

Brandon P. Hedrick

bphedrick1@gmail.com

Louisiana State University Health Sciences Center
Department of Cell Biology and Anatomy

1901 Perdido Street
New Orleans LA 70112

bphedrick.com

EDUCATION

- University of Pennsylvania, Philadelphia, PA, 2010-2015
Ph.D. in Earth and Environmental Sciences (Advisor: Peter Dodson)
- Emory University, Atlanta, GA, 2005- 2010
B.S. in Biology
B.S. in Environmental Sciences

CURRENT APPOINTMENT

- Assistant Professor, Louisiana State University, School of Medicine, Department of Cell Biology and Anatomy, New Orleans, USA, July 2019–Present

PROFESSIONAL EXPERIENCE

- Junior Research Fellow, Wolfson College, University of Oxford, Oxford, UK, January 2019–July 2019
- Postdoctoral Research Assistant, Laboratory of Dr. Roger Benson, September 2018–July 2019
Department of Earth Sciences, University of Oxford, Oxford, UK
- National Science Foundation Postdoctoral Research Fellowship in Biology (PRFB)
Laboratory of Dr. Stephanie Pierce, August 2017– August 2018
Department of Organismic and Evolutionary Biology, Harvard University, Cambridge MA, USA
Laboratory of Dr. Elizabeth Dumont, August 2016–August 2017
Department of Biology, University of Massachusetts–Amherst, Amherst MA, USA
- Postdoctoral Fellow, Laboratory of Dr. Elizabeth Dumont, July 2015– August 2016
Department of Biology, University of Massachusetts–Amherst, Amherst MA, USA

AWARDS and GRANTS (\$60,719 in small grants, \$130,000 in Ph.D. Scholarship, \$138,000 NSF; \$139,483 in additional large grants: **\$468,207 Total**)

AWARDS:

Best Biological Sciences Paper in Microscopy and Microanalysis for 2018 (Hedrick et

al., 2018; Microscopy and Microanalysis)
University of Pennsylvania Outstanding Teaching Assistant Award 2014

GRANTS:

Research Enhancement Program (Co-PI) (2020) \$39,570

Louisiana State University Internal Grant (2019) \$22,313

Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowship (2018, declined) \$77,660

National Science Foundation Postdoctoral Research Fellowship in Biology (PRFB)
(2016) \$138,000

University of Pennsylvania Paleontology Fund (2015) \$2800

Jurassic Foundation (2015) \$2069

University of Pennsylvania Paleontology Fund (2014) \$3500

University of Pennsylvania Paleontology Fund (2013) \$3300

The Greg and Susan Walker Endowment (2013) \$1170

Western Interior Paleontological Society Karl Hirsch Memorial Grant (2012) \$1000

University of Pennsylvania Paleontology Fund (2012) \$1,300

Paleontological Association: Sylvester Bradley Grant (2012) £1,100

University of Pennsylvania Research Foundation (2012) \$35,950

The Greg and Susan Walker Endowment (2011) \$530

University of Pennsylvania Paleontology Fund (2011) \$4,500

University of Pennsylvania Paleontology Fund (2010) \$3,100

Benjamin Franklin Fellowship (2010-2015) \$26,000/ yr

PUBLICATIONS (*denotes student author)

