

FOREST SEASONS

FALL 2016

The Newsletter of the
NAU School of Forestry

NORTHERN
ARIZONA
UNIVERSITY

College of Engineering,
Forestry, and Natural Sciences

NAU Hosts the Southwest Fire Science Consortium



Barb Satink Wolfson (right) and others comparing a burn severity map to reality with the San Carlos Apache Tribe during a fall 2015 field trip.

(swfireconsortium.org/) is a rich repository of information, which includes working papers and other documents, videos, recorded webinars, information on upcoming events, and much more.

Another important role of the SWFSC is to host a regional conference. This is held every four years in partnership with the Association for Fire Ecology. The next conference will be held in Tucson from November 28th through December 2nd, 2016.

The Southwest Fire Science Consortium (SWFSC) is one of 15 Fire Science Exchange Networks across the country. Since its inception in 2009, it has been hosted by the School of Forestry with Associate Professor Andrea (Andi) Thode serving as program lead and Barb Satink Wolfson (BSF 2002, MSF 2004) as the program coordinator. The primary goals of the SWFSC are to ensure that the best available science is used to make management decisions, and that scientists are informed about the research needs that are of greatest

relevance to managers and policy makers.

The SWFSC facilitates interactions and information transfer among managers, scientists, and policy makers in a number of ways. For example, the SWFSC has provided funding and staff support for numerous field trips, workshops, and webinars. In partnership with the NAU Ecological Restoration Institute, it has also produced 12 working papers. The SWFSC website

With only one full-time staff member, the impact of the SWFSC has been particularly impressive. Its success would not have been possible without great partners and collaborators. The members of the governing board and the co-principal investigators come from 13 other universities; federal, state and local agencies; tribal staff; NGOs or non-profits; and private consulting firms. We are very pleased to host the SWFSC in our school, proud of all that it has accomplished to date, and are looking forward to many more years of service to the wildland fire community in our region.

EXECUTIVE DIRECTOR'S MESSAGE

Dear Alumni and Friends:

It is my pleasure to introduce this new issue of Forest Seasons. While there is no single theme, one thing that this issue highlights is the work of our school that extends beyond the classroom. Much of what we do serves a wider community of natural resource scientists and managers, such as the excellent work that has been performed for almost seven years now by the Southwest Fire Science Consortium and, more recently, the work of the Ancient DNA Lab. I am also excited about the number of new graduate students from other countries who are expected to arrive this academic year, including seven from Panama and Indonesia. The arrival of these students is a direct result of our increasing amount of international research.

At the same time, I am very proud of the many academic successes of both our current and recently graduated students. For example, to have two Gold Axe recipients this past spring was quite an accomplishment for an academic unit of our size. And speaking of axes, our Logging Sports Team took first place in a regional conclave and third place in the Western Forestry Clubs Conclave this year!

While most of the news is good, I am sad to say goodbye to Susan Bierer, our Student Services Coordinator, who left the school at the end of July. She served our students very well for three years and was a great colleague. We wish her well for her future endeavors down in Tucson.

Finally, I am pleased to announce that we will be offering an informal alumni event on Saturday, October 29th. Our plans for this get-together are described more on Page 6. We look forward to seeing some of you there.

Sincerely,
Jim Allen



Professor Pete Fulé (right) spent the spring 2016 semester in Chile, where he served as an instructor for the University Studies Abroad Consortium (USAC), a program for American students. Dr. Fulé taught two classes: South American Forest Ecology and Climate Change. He was based at the Universidad Andrés Bello in Santiago, but took a number of field trips to nearby forests, mountains, and glaciers. Students in his classes come from Nevada, Idaho, and Tennessee, as well as one from NAU.



Associate Professor Ching-Hsun Huang received the College of Engineering, Forestry, and Natural Sciences' Teacher of the Year Award. With nearly 200 faculty members to choose from, this was an exceptional honor. Dr. Huang has a well-deserved reputation as a dynamic and enthusiastic teacher who works hard and also holds her students to high standards. She is shown here with President Rita Cheng and Provost James Coleman.

