

## CURRICULUM VITAE

David W. Kikuchi

2 August 2023

Oregon State University  
Department of Integrative Biology

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### EDUCATION

*University of North Carolina • Chapel Hill, NC*  
2013                      Ph. D. in Biology

*University of Illinois • Urbana, IL*  
2006                      BSc *cum laude*: majors in Biology, Chemistry and Creative Writing  
Thesis: High Distinction

### APPOINTMENTS

*Oregon State University • Corvallis, OR*  
Jan 2023 – pres        Assistant Professor

### TRAINING

*Universität Bielefeld • Bielefeld, Germany*  
2020 – 2022            Postdoctoral Researcher  
and Visiting Postdoctoral Research Associate in Robert D. Holt's lab at  
University of Florida, Gainesville

*Wissenschaftskolleg zu Berlin (Institute for Advanced Study) • Berlin, Germany*  
2019-2020            Research Fellow

*University of Arizona • Tucson, AZ*  
2016 – 2019            Postdoctoral Fellow

*Pima Community College • Tucson, AZ*  
2017                    Visiting faculty as part of Postdoctoral Excellence in Research and  
Teaching (PERT) training

*Carleton University • Ottawa, ON | University of Jyväskylä • Jyväskylä, Finland*  
2014 – 2015            NSF Postdoctoral Fellow

### HONORS AND AWARDS

2019-2020        Fellowship at the Wissenschaftskolleg zu Berlin (Institute for Advanced Study in  
Berlin)

2010-13            NSF Graduate Research Fellowship

2008-13            Caroline H. and Thomas S. Royster, Jr. Fellowship (5 year fellowship)

2007-08	Fulbright Fellowship – Peru
2006	High Distinction for thesis
2006	Integrative Biology Distinction Award

## RESEARCH FUNDING

2021	Australian Research Council: “Why are warning colours in animals so rare?” CI Marie Herberstein, CI Linda Beaumont, PI Hannah Rowland, PI Johanna Mappes, <b>PI David Kikuchi</b> . (AU\$400,000)
2019-2020	Fellowship at the Institute for Advanced Study in Berlin (€44,000)
2017	Center for Insect Science (University of Arizona) Seed Grant for "Integrative Education Advising in Higher Education" (\$10,000; Mays Imad as co-PI)
2014-15	NSF Postdoctoral Fellowship (\$140,000)
2011-13	NSF Doctoral Dissertation Improvement Grant (\$15,000)
2010-13	NSF Graduate Research Fellowship (\$90,000)
2011	SSE Outreach Award (\$800; Segundo Crespo as co-PI)
2010	Sigma Xi Grant-in-Aid-of-Research (\$500)
2009	Theodore Roosevelt Memorial Grant (\$1000)
2007-08	Fulbright Fellowship – Peru (\$14,013.20)
2004-05	Undergraduate Mentoring in Environmental Biology Fellow (\$5000)

## MEDIA

- Work featured on the series “Attack and Defend” (2015) available on Amazon or Paramount: <https://www.smithsonianchannel.com/details/series/attack-and-defend/season-1>
- Research articles covered by **ScienceNow**, **La Recherche**

## PUBLICATIONS

(\*undergraduate co-author, ‡graduate student co-author, †corresponding author, ‡co-lead authors, OA = Open Access)

## PEER-REVIEWED

- 33. Kikuchi, D. W.<sup>†‡</sup>**, Allen, W. L., K. Arbuckle. T. G. Aubier, S. Baidya, E. S. Briolat, E. R. Burdfield-Steel, K. L. Cheney, K. Daňková<sup>‡</sup>, M. Elias, L. Hämäläinen, M. E. Herberstein, T. J. Hossie, M. Joron, K. Kunte, B. C. Leavell<sup>‡</sup>, C. Lindstedt, U. Lorigou-Chevalier, M. McClure, C. F. McLellan, I. Medina, V. Nawge<sup>‡</sup>, E. Páez<sup>‡</sup>, A. Pal, S. Pekár, O. Penacchio, J. Raška, T. Reader, B. Rojas, K. H. Rönkä, D. Rößler, C. Rowe, H. M. Rowland, A. Roy<sup>‡</sup>, K. A. Schaal<sup>‡</sup>, T. N. Sherratt, J. Skelhorn, H. R. Smart<sup>‡</sup>, T. Stankowich, A. M. Stefan<sup>‡</sup>, K. Summers, C. H. Taylor<sup>‡</sup>, R. Thorogood, K. Umbers, A. E. Winters, J. Yeager, and A. Exnerová<sup>‡</sup>. *accepted*. The evolution and ecology of multiple antipredator defences. *Journal of Evolutionary Biology* 36:975-991

