

Quarterly Journal Article search : January-March 2023  
Columbia Basin Fish & Wildlife Library

Anderson, A. J., A. M. Claiborne, and W. Smith. 2023. Validation of age estimates for Chum and Sockeye salmon derived from otolith and scale analysis. *Fisheries Research* 259:106556.

<https://doi.org/10.1016/j.fishres.2022.106556>

Species: Chum and sockeye salmon

Location: Western Washington

Other keywords: Age validation

Andrews, K. R., T. Seaborn, J. P. Egan, M. W. Fagnan, D. D. New, Z. Chen, P. A. Hohenlohe, L. P. Waits, C. C. Caudill, and S. R. Narum. 2023. Whole genome resequencing identifies local adaptation associated with environmental variation for redband trout. *Molecular Ecology* 32(4):800-818.

<https://doi.org/10.1111/mec.16810>

Species: Redband trout

Location: Interior Columbia River

Keywords: Genome resequencing, genotype-environment association, climate change

Auerbach, D. S., and A. K. Fremier. 2023. Identification of salmon redds using RPV-based imagery produces comparable estimates to ground counts with high inter-observer variability. *River Research and Applications* 39(1):35-45. <https://doi.org/10.1002/rra.4065>

Species: Chinook salmon

Location: Wenatchee River, Washington

Other keywords: Redd surveys, population monitoring

Beechie, T. J., C. Fogel, C. Nicol, J. Jorgensen, B. Timpane-Padgham, and P. Kiffney. 2023. How does habitat restoration influence resilience of salmon populations to climate change? *Ecosphere* 14(2): e4402. <https://doi.org/10.1002/ecs2.4402>

Species: Pacific salmon and steelhead

Location: Chehalis River Basin, Washington

Other keywords: Climate change resilience, Habitat Assessment and Restoration Planning model

Bellmore, R. J., C. J. Sergeant, R. A. Bellmore, J. A. Falke, and J. B. Fellman. 2023. Modeling coho salmon (*Oncorhynchus kisutch*) population response to streamflow and water temperature extremes. *Canadian Journal of Fisheries and Aquatic Sciences* 80(2):243-260. <https://doi.org/10.1139/cjfas-2022-0129>

Species: Coho salmon

Location: Southeast Alaska

Other keywords: Thermal effects, streamflow, life cycle models

Bradford, M. J., and G. C. Taylor. 2023. Diversity in freshwater life history in spring and summer Chinook Salmon from the Fraser River, Canada. *Transactions of the American Fisheries Society* 152(2):129-144.

<https://doi.org/10.1002/tafs.10396>

Species: Chinook salmon

Location: Fraser River, Canada

Other keywords: Migration

Chen, E. K., N. A. Som, J. D. Deibner-Hanson, D. G. Anderson, and M. J. Henderson. A life cycle model for evaluating estuary residency and recovery potential in Chinook salmon. *Fisheries Research* 257:106511. <https://doi.org/10.1016/j.fishres.2022.106511>

Species: Chinook salmon

Location: Redwood Creek Basin, California

Other keywords: Habitat restoration response, stage-structured model

Clark, C., R. Al-Chokhachy, and K. Ross. 2023. Using continuous surveys to evaluate precision and bias of inferences from design-based reach-scale sampling of stream habitat. *Canadian Journal of Fisheries and Aquatic Sciences* 80(2):229-242. <https://doi.org/10.1139/cjfas-2022-0103>

Species: n/a

Location: Upper Lewis River Basin, Washington

Other keywords: Stream habitat assessments, sampling designs

Dralle, D. N., G. Rossi, P. Georgakakos, W. J. Hahm, D. M. Rempe, M. Blanchard, M. E. Power, W. E. Dietrich, and S. M. Carlson. 2023. The salmonid and the subsurface: hillslope storage capacity determines the quality and distribution of fish habitat. *Ecosphere* 14(2):e4436. <https://doi.org/10.1002/ecs2.4436>

Species: Pacific salmon and steelhead

Location: Eel River Basin

Other keywords: Subsurface water storage

Dudley, P. N., A. N. Hendrix, and A.-M. K. Osterback. 2023. A meta-analysis and model comparison of juvenile salmon growth across different habitat types. *River Research and Applications* 39(2):177-188. <https://doi.org/10.1002/rra.4078>

Species: Chinook salmon

Location: Sacramento River, California

Other keywords: Growth-habitat associations

Free, C. M., T. Mangin, J. Wiedenmann, C. Smith, H. McVeigh, and S. D. Gaines. 2023. Harvest control rules used in US federal fisheries management and implications for climate resilience. *Fish and Fisheries*, 24(2):248-262. <https://doi.org/10.1111/faf.12724>

Species: n/a

Location: United States

Other keywords: Harvest control rules, climate change adaptation

Gallinat, M.P., J. R. Bence, L. S. Miller, and L. A. Ross. 2023. Determining optimum size at release for hatchery-origin Tucannon river spring chinook salmon using PIT tags. *North American Journal of Aquaculture* 85(1):31-47. <https://doi.org/10.1002/naaq.10269>

