

NHRE NEWS

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

Welcome to the NSF REU-Site Natural History

Research Experiences' annual newsletter.

Volume 10

Directors' Corner

Greeting NHRE alumni!

We have some exciting news! We are happy to announce that we have received funding from the National Science Foundation to continue NHRE through 2028. We also welcome Jessica Johnston (she/her) as the new intern coordinator. Virginia Power (she/her), who has come out of retirement for one last time – fingers crossed -- will help us steer the internship this summer. We also welcome Emir Ali (he/him) who will now be managing our travel and finances.

This past summer, 16 interns participated in research projects in earth, biological and anthropological sciences. Our 2023 interns worked on topics ranging from fossils, volcanos, dinosaurs, spider fangs, killer whales to grape vines. They engaged with the public, making science accessible to all our museum visitors through stellar outreach skills and friendly conversations. Outside the lab, they went fossil hunting, ate pizza, and explored all that DC has to offer. Their learnings were on full display at the NHRE symposium -- now in a new venue, the Q?rius space -- and we enjoyed hearing about each one of their passions. Thank you to our 2023 cohort for all their incredible work, and we wish them all the best as they take the next steps in their science careers!

We are getting ready to welcome the new cohort of NHRE students next month! We thank all who are contributing to this newsletter. Keep the updates and good news coming.

Best,

Vanessa González (they/she) Ioan Lascu (he/him)



From left: top row. Luke Sparreo, Abram Jeremenko, Nate Wilson, David Canseco Vielma., Jillian Cieslik, Mara Cox, Lisa Rollinson, Abhiram Srivastava, Kimberly Maisonet, Megan O'Grady, Nadia Gray, Madison Geraci, Soren Kite, Lily McEwen, Lula Burke, Mary Gbenro.



REU Site, OCE-1560088

Fall 2023

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NHRE Class of 2014

Submitted by Hollis Miller

In June 2023 I graduated with my PhD from the University of Washington. My dissertation was entitled, *Stories of Sugpiaq Survivance: Uncovering Lifeways at Ing'yuq Village*. I collaborated with partners at the Sugpiaq/Alutiiq community of Old Harbor, Alaska to explore how their ancestors responded to and navigated Russian colonialism using archaeology, oral history, and ethnohistoric sources.

NHRE Class of 2015

Submitted by Ashly Romero

I graduated with my PhD in Anthropology this summer (2023) and am starting as a postdoctoral research associate at the University of Arizona College of Medicine - Phoenix. My research investigates how stress impacts skeletal growth and development in primates. NHRE was critical to my success in graduate school! I'm so grateful to have been a part of the program.

Submitted by Meena Said

The last time I sent, I was a couple years into my PhD program at the University of Notre Dame. I graduated from that program in 2021 and completed a postdoc at Lawrence Livermore National Laboratory, of which I am now staff and a forensic microscopist supporting nuclear forensics programs among other things.

I have been traveling to DC for work recently and it has made me feel nostalgic about my REU with Suzanne Birner back in 2015. The Forrestal (NNSA) building is so close to the museum, it feels like a full circle moment! That REU program was the most pivotal moment for me in my education, and I try to go back whenever I have some free time in the city – nothing beats the hall of geology, gems, and minerals!

Alumni update 2015

Andrea Cunningham graduated from the University of Florida with her PhD in Anthropology.



Submitted by Wilson Guillory

I have a lot of great news for the newsletter this year.

Isabella Muratore and I got married a few days ago (July 10, 2023) on Long Island with our friends and family in attendance. My dad gave a brief speech about how we couldn't have met anywhere else than "science camp" and that going there was the best choice we ever made. I'm inclined to agree!

Isabella got a job as an assistant professor in the US Naval Academy Chemistry Department where she will be teaching biology and continuing her research on ants. She is excited to move down to Annapolis MD at the end of the year and begin teaching in the spring 2024 semester. We're also glad to be back in the DC metro area so we can visit the NMNH again!

I still have a few years of my PhD left at Rutgers Newark where I'm studying the evolution and phylogeography of South American reptiles and amphibians. At the Evolution meeting in Albuquerque this past June I was honored to receive the OUP Publisher's Award for Excellence in Systematic Research from the Society of Systematic Biologists for a paper I published in 2021 in *Systematic Biology* called "A New Method for Integrating Ecological Niche Modeling with Phylogenetics to Estimate Ancestral Distributions".



NHRE Class of 2017



2017 NHRE intern, Myria Perez is working in the Fossil Lab, Deep Time as a FossiLab Preparator/Educator.

She has been a staff member since 2022. She will be one of the members of a team that are offering a Microvertebrate Fossil Picking Workshop to 2024 NHRE interns this year.

The 2024 interns will be using microscopes to search through Cretaceous sediment for mm-sized fossils of fish, freshwater sharks, amphibians, reptiles and mammals and collect ("pick") them using small brushes.

NHRE Class of 2018

Submitted by Amanda Markee

I just recently graduated with my Masters in Interdisciplinary Ecology from the University of Florida. Here, I wrote my thesis on characterizing silk production in the Luna moth using genomic and morphological tools. I learned so much during my time in Florida, and split a lot of my energy doing labor union organization and collective bargaining for our grad workers. This felt super rewarding especially given the political climate in Florida.

I've worked many different museum jobs since my time in NHRE, and it feels full circle that I'll be starting my PhD at the American Museum of Natural History in NYC this September. I'll be working

with Dr. Cheryl Hayashi and Dr. Jessica Ware to continue my research on the evolution and variation in silk production across arthropods. My other top choice institution was GWU in DC (because of NHRE), and I actually ran into Jonathan Huie from my cohort during my interview, and I was FINALLY able to see the Deep Time hall. It was incredible!!

I believe since the last time I wrote in, I've presented my research in Vancouver, Denver, and St. Louis, and was recently invited to give a symposium talk in Kyoto for the International Congress of Entomology conference in 2024. Everything seems to be going a mile a minute these days, and I'm forever thankful for the opportunities that I've been slingshotted into since meeting you all five summers ago.



From left to right: Amanda Markee, Virginia Power, Rebecca Goughnour

Submitted by Gina Errico



I defended my thesis on the effects of pathogenic fungi on tropical tree seedlings this past May, and graduated with an MS in Plant Biology! I am now working at the Los Angeles Times as a science reporter through the AAAS Mass Media Fellowship for the summer. I will be moving to Oahu in the fall, with the plan to teach biology at Hawaii Pacific University and launch myself into a science communication career!

