

**ANDREW OLAF (OLE) SHELTON, PH.D**

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**Education**

2009	Ph.D University of Chicago, Department of Ecology and Evolution
2005	M.Sc. University of Chicago, Department of Ecology and Evolution
2002	B.A. Biology. Brown University (Honors)

**Positions Held**

4/2012 – Present Research Fisheries Biologist. Northwest Fisheries Science Center, National Marine Fisheries Service, National Oceanic and Atmospheric Administration.

8/2009 – 4/2012 Post-doctoral scholar, Dept. Applied Mathematics and Statistics and Center for Stock Assessment Research, University of California, Santa Cruz.  
Supervisor: Dr. Marc Mangel.

**Selected Publications**

- Shelton, A.O., J.L. O'Donnell, J.F. Samhour, N. Lowell, G. Williams, R.P. Kelly. *In Revision*. A statistical framework for inferring biological communities from environmental DNA. Ecological Applications.
- Ono, K., A.O. Shelton, E.J. Ward, J.T. Thorson, B.E. Feist, R. Hilborn. *In Press*. Space-time investigation of the effects of fishing on fish populations. Ecological Applications.
- Keith, D., H.R. Akçakaya, S.H.M. Butchart, B. Collen, N.K. Dulvy, E.E. Holmes, J.A. Hutchings, D. Keinath, M.K. Schwartz, A.O. Shelton, and R.S. Waples. Temporal correlations in population trends: conservation implications from time-series analysis of diverse animal taxa. *Biol. Conserv.* 192:247–257.
- Thorson, J.T., M. Scheuerell, A.O. Shelton, K. See, H. Skaug, and K. Kristensen. Spatial factor analysis: a new tool estimating multispecies spatial distributions and correlated ranges. *Meth. Ecol. Evol.* 6:627-637. doi : 10.1111/2041-210X.12359
- Thorson, J.T., A.O. Shelton, E.J. Ward, H. Skaug. Geostatistical delta-generalized linear mixed models improve precision for estimated abundance indices for West Coast groundfishes. *ICES J. Mar. Sci.* 72 (5): 1297-1310. doi: 10.1093/icesjms/fsv243
- Shelton, A.O., J. Hutchings, D. Keith, R. Waples, H.R. Akçakaya, N. Dulvy. Maternal age effects on Atlantic cod recruitment and implications for future population trajectories. *ICES Journal of Marine Science* 72:1769-1778. doi: 10.1093/icesjms/fsv058
- Thorson, J.T., J. Cope, K. Kleisner, J.F. Samhour, A.O. Shelton, E.J. Ward. 2015. Giants' shoulders 15 years later: Lessons, challenges, and guidelines in fisheries meta-analysis. *Fish and Fisheries* 16:342-361
- Shelton, A.O., J.F. Samhour, A.C. Stier, and P.S. Levin. 2014. Assessing trade-offs to inform ecosystem-based fisheries management of forage fish. *Scientific Reports* 4:7110
- Lynch, H.J., J.T. Thorson, and A.O. Shelton. 2014. Dealing with under- and over-dispersed count data in life history, spatial, and community ecology. *Ecology* 95:3173–3180.
- Shelton, A.O., T.B. Francis, G.D. Williams, B. Feist, K. Stick, P.S. Levin. 2014. Habitat limitation and spatial variation in Pacific herring egg survival. *Mar. Ecol. Prog. Ser.* 514:231–245.
- Shelton, A.O., J.T. Thorson, E.J. Ward, B.E. Feist. 2014. Spatial, semi-parametric models improve estimates of species abundance and distribution. *Can J. Fish. Aqu. Sci.* 71:1655-1666.

- A-M.K. Osterback, D.M. Frechette, A.O. Shelton, S.A. Hayes, M.H. Bond, S.A. Shaffer, J. W. Moore. 2013. High predation on small populations: avian predation on imperiled salmonids. *Ecosphere* 4:art116.
- Shelton, A.O., W.H. Satterthwaite, M.P. Beakes, S.B. Munch, S. Sogard, and M. Mangel. 2013. Individual variation in growth and its population consequences: separating intrinsic and environmental contributions. *Am. Nat.* 181:799-814
- Shelton, A.O. S.B. Munch, D. Keith, and M. Mangel. Maternal age, fecundity, egg quality, and recruitment: linking stock structure to recruitment using an age-structured Ricker model. *Can J. Fish. Aq. Sci.* 69: 1631–1641
- Shelton, A.O. and M. Mangel. 2011. Fluctuations of fish populations and the magnifying effects of fishing. *PNAS* 108:7075-7080.
- Shelton, A.O., E.J. Dick, D. Pearson, S. Ralston, and M. Mangel. 2012. Single-species landings and uncertainty estimates from multi-species fisheries landings data: hierarchical Bayesian models for California groundfish fisheries. *Can J. Fish. Aq. Sci.* 69:231-246.
- Shelton, A.O. 2010. The ecological and evolutionary drivers of female-biased sex ratios: two-sex models of a perennial seagrass. *American Naturalist* 175:302–315.
- Shelton, A.O. 2010. The origin of female-biased sex ratios in intertidal seagrasses (*Phyllospadix* spp.) *Ecology* 91:1380–1390.
- Shelton, A.O. 2008. Skewed sex ratios, pollen limitation, and reproductive failure in the dioecious seagrass genus *Phyllospadix*. *Ecology* 89:3020-3029.

### Grants, Fellowships, And Awards

- Habitat Assessment Improvement Plan (NOAA) 2012-2013 (\$55,769)
- National Science Foundation Graduate Research Fellowship 2003-2006 (~\$120,000)

### Workshops And Working Groups

- PI:** NCEAS Working Group: *Applying Portfolio Effects to the Gulf of Alaska Ecosystem: Did Multiscale Diversity Buffer Against the Exxon Valdez Oil Spill?* PIs: Kristin Marshall, Anne Beaudreau, Richard Brenner, Mary Hunsicker, Eric Ward, and Ole Shelton.
- Invited participant**, NCEAS Working Group on “Red flags and species endangerment: Meta-analytical development of criteria for assessing extinction risk”, led by Robin Waples and Jeff Hutchings, 2010 - present

### Collaborators over the past 48 months:

Marc Mangel (CSTAR, UC Santa Cruz), Steve Munch (SWFSC), Will Satterthwaite (SWFSC), Micheal Beakes, Doug Kinzey (SWFSC), Steve Ralston (NOAA, SWFSC), Ann-Marie Osterback (UC Santa Cruz), David Keith (Dalhousie University), Phil Levin (NWFSC), Jameal Samhoury (NWFSC), Blake Feist (NWFSC), Sherri Dressel (Alaska Dept. Fish & Game), Ryan Kelly (U. Washington), Eric Ward (NWFSC), Jim Thorson (NWFSC), Kotaro Ono (AFSC), Tessa Francis (U. Washington), Anne Beaudreau (U. Alaska), Richard Brenner (ADFG), Mary Hunsicker (NWFSC),