

Stephanie K. Archer

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EDUCATION:

- 2015 Ph.D. Zoology NC State University (began at Oregon State University and Florida International University)
2009 M.S. Ecology Utah State University
2004 B.S. Ecology University of Georgia

PROFESSIONAL APPOINTMENTS:

- 2016 - Present *Natural Sciences and Engineering Research Council of Canada's Visiting Postdoctoral Fellowship*. Fisheries and Oceans Canada
2017 - Present Postdoctoral Researcher, Canadian Healthy Oceans Network 2.

PUBLICATIONS:

9. **Archer, SK**, JL Stevens, RE Rossi, KO Matterson, and CA Layman. 2017. Abiotic conditions drive significant variability in microbial activity and nutrient processing in a common Caribbean sponge, *Ircinia felix*. *Limnology and Oceanography* **62**: 1783–1793. DOI:10.1002/lno.10533
8. Easson, CG, **SK Archer**, KO Matterson, CJ Freeman, RW Thacker. 2015. Spatial variability in sponge community assemblages across an anthropogenic gradient in Bocas Del Toro, Panama. *PeerJ* **3**:e1385
7. Layman, CA, S Buhler, ST Giery, R Rossi, T Penland, M Henson, A Bogdanoff, M Cove, A Irizarry, C Schalke, and **SK Archer**. 2015. A primer on the history of food web ecology: Fundamental contributions of fourteen researchers. *Food Webs* **4**: 14-24.
6. **Archer, SK**, EW Stoner, and CA Layman. 2015. A complex interaction between a sponge (*Halichondria melanadocia*) and a seagrass (*Thalassia testudinum*) in a subtropical coastal ecosystem. *Journal of Experimental Marine Biology and Ecology* **465**:33-40.
5. **Archer, SK**, JE Allgeier, BX Semmens, SA Heppell, CV Pattengill-Semmens, AD Rosemond, PG Bush, CM McCoy, BC Johnson, and CA Layman. 2015. Hot moments in spawning aggregations: Implications for ecosystem-scale nutrient cycling. *Coral Reefs* **34**(1):19-23. DOI: 10.1007/s00338-014-1208-4
4. **Archer, SK** and TA Crowl. 2014. Retention of learned predator recognition in an endangered sucker *Chasmistes liorus liorus*. *Aquatic Biology* **20**:195-202. DOI: 10.3354/ab00558
3. Layman CA, ZR Jud, **SK Archer**, and D Riera. 2014. Provision of ecosystem services by artificial shoreline structures in a highly impacted estuary. *Environmental Research Letters* **9**: 044009. DOI: 10.1088/1748-9326/9/4/044009.
2. Heppell, SA, BX Semmens, **SK Archer**, CV Pattengill-Semmens, PG Bush, BC Johnson, CM McCoy, and SS Heppell. 2012. Documenting recovery of a spawning aggregation through size frequency analysis from underwater laser calipers measurements. *Biological Conservation* **155**: 119-127.
1. **Archer, SK**, SA Heppell, BX Semmens, CV Pattengill-Semmens, PG Bush, CM McCoy, and BC Johnson. 2012. Patterns of color phase indicate spawn timing at a Nassau grouper (*Epinephelus striatus*) spawning aggregation. *Current Zoology* **58**(1):70-80.

PEER REVIEWED GOVERNMENT REPORTS:

- Dunham, A, J Mossman, **S. Archer**, S. Davies, J. Pegg, E. Archer. *In Press*. Glass Sponge Reefs in the Strait of Georgia and Howe Sound: Status assessment and ecological monitoring advice. DFO Canadian Science Advise Secretariat Research Document.

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PUBLICATIONS IN REVIEW OR ADVANCED STAGES OF PREPARATION (Draft available on request):

- Archer, SK**, S Buhler, and CA Layman. *In Review*. Ambient nutrient availability drives the outcome of an interaction between a sponge (*Halichondria melanadocia*) and a seagrass (*Thalassia testudinum*). *Journal of Experimental Marine Biology and Ecology*
- Rossi, RE, **SK Archer**, and CA Layman. *In Review*. Potential role of biotic stressors in a dwarf red mangrove (*Rhizophora mangle*) die-off. *Estuaries and Coasts*
- Archer, SK**, WD Halliday, A Riera, X. Mouy, JWF Chu, MK Pine, A Dunham, and F Juanes. *In Prep*. Preliminary description of the acoustic environment on a glass sponge reef. Target Journal: *Marine Ecology Progress Series*.
- Archer, SK**, J Tucker, and CA Layman. *In Prep*. Sponges facilitate diversity through multiple cascading pathways. Target Journal: *Marine Biology*
- Archer, SK**, AS Kahn, SP Leys, T. Norgard, A Dunham, and CP Du Preez. *In Prep*. Pyrosome consumption by benthic organisms during an anomalous pyrosome bloom in the NE Pacific. Target Journal: *Ecology*
- RE Rossi, **SK Archer**, and CA Layman. *In Prep*. Mapping a mangrove die-off on a local scale: A case study from The Bahamas. Invited Submission: *Sensors*.