STUDENT

HIGHLIGHTS



Serra Hoagland with Executive Director Jim Allen at the May 2016 commencement.

First Native American Student to Receive PhD

Serra Hoagland completed her doctorate degree and graduated this past May, making her the first Native American student ever to earn a PhD from the School of Forestry. Serra worked under the guidance of Regents' Professor Paul Beier and completed a dissertation entitled "An Assessment of Mexican Spotted Owl Habitat on Tribal and Non-Tribal Lands in the Sacramento Mountain Range, New Mexico." In addition to her academic success, Serra was an outstanding member of the School of Forestry community and is actively involved with organizations such as the Wildlife Society, Intertribal Timber Council, and American Indian Science & Engineering Society. While pursuing her dissertation, Serra worked as a Biological Scientist for the US Forest Service and continues to serve as the Co-Point of Contact for Tribal Relations for the Southern Research Station. She plans to continue working for the agency and hopes to build partnerships with various tribal colleges and USFS research stations.



Professor Carol Chambers, Rachel Harrow, Associate Professor Kristen Waring, and Connor Meehan.

Two Students Receive Gold Axe Awards

With its Gold Axe award, NAU recognizes graduating students each semester who have made especially outstanding contributions in the areas of academic performance, leadership, and service. Out of the 2,919 undergraduates who received their degrees in May, only 43 received this prestigious award. The School of Forestry was very fortunate to have two of its graduating seniors recognized this year: Rachel Harrow and Connor Meehan. Congratulations to Rachel and Connor, as well as to their faculty mentors, Drs. Carol Chambers and Kristen Waring!

Students Participate in the Intertribal Timber Symposium

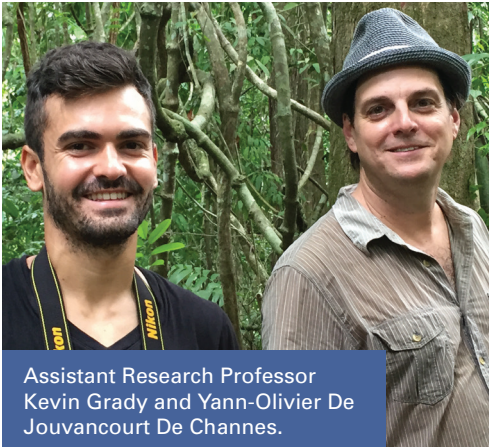
This year's annual meeting of the Intertribal Timber Council (ITC) was hosted by the San Carlos Apache Tribe in early April, and the School of Forestry was well-represented. In addition to the four faculty or staff and one Advisory Council member who participated, six students were present, including three graduate students who presented a poster on their research. Two undergraduate students received the ITC's highly competitive Truman D. Picard Scholarship and had an opportunity to address the meeting attendees at the closing banquet. Congratulations to those two students, Chad Brown and Harlan Tso! Under an agreement with the ITC, the School of Forestry will match these \$2,500 scholarships, resulting in \$5,000 for each student.



Leon Ben, Jr. (BSF, 1994), Orlando Carroll (BSF, 1989), Jamie Yazzie, Alicia Azpeleta, Jim Allen, and Lionel Whitehair posing in front of Alicia's, Jamie's and Lionel's poster.

PANAMA DRY TROPICAL FOREST

RESEARCH AND CONSERVATION



Assistant Research Professor Kevin Grady and Yann-Olivier De Jouvancourt De Channes.



A tree nursery at the Reserva Escondido Panamaes.

Associate Professor Richard Hofstetter, Assistant Research Professor Kevin Grady, Biology Adjunct Professor Karen London, and forestry graduate student Yann-Olivier De Jouvancourt De Channes recently visited the Reserva Escondido Panamaes near Pedasi, Panama. This is part of a developing collaboration and research program in Panama.

