

CHRISTINE C. STAWITZ

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EDUCATION

Ph.D., University of Washington **September 2011- August 2017**

Quantitative Ecology and Resource Management

Dissertation: Understanding the effects of growth and size-at-age variation on the dynamics of fish populations.

Advisor: Dr. Timothy E. Essington, School of Aquatic and Fisheries Sciences

B.Sc. (with distinction), University of Virginia **September 2004 – May 2008**

Systems Engineering, Minor in Computer Science

Thesis: Monitoring and data analysis of residential energy consumption in ecoMOD, a sustainable, modular, low-cost housing design.

Advisor: Dr. P. Paxton Marshall, School of Engineering and Applied Science

RECENT WORK AND RESEARCH EXPERIENCE

Postdoctoral Research Associate, **NOAA Fisheries** **September 2017 – present**

- Using individual-based modeling to predict impacts of climate change on snow crab, *Chionoecetes opilio*

Graduate Research Assistant, **University of Washington** **June 2012 – August 2017**

- Detecting patterns in somatic growth variation of marine fish using Bayesian state-space models
- Simulation analyses to determine the impact of somatic growth variation on fish productivity
- Exploring feasibility of using size-structured models in data-limited systems

Program Manager, **Microsoft Corporation** **August 2008 – August 2011**

- Managed design and development lifecycle on the Windows product team including:
 - Designed functionality of Windows 8 features, including copy engine dialog and common controls
 - Led team of developers, testers, and designers

Development Intern, **DonorTownSquare, Inc.** **June 2006 – January 2007**

- Designed, developed, and maintained database structures and constructed client websites

AWARDS

NSF IGERT Program on Ocean Change Ph.D. Traineeship **June 2014**

NMFS/Sea Grant Population Dynamics Graduate Fellowship **June 2014**

PICES Marine Science Organization Student Travel Award **October 2013**

PUBLICATIONS

Moriarty, P.E., Hodgson, E.E., Froehlich, H.E., Hennessey, S.M., Marshall, K.N., Oken, K.L., Siple, M.C., Koehn, L.E., Pierce, B.D., and **Stawitz, C.C.** 2018. The need for validation of ecological indices. *Ecological Indicators*. 84:546-552.

Stawitz, C.C., Siple, M.C., Lee, Q., Munsch, S.H. *In press*. Financial and ecological implications of global seafood mislabeling. *Conservation Letters*.

Stawitz, C.C., Hurtado-Ferro, F., Kuriyama, P.T., Trochta, J.T., Johnson, K.F., Haltuch, M.A., Hamel, O.S. Stock Assessment Update: Status of the U.S. petrale sole resource in 2014. 2015. Pacific Fishery Management Council, Portland, OR.

Monnahan, C.C., Ono, K., Anderson, S.C., Rudd, M.B., Hicks, A.C., Hurtado-Ferro, F., Johnson, K.F., Kuriyama, P.T., Licandeo, R.R., **Stawitz, C.C.**, Taylor, I.G., Valero, J.L. 2016. The effect of length bin structures on growth estimation in integrated age-structured stock assessments. *Fisheries Research*. 180: 103-112.

Kuriyama, P.T., Ono, K., Hurtado-Ferro, F., Hicks, A.C., Taylor, I.G., Licandeo, R.R., Johnson, K.F., Anderson, S.C., Monnahan, C.C., Rudd, M.B., **Stawitz, C.C.**, Valero, J.L. 2016. An empirical weight-at-age approach reduces estimation bias compared to modeling parametric growth in integrated, statistical stock assessment models when growth is time varying. *Fisheries Research*. 180: 119-127.

Stawitz, C.C., Essington, T.E., Branch, T.A., Haltuch, M.A., Hollowed, A.B., Spencer, P.D. 2015. A state-space approach for measuring growth variation and application to North Pacific groundfish. *Canadian Journal of Fisheries and Aquatic Sciences*. 72(9): 1316-1328.

Essington, T.E., Moriarty, P.E., Froehlich, H.E., Hodgson, E.E., Koehn, L.E., Oken, K.L., Siple, M.C., **Stawitz, C.C.** 2015. Fishing amplifies forage fish population collapses. *Proceedings of the National Academy of Sciences*. 112 (21): 6648-6652.

