The Newsletter of the NSF REU Site: Natural History Research Experiences Summer Internship Program

Welcome to the NSF REU-Site Natural History Research Experiences’ annual newsletter.

Directors’ Corner

On August 26th, 2015, we submitted a proposal to NSF to renew NHRE for another 5 years. Writing proposals is part of science. Some might term proposal-writing a “necessary evil” to obtain funding, but it can be an illuminating and instructive process: honing vision, articulating the essence of your work, making a plan and a timeline to achieve your goals. And why should taxpayers fund our work if we cannot justify that the dollars will be well spent? Here are some of the things we learned when we prepared our resubmission, and I’m sure you will agree it is money (and time) well spent! We are so proud of you!

NHRE 2011-2015, the NSF years (but we love you class-of-2010!):

95: % reporting that they are in touch with their mentors
87: % reporting that they are in touch with their NHRE cohort
55: % presenting NHRE research at professional meetings
83: % expecting to earn a PhD
79: # of NHRE mentors
16,800: members of the public who have learned about natural history directly from NHRE interns
40: % of NHRE interns from groups traditionally underrepresented in science
2,381: # of complete applications received
80: # of NHRE interns mentored
75: % of mentors who say they have a paper in prep with an NHRE co-author
1950: dollars the museum owes Liz for pizza

How did we learn all of this? You! THANK YOU for taking the time to take our surveys! You made it possible to resubmit. We won’t know until January if NSF panelists judged NHRE one of the top REU Site proposals in the nation, but we have our fingers crossed!
NHRE Class of 2010

Protecting Pollinators

Submitted by Heidi Wollaeger

I am still a greenhouse and nursery extension educator with Michigan State University Extension working on programming for the ~100 greenhouse businesses in southwest Michigan and the 270 nursery businesses in southern Michigan. Currently, I am organizing a national conference on protecting pollinators (http://www.ornamentalpollinators.org/) and a bus tour from Michigan to greenhouses in Ontario, Canada. Both of these big events are in October 2015. I am also a rather consistent author for greenhouse grower/Grower Talks/Green Profit magazines. I write 2 stories a month for MSUE floriculture and nursery digests, and I have published 3 new peer-reviewed papers in the last year, one of which won the prestigious Alex-Laurie Award (best and most relevant scientific publication in HORTTechnology or HortScience). I have written 9 magazine articles and about 27 Michigan State Extension News articles this year. In addition, I attended the 2015 International Garden Center Congress in Denmark which I plan to write an 8-article series about soon.

Other than writing, I am going to release a non-credit course on greenhouse lighting for greenhouse growers through MSUE this month.

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Interning with the Energy Research group at the Kansas Geological Survey

Submitted by Christa Jackson

I just graduated with my MS in Geology this July. Right now, I am investigating induced seismicity in the state of Kansas as an intern with the Energy Research group at the Kansas Geological Survey. What is next? No idea! I am just enjoying life as it comes, while always on the lookout for the next adventure!

Alumni update 2010

Carlos Rodriguez-Russo is just starting his second year of medical school at the Warren Alpert Medical School of Brown University. Connections abound between medicine and the natural sciences, and he has reveled in using narrative, scientific, and anthropological means to explore his new field. His most recent research project, supported by an NIH T35 training grant, is focused on analyzing usage patterns and effectiveness of community-based care for aging HIV patients. His poem "Procedure" will be published in the Annals of Internal Medicine this year.

Rebecca Richards is an Associate Lecturer at the University of Adelaide, she is currently tutoring and completing a PhD in Aboriginal anthropological photography. She completed a BA Hons (First Class) in Anthropology at the University of Adelaide and a three-year cadetship at the National Museum of Australia in 2011. In 2013, Rebecca completed an MPhil in Anthropology at the University of Oxford as Rhodes Scholar.

Her work focuses on social, visual, and material anthropology in museums and Indigenous communities. As an Aboriginal anthropologist, she is particularly interested in representation of Indigenous peoples in museums and the repatriation of museum collections to Indigenous peoples.
Jessica Glass is in her second year as a PhD student at Yale University. Her research will involve examining phylogeographic patterns in marine fishes in the western Indian Ocean, spanning South Africa to the Seychelles, and relating those patterns to other ocean systems. Recently, she became a member of the Explores Club and has written an article for them. [https://explores.org/students_corner/](https://explores.org/students_corner/)

In June 2015, Sabrina Mousalve married long time beau Ricardo Willis in Bogotá, Colombia.