- 2020 **Hedrick, B. P.**, Heberling, M., Meineke, E., Turner, K., Grassa, C., Kennedy, J., Park, D., Clarke, J., Cook, J., Blackburn, D., Edwards, S., and Davis, C. 2020. Digitization and the future of natural history collections. *BioScience* biz 163. <https://doi.org/10.1093/biosci/biz163>.
- 2020 **Hedrick, B. P.**, Dickson, B., Dumont, E. R., Pierce, S. E. 2020. The Evolutionary Success of Rodents Is Not Linked to the Evolution of Locomotor Innovation. *Scientific Reports* 10:717.
- 2020 Orbach, D. N., Brennan, P. L. R., **Hedrick, B. P.**, Keener, W., Webber, M. A., and Mesnick, S. L. 2020. Asymmetric and spiraled genitalia coevolve with unique lateralized mating behavior. *Scientific Reports* 10: 3257. <https://doi.org/10.1038/s41598-020-60287-w>
- 2020 **Hedrick, B. P.** and Dodson, P. 2020. Paleobiology in the 21st Century. *The Anatomical Record*.
- 2019 **Hedrick, B. P.**, Vander Linden, A.*, Cox, S., Watt, E., O’Roark, P., Cordero, S. A, Sutherland, C. 2019. Keeping salamanders off the streets: An assessment of one of the first amphibian road tunnels in the United States 30 years after installation. *Journal of Urban Ecology* 5(1): <https://doi.org/10.1093/jue/juz023>
- 2019 **Hedrick, B. P.**, Mutumi, G. L., Munteanu, V. D.*, Sadier, A., Davies, K. T. J., Rossiter, S. J., Sears, K. E., Dávalos, L. M., Dumont, E. R. 2019.

- Morphological diversification under high integration in a hyper diverse mammal clade. *Journal of Mammalian Evolution*.
- 2019 Butler, R. J., Sennikov, A. G., Dunne, E. M., Ezcurra, M. D., **Hedrick, B. P.**, Maidment, S. C. R., Meade, L. E., Raven, T. J., Gower, D. J. 2019. Cranial anatomy and taxonomy of the erythrosuchid archosauriform '*Vjushkovia triplicostata*' Huene, 1960, from the Early Triassic of European Russia. *Royal Society Open Science*. 6: 1911289. <https://doi.org/10.1098/rsos.191289>
- 2019 **Hedrick, B. P.**, Cordero, S. A., Zanno, L. E., Noto, C., Dodson, P. 2019. Quantifying shape and ecology in avian pedal claws: the relationship between the bony core and keratinous sheath. *Ecology and Evolution*. 9:11545–11556.
- 2019 **Hedrick, B. P.**, Goldsmith, E.*, Tumarkin-Deratzian, A. R., Rivera-Sylva, H., and Dodson, P. 2019. Filling in gaps in the ceratopsid histologic database: Long bone histology of two basal centrosaurines. *Anatomical Record*. <https://doi.org/10.1002/ar.24099>
- 2019 **Hedrick, B. P.**, Antalek-Schrag, P.*, Conith, A. J., Natanson, L., and Brennan, P. L. R. 2019. High variance and asymmetry in the shape of the Spiny Dogfish Shark vagina revealed by 2D and 3D geometric morphometrics. *Journal of Zoology*. <https://doi.org/10.1111/jzo.12653>
- 2019 **Hedrick, B. P.**, Schachner, E. R. Rivera, G., Dodson, P., and Pierce, S. E. 2019. The effects of skeletal asymmetry on biological variation in the fossil record. *Paleobiology* 45(1): 154–166. <https://doi.org/10.1017/pab.2018.42>
- 2018 Sadier, A., Davies, K. T. J., Yun, K., Yohe, L. R., Donat, P. **Hedrick, B. P.**, Dumont, E. R., Dávalos, L. M., Rossiter, S. J., and Sears, K. E. 2018. Evidence for multifactorial processes underlying phenotypic variation in bat visual opsins. *eLife* 7: e37412. <https://doi.org/10.7554/eLife.37412>
- 2018 **Hedrick, B. P.** and Dumont, E. R. 2018. Putting the Leaf-Nosed Bats in Context: A Geometric Morphometric Analysis of the Skulls and Jaws of the Three Largest Families of Bats. *Journal of Mammalogy* 99 (5): 1042–1054. <https://doi.org/10.1093/jmammal/gyy101>
- 2018 **Hedrick, B. P.**, Yohe, L., Vander Linden, A.*, Dávalos, L., Sears, K., Sadier, A., Rossiter, S. J., Davies, K. T. J. and Dumont, E. 2018. Assessing Soft-Tissue Shrinkage Estimates in Museum Specimens Imaged With Diffusible Iodine-Based Contrast-Enhanced Computed Tomography (diceCT). *Microscopy and Microanalysis* 24 (3): 284–291. <https://doi.org/10.1017/S1431927618000399>
- 2018 Vander Linden, A.*, **Hedrick, B. P.**, Kamilar, J., and Dumont, E. R. 2018. Atlas morphology, scaling, and locomotor behavior in primates, rodents, and relatives (Mammalia: Euarchontoglires). *Zoological Journal of the Linnean Society*: 185 (1): 283–299. <https://doi.org/10.1093/zoolinnea/zly042>
- 2018 Liu, B., Han, S., **Hedrick, B. P.**, Modarres-Sadeghi, Y., Lynch, M. E. 2018. Perfusion applied to a 3D model of bone metastasis results in evenly

