# Easton R. White

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Population Biology
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## EDUCATION

**University of California Davis** In progress
Doctoral Student in Population Biology

**Arizona State University** 2013
Bachelor of Science in Biology
Minor Mathematics

**Scottsdale Community College** 2010
Associate in Science
Associate in Arts

## RESEARCH INTERESTS

Theoretical ecology and evolution, marine ecology, population biology, fisheries, animal movement patterns, network theory, adaptive dynamics

## HONORS

Graduate
National Science Foundation Graduate Research Fellow 2013-2015
Fulbright Scholar 2013-2014

Undergrad
2013 Outstanding Graduating Senior- School of Life Sciences
2010 All-USA Academic Team Nominee
Phi Theta Kappa Honor Society, Scottsdale Community College
LeaderShape Graduate
Emerging Leaders Graduate

## PUBLICATIONS

### Published

**White, Easton R.**, Mark C. Myers, Joanna Mills Flemming, and Julia K. Baum. 2015. *Conservation Biology.* Shifting elasmobranch community assemblage at Cocos Island, an isolated marine protected area. In press.

Kessel S. T., Chapman D. D., Franks B. R., Gedamke T., Gruber S. H., Newman J. M., **White E. R.** and Perkins R. G. 2014. *Marine Ecology Progress Series.* Predictable temperature regulated residency, movement and migration in a large, highly-mobile marine predator.

**White, Easton R.** John D. Nagy, and Samuel H. Gruber. 2014. *Biology Direct.* Modeling the population dynamics of lemon sharks.

Robinson, James P.W., **Easton R. White**, Logan D. Wiwchar, Danielle C. Claar, Justin P. Suraci, Julia K. Baum. 2014. *Marine Policy*. The limitations of diversity metrics in directing marine global marine conservation

Gerber, Leah R. and **Easton R. White**. 2014. *Journal of Applied Ecology*. Two-sex matrix models in assessing population viability: when do male dynamics matter? In press.

Senko, Jesse, **Easton R. White,** Sellina S. Heppell, and Leah R. Gerber. 2014. *Animal Conservation*. A comparison of fishery management strategies for mitigating bycatch of vulnerable marine megafauna species. In press.

**In Progress**

**White, Easton R.** and John D. Nagy. 2014. Exploration of metapopulation dynamics with applications to the American pika. In preparation.

## WORK EXPERIENCE

**University of Victoria:** Fulbright Scholar/ Research Associate: September 2013-June 2014: Supervisor: Julia K. Baum

- Investigating population trends and predator-prey relationships of elasmobranchs in the Tropical Eastern Pacific

**Arizona State University:** Research Fellow: May 2012-May 2013: Supervisor: John Nagy

- Investigating evolutionary and population dynamics of metapopulations with a case study on the American pika

**Arizona State University:** Researcher: August 2011-May 2012: Supervisor: John Nagy

- Exploring population dynamics of various biological systems including a juvenile lemon shark nursery, a small mammal metapopulation, and a predator-prey relationship between wolves and moose

## INTERNSHIPS/ RESEARCH EXPERIENCE

**Gerber Lab: Marine Population Biology:** Researcher: January 2012- Present: Supervisor: Leah Gerber

- Using California sea lions as a case study to investigate consequences of population dynamics models using one and two sex structures
- Evaluating bycatch of turtles in Mexico using data of turtle beach strandings

**SCC/ASU Evolutionary Dynamics Laboratory:** Research Associate: May 2009- Present: Supervisor: John Nagy

- Studying the population dynamics of the predator-prey system on Isle Royale, Lake Superior by building mathematical models of the moose-wolf relationship

- Building a mathematical model of the American pika (*Ochotona princeps*) metapopulation found in the Sierra Nevada Mountains to study dispersal

