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Daniel Hanley, PhD
Biology Department
George Mason University
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Academic Appointments:

- 2020 – *present* George Mason University, Fairfax, Virginia, USA
Assistant Professor
- 2019 – 2020 Long Island University – Post, Brookville, New York, USA
co-Director of the Honors College
- 2016 – 2020 Long Island University – Post, Brookville, New York, USA
Assistant Professor (tenure granted)
- 2013 – 2016 Palacký University, Department of Zoology, Olomouc, Czech Republic
Postdoctoral Fellow
- 2014 (*fall*) Department of Psychology, Hunter College CUNY, New York, NY, US
Visiting Scholar
- 2013 – 2014 The Canadian Pollination Initiative (NSERC – Canpolin), Guelph, ON, Canada
Research Associate
- 2011 – 2013 University of Guelph, Department of Integrative Biology, Guelph, ON, Canada
MITACS Elevate Postdoctoral Fellow

Education:

- 2007 – 2011 University of Windsor, Windsor, ON, Canada
Doctor of Philosophy (PhD), Department of Biological Sciences
- 2004 – 2006 Bucknell University, Lewisburg, PA, USA
Master of Science (MSc), Animal Behavior Program
- 2002 – 2004 Cornell University, Ithaca, NY, USA
Bachelor of Science (BSc), *cum laude with distinction in research*
Department of Animal Science
- 2000 – 2002 Skidmore College, Saratoga Springs, NY, USA

Peer-reviewed Publications: **mentored student*, †*shared first authorship*

48. **Hanley D**, Rutledge SL*, Villa J* (2021) The perceptual and cognitive processes that govern egg rejection in hosts of avian brood parasites. *Frontiers in Ecology and Evolution*, 9, 702934
47. **Hanley D**, Moghaddame-Jafari B*, Rutledge SL* (2021) Could diffuse coevolution explain the generic eggshell color of the brown-headed cowbird? *Current Zoology*, 67: 645–652

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46. Hauber ME, Winnicki SK, Hoover JP, **Hanley D**, and Hays IR (2021) The limits of egg recognition: testing acceptance thresholds of American robins in response to decreasingly egg-shaped objects in the nest. *Royal Society Open Science*, 8: 201615. *Media coverage: The New York Times*.
45. Rutledge SL*, Carr DE, Hauber ME, & **Hanley D** (2021) Best of a bad job or masters of illusion: Do nest light conditions make the eggs of brood parasitic brown-headed cowbirds (*Molothrus ater*) more similar to the eggs of their hosts? *Ethology*, 127: 117-124
44. Hauber ME, Hoover JP, Rhodes OR, Ducay RL, **Hanley D** (2021) The blunt pole is not a source of more salient recognition cues than the sharp pole for the rejection of model eggs by American robins (*Turdus migratorius*). *Journal of Vertebrate Biology*, 70, 20111.1-7
43. Wisocki PA*, Kennelly P, Rojas Rivera I*, Cassey P, Burkey ML, & **Hanley D** (2020) The global distribution of avian eggshell colours suggest a thermoregulatory benefit of darker pigmentation. *Nature Ecology & Evolution*, 4: 148-155 *Media coverage: BBC Mundo, Axios, the Conversation, MSN, N+1, PhysOrg, Science News, Scientific American, Discover Magazine, the Guardian, Daily Mail*
42. Hamchand R, **Hanley D**, Prum RO, & Christian Brückner (2020) Expanding the eggshell colour gamut: uroerythrin and bilirubin from tinamou (Tinamidae) eggshells. *Scientific Reports*, 10, 11264
41. Hauber ME, Kim CR, Goethe C, **Hanley D** (2020) Self-referent phenotype matching is a poor predictor of egg rejection by American Robins. *Journal of Field Ornithology*, 91, 254-262
40. Manna TJ*, **Hanley D**, Honza M, Capek M, Rutila J, Samaš P, Abolins-Abols M., Hauber ME (2020) Fitting different visual models to behavioral patterns of parasitic egg rejection along a natural egg color gradient in a cavity-nesting host species. *Vision Research*, 167: 54-59
39. Nyklová-Ondrová M*, **Hanley D**, & Grim T (2020) White stork nest altitude decreases as global temperatures increase. *Biologia*, 75: 273-278
38. Hauber ME, Dainson M*, Luro A*, Louder AA, & **Hanley D** (2019) When are egg rejection decisions made? A test using thermochromic eggs in an avian brood parasite host. *Animal Cognition*, 22:1141-1148
37. Abolins-Abols M, **Hanley D**[†], Moskat C, Grim T, & Hauber ME (2019) Anti-parasitic egg rejection by great reed warblers (*Acrocephalus arundinaceus*) tracks differences across an eggshell color gradient. *Behavioural Processes*, 166: 103902
36. **Hanley D**, Gern K*, Hauber ME, & Grim T (2019) Host responses to foreign eggs across the avian visual color space. *American Naturalist*, 194: 17-27
35. **Hanley D**, López AV, Fiorini V, Reboreda JC, Grim T, & Hauber ME (2019) Variation in multicomponent recognition cues alter egg rejection decisions: a test of the optimal acceptance threshold hypothesis. *Philosophical Transactions of the Royal Society B*, 374: 20180195 *Media coverage: Mother Nature Network, Science*
34. Dunning J*, Diamond AW, Christmas SE, Cole E-L, Holberton R., Jackson HJ, Kelly KG*, Brown D, Rojas Rivera I*, & **Hanley D** (2018) Photoluminescence in the bill of the Atlantic puffin *Fratercula arctica*. *Bird Study*, 65: 570-573 *Media coverage: Audubon Magazine*
33. Canniff L*, Dainson M*, Hauber ME, López AV, & **Hanley D** (2018) Probing the limits of egg recognition using egg rejection experiments along phenotypic gradients. *Journal of Visualized Experiments*, 138: e57512
32. Dinets V, Sokolovskis K, **Hanley D**, & Hauber ME (2018) Striking difference in response to expanding brood parasites between birds of western and eastern Beringia. *Journal of Field Ornithology*, 89: 117-125
31. Dearborn DC, Page SM, Dainson M*, Hauber ME, & **Hanley D** (2017) Eggshells as hosts of bacterial communities: an experimental test of the antimicrobial egg coloration hypothesis. *Ecology and Evolution*, 16: 9711-9719