32. Heerwig, O. T. <sup>\*,†</sup>, S. M. R. Jain-Schlaepfer<sup>\*,‡</sup>, T. N. Sherratt, and **D. W. Kikuchi**<sup>†</sup>. *in press*. Effects of prey lethality and innate aversion on mimicry complexes. *Evolutionary Ecology*
- Featured paper**
31. **Kikuchi, D. W.** <sup>†</sup> and M. W. Simon. 2023. Socially transmitted innovations in dynamic predator-prey systems. *The American Naturalist* 201:895-907
30. **Kikuchi, D. W.** <sup>†</sup>, M. Barfield, M. E. Herberstein, J. Mappes, and R. D. Holt. 2022. The effect of predator population dynamics on Batesian mimicry complexes. *The American Naturalist* 199:406-419
29. **Kikuchi, D. W.** <sup>†</sup> and K. Reinhold. 2021. Modeling migration in birds: competition's role in maintaining individual variation. *Proceedings of the Royal Society B: Biological Sciences* 288:20210323
28. **Kikuchi, D. W.** <sup>†</sup>, M. E. Herberstein, M. Barfield, R. D. Holt, and J. Mappes. 2021. Why aren't warning signals everywhere? On the prevalence of aposematism and mimicry in communities. *Biological Reviews* 96:2446–2460
27. **Kikuchi, D. W.** <sup>†,‡</sup>, S. J. Waldron<sup>‡</sup>, J. K. Valkonen, S. Dobler, and J. Mappes. 2020. Biased predation promotes convergence yet maintains diversity within Müllerian mimicry rings. *Journal of Evolutionary Biology* 33:887-898 [OA]
26. Russell, A. L. <sup>†</sup>, **D. W. Kikuchi**, N. W. Giebink<sup>\*</sup>, and D. R. Papaj. 2020. Keeping them honest: constraints on signal detection limit cheating in a system of intersexual floral mimicry. *Philosophical Transactions of the Royal Society B* 375:20190469
25. McLean, J. D. <sup>\*,†</sup>, G. Cassis, G. Giribet, **D. W. Kikuchi**, and M. E. Herberstein. 2019. Insincere flattery? Understanding the evolution of imperfect mimicry. *Quarterly Review of Biology* 94:395-415
24. Akcali, C. K. <sup>\*,†</sup>, H. A. Pérez Mendoza, **D. W. Kikuchi**, and D. W. Pfennig. 2019. The role of multiple models in the evolution of imprecise mimicry: an experimental test. *Proceedings of the Royal Society B* 298:20191519
23. **Kikuchi, D. W.** <sup>†</sup>, A. Dornhaus, V. Gopeechund<sup>\*</sup>, and T. N. Sherratt. 2019. Signal categorization by foraging animals depends on ecological diversity. *eLife* 8:e43965 [OA]
22. Akcali, C. K. <sup>\*,†</sup>, H. A. Pérez Mendoza, D. Salazar-Valenzuela, **D. W. Kikuchi**, J. M. Guayasamin, and D. W. Pfennig. 2019. Evaluating the utility of camera traps in field studies of predation. *PeerJ* 7:e6487 [OA]
21. **Kikuchi, D. W.** <sup>†</sup>, G. H. Kattan, and K. C. Navarro-Vélez<sup>\*</sup>. 2019. A continent-scale test of multiple hypotheses on the abundances of Neotropical birds. *Oikos* 128:235-244
20. **Kikuchi, D. W.** <sup>†</sup> and A. Dornhaus. 2018. How cognitive biases select for imperfect mimicry: a study of asymmetry in learning with bumblebees. *Animal Behaviour* 144:125-134
19. Akcali, C. K. <sup>\*,†</sup>, **D. W. Kikuchi**, and D. W. Pfennig. 2018. Coevolutionary arms races in Batesian mimicry? A test of the chase-away hypothesis. *Biological Journal of the Linnean Society* 124:668-676 [OA]
18. Archis, J.<sup>\*</sup>, C. K. Akcali<sup>\*</sup>, B. L. Stuart, **D. W. Kikuchi**, and A. C. Chunco<sup>†</sup>. 2018. Is the future already here? The impact of climate change on the distribution of the eastern coral snake (*Micrurus fulvius*). *PeerJ* 6:e4647 [OA]