Matthew Nielsen is an Ecology and Evolutionary Biology graduate student in the Papaj Lab at the University of Arizona. He has worked with Dan Papaj studying how thermoregulatory behavior changes over development in pipevine swallowtail (Battus philenor) caterpillars and with Regis Ferriere modeling the effects of resource variation on the evolution of phenotypic plasticity and genetic divergence.

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**NHRE Class of 2011**

Raising awareness and support for Washington DC Women’s center.

In June 2015, David Reed cycled unsupported along the Pacific coast of the US, from Bellingham, WA to San Diego, CA. He dedicated the trip to raise funds for N. Street Village of empowerment for women across Washington DC.

Founded in 1972 to provide services for the growing homeless population in DC, N. Street Village provides temporary and permanent housing for homeless and lower-income women, as well as daily meals in the day center and a range of physical and mental health services and addiction recovery programs. At the time of the 2012 point-in-time homeless count conducted by DC, N Street Village was serving over 60% of the adult female homeless population (those unaccompanied by minor children).

Equally important, N Street Village provides a supportive and empowering community for women to thrive and grow into their best selves, where they can make friends and feel safe and welcome.

[http://www.razoo.com/story/Camimex,4,N-Street](http://www.razoo.com/story/Camimex,4,N-Street)

The trip was 1,834 miles and took him 31 days. He cycled 59 miles per day. David raised $1,380 for N. Street Village.

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**Seattle Bound**

*Submitted by Ariamne True*

Exciting Update: This fall, I am starting a graduate program in library and archive science at the University of Washington, Seattle. This decision was partially informed and inspired by my time with NHRE where I realized which parts of the job and spaces I enjoyed the most.
Assistant Curator at the Virginia Holocaust Museum

Submitted by Angela Rueda

In 2015, I graduated from the University of Denver with my Master’s in Anthropology with a concentration in Museum and Heritage studies. I moved back to D.C. for a paid internship at the National Museum of African American History and Culture, which was an incredible experience. At the end of the internship, I was offered a position as the Assistant Curator at the Virginia Holocaust Museum in Richmond, and I’ve been there since June.

Alumni update 2011

Victoria Danner graduated from the University of Maryland in May 2015 with a degree in Applied Anthropology. She recently accepted a position with the Cystic Fibrosis Foundation as their new Research Outreach Senior Coordinator.

Alison Post headed out to Colorado this Fall to start a PhD program in plant ecology at Colorado State University.

This year, Ryan Monski accepted a position as a high school biology teacher with Lee County Schools in Sanford, NC.

Sean Boaglio finished his second year of medical school at Rocky Vista University College of Osteopathic Medicine in Denver, CO. He is now moving forward to start his clinical training years.

Matt Chansler just completed his MS this summer from the Department of Plant Biology at Michigan State University. His thesis was about morphology and polyploidy in Phlox amabilis (Arizona Phlox) populations.

NHRE Class of 2012

Sustainable Farming in Hawaii

Maris Jones, a New Orleans native and alumna of Brown University’s Climate and Development Lab, graduated in May 2015 and was recommended for honors in the Department of Anthropology for her work entitled: “They Don’t Care About Us: An Exploration of Cultural Citizenship and Political Activism Among Afro-Brazilian Youth in Salvador, Bahia.”

An article by Maris was recently published in “Truthout”, a nonprofit progressive news organization in the United States that operates a website and distributes a daily newsletter


Maris is currently living in Hawaii doing a year of service working on a sustainable farm and leading program activities at a camp.
Researching New World Song Birds

Submitted by Tyler Infeld

My summer has been absolutely jam-packed and I have hardly had a chance to catch my breath! I've had a really exciting year here at the University of Minnesota, and my summer has set me off on some great projects.

My first year of my PhD program at the University of Minnesota has been a remarkable experience. Having been my first year intensively studying both birds and phylogenetics, there was a steep learning curve that I initially found myself struggling to overcome. However, I can happily say that I've got myself well-grounded and am on my way to developing my thesis proposal in the coming year. My advisor, Keith Barker, and I began a project investigating the evolution of morphological characters in New World songbirds. I traveled to the Field Museum of Natural History in Chicago, where I met the researchers and curators of the ornithology collection and collected some preliminary data from 162 species of New World songbirds (a meager sample of the +1,500 species I hope to study!). I intend to get back to the Field Museum as soon as possible, and I also plan on visiting other ornithology collections to expand my data, including the Smithsonian.