All of the links to my science articles are linked on my website if you want to include them as well!

https://ginaerrico.com/sciencewriting/

NHRE Class of 2019

Submitted by Jack Boyette

During spring 2021, I completed a thru-hike of the Appalachian Trail, which involved walking from Georgia to Maine over the course of 142 days. A month later, I started my PhD at the University of Alabama with a trip to Brazil's Atlantic Forest for fieldwork. While in Brazil, my PhD advisor notified me that he had accepted a job offer at Penn State University and the lab would be moving north. Setting aside the initial shock and the fact that I had to apply to another PhD program, I was excited to explore what Penn State had to offer.

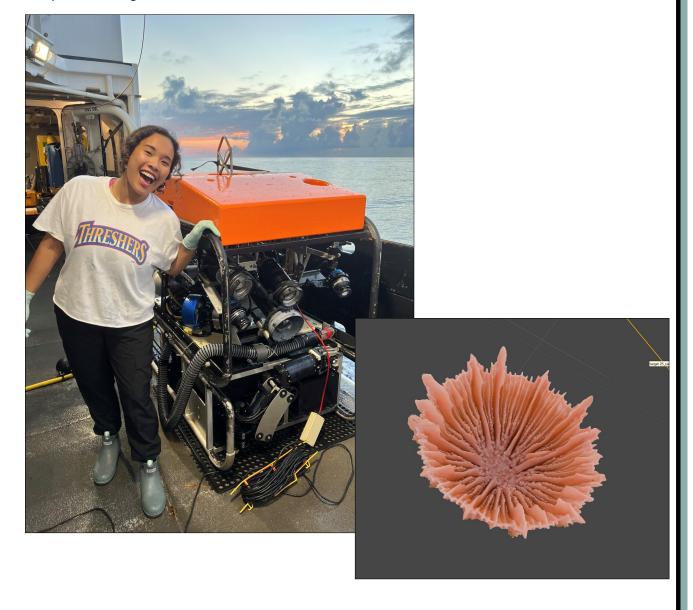


Since then, I've finished my first year at Penn State (second year overall), passed my qualifying exam, and have been selected for the NSF GRFP. I'm also super excited to be spending the summer in DC again as part of a 10-week grad student fellowship with the Smithsonian Institute Fellowship Program. I'll be sampling historical DNA from amphibian specimens collected before and after chytrid fungus introduction to explore immune evolution through time. I'll be sampling amphibian specimens at the MSC, doing lab work at the National Zoo's Center for Conservation Genomics, and living at George Washington University. I wouldn't be here without the NHRE!

NHRE Class of 2021

Submitted by Nina Ramos

After NHRE I was lucky to continue working with my mentor and <u>publish the work</u> I had started during my internship! Since graduating from undergrad, I was able to finally make it to the NMNH in person (since our cohort for NHRE was entirely remote) to work on a project to 3D digitize some of the invertebrate zoology collections and participated in a research expedition to sample the benthic biodiversity in the Gulf of Mexico for the Mesophotic and Deep Benthic Communities Restoration project. I'm grateful for the journey NHRE sent me on and I'm looking forward to continuing studying deep-sea taxa in graduate school.



2023

From left: NHRE Mary Gbenro and Lula Burke on a field trip in Wyoming with Scott Wing & Team





David Canseco Vielma

2023 Intern Projects

Earth Sciences

Seeing the Forest through the Cells: A Quantitative Reconstruction of Canopy Structure from the Late Paleocene to Early Eocene in the Bighorn Basin, WY

Lula B. Burke, Joseph N. Milligan, Scott L. Wing

Mineral Analysis of Apollo 17 Samples from The Taurus-Littrow Valley Landslide

Mara Cox, Cari Corrigan, Emma Bullock, Natalie Curran, Sarah Valencia, Barbara Cohen

Pollen Distribution and Morphology of Juglandaceae and Arecaceae during the EECO *Mary Gbenro, Ingrid Romero, Scott Wing*

Sedimentation from Penetrating Density Currents with Applications for Volcanic Plumes *Abram Jeremenko, Benjamin Andrews*

Investigating Magmatic Cooling Rates of the Mt. Whitney Intrusive Suite, California *Kimberly Maisonet González, Michael Ackerson*

Long Walks on the Beach with Dinosaurs: Taphonomic Signatures in East Coast Vertebrate Microfossil Assemblages

Simba Srivastava, Matthew Carrano

Biology

Into the Spider's Bite: Exploring Morphological Variation to Understand Evolutionary Shifts in Chelicerae **David Canseco**, Corinthia Black, Jeff Shultz, Hannah Wood

Establishing Phylogenetic Relationships and Distinctions of the North American Lindera Jillian Cieslik, Kenneth Wurdack, Laurence Dorr

Understanding Commensalism between Polynoids and Antipatharians using Micro-CT and 3D Reconstructions *Madison L. Geraci, Brett C. Gonzalez, Jeremy Horowitz, Karen J. Osborn*

Comparing Mandible Morphology in Various Killer Whale (Orcinus orca) Ecotypes Using Geometric Morphometrics

Nadia Gray, Michael McGowen, Waleska Gravena, John Ososky, Ellen J. Coombs

A New Species of Thormora (Annelida Polynoidae) from Madagascar

Soren Kite, Victor Conde-Vela, Brett Gonzalez, Karen Osborn

Commensal Driven Morphological Features of Polynoidae Associated With Antipatharia

Megan E. O'Grady, Jeremy Horowitz, Brett C. Gonzalez, Andrea M. Quattrini

Species Discovery in Southern African Bee Flies: A New Species in the Revised Genus *Enica Lisa Rollinson, Allan Cabrero, Torsten Dikow*

Discovering two new genera of the grape family Vitaceae and exploring tropical-temperate transition in plants *Luke Sparreo, Alicia Talavera, Gregory Stull, Jun Wen*

3D Analysis of Morphological Diversity in Hawaiian Hawks (Genus *Buteo*) Across Time and Space, from Pleistocene to the Present

Nate C. Wilson, Helen F. James, Megan Spitzer, Michael Hanson, Grace Musser

Anthropology

3D Digital Technology Connecting the Remote Community, the Native Village of Igiugig, Alaska, with Material Culture in Museum Collections