**Bimini Biological Field Station:** Intern: Summer 2011: Supervisor: Samuel Gruber

- Research assistant for Passive Integrated Transponder (PIT) tagging surveys of juvenile lemon sharks (*Negaprion brevirostris*) in Bimini nurseries (12 hour night time gillnetting with 15 minute checks)
- Manual acoustic telemetry tracking of juvenile *N. brevirostris* surgically implanted with acoustic transmitters.
- Capture, tag, work-up and release of lemon, tiger, nurse sharks using various techniques, including long-line, gillnet, seine and rod and reel.
- Boat handling – 16 and 17 foot tiller handle skiffs (150+ hours)

**Jupiter Research Project:** Research Assistant: January- March 2011:
Supervisor: Steven Kessel

- Capture, tag, work-up and release of adult lemon, tiger, bull, and hammerhead sharks using rod and reel and "poly-ball" fishing methods
- Placing satellite and pop-up tags on selected individuals and tracking their movements
- Assisting with transmitter surgeries that allowed us to track the movements of sharks through a series of receivers set along the Southeastern coast of the United States
- Capture and tagging of juvenile lemon sharks at Cape Canaveral to study effects the air force base had on creating a marine preserve by accident

**Bimini Biological Field Station:** Volunteer: May- August 2010: Supervisor: Samuel Gruber

- Same techniques and skills were used as seen above

## TEACHING EXPERIENCE

### University of Victoria

Teaching Assistant, Advanced Ecology (BIO470). Spring 2014. Professor: Julia K. Baum

Guest Lecturer, Calculus for Students in the Social and Biological Sciences. (MATH102). March 2014. Exponential Growth and Decay. Professor: Margaret Wyeth.

Guest Lecturer, Conservation Biology (BIO 370). November 2013. Metapopulation dynamics. Professor: Julia K. Baum

Presenter, R Workshop (Ocean Networks Canada series). November 2013/ March 2014. Population models in R.

### Scottsdale Community College

Teaching Assistant, Mathematics Mentoring Partnership Summer Program. Summer 2013. Professor: John D. Nagy

- Assisted students with topics included: differential equations, stability analysis, and population modeling

Teaching Assistant, Introduction to Biological Research Seminar (BIO 298AA).

Fall 2011/ Spring 2012/ Fall 2012: Professor: John D. Nagy

- Helped teach course designed for advanced undergrads interested in biological research through field work and mathematical modeling

Guest Lecturer, Marine Biology (BIO 145). Spring 2011. Shark Research and Conservation.

Guest Lecturer, General Biology II (BIO 182). Spring 2011. Shark Research and Conservation.

## PRESENTATIONS/RESEARCH PRESENTED

Shifting elasmobranch community assemblage at a marine protected area. Genomes to Biomes Meeting, Canadian Society for Ecology and Evolution. Montreal, Quebec, Canada, May 2014.

Population declines of six elasmobranch species at a protected marine reserve in the eastern tropical Pacific. Pacific Ecology and Evolution Conference. Bamfield, British Columbia, Canada, March 2014.

Modeling demographic stochasticity in lemon sharks. Eco-Evo Retreat. Brackendale, British Columbia, Canada. October 2013.

Population and evolutionary dynamics of the American pika. AARMS. St. Johns, Newfoundland, Canada, July 2013.

Metapopulation dynamics of the American pika. Society for Mathematical Biology Annual Meeting. Tempe, Arizona. June 2013.

Sharks, Math, and Outreach. ASU SOLUR Senior Presentation. Tempe, Arizona. April 2013.

A stochastic, spatially-structured model for metapopulation dynamics. ASU SOLUR Research Symposium. Tempe, Arizona. March 2013.

Behavioral patterns of American pikas at low-elevation in the Great Basin, USA. Wildlife Society Annual Meeting- Southwest Region. February 2013.

A stochastic, spatially-structured metapopulation model with applications to the American pika. Joint Mathematics Meetings. Spring 2013.

Project Inspire: Previous work and how to get involved as a scientist conducting public outreach. SCC Research Symposium. Fall 2012.