In addition to my research, I assisted Keith with a collecting trip in Montana, took part in two outreach events teaching students 8-14 years of age about the adaptations of bird bills, and had the opportunity to attend the joint meeting of the American Ornithologists’ Union and the Cooper Ornithological Society in Norman, OK, to present my preliminary data. I’m looking forward to the fall to continue working on my research projects, taking some courses, and TAing a course on evolution.

Incidentally, the North American Ornithological Congress meeting will be in Washington, DC, next summer, so I will naturally be coming to visit Gene, Liz, and Virginia while I am in town for the meeting.

Traveling the Globe

Submitted by Kelly Friend

I have been keeping quite busy working in a hospital laboratory and traveling with my mother, who is confined to a wheelchair. We travelled to Central America and visited many cloud forests, which we both thought were amazing. Unfortunately, while zip-lining in the treetops in Costa Rica, I obtained a spider bite on my leg, which has finally healed but it has taken six months for the mark to go away.

We also travelled to Ireland. The Giant’s Causeway was one of the best things that we saw. I also enjoyed viewing the poison garden on the Blarney Castle grounds. In the near future, we plan on going to Alaska to take a cruise down the coastline.

Every place that I have visited has taught me so much about that country’s history, and in traveling with my mother, I have also learnt how different cultures react to people in wheelchairs.
A Busy Summer and Fall

Submitted by Sarah Gaffney

Last February, I took a short-term position working for Southern Illinois University in Carbondale on a project mapping wetlands. I was working for a PhD candidate who was trying to determine duck habitat across the state by training a computer to recognize wetlands through satellite imagery. We had a bunch of sites across the state (we drove roughly 1200 miles per week!), at which we walked the waterline with a GPS and mapped the boundaries between different types of wetlands (forested/shrub/pond/emergent etc.) and identified waterfowl that we saw. I learned so much more about wetlands than I did in class just by being out there and seeing the vegetation and how the water levels changed. I also learned how to communicate with landowners and convey our goal without scaring them off because 75% of our sites were on private property (many thought we worked for the government and wanted to stop them from using their land).

This past summer, I worked for Penn State University at State College in the forestry department. There is a long-term project going on called the Deer-Forest Study that is trying to determine deer impact in PA forests. Hunters and the Gaming Commission tend to think there aren’t enough deer, while ecologists and foresters think there are too many. My work consisted of having 5 plots, one of which was fenced, and for each plot we had to measure the diameter and identify the trees as well as identify and determine the cover of all plant species in a microplot as well as count seedlings in the microplot. I learnt many plant identifications as well as their habitats. I think this information will be very useful in the future. I also became aware of how some foresters do not necessarily understand ecological principles and maybe biased towards thinking deer are always to blame.

I am now starting a new job, a 10 month SCA/Americorps position at Aztec Ruins National Monument in New Mexico. I’ll be working in the Natural Resources Department helping to restore native vegetation to the site as well as develop informative bulletins.

Going for a Master’s in Landscape Architecture

Submitted by Samantha Hauserman

At the beginning of this year, I was working for an environmental consulting company in Phoenix and applying to the graduate program in Landscape Architecture at the University of Arizona. My boyfriend Jon and I moved to Tucson (one of my favorite cities) in January, where we settled in with a dog and a garden, and started working for a wholesale plant nursery. In May and June, I traveled through mainland Southeast Asia with some friends, including Myanmar, which was an incredible experience. I started my graduate program in August and am absolutely loving it! I’ll be here for three years, and then it's off to single-handedly mitigate climate change by taking over the Department of the Interior!

Alumni update 2012

Tushar Mittal continues his studies as a graduate student at the University of California Berkeley, in the Earth and Planetary Science Department. Tushar’s research interests are planet formation, protoplanetary disk dynamics and magma physics.
Salvatore Anzaldo is a graduate student at Arizona State University studying Evolutionary Biology.

Ellis Cochran is continuing his graduate studies in Communication Studies at Louisiana State University. He is in his second year.

Alexis Goots is a Master’s student in Biological Anthropology at Texas State University. Her research interests include forensic ancestry estimation, human osteology, modern human variation, and the effects of developmental stress on the human skeleton.