- dispersed mechanical stimuli. *Biotechnology and Bioengineering* 115 (4): 1076-1085. doi: 10.1002/bit.26524
- 2018 Orbach, D. N., **Hedrick, B. P.**, Würsig, B., Mesnick, S. L., and Brennan, P. L. R. 2018. The Evolution of Genital Shape Variation in Female Cetaceans. *Evolution* 72(2): 261–273. doi: 10.1111/evo.13395
- 2016 Anné, J., **Hedrick, B. P.**, and Schein, J. P. 2016. First diagnosis of septic arthritis in a dinosaur. *Royal Society Open Science* 3: 160222.
- 2016 **Hedrick, B.P.**, Gao, C. Tumarkin-Deratzian, A. R., Shen, C., Holloway, J., Zhang, F., Hankenson, K. D., Liu, S., Anné, J., and Dodson, P. 2016. An injured *Psittacosaurus* (Dinosauria: Ceratopsia) from the Yixian Formation (Liaoning, China): Implications for *Psittacosaurus* biology. *The Anatomical Record* 299(7) 897–906.
- 2016 Rivera-Sylva, H. E., **Hedrick, B. P.**, Dodson, P. 2016. A new centrosaurine (Dinosauria: Ceratopsia) from the Aguja Formation (Late Campanian) of northern Coahuila, Mexico. *PLoS One* 11(4): e0150529.
- 2016 Foth, C., **Hedrick, B. P.**, and Ezcurra, M. D. 2016. Cranial ontogenetic variation in early saurischians and the role of heterochrony in the diversification of predatory dinosaurs. *PeerJ* 4: e1589.
- 2016 Zhao, B., **Hedrick, B. P.**, Gao, C., Tumarkin-Deratzian, A. R., Zhang, F., Shen, C., and Dodson, P. 2016. Histologic examination of an assemblage of *Psittacosaurus* (Dinosauria: Ceratopsia) juveniles from the Yixian Formation (Liaoning, China). *The Anatomical Record* 299(5): 601–612.
- 2015 **Hedrick, B. P.**, Manning, P. L., Lynch, E. R., Cordero, S. A.*, and Dodson, P. 2015. The geometry of taking flight: limb morphometrics in Mesozoic theropods. *Journal of Morphology*. 276:152–166.
- 2015 **Hedrick, B. P.**, Zanno, L. E., Wolfe, D. G., and Dodson, P. 2015. The slothful claw: Osteology and taphonomy of *Nothronychus mckinleyi* and *graffami* (Dinosauria: Theropoda) and anatomical considerations for derived therizinosaurids. *PLoS ONE* 10(6): e0129449.
- 2014 **Hedrick, B. P.**, Tumarkin-Deratzian, A., and Dodson, P. 2014. Bone microstructure and relative age of the holotype specimen of the diplodocoid sauropod dinosaur *Suuwassea emilieae*. *Acta Palaeontologica Polonica* 59 (2): 295–304.
- 2014 **Hedrick, B. P.**, Gao, C., Omar, G. I., Zhang, F., Shen, C., and Dodson, P. 2014. The osteology and taphonomy of a *Psittacosaurus* bonebed assemblage. *Cretaceous Research* 51: 321–340.
- 2013 **Hedrick, B. P.** and Dodson, P. 2013. Lujiatun psittacosaurids: understanding individual and taphonomic variation using 3D geometric morphometrics. *PLoS ONE*. 8(8) e69265.