Lily McEwen, Eric Hollinger, AlexAnna Salmon, Monty Rogers

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

NHRE Publications

- Castillo, Stephanie and Dikow, Torsten. 2017. "Taxonomic revision of Plyomydas Wilcox & Papavero, 1971 with the description of two new species and its transfer to Mydinae (Insecta: Diptera: Mydidae)." Revista Brasileira de Entomologia, 61, (2) 192–202. https://doi.org/10.1016/j.rbe.2017.03.002.
- Anzaldo, S. S., J. Dombroskie; and J. W. Brown. 2014. Morphological Variation, Taxonomic Distribution, and Phylogenetic Significance of Cornuti in Tortricinae (Lepidoptera: Tortricidae). Proceedings of the Entomological Society of Washington 116(1):1-31.
- Blaimer, B. B; M. W. Lloyd; W. X. Guillory; and S. G. Brady. 2016. Sequence Capture and Phylogenetic Utility of Genomic Ultraconserved Elements Obtained from Pinned Insect Specimens. Plos One 11(8).
- Boschert, C; and Dikow; T. 2022. Taxonomic revision of the mydas-fly genera *Eremohaplomydas* Bequaert, 1959, *Haplomydas* Bezzi, 1924, and *Lachnocorynus* Hesse, 1969 (Insecta: Diptera: Mydidae). *African Invertebrates* 63(1): 19–75. doi:10.3897/AfrInvertebr.63.76309.
- Castillo, S; and Dikow; T. 2017. Taxonomic revision of *Plyomydas* Wilcox & Papavero, 1971 with the description of two new species and its transfer to Mydinae (Insecta: Diptera: Mydidae). Revista Brasileira de Entomologia i61(2): 192-202.
- Davis, F. A; Cottrell E; Birner; S.K. Warren; J.M. and O. G. Lopez. 2017. Revisiting the electron microprobe method of spinel-olivine-orthopyroxene oxybarometry applied to spinel peridotites. American Mineralogist 102(1-2):421-435.
- DeRycke, E; 2020. A new cryptic species of fringed-toed lizards from southwestern Arizona with a revised taxonomy of the Uma notata species complex (Squamata: Phrynosomatidae). Zootaxa.

Dikow, Torsten and Dubus, Meliah. 2023. "A review of the assassin-fly genus Anypodetus Hermann, 1907 with the description of a new species (Insecta, Diptera, Asilidae)." African Invertebrates, 64, (2) 165–206. https://doi.org/10.3897/afrinvertebr.64.104283

- Eubanks, D; 2020.ND2 as an additional generic marker to improve identification of diving ducks involved in bird strikes. Human-Wildlife Interactions.
- Guillory, W; 2016. Sequence capture and phylogenetics utility of genomic ultraconserved elements obtained from pinned insect specimens. PLOS One e0161531. 11(8).
- Gutierrez, E. E; Maldonado J.E; Radosavljevic A; Molinari J; Patterson B.D; Martinez, J.M; Rutter A.R; M. T. R. Hawkins, Garcia F.J; and Helgen K.M. 2015. The Taxonomic Status of *Mazama bricenii* and the Significance of the Tachira Depression for Mammalian Endemism in the Cordillera de Merida, Venezuela. PLoS ONE 10(6).
- He, K., N. Woodman, S. Boaglio, M. Roberts, S. Supekar, and J. E. Maldonado. 2015. Molecular Phylogeny Supports Repeated Adaptation to Burrowing within Small-Eared Shrews Genus of Cryptotis (Eulipotyphla, Soricidae). Plos One 10(10).
- Herron, S. 2020. Nuclear and Chloroplast Sequence Resolve the Enigmatic Origins of the Concord Grape. Frontiers in Plant Science. 11:263
- Keil, D. 2013. Reddescription of Alatina alata (Reynaud, 1830) (Cnidaria: Cuboza) from Bonaire, Dutch Caribbean. **Zootaxa.**

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- Lewis, C., B. Bentlage, A. Yanagihara, W. Gillan, J. Van Blerk, D. P. Keil, A. E. Bely, and A. G. Collins. 2013. Redescription of *Alatina alata* (Reynaud, 1830) (Cnidaria: Cubozoa) from Bonaire, Dutch Caribbean. Zootaxa 3737(4):473-487.
- Lopez, O. 2017. Revisiting the electron microscope method of spinel-olivine-orthopyroxene oxbarometry applied to spinel peridotites. American Mineralogist.
- Machabee, P. 2022. Suosaari EP, Oehlert AM, Lascu I, DechoAW, Piggot AM, Palma A, Machabee P, Reid RP, 2022, Environmental and Biological Controls on Sedimentary Bottom Types in the Puquios of the Salar de Llamara, Northern Chile, Geosciences 12(6), 247.
- Markee, A., and T. Dikow. 2018. Taxonomic revision of the assassin-fly genus *Microphontes* Londt, 1994 (Insecta, Diptera, Asilidae). African Invertebrates 59(2):195-237.
- Miller, J. H., A. K. Behrensmeyer, A. Du, S. K. Lyons, D. Patterson, A. Toth, A. Villasenor, E. Kanga, and D. Reed. 2014. Ecological fidelity of functional traits based on species presence-absence in a modern mammalian bone assemblage (Amboseli, Kenya). Paleobiology 40(4):560-583.
- Monsalve, S., J. J. Dombroskie, W. H. Y. Lam, J. Rota, and J. W. Brown. 2011. Variation in the Female Frenulum in Tortricidae (Lepidoptera). Part 3. Tortricinae. Proceedings of the Entomological Society of Washington 113(3):335-370.
- Nielsen, M., and M. Buffington. 2011. Redescription of *Stentorceps* Quinlan, 1984 (Hymenoptera: Figitidae), with a description of five new species. African Entomology 19(3):597-613.
- Pott, L. 2020. Population-level assessment of atlas occipitalization in artificially modified crania from pre-Hispanic Peru. PLOS One. 15(9).
- Pratt, A. 2019. Octopods of deep reefs off Curacao, southern Caribbean including description of one newly discovered species. Bulletin of Marine Science.
- Ravin, I. S., and S. W. Lingafelter. 2015. Review of the genus Urgleptes Dillon (1956) of Hispaniola (Coleoptera, Cerambycidae, Acanthocinini): descriptions of five new species and one new synonymy. ZooKeys (532):55-85.
- Romero, A. N., M. Herlin, M. Finnilä, M. Korkalainen, H. Håkansson, M. Viluksela, and S. B. Sholts. 2017. Skeletal and dental effects on rats following in utero/lactational exposure to the non-dioxin-like polychlorinated biphenyl PCB 180. PLOS ONE 12(9):e0185241.
- Rutter, A. 2015. The Taxonomic Status of Mazama bricenii and the Sigificance of the Táchira Depression for Mammalian Endemism in the Cordillera de ,Mérida, Venezuela. PLOS One.10(6).
- Scher, Mason A., Barclay, Richard S., Baczynski, Allison A., Smith, Bryton A., Sappington, James, Bennett, Lily A., Chakraborty, Suvankar, Wilson, Jonathan P., Megonigal, J. P., and Wing, Scott L. 2022. "The effect of CO2 concentration on carbon isotope discrimination during photosynthesis in *Ginkgo biloba*: implications for reconstructing atmospheric CO2 levels in the geologic past." *Geochimica et Cosmochimica Acta*, 337 82–94. <u>https://doi.org/10.1016/j.gca.2022.09.033</u>.
- Supekar, S. 2015. Molecular Phylogeny Supports Repeated Adaptation to Burrowing within Small-Eared Shrews Genus of Crypotis (Eulipotyphla, Soricidae) PLOS One. 10(10)
- Stull, G. W., W. A. DiMichele, H. J. Falcon-Lang, W. J. Nelson, and S. Elrick. 2012. Palaeoecology of *Macroneuropteris scheuchzeri*, and its implications for resolving the paradox of 'xeromorphic' plants in Pennsylvanian wetlands. Palaeogeography Palaeoclimatology Palaeoecology 331:162-176.

