

JENNIFER K. HELLMANN

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PROFESSIONAL EXPERIENCE AND EDUCATION

2023 – Present	Assistant Professor The Ohio State University, Department of Evolution, Ecology, and Organismal Biology
2020 – 2023	Assistant Professor University of Dayton, Department of Biology
2017 – 2020	National Institutes of Health NRSA postdoctoral fellow University of Illinois, Urbana-Champaign, Department of Ecology, Evolution, and Behavior (PI Alison Bell)
2016 – 2017	Postdoctoral associate University of Illinois, Urbana-Champaign, Department of Ecology, Evolution, and Behavior (PI Alison Bell)
2011 – 2016	PhD The Ohio State University, Department of Evolution, Ecology, and Organismal Biology (PI Ian Hamilton)
2006 – 2010	B.S./B.A Messiah College, Major: Biology, Spanish; Minor: Environmental Science

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

- [28] Kustra M, Stiver KA, Marsh-Rollo SE, **Hellmann JK**, Alonzo SH. In press. Social environment influences the temporal dynamics of sneak-spawning in a fish with alternative reproductive tactics. *American Naturalist*.
- [27] Afseth C[^], Shim A[^], Anderson S[^], Bell AM, **Hellmann JK**. 2022. Vertical transmission of horizontally-acquired social information in sticklebacks: Implications for transgenerational plasticity. *Proceedings of the Royal Society B* 289: 20220571.
- Article in *New Scientist*: <https://www.newscientist.com/article/2330450-sticklebacks-may-pass-information-learned-from-other-fish-to-offspring/>
- [26] **Hellmann JK**, Carlson ER, Bell AM. 2021. The interplay between sperm-mediated and care-mediated paternal effects in threespined sticklebacks. *Animal Behaviour* 179: 267-277.
- [25] Chen E[^], Zielinski C[^], Singh R[^], Deno J[^], Bell AM, **Hellmann JK**. 2021. The specificity of sperm-mediated paternal effects in threespined sticklebacks. *Behavioral Ecology and Sociobiology* 75:68.
- [24] **Hellmann JK**, Bukhari SA, Deno J[^], Bell AM. 2020. Sex-specific plasticity across generations I: Maternal and paternal effects in sons and daughters. *Journal of Animal Ecology* 89: 2788-2799.
- [23] **Hellmann JK**, Carlson ER, Bell AM. 2020. Sex-specific plasticity across generations II: grandpaternal effects are lineage- and sex-specific. *Journal of Animal Ecology* 89: 2800-2812.
- Finalist: 2020 Journal of Animal Ecology Elton Prize

- Article in The Conversation: <https://theconversation.com/in-fish-parents-stressful-experiences-influence-offspring-behavior-via-epigenetic-changes-156833>
- [22] **Hellmann JK**, Stiver KA, Marsh-Rollo SE, Alonzo SH. 2020. Defense against outside competition is linked to cooperation in male-male partnerships. *Behavioral Ecology* 31: 432-439.
- [21] Donelan SC*, **Hellmann JK***, Bell AM, Luttbeg B, Orrock JL, Sheriff MJ, Sih A. 2020. Transgenerational plasticity in human-altered environments. *Trends in Ecology and Evolution* 35: 115-124.
- [20] Bell AM*, **Hellmann JK***. 2019. Transgenerational plasticity: mechanisms, evolution, and ecological significance. *Annual Review of Ecology, Evolution, and Systematics* 50: 97-118.
- [19] **Hellmann JK**, Hamilton IM. 2019. Intragroup social dynamics vary with the presence of neighbors in a cooperatively breeding fish. *Current Zoology* 65: 21-31.
- [18] 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.
- [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. Group 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

2020 – 2023	University of Dayton (Instructor of Record) BIO 330: Animal Behavior (Spring 2023) BIO 299: Sophomore Biology Seminar (Fall 2020, Fall/Spring 2021, Spring 2022) BIO 310: Ecology (Fall/Spring 2021, Fall 2022) BIO 496: Phenotypic plasticity (Spring 2021) BIO 551: Bio-instrumentation (Fall 2022)
2017	University of Illinois, Urbana-Champaign (Instructor of Record) IB 202: 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)

EXTERNAL GRANTS AND AWARDS

2021	<i>Urban Watershed Collaborative</i> : City of Dayton	\$30,000
2017	National Institutes of Health F32 NRSA Postdoctoral Fellowship	\$182,682
2017	NSF Postdoctoral Fellowship in Biology (declined)	\$138,000
2017	American Genetic Association EECG Research Award	\$9740
2016	Finalist, UC Presidential Postdoctoral Fellowship	
2013	Animal Behaviour Society Student Research Grants	\$1000
2012	American Academy of Underwater Sciences	\$1500

