

## EDUCATION

<b>Harvard University, Cambridge, MA, USA.</b>	Expected 2021
PhD in Evolutionary Biology	
<b>Oxford University, Oxford, UK.</b>	2015
MPhil in Environmental Policy	
<b>Yale University, New Haven, CT, USA</b>	2013
BS in Biology	

## AWARDS AND GRANTS (SELECTED)

<b>Department of Defense NDSEG Graduate Fellowship</b> (Army Research Office)	2016-present
<b>Rhodes Scholarship</b>	2013-15
<b>Harvard Office for Sustainability Grant</b> (\$5,000)	2020
<b>Bowdoin Prize</b> for Graduate Essay in the Natural Sciences (\$10,000)	2020

## RESEARCH (BIOLOGY, APPLIED PHYSICS, & SUSTAINABILITY)

### Overview and Impact

- work will be featured in a forthcoming United Nations Booklet on bioinspiration for sustainable design
- published 12 papers with more than 230 citations in the scientific literature (see [Google Scholar](#))
- media coverage in the [New York Times](#), [Scientific American](#), [Nat. Geographic](#), [The Atlantic](#), and more.
- methods include optical simulations, game theory, biological data science, and field work.

### Selected Projects

- **Super Black:** Demonstrated that birds-of-paradise and peacock spiders, have structures which absorb >99% of light. With collaborators, fabricating bio-inspired coatings for solar panels. See McCoy et al. 2020, *Nature Communications*, [LINK](#). McCoy et al. 2019, *Proc. Royal Soc. B*, [LINK](#).
- **City Trees and Urban Ecology:** Assembled a dataset of over 5 million city trees from US cities with species, exact location, condition, and more. Forthcoming paper on biodiversity and equity
- **Biology of Pregnancy:** Showed that pregnancy hormones represent an arms race between maternal and fetal interests. See McCoy and Haig 2020, *Trends in Ecology and Evolution*, [LINK](#).

## POLICY EXPERIENCE (SELECTED)

<b>Data Scientist, CovidLoanTracker</b> ( <a href="http://www.covidloantracker.com/">www.covidloantracker.com/</a> )	2020
Visualized data, analyzed data, and designed website for crowd-sourced effort to track the disbursement of government loans to >30,000 small businesses during Covid-19. Media coverage in <a href="#">CNN</a> , <a href="#">Forbes</a> ,	
<b>Researcher, Anaerobic Digestion for Clean Energy.</b> Cambridge, MA & Quapaw Nation, OK.	2019-20
With teammates, wrote a white paper on the feasibility of anaerobic digestion—using microbes to break down food waste and produce electricity and fertilizer—for the Quapaw Nation. Final Report: <a href="#">LINK</a> .	
<b>Research Assistant, Environmental Policy.</b> Oxford University, UK.	2014-15
Researched Corporate Environmental Management for Smith School of Enterprise and the Environment.	

## SKILLS

- Computer Science: familiar with Python and R; some experience with MATLAB
- Hobbies: a cappella singing, running (top ten all-time at Yale in 60m hurdles), bookbinding
- Languages: French (basic), American Sign Language (basic), Egyptian hieroglyphics (intermediate)

## RAP MUSIC DISCOGRAPHY

<b>Backup Dancer.</b> La Perla, Puerto Rico, USA.	2012
Uncredited appearance as backup dancer in music video by Puerto Rican reggaeton artist Audi.	