The team evaluated the reserve as a potential site for field classes as well as research in conservation and tropical forest ecology. This reserve has made great progress toward developing sustainable practices in agroforestry and tropical dry forest reforestation research, despite operating for less than a decade. They have grown hundreds of thousands of seedlings in their nurseries and have developed promising systems for soil remediation, reforestation, and restoration of the reef immediately off the coast. Because the site is in the region's most critically endangered tropical habitat (the dry tropical forest), conservation efforts are urgent. Water is a limiting resource in this area, especially during the six months of the dry season, so NAU faculty and students accustomed to the challenges of arid climates will have much to contribute in efforts to improve this land. A research field station will be built on the property soon and the team

was able to discuss and help design the facility with the property manager, Greg Ives, while they were there. He was very welcoming of their ideas concerning how to build and equip the facility to meet the needs for research, sleeping accommodations, and storage.

Three new Panamanian students will start master's degree programs in the School of Forestry in January 2017, and the team had the opportunity to discuss possible thesis research projects with them. The faculty were impressed that these students were so well-prepared for graduate school and already possess a deep understanding of the systems they wish to study. The students also are deeply appreciative and enthusiastic about the opportunity to attend the School of Forestry. They will be funded in part by the foundation that supports the reserve and partly by the NAU Center for International Education.

During their visit, the faculty also met

with Juan Perez, of the Panamanian Ministry of the Environment, to discuss common goals. Mr. Perez is the director of a new program called "Alliance for 1 Million"—a project aimed at reforesting one million hectares in Panama over the next 20 years. Mr. Perez is in favor of a partnership with the School of Forestry to help achieve this ambitious goal, making NAU one of the 20 members of the Alliance. Thus, the School of Forestry might play a significant role in developing the forestry sector in Panama, as well as improving tropical forest restoration and biodiversity. Research collaborations, grants through the foundation and Panamanian government, and classes are all very promising possibilities based on this exploratory and very productive visit.



Associate Professor Rich Hofstetter at the Panamanian Ministry of the Environment.

ANCIENT DNA

LAB OPENED



Professor Carol Chambers, President Rita Cheng (cutting the ribbon), and Faith Walker.

The School of Forestry has an exciting new research capacity, which is the ability to extract samples of DNA from “ancient” plant and animal specimens. This lab, developed by Professor Carol Chambers and Senior Research Scientist Faith Walker, was officially dedicated with a very well-attended open house and ribbon cutting ceremony on April 28th. The lab was funded in part with a \$20,000 grant from the NAU Vice President for Research’s office.



A spotted bat mummy.



Faith Walker beginning the DNA extraction process on an 8500 year-old bison jawbone.

DNA is generally considered ancient when it is older than 50 years, although some of the material that will be extracted in this lab will be thousands of years old. Drs. Chambers and Walker, for example, are planning to analyze DNA from spotted bat “mummies” that they have obtained, which are at least 10,000 years old. Questions the two plan to address relate to the genetic diversity of the species, how that has changed over time, and how it might change in the future. This will be part of their larger effort to provide information and guidance regarding the management of various bat species and the possible effects of ecological and climate changes that are expected to occur in the Southwest.

In addition to this work on bats, the lab will serve a much broader group of scientists with interests as diverse as the historical distribution of human and wildlife diseases, determining how the genetic structure of species have changed over time, and identifying the sources of plant materials found at archaeological sites. Many of the users will be from NAU or nearby organizations such as the Translational Genomics Research Institute (TGen North) and the Museum of Northern Arizona. However, this lab is likely to serve the needs of organizations much further afield as time goes on.

NAU already has a considerable capacity to extract and analyze DNA, and this is a very active area of research across several departments and research institutes. One thing that makes this new facility special is that it is isolated from the other labs performing DNA work, which is critical to ensuring the integrity of the material extracted from ancient specimens. We look forward to the many exciting discoveries that will get their start in this lab.