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- Stull, G. W., C. C. Labandeira, W. A. Dimichele, and D. S. Chaney. 2013. The "Seeds" on *Padgettia readi* Are Insect Galls: Reassignment of the Plant to *Odontopteris*, the Gall to *Ovofoligallites* N. Gen., and the Evolutionary Implications Thereof. Journal of Paleontology 87(2):217-231.
- Tóth, A., S. K. Lyons, and A. K. Behrensmeyer. 2014. A Century of Change in Kenya's Mammal Communities: Increased Richness and Decreased Uniqueness in Six Protected Areas. PLoS ONE 9(4).
- Tóth, A., S. K. Lyons, and A. K. Behrensmeyer. 2014. Mammals of Kenya's protected areas from 1888 to 2013. Ecological Archives:E095-E150.
- Tóth, A., S. K. Lyons, and A. K. Behrensmeyer. 2014. Ecological fidelity of functional traits based on species presence-absence in a modern mammalian bone assemblage (Amboseli, Kenya)
- Chesser, T. Vaseghi, V. 2018. Molecular systematics of swifts of the genus Chaetura (Aves: Apodiformes: Apodidae) Pgs: 162-171.
- Wilken, A. 2019. See how they ran: morphological and functional aspects of skeletons from ancients Egyptian shrew mummies (Eulipotyphia: Soridcidae: Crocidurinae) Journal of Mammology. Vol.100, Issue 4, (Sep 2019), pgs 1199-1210.
- Wilken, A. 2019. Comparative functional skeletal morphology among three genera of shrews: implications for the evolution of locomotor behavior in the Soricinae (Eulipotyphia: Soricidae) Journal of Mammology Vol.100, Issue 6, (Jun 2020), pgs 1750-1764.
- Woodman, N., and S. A. Gaffney. 2014. Can They Dig It? Functional Morphology and Semifossoriality Among Small-Eared Shrews, Genus *Cryptotis* (Mammalia, Soricidae). Journal of Morphology 275(7):745-759.
- Woodman, N. and F. A. Stabile. 2015. Functional Skeletal Morphology and Its Implications for Locomotory Behavior Among Three Genera of Myosoricine Shrews (Mammalia: Eulipotyphia: Soricidae). Journal of Morphology 276(5):550-563.
- Woodman, N., and F. A. Stabile. 2015. Variation in the myosoricine hand skeleton and its implications for locomotory behavior (Eulipotyphla: Soricidae). Journal of Mammalogy 96(1):159-171.

NHRE Presentations: 2010-2016.

- Richards, R; Bell, J. 2010. Observations on "Dolobbo bim" (Bark Paintings) in Arnhem Land 1948Annual Meeting of the Society for American Archaeology. (Poster presentation).
- Brendel, C; Perez Baez, G. 2014. The influence of Spanish loanwords on Juchitan Zapotec. National Conference on Undergraduate Research. (Poster presentation).
- Brendel, C; Perez Baez, G. 2014. The influence of Spanish loanwords on Juchitan Zapotec. 2014 Annual Meeting for the Society for Applied Anthropology. (Poster Presentation).
- Brendel, C; Perez Baez, G. 2015. The influence of Spanish loanwords on Juchitan Zapotec. Annual Meeting of the American Association of Geographers. (Oral presentation).
- Jagani, S; Rick, T. Anthropogenic change in the Chesapeake Bay: Archaeology and Historical Ecology of the Eastern Oyster (Crassostrea virginica) Annual Meeting of the Society for American Archaeology (Poster presentation).
- Jagani, Sheel; Rick, T; Hofman, C. 2011. Ancient Oyster Fisheries of the Chesapeake Bay: Methods and Implications. Annual Meeting of the Society for American Archaeology (Poster presentation).

