

PEC NEWSLETTER

Fall 2016

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Greetings From the Chair Meeting in Boston & More

By **Tim Beach**

Greetings from Tim Beach, the Chair, at Palenque in Chiapas, Mexico.

The Boston AAG Meeting should be an exciting one for the Paleoenvironmental Change Specialty (PEC) Group, around our Tenth Anniversary.

Last summer, I have had the fortune to go to two great meetings that show that paleoenvironmental studies are strong worldwide. These were the AMQUA meetings in Santa Fe and the IGC in China. We in the PEC Specialty Group of the AAG want to keep up our role and even grow within Geography. The PEC, though only ten years old, represents so many core aspects of the field.

Along these lines, we will host the Physical Geography Symposium. This

includes both a group of invited plenary talks, a Keynote lecture, and a Poster Session on “Human Environmental Interactions: The Legacy of Karl Butzer in the Physical Geography and beyond”. This will have a great lineup of invited speakers including Neil Roberts, author of *The Holocene*, Georgina Endfield, and PEC’s own Cary Mock. As most of you know, Karl passed away in May 2016 as many were rushing to the field or out of the office and lab. If you are interested to learn more of Karl’s career, read his modest Wikipedia site: https://en.wikipedia.org/wiki/Karl_Butzer.

Besides these sessions, we are looking forward to more AAG sessions and collaborations with



Chair, Tim Beach
University of Texas at Austin

other Specialty Groups. We encourage PEC members to organize sessions and to seek PEC co-sponsorship.

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For the Physical Geography Symposium, we will have a special Poster Session. We will also have the Physical Geography Reception around this Poster Session in an attempt to bring the Physical Geography Community together with any other communities in the discipline.

Lastly, at the Business Meeting in San Francisco's 2015 AAG Meeting we discussed two new awards for the Specialty Group, the lifetime achievement award and a great paper of the year award. Having more awards makes us seem like millennials, I know, but we are only 10 years old! We also discussed naming the awards, and the names that came up most in discussions for the Lifetime Achievement Award were Karl and Elisabeth Butzer. Much of the discussion centered around naming the awards after Geographers and having them represent our diversity and aspirations for diversity. I ask now for nominations by 31 October for an election to be held soon thereafter by the whole body on naming the awards.

I look forward to seeing you all in the great city of Boston!

Tim

Calling All Students A Message From Your Student Liaison

Greetings PEC members,

My name is Matthew Kerr and I am happy to be serving this year as Student Liaison to the PEC Board. First, a bit about myself: I am a PhD candidate studying under Dr. Sally Horn in the Laboratory of Paleoenvironmental Research at The University of Tennessee. My research fields include Quaternary environments and prehistoric human-environment interactions. My primary interest is in the effects of extreme climate events on prehistoric people and environments, particularly regarding consequences for the rise and fall of complex civilizations. I investigate these issues through stable isotope and archaeochemical analyses of a wide variety of natural and anthropogenic archives. If these topics interest you, I am always happy to hear from folks and discuss paleoenvironmental research.



Here are several things to keep in mind for the coming months:

- PEC sponsors several awards for students, including Research Awards and Student Presentation Awards for both papers and posters. These competitions each include a category for the PhD level and a combined category for the undergraduate and master's levels. Look for more information soon from the PEC board.
- Recently we sent a CFP for a series of paper sessions that I am co-organizing with Anna Agosta G'meiner for the AAG meeting in Boston next spring. These sessions, entitled "New Records of Paleoenvironmental Change," will feature research on the development and interpretation of new proxy records from sites around the globe. If you would like to participate, please contact me or Anna with your paper abstract.
- We will again have a PEC-sponsored, student-centered panel session for the upcoming AAG meeting. This panel will present a frank discussion on issues and challenges of maintaining health and wellbeing in the academy. If you are an undergraduate student considering grad school, a grad student working to start a career, or a professor with experience to share, please make plans to attend this discussion.
- Finally, we will have a PEC-sponsored meet-and-greet at a yet-to-be-determined location in Boston. If you have requests or suggestions for a location, I would love to hear from you!