Dakota Rowsey will be entering his second year of graduate school at the University of Minnesota. His research interests include morphological radiation and speciation.

Adam Martin is a graduate student studying Sustainability and Environmental Management at Willamette University in Oregon.

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NHRE Class of 2013

Wildlife Biologist Aide in Central Pennsylvania

Submitted by Amy Rutter

I graduated from Penn State this past May with a B.S. in Wildlife and Fisheries Science, a Minor in Biology, and Honors in Biology. At my graduation ceremony, I served as the Student Marshal (highest GPA) for the College of Agricultural Sciences. My senior honors thesis was titled "Morphological evidence of speciation in croaking geckos (Aristelliger spp.)" and I am working with the Hedges Lab to finish a manuscript that will describe the new gecko species identified by both my morphological evidence and genetic work completed by another student.

This past summer, I worked with the Pennsylvania Game Commission as a Wildlife Biologist Aide in Central PA. I captured white-tailed deer fawns and affixed radio collars to track their survival using VHF telemetry. I also had the opportunity to help with bear trapping, including putting in ear tags, measuring body proportions, and taking blood. During the bear project, we set up camera traps and got great images of coyotes, bobcats, and even fisher!

Since my PA Game Commission job finished, I have been applying and interviewing for other positions. If I can keep it up, I’d like to work a number of temporary or seasonal positions over the next year or two to gain a wealth of experiences before selecting a graduate school program.
California bound to pursue a PhD in Linguistics at UC Santa Barbara

Submitted by Chris Brendel

In the year between undergrad and grad school, I've been working as an assessment developer at the Educational Testing Service in Princeton, NJ. Primarily, I write and review test questions for the TOEFL Listening and TOEIC Speaking assessments, which are English-language tests for non-native speakers (TOEFL is for applicants to English-speaking universities whereas TOEIC is for professionals in international workplaces). Developing these tests has been an interesting application of pragmatic linguistics (though I'm not an applied linguist/ESL specialist), but working a 9-to-5 job made me realize how much I miss the academic environment--fortunately, it also gave me time to apply to and visit various grad schools.

The biggest development for me is that I'll be beginning my PhD in linguistics this fall at UC Santa Barbara. I received a Regents Fellowship, which is the most prestigious fellowship offered by the UC system. I will be working most directly with Eric Campbell, a linguist who studies the Oto-Manguean language family (which includes the sub-family I did my research on during the NHRE, Zapotec), and Fermín Moscoso del Prado Martín, a computational linguist interested in the sorts of quantitative methodology I used in both my undergrad thesis and my NHRE research. It's, of course, no coincidence that both of these interests were inspired by my time at the Smithsonian. In the short-to-medium term, my research plan is to apply computational phylogenetics to better understand the evolutionary history of and genetic relationships among Zapotecan languages or Sinic languages (haven't decided which group yet).

I'm certain that this opportunity would not have been possible without the NHRE--I likely wouldn't have become interested in applying computational modeling to historical data without my project with Gabriela and Ives, and I doubt I would have had the research experience necessary to be admitted to the PhD program at UCSB.

Recipient of a prestigious Fellowship

Submitted by Raquel Bryant

This fall, I will begin a PhD program at the University of Massachusetts, Amherst, in micropaleontology with Mark Leckie. Dr. Leckie happens to be a colleague and very close friend of my NHRE mentor, Brian Huber.

I am a recipient of the Randolph and Cecile Bromery Graduate Fellowship which guarantees me funding for four years. The Randolph and Cecile Bromery fellowship is set up to increase the participation of underrepresented students in geology and the earth sciences.
A year of exciting developments

Submitted by Valerie Hartigan

I am in the process of putting together a poster for the upcoming international cephalopod conference (CTAC) with my NHRE mentor, Mike, and several other people. In addition to the poster, there will be several publications coming related to my NHRE work, as well as other projects that I have been involved in with people I met while at the museum.

My boyfriend and I both applied to start grad school this year and were both accepted into PhD programs - but they were across the country from one another. After a long decision-making process, we decided to keep our family together and went with his grad school option first, so we are currently living in Indiana while he attends Notre Dame. I have been talking to some of the faculty in their biology department about possibly entering grad school myself there next year. My daughter is attending a Science, Math and Technology Magnet school and loves it (just like her mom) and I am currently still working as a nurse (for now). We also recently found out that we are expecting a new addition, due sometime around May 19th, so that is very exciting for everyone!

