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“The Energy of People, Places, and Life”

Joint SEB & SoE Conference
May 11-14, 2014  Cherokee, North Carolina

Conference Highlights
Submitted by Gail E. Wagner

Plan to attend the SEB’s 55th annual conference May 11-14, 2014, at Cherokee, North Carolina! In 2012 we enjoyed learning about the middle Appalachian region—come to discover the incredible floristic diversity of the southern Appalachians when many spring wildflowers are in bloom! For the first time, SEB is meeting jointly with the Society of Ethnobiology, with a fully blended meeting. In other words, double the friends, double the fun!

For many, the conference begins on Sunday (May 11), when the Board/Council convene, and when some take an optional plant walk led by Karen Hall, followed by Pecha Kucha presentations and an evening opening welcome reception. The conference features a number of special events and sessions, including a society-wide field trip on Monday afternoon that we are calling the Cherokee Heritage Experience: visits to the Museum of the Cherokee Indian, Qualla Arts and Crafts, and to Oconaluftee Village where Cherokee demonstrate traditional crafts. This year we will enjoy two distinguished talks, one by our Distinguished Economic Botanist (Dr. Jan Salick) and one by the Distinguished Ethnobiologist (Dr. Gene Hunn). You may sign up to participate in up to two OSN-sponsored educational hands-on workshops on Tuesday, one in the morning, and one in the afternoon. Tuesday night OSN hosts an interactive education reception at Western Carolina University’s nearby Mountain Heritage Center. Students host an open-microphone student reception on Monday night, and a student-mentor lunch will be held on Tuesday.

Over 130 papers, several films, and 50 posters are scheduled for Monday through Wednesday. Themed sessions include “Caribbean Ethnobotany,” sponsored by SEB’s Caribbean Chapter. We also will see sessions focusing on domestication, ethnoornithology, ethnomedicine, food, forestry management, Traditional Ecological Management, education, farming, resource management and conservation, folk taxonomy, theory, climate change, and paleoethnobotany, among others.

The award ceremony is followed by a joint banquet on Wednesday evening, May 14. Bring your musical instruments—we plan to liven up our own banquet! Optional post-conference field trips run on Thursday, May 15. One set of field trips takes you back to Asheville, NC, where you can either board your return flight home, or opt to stay in Asheville. Another set of field trips remains in the Cherokee area, where you may opt to stay or you can catch the late afternoon shuttle back to Asheville.

Judges Needed for the 2014 Meeting

Our society focuses on the students that are the future in Economic and Ethnobotany. We offer many awards and opportunities for mentoring and sharpening student skills, in the field and in the laboratory. However, no matter how great their abilities, students do not become known unless they can orally present and write about research in coherent and intriguing ways. For many years we have offered awards for the best posters and papers at our annual meetings. To guide students, you can be a judge at the meeting. Let me know if you have the ability, time, and interest to do this during the meeting in NC. Please write me at newsletter@econbot.org.

More details on page 3
Notes from the Field

I hope by now everyone has received their 2014 ballots for officers and council members. Student Representative ballots are still pending. Please complete your ballots right away. Results will be announced during the business meeting on Monday, May 12 at the NC annual meeting.

The meeting has lots of activities and planned events, so please register soon and make sure you are able to attend all the workshops and trainings of your interest. The shuttle from Asheville has a sign up deadline of April 4: make certain to reserve your space on a shuttle by that date! That deadline is set by the date we need to cancel our bus reservations without financial penalty! See page 2.

Besides the financial awards for posters and written papers presentations during the meeting, there are two awards for students to consider now, the Charles B. Heiser mentor award and the Richard Evan Schultes award.

Until the warmth of North Carolina on native lands, may you all be warm and well.

Student Awards

Call for Nominations for the Charles B. Heiser, Jr. Mentor Award

With registration open for the joint SEB/SoE conference in Cherokee, North Carolina entitled “The Energy of People, Places, and Life” (May 11-14, 2014), we would like to call for nominations for the Charles B. Heiser, Jr. Mentor Award.

The Student Committee initiated the Award in 2007 to recognize outstanding economic botanists who have substantially impacted the training and professional development of economic botany and ethno-botany students. The Mentor Award is named in honor of Charles B. Heiser, Jr., Distinguished Professor Emeritus of Indiana University, and spotlights dedicated educators who foster the development of the field by example and through student mentoring. A student-nominated award, it acknowledges mentors who are experienced, knowledgeable, trustworthy friends, counselors, and teachers.

Current SEB student members and recent graduates (up to 3 years) are invited to nominate a mentor who has influenced their development in the field of ethnobotany. Students who wish to nominate a mentor should submit a letter explaining why they believe their nominee should be selected for the award to Alexandra (alexandra.towns@naturalis.nl) and Annie (avirnig@nybg.org). Selection criteria can be found on the student section of the SEB website. The award has not been given out for the past three years due to a lack of submissions, so we encourage students to nominate for the current year!