17. **Kikuchi, D. W.** †, G. H. Kattan, C. Murcia, and F. Montealegre. 2017. Endless forms most camouflaged: katydids that masquerade as moss. *Ecology* 98:2479-2481 [OA]
16. **Kikuchi, D. W.** †, J. Mappes, T. N. Sherratt, and J. K. Valkonen. 2016. Selection for multicomponent mimicry: equal feature salience and variation in preferred traits. *Behavioral Ecology* 27:1515-1521 [OA]
15. Kattan, G. H. †, M. C. Muñoz\*, and **D. W. Kikuchi**. 2016. Population densities of curassows, guans, and chachalacas (Cracidae): effects of body size, habitat, season, and hunting. *The Condor: Ornithological Applications* 118:24-32
14. Sherratt, T. N. †, E. Whissell\*, R. J. Webster, and **D. W. Kikuchi**. 2015. Hierarchical overshadowing of stimuli and its role in mimicry evolution. *Animal Behavior* 108:73-79
13. **Kikuchi, D. W.** † and T. N. Sherratt. 2015. Costs of learning and the evolution of mimetic signals. *American Naturalist* 186:321-332
12. **Kikuchi, D. W.** †, G. Malick\*, R. J. Webster, E. Whissell\*, and T. N. Sherratt. 2015. An empirical test of two-dimensional signal detection theory applied to Batesian mimicry. *Behavioral Ecology* 26:1226-1235
11. Pfennig, D. W. †, C. K. Akcali\*, and **D. W. Kikuchi**. 2015. Mimicry promotes pre- and post-mating isolation in a snake mimicry complex. *Evolution* 69:1085-1090
10. **Kikuchi, D. W.** †, B. W. Seymoure\*, and D. W. Pfennig. 2014. Mimicry's palette: widespread use of conserved pigments in the aposematic signals of snakes. *Evolution & Development* 16:61-67  
**Cover article**
9. Titcomb, G. C.\* †, **D. W. Kikuchi**, and D. W. Pfennig. 2014. More than mimicry? Evaluating scope for flicker-fusion as a defensive strategy in coral snake mimics. *Current Zoology* 60:123-130 [OA]
8. **Kikuchi, D. W.** † and D. W. Pfennig. 2013. Imperfect mimicry and the limits of natural selection. *Quarterly Review of Biology* 88:297-315
7. Pfennig, D. W. † and **D. W. Kikuchi**. 2012. Competition and the evolution of imperfect mimicry. *Current Zoology* 58:608-619 [OA]
6. **Kikuchi, D. W.** † and D. W. Pfennig. 2012. A Batesian model and its mimic share color production mechanisms. *Current Zoology* 58:658-667 [OA]
5. **Kikuchi, D. W.** † and D. W. Pfennig. 2012. Mimicry. In Oxford Bibliographies Online: Ecology. Ed. David Gibson. New York: Oxford University Press.
4. **Kikuchi, D. W.** † and D. W. Pfennig. 2010. Predator cognition permits imperfect coral snake mimicry. *American Naturalist* 176:830-834  
**Subject of an article in ScienceNow ("Snakes lie to save their skin")**  
**Subject of an article in La Recherche ("Mentir mais pas trop")**
3. **Kikuchi, D. W.** † and D. W. Pfennig. 2010. High model abundance may permit the gradual evolution of Batesian mimicry: an experimental test. *Proceedings of the Royal Society B* 277:1041-1048 [OA]

