

Anne W. Hilborn

Contact details

Email: anneh@ucr.edu

Website: annehilborn.moonfruit.com

Twitter: @AnneWHilborn

Education

PhD, Department of Fish and Wildlife Conservation, Virginia Tech: Dec 2017

Dissertation: The effect of individual variability and larger carnivores on the functional response of cheetahs. Supervisor = Dr. Marcella Kelly

MSc, Ecology, Evolution and Conservation, Distinction, Imperial College London, UK: September 2011. Thesis: Hunting success in Serengeti cheetah. Supervisors = Dr. Sarah Durant and Dr. Nathalie Pettorelli.

B. S. Zoology, Magna Cum Laude, The University of Washington: June 2004,

Work experience

September 2018-present Postdoctoral Scholar, Department of Evolution, Ecology, and Organismal Biology, University of California Riverside. Working with six faculty members across two departments to create online classes in Ecology and Conservation Biology, and Global Change Biology. Use of Camtasia, Playposit, Zoom, and LMS systems to create video lectures and fully online educational activities.

January-July 2018 Web consultant, Virginia Tech Graduate School. Used content management system (Ensemble) to update and create new web pages for the Graduate School's Disrupting Academic Bullying Initiative. Work with Graduate Ombudsperson to create content for web pages. Attend meetings and workshops to disseminate information about the initiative and listen to feedback about the website.

January-March 2018 Faculty Fellow, Center for Communicating Science, Virginia Tech. Responsible for the creation and delivery of 3 workshops each on *Using Twitter for Science Communication* and *Raise Your Science Profile with Social Media*. Workshops were for 1.5-2 hours and for graduate students, staff and faculty.

January-August 2018 Instructor, Wildlife Field Techniques, Department of Fish and Wildlife Conservation, Virginia Tech.

June-August 2017 Web assistant, Virginia Tech Graduate School. Used content management system (Ensemble) to update and create new web pages for the Graduate School. Newly created pages were in the top 10% of pages viewed on site.

September-October 2015 Social media consultant, CFood, University of Washington. Advised on social media strategy, helped set up and promote project Twitter account. Condensed website content into Twitter appropriate material.

February-October 2014 Project Manager, Serengeti Cheetah Project, Tanzania. Responsible for the day to day running of the Serengeti Cheetah Project; Training and managing the project research assistant; Maintenance and logistics of field site in rural Tanzania including daily use and maintenance of LandRover vehicles. Responsible for the operation of Cheetah Watch, a citizen science project requiring collaboration with lodges, safari companies, and direct contact with tourists via face to face meetings and emails; Maintaining and entering data into the project database in Access, Contributing to yearly progress reports; Responsible for project social media outreach via Facebook, Twitter, and newsletters.

October 2011-December 2011 Research Scientist/Engineer, School of Aquatic and Fisheries Sciences, University of Washington. Responsible for the gathering of data from literature searches for a project on global biodiversity; identifying and counting zooplankton

March 2008-June 2010 Research Scientist/Engineer, Alaska Salmon Project, University of Washington. Part of team responsible for locating, netting, tagging and/or marking, and recording of measurement and daily locality data for research projects on sockeye salmon in the Wood River system, Alaska; Assisted in stream surveys for salmon population estimation; Outboard motor boat driving; Collection of limnological data in Wood River system, Alaska and Lake Washington, Washington; Part of team responsible for locating, counting and measuring tree swallows in egg and nestling forms in the Wood River System, Alaska; Entry and cleanup of current and historical Salmon Program data in Excel and Access; Laboratory work including the processing of animal, plant, dirt, and water samples for isotope analysis, identifying and counting zooplankton, the analysis of chlorophyll samples using a fluorometer.

June 2004-November 2007 Research Assistant, Serengeti Cheetah Project. Responsible for the collection of demographic and behavioral data on cheetahs in Serengeti National Park. Maintenance and logistics of field site in rural Tanzania including daily use and maintenance of LandRover vehicle. Data entry into Access database; Collection of cheetah fecal samples; Giving talks to student and tourists groups on cheetah ecology and conservation; Writing profiles of individual cheetahs for the Cheetah Watch website; Soliciting and entering data from tourists about cheetahs seen for the Cheetah Watch Program, as well as providing feedback to tourists about the cheetahs they saw; Writing of occasional short articles on cheetahs for Carnivore Newsbites Newsletter for the Tanzania Carnivore Project.

