

## CURRICULUM VITAE

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### EDUCATION

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- 2015 Ph.D. with Honors – Ecology and Evolutionary Biology; Thesis Advisors: Edward O. Wiley and A. Townsend Peterson, Department of Ecology and Evolutionary Biology, University of Kansas; Lawrence, KS.
- 2012 Graduate Certificate – Environmental Studies; Advisor: Joane Nagel, Department of Sociology, University of Kansas; Lawrence, KS.
- 2008 M. A. – Ecology and Evolutionary Biology; Thesis Advisor: Kirsten Jensen, Department of Ecology and Evolutionary Biology, University of Kansas; Lawrence, KS.
- 2006 B. S. – University Honors in Biodiversity, Ecology, and Evolutionary Biology, University of Kansas; Lawrence, KS.

### APPOINTMENTS

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- 2017 – Present Postdoctoral Research Associate at the University of Florida; Mentors: Robert Guralnick and Akito Kawahara.
- 2015 – 2017 NSF Postdoctoral Fellow at the University of Florida; Mentors: Robert Guralnick and Akito Kawahara.

### PUBLICATIONS

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- Kawahara, AY, D Plotkin, C Hamilton, H Gough, R St Laurent, **HL Owens**, NT Homziak, JR Barber. 2017. Diel behavior in moths and butterflies: A synthesis of data illuminates the evolution of temporal activity. *Organisms Diversity and Evolution*. doi: 10.1007/s13127-017-0350-6.
- Owens, HL**, DS Lewis, JR Dupuis, AL Clamens, FAH Sperling, AY Kawahara, FL Condamine. 2017. Latitudinal diversity gradient in New World swallowtail butterflies investigated with multi-evidence approach uncovers contrasting patterns of out-of- and into-the-tropics dispersal. *Global Ecology and Biogeography* 26: 1447-1458. doi: 10.1111/geb.12672
- Saupe, EE, N Barve, **HL Owens**, J Cooper, PA Hosner, AT Peterson. 2017. Reconstructing ecological niche evolution when niches are incompletely characterized. *Systematic Biology* 0: 1-11. doi: 10.1093/sysbio/syx084
- Ingenloff, K, CM Hensz, T Anamza, V Barve, LP Campbell, JC Cooper, ED Komp, L Jimenez, KV Olson, L Osorio-Olvera, **HL Owens**, AT Peterson, AM Samy, M Simões, J Soberón. 2017. Predictable invasion dynamics in North American populations of the Eurasian Collared Dove *Streptopelia decaocto*. *Proceedings of the Royal Society B* 284: 20171157. doi: 10.1098/rspb.2017.1157

Gurgel-Gonçalves, R, ED Komp, LP Campbell, A Khalighifar, J Mellenbruch, VJ Mendonça, **HL Owens**, K de la Cruz Felix, AT Peterson, JM Ramsey. 2017. Automated identification of insect vectors of Chagas disease in Brazil and Mexico: The Virtual Vector Lab. *PeerJ* 5: e3040.

Hosner, PA, MJ Andersen, MB Robbins, A Urbay-Tello, L Cueto-Aparicio, K Verde-Guerra, LA Sánchez González, AG Navarro-Sigüenza, RL Boyd, J Núñez, J Tiravanti, M Combe, **HL Owens**, AT Peterson. 2015. Avifaunal surveys of the Apurímac river valley, Ayacucho and Cuzco departments, Peru: new distributional records and biogeographic, taxonomic, and conservation implications. *Wilson Journal of Ornithology* 127: 563-812.<sup>1</sup>

**Owens, HL**. 2015. Evolution of codfishes (Teleostei: Gadinae) in geographical and ecological space: evidence that physiological limits drove diversification of subarctic fishes. *Journal of Biogeography* 42: 1091-1102. doi: 10.1111/jbi.12483.

Manthey, JD, LP Campbell, EE Saupe, J Soberón, CM Hensz, CE Myers, **HL Owens**, K Ingenloff, AT Peterson, N Barve, A Lira-Noriega, V Barve. 2015. A test of niche centrality as a determinant of population trends and conservation status in threatened and endangered North American birds. *Endangered Species Research* 26: 201-208. doi: 10.3354/esr00646.