CONFERENCE PROCEEDINGS:

- Archer, SK**, SA Heppell, BX Semmens, CV Pattengill-Semmens, PG Bush, CM McCoy, SS Heppell, BC Johnson. 2010. Development of a novel method for monitoring recovery on spawning aggregations, *Proceedings of the 63rd Annual Meeting of the Gulf and Caribbean Fisheries Institute*.

GOVERNMENT/TECHNICAL REPORTS:

- Copeland, T, J Johnson, **S Kraft**, P Bunn. 2007. Idaho Natural Production Monitoring and Evaluation 2006 annual report. Idaho Fish and Game.

GRANTS:

- 2015-2016. National Science Foundation, "RAPID: An interdisciplinary approach to elucidating the causes of widespread mangrove die-off", (Non-PI Co-author). \$75,187 (OCE 1405198)
2014. NCSU University Graduate Student Association Award for Conferences. \$1,500
2014. Explorer's Club Grant. Will warming seas change sponge ecosystem function? \$2,000
2011. Mote Symposium Travel Grant. William R. and Lenore Mote Symposium. Florida State University. \$500
2008. Research Support Award, Utah State University Ecology Center. \$3,000
2008. June Sucker Technical Committee Grant. Temperature Shock in Larval June Sucker, (Non-PI Co-author). \$31,000
2008. Research Grant Utah Chapter of the American Fisheries Society. Learning in June Sucker, *Chasmistes liorus*. \$1,000

SEMINARS AND INVITED TALKS:

7. **Archer, SK**. 2017. Vancouver Island University Science and Technology Series
6. **Archer, SK**. 2016. University of Victoria Biology Seminar Series
5. **Archer, SK**. 2016. Pacific Biological Station, Department of Fisheries and Oceans Canada
4. **Archer, SK**. 2015. Florida Gulf Coast University STEM Seminar Series
3. **Archer, SK**. 2013. Smithsonian Marine Station Seminar Series
2. **Archer, SK**. 2012. Friends of the Environment's Abaco Lionfish Derby
1. **Archer, SK** and TA Crowl. 2009. Oregon State University Stream Team Seminar Series

PRESENTATIONS:

2017

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24. **Archer, SK**, G Dennison, and A Dunham. Initial report on nine newly discovered glass sponge reefs in British Columbia, Canada. 10th World Sponge Conference. Contributed Paper.
23. **Archer, SK**, J Mossman, J Pegg, S Davies, and A Dunham. Sponge distribution and community-habitat associations in nine glass sponge reefs in the Strait of Georgia. 10th World Sponge Conference. Poster.
22. **Archer, SK**, J Mossman, J Pegg, S Davies, and A Dunham. Sponge distribution and community-habitat associations in nine glass sponge reefs in the Strait of Georgia. GeoHab 2017 – 17th International Symposium. Poster.
21. Boyd, LL, EW Stoner, P M, **SK Archer**, K Comer-Santos, M Heithaus, ER. Whitman. Effect of *Holothuria arenicola* on Seagrass Beds in Abaco, Bahamas. 37th Annual Symposium on Sea Turtle Biology and Conservation: 2017. Poster.

2016

20. **Archer, SK**, J Mossman, and A Dunham. Seascape ecology of glass sponge reefs: fine scale measurements of habitat heterogeneity and its relationship to community structure. PICES 25th Annual Meeting. Contributed Paper.
19. Rossi, RE, **SK Archer**, and CA Layman. A closer look at a mangrove die-off. Abaco Science Alliance. Contributed Paper.

2015

18. **Archer, SK** and CA Layman. Presence of a second foundation species alters seagrass ecosystem structure. The 100th Annual Meeting of the Ecological Society of America. Contributed Paper.
17. **Archer, SK** and CA Layman. Presence of a second foundation species alters seagrass ecosystem structure and function. The 37th AMLC Scientific Meeting. Contributed Paper.
16. **Archer, SK** and CA Layman. Presence of a second foundation species alters seagrass ecosystem structure. Zoology Graduate Student Association Symposium. Contributed Paper.