September 2003 Field Technician, Burke Museum bird collecting expedition, Arizona: Team member in expedition to Arizona to collect and prepare scientific avian

specimens. Responsible for preparation of scientific avian specimens in round body and spread wing forms to museum quality standards; Recording of locality and measurement data; Clearing bush for, set up, dismantling and packing of mist nets; Identification, removal and killing of birds caught in mist nets.

June- July, September 2002 Field Technician, Burke Museum bird collecting expedition, Siberia and Australia: Team member in expeditions to Siberia, Russia and New South Wales Australia to collect and prepare scientific avian specimens. Responsible for preparation of scientific avian specimens in round body, spread wing, and skeleton forms to museum quality standards; Recording of locality and measurement data; Clearing bush for, set up, dismantling and packing of mist nets; Identification, removal and killing of birds caught in mist nets; Caring for prepared specimens and packing them for transport.

Teaching Experience

Wildlife Field Techniques, Virginia Tech

Instructor (Spring 2018), Co-Instructor (Spring 2016-17), Teaching Assistant (Spring 2015). A two part course with 6 weeks of lectures and labs in the Jan-Mar, and 10 days of intensive field experience at Mountain Lake Biological Station in August. Classes were for between 40-50 students. As I modified and delivered roughly half of the lectures which covered experimental design, non invasive research techniques, identifying tracks and signs, scientific writing, and radio telemetry. I helped organize 3-6 undergraduate TAs per year with setting up labs on non invasive and invasive capture techniques, tracks and scat ID, orienteering, and map reading, and guiding students through class activities. During the field portion I ran exercises on reptile and amphibian identification, capture and survey techniques. I helped run field exercises on radio telemetry, orienteering in the field, and a computer lab on program Locate. I helped guide the students through a five day intensive research project including experimental design, choosing hypotheses, data collection, scientific writing, and elementary stats. I gave feedback on writing and presentation styles, and assisted with grading of assignments and exams.

Mammalogy, Virginia Tech.

Teaching Assistant (Fall 2013, 2016-17). 50-60 students. Responsible for the setting up and delivering content on natural history on North American mammals and skull and skin identification in one lab section per week (2016-17). Helped with writing and grading lab quizzes, and grading lab exams in 2016-17. In 2017 I also graded two writing assignments. In 2013 I wrote and delivered content on natural history on North American mammals and skull and skin identification for two lab sections per week. In addition my fellow TA and I set up the labs, wrote and graded lab quizzes and exams, and graded field journals.

Guest lectures

Oct 2017 Women in Ecology Webinar at Saint Mary's College. "How cheetahs coexist with lions and hyenas: Lessons from the Serengeti" 20 min

Nov 2016 Mammalogy, Virginia Tech. Gave two lectures, one on reproductive ecology and one on predation behavior. 75 min.

Peer Reviewed Journals

1. **Hilborn, A.**, Pettorelli, N., Caro, T., Kelly, M., Laurenson, M. K., Durant, S. (2018) Cheetahs modify their prey handling behavior depending on risks from top predators. *Behavioral Ecology and Sociobiology*. 72:74
2. Januchowski-Hartley, S., **Hilborn, A.**, Crocker, K.C., Murphy, A. (2016) Scientists stand with Standing Rock. *Science*, 353 (6307), 1506
3. Pettorelli, N., **Hilborn, A.**, Duncan, C., Durant, S. M. (2015) Individual variability: the missing component to our understanding of predator-prey interactions, in *Trait-Based Ecology - From Structure to Function*, vol. 52. Elsevier. 19-44
4. **Hilborn, A.**, Pettorelli, N., Orme, C.D.L., Durant, S.M. (2012) Stalk and chase: how hunt stages affect hunting success in Serengeti cheetah. *Animal Behaviour*, 84, 701–706.
5. Pettorelli, N., **Hilborn, A.**, Broekhuis, F., Durant, S. M. (2009). Exploring habitat use by cheetahs using Ecological Niche Factor Analysis. *Journal of Zoology*, 277, 141-148.

