

JOHN R. SKALSKI

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EDUCATION

B.S.	Wildlife Management/Biology, University of Wisconsin, Stevens Point	1974
M.S.	Wildlife Science, Oregon State University	1976
M.S.	Biometry, Cornell University	1978
Ph.D.	Biometry, Cornell University	1985

EMPLOYMENT HISTORY

1978-1985	Research Scientist, Battelle Pacific Northwest National Laboratory, Richland, Washington
1985-1987	Senior Research Scientist, Battelle Marine Research Laboratory, Sequim, Washington
1987-1995	Associate Professor, Center for Quantitative Science, School of Fisheries University of Washington, Seattle, Washington
1992-1995	Interim Director, Center for Quantitative Science in Forestry, Fisheries, and Wildlife, University of Washington, Seattle, Washington
1994-1995	Chair, Interdisciplinary Graduate Program in Quantitative Ecology and Resource Management, Graduate School, University of Washington, Seattle, Washington
1995-2000	Professor, School of Fisheries, University of Washington, Seattle, Washington
Present	Professor, School of Aquatic and Fishery Sciences, University of Washington, Seattle, Washington

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ADJUNCT/AFFILIATE POSITIONS

- 1989 - Present Affiliate Faculty Member, Northwest College and University Association for Science (NOCUS), Richland, Washington
- 1992 - 1994 Adjunct Associate Professor, Department of Environmental Toxicology, Clemson University, Clemson, South Carolina
- 1996 - Present Adjunct Professor, School of Environmental and Forest Sciences, University of Washington, Seattle, Washington

BACKGROUND

Dr. Skalski's research has focused on the development of sampling methodology, field designs, and statistical tests for assessing human-induced and natural effects on organismic and ecological systems. Dr. Skalski was the biometrician responsible for the design and statistical analysis of the 1986 study of the acoustic effects of a geophysical survey device on the catch-per-unit-effect in the rock fish hook-and-line fishery and the 1987 study of the acoustic effects on the zoeae stage of the Dungeness crab. He was also the biometrician on a study to assess the influences of mesh size changes on the trawl fishery for ground and rock fish in California, Oregon, and Washington. Both the geophysical and mesh size studies have resulted in regulatory changes in the oil industry and commercial fisheries. Other research activities of Dr. Skalski include an investigation for the US Nuclear Regulatory Commission which resulted in impact assessment designs which have been implemented at such sites as San Onofre Nuclear Generating Station, California. Research for the U.S. Department of Energy involved the development of experimental designs and data analysis techniques for detecting treatment effects on wild populations. Research on design optimization indicates that many applied ecology studies which failed to provide timely and purposeful information could have done so, if the same resources had been properly allocated. These optimization techniques provide objective means of evaluating the utility of environmental sampling programs. Other research activities include the adaptation of survival analysis for the study of wildlife epidemiology.

Empirical studies have investigated approaches for the analysis of catch-per-unit effort (CPUE) data in impact assessment, long-term effects of energy production on salmonid populations, and the statistical analysis of coded-wire-tag, PIT-tag, radio-tag, and balloon-tag data in fisheries. He has also worked with the General Counsel for National Oceanic and Atmospheric Administration on statistical approaches for estimating fishery bycatch rates of halibut. Particular expertise exists in assessing effects on biological systems and the use of statistics in resource management decisions and policies. Statistical research has involved the sampling from discrete distributions, analysis of non-linear response models, point and interval estimation, construction of statistical tests, as well as Monte Carlo studies of robustness and the use of data transformations. Special investigations have considered study designs confronted with restrictions on randomization and replication. Areas of applied statistical research include estimation of population abundance, and survival and migration rates of fish stocks.

Dr. Skalski is a member of the American Statistical Association, The Wildlife Society, and the American Fisheries Society. He is also a Certified Wildlife Biologist through The Wildlife Society.

SOFTWARE DEVELOPMENT

Dr. Skalski has conceived and supervised the development of the following software packages available through the University of Washington.