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30. Araos HL, Kroft KL*, Bogardus RM, Chang Y-M, Donohue KR, & **Hanley D**, Hatch KA, Wilson KW (2017) The Columbia Spotted Frog (*Rana luteiventris*) — Another species persisting with amphibian chytrid, *Batrachochytrium dendrobatidis*, infection. *Herpetological Review*, 48: 782-786
29. **Hanley D**, Grim T, Igetic B, Samaš P, López AV, Shawkey MD, & Hauber ME (2017) Egg discrimination along a gradient of natural variation in eggshell coloration. *Proceedings of the Royal Society B*, 284, 20162592 *Media coverage: PhysOrg, ScienceDaily, Scienmag*
28. Dainson M*, Hauber ME, López AV, Grim T, & **Hanley D** (2017) Does contrast between eggshell ground and spot coloration affect egg rejection? *The Science of Nature*, 104: 54
27. Vasas V, **Hanley D**, Kevan P, & Chittka L (2017) Multispectral images of flowers reveal the adaptive significance of using green receptors for edge detection in bees. *Journal of Comparative Physiology A*, 203: 301-311
26. Abrahamczyk S, Kessler M, **Hanley D**, Karger DN, Müller MPJ, Knauer AC, Keller F, Schwerdtfeger M, & Humphreys AM (2017) Pollinator adaptation and the evolution of floral nectar sugar composition. *Journal of Evolutionary Biology*, 30, 112-127
25. **Hanley D**, Šulc M*, Brennan PLR, Hauber ME, Grim T, & Honza M (2016) Dynamic egg colour mimicry. *Ecology and Evolution*, 6, 4192–4202
24. Nyklová-Ondrová M* & **Hanley D** (2016) The white stork in the Czech Republic: a long term survey *In* *The White Stork: studies in biology, ecology and conservation* (Tryjanowski P, Sparks TH, Jerzak L, Eds.) Bogucki Wydawnictwo Naukowe, Poznań
23. **Hanley D**, Grim T, Cassey P, & Hauber ME (2015) Not so colourful after all: eggshell pigments constrain avian eggshell colour space. *Biology Letters*, 11, 20150087 *Media coverage: New Scientist, Český rozhla, Olomoucké novinky, Vesmír, Audubon Magazine, Science.*
22. **Hanley D**, Samaš P, Heryán J*, Hauber ME, & Grim T (2015) Now you see it, now you don't: flushing hosts prior to experimentation can predict their responses to brood parasitism. *Scientific Reports*, 5, 9060 *Media coverage: Česká televise, and 13 other national outlets*
21. **Hanley D**, Samaš P, Hauber ME, & Grim T (2015) Who moved my eggs? An experimental test of the egg arrangement hypothesis for the rejection of brood parasitic eggs. *Animal Cognition*, 18, 299-305
20. Igetic B, Fecheyr-Lippens D, Xiao M, Chan A, **Hanley D**, Brennan PLR, Grim T, Waterhouse GIN, Hauber ME, Shawkey MD (2015) A nanostructural basis for gloss in avian eggshells. *Journal of the Royal Society Interface*, 12, 20141210 *Media coverage: National Geographic, The Discovery Channel News, PhysOrg, Science World Report, The Week, IFL Science, Alaska Native News, the New York Times.*
19. Thomas DB, Hauber ME, **Hanley D**, Waterhouse GIN, Fraser S, & Gordon KC (2015) Analysing avian eggshell pigments with Raman spectroscopy. *Journal of Experimental Biology*, 218, 2670-2674
18. Fecheyr-Lippens DC, Igetic B, D'Alba L, **Hanley D**, Waterhouse GIN, Grim T, Hauber ME, & Shawkey MD (2015) The cuticle modulates ultraviolet reflectance of avian eggshells. *Biology Open*, 4, 753–759
17. Verdes A, Cho C, Hossain M, Brennan PLR, **Hanley D**, Grim T, Hauber M, & Holford M (2015) Nature's palette: characterization of shared pigments from colourful avian and mollusk shells. *PLoS One*, 10, e0143545
16. Martin RR, Naftel SJ, Doucet SM, **Hanley D**, & Weisener CG (2013) Synchrotron radiation analysis in the study of pollution in the ring-billed gull (*Larus delawarensis*): a novel application of the technique. *X-ray Spectroscopy*, 42, 437-441
15. **Hanley D**, Miller N, Flockhart DTT, & Norris DR (2013) Forewing pigmentation predicts migration distance in wild-caught migratory monarch butterflies. *Behavioral Ecology*, 24, 1108-1113 *Media coverage: BBC Radio – Dr. Karl and the Naked Scientist, Audubon*