Web-Based Publications, Blogs, Non peer reviewed publications

1. **Anne Hilborn.** (2017) "[Bad mothers and why they make a difference to cheetah survival](#)". Aeon.
2. **Anne Hilborn.** (2017) How cheetah mothers help keep their cubs safe. *Wild Felid Monitor*. Vol. 10, 1, 18.
3. Simon Leather & **Anne Hilborn.** (2016) "[To name or not to name.](#)" *Biosphere*, issue 18.
4. **Anne Hilborn** (2015). "[Biologists take over Twitter](#)". The Fisheries Blog.

Media

Current Twitter Followers: ~13,900

March 2019 Talked about cheetahs on the [Tumble podcast](#)

June 2018 Talked about cheetahs on the [Drunken Safari podcast](#)

March 2018 Quoted in an article for [Earther](#) about March Mammal Madness

Dec 2017 Interviewed for [National Geographic](#) online article on the taxonomic correctness of animal emojis.

Feb 2017 Interviewed for [The Verge](#) on using Twitter for science communication

Jan 2017 Interview with Canadian radio show “[Quirks and Quarks](#)” about #bestcarcass

Jan 2017 Quoted in the [New York Times](#) about #bestcarcass, a hashtag I helped promote

Dec 2016 Coverage of my hashtag #bestspots in [National Geographic](#)

Oct 2016 “[Who eats faster, male or female cheetahs?](#)” The Wildlife Society

June 2016 [Radio interview](#) with the BBC about #fieldworkfail

Feb 2016 Through my weeklong curation of @realscientists, I started a conversation about menstruation during fieldwork, which was written up in [Nature News and Comment](#).

Nov 2015 Profile of my use of Twitter in [The Atlantic](#)

Sept 2015 A profile of me and my research was profiled for [Virginia Tech’s news page](#)

Sept 2015 Talk to the Virginia Tech student chapter of the Wildlife Society on being a wildlife biologist and fieldwork

Sept 2015 [Radio interview](#) with Australian Broadcasting Corporation about #cuteoff

July -August 2015 Sparked and promoted several mass participation trends on Twitter (#Fieldworkfail and #cuteoff) that raised awareness about aspects of fieldwork and biological science. These hashtags were featured in mainstream media such as [The Guardian](#), [Washington Post](#), [Huffington Post](#), [The Atlantic](#), [Le Monde](#), [National Geographic](#), [Mashable](#), [Slate](#), and [The Daily Mail](#).

April 2015 Podcast with Breaking Bio. “[Seeing Spots & Sniffing Poop with Anne Hilborn](#)”

Feb-Oct 2014 Responsible for Twitter and Facebook accounts for the Serengeti Cheetah Project

Outreach

Sept 2018 Skyped into Fall River Elementary School in Longmont, CO to talk to 40 kindergarteners about cheetahs.

Aug 2018 Gave a lecture to 25 high school students from the Philadelphia Zoo Crew on doing fieldwork in Alaska and Tanzania.

March 2018 Narrator for March Mammal Madness, which is a social media based tournament featuring simulated animal battles that take into account morphological and behavioral attributes of each species. Narrators research the competing species and write battles that take place on Twitter. Engagement with the #2018MMM hashtag includes 39,500 tweets, by 5229 accounts, with 10,000,000+ followers, for nearly 100,000,000 timeline deliveries. In addition, 1600 classrooms use the material to teach ~125,000 students in General Science, Earth Science, Biology, Environmental Science, and Life Science classes. <http://mammalssuck.blogspot.com/2018/02/march-mammal-madness-2018.html>

Oct 2017 Took part in a Science on Tap event at Rising Silo Brewery in Blacksburg, VA. Talked about observing carnivore predation behavior.

Aug 2017 Helped organize a 2 day trip by 14 high school students in the Zoo Crew Program at the Philadelphia Zoo to the Fish and Wildlife Department at Virginia Tech and Mountain Lake Biological Station, VA.

Jan 2017 Skyped into Fall River Elementary School in Longmont, CO to talk to 60 kindergarteners about lions.

Sept 2015 Talk to the Virginia Tech student chapter of the Wildlife Society on doing

fieldwork in Serengeti National Park.

Aug 2015 Helped organize a 2 day trip by 16 high school students in the Zoo Crew Program at the Philadelphia Zoo to the Fish and Wildlife Department at Virginia Tech and Mountain Lake Biological Station, VA. Gave students a talk on researching cheetahs.

July 2015 Talk to the AU chapter (Blacksburg) of Philanthropic Education Organization (P.E.O) on my cheetah research.

