

JENNIFER K. HELLMANN
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EDUCATION

- 2016 **The Ohio State University, Columbus OH**
PhD: Evolution, Ecology, and Organismal Biology
Advisor: Dr. Ian Hamilton
- 2010 **Messiah College, Grantham PA**
B.S. Biology, B.A. Spanish
Minor: Environmental Science

RESEARCH EXPERIENCE

- 2017 – Present **University of Illinois, Urbana-Champaign (National Institutes of Health NRSA postdoctoral fellowship)**
- *Mechanisms driving sperm-mediated transmission of paternal predation risk in threespined sticklebacks*
 - *Laboratory experiments, RNAseq, Tagseq, hormone analysis*
- 2017 – Present **University of California, Santa Cruz**
- *The role of outside options on male-male cooperation in *Symphodus ocellatus**
 - *Field (SCUBA) experiments: STARESO Research Station*
- 2016 – 2017 **University of Illinois, Urbana-Champaign**
- *Transgenerational consequences of maternal and paternal experience with predation risk in threespined stickleback*
 - *Laboratory experiments, RNAseq, water-borne hormone analysis*
- 2011 – 2016 **The Ohio State University**
- *Dissertation: the role of outside options and neighbors on within-group dynamics in a cooperatively breeding fish*
 - *Graduate research assistantship: walleye dispersal patterns in Lake Erie using RADseq*
 - *Laboratory and field (SCUBA) experiments, RADseq, hormone manipulations, microsatellite analysis, mathematical modelling*

PEER REVIEWED PUBLICATIONS (* co-first authors, ^mentored student)

- [20] Bell AM, **Hellmann JK**. Invited review, in press. Transgenerational plasticity: mechanisms, evolution, and ecological significance. Annual Review of Ecology, Evolution, and Systematics.
- [19] Dellinger M[^], Zhang W, Bell AM, **Hellmann JK**. 2018. Do male sticklebacks use visual and/or olfactory cues to assess a potential mate's history with predation risk? Animal Behaviour 145: 151-159.
- [18] **Hellmann JK**, Hamilton IM. 2018. Intragroup social dynamics vary with the presence of neighbors in a cooperatively breeding fish. Current Zoology, zoy025.

- [17] **Hellmann, JK**, Hamilton IM. 2018. Dominant and subordinate outside options alter help and eviction in a pay-to-stay negotiation model. *Behavioral Ecology* 29: 553-562.
- [16] Sabol AC[^], **Hellmann JK**^{*}, Gray SM, Hamilton IM. 2017. The role of ultraviolet coloration in intrasexual interaction in a colonial fish. *Animal Behaviour* 131: 99-106.
- [15] Reddon AR, O'Connor CM, Nesjen E, Cameron J, **Hellmann JK**, Ligocki IY, Marsh-Rollo SE, Hamilton IM, Wylie DR, Balshine S, Hurd PL. 2017. Isotocin neuronal phenotypes differ among social systems in cichlid fishes. *Royal Society Open Science* 4: 170350.
- [14] **Hellmann JK**, Sovic MG, Gibbs HL, Reddon AR, O'Connor CM, Ligocki IY, Marsh-Rollo SE, Balshine S, Hamilton IM. 2016. Within-group relatedness is correlated with colony-level social structure and reproductive sharing in a social fish. *Molecular Ecology* 25: 4001-4013.
- [13] Reddon AR, O'Connor CM, Ligocki IY, **Hellmann JK**, Marsh-Rollo SE, Hamilton IM, Balshine S. 2016. No evidence for larger brains in cooperatively breeding fishes. *Canadian Journal of Zoology* 94: 373-378.
- [12] **Hellmann JK**, Ligocki IY, O'Connor CM, Reddon AR Farmer TM, Marsh-Rollo SE, Balshine S, Hamilton IM. 2016. The influence of status and the social environment on energy stores in a social fish. *Journal of Fish Biology* 88, 1321-1334.
- [11] Ligocki IY, Reddon AR, **Hellmann JK**, O'Connor CM, Marsh-Rollo SE, Balshine S, Hamilton IM. 2015. Social status influences responses to unfamiliar conspecifics in a cooperatively breeding fish. *Behaviour* 152, 1821-1839.
- [10] Ligocki IY, Earley RL, **Hellmann JK**, Hamilton IM. 2015. Variation in glucocorticoid levels in relation to direct and third-party interactions in a social cichlid fish. *Physiology and Behavior* 151, 386-394.
- [9] O'Connor CM, Reddon AR, Ligocki IY, **Hellmann JK**, Garvy KA[^], Marsh-Rollo SE, Hamilton IM, Balshine S. 2015. Motivation but not body size influences territorial contest dynamics in a wild cichlid fish. *Animal Behaviour* 107, 19-29.
- [8] **Hellmann JK**, Ligocki IY, O'Connor CM, Reddon AR, Garvy KA[^], Marsh-Rollo SE, Gibbs HL, Balshine S, Hamilton IM. 2015. Reproductive sharing in relation to group and colony-level attributes in a cooperatively breeding fish. *Proceedings of the Royal Society: B* 282, 20150954.
- [7] **Hellmann JK**^{*}, Reddon AR^{*}, Ligocki IY, O'Connor CM, Garvy KA[^], Marsh-Rollo SE, Balshine S, Hamilton IM. 2015. Changes in submissive behaviour in response to social perturbation: Impacts of isotocin and the social landscape. *Animal Behaviour* 105, 55-62.
- [6] **Hellmann JK**, O'Connor CM, Ligocki IY, Farmer TM, Arnold TJ[^], Reddon AR, Garvy KA[^], Marsh-Rollo SE, Balshine S, Hamilton IM. 2015. Evidence for alternative male morphs in a Tanganyikan cichlid fish. *Journal of Zoology* 296, 116-123.
- [5] **Hellmann JK**, Erikson J, Queenborough S. 2015. Evaluating macroinvertebrate community structure in the confluence of freestone and limestone streams. *Journal of Limnology* 74: 64-74.
- [4] Garvy K[^], **Hellmann JK**, Ligocki IY, Reddon AR, Marsh-Rollo SE, Hamilton IM, Balshine S, O'Connor CM. 2015. Sex and social status affect territorial defense in a cooperatively breeding cichlid fish, *Neolamprologus savoyi*. *Hydrobiologia* 748: 75-85.
- [3] Wilkenfeld DA^{*}, **Hellmann JK**^{*}. 2014. Understanding beyond grasping propositions: a study of chess and fish. *Studies in History and Philosophy of Science* 48: 46-51.
- [2] O'Connor CM, Reddon AR, Marsh-Rollo SE, **Hellmann JK**, Ligocki IY, Hamilton IM, Balshine S. 2014. A comparative study of immune response and social system in Lamprologine cichlid fishes. *Naturwissenschaften* 101: 839-849.
- [1] **Hellmann JK**, Hamilton IM. 2014. The presence and familiarity of neighbors influences defense against predators in a cooperatively breeding cichlid. *Behavioral Ecology* 25: 386-391.