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Magazine.

14. **Hanley D** (2013) Eggshell conspicuousness is related to paternal brood patch vascularisation in the American thrashers. *Avian Biology Research*, 6, 163-177
13. **Hanley D**, Stoddard MC, Cassey P, & Brennan PLR (2013) Eggshell conspicuousness in ground nesting birds: do conspicuous eggshells signal nest location to conspecifics? *Avian Biology Research*, 6, 147-156
12. **Hanley D**, Cassey P, & Doucet SM (2013) Parents, predators, parasites, and the evolution of eggshell colour in open nesting birds. *Evolutionary Ecology*, 27, 593-617
11. **Hanley D** & Doucet SM (2012) Does environmental contamination influence egg coloration? A long-term study in herring gulls. *Journal of Applied Ecology*, 49, 1055-1063 *Media coverage: Toronto Star, Guelph Mercury, Guelph Review, University of Windsor Daily news, featured on the University of Guelph homepage, CMU Public Radio in Mt Pleasant, Michigan, Great Lakes Echo.*
10. Dearborn DC, **Hanley D**, Ballantine K*, Cullum J*, & Reeder D (2012) Eggshell colour is more strongly affected by maternal identity than by dietary antioxidants in a captive poultry system. *Functional Ecology*, 26, 912-920
9. Low C & **Hanley D** (2012) A perspective on the importance of within-tree variation in mortality risk for a leaf-mining insect. *Web Ecology*, 12, 27-32
8. Cassey P, Golo M, Lovell PG, & **Hanley D** (2011) Conspicuous eggs and colourful hypotheses: testing the role of multiple influences on avian eggshell appearance. *Avian Biology Research*, 4, 185-195
7. **Hanley D**, Doucet SM, & Dearborn DC (2010) A blackmail hypothesis for the evolution of conspicuous egg coloration in birds. *Auk*, 127, 453-459
6. Pitcher TE, Doucet SM, Beausoleil J, & **Hanley D** (2009) Secondary sexual characters and sperm traits in coho salmon (*Oncorhynchus kisutch*). *Journal of Fish Biology*, 74, 1450-1461
5. **Hanley D** & Doucet SM (2009) Egg coloration in ring-billed gulls (*Larus delawarensis*): a test of the sexual signaling hypothesis. *Behavioral Ecology and Sociobiology*, 63, 719-729
4. **Hanley D**, Heiber G*, & Dearborn DC (2008) Testing an assumption of the sexual signaling hypothesis: does blue-green egg color reflect maternal antioxidant capacity. *Condor*, 110, 767-771
3. **Hanley D**, Minehart W*, & Dearborn DC (2007) Documentation of a polygynous Gray Catbird. *The Wilson Journal of Ornithology*, 119, 499-502
2. Hawley DM, **Hanley D**, Dhondt AA, & Lovette IJ (2006) Molecular evidence for a founder effect in invasive house finch (*Carpodacus mexicanus*) populations experiencing an emergent disease epidemic. *Molecular Ecology*, 15, 263-275
1. Haussmann MF, Winkler DW, Huntington CE, Vleck D, Sanneman CE, **Hanley D**, & Vleck CM (2005) Cell-mediated immunosenescence in birds. *Oecologia*, 145, 270-275

Submitted/ In Review Publications: *mentored student

49. Abolins-Abols M, Peterson M, Studer B*, Mattison H, **Hanley D**, Bentley G, Hauber ME (*in prep*) Patterns of stress response to foreign eggs by a rejecter host of an obligate avian brood parasite. *Genes, Brain, and Behavior*.
50. Hartley S*, Patton M, Jewell K, Wiggins CA, Hawn C, Cooper C, **Hanley D** (*in prep*) Exploring house sparrows (*Passer domesticus*) eggs as bioindicators of heavy metals. *Ecological indicators*

Book reviews:

2. **Hanley D** (2020) Eggshell-derived biliverdin as an antioxidant defense system for birds' eggs (Comment on <https://doi.org/10.1002/bies.202000010>). *BioEssays*. 2000133

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1. **Hanley D** (2018) Mimicry and meaning: structure and semiotics of biological mimicry. *The Quarterly Review of Biology*, 93, 381