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- Moshkvin, I; Kaeppler, A. Methods for fiber identification of Hawaiian barkcloth. 16th Annual Meeting of the Society for American Archaeology (Poster presentation).
- Moshkvin, I; Kaeppler, A. Methods for fiber identification of Hawaiian barkcloth. American Anthropological Association Annual Meeting. (Poster presentation).
- Rowsey, D; Helgen, K. 2012. Species boundaries of brushtail possums. Annual Meeting of the Gilbert Ichthyological Society (Oral presentation).
- Toth, A.B; Behrensmeyer, A.K; Lyons, S.K. 2012. Increased diversity and decreased uniqueness in Kenyan mammal communities over the past century. Ecological Society of America Annual Meeting (Oral presentation).
- Toth, A.B; Behrensmeyer, A.K; Lyons, S.K. 2012. Increased diversity and decreased uniqueness in Kenyan mammal communities over the past century. Annual Meeting of the American Society of Mammalogists
- Toth, A.B; Behrensmeyer, A.K; Lyons, S.K. 2012. Increased diversity and decreased uniqueness in Kenyan mammal communities over the past century. 10th North American Paleontologist Convention. (Poster presentation).
- Deczynski, A; Chamorro, M. L; Konstantinov, A. S. 2011. Morphology of the head and associated structures in New World Cryptocephalini (Coleoptera: Chrysomelidae: Cryptocephalinae). Entomological Society of America Annual Meeting (Poster presentation).
- Corrigan, C. M; Cohen, B. A; Hodges, K; Lunning, N. G; Bullock, E. S. 2012. 3.9 Billion Years Ago and the Asteroid Belt: Impact Melts in Ordinary Chondrites. 43rd Lunar and Planetary Science Conference (Poster presentation).
- Lavine, R. J; Wagner, P. J; Erwin, D. H. 2011. A phylogenetic dissection of the gastropod subfamily Knightitinae across the Permian-Triassic boundary. Geological Society of America Annual Meeting (Oral presentation).
- Lavine, R. J; Wagner, P. J; Erwin, D. H. 2011. A phylogenetic dissection of the gastropod subfamily Knightitinae across the Permian-Triassic boundary. Council on undergraduate Research Conference (Oral presentation).
- Kuwahara, A; Meyer, C; Collins, A. 2013. Assessing Autonomous Reef Monitoring Structures (ARMS) as Biodiversity Monitors. Society for Integrative and Comparative Biology Annual Meeting (Oral presentation).
- 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).
- Lopez, O; Cottrell, E; Warren, J. 2013. Upper mantle oxygen fugacity in ridge and subduction zone settings recorded by spinel peridotite. Fall Meeting of the American Geophysical Union (Poster presentation).
- Lopez, O; Cottrell, E. Warren, J. 2013. Upper mantle oxygen fugacity in ridge and subduction zone settings recorded by spinel peridotite. Goldschmidt Geochemical Conference (Oral presentation)
- Goots, A; Bruwelheide, K; Owsley, D. 2013. Post-traumatic bone loss in Civil War soldiers. Meeting of the American Association of Physical Anthropologist (Poster presentation).
- Goots, A; Bruwelheide, K; Owsley, D. 2016. Post-traumatic bone loss in Civil War soldiers. Meeting of the American Association of Physical Anthropologist (Poster presentation).
- Rowsey, D M; Helgen, K. M. 2013. Species boundaries of brushtail possums in the Queensland wet tropics. Annual Meeting of the American Society of Mammologists (Poster presentation).

Im	 •	e effect of nutrients on the growth and manganese oxidation of America Annual Meeting (Poster presentation).	of
Att		Erwin, D. H. 2012. Taphonomic biases influencing exceptionally nale. Geological Society of America Annual Meeting (Poster	y

Burke, J; Behrensmeyer, A. K; Badgley, C; Barry, J; Lyons, S K. 2014. Assessing the impact of time-averaging on a Miocene vertebrate fauna from northern Pakistan. North American Paleontological Convention (Poster presentation).

- Ramirez, G; Andrews, B; Dennen, R. 2013. Transport and sedimentation in unconfined experimental dilute pyroclastic density currents. Fall Meeting of the American Geophysical Union (Poster presentation).
- Ramirez, G; 2013. Transport and sedimentation in unconfined experimental dilute pyroclastic density currents. Council on Undergraduate Research Conference of Research Experiences for undergraduate students Scholarship. (Poster presentation)
- Mittal, T; Macpherson, G. 2013. Dust enrichment of molecular clouds through young stella jets. Ecological Society of America Annual Meeting. (Poster presentation)
- Mittal, T; Macpherson, G. 2013. Dust enrichment of molecular clouds through young stella jets. 98th Meeting of Ecological Society of America (Poster presentation).
- Jones, L; Hunt D, 2014 Dental modifications in North American Woodlands Period populations. Botany 2014 (Poster presentation).
- Bricker, C; Owsley, D; Bruwelheide, K. 2014. Identification and taphonomic analysis of iron coffin burials from southeast Virginia. PASSHE Undergrad Research Coference in Science, Technology, Engineering, and Mathmatics. (Poster presentation).
- Galezo, A; Collins, A. 2016 Morphometrics of the dolphin genus Lagenorhynchus: deciphering a contested phylogeny. Southeast & Mid-Atlantic Marine Mammal Symposium (Poster presentation).
- Stabile, F; Woodman, N. 2014. Functional limb morphology of African myosoricine shrews (Mammalia, Soricidae). Society for Integrative and Comparative Biology Annual Meeting (Poster presentation).
- Stabile, F; Woodman, N. 2015. Functional limb morphology of African myosoricine shrews (Mammalia Soricidae). USGS Patuxent Wildlife Research Station Science Strategy Planning Meeting.
- Stabile, F; Woodman, N. 2016. Functional limb morphology of African myosoricine shrews (Mammalia Soricidae). Annual Meeting of the American Society of Mammalogists. (Oral presentation).
- Keil, K; Osborn, K. 2014. Associations between hyperiid amphipods and gelatinous zooplankton. Society for Integrative and Comparative Biology Annual Meeting (Poster presentation).
- Lavin, Luke; Bell, Joshua. 2012. Exploring the Collections and Relations of A.C. Haddon At the Smithsonian. American Anthropological Association Annual Meeting (Oral presentation).
- Gil, J; Watson, W. 2013. Improving the learning experience of museum visitors: Examining different types of experience in the Genome: Unlocking Life's Code exhibit. Ocean Sciences Meeting (Poster presentation).
- Gil, J; Watson, W. 2014. Improving the learning experience of museum visitors: Examining different types of experience in the Genome: Unlocking Life's Code exhibit. 37th Senior Technical Meeting. University of Puerto Rico, Rio Piedras (Poster presentation).

presentation).

