

CURRICULUM VITAE

NAME: Paul R. Crone

EMPLOYER: Department of Commerce
National Oceanic & Atmospheric Administration
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PRESENT POSITION: Research Fishery Biologist
Fisheries Resources Division

EDUCATION: B.S. University of Connecticut (1981)
M.S. Auburn University (1987)
Ph.D. Oregon State University (1995)

EXPERIENCE:

1997-present	Research Fishery Scientist NOAA/NMFS/SWFSC La Jolla, CA
2013-present	Co-founder Center for the Advancement of Population Assessment Methodology La Jolla, CA www.CAPAMresearch.org
1995-1996	Research Associate Dept. of Fisheries and Wildlife, Hatfield Marine Science Center Oregon State University Newport, OR
1987-1989	Research Associate Dept. of Fisheries and Allied Aquacultures Auburn University Auburn, AL
1987-1989	Aquaculture Extension Agent (Volunteer) U.S. Peace Corps Jamaica, W.I

RESEARCH INTERESTS: Fish population biology and dynamics
Stock assessment modeling
Biometrics
Sampling theory and application

PUBLICATIONS:

Maunder, M.N., **P.R. Crone**, J.L. Valero, B.X. Semmens. 2016. Growth: theory, estimation, and application in fishery stock assessment models. *Fisheries Research* 180:1-3.
<http://www.sciencedirect.com/science/article/pii/S0165783616300613>.

Crone, P.R., J.L. Valero. 2014. Evaluation of length vs. age-composition data and associated selectivity assumptions used in stock assessments based on robustness of derived management quantities. *Fisheries Research* 158:165-171.
<http://www.sciencedirect.com/science/article/pii/S0165783614000800>.

Maunder, M.N., **P.R. Crone**, J.L. Valero, B.X. Semmens. 2014. Selectivity: theory, estimation, and application in fishery stock assessment models. *Fisheries Research* 158:1-4.
<http://www.sciencedirect.com/science/article/pii/S0165783614001106>.

Dorval, E., **P.R. Crone**, J.D. McDaniel. 2013. Variability of egg escapement, fishing mortality, and spawning population in the market squid fishery in the California Current Ecosystem. *Marine and Freshwater Research* 64:80-90.

Berkson, J., L. Barbieri, S. Cadrin, S. L. Cass-Calay, **P. Crone**, M. Dorn, C. Friess, D. Kobayashi, T. J. Miller, W. S. Patrick, S. Pautzke, S. Ralston, M. Trianni. 2011. Calculating acceptable biological catch for stocks that have reliable catch data only (Only Reliable Catch Stocks – ORCS). NOAA Technical Memorandum NMFS-SEFSC-616. 56 p.

Chen, K.-S., **P.R. Crone**, C.-C. Hsu. 2010. Reproductive biology of albacore tuna (*Thunnus alalunga*) in the western North Pacific Ocean. *Journal of Fish Biology* 17:119-136.

Jiao, Y., L. Rogers-Bennett, I. Taniguchi, J. Butler, **P. Crone**. 2010. Incorporating temporal variation in the growth of red abalone (*Haliotis rufescens*) using hierarchical Bayesian growth models. *Canadian Journal of Fisheries and Aquatic Sciences* 67:730-742.

Chen, K.-S., **P.R. Crone**, C.-C. Hsu. 2006. Reproductive biology of female Pacific bluefin tuna *Thunnus orientalis* from south-western North Pacific Ocean. *Fisheries Science* 72:985–994.

Crone, P.R. 2001. Spatial differences in maturity schedules of female Dover sole off Oregon. *Fisheries Research* 51:393-402.

Crone, P.R. 2001. Albacore. Pages 317-321 in W. S. Leet et al. (Editors). California's living marine resources: A status report (albacore). California Department of Fish and Game Resources Agency/University of California, Agriculture and Natural Resources.

Crone, P.R., D.B. Sampson. 1998. Evaluation of assumed error structure in stock assessment models that use sample estimates of age composition. Pages 355-370 in *Fishery Stock Assessment Models*. Alaska Sea Grant College Program Report No. AK-SG-98-01, University of Alaska, Fairbanks, Alaska.

Sampson, D.B., **P.R. Crone**, editors. 1997. Commercial fisheries data collection procedures for Pacific coast groundfish. NOAA Technical Memorandum NMFS-NWFSC-31. 189 p.

Crone, P.R. 1995. Sampling design and statistical considerations for the commercial groundfish fishery of Oregon. Canadian Journal of Fisheries and Aquatic Sciences 52:716-732.

Crone, P.R., S.P. Malvestuto. 1991. A comparison of five estimators of fishing success from creel survey data on three Alabama reservoirs. American Fisheries Society Symposium 12:61-66.

REPORTS:

Crone, P.R., et al. 1999-present. Various stock assessment reports applicable to coastal pelagic, groundfish, and highly migratory species of the North Pacific Ocean. Pacific Fishery Management Council, 7700 NE Ambassador Place, Suite 101, Portland, Oregon, 97220.

Examples

Crone, P.R., K.T. Hill. 2015. Pacific mackerel (*Scomber japonicus*) stock assessment for USA management in the 2015-16 fishing year. Pacific Fishery Management Council, 7700 NE Ambassador Place, Suite 101, Portland, Oregon, 97220. 131 p.

Hill, K.T., **P.R. Crone**, E. Dorval, B.J. Macewicz. 2015. Assessment of the Pacific sardine resource in 2015 for U.S.A. management in 2015-16. Pacific Fishery Management Council, 7700 NE Ambassador Place, Suite 101, Portland, Oregon, 97220. 168 p.

STOCK ASSESSMENT AND RESEARCH RESPONSIBILITIES

- *Primary work:* currently a principal investigator for stock assessments on small pelagic species (e.g., Pacific mackerel, Pacific sardine, northern anchovy, California market squid) off the Pacific coast of North America and related population dynamics research for purposes of producing stock status determinations and advising federal and state marine resource management institutions; and involved with stock assessment development for highly migratory species that inhabit the northeast Pacific Ocean, including north Pacific albacore and shark spp.
- *Job tasks:* evaluating the status and dynamics of exploited marine resources using quantitative approaches, including modern age-structured stock assessment models and related statistical methods; developing/conducting research studies to better understand critical life history parameters involved in producing more robust stock assessment models (e.g., age/growth, maturity, and productivity); serving on technical workgroups and committees that are composed of research scientists, fishery managers, and representatives from fishing industries and conservation groups; and appointments to various management bodies as part of NOAA Fisheries mission and Pacific Fishery Management Council processes/recommendations. *Center for the Advancement of Population Assessment Methodology (CAPAM):* visit www.CAPAMresearch.org for additional work and deliverables related to principal investigator (co-founder) position with CAPAM, including conducting research studies in support of *good practices in stock assessment modeling* research, coordinating focused workshops on influential parameters in stock assessment models (e.g., selectivity in March 2013, growth in November 2014, and data weighting in 2015), conducting extensive short courses and classes addressing stock assessment models and fish population dynamics for universities and national/international fishery agencies, coordinating collaborative research projects with visiting scientists, and developing stock assessments with research partners.