouri State Parks: Perspectives from Park Interpreters. Presentation at the 2017 International Symposium on Society and Resource Management, Umea, Sweden.
2. Groshong, L., Wilhelm Stanis, S.A., & Morgan, M. (2017, June). Climate Change Impacts in Missouri State Parks: Perceptions from Engaged Park Users. Presentation at the 2017 International Symposium on Society and Resource Management, Umea, Sweden.
3. Morgan, M., Ojewola, O., & Wilhelm Stanis, S.A. (2017, June). Perceptions of Vulnerability and Resilience in Missouri State Parks & Historic Sites Due to Extreme Weather Events. Presentation at the 2017 International Symposium on Society and Resource Management, Umea, Sweden.

(Photos by Lisa Groshong and Vidya Balasubramanyam.)



Danielle Fox, a 2012 graduate of Fisheries and Wildlife, is the community conservationist in the City of Columbia’s Office of Sustainability. She is working with other business, government agencies and organizations on the goal of restoring and preserving monarch butterfly habitats. The full story in the Columbia Tribune, “Monarch butterfly conservation efforts on the rise in Columbia” can be found at the link below:

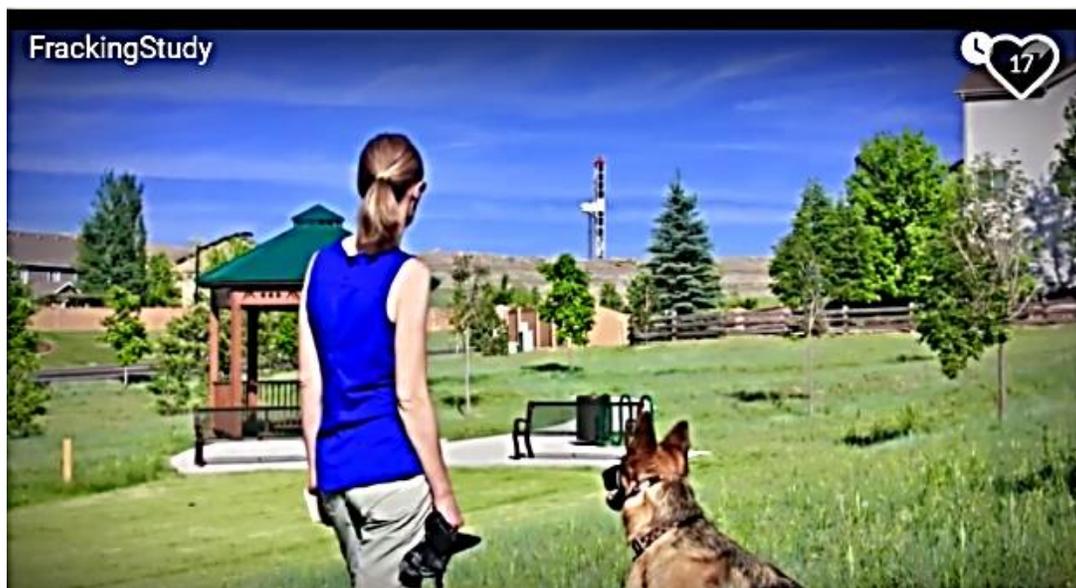
<http://www.columbiatribune.com/news/20170618/monarch-butterfly-conservation-efforts-on-rise-in-columbia>

Through working with MU School of Medicine Obstetrics, Gynecology and Women’s Health Program, Commonweal Foundation Biomonitoring Program, Division of Occupational and Environmental Medicine, University of California San Francisco, and Centers for Disease Control and Prevention (CDC), SNR/Center for Agroforestry students and scientists have successfully developed the analytical methods to assess the exposure of community to pollutants associated with fracking operations by determining the fracking chemicals and their metabolites in the urine collected from the residents living nearby the HF operation. Hazardous breakdown products of HF chemicals were present in the urine of study participants at much higher levels than those found in the general population, with one example up to ten times higher. The information has been disseminated to the community. “When the Wind Blows-tracking toxic chemicals in gas fields and impacted communities”

<http://www.comingcleaninc.org/assets/media/documents/When%20the%20Wind%20Blows.pdf>

The Center for Agroforestry is currently working with several organizations and communities to raise the funds needed for assessing the exposure of residents to the toxic chemicals due to the HF activities. <https://www.gofundme.com/health-of-dogs-living-near-fracking>

(Submitted by **Chung-Ho Lin**; Photo by Jennifer Fick.)



