

Nicholas A. Huron

Ecologist • Data Scientist

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Education

- 2022 Ph.D. in Biology
 Temple University
 Advisor: Dr. Matthew Helmus
- 2013 B.S. in Biology
 Pepperdine University
 Magna Cum Laude

Research Interests

Data Science, Invasion Biology, Biodiversity and Systematics, Conservation Biology, and Herpetology

Research Experience

- 2017–2022 *Graduate Student*, Integrative Ecology Lab
- *Dissertation*: “Building frameworks for understanding invasions and extinctions for biodiversity science”
 - Research Assistant: “Predicting establishment and impact of spotted lanternfly on trees across the USA”, United States Department of Agriculture
 - Research Assistant: “An integrative approach to model, predict and control the spotted lanternfly invasion meltdown in Pennsylvania”, Pennsylvania Department of Agriculture
- 2014–2017 *Research Assistant*, Cameron Siler Lab
- Study biodiversity and systematics of Philippine herpetofauna
 - Curate specimens/tissues for research in the Sam Noble Oklahoma Museum of Natural History (SNOMNH)
 - Lead fieldwork and data collection on “Tracking the Emergence of Infectious Disease Among Amphibian Species of Greatest Conservation Need—Amphibian Surveys of Wildlife Management Areas in Oklahoma to Determine Current Distribution, Status, and Health of Native Communities” grant, Oklahoma Department of Wildlife Conservation
- 2015–2016 *Herpetology/Mammalogy Curatorial Assistant*, Sam Noble OK Museum of Natural History
- Update taxonomy and reorganize specimen collections
 - Survey, catch, and process vouchered specimens for herpetology collection deposition
 - Digitize and review specimen records in collection databases (morphology, locality, etc.)
- 2013–2014 *Research Assistant*, Pepperdine University
- Organize and lead annual stream surveys of SMM streams
 - Provide critical feedback on studies prior to journal submission
 - Compile and digitize >20 year old amphibian survey dataset
- 2013–2014 *Research Student*, Rodney Honeycutt Lab
- Use molecular genetic lab techniques to analyze population phylogeography
 - Study local populations of *Taricha torosa*

2009–2014 *Research Student*, Lee Kats Lab

- Investigate behavioral ecology in Santa Monica Mountains (SMM) streams and the La Selva Research Station rainforest in Costa Rica
- Conduct regular stream surveys in the SMM for USGS and State Park Services
- Annual presentation of current research at SCCUR (see below for list)

2013–2013 *Restoration Ecologist*, Mountains Restoration Trust (MRT)

- Co-lead invasive crayfish removal project (CRP) at Tapia Park (Malibu Creek)
- Supervise trapping, characterization, and removal of invasive *Procambarus clarkii*
- Lead invasion ecology education side project via remote video and in person instruction
- Manage the CRP dataset and collaborate with local scientists

