

DAKOTA E. MCCOY
724-766-4014 / dakotamccoy@g.harvard.edu

EDUCATION

Harvard University Ph.D., Organismic and Evolutionary Biology Supervisor: Professor David Haig	Cambridge, MA Expected 2021
Oxford University M.Phil., Geography & the Environment Supervisor: Professor Cameron Hepburn	Oxford, UK 2015
Yale University B.S. (Intensive), Biology	New Haven, CT 2013

FELLOWSHIPS, GRANTS, & AWARDS

International & National

Rhodes Scholarship	2013-15
NDSEG Graduate Fellowship	2016-present
Marshall Scholarship (declined to pursue Rhodes)	2013
Capital One Academic All-American (Division I women's track and field)	2013
Goldwater Scholarship	2011-13
NSF Research Experience for Undergraduates Award.	2012

Harvard University

Bowdoin Prize Best essay in the Natural Sciences (\$10,000)	2019
Star Prize Nominee for Undergraduate Advising	2020
Regeneron Prize Harvard Nominee for biomedical research proposals	2020
Ashford Fellowship (for PhD candidates at Harvard)	2015-present
Mind, Brain, and Behavior Graduate Student Award	Summer 2017
Mind, Brain, and Behavior Conference Award	2016

SCHOLARLY PUBLICATIONS

- My work has been covered in [National Geographic](#), [The Atlantic](#), the [New York Times](#), [Inside Science](#), [Science News](#), and more.

Published

McCoy, D. E. and Haig, D. (2020). Embryo selection and mate choice: can 'honest signals' be trusted? *Trends in Ecology and Evolution*, 35(4), 308-318.

Miller, R., Frohnwieser, A., Schiestl, M., **McCoy, D. E.**, Gray, R. D., Taylor, A. H., & Clayton, N. S. (2020). Delayed gratification in New Caledonian crows and young children: influence of reward type and visibility. *Animal cognition*, 23(1), 71-85.

McCoy, D.E. & Prum, R.O. (2019). Convergent evolution of super black plumage near bright color in 15 bird families. *Journal of Experimental Biology*, 222(18), jeb208140.

- Cover image (right top)

McCoy, D. E., Schiestl, M., Neilands, P., Hassall, R., Gray, R. D., & Taylor, A. H. (2019). New Caledonian Crows Behave Optimistically after Using Tools. *Current Biology*, 29(16), 2737-2742.

McCoy, D. E.*, Frye, B. M.*, Kotler, J., Burkart, J. M., Burns, M., Embury, A., ... & Goya, A. L. (2019). A comparative study of litter size and sex composition in a large dataset of callitrichine monkeys. *American journal of primatology*, e23038.

- Cover image (right middle)

McCoy, D. E., McCoy, V. E., Mandsberg, N. K., Shneidman, A. V., Aizenberg, J., Prum, R. O., & Haig, D. (2019). Structurally assisted super black in colourful peacock spiders. *Proceedings of the Royal Society B*, 286(1902), 20190589.

- Cover image (right bottom)

McCoy, D. E.*, Feo, T.*, Harvey, T. A., & Prum, R. O. (2018). Structural absorption by barbule microstructures of super black bird of paradise feathers. *Nature communications*, 9(1), 1.

McCoy, D.E. (2018) Evolutionary Change. In: Shackelford T., Weekes-Shackelford V. (eds) *Encyclopedia of Evolutionary Psychological Science*. Springer, Cham.

McCoy, D.E. (2018) Game Theory as a Foundation of Evolutionary Psychology. In: Shackelford T., Weekes-Shackelford V. (eds) *Encyclopedia of Evolutionary Psychological Science*. Springer, Cham

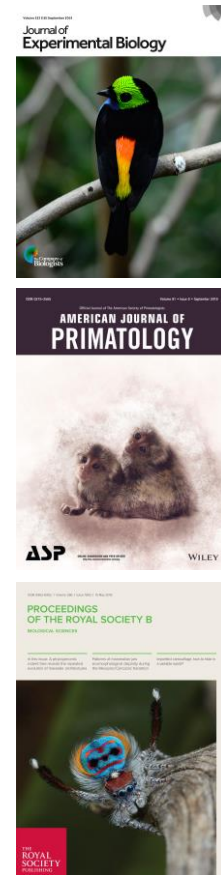
Petelle, M. R., **McCoy D.E.**, Alejandro, V.A., and Blumstein, D.T. (2013) Development of boldness and docility in yellow-bellied marmots. *Animal Behaviour* 86: 1147-1154.

McCoy, D.E. (2012) Connecticut birds and climate change: Bergmann's rule in the fourth dimension. *The Northeastern Naturalist* 19(2):323-334.