If you would like to discuss any of these topics or have issues you would like me to address as Student Liaison to the PEC Board, please contact me at mkerr6@vols.utk.edu. I look forward to seeing everyone in Boston! And to those of you in the Southeast, I hope to see you at SEDAAG in Columbia this November.

AAG PEC Award Winners

Awarded at the San Francisco Meeting

We had a large number of student applicants for the PEC awards. Many thanks to everyone who took the time to prepare an application. Unfortunately we had to select only one winner in each award category. The winners are:

Student Research Award PhD Category

Maegen Rochner - Past, Present, and Future Climate Change and Forest Dynamics in a High-Elevation Whitemark Pine Ecosystem, Wyoming, U.S.A.

Student Research Award Undergraduate/MS Category

Chance Raso - Fire History, Species Composition, and Stand Age Structure of Globally Rare Pitch Pine Bogs in Central Appalachia from Macroscopic Charcoal and Tree Rings

Student Presentation Award PhD Paper Category

Julie Commerford - Variation in Grassland Vegetation Composition and Fire Activity Throughout the Holocene at Fox Lake, Minnesota

Student Presentation Award Undergraduate/Masters Paper Category

Anye Zhu - Did Native American Depopulation Lead to Increased Mast Tree and Passenger Pigeon Abundance in Eastern and Midwestern U.S.?

Student Presentation Award PhD Poster Category

Jennifer Newall - Reconstructing the Glacial History of Western Dronning Maud Land, Antarctica

Student Presentation Award Undergraduate/Masters Poster Category

Chance Raso - Climate Response of Two Central Appalachian Rimrock Yellow Pine Species Using a Composite Growth Chronology

We would also like to thank the anonymous judges who took the time to review all of the applications. Updates on how the research award winners used their awards can be found in the later pages of this issue.



Left: Ph.D. Student research award winner Maegen Rochner (left) with PEC director Jim Doerner (right).

Right: Masters student research award winner Chance Raso (left) with PEC director Jim Doerner (right).

New Publications

Featured Publications From Our Members

By Maria Caffrey

We realize that all of our members very involved in various fields of research that PEC members would like to hear about. If you have an article or any other research you would like to be featured in our newsletter please email Maria Caffrey.

Bianchette, T.A., McCloskey, T.A., and Liu, K.-b. 2016. Re-evaluating the geological evidence for Late Holocene marine incursion events along the Guerrero Seismic Gap on the Pacific Coast of Mexico. PLoS-One, 11(8), e0161568. doi: 10.1371/ journal.pone.0161568.