TEACHING EXPERIENCE

- 2017 – 18 **University of Illinois, Urbana-Champaign**
Co-Instructor of Record, Physiology (Spring 2017)
- 2012 – 15 **The Ohio State University (Graduate Teaching Assistant)**
Evolution (2 semesters)
Human Physiology (3 semesters)
Biology for Non-majors (1 semester)
- 2010 **Messiah College (Undergraduate Teaching Assistant)**
Ecology (Spring 2010)

GRANTS AND AWARDS (Total: \$386,587)

2018	International Society for Behavioral Ecology Travel Grant	\$500
2018	Gordon Research Conference Travel Grant	\$250
2017	National Institutes of Health F32 NRSA Postdoctoral Fellowship	\$176,906
2017	NSF Postdoctoral Fellowship in Biology (declined)	\$138,000
2017	American Genetic Association EECG Research Award	\$9740
2016	National Science Foundation Travel Grant	\$1000
2016	International Society for Behavioral Ecology Travel Grant	\$1600
2016	Finalist, UC Presidential Postdoctoral Fellowship	
2015	The Ohio State University Career Development Grant	\$350
2015	Presidential Fellowship, The Ohio State University	\$26,266
2014	The Ohio State University AGGRS	\$2000
2014	International Society for Behavioral Ecology Travel Grant	\$750
2013	Animal Behaviour Society Student Research Grants	\$1000
2012	SciFund Crowdfunding	\$1440
2012	American Academy of Underwater Sciences	\$1500
2012	The Ohio State University Fish Systematics Endowment	\$1000
2011	University Fellowship, The Ohio State University	\$15,785
2009	Steinbrecher Summer Research Scholarship	\$4000
2008	NSF Research Experience for Undergraduates, Ursinus College	\$4500

INVITED LECTURES

- 2019 University of Massachusetts, Dartmouth, Department of Biology
- 2018 Clemson University, Department of Biological Sciences
- 2018 University of Illinois, Behavioral Ecology (IB431)
- 2018 Mathematical Biosciences Institute, The Ohio State University
- 2018 University of Illinois, Science Communication Skills workshop
- 2018 University of Illinois, Animal Behavior (IB429)
- 2018 University of Texas Austin, Brain, Behavior, & Evolution Symposium
- 2017 University of Illinois, Animal Behavior (IB429)
- 2016 Western Kentucky University, Department of Biology
- 2016 Ohio Wesleyan University, Science Lecture Series
- 2015 Florida State University, Department of Biological Science
- 2013 Ohio State University, Undergraduate Seminar in Mathematical Biology Research

PROFESSIONAL PRESENTATIONS (*presenter, ^ mentored student)