Alumni Update 2013

This year was a very special year for Jennifer Gil. She graduated from the University of Puerto Rico Piedras Campus with a B.A. in Interdisciplinary Science.

A research video that she did won the first prize in the first National Nanotechnology Initiative video contest: http://www.nano.gov/node/1418.

Jennifer was selected to participate as a Fellow in the AAAS Mass Media Science & Engineering Fellows Program with CNN en Español: http://www.aaas.org/page/mass-media-science-engineering-fellows-program-fellows. The AAAS Mass Media Science & Engineering Fellows Program was a great opportunity for her to communicate science to the general public.

Jenny’s work was divided between the website and a TV show called “Vive La Salud.” The show is a weekly health-related show. Jenny wrote for the show and pitched ideas. She also helped with backstage interviews with researchers and doctors that were invited on the show.

Her work on the CNN en Español website was writing science news for the general public. Four of her science stories were viewed by many people and were among the most popular: http://cnnespanol.cnn.com/author/jennifer-gil-acevedo/

Jenny is now in a Post-Bac program in the Earth and Planetary Science Department at Washington University in St. Louis: https://eps.wustl.edu/people/jenny_gil. Her advisor is Dr. Jeff Catalano. She wants to continue to communicate science to a general audience using different media.

Jana Burke, who is a graduate student at Yale University, received news in April that she was a recipient of a 2015 NSF Graduate Research Fellowship Award.

Caitlin Boas is in her second year at graduate school with the U.C. Berkeley Department of Integrative Biology. She recently received a 2015 Libbie Hyman Memorial Scholarship.
NHRE Class of 2014

Going for a PhD in Sociocultural Anthropology

Submitted by Christine DeMyers

During Fall 2014, I completed my Honors thesis project on student experiences with their diet and movement on campus, and now I am hoping to publish it.

This spring, I participated in the Archer Fellowship and interned at the Environmental Protection Agency for course credit. At the end of that semester, I flew from DC back to Texas to walk the stage and receive my BA in Anthropology.

I am now working on my PhD in Sociocultural Anthropology at Arizona State University and also working as a teaching assistant for a course called "Culture in a Globalizing World."

I love the NHRE program and I still talk to the roommates I had in the program frequently!

Web designer for the Indianapolis Museum of Art

Submitted by Illya Moskvin

In Fall 2014, I took a remote museum practicum course with Dr. Adrienne Kaeppler as my mentor in order to make time for continued involvement with the Smithsonian. When the NHRE program ended, I was still working on my report for fiber identification project. I finished it in late September and in November, I traveled with Dr. Kaeppler and her team to a symposium in Tahiti about the defense and preservation of tapa (barkcloth) as intangible cultural heritage. There, I presented on tapa fiber identification methods. The presentation was to a mixed but mostly non-technical audience; most of the attendees were involved in the making of tapa rather than its conservation. Over the next few months, I adapted this presentation into a single-author paper, which I submitted for publication as a chapter in the symposium compendium.

Spring 2014 was devoted to finishing up long-term projects, including a "Collection Highlights" module for the Indiana University Art Museum (IUAM), slated to go live in early 2016 to mark the museum’s 75th anniversary. We got a new director, David Breneman, who is very interested in putting our collections online, so that project has somewhat grown in scope over time.

I graduated in August 2015 with a B.A. in Anthropology and History of Art. My graduation was delayed because I was finishing up a senior thesis with the art history department. My thesis deals with typological recursion and how it might be applied to automated identification of art objects. I’m planning on publishing parts of this thesis, since it’s relevant to multiple fields and no one has really written about this phenomenon before (lots about hierarchy, but nothing about recursion), and I’m working on a computer program/database system that is designed around these principles.
...and I guess I'm now a member of the work force! I'm very excited about working at the IMA Lab, Indianapolis Museum of Art. Much of our work consists of consulting and development for other museums. My first project will be to help bring the collections of the Denver Art Museum online. It's really quite the dream job for me. I'm planning on going to graduate school within the next few years, likely in some program focusing on applied computer science, but in the meantime, I couldn't be happier with this opportunity.