2. **Kikuchi, D. W.** † 2009. Terrestrial and understory insectivorous birds of a Peruvian cloud forest: species richness, abundance, density, territory size and biomass. *Journal of Tropical Ecology* 25:523-529
1. **Kikuchi, D. W.** †, E. Lasso, J. W. Dalling, and N. Nur. 2007. Pollinators and pollen dispersal of *Piper dilatatum* (Piperaceae) on Barro Colorado Island, Panama. *Journal of Tropical Ecology* 23:603-606

## OTHER PUBLICATIONS

- Exnerová, A., C. Kang, H. M. Rowland, **D. W. Kikuchi**. Evolution of multiple prey defences: from predator cognition to community ecology. *Journal of Evolutionary Biology* 36:961-966
- Kikuchi, D. W.** 2020. Eyes in the dark. *Aeon*: <https://aeon.co/essays/how-communication-between-predator-and-prey-shapes-evolution>
- Pfennig, D. W. and **D. W. Kikuchi**. 2012. Life imperfectly imitates life. *Nature* 483:410-411  
**Invited News & Views article**
- Kikuchi, D. W.** 2007. Population trends from counts of migrating raptors at Bake Oven Knob, Pennsylvania, 1992-2005. *American Hawkwatcher* 32:8-15

## MENTORSHIP

### MASTER'S STUDENTS (PRIMARY ADVISOR)

Alice Welch	(MSc. at OSU from 2023 – present)
Oliver Heerwig	(MSc. from University of Bielefeld, Germany 2021)

### DOCTORAL DISSERTATION COMMITTEES

Christopher Akcali	(Ph. D. from UNC-Chapel Hill 2019)
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### MASTER'S THESIS COMMITTEES

Arden Smith	(2023 – present)
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### EXTERNAL THESIS EXAMINATION

Donald James McLean	(MSc. from Macquarie University, Australia 2018)
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### UNDERGRADUATE STUDENTS

§ denotes Honors student

Kimberly Navarro-Vélez	2015-2021 – PhD student & Fulbright Fellow at Cornell University
Jak Kearsley	2018-2021
Andrea Mason	2016-19 – PhD student at Brown University
Mohammad Safdar	2019
Tristan Meyer Owens	2019
Steven Hsu	2016-17
Maddie Birr	2016
Shannon McGlaughlin	2016

Sofia Jain-Schlaepfer §	2015 – MSc from James Cook University
Yinmin Ou §	2015
Bradley Allf §	2012-2013 – postdoc at NCSU
Georgia Titcomb §	2012-2013 – postdoc at UC Santa Barbara
Townsend Haynes	2012
Antonio Serrato	2011 – postdoc at Harvard
Saige Clark	2009-2010
Allison Bailey	2010
Wendell Juliantius	2010
Elizabeth Christenson	2009
Yong Choi	2009
Rebecca Searles	2009
Ge Zhang	2009

## TEACHING

### *New Instructional Materials*

- 2021 Critical Thinking Module: Part of “Teaching Critical Thinking & Logical Reasoning in Undergraduate STEM Courses” (funded by NSF RCN-UBE #2018270 to Mays Imad)

### *Visiting Faculty as part of PERT training program*

- 2017 Bio 100: Introductory Biology for Non-majors (Pima Community College)

### *Guest Lectures*

- 2023 IB 594: Community Ecology (OSU)  
 2016 Ecol 487/587: Animal Behavior (University of Arizona)  
 2014 BIOL 3612: Computational Methods in Ecology & Evolution (Carleton University)  
 BIOL 3609: Evolutionary Concepts (Carleton University)  
 2013 BIOL 514: Evolution and Development (UNC-Chapel Hill)

### *Teaching Assistantships*

- 2010 BIO 471: Evolutionary Mechanisms (UNC-Chapel Hill)  
 2009 BIO 201: Introduction to Evolution and Ecology (UNC-Chapel Hill)

