KYLE E. COBLENTZ

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ACADEMIC POSITIONS

Senior Research Associate October 2023-Present
School of Biological Sciences
University of Nebraska–Lincoln
Advisor: Dr. John DeLong

Postdoctoral Research Associate November 2018-October 2023
School of Biological Sciences
University of Nebraska–Lincoln
Advisor: Dr. John DeLong

EDUCATION

Oregon State University December 2018
PhD in Zoology
Graduate Minor in Statistics
Advisor: Dr. Mark Novak

Tulane University May 2013
B.S. *summa cum laude* with Honors in Ecology and Evolutionary Biology
Minor in Chemistry
Advisor: Dr. Caz Taylor

PUBLICATIONS

Google Scholar Data (accessed 7.4.2024)
Citations: 633, h-index: 11, i10-index: 11

Published

19. Figueroa, A.[†], **K.E. Coblentz**, A. Herrera, L. Cuni, J. Villate, P. Jordano, S. Whitfield, M.S. Araujo. *Accepted*. Spatiotemporal variation in ecological opportunity drives individual diet specialization in Miami's gopher tortoises. *Food Webs*. SSRN preprint: https://dx.doi.org/10.2139/ssrn.4822385

18. **Coblentz, K.E.**, L.A. Treidel, F.P. Biagioli[†], C. Fragel[†], A.E. Johnson, D.D. Thilakarathne[†], L. Yang[†], J.P. DeLong. *Accepted*. A framework for understanding climate change impacts through non-compensatory intra- and interspecific climate change responses. *Global Change Biology*. Authorea preprint: https://doi.org/10.22541/au.169470726.65740114/v1

17. DeLong, J.P., **K.E. Coblentz**, S.F. Uiterwaal[†], C. Akwani*, M. Salsbery[†]. Temperature and predators as interactive drivers of community properties. 2023. *Ecology & Evolution*. 13:e10665. https://doi.org/10.1002/ece3.10665

16. **Coblentz, K.E.**, J.P. DeLong. 2023. Ecological boundaries and constraints on viable eco-evolutionary pathways. *Oikos*. e09893. https://doi.org/10.1111/oik.0.9893

15. **Coblentz, K.E.**, M. Novak, J.P DeLong. 2023. Predator feeding rates may often be unsaturated under typical prey densities. *Ecology Letters*. 26:302-312. https://doi.org/10.1111/ele.14151

14. **Coblentz, K.E.**, A. Squires*, S. Uiterwaal†, and J.P. DeLong. 2022. Quantifying predator functional responses under field conditions reveals interactive effects of temperature and interference with sex and stage. *Journal of Animal Ecology*. 91:1431-1443. https://doi.org/10.1111/1365-2656.13703

13. DeLong, J.P., and **K.E. Coblentz**. 2022. Prey diversity constrains the adaptive potential of predator foraging traits. *Oikos*. 2022:e08800. https://doi.org/10.1111/oik.08800

12. Grainger, T.N., A. Senthilnathan, P. Ke, M.A. Barbour, N.T. Jones, J.P. DeLong, S.P. Otto, M.I. O'Connor, **K.E. Coblentz**, N. Goel, J. Sakarchi, M.M. Szojka, J.M. Levine, R.M. Germain. 2022. An empiricist's guide to using ecological theory. *The American Naturalist*. 199:1-20. https://doi.org/10.1086/717206

11. **Coblentz, K.E.**, S. Merhoff*, M. Novak. 2021. Quantifying the effects of intraspecific variation on predator feeding rates through nonlinear averaging. *Functional Ecology*. 35:1560-1571. https://doi.org/10.1111/1365-2435.13802

10. **Coblentz, K.E.**, J.P. DeLong. 2021. Estimating predator functional responses using the times between prey captures. *Ecology*. 102:e03307. https://doi-org/10.1002/ecy.3307

9. **Coblentz, K.E.**, J.P. DeLong. 2020. Predator-dependent functional responses alter the coexistence and indirect effects among prey that share a predator. *Oikos*. 129:1404-1414. https://doi.org/10.1111/oik.07309

8. **Coblentz, K.E.**. 2019. Relative prey abundance and predator preference predict individual diet variation in prey switching experiments. *Ecology*. 101:e02911. https://doi.org/10.1002/ecy.2911

7. Barner, A.K., **K.E. Coblentz**, S. Hacker, B.A. Menge. 2018. Fundamental contradictions among observational and experimental estimates of non-trophic species interactions. *Ecology*. 99:557–566. https://doi.org/10.1002/ecy.2133

6. Novak, M., C. Wolf, **K.E. Coblentz**, I. Shepard*. 2017. Quantifying predator dependence in the functional response of generalist predators. *Ecology Letters*. 20:761–769. https:/doi.org/10.1111/ele.12777

5. **Coblentz, K.E.**, A. Rosenblatt, M. Novak. 2017. The application of Bayesian hierarchical models for quantifying diet specialization. *Ecology*. 98:1535–1547. https://doi.org/10.1002/ecy.1802

4. Hughes, B.B. [and 35 others including **K.E. Coblentz**]. 2017. Long-term studies contribute disproportionately to ecology and policy. *BioScience*. 67:271–281. https://doi.org/10.1093/biosci/biw185

3. **Coblentz, K.E.**, J.R. Henkel, B.J. Sigel, C.M. Taylor. 2015. Influence of sediment characteristics on the composition of soft-sediment intertidal communities in the northern Gulf of Mexico. *PeerJ*. 3:e1014. https://doi.org/10.7717/peerj.1014.