- SURPH** (SURvival under Proportional Hazards). 1994. SURPH is an analytical tool for estimating survival using release-recapture data as a function of environmental and experimental effects. These effects may be analyzed at the population (such as ambient temperature) or individual (such as body length) level. SURPH provides flexible modeling capability for selecting the most parsimonious models, and diagnostic reports and graphs for analyzing data and selected models. Hypothesis testing can be done with Likelihood Ratio Test, AIC, or Analysis of Deviance. <http://www.cbr.washington.edu/paramest/surph/>
- USER** (User Specified Estimation Routine). 2002. Interactive software that allows investigators to create multinomial and multimodel likelihood functions to estimate demographic parameters and estimate associated standard errors and profile likelihood confidence intervals. <http://www.cbr.washington.edu/paramest/user>
- PitPro** (PIT Tag Processor). 2003. Software utility uses the Pacific States Marine Fisheries Commission PTAGIS PIT-tag database to extract capture histories of tagged fish for subsequent survival analyses. <http://www.cbr.washington.edu/paramest/pitpro>
- SampleSize**. 2003. Interactive software to investigate the relationship between release sizes (i.e., sample sizes) and the precision of single-release, paired-release, transport/inriver ratios, and virtual/paired release-recapture designs. <http://www.cbr.washington.edu/analysis/apps/samplesize>
- ROSTER** (River-Ocean Survival and Transportation Effects Routine). 2005. Program ROSTER models the life cycle of Pacific salmonids from the initiation of the juvenile migration as smolts to the end of the spawning migration as adults. This model jointly analyzes juvenile and adult PIT-tag data and uses both juvenile and adult data from transported individuals. Multiple performance measures useful in monitoring the juvenile and adult migrations and assessing recovery effects are produced by the model, including estimates of juvenile inriver survival, ocean survival, adult inriver survival, transportation effects (e.g. T/I, 'D'), smolt-to-adult ratios, and adult age composition. <http://www.cbr.washington.edu/paramest/roster>
- ATLAS** (Active Tag-Life Addjusted Survival). 2010. Interactive software to analyze release-recapture studies using active tags (i.e., radiotelemetry or acoustic telemetry) and produce tag-life-adjusted estimates of survivals for a variety of study designs. <http://www.cbr.washington.edu/paramest/atlas/>
- TribPit**. 2014. Interactive software to analyze juvenile fall Chinook salmonid and steelhead outmigration success in the tributaries based on PIT-tag detections. <http://www.cbr.washington.edu/node/1190>
- PopRecon** (POPulation RECONstruction). 2014. Interactive software to estimate population abundance of furbearer/predator species based on full age-at-harvest data, supplemented with harvest effort and auxiliary estimates of survival, abundance, or harvest vulnerability.

GRADUATE STUDENT THESES AND DISSERTATIONS

- Smith, S. G. 1991. Assessing hazards in wild populations using auxiliary variables in tag-release models. Ph.D. dissertation. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington, USA.
- Hoffmann, A. 1993. Quantifying selection in wild populations using known-fate and mark-recapture data. Ph.D. dissertation. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington, USA.
- Liao, S. 1994. Statistical models for estimating salmon escapement and stream residence time based on stream survey data. Ph.D. dissertation. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington, USA.
- Bickford, S. A. 1996. A retrospective analysis of the results, trends, and methodologies of Columbia and Snake River survival studies, 1971 to 1995. M.S. thesis. School of Fisheries, University of Washington, Seattle, Washington, USA.
- Lady, J. 1996. Release-recapture models for estimating the stream residence time of spawning salmon. M.S. thesis. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington, USA.
- Schlechte, J. W. 1996. Stage-structured analysis and modeling of the Pacific razor clam (*Siliqua patula*) in a changing environment: investigation of population dynamics and harvest strategies using process models and simulation. Ph.D. dissertation. School of Fisheries, University of Washington, Seattle, Washington, USA.
- Gove, N. E. 1997. Using age-at-harvest data to estimate demographic parameters for wildlife populations. M.S. thesis. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington, USA.
- Ryding, K. E. 1998. Analyzing adult returns to assess ocean effects and salmon survival relationships. M.S. thesis. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington, USA.
- Lowther, A. B. 2002. Development, expansion, and evaluation of release-recapture survival models for Snake River juvenile salmonids, with new algorithms allowing time-dependent individual covariates. Ph.D. dissertation. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington, USA.
- Ryding, K. E. 2002. Estimation of demographic parameters used in assessing wildlife population trends. Ph.D. dissertation. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington, USA.
- Buchanan, R.A. 2005. Release-recapture models for migrating juvenile and adult salmon in the Columbia and Snake Rivers using PIT tag and radiotelemetry data. Ph.D. dissertation. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington, USA.
- Miller, T.J. 2005. Estimation of catch parameters from a fishery observer program with multiple objectives. Ph.D. dissertation. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington, USA.