Teaching & mentorship:

Undergraduate courses:

2020	Foundations of Ecology and Evolution (BIOL 308, GMU)
2019	Ecological Resilience (BIO 97, LIU Post)
2019	Evolution (BIO 110, LIU Post)
2017 - present	General Biology II (BIO 104, LIU Post)
2016 - present	General Biology (BIO 103, LIU Post)
2016 - present	Ecology (BIO 109, LIU Post)
2012	Guest Lecturer, Integrative Vertebrate Biology (Dr. Jinzhong Fu), University of Guelph
2007-2010	Lab Instructor and Teaching Assistant, Animal Communication, University of Windsor
2007-2009	Lab Instructor, Introductory Biology, University of Windsor
2005-2006	Teaching Assistant, Ornithology, Bucknell University
2004	Animal Behavior, Bucknell University

Graduate courses: *Certificate for Lifelong Learning (Continued Education Program)

2020	Population Ecology (BIOL 648/EVPP 648)
2019*	Avian Perception and Decision-Making (LASX-301, LIU School of Professional Studies)
2017	Ecology (BIO 518)
2015-2016	Instructor, Scientific Analysis and Presentation, Palacký University
2014-2016	Instructor, Behavioural Ecology, Palacký University
2014-2016	Guest facilitator, Ornithology Reading Group, Palacký University

Mentored students:

2021	Juliana Villa – PhD in Environmental Science and Policy
2021	Alex Di Giovanni – PhD in Environmental Science and Policy
2021	Anirudh Sai Surya Krovvid – Oscar Research Assistant
2021	Dat Vo – Oscar Research Assistant
2021	Dana Moskowicz – Learning Assistant
2021	Quentin Darnell Jamison – Oscar Research Assistant
2021	Beheshteh Moghaddame-Jafari – Undergraduate Research Experience
2021	Sela Copper – Undergraduate Research Experience
2020	Douglas Chase – Undergraduate Research Experience
2020	Akash Gandotra – Undergraduate Research Volunteer
2020	Simran Kohli – Undergraduate Research Volunteer
2020	Marcello Tripoli – Undergraduate Research Experience
2019	Casey Strauss – Graduate Research Experience
2019	Veronika Koudelkova – Summer Internship in Biology
2019	Liam Boyle - Advanced Science Research (ASR) program (high school)
2019	Rabia Aydinli – Undergraduate Research Experience
2018	Brett Studer – Summer Internship in Biology
2018	Samantha Rutledge – REU in Biology
2018	Samantha Pollet – Honors thesis
2017	Phil Wisocki – MSc in Biology
2016	Ramanpreet Singh – Honors thesis

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- 2016 Indira Rojas – Honors thesis
- 2014 Karel Gern – MSc in Zoology
- 2011 Brennan Obermayer – Canadian Wildlife Service, Sackville, New Brunswick
- 2011 James Telford – Parks Canada, Prince Albert National Park
- 2009 Fabio Castelli – honors thesis at the University of Windsor
- 2008 Michelle Bondy – enrolled at the University of Western Ontario
- 2008 Melissa Abdellah – honors thesis at the University of Windsor
- 2007 Allison Mistakidis – honors thesis at the University of Windsor
- 2006 Gabriel Heiber – NSF - REU summer research at Yale University
- 2006 Kate Ballantine – US Peace Corps
- 2006 John Cullum – the National Geographic Society & International Crane Institute
- 2005 William Minehart III – field assistant in Peru, for Oxford University's Edward Grey Institute of Field Ornithology

Grants:

- 2017 The Howard Hughes Medical Institute, Science Education Alliance's Phage Hunters Advancing Genomics and Evolutionary Science (co-applicant), Long Island University-Post

Conference Presentations: *mentored student

- 66. **Hanley D**, Rutledge S* (2021) The role of color perception and opponent processes in avian egg recognition. American Ornithological Society and the Society of Canadian Ornithologists Joint Meeting, Virtual (Oral).
- 65. Cooper SH* & **Hanley D** (2021) Birds' eggshell colors conform to Bogert's rule. American Ornithological Society and the Society of Canadian Ornithologists Joint Meeting, Virtual (Poster)
- 64. **Hanley D**, Rutledge S*, Moghaddame-Jafari B* (2021) Hosts select for the eggshell color of the Brown-headed Cowbird. American Ornithological Society and the Society of Canadian Ornithologists Joint Meeting, Virtual (Poster)
- 63. Cooper SH*, **Hanley D** (2021) Quantification of avian egg coloration: a closer look at variation in egg coloration between species in relation to their latitude. OSCAR Celebration of Student Scholarship and Impact, George Mason University, Virtual (Poster).
- 62. Jamison QD*, Lim HC, **Hanley D**, Makula M (2021) Pollen identification for field use: can plants be identified by the colour of their pollen? OSCAR Celebration of Student Scholarship and Impact, Virtual (Poster)
- 61. Moghaddame-Jafari B*, Rutledge S*, **Hanley D** (2021) Diffuse coevolution selects for the generic eggshell color of the brown-headed cowbird. George Mason University Spring 2021 semester's Student Research Day, Virtual (Poster)
- 60. Cooper SH* & **Hanley D** (2021) Quantification of avian egg coloration: a closer look at variation in egg coloration between species in relation to their latitude. 10th Annual College of Science Undergraduate Research Colloquium, George Mason University, Virtual (Poster) *Awards: Award Winner in the Life Sciences category*
- 50. Mattison JH, Hauber ME, **Hanley D**, Studer B*, Abolins-Abols M (2021) Is brood parasitism a stressor? Measuring heart rate in experimentally brood-parasitized female songbirds. CISAB: Animal Behavior Conference 2021 (Poster)
- 49. **Hanley D**, Wisocki PA*, Kennelly P, Rojas Rivera I*, Cassey P, Burkey ML, & Hauber ME (2020) The colorful world of animal signals. North American Ornithological Conference 2020, Virtual (Oral)
- 48. Rutledge S*, Carr DE, Hauber ME, **Hanley D** (2020) Master illusionists or amateur artists: do the