A successful trip to the 2015 summer Evolution conference in Brazil

Submitted by Shaina Lu

As a result of a combined effort by my academic advisor, Vince Formica, and my 2014 NHRE mentor, Terry Chesser, I was able to attend the 2015 Evolution conference in Brazil this summer.

This conference was an incredible experience for me on all fronts. I was able to attend interesting talks that stretched my brain, which needed to be in top gear in order to absorb all that was going on. It was amazing to hear about current research in the field, and even to hear how fellow scientists asked each other questions.

Furthermore, I had the opportunity to present my NHRE research to a captive audience. I had previously only presented a version of the poster at the 2014 NHRE Symposium and at Swarthmore College, but at the conference, I had over two hours to talk about my research with people who really cared about my results. It was a phenomenal experience, though I had to field some pretty tough questions from scientists who work on similar research!

The conference proved to be a great opportunity even after my presentation. I shared a room with graduate students who had plenty of good conference and graduate school advice. (As a first generation college student at an undergraduate institution, I haven’t had much of a chance to converse with grad students, so this experience was invaluable to me.) I also talked to a HHMI (Howard Hughes Medical Institute) investigator who gave me information about one of his peers whose research interests aligned with mine, and advice about applying for graduate school fellowships. Even while travelling home, I was recognized by a professor who saw me present my poster, and he offered to help me a future project that I want to pursue.

All in all, this conference was a great success and learning experience for me. I am so grateful to have great mentors, past and present, that support and believe in me.
2014 AGU Award for Outstanding Student Paper, plus a 2015 NSF GRFP Award

Submitted by Kellie Wall

The past year has been very busy and exciting. I gave my first formal talk, about the research I did last summer at NMNH, at December’s AGU meeting (the US’s biggest annual geoscience conference) and was awarded an Outstanding Student Paper Award—a huge honor, especially since I was an undergraduate in the same category as graduate students also presenting their research.

I graduated this spring with my B.S. in Geology from Washington State University (Summa Cum Laude), and since then I’ve been tromping around beautiful Montana, Idaho, and western Washington (for geology field camp and just for fun), as well as catching some fantastic summer concerts.

Next month, I begin graduate school at Oregon State University, working toward a PhD in igneous petrology with my advisor, Dr. Anita Grunder. I am honored and blessed to have the support of a 2015 NSF Graduate Research Fellowship! I couldn’t have done it (and probably wouldn’t have even known about the award!!) without my experience with NHRE and help from my awesome mentors. I am so thankful for the amazing opportunities I’ve been given, and looking forward to many great adventures ahead.

Starting a PhD Program in Archaeology at the University of Washington

Submitted by Hollis Miller

It has been a busy year! I presented my NHRE work at a poster session at the annual meeting of the Association of American Geographers in Chicago this past April.

I graduated from Lafayette College in May with a B.A. in Anthropology & Sociology and Geology. During this past year, I worked on a senior thesis in Anthropology & Sociology that built off the modeling work I started with Dr. Rogers last summer. My central question was about resilience within the Mongolian pastoral community amidst shifting social, political, and ecological environments.

I am so grateful for the experiences I had at NMNH. I wouldn’t have been able to do such a cool project otherwise, and Dr. Rogers even served on my committee for the thesis!
A semester studying abroad with SEA

Submitted by Claudia Mazur

I just returned from my study abroad program with Sea Education Association Semester. It is a program in Woods Hole that involves a six-week on-shore component, as well as a six-week at-sea component on a 134ft sailing school vessel. My curriculum, in particular, focused on the oceans and climate, which had a cruise track from New Zealand to Tahiti. Along with learning how to be a full-time crew member, I also worked in the lab on my own research project, entitled “The role of bathymetry in the movement of water masses along the Chatham Rise.” Overall, the experience was amazing and one that I am still trying to figure out how to put into words.

My experience with SEA is something that I talk about at least once a day. Living on the ship showed me a life of simplicity and taught me to appreciate all of life’s adventures. On my journey, I saw things one only dreams of seeing: whales migrating for the winter, a lunar eclipse, dolphins lit up by the bioluminescent plankton surrounding them, tropical storms, the clearest night skies, swells up to 22 ft high, the brightest of rainbows, and corals untouched by humans! I even lived April 3rd twice after crossing the dateline! My journey was not an easy one, but one that made me fall even more in love with life and the planet that I live on (as cheesy as it sounds).