Call for Applications for the Richard E. Schultes Award

The application cycle for the Richard E. Schultes Award is once again open! The award was created in 2001 to honor the late Dr. Richard E. Schultes. Awarded to graduate student members of SEB, or members who have received their degree within the past year, the Schultes Award is intended to help defray costs of fieldwork. The award provides up to $2,500 for research in economic botany. Details about application requirements and submission are available online on the student section of the SEB website. The deadline for the coming cycle will be March 15, 2014.
SEB 2014 Meeting

TRANSPORTATION to Cherokee takes some planning on your part. We recommend you fly in to the Asheville Regional Airport, which is 56 miles from Cherokee with no public transportation between the two places. The deadline is April 4 to sign up for a specific shuttle to get you from Asheville to Cherokee at the nominal cost of $20, or for a shuttle to return you from Cherokee to Asheville (an additional $20). Note that if you take a field trip, the field trip may include returning you to the airport. Otherwise, the only way for you to get from the airport to Cherokee or vice versa is by personal car. Make certain to book your shuttle to leave Cherokee three hours or more in advance of your plane flight out of Asheville! In other words, carefully coordinate your flight schedule with what shuttles you sign up to take.

HOUSING. Contact Harrah's Cherokee Casino Resort directly to make your reservations—SEB is not handling room reservations. We have booked a block of 200 rooms for Sunday through Wednesday nights at a greatly discounted rate. Rooms are NOT available at the resort on Friday or Saturday nights, although there are other hotels in Cherokee where you may book rooms. Rooms on other nights will cost the regular rate. Book your rooms NOW, before the special-price room block is sold out! Note that the instructions on our Conference Site tell you how you may search for a roommate to share a room and room costs (rooms cost the same for one or two people, and just $10 more per additional person up to four people).

EDUCATIONAL WORKSHOPS. The following workshops are being offered, but each has limited enrollment: register early to sign up for your top choices! "M" workshops are offered in the morning; "A" workshops are offered in the afternoon.

M1. Mobile Discovery: Engaging Students & Indigenous Communities in Global Health Research, led by Dr. Slavko Komarnytsky

M2. Caribbean Medicinal Teas & Bush Baths, led by Dr. Sonia Peter

Student Activities

2014 Conference Student Social Open Mic Night, Mentoring Events, and Calendar Fundraiser

Submitted by Alexandra Towns & Annie Virnig, Student Co-Representatives

Joining forces with the Society for Ethnobiology (SoE) student representative Janelle Baker, fellow SEB co-representative Annie Virnig and I have been planning this year's student social and student fundraiser. We are pleased to announce that the student social will be held on Monday evening, May 12 from 7:30 until 10:00 pm at Harrah's Conference Center. This year, the student social will be an open mic night! Be sure to bring your instruments, story-telling skills, dancing shoes, and sense of humor for a fun-filled night of meeting students from both societies and networking with other members who are young-at-heart. Everyone is welcome! We plan to provide light refreshments and non-alcoholic drinks, but a cash bar will also be open for the event. Stay up-to-date with the plans via the student list-serv.

We are also planning two different mentoring activities for students that are sure to be great opportunities to interact with both early-career and established ethnobotanists. Both of these are open for registration as part of conference registration. The first is for students who are first-time attendees, or feel that they are not yet comfortable with the SEB/SoE community, and will pair them with a mentor for the duration of the conference. We have an awesome group of recent graduates, early career scholars, and established academics who have volunteered to serve as mentors! If you check the box on the registration form for this activity, we'll then pair you with mentors based on your research interest and preference for younger or more established SEB and SoE mentors.

The second activity is a mentor lunch taking place on Tuesday, May 13 from 12:00-1:30. There is a $5 donation for this (mentors are covering the bulk of the cost), and this will be dedicated towards more general career and research advice. We again have a great selection of mentors who have volunteered to be a part of this, including several of the former SEB Distinguished Economic Botanists and SoE Distinguished Ethnobiologists.

We hope you'll consider these events as you register! Mentors are very excited to be able to work with younger members of SEB and SoE and introduce them to the community, so both should be great opportunities for students.

Finally, we want to alert you that the student fundraiser this year will be a 2015 Epic Trees Wall Calendar "Celebrating the tallest, oldest, thickest, and more breathtaking trees in the world." It will include logos from both societies. You can order one for $25 when you register to attend the conference. All proceeds benefit SEB and SoE student activities. We look forward to seeing you at the Monday night social, the various mentoring events, and encourage you to support SEB students by purchasing this year's calendar fundraiser!
SEB 2014 Meeting

continued from page 3

M3. Breeder Seed to the Grocery Shelf: GMOs and Consumer Products, led by Dr. Mary Eubanks
M4. Grocery Store Botany, led by Dr. Laura Thompson
A5. Dyeing to Learn Objectives: Using a Natural Dyes Activity to Develop Learning Objects, led by Dr. Karen Hall and Dr. Sunshine Brosi
A6. Exploring the Genetics, Evolution and Ethnobotany of Taste: An Organoleptic Approach to Our Relationship with Plants, led by Ashely DuVal and Dr. Rachael Meyer
A7. Fibers of Life: Creations from Plant Fibers, led by Heidi Bohan.