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- patterned parasitic eggs of the generalist brown-headed cowbird resemble host eggs? North American Ornithological Conference 2020, Virtual (Poster)
47. Rutledge S*, Carr DE, Hauber ME, **Hanley D** (2020) Does nest lighting affect color similarity between cowbird (*Molothrus ater*) and host eggs? Animal Behavior Society, Virtual (Oral).
 46. Rutledge S*, Carr DE, Hauber ME, **Hanley D** (2018) Master illusionists or careless mimics: does the brown-headed cowbird's (*Molothrus ater*) parasitic eggs resemble the eggs of host species? Northeast Regional Undergraduate Research Conference, 2019 Nov 9-10, Keene, NH, USA (Poster)
 45. Rutledge S*, Carr DE, Hauber ME, & **Hanley D** (2019) Professional illusionists or amateur mimics: egg-laying techniques of the brown-headed cowbird. PASSHE STEM Student Research Conference, Kutztown, PA, USA (Oral)
 44. Wisocki P*, Kennelly P, Rojas I*, Cassey P, & **Hanley D** (2018) Cartographic Considerations of Mapping Global Variations in Avian Eggshell Colors. North American Cartographic Information Society. Norfolk, VA, USA (Talk)
 43. Rojas I*, **Hanley D** (2018) Are cavity nests selecting for brighter eggs? Resolving the mysteries of the avian egg. Sheffield, UK (Poster)
 42. **Hanley D**, Wisocki P*, Grim T, Hauber ME, & Moskát C (2018) Co-evolutionary consequences for color-based rejection biases. Ecological Society of America, New Orleans, Louisiana, USA (Talk)
 41. Wisocki P*, Kennelly P, Rojas I*, Cassey P, & **Hanley D** (2018) Avian eggshell colors selected by solar irradiance. Ecological Society of America, New Orleans, Louisiana, USA (Poster)
 40. Czarnecki C*, Manderino R, **Hanley D**, Parry D (2018) Ultraviolet reflectance and relative bird predation on plasticine caterpillar dummies. Ecological Society of America, New Orleans, Louisiana, USA (Talk)
 39. Āboliņš-Ābols M, **Hanley D**, Moskát C, Grim T, & Hauber ME (2018) Egg rejection by brood parasite hosts is based on color differences across a natural color gradient. International Society of Behavioral Ecology, Minneapolis, Minnesota, USA Minneapolis, Minnesota, USA (Poster)
 38. Wisocki P*, Kennelly P, Rojas I*, Cassey P, & **Hanley D** (2018) Avian eggshell colors selected by solar irradiance. Esri International User's Conference Map Gallery, San Diego, California, USA (Poster)
 37. Wisocki P*, Kennelly P, Rojas I*, Cassey P, & **Hanley D** (2018) Avian eggshell colors selected by solar irradiance. Society for Conservation GIS Map Gallery, Monterey, California, USA (Poster)
 36. Vasas V, **Hanley D**, Kevan P, & Chittka L (2017) The adaptive significance of using long-wavelength sensitive receptors for edge detection in bees. 35th International Ethological Conference, Estoril, Portugal (Talk)
 35. Hauber ME, **Hanley D**, López AV, Fiorini V, & Grim T (2017) Testing optimal acceptance threshold theory in egg rejecter hosts of avian brood parasites. Animal Behavior Society. Toronto, ON, Canada (Talk)
 34. Šulc M*, **Hanley D**, Brennan PLR, Hauber ME, Grim T, & Honza M (2017) Why do some hosts reject cuckoo eggs late [Proč někteří rákosníci odmítají kukaččí vejce opožděně]? Zoology Days [Zoologické Dny], Brno, Czech Republic (Talk)
 33. **Hanley D**, Grim T, & Hauber ME (2016) How hosts recognize parasitic eggs: asymmetrical egg discrimination along an eggshell colour gradient. Society for Experimental Biology (Satellite Meeting) Brighton, UK (Invited Talk)
 32. **Hanley D**, López AV, Gern K*, Grim T, & Hauber ME (2016) Birds recognize parasitic eggs using colour categorization. Society for Experimental Biology. Brighton, UK (Poster)
 31. Dainson M*, Hauber ME, López AV, Grim T, & **Hanley D** (2016) How contrast between eggshell