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Kandlikar, G; Freund, F; Johnson, G; Taylor, W; Zimmer, E. 2014. Chloroplast DNA reveals uniparental plastid in- heritance from Isoetes engelmannii in two allotetraploid speciation events. Botany 2014 (Poster presen- tation).				
	Nagi, S. Wollaeger, H; Figlar, R. 2014. Genetic variability in Magno nited States. Botany 2014 (Poster presentation).	olia acuminata (L.) popu-		
	LaVine, R J; 2014. Ecological gradient structure in the Mississippian Lodgepole Formation, southwest Montana. Geological Society of America (Poster presentation).			
Post, A; 2014. Experimental Evolution of Divergence with Gene Flow: Testing for Local Adaptation in Yeast. Soci- ety for the Study of Evolution (Poster presentation).				
-	antelli, C. 2013. The effect of nutrients on the growth and manga 3th Meeting of Ecological Society of America (Poster presentation	_		
Mazama americ	; Helgen, K; Gutiérrez, E. 2014. Neotropical Deer: Morphometric ana Species Complex (Mammalia: Cervidae). American Society of (Poster presentation).	•		
Boas, C; 2014. Phylogen Meeting (Poster	etics within Bellerophon: breaking down a classic wastebasket ta ⁻ presentation).	xon. GSA Annual		
	4. Ecosystem engineering during the Early Cambrian. Sigma Xi Internation Sigma Xi Internation).	ternational Research		
	Fixing Things: The Politics and Techniques of Cell Phone Repair. 2 For Applied Anthropology (Poster presentation).	2014 Annual Meeting		
	orrigan, C.M; McCoy, T. J. 2014. Unscrambling the History of Enst ry Science Conference (Poster presentation).	atite Chondrites. 45th		
	ns between hyperiid amphipods and gelatinous zooplankton. Soc blogy (Poster presentation).	iety of Integrative &		
	ns between hyperiid amphipods and gelatinous zooplankton. Soc blogy (Poster presentation).	iety of Integrative &		
	; Kelley, K A. 2010. Mineral-melt partitioning of V and Sc at arcs: ugacity. Fall Meeting of the American Geophysical Union (Poster	-		
	C. 2016. Geochemical characterization of potential impact melt cl 17th Lunar and Planetary Science Conference. (Poster presentatio			
	ell, E. 2014. Oxygen fugacity recorded by xenoliths from Pacific o nerica (Poster presentation).	ceanic islands. Geologi-		
Wall, K; Davis, F A; Cottrell, E. 2014. Oxygen fugacity recorded by xenoliths from Pacific oceanic islands. Fall Meeting of the American Geophysical Union (Poster presentation).				
	4. Taxonomic revision of the robber-fly genus Leptopteromyia W Entomological Society of America (Oral presentation).	illiston, 1907. Annual		
Cabrero, Alan; Dikow, T.	2014. Taxonomic revision of the robber-fly genus Acronyches (D	viptera: Asilidae). Annual		

Meeting of the Entomological Society of America (Oral presentation).

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- Snider, A; Knowlton, N; Al-Rshaidat, M; Leray, M. 2014. Barcoding and metabarcoding the cryptofauna of the northern Red Sea. Western Society of Naturalists (Poster presentation).
- Snider, A; Knowlton, N; Al-Rshaidat, M; Leray, M. 2014. Barcoding and metabarcoding the cryptofauna of the northern Red Sea. Central Michigan University 2nd Annual Honors Exhibition (Oral presentation)
- Snider, A; Knowlton, N; Al-Rshaidat, M; Leray, M. 2012. Barcoding and metabarcoding the cryptofauna of the northern Red Sea. Southern Regional Honors Conference(Poster presentation).
- Lyons, S K; Toth, A; Behrensmeyer, A K. 2012. Changes in mammal community structure in Kenya over the last 100 years. Annual Meeting of the American Society of Mammalogists (Oral presentation).
- Toth, A; Behrensmeyer, A K; Miller, J; Lyons, S K. 2013. Species richness, community dynamics, and timeaveraging in recent Kenyan ecosystems. 10th North American Paleontological Convention (Oral presentation).
- Marshall, B; Andrews, B J; Fauria, K. 2015. What's all the talc about? Entrainment in dilute pyroclastic density currents. American Geophysical Union Fall Meeting (Poster presentation).
- Miller, H; Rogers, J D. 2015. Using agent-based modeling to examine the effects of social connectivity on resilience. Annual Meeting of the American Association of Geographers (Poster presentation).
- Ehlinger, S. Q; Wendler, J. E; Wendler, I; Huber, B.T; Macleod, K. 2010. Influence of early diagenesis on foraminiferal shell chemistry and isotope signatures: Results from the Tanzania Drilling Project. Annual Meeting of the Geological Society of America (Poster presentation).
- Rodriguez-Russo, C. A; Huber, B. T; Macleod, K. G. 2010. Subtropical Turonian stable isotope ratios from "glassy" foraminifera : No evidence for greenhouse ice sheets. Annual Meeting of the Geological Society of America (Poster presentation).
- Huber, B. T; Macleod, K. G; Bryant, R. M; and Dickie, M. 2014. Oxygen isotope paleotemperatures across the Cretaceous Super greenhouse at southern high latitudes (Naturaliste and Agulhas Plateau). Annual Meeting of the Geological Society of America (Oral presentation).
- Cottrell, E; Davis, F; Birner S K; Warren, J M; Wall, K. 2014. Oxybarometry of peridotites from various tectonic settings. Annual Meeting of the Geological Society of America (Oral presentation).
- Birner, S.K; Warren, J.M; Cottrell, E; Lopez, O.G; Davis, F.A.; Falloon, T.J. 2014. Oxygen Fugacity Variations Among Tonga Trench Forearc Peridotites. Goldschmidt Geochemical Conference (Oral presentation).
- Birner, S.K; Warren, J.M; Cottrell, E; Lopez, O.G; Davis, F.A; Falloon, T.J. 2013. Variations in Oxygen Fugacity among Forearc Peridotites from the Tonga Trench. Fall Meeting of the American Geophysical Union (Oral presentation).
- Herron, S; Wen, J; Zimmer, E. 2015. Nuclear and Chloroplast Sequences Resolve the Concord Grape Mystery. Botany 2015 (Poster presentation).
- 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).
- Kenyon, J; Rosenfeld, C; Santelli, C. 2015. Investigating the effects of Se on fungal growth and biomineral production. Goldschmidt Conference (Poster presentation).
- Fernandez, A; Hunt, D. 2015. Sex determination from the human sacrum: A re-assessment. Annual Meeting of the American Association of Physical Anthropologists (Poster presentation).