**Owens, HL**. 2014. Closing the gap between researchers and policymakers: Lessons from the history of fisheries management in the United States. *Society and Natural Resources* 27: 1339-1345. doi: 10.1080/08941920.2014.933930.

**Owens, HL**, LP Campbell, LL Dornak, EE Saupe, N Barve, J Soberon, K Ingenloff, A Lira-Noriega, CM Hensz, CE Myers, AT Peterson. 2013. Constraints on interpretation of ecological niche models by limited environmental ranges on calibration areas. *Ecological Modelling* 263: 10-18. **Highly cited.**

Barve, N, AJ Bonilla, J Brandes, JC Brown, N Brunzell, FV Cochran, RJ Crosthwait, J Gentry, LM Gerhart, T Jackson, AJ Kern, KS Oberhauser, **HL Owens**, AT Peterson, AS Reed, J Soberón, AD Sundberg, LM Williams. 2012. Climate-change and mass mortality events in overwintering monarch butterflies. *Revista Mexicana de Biodiversidad* 83: 817-824.

Saupe, EE, V Barve, CE Myers, J Soberon, N Barve, CM Hensz, AT Peterson, **HL Owens**, A Lira-Noriega. 2012. Variation in niche and distribution model performance: The need for a priori assessment of key causal factors. *Ecological Modelling* 237-238: 11-22. **Highly cited.**

**Owens, HL**, AC Bentley, AT Peterson. 2012. Predicting suitable environments and potential occurrences for coelacanths (*Latimeria* spp.). *Biodiversity and Conservation* 21: 577-587. doi: 10.1007/s10531-011-0202-1.

*In review:*

Williams, R, **HL Owens**, J Clamp, AT Peterson, A Warren, M Martin-Cereceda. Endemicity and climatic niche differentiation in three marine ciliated protists. *Limnology and Oceanography*.

*In review:*

Allen, JM, CC Germain-Aubrey, N Barve, KM Neubig, LC Majure, SW Laffan, BD Mishler, **HL Owens**, SA Smith, WM Whitten, JR Abbott, DE Soltis, RP Guralnick, PS Soltis. Spatial phylogenetics of Florida vascular plants: The effects of tree uncertainty and ultrametricity.

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<sup>1</sup> Edwards Prize, *Wilson Journal of Ornithology*

## RESEARCH GRANTS

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- 2017 University of Florida Biodiversity Institute Seed Grant. BridgeTree: A Toolbox to Mobilize Big Biodiversity Data to Understand and Communicate Pattern and Process, **Principal Investigator**. \$45,000.
- 2015 – 2017 NSF DBI 1523732. Postdoctoral Fellowship in Biology. Out of the Tropics and Out of the Drawer: Integrative Analysis of the Tropical Diversity Gradient from Museum Collections of New World Swallowtail Butterflies, **Principal Investigator**. \$138,000.
- 2012 – 2014 NSF DEB 1209917. Dissertation Research. Niche Evolution in Gadine Fishes, Co-Principal Investigator (with Principal Investigator E.O. Wiley). \$14,753.
- 2012 Building a Phylogenetic Framework to Investigate Ecological Niche Evolution. University of Kansas Biodiversity Institute Panorama Grant, **Principal Investigator**. \$700.

## INVITED PRESENTATIONS

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- Apr 2018 Spatial biodiversity modeling in a changing world. Department of Biology, St. Cloud State University, St. Cloud, Minnesota
- Mar 2017 Biodiversity patterns in swallowtail butterflies: Rethinking tropicality. Department of Biological Sciences, University of New Orleans, New Orleans, Louisiana.
- Oct 2016 Biodiversity patterns in swallowtail butterflies: Rethinking tropicality. McGuire Center Seminar, Florida Museum of Natural History, Gainesville, Florida.
- Nov 2015 Toward total-evidence biogeography: Uniting comparative phylogenetics and macroecology. Department of Biological Sciences Ecology and Evolution Seminar, University of Alberta, Edmonton, Alberta, Canada.
- Mar 2015 Uniting niche modeling and comparative phylogenetics to infer codfish biogeographic history. Global Online Seminar in Biodiversity Informatics, University of Kansas. Lawrence, Kansas.  
<https://www.youtube.com/watch?v=DArfCVrJzIU>.
- Mar 2015 Evolution of codfishes in geographical and ecological space: climate change and diversification of subarctic fishes. Department of Biology Graduate Colloquium, University of Northern Iowa. Cedar Falls, Iowa.
- Feb 2014 Ecology, evolution, and biogeography of codfishes. Department of Biology Seminar Series, Regis University. Denver, Colorado.
- Mar 2012 Whither cod? Incorporating climate model data into ecological niche models. National Center for Atmospheric Research Mesa Lab Research Reports. Boulder, Colorado.