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- ground and spot coloration affects egg rejection rates in the American Robin. Animal Behavior Society. Columbia, Missouri, USA (Poster)
30. **Hanley D** (2015) At the intersection of perception, behavior, and evolution: how I study nature's colors. Early professionals mini-talk symposium at the American Ornithologists' Union/ Cooper Ornithological Society Joint Meeting. Norman, Oklahoma (Talk)
 29. **Hanley D**, Grim T, Cassey P, & Hauber ME (2015) The role of pigments in the (limited) diversity of avian eggshell colors. American Ornithologists' Union/ Cooper Ornithological Society Joint Meeting. Norman, Oklahoma (Talk)
 28. **Hanley D**, Samaš P, Heryán J*, Hauber ME, & Grim T (2015) Presence at the nest predicts responses to experimentation. Nest construction and function. Lincoln, UK (Talk)
 27. **Hanley D** (2015) Acceptance thresholds and egg discrimination vary by colour. Post UP II conference 2. Olomouc, Czech Republic (Talk)
 26. **Hanley D**, Samaš P, Hauber ME, & Grim T (2014) Clutch arrangement hypothesis: an experimental test. International Society of Behavioral Ecology, New York, NY, USA (Talk)
 25. Fecheyr-Lippens DC, D'Alba L, Hauber ME, Waterhouse G, **Hanley D**, Grim T, & Shawkey, MD (2014) Mechanisms of UV and white color production in avian eggshells. International Society of Behavioral Ecology, New York, NY, USA (Poster)
 24. Williams DL, Baker N, Garrow M, & **Hanley D** (2014) Bird eggs, bodies, and bombs - predicting visible spectra and color with Gaussian and Excel. 247th ACS National Meeting and Exposition. Dallas, TX, USA (Poster)
 23. **Hanley D** (2013) Who moved my eggs? An experimental test of the arrangement hypothesis. Post UP II conference 1. Olomouc, Czech Republic (Talk)
 22. Williams DL, **Hanley D**, & Garrow MT* (2012) Simulation of avian egg pigments using Gaussian03W. Southwest Regional American Chemical Society. Baton Rouge, LA, USA (Talk)
 21. **Hanley D**, Stoddard MC, Cassey P, & Brennan PLR (2012) Are immaculate eggs in ground nesting birds conspicuous to conspecifics and predators and could they be a signal at the nest? Nest construction and function. Lincoln, UK (Talk)
 20. **Hanley D** (2012) Eggshell conspicuousness and paternal brood patch development in the American Thrashers. Nest construction and function. Lincoln, UK (Poster)
 19. **Hanley D**, Diamond AW, Kelly KG, Holberton R, & Norris DR (2012) Reconstructing diet and colour: A history of the Atlantic Puffin. North American Ornithological Conference. Vancouver, BC, Canada (Talk)
 18. Kelly KG, Holberton R, **Hanley D**, & Diamond AW (2012) Is the colour of Atlantic Puffin bills and feet an honest signal of condition? North American Ornithological Conference. Vancouver, BC, Canada (Poster)
 17. **Hanley D** (2012) Eggshell conspicuousness and paternal brood patch development in the American Thrashers. North American Ornithological Conference. Vancouver, BC, Canada (Poster)
 16. Dearborn DC, **Hanley D**, Ballantine K*, Cullum J*, & Reeder D (2012) Antioxidants, female quality, and signals in eggshell color, as part of a symposium "Evolution of Communication: A Symposium to Honor R. Haven Wiley". Joint meeting of the Animal Behavior Society and Human Behavior and Evolution Societies. Albuquerque, NM, USA (Talk)
 15. **Hanley D** & Doucet SM (2011) Herring gull eggshell reflectance as a bioindicator of environmental stress. MITACS Research Showcase. Toronto, ON, Canada (Poster)
 14. **Hanley D** & Doucet SM (2011) Does egg coloration vary with environmental stress? A long-term study in Herring Gulls. Society of Canadian Ornithologists. Moncton, NB, Canada (Poster)
 13. Doucet SM, **Hanley D**, & Cassey P (2011) The evolution of eggshell color: egg visibility, solar radiation, and microbial invasion. Animal Behavior Society. Bloomington, IN, USA (Poster)
 12. **Hanley D** & Doucet SM (2010) Does egg coloration vary with environmental stress? A long-term