2. **Coblentz, K.E.**, J.R. Henkel, B.J. Sigel, C.M. Taylor. 2015. Technical Note: The use of laser diffraction particle size analyzers for inference on infauna-sediment relationships. *Estuaries and Coasts*. 38:699-702. https://doi.org/10.1007/s12237-014-9837-y

1. **Coblentz, K.E.**, S.A. Van Bael. 2013. Field colonies of leaf-cutting ants select plant materials containing low abundances of endophytic fungi. *Ecosphere*. 4:art66. https://doi.org/10.1890/ES13-00012.1

Drafts of 'In Review' and 'In Preparation' manuscripts are available on request.

In Review

Coblentz, K.E., A. Dalal, Q. Yang†, M. Incarnato†, D. Thilakarathne†, F. Biagioli†, C. Shaw*, R. Wilson*, K.L. Montooth, J.P. Delong. *In Revision.* Heritable intraspecific variation in prey size and movement interact to determine predation risk and potential natural selection. *Functional Ecology.* bioRxiv preprint: https://doi.org/10.1101/2024.01.11.575285

DeLong J.P., **K.E. Coblentz**, F.A. La Sorte, S.F. Uiterwaal. The global diet diversity spectrum and anti-specialization in avian apex predators.

Uiterwaal, S.F., **K.E. Coblentz**, F.A. La Sorte, J.P. DeLong. Insights from 100 years of raptor diet research: Taxanomic and geographic gaps remain as research on raptor diets slow.

Novak, M., **K.E. Coblentz**, J.P. DeLong. In defense of the Type I functional response: The frequency and population-dynamic effects of feeding on multiple prey at a time. bioRxiv preprint: https://doi.org/10.1101/2024.05.14.594210

In Preparation

Coblentz, K.E., M. Novak, J.P. DeLong. Simple, universal rules predict trophic interaction strengths.

* Undergraduate co-author; † Graduate student co-author

MAJOR GRANTS AND FELLOWSHIPS

National Science Foundation Doctoral Dissertation Improvement Grant 2017

National Science Foundation Graduate Research Fellowship 2013

Oregon State University Provost's Distinguished Graduate Scholar Fellowship 2013

OTHER GRANTS AND FELLOWSHIPS

University of Nebraska Postdoc Travel Award 2022

Oregon State University Graduate Student Travel Award 2017

Oregon State Zoology Research Fund 2017

Pacific Northwest Shell Collector's Club Grant 2015

Mamie Markham Research Award 2014

Tulane Dean's Grant 2012

Louisiana Sea Grant Undergraduate Research Opportunities Grant 2011

AWARDS

E.C. Pielou Student Award 2017
The E.C. Pielou Award is based on overall quality of the student's contribution to statistical ecology, as evidenced by their oral presentation at the Annual Ecological Society of America meeting

Fred R. Cagle Memorial Prize 2013
The Fred R. Cagle Memorial Prize is given to the top graduating student in the Tulane Ecology and Evolutionary Biology Department.

Senior Scholar Award in Ecology and Evolutionary Biology 2013
The Senior Scholar Award in Ecology and Evolutionary Biology is given for the best undergraduate thesis in the Tulane Ecology and Evolutionary Biology Department.

Elected to Phi Beta Kappa Honors Society 2013

Undergraduate Fellow in Ecology and Evolutionary Biology 2012–2013

Dean's List 2009–2013

TEACHING EXPERIENCE

Instructor of Record

Ecology & Evolution, Cedar Point Biological Station, University of Nebraska-Lincoln — Summer 2024

Marine Ecology Laboratory, Oregon State University — Spring 2015

Teaching Assistant

General Biology for Majors Laboratory, Oregon State University — Summer 2015

General Biology for Majors Laboratory, Oregon State University — Fall 2014 - Winter 2015

Diversity of Life Laboratory, Tulane University — Fall 2012 - Spring 2013

Guest Lecturer

Marine Ecology, Oregon State University — Winter 2017

PRESENTATIONS

Invited Talks

Coblentz, K.E.. (Upcoming; 2024). A framework for understanding climate change impacts through non-compensatory climate change responses. *Unifying Ecology Across Scales Gordon Research Conference.*

Coblentz, K.E., M. Novak, J.P. DeLong. 2024. What determines trophic interaction strengths? From data to theory and back again. *Invited talk for the 'Linking theory and empirical research in EEB' organized symposium at Canadian Society for Ecology and Evolution (CSEE) Meeting.*

