

CURRICULUM VITAE

David W. Kikuchi

3 January 2024

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, PI David Kikuchi . (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)

36. Reinhold, K. †, L. Eigentler, and **D. W. Kikuchi**. *in revision*. Evolution of individual variation in a costly competitive trait: a theoretical analysis.
35. M. Imad†, D. Lippincott, and **Kikuchi, D.W.** *in revision*. Thinking critically about imposter syndrome: an antidote to conspiracy theories.

PEER-REVIEWED

34. **Kikuchi, D. W.** *accepted*. Who innovates? Abundance of novel and familiar food changes which animals are most persistent. *Proceedings of the Royal Society B: Biological Sciences*

33. Kikuchi, D. W.^{†‡}, Allen, W. L., K. Arbuckle, T. G. Aubier, S. Baidya, E. S. Briolat, E. R. Burdfield-Steel, K. L. Cheney, K. Daňková^{*}, M. Elias, L. Hämäläinen, M. E. Herberstein, T. J. Hossie, M. Joron, K. Kunte, B. C. Leavell^{*}, C. Lindstedt, U. Lorigou-Chevalier, M. McClure, C. F. McLellan, I. Medina, V. Nawge^{*}, E. Páez^{*}, A. Pal, S. Pekár, O. Penacchio, J. Raška, T. Reader, B. Rojas, K. H. Rönkä, D. Rößler, C. Rowe, H. M. Rowland, A. Roy^{*}, K. A. Schaal^{*}, T. N. Sherratt, J. Skelhorn, H. R. Smart^{*}, T. Stankowich, A. M. Stefan^{*}, K. Summers, C. H. Taylor^{*}, R. Thorogood, K. Umbers, A. E. Winters, J. Yeager, and A. Exnerová[‡]. 2023. The evolution and ecology of multiple antipredator defences. *Journal of Evolutionary Biology* 36:975-991

32. Heerwig, O. T.[‡], S. M. R. Jain-Schlaepfer^{*‡}, T. N. Sherratt, and **D. W. Kikuchi**[†]. 2023. Effects of prey lethality and innate aversion on mimicry complexes. *Evolutionary Ecology* 37:709-720

Featured paper

31. Kikuchi, D. W.[†] and M. W. Simon. 2023. Socially transmitted innovations in dynamic predator-prey systems. *The American Naturalist* 201:895-907

30. Kikuchi, D. W.[†], 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.[†] 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.[†], 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.^{†‡}, S. J. Waldron[‡], 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.[†], **D. W. Kikuchi**, N. W. Giebink^{*}, 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.^{‡†}, 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.^{‡†}, 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.[†], A. Dornhaus, V. Gopeechund^{*}, and T. N. Sherratt. 2019. Signal categorization by foraging animals depends on ecological diversity. *eLife* 8:e43965 [OA]

22. Akcali, C. K.^{‡†}, 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.** †, G. H. Kattan, and K. C. Navarro-Vélez*. 2019. A continent-scale test of multiple hypotheses on the abundances of Neotropical birds. *Oikos* 128:235-244
 20. **Kikuchi, D. W.** † 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.* †, **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.* †, C. K. Akcali*, B. L. Stuart, **D. W. Kikuchi**, and A. C. Chunco†. 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: katydid 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

POSTDOCS

Margaret Simon	2024
Bradley Allf	2023

MASTER'S STUDENTS (PRIMARY ADVISOR)

Alice Welch	2023 – present
Oliver Heerwig	2021

DOCTORAL DISSERTATION COMMITTEES

Delaney Chabot	2023 – present
Dorothy Zahor	2023 – present
Harrison Bell	2023 – present Graduate Council Representative
Lauren Kashiwabara	2023 – present Graduate Council Representative
Christopher Akcali	2019

MASTER'S THESIS COMMITTEES

Austin Cook	2023 – present
Arden Smith	2023 – present
Olivia Boisen	2023 Graduate Council Representative

EXTERNAL THESIS EXAMINATION

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

§ denotes Honors student

Jayshaun Talbert	2024 – present
Amy Wright	2024 – present
Cierra Freese	2024 – present
Lauren Smith	2024 – present
Emily Crowley	2024 – present
Simon Collins	2024 – present
Simone Sienkiewicz	2024 – present
Peter McKinney §	2023 – present
Amanda Antell	2023
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

TEACHING*Courses*

2023 IB 599: Behavioral Ecology (OSU IB graduate curriculum)

Z 350: Animal Behavior (eCampus)

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)

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)

TRAINING

2023 Faculty Success Program (sponsored by OSU CoS)

"Unconscious bias and diversity in research" workshop (Behaviour 2023 meeting in Bielefeld, Germany)

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

- 2022-2023 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

- Human Frontiers in Science Program (2023)
- 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 School of Biological Sciences. Washington State University, Vancouver, Washington
- 2023 Biology Department. Case Western University, Cleveland, Ohio
- 2023 PEEC. University of Illinois, Urbana-Champaign, Illinois

- 2022 Integrative Biology. Oregon State University, Corvallis, Oregon
- 2021 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
 - * **Behaviour 2023, Bielefeld, Germany**
- 2022 * **ISBE 2022, Stockholm, Sweden**
 - * **ESEB 2022, Prague, Czech Republic**
- 2019 ABS 2019, Chicago, IL
 - * **ESEB 2019, Turku, Finland**
 - * **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)

- 2023 Research Seminar. MathBio Seminar Series, Oregon State University, Corvallis, OR
- 2022 Research Seminar. CRC NC³ (Niche Choice, Niche Conformance, Niche Construction) Retreat, Hoherdskopf, Germany
- 2021 Research Seminar. CRC NC³ (Niche Choice, Niche Conformance, Niche Construction) Retreat, Helgoland, Germany
- 2021 Online Research Seminar. CRC NC³ Seminar Series, Bielefeld, Germany
- 2021 Research Seminar. FSPM² (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, 2nd 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)