OPTIONAL FIELD TRIPS. The following optional field trips are offered, each with minimum-maximum enrollments. Register early to get your top choice! All post-conference field trips run on Thursday, May 15. Two end at the Asheville airport, and a late afternoon shuttle back to Asheville is scheduled for the other two.

Plant Walk, led by Karen Hall. Sunday, May 10, 3:00-5:30.

Post-Conference Field Trips on Thursday, May 15:
CH1. Cherokee Cosmography, led by TJ Holland (Cherokee).
CH2. Appalachian Ethnobotany, led by David Cozzo.

REGISTRATION is open, including for shuttle reservations and for post-conference field trips. Note that registration rates go up after March 15.

Other deadlines:
April 4: shuttle reservation deadline
April 7: post-conference field trip, banquet, and student mentor lunch deadline.
April 26: room reservation deadline at Harrah’s Resort hotel.
Education
Submitted by Gail Wagner, Cassandra Quave, and Karen Hall

Educational Group Realizes its Vision

The Open Science Network in Ethnobiology (OSN) sponsored a table during SEB’s 2013 London conference, where copies of their recently published Vision and Change for Undergraduate Ethnobiology Education in the U.S.A.: Recommended Curriculum Assessment Guidelines (McClatchey et al. 2013) were disseminated. Copies will be available at SEB/SoE 2014, plus you can download a copy from the OSN website (http://www.opensciencenetwork.org).

Originally an NSF-funded Research Coordination Network, OSN began a life of its own with the 2013 adoption of by-laws and election of officers and board members. They are as follows: Karen C. Hall, Chair, Botanical Research Institute of Texas
Cassandra Quave, Vice Chair, Emory University
Keri Barfield, Treasurer, Botanical Research Institute of Texas
Nanci Ross, Secretary, Drake University
Sunshine Brosi, Board member, Frostburg State University

At the upcoming combined SEB/SoE conference, OSN will be hosting their popular “Teaching Tuesday” sessions with some exciting workshops such as flintknapping, medicinal teas, GMOs, plant dyes, and much more. In addition, OSN plans a Tuesday evening members’ reception at the Mountain Heritage Center at Western Carolina University. Registration for the event includes annual membership in OSN. We hope to see you there!

The Open Science Network has been adopted as an educational initiative of the Society for Economic Botany.

Summer 2014 Courses

Mountain Lake Biological Station (University of Virginia) http://mlbs.org/summerscours
May 19 - June 13
PLANT CONSERVATION AND DIVERSITY: Bioinformatics, Systematics, and Field Techniques, 3 credits, Zack Murrell, Appalachian State University

BIOLOGY AND CONSERVATION OF FISHES, 3 credits, Dave Neely, Tennessee Aquarium Conservation Institute

May 19 - May 30
SCIENCE WRITING: Creative Approaches to Biology and Ecology, 2 credits, Hannah Rogers, University of Virginia

New Book on Ethnobotany and Teaching

Innovative Strategies for Teaching in the Plant Sciences (C.L. Quave, Ed., Springer Press, 2014) focuses on innovative ways educators can enrich the plant science content being taught in universities and secondary schools. Drawing on contributions from scholars around the world, various methods of teaching plant science are demonstrated.

Specifically, core concepts from ethnobotany can be used to foster the development of connections between students, their environment, and other cultures around the world. Furthermore, the volume presents different ways to incorporate local methods and technology into a hands-on approach to teaching and learning in the plant sciences.

Written by leaders in the field, Innovative Strategies for Teaching in the Plant Sciences is a valuable resource for teachers and graduate students in the plant sciences. The release date is set for March 31, 2014. The book is available for sale at the Springer Press website and copies will also be available for purchase at the annual SEB meeting this May (http://www.springer.com/life+sciences/plant+sciences/book/978-1-4939-0421-1).

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Publications

Taming Tibet: Landscape Transformation and the Gift of Chinese Development
By Emily T. Yeh

Cornell University Press is pleased to announce the publication of Taming Tibet by Emily T. Yeh, which examines how Chinese development projects in Tibet served to consolidate state space and power.

The violent protests in Lhasa in 2008 against Chinese rule were met by disbelief and anger on the part of Chinese citizens and state authorities, perplexed by Tibetans’ apparent ingratitude for the generous provision of development. In Taming Tibet, Emily T. Yeh examines how Chinese development projects in Tibet served to consolidate state space and power. Drawing on 16 months of ethnographic fieldwork between 2000 and 2009, Yeh traces how the transformation of the material landscape of Tibet between the 1950s and the first decade of the 21st century has often been enacted through the labor of Tibetans themselves. Focusing on Lhasa, Yeh shows how attempts to foster and improve Tibetan livelihoods through the expansion of markets and the subsidized building of new houses, the control over movement and expansion of markets and the subsidized building of new houses, the control over movement and space, and the education of a Tibetan desires for development have worked together at different times and how they are experienced in everyday life.