## CONFERENCE PRESENTATIONS

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- Jul 2017 From the tropics to the drawer and back: Digitized New World swallowtail butterfly

- specimens inform diversity patterns. Presenting author, oral presentation. Entomology 2017. Denver, Colorado.
- Jul 2017 Seeing the invisible: Biogeographic breaks in circumtropical billfishes (Istiophoriformes). Presenting author, oral presentation. Joint Meeting of Ichthyologists and Herpetologists. Austin, Texas.
- Oct 2016 Biodiversity patterns in swallowtail butterflies: Rethinking tropicality. Presenting author, oral presentation. Southern Lepidopterists' Society. Gainesville, Florida.
- Sept 2016 Out of or into the tropics? Processes underlying biodiversity patterns in New World swallowtail butterflies. Presenting author, oral presentation. XXV International Congress of Entomology. Orlando, Florida.
- Aug 2016 New method for photographing and automatically identifying triatomines. Poster presentation. 52nd Congress of the Brazilian Society of Tropical Medicine. Maceió, Brazil.<sup>2</sup>
- Jun 2016 Out of or into the tropics? Processes underlying biodiversity patterns in New World swallowtail butterflies. Presenting author, oral presentation. Evolution 2016. Austin, Texas.
- Jul 2015 Holocene Pacific cod (*Gadus macrocephalus*) distributional changes: Ecological niche models and archeological evidence. Presenting author, oral presentation. Joint Meeting of Ichthyologists and Herpetologists. Reno, Nevada.
- Jul 2014 Investigating modes of speciation in trans-Isthmian haemulid grunts. Presenting author, oral presentation. Joint Meeting of Ichthyologists and Herpetologists. Chattanooga, Tennessee.
- Jun 2014 Investigating modes of speciation in trans-Isthmian haemulid grunts. Presenting author, oral presentation. Evolution 2014. Raleigh, North Carolina.
- Jan 2014 Incorporating phylogenetics and ecological niche modeling for biogeographic analysis. Presenting author, oral presentation. International Biogeography Society Early Career Conference. Canberra, Australia.
- Jul 2013 A Phylogenetic Approach to Niche Evolution in Gadine Fishes. Presenting author, oral presentation. Joint Meeting of Ichthyologists and Herpetologists. Albuquerque, New Mexico.
- Jun 2013 A phylogenetic approach to niche evolution in gadine fishes. Presenting author, oral presentation. Evolution 2013. Snowbird, Utah.
- Aug 2012 Niche conservatism in gadine fishes. Presenting author, oral presentation. World Congress of Herpetology. Vancouver, British Columbia, Canada.
- May 2012 I wonder where that fish will go? Predicting ecological shifts in the Northwest Atlantic. Presenting author, poster and video presentations. NSF IGERT Video and Poster Competition. Washington, D.C.
- Dec 2011 Ecological niche modeling as a tool for anticipating the potential geography of invasive species. Presenting author, oral presentation. Midwest Fish and Wildlife

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<sup>2</sup> Best work, Vectors & Reservoirs Area, 52nd Congress of the Brazilian Society of Tropical Medicine.