Coblentz, K.E.. 2024. Ecological insights through the integration of models and data. *University of Nebraska-Lincoln, School of Natural Resources.*

Coblentz, K.E. 2022. Putting the 'fun' back in functional response: novel approaches and insights into a fundamental concept. *University of Zurich: Behavior, Ecology, Environment, and Evolution Seminar.*

Coblentz, K.E. 2018. Causes and consequences of individual diet variation. *Hatfield Marine Science Center.*

Contributed Presentations

Coblentz, K.E., M. Salsbery, A. Squires, J.P. DeLong. 2023. Direct temperature effects and prior temperature adaptation interact to determine predator-prey dynamics and stability. *Ecological Society of America Meeting.*

Coblentz, K.E. 2022. Putting the 'fun' back in functional response: novel approaches and insights into a fundamental concept. *University of Nebraska-Lincoln: Ecology, Evolution, and Behavior Seminar.*

Coblentz, K.E., J.P. DeLong, M. Novak. 2022. Predator feeding rates may often be unsaturated under typical prey densities despite saturating predator functional responses. *Unifying Ecology Across Scales Gordon Research Conference.* (Poster)

Coblentz, K.E., J.P. DeLong. 2021. Ecological boundaries determine evolutionary trajectories on adaptive landscapes. *American Society of Naturalist Standalone Meeting.*

Coblentz, K.E., J.P. DeLong. 2020. Flipping the functional response: An alternative method for estimating predator functional responses. *University of Nebraska–Lincoln: Ecology, Evolution, and Behavior Seminar.*

Coblentz, K.E. 2019. Causes, consequences, and estimation of individual diet variation. *University of Nebraska–Lincoln.*

Coblentz, K.E., S. Merhoff, M. Novak. 2018. Changes in intraspecific diet variation with prey community composition alter the percieved strength of species interactions. *Ecological Society of America Meeting.*

Coblentz, K.E., L.M. Segui. 2018. The neglected numerical response of consumers. *American Society of Naturalists Standalone Meeting.*

Coblentz, K.E. 2017. Nonlinear functional responses and ecological pleiotropy alter the strength of disruptive selection in consumers. *Oregon State Mathematical Biology Seminar.*

Coblentz, K.E., A.E. Rosenblatt, M. Novak. 2017. Quantifying individual diet specialization using Bayesian hierarchical models. *Ecological Society of America meeting. *Awarded 2017 E.C. Pielou Student Award*

Coblentz, K.E., M. Novak. 2017. The effects of consumer satiation and interference competition on the strength of disruptive selection. *Evolution Meeting.*

Coblentz, K.E. 2017. The role of mathematics in ecology and evolutionary biology. *Oregon State Biology Graduate Student Symposium.*

Coblentz, K.E. 2015. A model of diet specialization within generalist predator populations. *Western Society of Naturalists Meeting.*

Coblentz, K.E. 2015. Dynamics of trophic specialization within a generalist predator population. *Oregon State Biology Graduate Student Symposium.*

Coblentz, K.E., B.J. Sigel, J.R. Henkel, C.M. Taylor. 2013. Sediment characteristics and diversity in the soft-sediment intertidal of the northern Gulf of Mexico. *Society of Limnology and Oceanography Aquatic Sciences Meeting.* (Poster)

Coblentz, K.E., B.J. Sigel, J.R. Henkel, C.M. Taylor. 2012. Impacts of the Deepwater Horizon oil spill on intertidal benthic macroinvertebrates in the northern Gulf of Mexico. *Benthic Ecology Meeting.* (Poster)

SERVICE AND OUTREACH

Postdoctoral representative on the University of Nebraska-Lincoln School of Biological Sciences Diversity, Equity, and Inclusion Committee. 2021-2023.

Mentor for two students through the University of Nebraska-Lincoln Summer Research Bridge Experience which provides a summer transition experience for first-generation and underrepresented students before their first semester of college. 2023.

Reviewer for UCARE (Undergraduate Creative Activities and Research Experience) grant applications at the University of Nebraska–Lincoln, 2020-2022

Founding member and organizer of the Oregon State Integrative Biology Writing Club

Public outreach talk for the Pacific Northwest Shell Collector's Club. 2018.

Outreach event for Science and Math Investigate Learning Experiences at Oregon State University (co-organizer and volunteer). 2017.

Reviewer for: Journal of Animal Ecology (13), The American Naturalist (4), Oikos (3), Functional Ecology (3), Ecology Letters (2), Oecologia (2), Ecology & Evolution (2), Nature Climate Change (1), Methods in Ecology & Evolution (1), Scientific Reports (1), Ecosphere (1), Marine Ecology Progress Series (1), Biological Invasions (1), Ecological Entomology (1), PeerJ (1). *Numbers in parentheses are the number of manuscripts excluding revised versions*

Professional Societies: Member of the Ecological Society of America and the American Society of Naturalists