

Stanford



Dakota McCoy

Postdoctoral Scholar, Materials Science and Engineering

Bio

BIO

Dakota "Cody" McCoy is a Stanford Science Fellow (also supported by the NSF PRFB) who recently completed her PhD in Evolutionary Biology at Harvard University. Previously, she attended Oxford University as a Rhodes Scholar to study environmental policy. Combining applied physics with biological methods, she studies the functions and origins of optical adaptations in nature. For example, her work on "super black" birds and spiders has driven novel solar technology research, inspired recent studies of light manipulation in several animals, and will soon appear in a forthcoming United Nations booklet on bioinspiration. She also researches the unusual health risks of pregnancy for humans. Cody hails from Pittsburgh, greatest city in the USA, where she grew up with four siblings and four dogs.

HONORS AND AWARDS

- Stanford Science Fellow, Stanford University (7/1/2021-7/1/2024)
- NSF Postdoctoral Research Fellow in Biology, National Science Foundation (7/1/2021-7/1/2023)
- Trail-Crisp Medalist, The Linnean Society (2021)
- National Defense Science and Engineering Graduate Fellow, USA Department of Defense (9/1/2015-5/23/2021)
- Ashford Fellow, Theodore H. Ashford Fellowship (9/1/2015-5/23/2021)
- Rhodes Scholar, The Rhodes Trust (9/1/2013-6/1/2015)

STANFORD ADVISORS

- Jennifer Dionne, Postdoctoral Faculty Sponsor
- Jennifer Dionne, Postdoctoral Research Mentor

Publications

PUBLICATIONS

- **Species clustering, climate effects, and introduced species in 5 million city trees across 63 US cities.** *eLife*
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- **Meiosis solved the problem of gerrymandering.** *Journal of genetics*
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- **Meiosis solved the problem of gerrymandering** *JOURNAL OF GENETICS*
Agren, J., Haig, D., McCOY, D. E.
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- **After short interbirth intervals, captive callitrichine monkeys have higher infant mortality.** *iScience*
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- **Finite-difference Time-domain (FDTD) Optical Simulations: A Primer for the Life Sciences and Bio-Inspired Engineering.** *Micron (Oxford, England : 1993)*
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- **Microstructures amplify carotenoid plumage signals in tanagers** *SCIENTIFIC REPORTS*
McCoy, D. E., Shultz, A. J., Vidoudez, C., van der Heide, E., Dall, J. E., Trauger, S. A., Haig, D.
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- **Embryo Seection and Mate Choice: Can 'Honest Signals' Be Trusted?** *TRENDS IN ECOLOGY & EVOLUTION*
McCoy, D. E., Haig, D.
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- **Delayed gratification in New Caledonian crows and young children: influence of reward type and visibility** *ANIMAL COGNITION*
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2020; 23 (1): 71-85
- **Convergent evolution of super black plumage near bright color in 15 bird families** *JOURNAL OF EXPERIMENTAL BIOLOGY*
McCoy, D. E., Prum, R. O.
2019; 222 (18)
- **New Caledonian Crows Behave Optimistically after Using Tools** *CURRENT BIOLOGY*
McCoy, D. E., Schiestl, M., Neilands, P., Hassall, R., Gray, R. D., Taylor, A. H.
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- **A comparative study of litter size and sex composition in a large dataset of callitrichine monkeys** *AMERICAN JOURNAL OF PRIMATOLOGY*
McCoy, D. E., Frye, B. M., Kotler, J., Burkart, J. M., Burns, M., Embury, A., Eyre, S., Galbusera, P., Hooper, J., Idoe, A., Lopez Goya, A., Mickelberg, J., Peromingo Quesada, et al
2019; 81 (9): e23038
- **Structurally assisted super black in colourful peacock spiders** *PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*
McCoy, D. E., McCoy, V. E., Mandsberg, N. K., Shneidman, A., Aizenberg, J., Prum, R. O., Haig, D.
2019; 286 (1902): 20190589
- **Structural absorption by barbule microstructures of super black bird of paradise feathers** *NATURE COMMUNICATIONS*
McCoy, D. E., Feo, T., Harvey, T., Prum, R. O.
2018; 9: 1
- **Speak out against tuition waiver taxes** *SCIENCE*
Hollingsworth, L., Veeraraghavan, P., Wu, K. J., McCoy, D. E., Van dervort, A., Gunther, K. E.
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- **Development of boldness and docility in yellow-bellied marmots** *ANIMAL BEHAVIOUR*
Petelle, M. B., McCoy, D. E., Alejandro, V., Martin, J. A., Blumstein, D. T.
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- **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*
McCoy, D. E., Norris, C. A.
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- **Connecticut Birds and Climate Change: Bergmann's Rule in the Fourth Dimension** *NORTHEASTERN NATURALIST*
Mccoy, D. E.
2012; 19 (2): 323-334