- Ashbrook, C. E. 2008. Selective fishing and its impacts on salmon: a tale of two test fisheries, M.S. thesis. School of Aquatic & Fishery Sciences, University of Washington, Seattle, Washington, USA.
- Broms, K. 2008. Small game population reconstruction: Model development and application. M.S. thesis. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington.
- Stover, A. 2009. Estimating Pacific Northwest salmon escapement: A methods review based on statistical first principles. M.S. thesis. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington.
- Clawson, M. V. 2010. Use of age-at-harvest information to inform wildlife management. M.S. thesis. School of Forest Resources, University of Washington, Seattle, Washington.
- Perry, R. 2010. Survival and migration dynamics of juvenile Chinook salmon (*Oncorhynchus tshawytscha*) in the Sacramento-San Joaquin River Delta. Ph.D. dissertation. School of Aquatic & Fishery Sciences, University of Washington, Seattle, Washington.
- Gast, C. M. 2011. Fixed and random effects models and multistate estimation procedures for statistical population reconstructions. Ph.D. dissertation. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington.
- Pope, A. C. 2014. A graphical user interface (GUI) input-based algorithm to automate generation of multi-state models for release-recapture studies. M.S. thesis. Quantitative Ecology and Resource Management, University of Washington, Seattle, Washington.

PUBLICATIONS

Theses:

- Skalski, J. R., 1977. Transferrin polymorphism in a population of Nuttall's cottontail in central Oregon. M.S. Thesis. Oregon State University. 57 pp.
- Skalski, J. R., 1978. Tests of homogeneity and goodness-of-fit to a truncated geometric distribution. M.S. Thesis. Cornell University. 45 pp.
- Skalski, J. R., 1985. Use of capture data to quantify change and tests for effects on the abundance of wild populations. Ph.D. Thesis. Cornell University. 404 pp.

Books:

- Skalski, J. R., K. E. Ryding, and J. J. Millsbaugh. 2005. *Wildlife demography: Analysis of sex, age, and count data*. Academic Press. San Diego, CA. 656 pp.
- Smith, S. G., J. R. Skalski, J. W. Schlechte, A. Hoffmann, and V. Cassen. 1994. *SURPH.1 manual: Statistical survival analysis of fish and wildlife tagging studies*. Center for Quantitative Science, School of Fisheries, University of Washington, Seattle, WA.
- Skalski, J. R., and D. S. Robson. 1992. *Techniques for wildlife investigations: Design and analysis of capture data*. Academic Press. San Diego, CA. 237 pp.

Submitted Papers and Book Chapters:

- Buchanan, R. A., J. R. Skalski, G. Mackey, C. Snow, and A. R. Murdoch. 2015. Estimating cohort survival through tributaries for salmonid populations with variable age-at-migration. *North American Journal of Fisheries Management* (in revision).
- Skalski, J. R., M. A. Weiland, G. R. Ploskey, C. M. Woodley, M. B. Eppard, G. Johnson, T. J. Carlson, and R. L. Townsend. 2015. Multifaceted criteria used in determining acceptance of survival compliance studies at federally operated dams in the Columbia/Snake River. *North American Journal of Fisheries Management* (submitted).
- Clawson, M. V., J. R. Skalski, J. L. Isabelle, and J. J. Millsaugh. 2014. Trends in male wild turkey abundance and harvest following restoration efforts in the southeast region of Missouri, 1960–2010. *Wildlife Society Bulletin* (in press).
- Skalski, J. R., R. L. Townsend, and R. A. Buchanan. 2013. The limits of correlative investigations in identifying causal factors in the freshwater and marine survival of Columbia River salmonids. *Reviews in Fisheries Sciences* (submitted).
- Woodley, C. M., A. Seaburg, K. A. Wagner, E. S. Fischer, M. A. Weiland, J. Skalski, T. J. Carlson, and M. B. Eppard. 2014. Compliance studies: What about the fish? *Hydro Review* (submitted).
- Woodley, C. M., K. A. Wagner, A. G. Seaburg, J. R. Skalski, and M. B. Eppard. 2013. Performance assessment of bi-directional knotless tissue-closure devices to monofilament sutures in age-0 Chinook salmon. *Transactions of the American Fisheries Society* (submitted).