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- study in Herring Gulls. Lake Erie Millennium Network. Windsor, ON, Canada (Poster)
11. **Hanley D** & Doucet SM (2009) The evolution of avian egg coloration. American Ornithologists' Union. Philadelphia, PA, USA (Talk)
 10. **Hanley D** & Doucet SM (2009) The evolution of avian egg coloration. Animal Behavior Society. Pirenópolis, Goiás, Brazil (Talk)
 9. **Hanley D** & Doucet SM (2008) Egg coloration in ring-billed gulls (*Larus delawarensis*): a test of the sexual signaling hypothesis. International Society of Behavioral Ecology. Ithaca, NY, USA (Talk)
 8. Pitcher TE, Doucet SM, Beausoleil J, & **Hanley D** (2008) Secondary sexual characters and sperm traits in coho salmon. International Society of Behavioral Ecology. Ithaca, NY, USA (Poster)
 7. **Hanley D** & Doucet SM (2007) Egg colouration, female quality, and parental investment in Ring-billed Gulls. Society of Canadian Ornithologists. Elgin, ON, Canada (Talk)
 6. **Hanley D** & Dearborn DC (2007) Conspicuous blue egg pigmentation as a determinant of male parental care in *Dumetella carolinensis*. Masters Defense Bucknell University, Lewisburg, PA, USA (Talk)
 5. **Hanley D** & Dearborn DC (2006) Conspicuous blue egg pigmentation as a determinant of male parental care in *Dumetella carolinensis*. IV North American Ornithological Conference Veracruz, Mexico (Poster)
 4. **Hanley D**, Dearborn D, Hawley D, & Dhondt AA (2005) Color signals in avian species. Sigma Xi Student Research Conference Seattle, WA, USA (ribbon of excellence received, - Poster)
 3. **Hanley D**, Hawley DM, Lovette IJ, & Dhondt AA (2004) Are the effects of the eastern House Finch bottleneck evident today? An investigation through the use of allelic and haplotypic diversity. Honors defense. Cornell University. Ithaca, NY, USA (Talk)
 2. **Hanley D**, Hawley DM, Lovette IJ, & Dhondt AA (2004) Are the effects of the eastern House Finch bottleneck evident today? An investigation through the use of allelic and haplotypic diversity. AFO – WOS conference Ithaca, NY, USA (Poster)
 1. **Hanley D**, Hawley D, Lovette IJ, & Dhondt AA (2004) Are the effects of the eastern House Finch bottleneck evident today? An investigation through the use of allelic and haplotypic diversity. 19th Undergraduate Research Forum. Ithaca, NY, USA (Poster)

Invited Seminars:

13. **Hanley D** (2021) Preserved but not forgotten: how preserved eggs continue to provide insights into avian ecology. The Bird Museum - The Western Foundation of Vertebrate Zoology, Camarillo, CA, USA
12. **Hanley D** (2021) Tales of deception and cunning from the natural world: the role of avian color perception in message decryption. Washington Youth Summit on the Environment (WYSE), Fairfax, VA, USA
11. **Hanley D** (2020) The colorful world of animal signals. The Center for Gifted Youth, Brookville, NY, USA
10. **Hanley D** (2018) Global variation in avian egg color. Blandy Experimental Farm, University of Virginia, Boyce, VA, USA
9. **Hanley D** (2018) Measuring perceptual constraints on decision-making in a hosts of the brown-headed cowbird. Blandy Experimental Farm, University of Virginia, Boyce, VA, USA
8. **Hanley D** (2017) Uncovering evolutionary and cognitive patterns using eggshell pigments. SUNY Farmingdale, NY, USA
7. **Hanley D** (2017) Evolutionary processes that drive global patterns in avian eggshell color: a tale of two tones. Seminar series guest lecture. LIU Post, Brookville, NY, USA
6. **Hanley D** (2016) Canaries in the coal mine: can eggshell colors indicate environmental health? CUNY Brooklyn, NY, USA

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5. **Hanley D** (2013) Environmental and evolutionary pressures shaping natural colours, Universität Bern, Bern, Switzerland
4. **Hanley D** (2013) How does risk influence eggs? The Academy of Sciences of the Czech Republic, Institute of Vertebrate Biology, Brno, Czech Republic
3. **Hanley D** (2013) The evolution of avian egg colour: the influence of care, risk, and recognition. Palacký University, Olomouc, Czech Republic
2. **Hanley D** (2012) Colourful eggs and hypotheses on the evolution of avian egg colour. Toronto Ornithological Club. Toronto, ON, Canada
1. **Hanley D** (2011) Collection science through comparative analysis: investigating the evolution of avian egg color. Delaware Museum of Natural History. Wilmington, DE, USA

Awards and Scholarships:

2020	American Ornithological Society, Member Elect
2020	Abraham Krasnoff Memorial Award for Lifetime Scholarly Achievement
2016	Society for Experimental Biology travel award
2015	American Ornithologists' Union post-doc travel award
2014	International Society for Behavioral Ecology travel award
2011-2013	Ontario Graduate Scholarship, University of Windsor
2009	NSERC Vanier Competition Finalist
2007-2009	Presidential Scholarship
2008	Chris Wysiekierski Memorial Scholarship
2007-2011	International Student Tuition Scholarship, University of Windsor
2007	U.S. – Canada Fulbright Program Alternate
2004-2006	Full Tuition Waiver
2004	Morrison Award
2004	American Society of Animal Science Scholastic Achievement Award
2004-2005	Nominated to the International Scholar Laureate Program
2000-2004	National Dean's List
2000-2004	University dean's List
2002-2004	Dyson Scholarship
2000	New York State's Leaders of Tomorrow, Lottery scholarship Alternate