Publications

13. **Huron, NA**, Helmus, MR. *in prep.* Predicting host associations of the invasive spotted lanternfly on trees across the USA.
12. **Huron, NA**, Hedges, SB, Helmus, MR. 2022. Detecting stabilizing, directional, and disruptive patterns of anthropogenic species loss with general models of nonrandom extinction. *bioRxiv*. doi:10.1101/2022.09.11.507476.
11. **Huron, NA**, Behm, JE, Helmus, MR. 2022. Paninvasion severity assessment of a U.S. grape pest to disrupt the global wine market. *Communications Biology*, 5:1–11. doi:10.1038/s42003-022-03580-w.
10. Warren, DL, Matzke, NJ, Cardillo, M, Baumgartner, J, Beaumont, LJ, Turelli, M, Glor, R, **Huron, NA**, Simões, M, Iglesias, TL, Piquet, JC, Dinnage, R. 2021. ENMTools 1.0: an R package for comparative ecological biogeography. *Ecography*, 44:504–11. doi:10.1111/ecog.05485.
9. Marhanka, EC, Watters, JL, **Huron, NA**, McMillin, SL, Winfrey, CC, Curtis, DJ, Davis, DR, Farkas, JK, Kerby, JL, Siler, CD. 2017. Detection of high prevalence of *Batrachochytrium dendrobatidis* in amphibians from southern Oklahoma, USA. *Herpetological Review*, 48:70–74. [Google Scholar](#).
8. Siler, CD, Davis, DR, Freitas, ES, **Huron, NA**, Geheber, AD, Watters, JL, Penrod, ML, Papeş, M, Amrein, A, Anwar, A, Cooper, D, Hein, T, Manning, A, Patel, N, Pinaroc, L, Diesmos, AC, Diesmos, ML, Oliveros, CH, Brown, RM. 2016. Description of a new species of Slender Skink of the *Brachymeles bonitae* Complex (Reptilia: Squamata: Scincidae) from the northern Philippines. *Zootaxa*, 4132:15–29. doi:10.11646/zootaxa.4132.1.2.
7. **Huron, NA**, Realubit, NDC, Cobb, KA, Brown, JC, Bergmann, P, Morinaga, G, Diesmos, AC, Diesmos, ML, Brown, RM, Siler, CD. 2016. Discovery of new island populations of the recently described False Geckos (*Pseudogekko pungkaypinit* and *Pseudogekko ditoy*): Conservation implications for the eastern Philippines. *Herpetological Review*, 47:1–4. [PDF](#).
6. Diesmos, AC, Waters, JL, **Huron, NA**, Davis, DR, Alcalá, AC, Crombie, RI, Afuang, LE, Gee-Das, G, Sison, RV, Sanguila, MB, Penrod, ML, Labonte, MJ, Davey, CS, Leone, EA, Diesmos, ML, Sy, EY, Welton, LJ, Brown, RM, Siler, CS. 2015. Amphibians of the Philippines, part I: checklist of the species. *Proceedings of the California Academy of Sciences*, 62:457–539. [Google Scholar](#).
5. Davis, DR, Sanguila, MB, Brown, JC, Brown, RM, Cobb, KA, Begmann, P, Morinaga, G, **Huron, NA**, Watters, JL, Siler, CD. 2015. Natural History Notes: *Pseudogekko ditoy* (Leyte Diminutive False Gecko) Morphology. *Herpetological Review*, 46:634.

4. Heitz, BB, Ellsworth, ED, **Huron, NA**, Geheber, AD, Siler, CD. 2015. Geographic Distribution: *Sonora semiannulata* (Variable Groundsnake). *Herpetological Review*, 46:577.
3. Sanguila, MB, Realubit, NDC, Diesmos, ML, Lorenzo II, A, De Layola, A, Brown, JC, Cobb, KA, Bergmann, P, Morinaga, G, Freitas, ES, **Huron, NA**, Watters, JL. 2015. Geographic Distribution: *Pelophryne lighti* (Mindanao Flathead Toad). *Herpetological Review*, 46:380.
2. Realubit, NDC, Diesmos, ML, Lorenzo II, A, De Layola, A, Diesmos, AC, Brown, JC, Brown, RM, Cobb, KA, Bergmann, P, Morinaga, G, Siler, CD, **Huron, NA**, Siler, JM. 2015. Geographic Distribution: *Draco Mindanensis* (Mindanao Flying Lizard). *Herpetological Review*, 46:216.
1. Davis, DR, Watters, JL, Köhler, G, Whitsett, C, **Huron, NA**, Brown, RM, Diesmos, AC, Siler, CD. 2015. Redescription of the rare Philippine slender gecko *Pseudogekko brevipes* (Reptilia: Squamata: Gekkonidae) and description of a new species. *Zootaxa*, 4020:357–374. [doi:10.11646/zootaxa.4020.2.7](https://doi.org/10.11646/zootaxa.4020.2.7).

Research Grants

- 2019 (\$76,890.00) *United States Department of Agriculture*: Predicting establishment and impact of spotted lanternfly on trees across the USA (Co-written with/submitted by M. Helmus)
- 2018 (\$300.00) *American Society of Ichthyologists and Herpetologists*: Stoye Award (Conservation)
- 2018 (\$225.00) *Temple University Biology Graduate Student Society*: Travel Award
- 2017 (\$150.00) *University of Oklahoma Graduate Student Senate*: Research Grant
- 2015 (\$562.50) *University of Oklahoma Graduate Student Senate*: Research Grant
- 2015 (\$200.00) *Society for the Study of Amphibians and Reptiles*: Henri C. Seibert Award (Ecology)
- 2015 (\$475.00) *University of Oklahoma Department of Biology*: L. G. Hill Zoology Excellence Fund

Honors, Awards, and Fellowships

- 2017–2022 Temple University Fellowship
- 2013 Selection for Who's Who in American Universities and Colleges
- 2012–2013 Blanche E. Seaver Faculty Scholarship
- 2011–2013 Pepperdine University Natural Science Award
- 2011–2012 Pepperdine University Seaver College Faculty/Staff Scholarship
- 2010 Seaver College Dean's List (2 Semesters)
- 2010 Phi Eta Sigma Honor Society Induction