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	Patterns of genetic variation in the Australian Grey Fantail complex: Rhipidura al- dura phasiana. Evolution 2015 (Poster presentation).
	V. 2014. A 3D quantitative comparative analysis of wrist morphology among western as. Annual Meeting of the American Association of Physical Anthropologists (Poster
Physical, CT, and	Bruwelheide, K; Rouse, S; Stephen L; Hurlbert, D. E. 2015. Basketmakers revealed: 3D analyses of mummified human remains from the southwest. American Association opologists (Poster presentation).
Tiller, J; 2015. Basketmak	ers Revealed. American Association of Physical Anthropologist (Poster presentation).
utero/lactational	ansson, H; Vilukela, M. 2016. Craniofacial and dental effects shown in rats following in exposure to 2,2',3,4,4',5,5'-heptachlorobiphenyl (PCB-180). Annual Meeting of the tion of Physical Anthropologists (Poster presentation).
	L; Goetz F.E; Maslakova S.A; Wirshing H.H; Norenburg, J.L. 2016. Carcinonemertidae: search of their family history. SICB Annual Meeting 2016 (Poster presentation).
Karluk Salmon Ca	R; Coolidge, R H. 2016. Biocultural evidence through taphonomic observations in the nnery Chinese of Kodiak Island, Alaska. Annual Meeting of the American Association of plogists (Poster presentation).
	lins, A. 2016. Morphometrics of the dolphin genus Lagenorhynchus: deciphering a con- . Southeast & Mid-Atlantic Marine Mammal Symposium (Poster presentation).
	C; McCoy, T.J; Bullock, E.S. 2016. Mineral Associations in Enstatite Chondrites: Possi- Ainerals on Mercury. 47th Lunar and Planetary Science Conference (Poster presenta-
	tts, R. 2016. The effect of context on visitor responses to the question "What does it an?". Annual Meeting of the American Association of Physical Anthropologists (Poster
	l, E. 2015. Oxygen Fugacity of Abyssal Peridotites Along the Gakkel Ridge. Fall Meeting Geophysical Union (Poster presentation).
	P J; Darroch, S. A. F. 2015. A phylogenetic analysis of the brachipod genus Leptaena. y of America Annual Meeting (Poster presentation).
	015. Tall grass, small wasps: Measuring the biodiversityof braconid wasps hneumonoidea) in two warm season grasslands Entomology 2015 (Oral presenta-
	Kula, A. A R; Smith, D; R; Kula, R. R. 2015. Is pan trapping an effective method for esti- teran diversity in grasslands?. Entomology 2015 (Poster presentation).
	rell, E. 2015. Oxygen fugacity of abyssal peridotites along the Gakkle Ridge. Fall merican Geophysical Union (Poster presentation).
Rotalipora lineage	ber, B; Acha, B; Wiggins, J. W. 2016. Morphometric and stratophenetic study of the e (planktic foraminifera) during the middle and late Cenomanian. Geological Society of Aeeting (Poster presentation).

NHRE Presentation: 2016-2020

- Dafoe, A. C; Hunt, D. R. 2017. The Accuracy of Nutrient Foramen Versus Midshaft Measurements of the Tibia for Sex Determination. Annual Meeting of the American Academy of Forensic Sciences (Oral presentation).
- Woolard, K; Pobiner, B. 2017. Cautionary tales in the use of captive carnivore tooth mark data. Society for American Archaeology (Oral presentation).
- Aoki, N; Mushegian, N; Katija, K; Osborn, K. 2017. Kinematic description of locomotion in tomopterid polychaetes. Meeting of the Association for the Sciences of Limnology and Oceanography (ASLO) (Oral presentation).
- Abbott, C. P; Sues, Hans-Dieter; Lockwood, R. 2017. The Dimetrodon dilemma: reassessing posture in sphenacodonts. Geological Society of American Annual Meeting (Poster presentation).
- Brook, Z; Barclay, R. S; Wing, S. L. 2017. Cell size in Gingko and the paleo-CO2 proxy. Geological Society of America Annual Meeting (Poster presentation).
- Wood, H.M; Flynn, B.I. 2018. You Are How You Eat: Chelicerae Orientation and the Diversification of Spiders (Arachnida: Araneae). Society for Integrative and Comparative Biology (Poster presentation).
- Benavidez, B. M; Hunt, D. 2018. What teeth can tell you: oral health in two Paleo-Indian populations. American Association of Physical Anthropologists Annual Meeting (Poster presentation).
- Carreon, S; Austin, R; Sholts, S. 2018. Dental Caries Analysis of the Channel Islands. Society for American Archaeology (Poster presentation).
- O'Brien, E; Edwards, R. D; Radosavljevic, A; Funk, V. 2018. Patterns of plant endemism and diversity in the Guiana Shield. Botany 2018 (Poster presentation).
- Scher, M; Barclay, R. S; Wing, S. L. 2018. The effect of CO2 concentration on carbon isotope discrimination in Ginkgo. American Geophysical Union Fall Meeting (Poster presentation).
- Richards, JC; Vecchione, M. 2019. The Diversity and Distribution of Cephalopods in the Charlie-Gibbs Fracture Zone. Society for Integrative and Comparative Biology Annual Meeting (Poster presentation).
- Florez, D; Andrews, B. J. 2017. Entrainment and runout of Martian pyroclastic density currents. Lunar and Planetary Science Conference (Poster presentation).
- Sosa, E. S; Lunning, N. G; McCoy, T. J; Bullock, E. S; Corrigan, C. M; Gardner-Vandy, K. G. 2017. Constraining the petrogenesis of the paired achondrites GRA 06128/9 through partial melting of an oxidized chondrite. Lunar and Planetary Science Conference (Poster presentation).
- Sosa, E S; Lunning, N. G; McCoy, T. J; Bullock, E. S; Corrigan, C. M; Gardner-Vandy, K. G. 2017. Constraining the petrogenesis of the paired achondrites GRA 06128/9 through partial melting of an oxidized chondrite. Council on Undergraduate Research REU Symposium (Poster presentation).
- Woolard, K; Pobiner, B. 2017. Cautionary tales in the use of captive carnivore tooth mark data. Society for American Archaeology (Oral presentation).
- Abbott, C P; Sues, Hans-Dieter; Lockwood, R. 2017. The Dimetrodon dilemma: reassessing posture in sphenacodonts. Geological Society of American Annual Meeting (Poster presentation).
- Brook, Z; Barclay, R. S; Wing, S. L. 2017. Cell size in Gingko and the paleo-CO2 proxy. Geological Society of America Annual Meeting (Poster presentation).
- Carreon, S; Austin, R; Sholts, S. 2018. Dental Caries Analysis of the Channel Islands. Society for American Archaeology (Poster presentation).
- O'Brien, E; Edwards, R. D; Radosavljevic, A; Funk, V. 2018. Patterns of plant endemism and diversity in the Guiana Shield. Botany 2018 (Poster presentation).