PLANNED FOR OCTOBER 29

ALUMNI EVENT

The School of Forestry invites you to an alumni gathering on Saturday, October 29th. Plans are still being finalized, but tentatively include a breakfast in our building, a building tour, talks by our executive director and one or more faculty members, a field trip to the Centennial Forest, and a barbecue. There will also be opportunities to meet current students and some of the members of our Advisory Council. We plan to send out more information soon by email, so please send us your message to forestryinfo@nau.edu if you want to be on the list.



UPDATE ON THE CHARLES O. AND MARY MINOR FORESTRY PROFESSORSHIP

We continue to get closer to our goal of \$250,000, which is the amount needed to fully endow this first-ever named professorship in the School of Forestry. This professorship will enable a top faculty member to have more resources for research and supporting graduate students, which will increase our overall productivity, helping us to retain top talent.

An important development in our effort to achieve this

was the recent offer from an anonymous donor of up to \$30,000 in matching funds. The donor has offered a 1:1 match for every dollar donated to this professorship until we reach \$30,000 in donations or the end of this calendar year, whichever comes first. We would love your help to reach this goal. One thing to keep in mind is that any money that is donated will effectively be matched twice—in the short-term it will be matched by the anonymous donor, and

once we reach the \$250,000 goal, the returns on the endowed fund will be matched each year by the Arizona Board of Regents Eminent Scholars fund. This is a great opportunity to invest in the future of our school.

ALUMNI

UPDATES

John (Little John) Smith, BSF 1966

After a career spent working as a scaler, forester, and purchasing representative for Precision Pine and Timber, Inc. and Duke City Lumber Company, John is retired and settled down in Winslow, Arizona. He is happily engaged in quilting with his wife and the local Quilt Guild. John sends his regards to all of the School of Forestry alumni and in particular to those known as "Minor's Little Raiders!"

Brian Oswald, MSF 1981

Brian was inducted into the University of Idaho Alumni Hall of Fame this past May. He received his PhD from Idaho in 1992 and currently is the Joe C. Denman Distinguished Professor of Forestry in the



Mary Coulombe and Bob Ratcliff.

Arthur Temple College of Forestry and Agriculture at Stephen F. Austin State University. Brian was also recognized as our Distinguished Alumnus of the Year in 2009.

Naomi Marcus, BSF 2003

For the past 13 years, Naomi has worked with the Colorado State Forest Service in a variety of positions. In Naomi's current position as the Forest Stewardship Coordinator, she oversees the state's forest stewardship, conservation easement, and state-funded grant programs. Prior to completing her BSF in 2003, Naomi worked as a Henry Clepper Forest Policy Intern for the Society of American Foresters. Conservation education for multiple generations is at the core of everything that Naomi does. As a result of her efforts to train colleagues, teach Coloradans, function as a natural resources camp director, receive an MED specializing in adult education and training, and actively engage as a multi-level leader with the SAF, Naomi was recognized as an SAF Fellow in 2015. Naomi lives in Frederick, Colorado with her husband David and their two sons.

Abigail (Abby) Tobin, MSF 2016

Abby started her position as a Fish & Wildlife Biologist 3 for the Washington Department of Fish and Wildlife in August of this year. She is based out of Olympia, Washington, but will be coordinating White-nose syndrome (WNS) and bat conservation efforts across the state. Her main duties are to collaborate with stakeholders and partners to develop and evaluate the baseline health of bat populations and the distribution of WNS in Washington.

Mary Coulombe, BSF 1984

Mary was awarded the Society of Outdoor Recreation Professionals' Distinguished Service Award for 2016 at their annual conference in Boise, Idaho, this past May. She is shown here with Bob Ratcliff, a National Park Service employee who recommended her for the award and who works closely with her on the Federal Recreation Council, Every Kid in a Park initiative, Find Your Park initiative, and Recreation.gov. Mary is the Chief of Natural Resources Management for the US Army Corps of Engineers and has been a member of our Advisory Council since its inception in 2009.



Printed on responsibly sourced paper.



Save the date! We are planning a get-together for
School of Forestry alumni on Saturday, October
29th, and hope to see you there.

See Page 6 for more details.