The master narrative of the PRC stresses generosity: the state and Han migrants selflessly provide development to the supposedly backward Tibetans, raising the living standards of the Han’s “little brothers.” Arguing that development is in this context a form of “indebtedness engineering,” Yeh depicts development as a hegemonic project that simultaneously recruits Tibetans to participate in their own marginalization while entrapping them in gratitude to the Chinese state. The resulting transformations of the material landscape advance the project of state territorialization. Exploring the complexity of the Tibetan response to—and negotiations with—development, focus is on three key aspects of China’s modernization: agrarian change, Chinese migration, and urbanization. The author presents a wealth of ethnographic data and suggests fresh approaches that illuminate the Tibet Question.

About the Author
Emily T. Yeh is Associate Professor of Geography at the University of Colorado at Boulder.

Praise for Taming Tibet

Emily T. Yeh’s Taming Tibet is one of the best analyses of the contemporary socioeconomics and politics of the development of Tibet. The book is based on powerful ethnographic details and strong theoretical analysis and situates the current sociopolitical milieu within the context of the larger issues of the state’s goal of “development” and local subjectivity in transforming Tibetan landscape.

Yeh shows that the issue is not a simple dichotomy between state action and local resistance. The “gift of development” produces an asymmetrical relationship between donor and recipient, the Chinese state’s desire to make an imprint on the territory while at the same time creating “internal others” and “objects of suspicion.” Taming Tibet should be required reading for anyone interested in understanding contemporary Tibet and China’s relations with periphery regions.

—Tsering Wangdu Shakya, Canada Research Chair in Religion and Contemporary Society in Asia, University of British Columbia, author of The Dragon in the Land of Snows

This book is available from most booksellers or directly from Cornell University Press’s website (http://www.cornellpress.cornell.edu/book/GCOI=80140100581500) and our ordering department (tel: 1-800-666-2211). (If ordering the book directly from Cornell, use the promo code CAU6 at checkout or when calling to receive 25% discount off the paperback’s $26.95 list price.) In Europe, the book is available from NBN International; in Australia and New Zealand, from Footprint Books.

Systematics, Ecology and Management of Rattans in Cambodia, Laos, and Vietnam—The Biological Bases of Sustainable Use

To Advance Sustainable Rattan Industry, New York Botanical Garden and the World Wildlife Fund Collaborate to Publish First-Ever Book on Mekong Rattan Species

Representing a major advance for the sustainable use of a critical natural resource, the New York Botanical Garden and the World Wildlife Fund (WWF) have released the most comprehensive catalog to date of the rattan species found in three Southeast Asian countries, including specific information for sustainably harvesting and managing wild rattan.

Rattan, a type of climbing palm used to make furniture and many other products, is the basis of a $6.5 billion industry worldwide. It provides vital economic support for communities across Southeast Asia, but its natural stocks are in decline in many places.

The new rattan guide, which covers Cambodia, Laos, and Vietnam, is the result of an eight-year collaborative research effort by Botanical Garden scientists and WWF experts. In addition, that collaborative research effort by Botanical Garden scientists and WWF experts. In addition, that collaboration has resulted in the adoption of sustainable rattan management methods in 100 communities in those three countries.

To read the full press release, go to:

Please contact me if you’d like more information or want to arrange an interview with the book’s co-authors, Garden scientists Charles M. Peters, PhD, and Andrew J. Henderson, PhD.

Stevenson Swanson
Science Media Manager
The New York Botanical Garden
718.817.8512
EthnoBotanizing the Web

Odds and Ends
Submitted by Gail E. Wagner

**NASA Researches How to Grow Lunar Plants**
NASA is researching methods for growing plants on the moon with its Lunar Plant Growth Habitat team. The agency aims to grow plants such as sunflowers and turnips by 2015 (source: Sigma Xi SmartBrief, Nov. 25, 2013). VEGGIE, a fresh Vegetable Production System, has been developed for use on the International Space Station. NASA challenges students to participate by designing, building, and/or evaluating a growth chamber [http://www.nasa.gov/audience/foreducators/plantgrowth/home/#_U1eCTdU3g].

**AIBS Helps Coordinate Digitization of Biological Collections**
In 2013, the American Institute of Biological Sciences released the Implementation Plan for a Network Integrated Biocollections Alliance to help guide implementation of a coordinated, large-scale and sustained effort to digitize the nation’s biological collections (source: AIBS Public Policy Report, 15(2) on January 27, 2014). Over one billion specimens are curated in the over 1,600 biocollections. Download a copy of the report [http://www.actionbioscience.org/science_policy/implementation_plan_for_the_network_integrated_biocollections_alliance.html].

**New Funding Opportunities from the USDA**
The United States Department of Agriculture (USDA) has announced new funding opportunities. The USDA’s Agriculture and Food Research Initiative Foundational Program is requesting applications for approximately $82 million in research funding. In addition to supporting six existing priority research areas, in 2014 the program will feature two new programs. The Exploratory Research Program addresses new challenges in food security, climate change, environmental quality, natural resources, and nutrition. The Critical Agriculture Research and Extension program will address critical problems that continue to impede the efficient production and protection of plants and animals. Learn more at [http://www.nifa.usda.gov/afri](http://www.nifa.usda.gov/afri) (source: AIBS Public Policy Report 15(1) on January 13, 2014).