SELECT PRESENTATIONS (FIRST AUTHOR ONLY)

Stawitz, C.C., Haltuch, M.A. "How does growth variability affect estimation of management quantities in fisheries stock assessments, and can growth changes be detected?" ICES/PICES Early Career Scientist Meeting, Busan, ROK. May 31st, 2017.

Stawitz, C.C., Essington, T.E. "The relative importance of somatic growth and recruitment to population production." NMFS-Sea Grant Population Dynamics Fellows Meeting, Santa Cruz, CA. June 28th, 2016

Stawitz, C.C., Hurtado-Ferro, F., Kuriyama, P.T., Trochta, J.T., Johnson, K.F., Haltuch, M.A., Hamel, O.S. "Stock assessment update: status of the U.S. petrale sole resource in 2014." Pacific Fishery Management Council Science and Statistical Committee Meeting. Spokane, WA. June 10th, 2015.

Stawitz, C.C., Essington, T.E., Branch, T.A., Haltuch, M.A., Hollowed, A.B., Mantua, N. Spencer, P. "A state-space approach for measuring growth variation and application to North Pacific groundfish." CAPAM Growth Workshop. La Jolla, CA. November 6th, 2014.

Stawitz, C.C., Essington, T.E., Branch, T.A., Haltuch, M.A., Hollowed, A.B., Mantua, N. Spencer, P. "A state-space approach for measuring growth variation and application to North Pacific groundfish." Ecological Society of America Annual Meeting. Sacramento, CA. August 13th, 2014.

TEACHING AND TUTORING EXPERIENCE

Lecturer, GitHub Tutorial, University of Washington

June 2016, January 2017

- Prepared and led interactive tutorial on GitHub use to students and postdoctoral scholars

Guest Lecturer, Advanced Marine Biology, University of Washington

October 2014

- Prepared and led fish life history lecture: "Growth and Body Size in Fishes" lecture and discussion

Guest Lecturer, Super-Advanced R, University of Washington

Spring 2014

- Prepared and led "Underpinnings of R" lecture and lab, covering core computer science topics such as scoping, typing, rounding error, and regular expressions in the R programming language.

Guest Lecturer, Analysis of Ecological Data, University of Washington

April 2016, Spring 2013

- Lectures on statistics including: mixed effect models, analysis of covariance, nonlinear regression, and variance-stabilizing data transformation

Computing Assistant, Analysis of Ecological Data, University of Washington

Spring 2013

- Prepared and led weekly R labs on generalized linear models, mixed effect models, analysis of variance & covariance, nonlinear regression

Drop-In Tutor, Statistics Tutor and Study Center, UW, Seattle, WA

January – June 2014

- Tutored undergraduate students on statistics and probability coursework

TECHNICAL SKILLS

Software development: Co-author; ss3sim and r4ss R packages

Programming language proficiency: R, SQL, JAGS, Stock Synthesis 3, HTML, ADMB, C++, Java, JavaScript

OUTREACH & SERVICE

FINS Diversity and Equity Forum Leader

September 2015 – present

- Lead workshops and develop training materials to promote diversity and equity in the UW community

Washington Trails Association Volunteer

August 2009 – present

- Built and maintained hiking trails in Washington state

Ocean Inquiry Project Volunteer, Seattle, WA

August 2014 - present

- Teaching high school students about marine science and oceanography via cruises and scientific dives

NOAA Fisheries Groundfish Trawl Survey Volunteer, Newport, OR

May 2015 – June 2015

- Participated in sea safety and biology training; sampled groundfish on 11-day cruise

UW Graduate and Professional Student Senator, Seattle, WA

September 2012 - September 2014

- Represented QERM student interests and concerns to the graduate student government

Orca Bowl: Science Judge, Seattle, WA

February 2013

- Served as science judge in event for high school students to learn and compete in marine science trivia

Seattle Aquarium Volunteer, Seattle, WA

January 2011 - December 2013

- Teaching marine biology and ecology to aquarium visitors; animal husbandry