Jan 2015 Talk to high school seniors, The Northwest School, Seattle, USA. "Cheetahs, salmon and having fun in the field."

Honors, Awards, Grants

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| 2017 | Outstanding PhD Student, College of Natural Resources, Virginia Tech |
| 2017 | Georgia Pacific Dean's Graduate Fellowship, Department of Fish and Wildlife, Virginia Tech \$995 |
| 2016 | Edna Bailey Sussman Foundation Internship \$6,000 |
| 2016 | Burd Sheldon McGinnes Fellowship, Department of Fish and Wildlife, Virginia Tech. \$2,500 |
| 2015 | P.E.O Scholar \$15,000 |
| 2015 | Henry Sackett Mosby Scholarship, Department of Fish and Wildlife, Virginia Tech. \$2,000 |
| 2014 | National Science Foundation Doctoral Dissertation Improvement Grant \$20,085 |
| 2014 | Department of Fish and Wildlife Conservation Outstanding Teaching Assistant Award |

2010-2013 National Science Foundation Graduate Research Program Fellow
\$120,000

2004 B.S. Magna Cum Laude, University of Washington

Invited talks

Oct 2018 University of California Riverside, Department of Evolution, Ecology, and Organismal Biology. “The effect of prey, predators, and sociality of cheetah hunting behavior.”

Oct 2018 California State University Long Beach, Department of Biological Sciences. “The effect of prey, predators, and sociality of cheetah hunting behavior.”

June 2018 Graduate Education Summer Conference, Virginia Tech. “This I Believe”,

May 2017 Education Writers Association Conference, Washington D.C. “Storytelling with Social Media”

March 2017. College of Natural Resources, Virginia Tech. Women in Natural Resources Panel.

Contributed talks

Oct 2016 National Meeting The Wildlife Society, Raleigh, NC. “Dine and Dash: the effect of apex predators on cheetah handling time” Anne Hilborn, Nathalie Pettorelli, Tim Caro, Marcella Kelly, Karen Laurenson, and Sarah Durant.

Feb 2016 VA chapter of the Wildlife Society Conference. “Twitter as a science communication tool”. Anne Hilborn

Dec 2015. Tanzania Wildlife Research Institute’s Biannual Scientific Meeting. “Dash and Dine: Predation in Serengeti cheetahs.” Anne Hilborn, Nathalie Pettorelli, Tim Caro, Marcella Kelly, Karen Laurenson, and Sarah Durant.

Nov 2015. Zoological Society of London. “Using Social Media as a Scientist”. Anne Hilborn

March 2015. Virginia Tech Graduate Student Association Research Symposium “Dash and Dine: Predation in Serengeti cheetahs.” Anne Hilborn and Marcella Kelly

February 2015. VA chapter of the Wildlife Society Conference. “Dash and Dine: Handling time in wild cheetahs”. Anne Hilborn and Marcella Kelly

March 2013 Virginia Tech Graduate Student Association Research Symposium “Hunting Success in Serengeti Cheetahs.” Anne Hilborn, Nathalie Pettorelli, David Orme, Sarah

Durant

Oct 2011 University of Montana, “Hunting Success in Serengeti Cheetahs” Anne Hilborn, Nathalie Pettorelli, David Orme, Sarah Durant

Sept 2011 Imperial College London, “Hunting Success in Serengeti Cheetahs” Anne Hilborn, Nathalie Pettorelli, David Orme, Sarah Durant

Contributed Posters

Jan 2019 Advancing Diversity Workshop, Virginia Tech. “Guidelines On Identity Based Harassment In Off-Campus Research And Teaching” Anne Hilborn and Erin Heller

Workshops

Feb 2017 Tutorial for faculty, staff and students in the Department of Fish and Wildlife Conservation on getting started using Twitter as a science communication tool

Professional Service

Reviewer:

Funding Agencies: National Science Foundation, 1 full proposal; Graduate Women In Science, 1 full proposal.

Scientific Journals: Journal of Animal Ecology, Animal Behaviour, Wildlife Research, African Zoology, Integrative and Comparative Biology, Journal of Mammalogy

2016-2017 Member of the Gender and Ethnic Diversity Working Group, The Wildlife Society

2016-2017 President, The Fish and Wildlife Graduate Student Association at Virginia Tech