

# KYLE E. COBLENTZ

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## ACADEMIC POSITIONS

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### 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

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### 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

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Google Scholar Data (accessed 9.28.2023)

Citations: 539, h-index: 10, i10-index: 10

### Published

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.**, L.A. Treidel, F.P. Biagioli, C. Fragel, A.E. Johnson, D.D. Thilakarathne, L. Yang, J.P. DeLong. A framework for understanding climate change impacts through intra- and interspecific asymmetries in climate change responses. *Ecology Letters*. *Authorea* preprint: <https://doi.org/10.22541/au.169470726.65740114/v1>

DeLong, J.P., **K.E. Coblentz**, S.F. Uiterwaal, C. Akwani, M. Salsbery. Temperature and predators as interactive drivers of community properties. *Ecology & Evolution*.

## In Preparation

**Coblentz, K.E.**, M. Novak, J.P. DeLong. Predator functional response experiments and typical prey densities are largely consistent with non-oscillatory predator-prey dynamics.

**Coblentz, K.E.** Nonlinear functional responses and ecological pleiotropy alter the strength and likelihood of disruptive selection in consumers. bioRxiv preprint: <https://doi.org/10.1101/283911>

Figueroa, A., **K.E. Coblentz**, A. Herrera, L. Cuni, J. Villate, P. Jordano, S. Whitfield, M.S. Araujo. Spatiotemporal variation in ecological opportunity drives individual diet specialization in Miami's gopher tortoises.

## **MAJOR GRANTS AND FELLOWSHIPS**

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<b>National Science Foundation Doctoral Dissertation Improvement Grant</b>	2017
<b>National Science Foundation Graduate Research Fellowship</b>	2013
<b>Oregon State University Provost's Distinguished Graduate Scholar Fellowship</b>	2013

## **OTHER GRANTS AND FELLOWSHIPS**

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<b>University of Nebraska Postdoc Travel Award</b>	2022
<b>Oregon State University Graduate Student Travel Award</b>	2017
<b>Oregon State Zoology Research Fund</b>	2017
<b>Pacific Northwest Shell Collector's Club Grant</b>	2015
<b>Mamie Markham Research Award</b>	2014
<b>Tulane Dean's Grant</b>	2012
<b>Louisiana Sea Grant Undergraduate Research Opportunities Grant</b>	2011

## **AWARDS**

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<b>E.C. Pielou Student Award</b>	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	
<b>Fred R. Cagle Memorial Prize</b>	2013
The Fred R. Cagle Memorial Prize is given to the top graduating student in the Tulane Ecology and Evolutionary Biology Department.	
<b>Senior Scholar Award in Ecology and Evolutionary Biology</b>	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.	
<b>Elected to Phi Beta Kappa Honors Society</b>	2013
<b>Undergraduate Fellow in Ecology and Evolutionary Biology</b>	2012–2013
<b>Dean's List</b>	2009–2013

## **TEACHING EXPERIENCE**

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### **Instructor of Record**

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

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**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 Zurich: Behavior, Ecology, Environment, and Evolution Seminar*.

**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 perceived strength of species interactions. *Ecological Society of America Meeting*.

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

**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**

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

Reviewer for: Journal of Animal Ecology (12), The American Naturalist (4), Oikos (3), Functional Ecology (3), Ecology Letters (2), Oecologia (2), Ecology & Evolution (2), Nature Climate Change (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

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.