2014

15. **Archer, SK**, EW Stoner, CA Layman. Complex interactions comprise a sponge-seagrass commensal relationship in a sub-tropical coastal ecosystem. Zoology Graduate Student Association Symposium. Contributed Paper.
14. **Archer, SK**, EW Stoner, CA Layman. Complex interactions comprise a sponge-seagrass commensal relationship in a sub-tropical coastal ecosystem. Benthic Ecology Meeting. Contributed Paper.
13. **Archer, SK**, EW Stoner, CA Layman. Sponges in seagrass: From species interactions to ecosystem function. Bahamas Natural History Conference. Contributed Paper.
12. **Archer, SK** and CA Layman. Sponge diversity of nearshore habitats of Abaco. Abaco Science Alliance Conference. Poster.

2013

11. **Archer, SK**, EW Stoner, CA Layman. Sponge-seagrass interactions: investigating the interaction between turtle grass (*Thalassia testudinum*) and *Halichondria melanadocia*. Ninth World Sponge Conference. Contributed Paper.
10. **Archer, SK** and CA Layman. Sponge diversity of nearshore habitats of Abaco. Bahamas National Natural History Conference. Poster.

2011

9. **Archer, SK**, SA Heppell, BX Semmens, CV Pattengill-Semmens, PG Bush, CM McCoy, SS Heppell, BC Johnson. You gotta look good for the party: Evidence for a link between cleaning organisms and aggregating grouper. 8th Annual William R. and Lenore Mote 2011 Symposium. Contributed Paper.

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8. Heppell, SA, BX Semmens, CV Pattengill-Semmens, PG Bush, CM McCoy, SS Heppell, BC Johnson, **SK Archer**. Oceanic patterns associated with Nassau grouper aggregation spawn timing: Shifts in surface currents on the nights of peak spawning. Southern Division, American Fisheries Society. Invited symposium paper.

2010

7. **Archer, SK**, SA Heppell, BX Semmens, CV Pattengill-Semmens, PG Bush, CM McCoy, SS Heppell, BC Johnson. Development of a novel method for monitoring recovery on spawning aggregations. 63rd Annual Meeting of the Gulf and Caribbean Fisheries Institute. Contributed paper.

6. **Archer, SK**, SA Heppell, BX Semmens, CV Pattengill-Semmens, PG Bush, CM McCoy, SS Heppell, BC Johnson. Development of an alternative method for monitoring recovery on spawning aggregations. 22nd Annual Meeting of the Gilbert Ichthyological Society. Contributed paper.

2009

5. **Archer, SK** and TA Crowl. Naïve prey versus nonnative predators: A role for behavior in endangered species conservation. Annual Meeting of the Oregon Chapter of the American Fisheries Society. Contributed paper.

2008

4. **Archer, SK** and TA Crowl. Predator detection and learning capabilities in an endemic lake sucker. Annual Meeting of the Desert Fishes Council. Contributed paper.

3. **Archer, SK** and TA Crowl. Predator detection and learning capabilities in an endemic lake sucker. Annual Meeting of the American Fisheries Society. Contributed paper.

2. **Archer, SK** and TA Crowl. Predator detection and learning capabilities in an endemic lake sucker. Annual Meeting of the Ecological Society of America. Contributed paper.

1. **Archer, SK** and TA Crowl. Predator detection and learning capabilities in an endemic lake sucker, Annual Meeting of the Utah Chapter of the American Fisheries Society. Poster.

UNIVERSITY-LEVEL TEACHING EXPERIENCE:

Florida International University

Teaching Assistant, *General Biology Lab I*. 2013. Spring semester

Teaching Assistant, *Ecology Lab*. 2012. Fall semester

Oregon State University

Instructor of record, *Management Principles of Salmon in the Pacific Northwest*. 2010. Fall quarter

Teaching Assistant, *Global Crises in Resource Ecology*. 2010. Winter, spring, summer, quarters

Utah State University

Teaching Assistant, *Ecology*. 2007. Fall semester

University of Georgia

Teaching Assistant, *Ichthyology*, UGA. 2005. Spring semester

FIELD AND SHORT COURSE TEACHING EXPERIENCE

17th Annual Marine Conservation Summer Teacher Training Workshop- Bahamas Reef Environmental Education Foundation

Instructor, *Seagrass Ecology*, *Sponge Ecology*, and *History of The Bahamian Sponge Fishery*. 2015. Summer short courses

Summer Field Courses- FRIENDS of the Environment, Abaco, The Bahamas

Instructor, *Habitat Conservation and Protected Areas*. 2014. Summer short course

Instructor, *Surprising Sponges*. 2013. Summer short course

International Field Studies, Forfar Field Station

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Instructor, *Fish Identification, Fish Behavior, Geology*, 2005-2006.

