**Erica Christensen**

Department of Wildlife Ecology and Conservation

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**EDUCATION**

PhD Wildlife Ecology and Conservation Dec. 2018 (expected)

University of Florida, Gainesville, Florida

Adviser: Dr. Morgan Ernest

MS Environmental Science June 2011

Drexel University, Philadelphia, Pennsylvania

BA Pure Mathematics Dec. 2007

Oberlin College, Oberlin, Ohio

**PUBLICATIONS**

Ernest, S.K.M., Yenni, G.M., Allington, G., **Christensen, E.M**., Geluso, K., Goheen, J.R., Schutzenhofer, M.R., Supp, S.R., Thibault, K.M., Brown, J.H., et al. (2016). Long-term monitoring and experimental manipulation of a Chihuahuan desert ecosystem near Portal, Arizona (1977–2013). Ecology 97, 1082–1082.

**PREPRINTS**

**Christensen, E**.**M.,** Harris, D., and Ernest, S. K. M. (2018). Long-term community change through multiple rapid transitions in a desert rodent community. bioRxiv. doi: <https://doi.org/10.1101/163931>. Accepted in *Ecology*

White, E.P., Yenni, G.M., Taylor, S.D**., Christensen, E.M**., Bledsoe, E.K., Simonis, J.L., Ernest, S.K.M. (2018). Developing an automated iterative near-term forecasting system for an ecological study. bioRxiv. doi: <https://doi.org/10.1101/268623>. Submitted: Methods in Ecology and Evolution

**CONFERENCE ABSTRACTS**

Christensen, EM, Harris, DJ, Ernest, SKM. (2017, August). *Novel approach for the analysis of community dynamics: separating rapid reorganizations from gradual trends.* Talk presented at the Ecological Society of America Conference in Portland, OR, USA.

Christensen, EM, Ernest, SKM. (2016, July). *Transition between alternative states in a small mammal community.* Poster presented at the Gordon Research Conference: Unifying Ecology Across Scales in Biddeford, Maine, USA.

Christensen, EM, Ernest, SKM. (2015, August). *Investigating long-term stability of community structure in a desert ecosystem.* Poster presented at the Ecological Society of America Conference in Baltimore, MD, USA.

Christensen, EM, Ernest, SKM. (2014, July). *Identifying consumer-resource interaction at different time scales during a long-term study.* Poster presented at the Gordon Research Conference: Unifying Ecology Across Scales in Biddeford, Maine, USA.

**RESEARCH EXPERIENCE**

**Research Assistant:** The Portal Project: University of Florida field site, near Portal, AZ, *2012-present*

* Managed data collection in long-term study of desert rodent communities, setting ~1200 live traps divided over two nights every month
* Processed captured rodents in the field by PIT tagging, weighing, and identifying sex and species
* Performed plant surveys twice a year: including identifying and counting desert grass and forb species within quadrats, and running transects for shrub cover estimation
* Managed and instructed volunteers for assisting with monthly rodent surveys
* Managed 40-year dataset, maintained on GitHub, including writing scripts in R for data cleaning and error checking

**Data and Computational Manager:** Lone Cabbage Reef Oyster Restoration Project, University of Florida, *1/2018-present*

* Managed oyster count data and water quality data collected for the Lone Cabbage Reef Restoration Project near Cedar Key, FL
* Trained other researchers in best practices of data management and use of GitHub for version control

**Research Assistant:** The Leatherback Trust/Earthwatch Institute, Playa Grande, Costa Rica, *9/2011-3/2012*

* Monitored nesting leatherback, olive ridley, and black sea turtles using nightly foot patrols along a 3.6 km beach
* Monitored nests during incubation using thermocouples, and marked adult females using PIT tags or Monel flipper tags
* Instructed Earthwatch volunteers on data collection such as carapace measurements and egg counts
* Collaborated with Spanish-speaking public on a daily basis including National Park guards and local tour guides

**Volunteer Coordinator/Research Assistant:**Drexel University/Earthwatch Institute, Barnegat, NJ, *Summer 2011 & 2012*

* Acted as field liaison between Drexel staff and groups of 8 Earthwatch volunteers during 9-day expeditions
* Organized local excursions for volunteers as part of the Earthwatch expeditions, such as canoeing in the Pine Barrens, and visiting Albert Music Hall and Jenkinson’s Aquarium
* Trapped diamondback terrapins daily in Barnegat Bay (in particular Forsythe National Wildlife Refuge) in the 6th and 7th years of a planned 20-year population study
* Processed captured terrapins in field lab by PIT tagging, taking blood samples, x-raying gravid females, and measuring carapace dimensions

**Junior Scientist:** Navmar Applied Sciences Corp. (formerly Advanced Avionics Inc.),Warminster, PA, 5*/2008-6/2011*

* Simulated free-drifting ocean sonobuoys using a MATLAB model, as support to Navy projects
* Modeled ocean currents in conjunction with University of Delaware personnel
* Present work in official reports

**Volunteer:** Drexel University, lab of Dr. Bien, Warren Grove Gunnery Range, NJ, *Summer 2010*

* Tracked Northern Pine Snake individuals using implanted beacons and handheld antennas, to study patterns in habitat use on an active military test range

**TEACHING/MENTOR EXPERIENCE**

**Teaching Assistant:** University of Florida, *Fall 2017*

* Assisted Dr. Ernest in semester-long graduate-level course: WIS 6934 “Biodiversity: Ecological Patterns and Processes”
* Led hour-long class discussions on two occasions
* Led hour-long R-based workshop on computing biodiversity metrics

**Workshop Instructor:** Software Carpentry *2016-present*

* Certified instructor for Software Carpentry organization as of January 2016
* Instructed 20-30 students in basics of Unix shell and R at workshops at the University of North Carolina, Chapel Hill and the University of Florida, Gainesville

**Teaching Intern***:* Besant Hill High School (formerly Happy Valley School), Ojai, CA, *Jan. 2007*

* Led classroom activities and assisted with curriculum planning in Chemistry, Algebra, and Calculus at a private High School

**Chemistry Lab Teaching Assistant***:* Oberlin College*,* Oberlin, OH, *Fall 2006*

* Assisted professor in teaching laboratory experiments in weekly lab sessions

**Peer Tutor**: Mathematics Department, Oberlin, OH, *Fall 2005-Spring 2006*

* Served as expert resource for homework assignments on a weekly basis for Calculus II

**HONORS AND AWARDS**

**Presidential Doctoral Research Fellowship**, Utah State University, *2012-2014*

* $20,000/yr stipend and waiver of resident tuition

**QUANTITATIVE SKILLS**

**Programming and Data Management**

* Nine years of experience programming in scripting languages such as R, Python, and MATLAB
* Qualified instructor for Software and Data Carpentry (<https://software-carpentry.org/>) with experience instructing beginner workshops on the Unix shell and R
* Proficient using GitHub for version control
* Experience using SQL and Microsoft Access for database manipulation
* Classroom experience with SAS and ArcGIS

**ADDITIONAL SKILLS**

**Wilderness First Aid certification**

* Certified March 2018, by SOLO organization (<https://soloschools.com/>)