I enjoyed myself so much, that I went back to Woods Hole for the summer. I was awarded a Summer Student Fellowship at the Woods Hole Oceanographic Institute in Virginia Edgcomb’s Lab. I studied the microbial processes that occur in sediments under oyster aquaculture cages in local ponds/estuaries, and I measured the rates of key processes associated with nitrogen removal. A geologist in a microbiology lab was a funny site to see!

Internship at the Michigan Department of Environmental Quality

Submitted by Allison Snider

During my final year as an undergrad, I finished up my senior capstone project (Barcoding epifauna and ectoparasites in Antarctic sea spiders (Pycnogonida)) and had the opportunity to intern at the Michigan Department of Environmental Quality, where I worked with an environmental toxicologist. I was also able to study abroad in Belize for a
short time. After an exciting year, I graduated in May, completing my B.S. in Natural Resource Biology and minor in Museum Studies.

I have just been offered a part-time assistant educator position at the Ann Arbor Hands-On Museum, and I am continuing to explore graduate positions and job opportunities.

Six weeks of summer work at Copán in Honduras

Submitted by Aileen Fernandez

This summer (June-August 2015) I spent six-weeks in Copán, Honduras, working for Proyecto Arqueológico Río Amarillo (PARAC), directed by Dr. Cameron McNeil of my university Lehman College CUNY. Copán is an archaeological site of the Maya civilization.

During my time there, I conducted lithics research with Dr. Nate Meissner of Southern Illinois University that involved the classification of chert debitage to determine different stages of tool production. I also helped teach visiting university students from the capital city, Tegucigalpa, how to classify lithics. We analyzed over 17,000 flakes from the Rio Amarillo site. Other things I got a chance to do were artifact photography and excavation work at the site.

This fall, I am entering my final semester as an undergraduate student, then continuing my education in pursuit of a PhD in Physical Anthropology.

Back at NMNH

Submitted by Kate Duncan Sherwood

Following my NHRE internship studying the remains of Basketmaker mummies with my mentors, Dr. Doug Owsley and Kari Bruwelheide, I had the opportunity to represent the program at the Research Experiences for Undergraduates Symposium at the NSF headquarters in Arlington, Virginia. I also presented our findings at the American Association of Physical Anthropologists meeting in my hometown of St. Louis. Our research was very well received at both meetings!

This past May, I finished my B.A. in Anthropology Summa Cum Laude with university and departmental honors from the University of North Carolina Wilmington. After graduation, I returned to Washington, D.C., where I split my time interning at both the National Museum of Health and Medicine in Silver Spring, MD, and the National Museum of Natural History with my NHRE mentors. As of August 2015, I have joined NMNH’s Department of Anthropology full-time as the scientific photographer and a researcher.

I hope to eventually attend graduate school, but for now I am enjoying being back at the museum with my NHRE mentors and spending more time behind the camera (www.kateduncansherwood.com). Without the NHRE program, I would not have the opportunity to work with such an incredible office. I cannot wait to see what the future holds!
Field work in Lava Tube Caves, Washington State

Submitted by Allan Cabrero

My first year of my Masters was incredible and I’m excited to be starting my second year. I was able to go caving in the lava tubes found in Trout Lake, WA. It was difficult, but fun field work looking for harvestmen (Class: Arachnida). I had to squeeze into some tight spaces less than a foot wide! But the field work was very rewarding. We found 10 new populations of cave harvestmen!

I was also part of a team that described a new species of harvestmen! I worked on the SEM imaging, this will be my first publication.

I was also awarded the 2015 NSF GFRP, in addition to other fellowships and scholarships. I never expected to receive these, but I am really grateful for all this support.

It looks like I will be applying to PhD programs this fall, which is very exciting and scary!

Sustainable agriculture and food security

Submitted by Sterling Herron

I just graduated from Milligan College in May of this past summer with a B.S. in Biology and Chemistry.

This fall I am pursuing an M.S. in Biology (Botany focus) with Dr. Allison Miller at Saint Louis University. I plan to study some facet of perennial agriculture, particularly which plant species would be good candidates for future de novo domestication efforts. This is in collaboration with Saint Louis University, the Missouri Botanical Garden, and the Land Institute (Salina, KS).

I’m definitely excited about this as it has a lot of applications in sustainable agriculture and food security.