**Genetically Modified Foods—Good or Bad?**
A recent article by David Rotman in MIT Technology Review (December 17, 2013) “Why We Will Need Genetically Modified Foods” stands in contrast to the thought-provoking assessment offered by the optional workshop headed by Dr. Mary Eubanks on Tuesday, May 13, at the upcoming joint SEB/SoE conference in Cherokee. If you would like to learn more, be sure to sign up for Workshop M3. Breeder Seed to the Grocery Shelf: GMOs and Consumer Products! Find Rotman’s article at [http://www.technologyreview.com/featured/story/522596/why-we-will-need-genetically-modified-foods/?utm_campaign=newsletters&utm_source=newsletter-daily-all&utm_medium=email&utm_content=20131230](http://www.technologyreview.com/featured/story/522596/why-we-will-need-genetically-modified-foods/?utm_campaign=newsletters&utm_source=newsletter-daily-all&utm_medium=email&utm_content=20131230).

**AP Readers in Environmental Sciences Needed.**
AP Environmental Sciences (APES) is one of the fastest growing of the AP subjects chosen by high school students. This past year, more than 120,000 APES exams were scored. Increasing numbers of high school graduates are choosing to pursue their college/university degrees in the environmental sciences because of their AP experiences. Each June several hundred high school teachers and college/university professors gather to grade the essay questions on the exams. The need for college and university readers has never been greater. If you'd consider applying to read exams for a week in early June to help this important program continue to grow, please contact Chief Reader Alan McIntosh of the University of Vermont (alan.mcintosh@uvm.edu). Expenses are covered and a stipend is provided. Most importantly, you'll get to know and share experiences with some of the most dedicated Environmental Sciences professionals in the land (Source: CEDD Weekly Newsletter, November 14, 2013).

**Heat & Drought Draw Farmers Back to Sorghum.**
Much of the world is turning hotter and drier these days, and it’s opening new doors for a water-saving cereal that’s been called “the camel of crops”; sorghum, explains Dan Charles in a National Public Radio blog (October 31, 2013). Read and hear about what he has to say here: [http://www.npr.org/blogs/thesalt/2013/10/31/231509864/heat-drought-draw-farmers-back-to-sorghum-the-camel-of-crops](http://www.npr.org/blogs/thesalt/2013/10/31/231509864/heat-drought-draw-farmers-back-to-sorghum-the-camel-of-crops).

**iPlant Collaborative Funded for Five More Years**
The National Science Foundation (NSF) has renewed iPlant’s funding for a second five-year term. The iPlant Collaborative develops cyberinfrastructure and computational tools to solve Grand Challenges in Plant Science. The $50.3 million renewal grant builds on the foundation that iPlant successfully developed in the first five years—hardware, software, graphical user interfaces, analysis tools and services, high-performance computing, cloud computing, data storage, collaboration networking tools, educational and training support, and computational expertise—by broadening its scope to facilitate research for non-plant species as well. [http://www.iplantcollaborative.org/](http://www.iplantcollaborative.org/).

**Life Discovery—Doing Science Ed Conference**
Proposals are being accepted for short presentations (deadline February 15) and Education Share Fair Roundtable (March 15) at the second annual conference at San José State University, San José, CA, October 3-4, 2014. Conference Theme: Realizing Vision and Change, Preparing for Next Generation Biology. The theme for the 2nd Life Discovery—Doing Science Conference focuses on innovative approaches to instruction and assessment that are suitable, scalable, and adaptable to secondary and post-secondary levels of education, aligning with the objectives of both the K-12 Next Generation Science Standards and the Vision and Change for Undergraduate Biology Education. SEB is one of the partners in this conference! [http://www.esa.org/ldc/?utm_source=Life+Discovery+Conference&utm_campaign=ff7c4222bc-October_Newsletter10_3_2011&utm_medium=email&utm_term=0_4c075440ee-fr7c4222bc-.](http://www.esa.org/ldc/?utm_source=Life+Discovery+Conference&utm_campaign=ff7c4222bc-October_Newsletter10_3_2011&utm_medium=email&utm_term=0_4c075440ee-fr7c4222bc-).
Interview with Dr. Jan Salick  
Recipient of the 2014 Distinguished Economic Botanist Award

Submitted by Annie Virnig

What is your background and research for those who aren't familiar with it?

I trained as an ecologist with a bachelor's degree from University of Wisconsin, Madison; a master's from Duke University; a PhD from Cornell University; and a post-doc at The New York Botanical Garden. I then went through tenure and professorial advancement at Ohio University before coming to the Missouri Botanical Garden in 2000. I have worked around the world in Southeast Asia (1974-1976): Mexico, Central and South America (1977-1999); Tibet, China, Nepal and Bhutan (2000-present); and most recently with Native Americans in New England (2013-continuing). Thematically, I have worked on indigenous agriculture and forest management, biodiversity conservation and climate change. I have championed ethnobotany as a science with NSF, NAS, IUBS, ICSU, FAO, UNESCO, UN, IPCC, IPBES, and other national and international science and policy organizations.