McCoy, D. E. and Norris, C.A. 2012. The Cranial Anatomy of the Miocene Notoungulate Hegetotherium mirabile (Notoungulata, Hegetotheriidae) with Preliminary Observations on Diet and Method of Feeding. *Bulletin of the Peabody Museum of Natural History* 53(2):355-374.

Under Review

McCoy, D.E., Shultz, A.J., Vidoudez, C., van der Heide, E., Trauger, S.A., & Haig, D.A (in review at *Nature Communications*). Microstructures amplify carotenoid plumage signals in colorful tanagers



McCoy, D.E., Ågren, J.A., Kotler, J. and Weir, B. (in review at *Evolutionary Applications*). Evolutionary conflict explains health problems during pregnancy

In Preparation

McCoy, D.E., Boatman, B., Koenig, B. & Haig, D.A. (In preparation). Cooperation and conflict in mixed-age house mouse huddles.

McCoy, D.E. & Hepburn, C.A. (In preparation). Sexual selection and altruism: the effect of gender on long-term donations by both men and women.

Reviewing Experience

- Proceedings of the Royal Society B
- Biological Journal of the Linnean Society
- Journal of Animal Ecology
- Current Zoology
- Journal of Vertebrate Biology

ACADEMIC PRESENTATIONS

Invited

“Super Black in Animals.” (2018) The 28th First Annual IgNobel Prize Ceremony & Lectures; 24/7 Speech. Cambridge, MA, 2018.

“Love is a Battlefield.” (2018) Veritalk, Harvard Graduate School of Arts and Sciences; podcast interview. Cambridge, MA, 2018.

“Structural Color in Birds.” Guest lecture, Harvard course on Ornithology. Cambridge, MA, 2018.

“Color, Feathers, and the Evolution of Beauty.” Harvard Museum of Natural History, Adult Class on Bird Coloration. Cambridge, MA, 2018.

“Huddling: Conflict and Thermogenesis.” Guest lecture: Harvard Course on Vertebrate Viviparity. Cambridge, MA, 2017.

“The Value of Museum Collections.” Verrill Medal Symposium 2016, Yale Peabody Museum of Natural History. New Haven, CT, 2016.

“Conflict in Evolution: Thermoregulation to sexual selection.” University of Zurich Afternoon Seminars. Zurich, Switzerland, 2016.

“Super Black” Harvard Mind, Brain, and Behavior Open Science Conference. Cambridge, MA, 2016.

“Connecticut Birds and Climate Change: Bergmann’s Rule in the Fourth Dimension.” St. Hilda’s College Greenfeast Environmental Festival. Oxford, UK, 2014.

Conferences

“The Corruption of Honest Signals: Mate Choice in Red Birds, Pregnancy, & the SAT” Society for Integrative and Comparative Biology Annual Meeting 2019. Tampa, FL, 2019.

- Finalist: Huey Award for best student paper (Division of Ecology and Evolution)

“Red velvet and neon yellow: vivid color from pigment and structure in the Ramphocelus tanagers.” The 135th Meeting of American Ornithology. East Lansing, MI, 2017.

“Super black feathers: structure, perception, and a proposed sensory bias.” 2016 Conference on Comparative Cognition. Melbourne, FL, 2016.

TEACHING & MENTORSHIP EXPERIENCE

Mentor for undergraduates:

- Senior Thesis Advisor, Department of Organismic and Evolutionary Biology
 - Thermoregulation and Sociality in Ground Squirrels
- NSF REU Advisor, Department of Organismic and Evolutionary Biology
 - City Trees across the USA: native species, biodiversity, and equity
- FDR Foundation Summer Research Advisor (for students of highest financial need)
 - Anaerobic Digestion as a Backstop to Intermittent Renewables

Teaching Fellow, Harvard University (Faculty of Arts and Sciences)

The First Nine Months (Professor David Haig), Head TF

Biology of Mammals (Professor Jonathan Losos)

Vertebrate Viviparity (Professor David Haig)

Cambridge, MA

Spring 2020

Fall 2017

Spring 2017

Teaching Fellow, Harvard Law School

Climate Solutions Living Lab (Professor Wendy Jacobs)

Cambridge, MA

Spring 2020

Adams House Resident Tutor, Harvard University

Co-head fellowships tutor; STEM tutor. Mentor undergraduates as they apply for science PhDs, post-graduate fellowships, jobs, and more. Primary academic advisor for 6 sophomores per year.