Papers:

- Li, X, Z. D. Deng, R. S. Brown, T. Fu, J. J. Martinez, G. A. McMichael, J. R. Skalski, R. L. Townsend, B. A. Trumbo, M. L. Ahmann, and J. F. Renholds. 2015. Migration depth and residence time of juvenile salmonids in the forebays of hydropower dams prior to passage through turbines or juvenile bypass systems: Implications for turbine-passage survival. *Conservation Physiology* 3 (doi:10.1093/conphys/cou064).
- Johnson, G., E., N. K. Sather, J. R. Skalski, and D. J. Teel. 2014. Application of species diversity indices to quantify early life-history diversity for Chinook salmon. *Ecological Indicators* 38:170-180.
- Perry, R., P. L. Brandes, J. R. Burau, P. T. Sandstrom, and J. R. Skalski. 2015. Effect of tides, river flow, and gate operations on entrainment of juvenile salmon into the interior Sacramento-San Joaquin River Delta. *Transactions of the American Fisheries Society* 144(3):445-455.
- Skalski, J. R., and S. Bickford. 2014. Decadal compliance with the no-net-impact survival standards at Wells Hydroelectric Project, Columbia River, Washington. *Northwest Science* 88(2)-120-128.
- Skalski, J. R., M. B. Eppard, G. R. Ploskey, M. A. Weiland, T. J. Carlson, and R. L. Townsend. 2014. Assessment of subyearling Chinook salmon survival through the federal hydroprojects in the main-stem Columbia River. *North American Journal of Fisheries Management* 34:741-752.

- Wagner, K. A., C. Woodley, A. G. Seaburg, J. R. Skalski, and M. B. Eppard. 2014. Physiological stress responses to prolonged exposure to MS-222 and surgical implantation in juvenile Chinook salmon. *North American Journal of Fisheries Management* 34:863-873.
- Brown, R. S., E. W. Oldenburg, A. G. Seaburg, J. R. Skalski, M. Brad Eppard, K. A. Deters, and K. V. Cook. 2013. Survival of seaward-migrating PIT and acoustic tagged juvenile Chinook salmon in the Snake and Columbia rivers: an evaluation of length-specific tagging effects. *Animal Biotelemetry* 1:8 (12 June 2013) (<http://www.animalbiotelemetry.com/content/1/1/8>).
- Buchanan, R. A., J. R. Skalski, P. Brandes, and A. Fuller. 2013. Route use and survival of juvenile Chinook salmon through the San Joaquin River Delta. *North American Journal of Fisheries Management* 33:216-229.
- Clawson, M. V., J. R. Skalski, and J. J. Millspaugh. 2013. Archaeological analysis of bison jumps and the implications to the contemporary management of bison herds in North America. *Natural Areas Journal* 33(2):148-155.
- Clawson, M. V., J. R. Skalski, and J. J. Millspaugh. 2013. The utility of auxiliary data in statistical population reconstruction. *Wildlife Biology* 19:147-155.
- Gast, C., J. R. Skalski, and D. E. Beyer. 2013. Evaluation of fixed- and random-effects models and multistage estimation procedures in statistical population reconstruction. *Journal of Wildlife Management* 77(6):1258-1270.
- Gast, C. M., J. R. Skalski, J. L. Isabelle, and M. V. Clawson. 2013. Random effects models and multistate estimation procedures for statistical population reconstruction of small game populations. *PLoS One* 8(6):e65244 (DOI:10.1371/journal.pone.0065244).
- Johnson, G. E, F. Khan, J. Skalski, and B. Klatte. 2013. Sluiceway operations to pass juvenile salmonids at The Dalles Dam, Columbia River, USA. *North American Journal of Fisheries Management* 33:1000-1012.
- Perry, R. W., P. L. Brandes, J. R. Burau, A. P. Klimley, B. MacFarlane, C. Michel, and J. R. Skalski. 2013. Sensitivity of population-level survival to migration routes used by juvenile Chinook salmon to negotiate the Sacramento-San Joaquin River Delta. *Environmental Biology of Fishes* 96:381-392.
- Skalski, J. R., A. G. Seaburg, and R. A. Buchanan. 2013. The effects of high detection probabilities on model selection in paired release-recapture studies in the era of electronic tagging studies. *Animal Biotelemetry* 1:12 (DOI: 10.1186/10.1186/2050-3385-1-12).
- Brown, R. S., T. J. Carlson, A. J. Gingerich, J. R. Stephenson, B. D. Pflugrath, A. E. Welch, M. J. Langeslay, M. L. Ahmann, R. L. Johnson, J. R. Skalski, A. G. Seaburg, and R. L. Townsend. 2012. Quantifying mortal injury of juvenile Chinook salmon exposed to simulated hydro-turbine passage. *Transactions of American Fisheries Society* 141:147-157.