One of your more recent papers talks about using climate change as a means to evaluate social ecological systems, from very specific local phenomena to an entire cultural cosmology. I found this very interesting. Can you elaborate on this concept a little more and talk about some of your findings from your ethnobotanical research on climate change in Tibet?

I love this research. It is personally fulfilling and scientifically novel, taking place in a breathtakingly beautiful part of the world with profound and spiritual people. What is more relevant to our age than climate change? Monitoring this environmentally dynamic condition together with gorgeous Himalayan alpine plants and soul searching Tibetan people is awe inspiring.

The Himalayas and the Tibetan Plateau—often referred to as the “Third Pole” because of their importance in shaping worldwide climate patterns—are experiencing the most drastic global climate change outside of the poles with temperature increases of 5-6ºC, 20-30% increase in rainfall, and melting of permanent snows and glaciers. Simultaneously, this area is a worldwide center of temperate biodiversity, including a majority of medicinal plants important to Tibetan medicine. Our data show that climate changes affect Tibetans' health, agriculture, and livelihoods in a many ways including diseases, pests, crops, water, and annual cycles. Also Tibetans' culture and cosmology are affected. We document how Tibetans perceive, adapt to, and mitigate climate change through Traditional Knowledge. We have established a 1,500-km transect across the eastern Himalaya including China, Tibet, Bhutan, and Nepal to document the effects of climate change on alpine plants and peoples' use of them.

Your research has focused on issues such as indigenous conservation and responses to climate change. Do you see a role of ethnobotanists in advocating for local groups and fighting issues like loss of biodiversity and climate change? Do you believe that advocacy and scientific objectivity can be obtained simultaneously?

I do believe in advocacy when it arises from my science, while not allowing my science to be driven by advocacy. My climate change research clearly shows Himalayan alpine plants moving up mountains and clearly documents Tibetan observations of warming and glacial melting. I am using our data and findings to support international efforts to address climate change and to include indigenous perspectives in policy formation. My climate change advocacy is with the same organizations in which I promote ethnobotany: NSF, NAS, IUBS, ICSU, FAO, UNESCO, UN, IPCC, IPBES, and other national and international science and policy organizations.

Do you think that as ethnobotany shifts to become more quantitative and “rigorous” from a Western scientific mindset that we lose some of the value of qualitative research that can expose us to differing worldviews in non-Western cultures? How do you weigh this balance?

First of all, I believe in integrating qualitative and quantitative approaches; each enriches the other. But to your point: in no way do hypothesis and statistical testing or modeling reduce our exposure to other worldviews. For example, I have recently published a study on Tibetan Cosmology of Climate Change that brought me into direct contact with very different worldviews. Similarly, my quantitative studies of Tibetan Medicine Plurality and Tibetan Sacred Sites have opened new worlds of understanding for me. Statistics do not impose a worldview but they do keep my biases at bay. I continually worry about bringing unconscious bias to my work; it is hard to think out of the box. Techniques like randomization and statistics keeps me honest. This is the theme of my Distinguished Economic Botanist address: Look for What You Are Not Looking for. The unexpected and the unaccepted are exciting.

You speak in one of your faculty profiles about how ethnobotany is shifting from a utilitarian field to one that is more process-oriented. How do you see this shift changing the value of ethnobotanical research, both academically and pragmatically?

In the past, ethnobotanists were interested in documenting what plants were used for; more recently we have become increasingly interested in how people are using, managing, domesticking, and conserving plants—we are interested in the process by which people are interacting with plants and their environment. This harkens back to my ecological training of studying plant-animal-environment interactions that I have converted to plant-people-environment interactions. I think the academics have become more complex and interactive; in application, we can move from bio-prospecting to conservation.

You were PI on the Intellectual Imperatives in Ethnobotanist, an NSF Biocomplexity Workshop, which took place at the Missouri Botanical Garden in 2003. One of the issues brought up in the report was on the difficulty of finding funding for ethnobotany as an interdisciplinary field. Do you think any progress has been made in funding for interdisciplinary research since the time of the report?

We have made progress. Since that time, many of us have received NSF and other academic grants. Nonetheless, we are still underdogs with a long way to go. That is a position I am comfortable with and find challenging. Truth and justice, ho!

Over the course of your career, you have worked in the Amazon, Mesoamerica, South Africa, Indonesia, and Tibet. What has it been like to

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Interview with 2014 DEB

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transition to these very different places and do you have one that has particularly resonated with you?

I love a steep learning curve and testing perceptions against different worldviews. I haven't looked back enough yet to digest the whole or to compare in any meaningful way. Perhaps you are planting a seed to tend in my dotage?

After a long career, where are you currently working and what ethnobotanical questions are most intriguing to you?