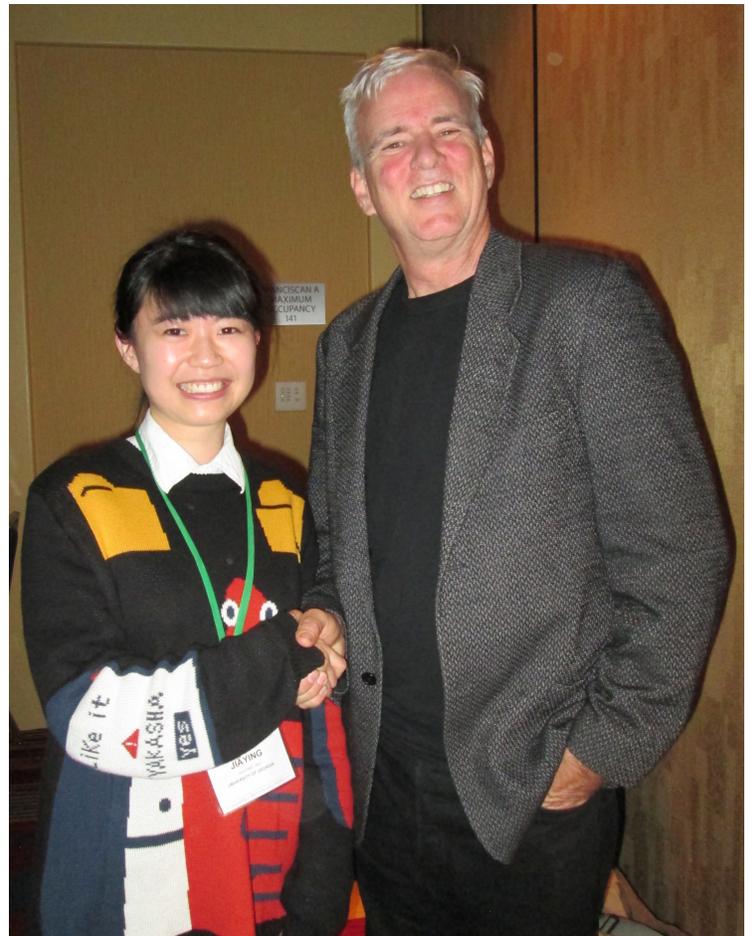
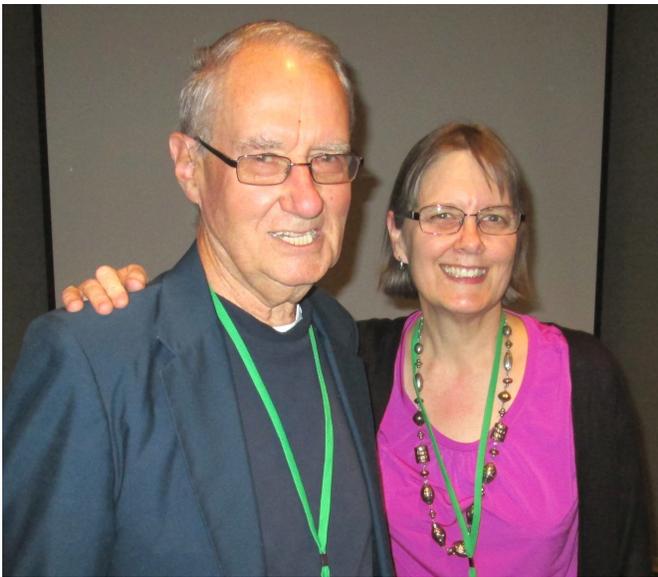
Bianchette, T.A., Liu, K.-b., Qiang, Y., and Lam, N.S.-N. 2016. Wetland accretion along coastal Louisiana: Spatial and temporal variability in light of Hurricane Isaac's impacts. Water, 8(1). doi: 10.3390/w8010001.

Figuroa-Rangel, B.L., Valle-Martinez, A., Olvera-Vargas, M., and Liu, K.-b. 2016. Environmental history of mangrove vegetation in Pacific West-Central Mexico during the last 1300 years. Frontiers in Ecology and Evolution, 4(101). doi: 10.3389/fevo.2016.00101.

Highlights from the AAG Annual Meeting, San Francisco, CA



Participants in the Roger Byrne Session from left to right: Michelle Goman, Sally Horn, Michele Forman, Barbara Holzman, Dave Wahl, Jim Doerner, Scott Mensing, Scott Starratt. Photo



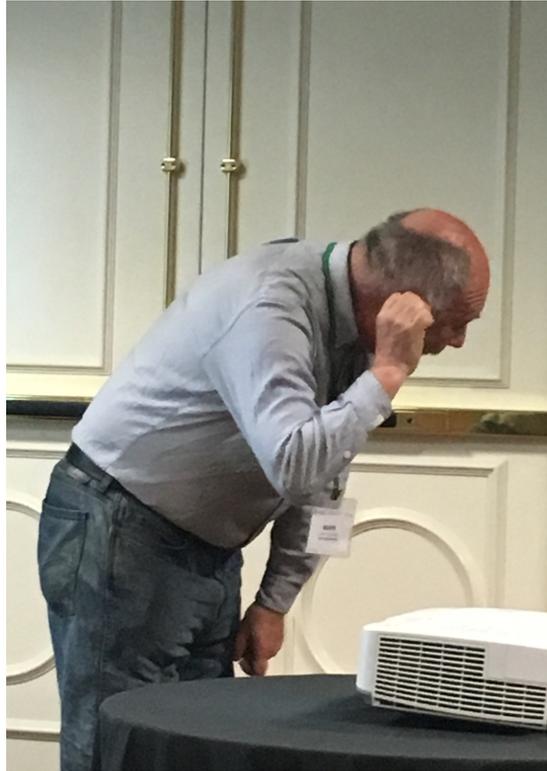
Upper right: William (Bill) Denevan with Sally Horn. Photo credit: Sally Horn. Above: Jiaying Wu with Glenn MacDonald. Photo credit: Sally Horn. Lower left: Don Sullivan with Dave Wahl. Photo credit: Sally Horn.