External Research Grants:

2019	National Geographic Society, Technology Grant
2017	Ocean Optics – Corporate Sponsorship
2011-2013	MITACS Strategic Fellowship Research Award, University of Guelph
2009	Chapman Memorial Fund, American Museum of Natural History
2009	Marcia Brady Tucker Travel Award, American Ornithologists' Union
2009	Student Research Award, Animal Behavior Society
2009	Student Travel Award, Animal Behavior
2008	The Field Museum Visiting Scholarship, University of Chicago
2008	Collections Study Grant, American Museum of Natural History
2008	Grant in Aid of Research, Sigma Xi
2007	Explorers Fund Grant, Explorer's Club
2003	Explorers Club Grant, Explorer's Club

Internal Research Grants:

2017	Faculty Research Grant, Long Island University
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2017 Student-Faculty Research Grant, Long Island University
2006 McKenna Fund, Bucknell University
2005-2006 Research Grant, Bucknell University
2004 Research Grant, Cornell University
2003 NSF Research Experience for Undergraduates, Cornell University
2002 NSF Research Experience for Undergraduates, University of Virginia

Peer Reviewer:

Journals Acta Ornithologica, American Naturalist, Animal Behaviour, Animal Biology, Avian Biology Research, Biology Letters, Behavioral Ecology, Behavioral Ecology and Sociobiology, Behavioural Processes, Biological Journal of the Linnean Society, Chinese Birds, Ecology and Evolution, Ecology Letters, Ecological Modelling, eLife, Emu, Environmental Science and Pollution Research, Evolutionary Ecology, Functional Ecology, Ibis, Journal of Avian Biology, Journal of Ethology, Journal of Insects, Journal of Field Ornithology, Journal of Ornithology, Methods in Ecology and Evolution, Naturwissenschaften, Oecologia, Oikos, PLoS One, Philosophical Transactions of the Royal Society of London B, Proceedings of the Royal Society B, Royal Society Open, Scientific Reports, The Auk, Wilson Journal of Ornithology

Grants Hungarian Scientific Research Fund, MITACS Research Review Committee, The Leverhulme Trust, National Geographic Society, American Ornithological Society Postdoctoral Awards

Book Chapters

Honza M and Cherry MI (2017) Egg characteristics affecting egg rejection *In* Cuckoo brood parasitism (Soler M, ed.) Oxford University Press, Oxford

Brulez K, Pike TW, & Reynolds SJ (2015) The avian eggshell: structure, colour and signaling *In* Nests, eggs and incubation: new ideas about avian reproduction. (Deeming C & Reynolds SJ, eds.) Oxford University Press, Oxford

Committee Service:

2020-present WAC Committee
2018-2019 Campus 'Research Working Group'
2018 Campus 'Research Committee'
2018 Post and Beyond (on campus conference) Committee Chair
2017-2018 Faculty council
2016 Sustainability Committee LIU Post
2016 Campus Committee on Student Writing, Committee member

Other Professional Service:

2020-present American Ornithological Society Research Awards Committee
2015 American Ornithologists' Union, Early Professional Awards Subcommittee, Chair
2015 American Ornithologists' Union, Early Professionals' Committee
2009 Graduate Committee, University of Windsor, Department of Biological Sciences
2008 Appointments Committee, University of Windsor, Department of Biological Sciences
2007 Union Representative (CUPE 4580), University of Windsor, Department of Biological Sciences
2007 Fund raising committee, University of Windsor, Department of Biological Sciences

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2004-2006 Seminar Series Founder & Organizer, Bucknell University, Animal Behavior

Professional Societies: **awarded membership*

American Ornithological Society (Member Elect)*, American Ornithologists' Union*, Copper Ornithological Society, Explorers Club*, International Society of Behavioral Ecology, Sigma Alpha Lambda*, Sigma Xi*, Society of Canadian Ornithologists*, Society of Experimental Biology, The National Society of Collegiate Scholars*

Professional Development:

2016 Writing Across the Curriculum development workshop (16 September)
2012 Scientific Management, Rainmaker Strategies Group
2012 Presentation Skills, JADE Consulting & 3CC Consulting
2011 Project Management, Project Management Institute
2011 Networking, Communication, Business Etiquette Workshop, Positive Networking®
2009 Instructional Skills Certification, Center for Teaching and Learning, University of Windsor
2008-2011 Certified in Wilderness First Aid, Wilderness Medical Associates, Canada
2003 Ultrasound Training, Special Species Symposium, Cornell University Veterinary Hospital

Other Relevant Experiences:

2004 Curator's Assistant, Cornell University's Museum of Vertebrates
2003 Research Assistant, Iowa State & Cornell University
2002-2003 Research Assistant, Cornell University Lab of Ornithology
2002 Laboratory Assistant, Skidmore College
2001 Computer technical support representative, Skidmore College
1996-present Bird Bander (a.k.a. Ringer)