- Carlson, T. J., R. S. Brown, J. R. Stephenson, B. D. Pflugrath, A. H. Colotelo, A. J. Gingerich, P. L. Benjamin, M. J. Langeslay, M. L. Ahmann, R. L. Johnson, J. R. Skalski, A. G. Seaburg, and R. L. Townsend. 2012. The influence of tag presence on the mortality of juvenile Chinook salmon exposed to simulated hydroturbine passage: Implications for survival estimates and management of hydroelectric facilities. *North American Journal of Fisheries Management* 32:249-261.
- Diefenderfer, H. L., G. E. Johnson, J. R. Skalski, S. A. Breithaupt, and A. M. Coleman. 2012. Potential for diminishing returns in the hydroecologic restoration of riverscapes. *Landscape Ecology* 27:671-682.
- Skalski, J. R. 2012. Estimating variance components and related parameters when planning long-term monitoring programs. In: *Design and analysis of long-term ecological monitoring studies*, edited by R. A. Gitzen, J. J. Millspaugh, A. B. Cooper, and D. S. Licht, Chapter 8, pp. 174–199, Cambridge University Press, Cambridge.
- Skalski, J. R., M. V. Clawson, and J. J. Millspaugh. 2012. Model evaluation in statistical population reconstruction. *Wildlife Biology* 18:225-234.
- Skalski, J. R., J. J. Millspaugh, and M. V. Clawson. 2012. Comparison of statistical population reconstruction using full and pooled adult age-class data. *PLoS ONE* 7(3):1-7 (DOI 10.1371/journal.pone.0033910).
- Skalski, J. R., T. W. Steig, and S. Hemstrom. 2012. Assessing compliance with fish survival standards: A case study at Rock Island Dam, Washington. *Environmental Science & Policy* 18:45-51.
- Diefenderfer, H. L., R. M. Thom, G. E. Johnson, J. R. Skalski, K. A. Vogt, B. D. Ebberts, G. C. Roegner, and E. M. Dawley. 2011. A levels-of-evidence approach for assessing cumulative ecosystem response to estuary and river restoration programs. *Ecological Restoration* 29(1-2):111-132.
- Hurley, M. A., J. W. Unsworth, P. Zager, E. O. Garton, D. M. Montgomery, J. R. Skalski, and C. L. Maycock. 2011. Demographic response of mule deer to experimental reduction of coyotes and mountain lions in southeastern Idaho. *Wildlife Monographs* 178(1):1-33.
- McMichael, G. A., J. R. Skalski, and K. A. Deters. 2011. Survival of juvenile Chinook salmon during barge transport. *North American Journal of Fisheries Management* 31(6):1187-1196.
- Pearson, W. H., and J. R. Skalski. 2011. Factors affecting stranding of juvenile salmonids by wakes from ship passage in the lower Columbia River. *River Research and Applications* 27:926-936.
- Broms, K. M., J. R. Skalski, J. J. Millspaugh, C. A. Hagen, and J. H. Schulz. 2010. Using statistical population reconstruction to estimate demographic trends in small game populations. *Journal of Wildlife Management* 74(2):310-317.
- Buchanan, R. A., and J. R. Skalski. 2010. Using multistate mark-recapture methods to model adult salmonid migration in an industrialized river. *Ecological Modelling* 221:582–589.