EVENTS/MEETINGS/ANNOUNCEMENTS

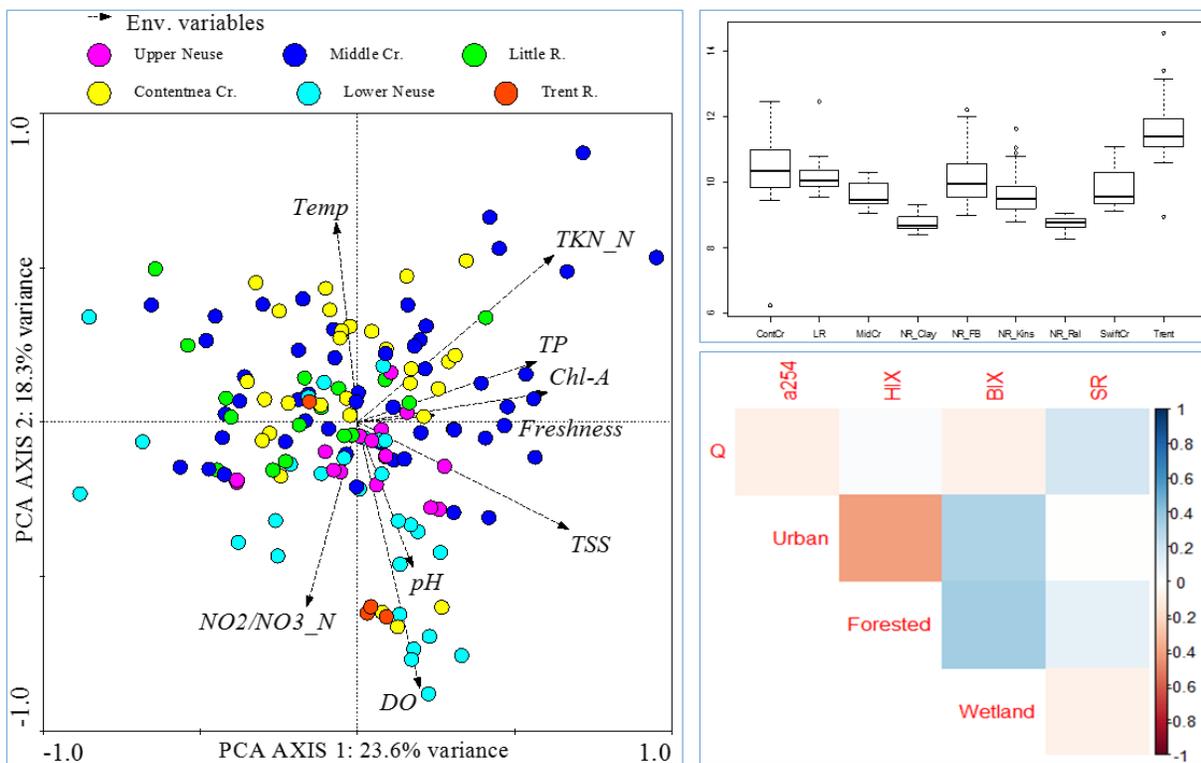
Analysis of Environmental Data using R

This course aims to provide participants with hands on training in the application of statistical techniques useful for the analysis of environmental data. Broadly, this course will focus on data preparation and management, using graphical exploration, transformation and outlier identification. We will use statistical models to conduct hypothesis testing and regression analyses. Finally, the course will provide an introduction to multivariate ordination techniques, such as principle component analysis and canonical correspondence analysis, commonly used to summarize patterns in environmental data. The course is directed towards graduate students working in various fields of environmental sciences. Prereq: an undergraduate course in statistics, understanding of basic concepts, such as correlation and regression. (Submitted by **Rebecca North.**)

Course details: Spring 2018; NAT_R 8001; Section 69043

Time and place: TBD

Instructor: Listed as Staff, but will be taught by **Ruchi Bhattacharya, Ph.D.**



Prairie Fork Conservation Area update: We have seen students from a William Woods summer camp to talk about watersheds, water cycle and explore different water scenarios using the stream table. We are looking forward to the Natural Resource Careers Academy that will be happening at Prairie Fork, Campus and the Central MO area, the week of July 9th-14th. (Submitted by Amber Edwards.)