2019	Hellmann, JK* ... Bell AM. Evolution Evolving.
2018	Hellmann, JK* , Bell AM. International Society for Behavioral Ecology
2018	Kempfer, S*^... Hellmann, JK... UIUC Summer Research Forum
2018	Hellmann, JK* , Bell AM. Gordon Research Conf., Predator-Prey Interactions
2018	Hellmann, JK* , Bell AM. Society of Integrative and Comparative Biology
2017	Hellmann, JK* . UIUC Animal Biology colloquium
2017	Kulinski, K*^... Hellmann, JK... UIUC Summer Research Forum
2017	Hellmann, JK. Allee Symposium, Animal Behaviour Society
2017	Hellmann JK , Sabol AC*^... Society of Integrative and Comparative Biology
2016	Dellinger, M*^, Hellmann, JK... UIUC Summer Research Forum
2016	Hellmann JK* , Hamilton IM. International Society for Behavioral Ecology
2016	Sabol AC*^, Hellmann JK... Society of Integrative and Comparative Biology
2015	Hellmann JK* ... Hamilton IM. Society of Integrative and Comparative Biology
2015	Hellmann JK* ... Hamilton IM. Animal Behavior Society
2015	Hellmann JK* ... Hamilton IM. OSU EEOB Darwin Awards
2015	Hellmann JK* . OSU Graduate student research forum
2014	Hellmann JK* ...Hamilton IM. International Society for Behavioral Ecology
2014	Hellmann JK* ... Olson A. Santa Fe Institute CSSS Final Proceedings
2014	Scholtes NK*... Hellmann JK , Li L. Santa Fe Institute CSSS Final Proceedings
2014	Ligocki IY*... Hellmann JK International Society of Behavioral Ecology
2014	Ligocki IY*... Hellmann JK Midwest Evolution and Ecology
2014	Hellmann JK* ...Hamilton IM. Midwest Evolution and Ecology
2013	Hellmann JK* , Hamilton IM. Animal Behaviour Society
2010	Hellmann JK* , Erikson J. UMBC Undergraduate Research Symposium
2010	Hellmann JK* , Erikson J. Ecological Society of America

MENTORED STUDENTS (*independent research project)

2019	Samantha Anderson, UIUC. Undergraduate researcher
2019	Andrew Shim, UIUC. Undergraduate researcher
2019	Cassandra Afseth, UIUC. Undergraduate researcher
2018	Caroline Caton, UIUC. Undergraduate researcher
2018	Shayne Kempfer*, UIUC. PRECS summer research program
2018	Raiza Singh*, UIUC. Undergraduate researcher
2017-18	Christian Zielinski*, UIUC. Undergraduate researcher
2017-18	Jack Deno*, UIUC. Undergraduate researcher
2017-18	Erin Hsiao*, UIUC. Undergraduate researcher
2017-18	Yangxue Ma*, UIUC. Undergraduate researcher
2016-18	Eunice Chen*, UIUC. Undergraduate researcher, Distinction project.
2017	Liam Masse, UIUC. Undergraduate researcher
2017	Kayla Kulinski*, UIUC. PRECS summer research program
2016	Marion Dellinger*, UIUC. Merial Veterinary Scholars Program
2015-16	Ryan Hudson, OSU. Undergraduate researcher
2015-16	Abby Pope, OSU. Undergraduate researcher
2014-16	Anne Sabol*, OSU. Undergraduate researcher
2013	Kelly Garvy*, OSU. Field assistant

WORKSHOPS

2016	High Performance Biological Computing RNAseq workshop
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2014 Santa Fe Institute: Complex Systems Summer School
2012 MBI-NIMBioS-CAMBAM Summer Graduate Workshop

SERVICE

2019 Reviewer, Graduate Women In Science fellowships
2018 – 19 Reviewer, Animal Behavior Student Research Grants
2017 – 18 Judge, UIUC Undergraduate Research Symposium
2017 National Science Foundation Data Nugget
2017 Facilitator, Orpheum Children’s Museum Girls Do Science Club
2016 National Science Foundation External Reviewer
2016 Organized public seminar on climate change at OSU
2016 Designed ‘Colorful Chameleon’ children’s activity, OSU Museum of Biological Diversity Open House
2015 Organized Women In Science forum for OSU EEOB graduate students
2015 – 16 President, OSU Graduate Evolution Ecology Student Organization
2014 – 15 Volunteer, OSU Museum of Biological Diversity Open House
2014 – 15 Graduate Student Representative, OSU Faculty Search Committee
2014 – 15 Judge, OSU Undergraduate Research Forum
2013 – 14 Graduate Student Representative, OSU EEOB Graduate Admission Committee

JOURNAL REVIEW

Molecular Ecology, Proceedings of the Royal Society B, Environmental Biology of Fishes, PeerJ, Physiology and Behavior, Journal of Insect Physiology, Animal Behaviour, Ecology and Evolution

PROFESSIONAL ORGANIZATIONS

2017 – Present American Society of Naturalists
2015 – Present Society for Integrative and Comparative Biology
2014 – Present International Society for Behavioral Ecology
2013 – Present Animal Behavior Society