- Buchanan, R. A., J. R. Skalski, and A. E. Giorgi. 2010. Evaluating surrogacy of hatchery releases for the performance of wild yearling Chinook salmon smolts from the Snake River Basin. *North American Journal of Fisheries Management* 30:1258-1269.
- Giorgi, A., J. Skalski, C. Peven, M. Langeslay, S. Smith, T. Counihan, R. Perry, and S. Bickford. 2010. Guidelines for conducting smolt survival studies in the Columbia River. Pages 47-78 in K. S. Wolf and J. S. O'Neal, editors. *Tagging, Telemetry and Marking Measures for Monitoring Fish Populations—A compendium of new and recent science for use in informing technique and decision modalities*. Pacific Northwest Aquatic Monitoring Partnership (PNAMP) Special Publication 2010-002, Chapter 3, (<http://www.pnamp.org/node/2867>).
- Parsons, A. L., and J. R. Skalski. 2010. Quantitative assessment of salmonid escapement techniques in the Pacific Northwest. *Reviews in Fisheries Science* 18(4):301-314.
- Perry, R. W., P. L. Brandes, P. Sandstrom, A. Ammann, B. McFarlane, A. P. Klimley, and J. R. Skalski. 2010. Estimating survival and migration route probabilities of juvenile Chinook salmon through the Sacramento–San Joaquin River Delta. *North American Journal of Fisheries Management* 30:142-156.
- Skalski, J. R., S. Liao, and R. A. Buchanan. 2010. Performance of three alternative estimators of stream residence time based on live and dead counts of salmonids. *North American Journal of Fisheries Management* 30:191-208.
- Skalski, J. R., J. J. Millsbaugh, M. V. Clawson, J. L. Belant, D. R. Etter, B. J. Frawley, and P. D. Friedrich. 2010. Abundance trends of American martens in Michigan based on statistical population reconstruction. *Journal of Wildlife Management* 75(8):1767-1773.
- Skalski, J. R., R. L. Townsend, T. W. Steig, and S. Hemstrom. 2010. Comparison of two alternative approaches for estimating dam passage survival using acoustic-tagged sockeye salmon smolts. *North American Journal of Fisheries Management* 30:831-839.
- Vynne, C., J. R. Skalski, R. B. Machado, H. Smith, M. J. Groom, A. T. A. Jácomo, J. Marinho-Filho, M. B. Ramos Neto, L. Silveira, C. Pomilla, S. K. Wasser. 2010. Effectiveness of scat detection dogs in determining species presence in a tropical savanna landscape. *Conservation Biology* 25(1):154-162.
- Brown, R. S., T. J. Carlson, A. E. Welch, J. R. Stephenson, C. S. Abernethy, B. D. Ebberts, M. J. Langeslay, M. L. Ahmann, D. H. Feil, J. R. Skalski, and R. L. Townsend. 2009. Assessment of barotrauma from rapid decompression of depth-acclimated juvenile Chinook salmon bearing radiotelemetry transmitters. *Transactions of the American Fisheries Society* 138:1285–1301.
- Buchanan, R.A., J. R. Skalski, and G. A. McMichael. 2009. Differentiating mortality from delayed migration in subyearling fall Chinook salmon (*Oncorhynchus tshawytscha*). *Canadian Journal of Fisheries and Aquatic Sciences* 66:2243-2255.
- Millsbaugh, J. J., J. R. Skalski, R. L. Townsend, D. R. Diefenbach, M. S. Boyce, L. P. Hansen, and K. M. Kammermeyer. 2009. An evaluation of the sex-age-kill (SAK) model performance. *Journal of Wildlife Management* 73(3): 442-451.