SPOTLIGHT

MISSOURI TREE- RING LABORATORY

The oak wood shown here is possibly the oldest in the world. It is from a tree found buried in a north Missouri stream that grew 13,800 years ago when glaciers extended into central Iowa. The wood structure, chemistry, and tree rings of this tree, and hundreds of others like it, are being analyzed at the Missouri Tree-Ring Laboratory to document changes in tree growth, forest types, and climate conditions over the last 15,000 years. The Missouri Tree-Ring Laboratory, located in the Anheuser-Busch Natural Resources Building, is an internationally recognized facility for dendrochronology (tree-ring) research.



The tree-ring laboratory consists of a large, 500 sq. ft. woodshop for preparing samples, an 800 sq. ft. sample analysis laboratory, walk-in coolers for cold storage, and an off-site warehouse for dry storage. Research projects span disciplines of forestry, botany, climatology, anthropology, geology, chemistry, and more. Picture above (Photo by Shibu Jose), left to right: Dr. Michael Stambaugh (Associate Research Professor), Mary Burke (Undergraduate Forestry student / Research Assistant), Joe Marschall (Sr. Research Specialist), and Erin Abadir (Sr. Research Technician). The lab regularly hosts visiting scientists and public tours. (Left photo taken by Caroline Todd): Chinese foresters and friends of Forrest Keeling Nursery (Elsberry, MO) on a tour of the Missouri Tree-Ring Laboratory. For more information about the Missouri Tree-Ring Laboratory, website and contact information are below:



<http://faculty.missouri.edu/~stambaughm/mtrl/>

Dr. Michael Stambaugh (email: stambaughm@missouri.edu, Tel: (573)-882-8841)

DONOR SPOTLIGHT

Bill T. Crawford received his BA in Zoology in 1940 and MA in Zoology in 1942, both from the University of Missouri. He worked for 43 years at the Missouri Department of Conservation (MDC) where he was Chief of Wildlife Research. He held an adjunct research position at Mizzou, and guest lectured to several classes each semester. He valued the relationship with the University and was instrumental in getting the MDC building built at the corner of College and Stadium, negotiating with the University to purchase the land. He was co-founder of the Missouri Prairie Foundation, formed to protect and promote the unbroken, natural prairies that still exist around the state. The Prairie Foundation celebrated its 50th birthday in 2016 and Bill was honored for his unparalleled support for the Foundation. Bill also helped establish the Natural Area System for the state of Missouri, and served as President of the International Wildlife Society. He received the MU Alumni Association Alumni Award in 1984 and in 1988 received the Citation of Merit from the College of Agriculture, Food and Natural Resources (CAFNR) in recognition of his efforts to foster cooperation between the Missouri Department of Conservation and CAFNR. In June of 2004 Bill established an endowment at MU to provide annual awards to junior or senior students in The School of Natural Resources (SNR) majoring in Fisheries and Wildlife. Recipients are chosen for their focus on wildlife and interest in working in the field of conservation biology. Bill hopes that each recipient of this award will apply themselves beyond the defined duties of their future employment, always striving to serve their community and improve the ecology of our planet. Over the last 13 years, many students have benefitted from Bill's generosity and that will continue into perpetuity! Our thanks to Bill for all he does for the students in SNR, and for all of us with his efforts to conserve our natural resources for future generations.

DONOR APPRECIATION

The School of Natural Resources wishes to acknowledge donors that have made recent contributions to the School. The following have made contributions during June, 2017.

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