Honoring Roger Byrne

By Don Sullivan

After 43 years in the Department of Geography at the University of California, Berkeley, Roger Byrne retired this spring. Roger has had a very large impact on the field of paleoenvironmental research through his own research, and through the number of graduate and undergraduate students he has trained. (Among his former students are Sally Horn, University of Tennessee; Scott Mensing, University of Nevada, Reno; Dave Wahl, US Geological Survey; Tripti Bhattacharya, University of Arizona; Mark Blumler, SUNY Binghamton; James Wanket, Sacramento State University; Michelle Goman, Sonoma State University; Glen MacDonald, UCLA; and Don Sullivan, University of Denver.)

PEC sponsored four paper sessions and a panel at last spring's AAG meeting in San Francisco celebrating Roger Byrne's legacy. A total of 19 papers were presented, and four geographers participated in the panel discussion. Many thanks to everyone who participated in and attended the sessions.



Former Roger Byrne student Mark Blumler demonstrating the finer points of biogeography

The 2016 PEC Meeting Meet and Greet All Students are Welcome!



Thanks to everyone who came out for the fourth annual PEC meet and greet organized by former student representative Vachel Carter. This year we had a large turnout of people at Colibri Mexican Bistro in San Francisco. Please keep your eyes peeled for Matt Kerr's messages regarding the next meet and greet to be held at the 2017 AAG meeting in Boston.

Research Update

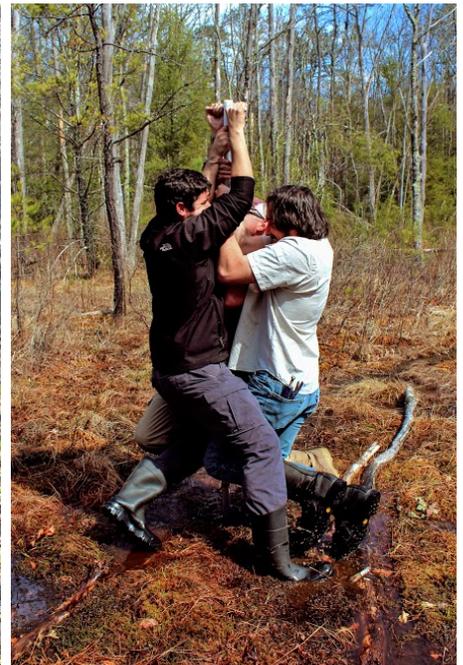
Research Award Winner Chance Raso



Lisa Kennedy (front left) and Chance Raso (front right) in the field with their team

In March of 2016, Lisa Kennedy, Associate Professor of Geography at Virginia Tech, took her small upper level undergraduate course titled Tracking Environmental Change to Kire Bog in the George Washington and Jefferson National Forest, Virginia to extract a sediment core with her master's student, Chance Raso. His thesis work, titled "Fire History, Species Composition, and Stand Age Structure of a Globally Rare Pitch Pine Bog in Central Appalachia from Macroscopic Charcoal and Tree Rings," is using both macroscopic charcoal

and tree rings to examine long term fire history and forest dynamics within the rare pitch pine bog. Chance's thesis won the 2016 PEC Undergraduate/Masters Student Research Competition, where he used the radiocarbon date reward to get an estimated age of charcoal from the bottom of the sediment core to be 3,200 cal YBP. Chance and Lisa will be presenting this research at the Appalachian Fire Learning Network Workshop along with the 2016 SEDAAG Annual Meeting in November.