Manuscripts in Review:

TEACHING EXPERIENCE

Assistant Professor, Louisiana State University Health Sciences Center, School of Medicine, Department of Cell Biology and Anatomy 2019–Present

Adjunct Professor, Elms College, Department of Natural Sciences, Mathematics, and Technology 2016–2017

Courses (as Instructor):

- ANAT 6522 (LSUHSC): Allied Health Gross Anatomy (2020–Present)
-Course director in cadaver-based human dissection and lecture aimed at occupational therapists, physical therapists, and physician assistants.
- ANAT 100 (LSUHSC): Medical Gross Anatomy and Embryology (2019–Present)
-Cadaver-based human dissection and lecture on human anatomy and embryology for first-year medical students. The course consists of 4 hour-long lectures per week and 8–9 hours in lab per week. In the first month of the course, embryology is the focus of the course, while the last three months of the course center on anatomy of adults.
- DENT 1101 (LSUHSC): Gross Anatomy and Neuroanatomy (2020)
-Cadaver-based human dissection and lecture on human anatomy and neuroanatomy for first-year dental students. The course consists of 4 hour-long lectures per week and 8–9 hours in lab per week. The first three months of the course center on adult human anatomy and the last month concerns neuroanatomy.
- HLSC 2412 (LSUHSC): Nursing Gross Anatomy (2019–Present)
-Cadaver-based human dissection aimed at nursing students. Dissection labs were 3 hours, twice per week and were aimed at getting nursing students comfortable with general human anatomy.
- ANAT 279 (LSUHSC): Introduction to Biostatistics (2020)
-Upper-level course on introductory biostatistics and research methods, covering basic statistical techniques and their implementation in the R statistical computing software.
- ANAT 291 (LSUHSC): Graduate Student Seminar Series (2020)
-Upper-level graduate student course where graduate students in the Cell Biology and Anatomy department go through papers relevant to their theses or manuscripts that they are writing. Additionally, we discuss job applications, postdoc opportunities, and directions that PhDs can go outside of academia.
- BIO 124 (Elms College): General Biology II (2017)
-Taught introductory biology to primarily first-generation college students emphasizing the evolution and diversity of life on earth.
- BIOL793G (UMass–Amherst): Introduction to Geometric Morphometrics (2016)
-Developed, organized, and taught a course on research methods. The course was split into two parts: (1) introductory statistics including t-tests, ANOVAs, regressions, MANOVAs, and ordination methods and (2) shape analyses. Students developed their own projects through the course, many of which were continued after the course as independent studies.
- GEOL615 (UPenn): Evolutionary History of the Mammalia (2015)
-Developed, organized, and taught mammalian evolution. This course was

organized for upper-level undergraduates such that students gave 45-minute presentations each class on a mammal clade of their choice. This gave students experience giving long format lectures.

- GEOL615 (UPenn): Special Topics in Paleontology: Morphometrics (2014)
-Created, organized, and taught a course on the principles of geometric morphometrics and the application of morphometric theory to real data.

Courses (as Teaching Assistant):

- Environmental Studies, Emory University, (2009-2010)
ENVS 141: Introduction to Geology with lab (2010)
ENVS 190: Introduction to Dinosaurs (2009)
- Earth and Environmental Science, University of Pennsylvania (2012-2014).
GEOL 125: Earth and Life through Time (2012, 2013)
GEOL 103: Natural Disturbances and Human Disasters (2013)
GEOL 205: Paleontology (2014)
- *Guest Lectures:* Earth and Environmental Science, University of Pennsylvania (2012-2014).
GEOL 125 Earth and Life through Time: 2012 (2), 2013 (2)
GEOL 477 Introduction to Vertebrate Paleontology: 2011 (2)
GEOL 406 Advanced Paleontology: 2012 (1)
GEOL 478 Evolution of the Dinosaurs: 2012 (2), 2014 (2)
- *Informal Teaching:*
Lead weekly journal club (2010 - present)