GUEST LECTURES:

Marine Protected Areas in British Columbia, FISH 322, Marine Ecology, Vancouver Island University. 2017

Aquatic Invasive Species, FISH 207 and FISH 205, Invertebrate Ecosystems, Vancouver Island University 2016.

Career paths in natural resources, Fisheries and Wildlife 255, Field Sampling and Methodology, Oregon State University. 2010

OUTREACH:

2012-2015. Contributor. Abaco Scientist Blog, <http://appliedecology.cals.ncsu.edu/absci/>

2013-215. Mentor. North Carolina State University, 2 undergraduate students.

2012-2013. Mentor. Florida International University, 3 undergraduate students.

2013. Assistant, FRIENDS of the Environment Summer Science Camp, Abaco, The Bahamas.

2010. Mentor, Apprenticeships in Science and Engineering, Saturday Academy

PROFESSIONAL SERVICE:

2017. Scientific Steering Committee. 10th World Sponge Conference.

2015. Vice President. Rho Tau Chapter of Graduate Women in Science.

2015. Organizer. Ecology, Evolution, and Organismal Biology Seminar Series. North Carolina State University.

2015. Organizer. Advances in Ecology Discussion Group. North Carolina State University.

2010-2011. Organizer, Faculty and Graduate Student Discussion Group, Department of Fisheries and Wildlife, Oregon State University

2010-2013. Council Member, Gilbert Ichthyological Society

2010-2011. Co-President, Fisheries and Wildlife Graduate Student Association, Oregon State University

2010. Student Evaluation Chair, Promotion and Tenure Committee, Department of Fisheries and Wildlife, Oregon State University

2010. Committee Chair, Silent Auction, Research and Advances in Fisheries, Wildlife, and Ecology Symposium
Fisheries and Wildlife Graduate Student Association, Oregon State University

2010. Mentor, Student-Mentor Social, Oregon Chapter of the American Fisheries Society Annual Meeting

2010. Student Volunteer, Oregon Chapter of the American Fisheries Society Annual Meeting

2009. Student Volunteer, Oregon Chapter of the American Fisheries Society Annual Meeting

2008. Student Volunteer, Utah Chapter of the American Fisheries Society Annual Meeting

2007. Volunteer, Audio-Visual, Idaho Chapter of the American Fisheries Society Annual Meeting

SCHOLARSHIP AND FELLOWSHIPS:

2013-2015. Graduate Research Assistantship, North Carolina State University

2012-2013. Presidential Fellowship. Florida International University

2011. Sustainable Fisheries Foundation William Trachtenberg Scholarship, Western Division, American Fisheries Society

2011. Thomas G. Scott Grant Scholarship, Department of Fisheries and Wildlife, Oregon State University

2011. Coombs-Simpson Memorial Fellowship, Department of Fisheries and Wildlife, Oregon State University

2011. H. Richard Carlson Scholarship, Department of Fisheries and Wildlife, Oregon State University

2009. Henry E. Mastin Graduate Student Fund, Department of Fisheries and Wildlife, Oregon State University

2009-2011. Graduate Research Assistantship, Oregon State University

2008-2009. Graduate Research Assistantship, Utah State University

2007-2008. Presidential Fellowship, Utah State University

2002. Regional Scholarship, Professional Golf Association

2001-2004. Regents Fee Waiver, University of Georgia

2001-2004. Charter Scholarship, University of Georgia

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AWARDS:

2015. Best Presentation, Zoology Graduate Student Association Symposium, North Carolina State University
2011. Chairman's Leadership Award, Department of Fisheries and Wildlife, Oregon State University
2008. Carl L. Hubbs Award for Best Student Paper, The Desert Fishes Council
2005. Institute of Ecology's Teaching Assistant Award, University of Georgia

EDITORIAL POSITIONS:

Associate Editor, Food Webs

JOURNALS REVIEWED FOR:

Animal Behaviour
Journal of Experimental Marine Biology and Ecology
Oecologia
Deep-Sea Research Part I
PeerJ
Freshwater Science
Marine Ecology Progress Series

PROFESSIONAL MEMBERSHIPS:

Sigma Xi
Graduate Women in Science, Rho Tau Chapter
Ecological Society of America