- Conference. Des Moines, Iowa.
- Jul 2011 Climate change and the distributions of Atlantic fishes: A correlative modeling approach. Presenting author, oral presentation. Joint Meeting of Ichthyologists and Herpetologists, Minneapolis, Minnesota.
- Jul 2010 Predicting the distributions of the coelacanths *Latimeria chalumnae* and *Latimeria menadoensis*. Presenting author, oral presentation. Joint Meeting of Ichthyologists and Herpetologists, Providence, Rhode Island.
- Aug 2008 Multiple species of *Phoreiobothrium* from the Blacktip Shark, *Carcharhinus limbatus*, from the Gulf of Mexico. Oral Master's Thesis Presentation. Department of Ecology and Evolutionary Biology, University of Kansas. Lawrence, Kansas.
- Jun 2008 Multiple species of *Phoreiobothrium* from the Blacktip Shark, *Carcharhinus limbatus*, from the Gulf of Mexico. Presenting author, oral presentation. American Society of Parasitology. Arlington, Texas.
- Apr 2008 Multiple species of *Phoreiobothrium* from the Blacktip Shark, *Carcharhinus limbatus*, from the Gulf of Mexico. Presenting author, oral presentation. Southwest Association of Parasitologists. Lake Texoma, Oklahoma.

## **TEACHING EXPERIENCE**

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### Global Biodiversity Information Facility (2018):

Biodiversity Information for Development: Data Use for Decision Making workshop (trainer, 5-day course)

### University of Florida (2016-2017):

Undergraduate Special Topics: Animals and Human Affairs, ZOO 4926 (guest lecturer, 1 lecture)

Graduate Seminar in Ecological Niche Modeling, ZOO 6927 (lead instructor, 1 semester)

Graduate Seminar in Global Change Biology, ZOO 6927 (guest lecturer, 1 lecture)

ButterflyNet Bioinformatics Workshop (lecturer, 3-day course)

### Joint Meeting of Ichthyologists and Herpetologists (2016):

R Workshop (course coordinator and lead instructor, 1-day course)

### University of Kansas (2006–2013):

Principles of Molecular and Cellular Biology, BIOL 150 (lecture teaching assistant, 2 semesters; laboratory teaching assistant, 1 semester; discussion leader, 2 semesters)

Principles of Organismal Biology, BIOL 152 (lecture teaching assistant, 1 semester; laboratory teaching assistant, 1 semester; discussion leader, 2 semesters)

Organismal Physiology, BIOL 409 (laboratory teaching assistant, 1 semester)

Biostatistics, BIOL 570 (laboratory teaching assistant, 1 semester)

### Haskell Indian Nations University (2010-2013):

Haskell Environmental Research Studies Summer Institute (mentor, 2 summers)  
Niche Modeling Lightening Course (instructor, 1 day course)  
Introduction to Geographical Information Systems (guest lecturer, 2 lectures)

## **GRADUATE STUDENTS MENTORED**

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Luis Soto; University of Florida; Advisors: Rob Guralnick and Colette St. Mary  
PhD research; Lamniform shark paleoecology

Laura Brenskelle; University of Florida; Advisor: Rob Guralnick  
PhD research; Geographic variation in butterfly wing shape

Daniel Auliz Ortiz; Autonomous University of Baja California Sur; Advisor: Héctor Reyes Bonilla  
Masters project; Modeling coral distributions

## **UNDERGRADUATE STUDENTS MENTORED**

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Minji Ku	<i>Tropical vertebrate georeferencing</i>	2017 – present	Active project
Dani Hayes	<i>Butterfly morphology</i>	2017	
Scott Fleishman	<i>Butterfly georeferencing</i>	2016 – 2017	
William Walters	<i>Butterfly georeferencing</i>	2016 – 2017	
Chelsea Burgess	<i>Invasive gobies</i>	2013 – 2015	Poster presentation

## **RESEARCH EXPERIENCE**

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Nov 2014      Visiting Researcher, Oceanography Section, Climate and Global Dynamics Division, National Center for Atmospheric Research, supervisor Gokhan Danabasoglu. Processing and application of decadal climate model and hindcast data for ecological niche modeling.

2013-2014      Graduate Research Assistant, University of Kansas, supervisor Town Peterson. Quantitative morphometric studies towards an automated identification facility for triatomine bugs, vectors of Chagas disease.