Graduate Students Mentored:

- Adam Lawson (Ph.D. Candidate, Louisiana State University Health Science Center): I am serving on Adam Lawson's Ph.D. committee (2019–present). He is working on reconstructing the lung of the African Grey Parrot to quantify individual variation in bird lungs using 3D modeling. He will be expanding this work to also study interspecific variation in lungs of three owl species as part of his Ph.D.
- Candace Grand Pre (Ph.D. Candidate, Louisiana State University Health Science Center): I am serving as a committee member on Candace Grand Pre's Ph.D. committee (2019–present). She is currently studying the hepatic piston of *Alligator mississippiensis* using ultrasound to better understand how modern crocodylians breathe. This work is currently expanding to assess the evolutionary history of crocodylian breathing.
- Adam Laing (Undergraduate, Masters, University of Pennsylvania, *Senior Thesis and Masters' Thesis*, 2012–2015): Adam and I developed his undergraduate thesis on nutrient foramen shape and its use in determining posture of extinct vertebrates, which became his masters' thesis during a fifth year at UPenn. As part of this project, I taught Adam basic statistics, phylogenetic comparative methods, geometric morphometrics, basic coding in R, and reviewed his thesis drafts and presentation. Adam presented these results at a *national conference (SVP)*. We have continued working together on this project since his graduation in 2015 and now have a **complete manuscript** based on the project, which will soon

be submitted to PLoS ONE. Adam is now enrolled in a **Ph.D. program** at SUNY continuing his studies in evolutionary biology.

Undergraduate Students Mentored:

- Tanner Frank (Undergraduate, University of Pennsylvania, *Senior Thesis*, 2012–present): Tanner and I worked together to develop his project on the relationship between avian pelvic shape and ecology. Through his project, Tanner learned geometric morphometric-based data collection, multivariate statistics, geometric morphometrics, and basic coding in R. Tanner gave a talk on his project at a *national meeting (SICB)* in the “best student presenters” section. Upon graduating, he was awarded a Smithsonian Internship that he carried out in Panama. Tanner and I are currently working on a **manuscript** based on his thesis that will be submitted to the *Journal of Ornithology*. Tanner is now a **Ph.D. student** at UC Berkeley.
- Samantha Cordero (Undergraduate, University of Pennsylvania, *Senior Thesis*, 2012–2015): I helped Sam develop her project on bird claw shape and the integration between bony ungual shape and the shape of the overlying keratinous sheath. As part of this project I taught Sam data collection techniques, multivariate statistics, geometric morphometrics, and basic coding in R. Sam collected data on over 600 specimens and won the **Rose Undergraduate Research Award** recognizing outstanding undergraduate research projects. She also presented her data at a *national conference (SVP)*.
- Zena Casteel (Undergraduate, University of Massachusetts, *Senior Thesis*, 2015–2017): Zena developed her project as part of my course, “Introduction to Geometric Morphometrics.” She examined the relationship between beak shape and song in 9 subspecies of Song Sparrows. I taught her geometric morphometrics, statistics, and basic coding in R. She is now doing a **Fulbright Scholarship** in Brazil and has deferred acceptance to **Cornell University** until her Fulbright is complete.
- Emma Hoffman (Undergraduate, University of Pennsylvania, *Senior Thesis*, 2015): I helped mentor Emma on her undergraduate thesis on the effects of taphonomy on the fossil record in the Morrison Formation. She has earned a **master’s degree** in geological education from SUNY Albany.
- Jacob Bridy (Undergraduate, University of Pennsylvania, 2015): I helped mentor Jacob on an ankylosaur tooth shape project, which became his senior thesis. This included teaching him typical traditional measuring techniques, reviewing basic statistics, and brainstorming with him on his project. He has now earned a **master’s degree** in museum studies at the University of Washington.
- Daniel Tran (Undergraduate, University of Massachusetts, 2016): I mentored Daniel, Christian, and Chandler on a project evaluating morphometry in eye, ear, and olfactory bulb size across a range of bat species. Danny got experience using CT segmentation software and was introduced to working in a lab environment.
- Christian Lanzing (Undergraduate, University of Massachusetts, 2016); see above
- Chandler Kupris (Undergraduate, University of Massachusetts, 2016); see above