- Skalski, J. R., R. A. Buchanan, and J. Griswold. 2009. Review of marking methods and release-recapture designs for estimating the survival of very small fish: Assessment of salmonid fry survival. *Reviews in Fisheries Science* 17(3):391–401.
- Skalski, J. R., R. A. Buchanan, R. L. Townsend, T. W. Steig, and S. Hemstrom. 2009. A multiple-release model to estimate route-specific and dam passage survival at a hydroelectric project. *North American Journal of Fisheries Management* 29:670-679.
- Skalski, J. R. 2008. Tiny PIT tag plays a big role in the Columbia-Snake River Basin. *Hydro Review* 27(5):48-55.
- Skalski, J. R., J. J. Millspaugh, and K. E. Ryding. 2008. Effects of asymptotic and maximum age estimates on calculated rates of population change. *Ecological Modelling* 212:528-535.
- Skalski, J. R., R. L. Townsend, L. L. McDonald, J. W. Kern, and J. J. Millspaugh. 2008. Type I errors linked to faulty statistical analyses of endangered species classifications. *Journal of Agricultural, Biological, and Environmental Statistics* 13(2):1-22.
- Buchanan, R. A., and J. R. Skalski. 2007. A migratory life-cycle release-recapture model for salmonid PIT-tag investigations. *Journal of Agricultural, Biological, and Environmental Statistics* 12(3):325-345.
- Deriso, R. B., M. N. Maunder, and J. R. Skalski. 2007. Variance estimation in integrated assessment models and its importance for hypothesis testing. *Canadian Journal of Fisheries and Aquatic Sciences* 64:187-197.
- Gilbert, B. A., K. J. Raedeke, J. R. Skalski, and A. B. Stringer. 2007. Modeling black-tailed deer population dynamics using structured and unstructured approaches. *Journal of Wildlife Management* 71(1):144-154.
- Miller, T. J., J. R. Skalski, and J. N. Ianelli. 2007. Optimizing observer coverage when faced with multiple objectives. *ICES Journal of Marine Science* 64:97-109.
- Ryding, K. E., J. J. Millspaugh, and J. R. Skalski. 2007. Using time series to estimate the finite rate of population. *Journal of Wildlife Management* 71(1):202-207.
- Skalski, J. R., J. J. Millspaugh, P. Dillingham, and R. A. Buchanan. 2007. Note: Calculating the variance of the finite rate of population change from a matrix model in *Mathematica*. *Environmental Modelling & Software* 22:359-364.
- Skalski, J. R., R. L. Townsend, and B. A. Gilbert. 2007. Calibrating population reconstruction models using catch-effort and index data. *Journal of Wildlife Management* 71(4):1309-1316.
- Buchanan, R. A., J. R. Skalski, and S. G. Smith. 2006. Estimating the effects of smolt transportation from different vantage points and management perspectives. *North American Journal of Fisheries Management* 26:460-472.
- Miller, T. J., and J. R. Skalski. 2006. Estimation of seabird bycatch for Alaskan longline vessels using model- and design-based methods. *Canadian Journal of Fisheries and Aquatic Sciences* 63:1878-1889.

- Miller, T. J., and J. R. Skalski. 2006. Integrating design- and model-based inference to estimate length and age composition in Alaska longline catches. *Canadian Journal of Fisheries and Aquatic Sciences* 63:1092-1114.
- Skalski, J. R., and J. J. Millspaugh. 2006. Application of multidimensional change-in-ratio method using Program USER. *Wildlife Society Bulletin* 34:433-439.
- Skalski, J. R., J. J. Millspaugh, and K. E. Ryding. 2006. The impact of hunter postseason survey design on harvest estimation. *Wildlife Society Bulletin* 34:329-337.
- Skalski, J. R., J. J. Millspaugh, and R. D. Spencer. 2006. Population estimation and biases in paint-ball mark-resighting surveys of elk. *Journal of Wildlife Management* 69 (3):1043-1052.
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- Dillingham, P. W., J. R. Skalski, and K. E. Ryding. 2005. Fine geographic scale interactions between Steller sea lion trends and local fisheries. *Canadian Journal of Fisheries and Aquatic Sciences* 63:107-119.
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