## PEDAGOGICAL TRAINING

- 2021 “Teaching Critical Thinking in STEM” (Virtual Conference)  
 “Lessons from Online Teaching and Learning Animal Behavior” (ABS Education Committee Workshop)

- 2018 “Designing Classroom Environments that Facilitate Student Learning and the Development of Discipline Fluency” workshop (University of Arizona)
- 2018 “Addressing Implicit Bias in the Academy” workshop (University of Arizona)
- 2017 PERT Pedagogy Workshop on Active Learning in the Classroom
- 2017 Institutional Research and Academic Career Development Awards Conference 2017, Birmingham, AL
- 2016 Institutional Research and Academic Career Development Awards Conference 2016, Tucson, AZ
- 2014 “Experiencing Evolution” professional development workshop at Evolution 2014, Raleigh, NC
- 2012 Completed course, “Entering Advising Curriculum” to train academics in mentorship. Sponsored by WPST and HHMI

## PROFESSIONAL SERVICE

### EDITORIAL WORK

- 2022 Guest editor at *Journal of Evolutionary Biology* for special issue on “Evolution of multiple prey defences”

### SYMPOSIA ORGANIZED

- 2021 Aug 23-27 ESEB Satellite Symposium, “Evolution of Multiple Prey Defences”, with Alice Exnerová (Charles University, Prague)

### GRANT REVIEW

- Czech Science Foundation (2020)
- Swiss National Science Foundation (2020)
- US Student Fulbright applications at University of Illinois (2020)
- ABS Student Research Grants (2015 – 2018, 2021)

### PEER REVIEW OF MANUSCRIPTS

Reviewer for *Acta Herpetologica*, *The American Naturalist*, *Animal Behavior*, *Animal Cognition*, *Behavioral Ecology*, *Behavioral Ecology and Sociobiology*, *Biological Journal of the Linnean Society*, *Biotropica*, *BMC Zoology*, *Current Zoology*, *Ecology*, *Ecology Letters*, *Ecology and Evolution*, *eLife*, *Ethology*, *Evolution*, *Evolutionary Ecology*, *Functional Ecology*, *Global Ecology and Biogeography*, *Journal of Evolutionary Biology*, *Journal of Experimental Biology*, *Journal of Animal Ecology*, *Journal of Herpetology*, *Journal of Natural History*, *Journal of Theoretical Biology*, *Journal of Zoology*, *Marine Ecology Progress Series*, *Nature Communications*, *Oecologia*, *Oikos*, *Organisms Diversity and Evolution*, *PeerJ*, *Phyllomedusa*, *PLoS Computational Biology*, *PLoS One*, *Proceedings of the Royal Society-B*, *Scientific Reports*, *The Southwestern Naturalist*, *Trends in Ecology and Evolution (TREE)*, *Tropical Conservation Science*, *Western North American Naturalist*

## MEETINGS, TALKS, AND PRESENTATIONS

### INVITED RESEARCH SEMINARS

- 2023 PEEC Seminar Series. University of Illinois, Urbana-Champaign, Illinois
- 2022 Integrative Biology. Oregon State University, Corvallis, Oregon
- 2021 Noon Seminar Series, Department of Biology. Indiana University, Bloomington, Indiana
- 2021 Institute of Zoology. University of Veterinary Medicine Hanover. Hanover, Germany
- 2020 Online Research Seminar. University of Florida, Gainesville, Florida
- 2020 Behavior and Evolution Seminar Series. Universität Bielefeld. Bielefeld, Germany
- 2020 Biology Department. Universität Hamburg. Hamburg, Germany
- 2019 Neurobiology and Behavior. Cornell University. Ithaca, New York
- 2019 Ecology, Evolution, and Marine Biology. University of California-Santa Barbara, Santa Barbara, California
- 2017 Department of Biology. Universidad Javeriana. Cali, Colombia (in Spanish)
- 2017 Introductory Statistics: Department of Biology. Universidad Javeriana. Cali, Colombia (in Spanish)
- 2013 North Carolina Congress of Herpetology. Asheboro, North Carolina
- 2011 UNC Biology Department Symposium. Chapel Hill, North Carolina (Speaker elected by the graduate student body to represent the department)
- 2010 Behavioral, Population, and Community Ecology Seminar, Ecology Program, Duke University. Durham, North Carolina
- 2010 Research in Progress Seminar, Department of Biology, East Carolina University. Greenville, North Carolina