WORKSHOPS ATTENDED

- Creating an Inclusive Environment in the Laboratory, Louisiana State University Health Sciences Center, New Orleans, LA, USA, 2020
- SafeZone: Advocation for LGBTQ Peers, Louisiana State University Health Sciences Center, New Orleans, LA, USA, 2019
- Diversity, Equity, Inclusion, and Implicit Bias in Academia, Louisiana State University Health Sciences Center, New Orleans, LA, USA, 2019
- Open Source Hardware GPS Data Logging, Seneca Park Zoo, Rochester, NY, USA, 2018
- Early Career Researchers: When to Get Engaged? University of Oxford, Oxford, UK, 2018
- Telling Stories that Matter; Communicating your Research Through Story, University of Oxford, Oxford, UK, 2018
- Finite Element Analysis, University of Massachusetts –Amherst, Amherst, MA, USA, 2017
- Micro CT Training, Harvard University, Cambridge, MA, USA, 2016
- Geometric Morphometrics, University of California, Berkeley, CA, USA, 2014
- Micro CT Training, University of Pennsylvania, PA, USA, 2014
- Paleohistology Short Course, University of Bonn, Bonn, Germany, 2012
- 3D Geometric Morphometrics, Transmitting Science, Barcelona, Spain, 2012

FIELDWORK

- Amherst Area Salamander Conservation (2016–2020)
- Belize (Spring 2016, 2018)
- Amherst Area Eastern Spadefoot Toad Conservation (Summer 2016)
- Amherst Area Swamp Sparrow Research (Summer 2016)
- New Mexico, Menefee Formation (Summer 2011, 2012, 2013)
- Gansu, China (Summer 2011, 2013)
- Coahuila, Mexico (Spring 2011)
- South Dakota, Hell Creek Formation (Summer 2011)
- Shandong, China (Winter 2010)
- Kenya (Summer 2009)
- Wyoming, Morrison Formation (Summer 2009)
- San Salvador, Bahamas (Fall 2007)

OUTREACH

- Tigers Scholars Undergraduate Summer Enrichment Program (2020–Present)
-Gave anatomy lectures to undergraduate participants. The program is aimed at engaging students from underrepresented groups in Louisiana in STEM fields (<https://www.medschool.lsuhscc.edu/TigerScholarsSEP/>)
- Outreach at the Audubon Zoo – 2019 - Present
-Invited Speaker: “Neotropical Fruit Bats” –2019

- Acted as an expert on bats during Bat Appreciation Day–2019
- Super Science Saturdays (University of Oxford) – 2019
- DayCon (Harvard University) – 2018
- I Heart Science (Harvard University) – 2018
- Hitchcock Center for the Environment (collaborator):
 - Leader of citizen science based project on spotted salamander conservation collecting data on salamander tunnel efficacy along a roadway in Amherst, MA. This includes a number of talks on amphibian conservation and ecology: 2015–2017
 - Invited Speaker: “An Invisible Terror: Birds and Window Collisions” – 2017
 - Co-led demonstration on the use of coverboards to calculate red-backed salamander population size – 2017
- National Fossil Day “Meet a Paleontologist” (Harvard University) – 2017