Deciding on a career in Academic Librarianship

Submitted by Megan Moore

I think I have finally figured out what I want to do in the future. I plan to apply to grad school for Library Science this fall and start school in the fall of next year. There are a few routes I could go in library school, and I am looking at Academic Librarianship because I can incorporate my background in science. I will need a Master’s degree to be able to be hired as a librarian. I plan on doing the Master’s on a part-time basis, as I will need to work on the side to afford grad school. My long term goal is to graduate in three years.
Recently I applied for a job at my local library as a clerk to gain some experience, although I do realize being a librarian would be different.

In addition, I’ve been nannying for my neighbors throughout the summer and working towards obtaining my driver’s license. I received my permit in early August, and so I’ve been practicing a bit each day since then.

Alumni update 2014

Casey Bricker is in the midst of applying to Cham University for Physician Assistant studies. She plans to pursue Emergency Medicine or Orthopedics as she has a strong background in skeletal biology.

Casey is also working at Children's Hospital of Pittsburgh of UPMC in the Emergency Department. Children’s Hospital is ranked in the top 10 pediatric hospitals in the country.

Noah Winters will be back at NMNH this Fall. He was offered a 6-month technician job with the Systematic Entomology Lab, USDA. Noah will be a support technician for all the Lab scientists.

2015 Field trip to Calvert Cliffs

In June, NHRE took a class field trip to dig for fossil shark teeth at Calvert Cliffs, located on the shores of the Chesapeake Bay. We were accompanied by paleontologist Dave Bohaska.
2015: Interns in the Exhibits

Another successful NHRE outreach day that took place in the final week of the 2015 program. All 17 NHRE interns were busy answering visitor’s questions throughout their two hour shifts. Each intern brought out a variety of specimens ranging from dolphin skulls to dinosaur casts to bees and bird skins.

Rachel Johnson attracts a huge crowd with her dinosaur cast.

Wilson Guillory shows a young enthusiast a drawer of carpenter bee specimens.

Brianna Marshall talks to a young visitor about volcanos.

NHRE Professional Presentations and Publications

Here we list all professional presentations given by NHRE alumni. If you published or presented your work at a conference and you don’t see it listed here, please let us know.

Peer-Reviewed NHRE Publications (NHRE 2010–2014)


**NHRE Professional Presentations (NHRE 2010-2014)**


26. Wall, K; Cottrell, E. 2014. Oxygen fugacity recorded by xenoliths from Pacific oceanic islands. Fall Meeting of the American Geophysical Union (Poster presentation).


28. Kenyon, Jennifer; Rosenfeld, Carla; Santelli, Cara. 2014. Investigating the effects of selenium on fungal growth and mineral production. Louisiana State University Undergraduate Research Conference (Poster presentation).

29. Rosenfeld, C; Kenyon, J; Santelli, C. 2014. Environmental selenium transformations: Distinguishing abiotic and biotic factors influencing Se redox transformations. Fall Meeting of the American Geophysical Union (Oral presentation).


34. Toth, A; Behrensmeier, A K; Miller, J; Lyons, S K. 2013. Species richness, community dynamics, and time-averaging in recent Kenyan ecosystems. 10th North American Paleontological Convention (Oral presentation).


41. Ramirez, Gabrielle; Andrews, Benjamin; Dennen, Robert. 2013. Transport and sedimentation in unconfined experimental dilute pyroclastic density currents. Fall Meeting of the American Geophysical Union (Poster presentation).


45. Lavin L.; Bell, J. 2012. Exploring the Collections and Relations of A.C. Haddon at the Smithsonian. 16th Annual Five College Anthropology Undergraduate Research Conference (Oral presentation).


52. Atta, Calder J; LaFlamme, Marc; Sessa, Jocelyn A; Tweedt, Sarah; Erwin, Douglas H. 2012. Taphonomic biases influencing exceptionally preserved Naraoia from the Burgess Shale. Geological Society of America Annual Meeting (Poster presentation).

53. Lopez, O; Cottrell, E; Warren, J. 2012. Upper mantle oxygen fugacity in ridge and subduction zone settings recorded by spinel peridotite. Fall Meeting of the American Geophysical Union (Poster presentation).


57. Jagani, Sheel; Rick, Torben; Hofman, Courtney. 2011. Ancient Oyster Fisheries of the Chesapeake Bay: Methods and Implications. Annual Meeting of the Society for American Archaeology (Poster presentation).