Spr 2013      Graduate Research Assistant, University of Kansas, supervisor Ed Wiley. Fish measurement, clearing and staining, and fluorescence microscopy.

Spr 2012      Visiting Researcher, Oceanography Section, Climate and Global Dynamics Division, National Center for Atmospheric Research, supervisor Joanie Kleypas. Processing and application of general circulation model climatological and oceanographic data for ecological niche modeling.

Sum 2007, 2008      Graduate Research Assistant, University of Kansas, supervisor Kirsten Jensen. Preparation of cestodes of sharks from the Gulf of Mexico for examination with light microscopy, databasing, and collection curation.

## HONORS, FELLOWSHIPS, AND AWARDS

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- 2017 Postdoctoral fellowship, National Institute for Mathematical and Biological Synthesis (NIMBioS), \$102,000. *Offered, but declined.*
- 2016 Best work: Vectors and reservoirs, Brazilian Society of Tropical Medicine, 52nd Congress of the Brazilian Society of Tropical Medicine.
- 2009-2015 NSF IGERT Fellow, \$60,000.
- 2013 Student travel award, International Biogeography Society, \$350.
- 2011 Second place presentation, University of Kansas Biodiversity Institute Graduate Student Organization Annual Retreat.
- 2010 Third place presentation, University of Kansas 9th Annual GIS Day.
- 2010 First place presentation, University of Kansas Biodiversity Institute Graduate Student Organization Annual Retreat.
- 2010 Michael S. Gaines Award for Excellence in Teaching, Principles of Biology Laboratory.
- 2008 Marc Dresden Student Travel Grant, Southwest Association of Parasitologists.

## SERVICE AND SOCIETY MEMBERSHIP

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- Spr 2018 Editorial Board, Copeia (Journal of the American Society of Ichthyologists and Herpetologists)
- Spr 2017-pres President, Florida Museum of Natural History Postdoc Association
- Sum 2016-pres Entomological Society of America
- Spr 2012-pres Society for the Study of Evolution
- Spr 2010-pres American Society of Ichthyologists and Herpetologists
- Sum 2014-2016 Ad-Hoc Committee on Membership, American Society of Ichthyologists and Herpetologists
- Spr 2014-2015 Biodiversity Institute Strategic Planning Committee, University of Kansas
- Fall 2013-2015 Natural History Museum Student Advisory Committee, University of Kansas
- 2010-2015 Graduate Student Organization, American Society of Ichthyologists and Herpetologists
- 2008-2015 Volunteer Specimen Preparator, Division of Ornithology, University of Kansas Biodiversity Institute
- 2006-2015 Ecology and Evolutionary Biology Graduate Student Organization, University of Kansas
- Fall 2012-2013 Ecology and Evolutionary Biology Systematic Ichthyologist Job Search Committee, University of Kansas
- Fall 2011-2012 Ecology and Evolutionary Biology Graduate Program Committee, University of Kansas

2009-2010 Ecology and Evolutionary Biology Executive Committee, University of Kansas  
2006-2010 Biodiversity Institute Graduate Student Organization, University of Kansas  
2006-2009 American Society of Parasitologists  
2006-2009 Southwestern Association of Parasitologists  
Fall 2006 Student Representative, Ecology and Evolutionary Biology Sabbatical Leave committee, University of Kansas

## **PEER REVIEWS**

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*The American Naturalist* (2), *Animal Conservation* (1), *Biodiversity Informatics* (2), *Biological Invasions* (1), *Climate Change Responses* (1), *The Condor* (2), *Diversity and Distributions* (2), *Ecography* (1), *Ecological Modelling* (1), *Ecological Research* (1), *Ecology and Evolution* (1), *Entropy* (1), *Environmental Modelling and Assessment* (1), *Hydrobiologia* (1), *Journal of Animal Ecology* (1), *Journal of Biogeography* (2), *Journal of Forest Research* (1), *Paleoceanography* (1), *PCI Evolutionary Biology* (1), *PEERJ* (2), *Proceedings of the Royal Society B* (4), *PLoS One* (2), *Royal Society Open Science* (1), *Scientific Data* (1), *Southwest Naturalist* (1), *Zootaxa* (1)