INVITED TALKS

- Conference Seminar (Speaker at SPARCnet annual meeting) “Effects of Coverboard Age and Aging on Salamander Usage”. – 2020
- Biology Seminar (Invited Speaker; Georgia Southern University) “The Evolutionary Diversity of Locomotor Innovation in Rodents) – 2020
- Bat Week (Invited Speaker; Audubon Zoo) “Neotropical Fruit Bats” – 2019
- Project Teach (Invited Speaker; Harvard University) “How to become a paleontologist (and get paid for it)” –2019
- OEB Science Café, Citizen Science Panel (Invited Speaker; University of Massachusetts – Amherst) – 2017
- BioTap Undergraduate Invited Talk (University of Massachusetts – Amherst) “The Evolution of Flight: Winging It” – 2016
- Delaware Valley Paleontological Society Invited Talk (Academy of Natural Sciences, Philadelphia) – 2014

PROFESSIONAL SERVICE:

Editor at PeerJ (February 2020–Present)

-<https://peerj.com/BPHedrick/>

-4 Articles Edited (<https://peerj.com/BPHedrick/#contributions>)

Co-editor (with Dr. Peter Dodson) of a special volume of the Anatomical Record to be published April 2020

Reviews: Evolution; BMC Evolutionary Biology; Acta Chiropterologica; Scientific Reports; Proceedings of the Royal Society: B; Interface Focus; Journal of Mammalian

Evolution; PLoS ONE; The Anatomical Record; Historical Biology; Palaeogeography, Palaeoclimatology, Palaeoecology; Naturwissenschaften; Ameghiniana; Paleontological Contributions; Cretaceous Research; Journal of Palaeontology; EvoDevo; Zoology; PeerJ

ABSTRACTS AND CONFERENCE PRESENTATIONS

- 2020 **Hedrick, B. P.**, Brocklehurst, N., Mitchell, J., and Benson, RBJ. Functional Constraints and Disparity in Bird Limb Proportion Evolution. SICB [abstract]
- 2020 Grand Pre, C. A., **Hedrick, B. P.**, and Schachner, E. R. Movement and function of the hepatic-piston pulmonary apparatus during various modes of respiration in the American Alligator (*Alligator mississippiensis*). SICB [abstract]
- 2020 Lawson, A. B., Echols, S. M., **Hedrick, B. P.**, and Schachner, E. R. Anatomy of the respiratory system of the African Grey Parrot (*Psittacus erithacus erithacus*) SICB [abstract]
- 2020 Schachner, E. R., Diaz JR, R. E., and **Hedrick, B. P.** Anatomy of the crocodylian bronchial tree and implications for the ancestral archosaurian lung. SICB [abstract]
- 2020 Orbach, D. N., Brennan, P. L. R., **Hedrick, B. P.**, Keener, W., Webber, M., and Mesnick, S. L. Unique coevolution of genital asymmetry and lateralized mating behavior in a mammal. SICB [abstract]
- 2020 Mutumi, G. L., Hall, R. P., **Hedrick, B. P.**, Yohe, L. R., Sadier, A., Davies, K. T. J., Dávalos, L. M., Rossiter, S. J., Sears, K., Dumont, E. R. Mosaic evolution of sensory and biomechanical structures in the adaptive radiation of neotropical leaf-nosed bats. SICB [abstract]
- 2020 Hall, R. P., Mutumi, G. L., **Hedrick, B. P.**, Yohe, L. R., Sadier, A., Davies, K. T. J., Dávalos, L. M., Rossiter, S. J., Sears, K., Dumont, E. R. Ancestral generalization as a potential gateway to rapid dietary divergence in neotropical leaf-nosed bats. SICB [abstract]
- 2019 Mutumi, G. L., Hall, R. P., **Hedrick, B. P.**, Yohe, L. R., Sadier, A., Davies, K. T. J., Dávalos, L. M., Rossiter, S. J., Sears, K., Dumont, E. R. The influence of sensory and biomechanical modules on the evolution of neotropical leaf-nosed bats. NASBR [abstract]
- 2019 Hall, R. P., Mutumi, G. L., **Hedrick, B. P.**, Yohe, L. R., Sadier, A., Davies, K. T. J., Dávalos, L. M., Rossiter, S. J., Sears, K., Dumont, E. R. Dietary Generalization: A Gateway to Rapid Dietary Divergence in New World Leaf Nosed Bats. NASBR [abstract]
- 2019 **Hedrick, B. P.**, Mitchell, J. Benson, R. B. J. Functional constraints lead to decreased disparity in bird limb proportion evolution. ICVM [abstract]
- 2019 **Hedrick, B. P.**, Dumont, E. R., Pierce, S. E. 2019. The Evolutionary Success of Rodents Is Not Linked to the Evolution of Locomotor Innovation. SICB [abstract]
- 2019 ER Schachner, E. R. Richbourg, H. A., **Hedrick, B. P.**, Diaz Jr, R. E. 2019. Lung Architecture in Cuvier's Dwarf Caiman (*Paleosuchus*