Presentations

- 2020 Ecological Society of America Annual Meeting, Virtual Meeting (U.S.A.)
- 2018 Joint Meetings of Ichthyologists and Herpetologists, University of Rochester (Rochester, NY U.S.A.)
- 2018 Mid-Atlantic Ecological Society of America Conference, Rutgers University - Newark Campus (Newark, NJ U.S.A.)
- 2015 Society for the Study of Amphibians and Reptiles Meeting, University of Kansas (Lawrence, KS U.S.A.)
- 2013 Southern California Conference of Undergraduate Research (SCCUR), Whittier College (Whittier, CA U.S.A.)
- 2012 SCCUR, California State University Channel Islands (Camarillo, CA U.S.A.)
- 2011 SCCUR, Mt. San Antonio College (Walnut, CA U.S.A.)
- 2010 SCCUR, Pepperdine University (Malibu, CA U.S.A.)

Teaching Experience

- 2019 *Principles of Ecology*, Temple University (TA, 1 semester)
2018–2020 *Introduction to Organismal Biology*, Temple University (TA, 2 semesters)
2016 *Introductory Biology: Molecules, Cells, and Physiology*, University of Oklahoma (TA, 1 semester)
2016 *Field Herpetology*, University of Oklahoma (TA, 2 week summer course)
2015 *Human Physiology*, University of Oklahoma (TA, 1 semester)
2014 *Introductory Zoology*, University of Oklahoma (TA, 1 semester)
2012 *Introduction to Ecology*, Pepperdine University (Undergraduate TA, 1 semester)
2011–2012 *Keck Research Seminar*, Pepperdine University (Student Mentor, 2 semesters)
2010–2013 *Cellular Biology*, Pepperdine University (Undergraduate TA, 4 semesters)
2010–2011 *General Chemistry*, Pepperdine University (Tutor, 2 semesters)

Skills

Computer

- R statistics program (data visualization; function, script, and package dev.; R Markdown report writing)
- Geographic Information Systems software (ArcGIS and qGIS)
- Ecological Niche Modeling (e.g., Maxent, ensemble methods)
- Git and Github version control and integration
- Bash command line
- Python
- Zotero citation management
- Adobe creative suite (Intermediate: acrobat, illustrator, indesign, and photoshop)

Professional

- Management of undergraduate students
- Writing and critical peer-review of scientific literature

Lab and Fieldwork

- Amphibian/reptile field collection (destructive/non-destructive tissue sampling, specimen preparation, *Batrachochytrium dendrobatidis*/ranavirus swabbing, eDNA collection)
- Ecological survey techniques (e.g., Stream Health Biotic Index)
- Amphibian/reptile care and husbandry
- Lab safety and general genetic sequencing (tissue extraction, PCR, gel electrophoresis)

Language

- Proficient in conversational German
- Limited experience with conversational Tagalog

Professional Memberships

- 2018 Ecological Society of America
2015 Society for the Study of Amphibians and Reptiles (SSAR)
2015 The Herpetologists' League (HL)
2013 American Society of Ichthyologists and Herpetologists (ASIH)

Mentorship

Temple University, Undergraduate

2021–2022 Hajra Sohail
2020–2021 Rabbika Rafiu
2017–2019 Alexa Gordon
2017–2018 Thomas Thompson

Outreach and Service

- 2021– The Raleigh School
- Assist education and care of preschool students, especially for 'nature days'
 - Write articles as member of Community Matters Newsletter Committee
 - Participate in regular school workdays
- 2014–2017 Sam Noble Oklahoma Museum of Natural History
- Assist coordination of Department of Herpetology annual public events
 - Mentor undergraduate research volunteers in the Department of Herpetology
 - Identify collected specimens and interface with public during annual Oklahoma Bioblitz
- 2011– Sigma Phi Epsilon national social fraternity (alumnus)
- Member of the California Psi chapter
 - Vice President of Recruitment (2012 calendar year)
 - Semesterly trips to build homes in Tecate, Mexico (Club Dust)
 - Annual philanthropy to benefit YouthAIDS
- 2009–2013 Pepperdine University GreenTeam
- Member and volunteer
 - Helped initiate "Trayless Tuesday" to increase campus-wide environmental awareness

References available upon request.