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Radiocarbon Dating

AMS & Conventional

Isotope Ratios

δD , $\delta^{13}C$, $\delta^{15}N$, $\delta^{18}O$, $\delta^{34}S$, $^{87}Sr/^{86}Sr$, C/N ratio

Elemental Analyses

ED-XRF, WD-XRF, portable-XRF

CHN-elemental analyses of bulk samples

ICP-MS, ICP-OES

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Alex Cherkinsky, cherkin@uga.edu
Radiocarbon Dating, Bone/Teeth

Randy Culp, rculp@uga.edu
Stable Isotopes, GC-IRMS

Doug Dvoracek, dvoracek@uga.edu
Geochemistry, Geology, Sr isotopes

Alice Hunt, ahunt@uga.edu
XRF, ICP-MS/OES, Archaeology

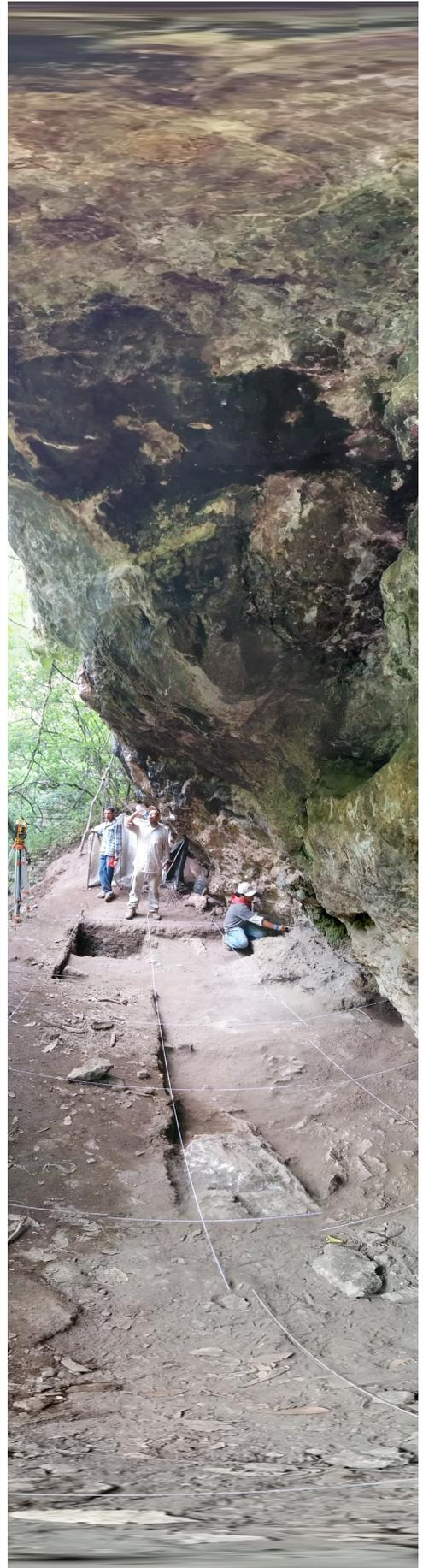
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Parting Pictures... Notes From the Field

Michelle Goman traveled to the highlands of Eastern Guerrero, Mexico this summer to take part in an NSF funded archaeological excavation of the Cacalotepxi Rockshelter. The rockshelter has a hunting scene painted on on the rock walls (possibly Late Archaic in age, 3500-1200 BCE). Michelle and students are currently processing soil samples for macro botanical remains.

Top left: Cave painting in Cacalotepxi. Excavation Director Gerardo Guitierrez (UC Boulder, anthropology) points to a cave painting depicting deer running from two hunters (off screen). Looking on is Dr. James Cordova (UC Boulder, art history).

Bottom left: Michelle Goman collecting charcoal from a unit (James Cordova looking on).

Right: Profile and early excavations of Cacalotepxi cave shelter.