I shot my knees in the Himalaya, so I have scouted a flat research site. I am hoping to work with the Wampanoag—the Native Americans who taught the Pilgrims how to farm/gather/fish and whose ceremony we appropriated as “Thanksgiving.” Climate change and ethnobotanical restoration will be among my topics. My latest heroine is an amazing Wampanoag, Jessie Little Doe, who was awarded a MacArthur genius fellowship for restoring their language; she is totally inspirational.

What is your philosophy for teaching and mentoring? What do you believe is the best way to introduce young people to the field and support the development of ethnobotany as a discipline?

Teach ethnobotany in the field! Get people out to personally see plants and talk to people. In the field, people learn not only methods and practice but also become aware of unique attributes of place and people. On site (in situ), students gain first-hand experience that only field time provides and that is needed for grounding projects in local realities. “The field” can be the Amazon rainforest or the streets of New York.

As a doctoral student at an academic institution, most ethnobotany career tracks I see forge straight into academia. Do you think there are careers for ethnobotanists outside of academia?

Where, and what do you think are the relative merits of a career inside and outside of academia?

Ten years ago students were saying just the opposite: as an ethnobotanists, it was hard to find an academic position. Only NGOs were offering jobs. With the economic downturn, NGOs have fallen on hard times. It is great that universities are now hiring ethnobotanists. Regardless, ethnobotanists always need to make their own careers; there is no set pathway. This is incredibly liberating and exciting, but also somewhat scary. I have been fortunate to thrive on adventure and creativity, which are almost prerequisites for ethnobotany. Good luck and enjoy!

Jobs ★ Internships ★ Grants ★ Proposals

Summer 2014 Research Experiences for Undergraduates (REU) Opportunities

As job opportunities or grants arise. They are sent to the SEB office for posting on the website. They are often time sensitive, so we do not hold them until publish times. Please check these if you are seeking employment.

Mountain Lake Biological Station (www.MLBS.org)

University of Virginia’s MLBS is pleased to announce its NSF Research Experiences for Undergraduates (REU) undergraduate research internship program, now in its 22nd year. Work at MLBS focuses on field-based ecology, evolution, physiology, and behavior. Learn more about the programs and apply online: http://www.mlbs.org/reuprogram.

In general, http://www.ars.usda.gov/ is a good site to browse. Several plant-related post-doctoral positions are available through the USDA-Agricultural Research Service in Minnesota, and elsewhere.

One position is noted below and an additional 31 positions are found at: https://www.usajobs.gov/StudentsAndGrads

Proposals

The National Science Foundation is requesting proposals under the Advancing Informal STEM Learning (AISL) Program. Let’s get some plants in there!


See previously funded projects at: http://www.nsf.gov/awardsearch/advancedSearchResult?ProgEleCode=7259&BooleanElement=ANY&BooleanRef=ANY&ActiveAwards=true&...
Feelings of a Beginner in the Field: About Women, Lent, and Mimosaceae Seeds in Western Mexico
Submitted by Mélanie Congretel

It all began with an email from my Master’s program’s director at the French Museum of Natural History: “We need someone who speaks a little Spanish to go study non-timber forest products (NTFPs) in Western Mexico.” And three months later there I was, in Autlan de Navarro, southwest of Guadalajara in the Pacific state of Jalisco. I was hosted there by the IMECBIO (Manantlán Institute of Ecology and Biodiversity Conservation), a research center in ecology affiliated with the Universidad de Guadalajara. After a full training in biology and ecology, I was rather new to ethnobotany, and a little naïve: I had dreamed of lush rainforests, remote places, and curious indigenous people. Instead, I found myself in a small, industrialized mestizo town, surrounded by many cacti in a dry, if not completely burnt landscape.

My goal was to inventory all NTFPs available in the local market, register their collecting and processing techniques, recount the knowledge linked to production and use, assess the ecological consequences of gathering, and document the socio-economic sustainability of the activity. This was a program a little too vast considering the short time I had—hardly three months! With the impressive quantity of NTFPs locally available, it was time to make a choice, and it was easy. A small seed called parota had caught my attention because it seemed to be on every woman’s stall at the market, and in every client’s basket (I am hardly exaggerating), especially on Fridays (it was then February of 2012). This was the catalyst I needed to begin.

Focusing on this specific product, I decided to test four hypotheses commonly accepted among researchers who work on NTFPs: commercial gathering (1) is economically profitable, (2) doesn’t have ecological consequences, (3) increases women’s well being, and (4) doesn’t modify the access to the resource. Starting from there, I first tried to identify all the sellers in the area by frequent visits to the local market, and then “follow the thread” up the chain towards the gatherers, and down the chain towards the consumers, in order to understand the whole food chain. It soon appeared that the chain was very short and feminine, as gatherers and sellers were the same people, mostly women. Participant observations took me to local villages, and had me peel cactus leaves while chatting with the women, help gather the parota fruits collected with a pole from the giant Enterolobium cyclocarpum “parota” tree (aka Guanacaste, a Mimosaceae), boil and then peel them in order to extract the seeds that were later washed and boiled again several times before being brought to the market. It was often hot, sometimes dangerous—I got knocked down once by a falling fruit—but always fun and rewarding.