INTERNAL GRANTS AND TRAVEL AWARDS

2022	Research Council SEED grant, University of Dayton	\$6500
2021	Research Council SEED grant, University of Dayton	\$6500
2018	International Society for Behavioral Ecology Travel Grant	\$500
2018	Gordon Research Conference Travel Grant	\$250
2016	National Science Foundation Travel Grant	\$1000
2016	International Society for Behavioral Ecology Travel Grant	\$1600
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
2012	SciFund Crowdfunding	\$1440

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 TALKS

2023	UC Santa Cruz, Department of Ecology and Evolutionary Biology
2023	The Ohio State University, Dep. of Evolution, Ecology, and Organismal Biology
2022	McMaster University, Department of Psychology, Neuroscience & Behaviour
2022	McMaster University, Department of Biology
2022	Wright State University, Department of Biology
2021	Millersville University, Department of Biology
2021	Smithsonian Environmental Research Center
2020	UC Davis, Animal Behavior Graduate Group
2020	UC Santa Cruz, Department of Ecology and Evolutionary Biology
2020	California State University, Fullerton, Department of Biological Science
2020	Gordon Research Conference, Predator-Prey Interactions
2019	University of Dayton, Department of Biology
2019	Cornell University, Department of Neurobiology and Behavior
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

2022	Sensorium, University of Cincinnati
2022	International Society for Behavioral Ecology
2021	Society of Integrative and Comparative Biology
2020	Gordon Research Conference, Predator-Prey Interactions
2020	Society of Integrative and Comparative Biology
2019	Behaviour (Symposium: Behavioral Plasticity)
2019	Evolution Evolving
2018	International Society for Behavioral Ecology
2018	Gordon Research Conference, Predator-Prey Interactions
2018	Society of Integrative and Comparative Biology
2017	UIUC Animal Biology colloquium
2017	Allee Symposium, Animal Behaviour Society
2017	Society of Integrative and Comparative Biology
2016	International Society for Behavioral Ecology
2015	Society of Integrative and Comparative Biology
2015	Animal Behavior Society
2015	OSU EEOB Darwin Awards
2015	OSU Graduate student research forum
2014	International Society for Behavioral Ecology

2014 Santa Fe Institute CSSS Final Proceedings
 2014 Midwest Evolution and Ecology
 2013 Animal Behaviour Society
 2010 UMBC Undergraduate Research Symposium
 2010 Ecological Society of America

MENTORED GRADUATE STUDENTS

January 2023-Pres Truth Muller, UD. Masters student
 August 2022-Pres Lauren Corrigan, UD. Masters student
 January 2021-Pres Michaela Rogers, UD. PhD student

MENTORED UNDERGRADUATES (*independent project, ^talk/poster presentation)

2023-Pres Emerson Amy, UD. Undergraduate student
 2023-Pres Darrin Alexander, UD. Undergraduate student
 2022-Pres Sarah Metz, UD. Undergraduate student
 2022-Pres Emily Berkshire*, UD. Undergraduate student
 2022-Pres Amy Friemoth, UD. Undergraduate student
 2022-Pres Morgan Roach, UD. Undergraduate student
 2022-Pres Claire VanMeter**^, UD. Undergraduate student
 2021-Pres Lauren Myers*, UD. Undergraduate student
 2020-Pres Emma Borgert*, UD. Undergraduate student
 2020-Pres Lauren Roy**^, UD. Undergraduate student
 2020-Pres William Ogburn**^, UD. Undergraduate student
 2022 Jonas Smith, UD. Undergraduate student
 2019-20 Samantha Anderson*, UIUC. Undergraduate student
 2019-20 Andrew Shim*, UIUC. Undergraduate student
 2019-20 Cassandra Afseth*, UIUC. Undergraduate student
 Awarded "Highest Distinction" for thesis project
 2018 Caroline Caton, UIUC. Undergraduate student
 2018 Shayne Kempfer*, UIUC. Phenotypic Plasticity Research Experience for
 Community College Students summer research program
 2018 Raiza Singh*, UIUC. Undergraduate student
 2017-19 Eunice Chen**^, UIUC. Undergraduate student
 Awarded "High Distinction" for thesis project
 2017-18 Jack Deno*, UIUC. Undergraduate student
 2017-18 Erin Hsiao*, UIUC. Undergraduate student
 2017-18 Yangxue Ma*, UIUC. Undergraduate student
 2017 Liam Masse, UIUC. Undergraduate student
 2017 Kayla Kulinski**^, UIUC. Phenotypic Plasticity Research Experience for
 Community College Students summer research program
 2016-19 Christian Zielinski**^, UIUC. Undergraduate student
 2016 Marion Dellinger**^, UIUC. Meriel Veterinary Scholars Program
 2015-16 Ryan Hudson, OSU. Undergraduate student
 2015-16 Abby Pope, OSU. Undergraduate student
 2014-16 Anne Sabol**^, OSU. Undergraduate student
 2013 Kelly Garvy*, OSU. Field assistant