A stage-structured stochastic model of juvenile lemon shark population dynamics. American Elasmobranch Society Annual Meeting. Vancouver, British Columbia. Summer 2012.

Exploring population dynamics of lemon sharks through a simple mathematical model. SCC Research Symposium. Spring 2012.

Metapopulation Dynamics of Great Basin Pikas. ASU SOLUR Research Symposium. Tempe, Arizona. Spring 2012.

A Stochastic, Spatially-Structured Model for Metapopulation Dynamics with Applications to the American Pika (*Ochotona princeps*). SCC Research Symposium. Fall 2011.

Annual population fluctuations in a predator-prey system using a series of discrete time stochastic models. International Council for Industrial and Applied Mathematics. Vancouver, British Columbia. July 2011.

## ADDITIONAL ACADEMIC TRAINING

**Software Carpentry Instructor Course: Summer 2014**

**Software Carpentry Bootcamp: April 2014**
University of Victoria
- Basics of Unix/Linux Shell, Python, databases, SQLite, Git

**Math Teaching Workshop:** January- March 2014
University of Victoria- Learning and Teaching Center
- 9-part series on how to teach mathematics in higher education

**Dynamical Systems and Mathematical Biology:** July-August 2013
Atlantic Association for Research in Mathematical Sciences (University of Newfoundland)
- Stochastic Modeling with Applications to Biology: Linda Allen and Edward Allen
- Mathematical Methods to Gain Biological Insight: Odo Diekmann
- (Audit) Mathematical Modeling in Developmental Biology and Medicine: Philip Manni

## VOLUNTEER POSITIONS/COMMUNITY OUTREACH

**Pi: Mathematics without Boundaries:** Cofounder: March 2012- Present
- Working in K-12 science classrooms to promote importance of mathematics and science
- Collaborating with School of Life Sciences (ASU) to bring K-12 students directly into research labs at ASU

**Center for Native and Urban Wildlife:** Volunteer: January 2010- May 2012
- Worked on local Butterfly and Burrowing owl surveys to assess their populations
- Helped maintain the center's "mini-zoo" that was used to teach 4$^{th}$ graders about the wildlife found in Arizona

**Phi Theta Kappa:** Vice President of Public Relations: August 2009- May 2011
- Promoted and planned all of the organization's events that were held both on and off campus promoting scholarship and service
- Helped to increase student involvement in various community service events

## FUNDING/AWARDS

NSF Travel Award, August 2014 ($1 700)
Fulbright student mobility award ($800)

NSF Travel Award, July 2013 ($1 300)
NSF Graduate Research Fellow, 2013-2015 ($90 000 over three years)
Fulbright Scholar, 2013-2014 ($15 000)
Outstanding Graduating Senior, 2013 ($500)
All- Arizona Academic Team Tuition Waiver, 2010-2012 (~$20 000 over two years)
American Elasmobranch Society Student Travel Award, July 2012 ($500)
Scottsdale Community College Travel Grant, July 2011 ($1 200)
Three-time MCCCD Foundation Scholarship Recipient (3 x $500)

## PROFESSIONAL SKILLS + QUALIFICATIONS

- **Computer competency**:
  - Microsoft Office, R-programming software, MATLAB, LaTeX
  - Unix Shell, SQLite, Python, Git/GitHub
- PADI Rescue Scuba Diver certification
- AAUS Scientific Diver certification
- DAN Emergency Oxygen Provider, CPR/ First Aid Certified
- 150+ logged open water dives in various environments
- General boating knowledge- captaining, operating, maintenance
- General truck and car knowledge- stick shift, trailer towing, maintenance

## MEMBERSHIPS

Ecological Society of America (ESA)

Canadian Society for Ecology and Evolution (CSEE)

American Elasmobranch Society (AES)

Society for Mathematical Biology (SMB)

Divers Alert Network (DAN)

PADI Diving Society

American Association for the Advancement of Science (AAAS)

Society for Industrial and Applied Mathematics (SIAM)

Pi: Mathematics Without Boundaries