### TALKS OR POSTERS AT MAJOR SOCIETY MEETINGS

\* indicates an international society meeting, other meetings are national-level

**bold** indicates that a talk was given when there was competition for slots

- 2023 ABS 2023, Portland, OR
- 2022 \* **ISBE 2022, Stockholm, Sweden**
- \* **ESEB 2022, Prague, Czech Republic**
- 2019 ABS 2019, Chicago, IL
- 2019 \* ESEB 2019, Turku, Finland**
- 2018 \* ISBE 2018, Minneapolis, MN**
- 2018 ABS 2018, Milwaukee, WI



- 2017 Evolution 2017, Portland, OR
- 2016 Evolution 2016, Austin, TX
- 2016 ABS 2016, Columbia, MO
- 2015 \* Evolution 2015, Guarujá, Brazil
- 2014 ABS 2014, Princeton, New Jersey
- 2014 \* ISBE 2014, New York, New York
- 2014 Evolution 2014, Raleigh, North Carolina
- 2013 \* IEC 2013, Newcastle, England
- 2012 \* Evolution 2012, Ottawa, Canada
- 2012 SICB 2012, Charleston, South Carolina
- 2011 \* ESEB 2011, Tübingen, Germany
- 2010 Evolution 2010, Portland, Oregon
- 2008 VII Congreso Nacional de Ornitología, Piura, Peru
- 2008 ESA 2008, Milwaukee, WI

#### OTHER TALKS GIVEN (ONLY TALKS SINCE 2019 LISTED)

- 2022 Research Seminar. MathBio Seminar Series, Oregon State University, Corvallis, OR
- 2022 Research Seminar. CRC NC<sup>3</sup> (Niche Choice, Niche Conformance, Niche Construction) Retreat, Hoherdskopf, Germany
- 2021 Research Seminar. CRC NC<sup>3</sup> (Niche Choice, Niche Conformance, Niche Construction) Retreat, Helgoland, Germany
- 2021 Online Research Seminar. CRC NC<sup>3</sup> Seminar Series, Bielefeld, Germany
- 2021 Research Seminar. FSPM<sup>2</sup> (Mathematical Modeling) Meeting, Bielefeld, Germany
- 2020 "Sokal Revisited: The Grievance Studies Affair." Fruitful Frictions Seminar. Institute for Advanced Study, Berlin
- 2019 Fellow's Colloquium. Institute for Advanced Study, Berlin, Germany
- 2019 Research Seminar. University of Arizona, Tucson, AZ

#### OUTREACH

- 2018 Tour for Arizona Science, Engineering, and Math Scholars (a program for underrepresented minority undergraduates at University of Arizona)
- 2018 Volunteer at Science Night, Desert Shadows Middle School, Nogales, AZ

- 2016 Ecology and Evolutionary Biology Dept. Wikipedia Edit-a-thon, 2<sup>nd</sup> Place Prize for editing pages in the category “Evolutionary Biology” (\$50)
- 2016 Volunteer for University of Arizona “Insect Fest” outreach event
- 2012 Outreach presentation at North Carolina State Museum for Darwin Day
- 2012 Poster contributed to UNC “Life as Art” festival
- 2011 Developed and implemented the outreach workshop, “Biodiversity and the Dry Forest,” for secondary school students in Peru (with Segundo Israel Crespo More)

## SOCIETY MEMBERSHIPS

- American Society of Naturalists (ASN; member since 2018)
- Animal Behavior Society (ABS; since 2009)
- European Society for the Study of Evolutionary Biology (ESEB; since 2021)
- International Society for Behavioral Ecology (ISBE; since 2020)
- Society for the Study of Evolution (SSE; since 2010)

## LANGUAGES

- Spanish (advanced spoken and written)
- German (intermediate spoken and written)