Cambridge, MA

2016-present

January-Term Instructor, Harvard University

How to Make A Book: From the Evolution of Writing to Movable Type

Designed and taught 3-week course

Cambridge, MA

January 2016

Teaching Fellow, Said Business School (University of Oxford)

Said Business School: Corporate Environmental Management (Professors Alex Money and Gordon Clark)

Corporate Environmental Management (Professor Gordon Clark)

Oxford, UK

Spring 2015

Fall 2014

SCIENCE OUTREACH

Organizations & Presentations

Museum of Fine Art: Art-Science Collaboration

With artist Jason Chase; three pieces of art on display using Singularity Black, a

Boston, MA

2018

super black structural paint developed by NanoLab, inspired by super black in animals.

Harvard Project Teach, Harvard Museum of Natural History.

Presentation: “Super Black.”

Cambridge, MA

2018

Ashford Fellowship Intern

Organize social events for Ashford fellows at Harvard

Cambridge, MA

2017-present

Science in the News

Public Presentation: “Super Black Birds and Spiders: Conflict in Evolution.”

Cambridge, MA

2018

Harvard Integrated Life Sciences, Public Writing

Op-Ed Writing for Scientists: designed and led workshop for graduate students with science writer.

Cambridge, MA

2017

Paid Science Blogger

Hired to write pieces about animal cognition, evolution. See www.cody.passle.net

Oxford, UK

2014-15

Popular Publications (Op-Eds and Letters)

Adam Mastroianni and **Dakota McCoy**. (May 17, 2018) “Countries with Less Gender Equity Have More Women in STEM--Huh?” *Scientific American*. Available at:

<https://blogs.scientificamerican.com/voices/countries-with-less-gender-equity-have-more-women-in-stem-huh/>

Dakota McCoy. (January 9, 2018). Super-black feathers can absorb virtually every photon of light that

hits them. *The Conversation*. Available at: <http://theconversation.com/super-black-feathers-can-absorb-virtually-every-photon-of-light-that-hits-them-89689>

Hollingsworth, L.R., Veeraraghavan, P., Wu, K.J., **McCoy D.E.**, Van Dervort, A., and Gunther K.E.

(December 1, 2017). Letter: Speak out against tuition waiver taxes. *Science*. Available at:

<http://science.sciencemag.org/content/358/6369/1395.1>

Rachel Kolb and **Dakota McCoy**. (August 3, 2017) “Gene-editing tool raises questions about what is ‘disease’.” *San Francisco Chronicle*. Available at:

<https://www.sfchronicle.com/opinion/openforum/article/Gene-editing-tool-raises-questions-about-what-is-11732894.php>

Dakota McCoy. (June 2, 2017). Pittsburgh isn't the city you think it is, Mr. President. *PennLive*.

Available at: https://www.pennlive.com/opinion/2017/06/pittsburgh_isnt_the_city_you_t.html

Dakota McCoy. (February 17, 2017). Climate & business: Letter to the Editor. *Pittsburgh Tribune*

Review (TribLive.com). Available at: <http://triblive.com/opinion/letters/11939678-74/climate-business-coal>

POLICY WORK

CovidLoanTracker

Cambridge, MA

2020-present

- Data visualization, data analysis, data cleaning, and website design
- Small businesses and receiving / failing to receive grants

GSAS Action Coalition

President: graduate students for social and environmental justice. Take many actions, averaging three focal topics per semester, to encourage graduate students to use their research skills for good. For example, we:

- Researched and wrote public comment on the Bureau of Ocean Energy Management (BOEM) Notice: Environmental Impact Statements; Availability, etc.: 2019-2024 Draft Proposed Outer Continental Shelf Oil and Gas Leasing Program
- Researched and wrote public comment on the U.S. Department of State (DOS) Notice: Environmental Impact Statements; Availability, etc.: Proposed Enbridge Energy, Limited Partnership Line 67 Expansion Project
- Researched and wrote public comment on the Department of the Interior (DOI) Notice: Review of Certain National Monuments Established Since 1996
- Submitted Harvard Against Solitary Confinement petition (over 400 signatures) to legislators
- Prompted Representative Denise Provost to submit a proposed amendment about solitary confinement programming to the Massachusetts omnibus criminal justice bill

Cambridge, MA

2018-present

Harvard Votes Challenge

Co-chair, Graduate School of Arts and Sciences
Nonpartisan initiative to get out the vote at Harvard

Cambridge, MA

2018

Research Assistant: Corporate Environmental Management

Smith School of Enterprise and the Environment, Oxford University

Oxford, UK

2014-15

INTERESTS

- Music; 9 years of a cappella singing, including 3 CDs and international tours (current group: VoiceLab)
- Egyptian hieroglyphics
- Bookbinding (affiliated with the Bow & Arrow Press)
- Sports & Running (varsity hurdler in college)

RAP MUSIC DISCOGRAPHY

San Juan, Puerto Rico

Uncredited appearance as backup dancer in music video by Puerto Rican reggaeton artist Audi.

2012