Now, why was it that the seed was more largely present and sold on Fridays? As a Mimosaceae, the parota tree is leguminous, meaning its seeds are highly protein-rich. In the local context of a very Catholic population, the seed is consumed as a substitute for meat during the seven weeks of Lent, more specifically on Fridays when meat is prohibited. It was thanks to the coincidental timing of my arrival that I was able to observe this tradition. I might have been a little too strong in my statement when I described the phenomenon as a strong bio-cultural interaction that had become a habit and was slowly turning into tradition. However, the truth is that for several years before I came (I don’t know exactly how long), a good number of women have been able to use this seed as a way to generate incomes for their family and to gain autonomy and respect.

I could list more details of this work, the free listings and collective mappings, or how I started to show that the increasing success of the seed on the market—leading to an intensification of its gathering—did change the access rules to the trees, but my point here is just to tell how stimulating and rewarding being in the field in western Mexico has been. I met incredible people, felt warmly welcomed in every family I worked with, made friends with the many children they had, and came back totally convinced that ethnobotanical work with mestizo people needs to be reinforced in practice and especially in the classroom. Although work with non-Indigenous and mestizo groups does occur in the field, ethnobotany books and classes tend to emphasize the field as only relevant for work with Indigenous groups. However, even in the so-called “Western world,” ethnobotany can make interesting and important contributions to our understanding of the evolving relationships between people and plants. The world’s ecosystems are changing fast, people’s habits and beliefs too, but as some of them decline, disappear, or just melt together, new ones get born… so ethnobotanists should never get bored!

Special thanks to Jesus-Juan Rosales Adame and Judith Cevallos-Espinosa from the IMECBIO-UdG for guiding me through this experience, and to Serge Babuchet and Françoise Aubaille from the National Museum of Natural History for trusting me and transmitting to their students their love for ethnobotany!

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Collecting Medicinal Plants and Edible Orchids in Tanzania
Submitted by Sarina Veldman

For my PhD, I am working on DNA barcoding of medicinal plants and edible orchids from Tanzania. Although a lot of the work needs to be done in the lab, I luckily also get to make my own collections in the field. Last year, in September and October, I went to Tanzania to collect samples at local markets. The day after my arrival to Dar-es-Salaam, my Tanzanian supervisor and I traveled to southern Tanzania to collect edible orchid tubers and to interview the people selling them. We used the local transportation, which was a nice and crowded bus full of people with all sort of goods. After 16 hours, we arrived in Tunduma, a border town between Tanzania and Zambia. This is where most of the trade in the edible orchids takes place. People from Zambia use tubers from three different orchid genera (Disa, Satyrium, and Habenaria) to make a local dish called chikanda. As the Zambian orchids are getting more and more scarce, people now also tend to import the tubers from surrounding countries such as Tanzania. When we finished most of the interviews in Dar-es-Salaam, we traveled to another coastal city further north, Tanga. In Tanga, the medicinal plant vendors were not so much centralized in one market, but scattered throughout the city. Another remarkable difference was that most vendors also sold ready prepared mixtures at their stalls. Around some of the popular stalls, many people (in most cases men) were waiting for a power mixture to regain their strength. Some of the vendors here mentioned a spiritual connection as source for their knowledge, which was something we had only heard once in Dar-es-Salaam. It was so interesting to see the differences between the two cities and to talk to so many people about such an interesting topic. Back in Dar-es-Salaam, we also visited traditional healers and people selling Arabian medicinal plants. Last but not least, we joined collectors in the field to see which plants they collected and how. This can be quite adventurous compared to the collecting in the local markets. First of all, you need to get the required permission from district, regional, and village offices. Then, of course, you need to get to the collection sites (and back…) by buses, smaller buses, canoes, motorcycles (4 passengers and 2 drivers on two motorcycles…), and lots of walking. And last, but not least, you also need to collect sufficient material and keep track of which plant is which and where it was collected, etc. After collecting all of the plants and information on the markets and in the field, you will also need to arrange for permits to bring them home with you. To go short: doing fieldwork can be quite diverse, requires much data collecting, and very interesting. It might not always go as expected, but it usually is lots of fun.
Survey of Collections Advocacy in Natural History Exhibits

The Natural Sciences Collections Alliance is sharing the following opportunity with collections professionals. Katharine Corriveau, a graduate student in museum studies at John F. Kennedy University, is conducting a survey of natural history museum curators, collection managers, researchers, and other collections professionals. Her research focuses on understanding the challenges that face the preservation and growth of natural history collections in the 21st century, as related to dwindling resources dedicated to collections care and research, lack of public awareness of the scientific and cultural value of collections, and insufficient coverage of this value in front-of-house museum exhibits. Results from this survey will be used to publish a snapshot of the current state of collections advocacy in museum exhibits. Ms. Corriveau can be reached at kbaldwincorriveau@email.jfku.edu.