- palpebrosus*) and the Structural Diversity of the Crocodylian Bronchial Tree. Experimental Biology [abstract]
- 2018 Hall, R. P., Mutumi, G. L., **Hedrick, B. P.**, Dávalos, L. M., Rossiter, S., Sears, K., and Dumont, E. R. How Is Relative Sensory Organ Volume Related to Diet Driven Diversification in Phyllostomids? NASBR [abstract]
- 2018 Mutumi, G. L., **Hedrick, B. P.**, Dávalos, L. M., Rossiter, S., Sears, K., and Dumont, E. R. Integration and Morphological Disparity in the Most Dietary Diverse Clade of Mammals. NASBR [abstract]
- 2018 **Hedrick, B. P.**, Cordero, S. A., O’Roark, P. and Watt, E. How did the salamander cross the road? Improvements to older amphibian culverts. JMIH [abstract]
- 2018 Munteanu, V. D. and **Hedrick, B. P.** 2018. Hit the Ground Running: How Locomotor Mode Affects Post-Cranial Morphology in Order Carnivora. SICB [abstract]
- 2017 **Hedrick, B. P.**, Pierce, S. E., and Dumont, E. R. 2017. Disparity in the cross-sectional geometry of limb bones in birds and bats. BCoN [abstract]
- 2017 **Hedrick, B. P.** and Dumont, E. R. 2017. Putting the Leaf-Nosed Bats in Context: A Geometric Morphometric Analysis of the Three Largest Bat Clades. NASBR. [abstract]
- 2017 Mutumi, G. L., **Hedrick, B. P.**, Dávalos, L. M., Rossiter, S., Sears, K., and Dumont, E. R. 2017. Skull Shape Diversity among Phyllostomids in Relation to Immediate Outgroups: Phylogeny or Function. NASBR. [abstract]
- 2017 **Hedrick, B. P.**, Cordero, S., O’Roark, P., Watt, E. 2017. Assessment of the First Amphibian Road Crossing Structure in North America 30 Years After Installation. Joint Meeting of Ichthyology and Herpetology [abstract]
- 2017 Orbach, D., **Hedrick, B. P.**, Brennan, P. L. R. 2017. Vaginal shape variation in cetaceans: evolution of extreme diversity. Biology of Spermatozoa Annual Conference. [abstract]
- 2017 Liu, B., Han, S., **Hedrick, B. P.**, Modarres-Sadeghi, Y., and Lynch, M. E. 2017. Tumor Cells Experience Uniformly Distributed Mechanical Cues in a 3D Bone Scaffold During Perfusion. Biomedical Engineering Society Annual Meeting [abstract]
- 2017 **Hedrick, B. P.** and Dodson, P. 2017. Assessing Alligator Limb Architecture Using Geometric Morphometrics: Allometry, Disparity, and Integration. SICB [abstract]
- 2017 Casteel, Z., **Hedrick, B. P.**, Strauss, A., and Podos, J. 2017. The Sound of Shape: Subtle aspects of subspecific variation in the highly polytypic Song Sparrow. SICB [abstract]
- 2017 Vander Linden, A., **Hedrick, B. P.**, Kalimar, J. M., and Dumont, E. 2017. Three-dimensional morphology of the atlas vertebra in relation to ecology in primates, rodents, and relatives. SICB [abstract]

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