- Scher, M; Barclay, R. S; Wing, S. L. 2018. The effect of CO2 concentration on carbon isotope discrimination in Ginkgo. American Geophysical Union Fall Meeting (Poster presentation).
- Richards, J.C; Vecchione, M. 2019. The Diversity and Distribution of Cephalopods in the Charlie-Gibbs Fracture Zone. Society for Integrative and Comparative Biology Annual Meeting (Poster presentation).
- McKabe, K; Billeck, B. 2019. To bead or not to bead: compositional variation of white glass beads is the question. Comparative Biology Annual Meeting, Society of American Archaeology. (Poster presentation).
- Errico, G; Hunt, D. 2019. Closing the gap: examining sex differences in oral health. American Association of Physical Anthropologists 88th Annual Meeting. (Poster presentation).
- Espinoza, A; Hunt, D. 2019. Expression of sexual dimorphism among the German, Irish, and Italian ancestry groups in the Huntington Collection. American Academy of Forensic Sciences Annual Meeting. (Poster presentation).
- Ranft, H; Schuettpelz, E. 2019. It takes one to tango: examining the prevalence of asexual reproduction in the fern genus Pteris. Botany 2019.(Poster presentation).
- Boschert, C; Dikow, T. 2019. Describing new mydas-fly species from the Namib Desert. (Entomological Society of America Annual Meeting. Poster presentation).
- Markee, A; Dikow, T. 2018. Taxonomic revision of the assassin-fly genus Microphontes Londt, 1994. Entomological Society of America Annual Meeting. (Poster presentation).
- Sandoval, M; Santos, B; Brady, S. 2019 A parasitoid puzzle: phylogenetic relationships of Labeninae wasps (Ichneumonidae) .Entomological Society of America Annual Meeting. Poster presentation).
- Sandoval, M; Santos, B; Brady, S. 2019 A parasitoid puzzle: phylogenetic relationships of Labeninae wasps (Ichneumonidae). Conference for Undergraduate Research. (Poster presentation).
- Arington, A; Osborn, K. 2018. Swimming mechanics of gossamer worms. Western Society of Naturalists Annual Meeting. (Poster presentation).
- Acquadro, J; Macpherson, G; Corrigan, C. 2019. Evidence for impacted-induced shock melting in carbonaceous chondrites. Lunar and Planetary Science Conference. (Poster presentation).
- Goughnour, B; Huber, B. 2018. Foraminiferal paleoecology and paleotemperature estimates for the Cenomanian (100 -94 Ma) at high southern latitudes. Geological Society of American Annual Meeting. (Poster presentation).
- McComb, S; Huber, B. 2019 Analysis of Low and High Latitude Planktonic Foraminiferal Distributions Across the Late Maastrichtian Deccan Volcanism Event. Geological Society of America Annual Meeting. (Poster presentation).
- Perez, M. B; Behrensmeyer, A. K. 2018 Taphonomy of England's Blue Lias ichthyosaurs. Society for Vertebrate Paleontology Annual Meeting. (Poster presentation).
- Samuels-Fair, M; Hunt, G. 2019. Sexual selection and secual dimorphism trends in cytheroid ostracodes from the U.S. Coastal Plain. Geological Society of America Annual Meeting. (Poster presentation).
- Sorman, M; Fraas, A; Huber, H. 2016. Morphometric study of the Rotalipora lineage (planktic foraminifera) during the middle and late Cenomanian. Geological Society of America Annual Meeting. (Poster presentation).
- Ocampo, I; Jackson, C; Cottrell, E. 2018 Nitrogen solubility in magma oceans. Meeting of the American Geophysical Union. (Poster Presentation).
- McKeegan, R; Holycross, M; Cottrell, E. 2018. Probing the Earth's deep oxygen cycle with vanadium: the temperature dependence of partitioning. Geological Society of America Annual Meeting. (Poster presentation).
- Curry, D; C; Lascu, I. 2018. Uncovering the origin of magnetism in early Proterozoic rocks from Lake Superior. American Geophysical Union Fall Meeting. (Poster presentation).

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- Boyette, J; Schott, R; Bell, R. 2020. Evolution of Non-visual Opsin Genes Across the Frog Tree of Life. Evolution. (Poster presentation).
- Becker, M; McGowan, M. 2020. Global Phylogeography of Delphinine Dolphins Using Mitogenomics. Ocean Sciences Meeting . (Poster presentation).
- Wilken, A; Woodman, N. 2019. Functional morphology of the forelimb of North American shrews.. Annual Meeting of the American Society of Mammalogists. (Poster presentation).
- Huie, J; Prates, I; De Queiroz K. 2019. Morphological and ecological diversity in mainland Draconura clade anoles.. Evolution 2019. (Poster presentation).
- Jaynes, K; Bell, R. 2018. Deciphering evolutionary ancestry in African tree frogs: genus Leptopelis. American Society of Ichthyologists and Herpetologists Annual Meeting. (Poster presentation).
- Pott, L; Austin, M; Eller, A; Sholts, S. 2020. Population-level assessment of cranial modification and atlanto-occipital fusion across Peru. American Association of Physical Anthropologists Annual Meeting. (Poster presentation).
- Sadhir, S; Eller, A. 2020.. Skin Pigmentation Variability in Baboons: Implications for Vitamin D Deficiency. American Association of Physical Anthropologists Annual Meeting. Poster presentation).
- Sadhir, S; Eller, A. 2020.. Skin Pigmentation Variability in Baboons: Implications for Vitamin D Deficiency. Northeastern Evolutionary Primatology Meeting. Poster presentation).
- Sadhir, S; Eller, A. 2020.. Skin Pigmentation Variability in Baboons: Implications for Vitamin D Deficiency. Fall Frontiers in Undergraduate Research Exhibition. Poster presentation).
- Robles, K; Lin, Chan; Osborn, K. 2020. Visualizing deep-sea eye adaptations using micro-CT 3D reconstructions. Society for Integrative and Comparative Biology Annual Meeting. (Poster presentation).
- de Queiroz, Kevin, Huie, Jonathan M., and Langan, Esther M. 2023. "No longer in doubt: Discovery of a second specimen corroborates the validity of Anolis incredulus Garrido and Moreno 1998

(Reptilia, Inia)." Zootaxa, 5284, (1) 121–141. https://doi.org/10.11646/zootaxa.5284.1.4

Dikow, Torsten and Dubus, Meliah. 2023. "A review of the assassin-fly genus Anypodetus Hermann, 1907 with the description of a new species (Insecta, Diptera, Asilidae)." African Invertebrates, 64, (2) 165–206. https://doi.org/10.3897/afrinvertebr.64.104283