Species: Chinook salmon

Location: Tucannon River, Washington

Other keywords: Smolt-to-adult return rates, hatchery releases

Harstad, D. L., D. A. Larsen, L. Clarke, D.K. Spangenberg, R. Hogg, R., B. Requa, and B. R. Beckman. 2023. The effect of reducing dietary lipid and food availability on precocious male maturation in Chinook Salmon: A production-scale hatchery experiment. *Transactions of the American Fisheries Society* 152(2): 232-252. <https://doi.org/10.1002/tafs.10402>

Species: Chinook salmon

Location: Bonneville Hatchery, Oregon

Other keywords: Dietary regimes

Horn, R. L., and S. R. Narum. 2023. Going the distance to test local adaptation in Coho salmon. *Molecular Ecology* 32(3):539-541. <https://doi.org/10.1111/mec.16792>

Species: Coho salmon

Location: n/a

Other keywords: Migration, genomics

Hostetter, N.J., A. F. Evans, Q. Payton, D. D. Roby, D. E. Lyons, and K. Collis. 2023. A review of factors affecting the susceptibility of juvenile salmonids to avian predation. *North American Journal of Fisheries Management* 43(1):244-256. <https://doi.org/10.1002/nafm.10862>

Species: Various salmonids

Location: Columbia River Basin

Other keywords: Predator-prey dynamics

Kendall, N. W., J. Unrein, C. Volk, D. A. Beauchamp, K. L. Fresh, and T. P. Quinn. 2023. Life cycle model reveals sensitive life stages and evaluates recovery options for a dwindling Pacific salmon population. *North American Journal of Fisheries Management* 43(1):203-230. <https://doi.org/10.1002/nafm.10859>

Species: Sockeye salmon

Location: Cedar River, Washington

Other keywords: Population models, survival rates

Kiffney, P. M., P. J. Lisi, M. Liermann, S. M. Naman, J. H. Anderson, M. H. Bond, G. R. Pess, M. E. Koehler, E. R. Buhle, T. W. Buehrens, R. S. Klett, J. M. Cram, and T. P. Quinn. 2023. Colonization of a temperate river by mobile fish following habitat reconnection. *Ecosphere* 14(2):e4336.

<https://doi.org/10.1002/ecs2.4336>

Species: Chinook and coho salmon, mountain whitefish

Location: Cedar River Basin, Washington

Other keywords: Recolonization, habitat connectivity, long-term monitoring

Losee, J. P., D. R. Dapp, G. Madel, and G. Shimek. 2023. Volunteer angling and technology-based solutions provide the first estimate of sea lice infections for wild Coastal Cutthroat trout *Oncorhynchus clarkii clarkii*. *Fisheries* 48(3):97-106. <https://doi.org/10.1002/fsh.10882>

Species: Coastal cutthroat trout

Location: North America Pacific Coast

Other keywords: Ectoparasite infections

Luis, S. M., and G. B. Pasternack. 2023. Local hydraulics influence habitat selection and swimming behavior in adult California Central Valley Chinook salmon at a large river confluence. *Fisheries Research* 261:106634. <https://doi.org/10.1016/j.fishres.2023.106634>

Species: Chinook salmon

Locations: Feather and Yuba Rivers, California

Other keywords: River confluence hydraulics, homing and straying

McClure M. M., et. al. 2023. Vulnerability to climate change of managed stocks in the California Current large marine ecosystem. *Frontiers in Marine Science* 10. <https://doi.org/10.3389/fmars.2023.1103767>

Species: Various including Pacific salmon

Location: California Current Large Marine Ecosystem (Pacific coast from Washington to Baja California)

Other keywords: Climate change vulnerability, adaptive capacity

Magnuson, J. T., N. Fuller, V. McGruer, K. E. H. Hartz, S. Acuña, G. W. Whitledge, M. J. Lydy, and D. Schlenk. 2023. Effect of temperature and dietary pesticide exposure on neuroendocrine and olfactory responses in juvenile Chinook salmon (*Oncorhynchus tshawytscha*). *Environmental Pollution* 318: 120938. <https://doi.org/10.1016/j.envpol.2022.120938>

Species: Chinook salmon

Location: n/a

Other keywords: Gene dysregulation, olfactory impairment

May, S. A., J. J. Hard, M. J. Ford, K. A. Naish, E. J. Ward. 2023. Assortative mating for reproductive timing affects population recruitment and resilience in a quantitative genetic model. *Evolutionary Applications* 16(3):657-672. <https://doi.org/10.1111/eva.13524>

Species: Pacific salmon

Location: n/a

Other keywords: Quantitative genetic models, assortative mating, reproductive timing

Mordecai, G., K. Beardslee, B. Glambeck, N. Frazer, R. Routledge, and A. Morton. 2023. Detection and phylogenetic assessment of PRV-1 via sampling of biological materials released from salmon farms in British Columbia. *Canadian Journal of Fisheries and Aquatic Sciences* 80(1):156-169.

<https://doi.org/10.1139/cjfas-2022-0019>

Species: Chinook salmon, Atlantic salmon

Location: Puget Sound, Washington to Central Coast of British Columbia

Other keywords: Infectious agents, farmed/wild fish interactions

Neuswanger, J. R., A. E. Rosenberger, M. S. Wipfli, and N. F. Hughes. 2023. Territories within groups: the dynamic competition of drift-feeding juvenile Chinook salmon in 3-dimensional space. *Canadian Journal of Fisheries and Aquatic Sciences* 80(2):346-359. <https://doi.org/10.1139/cjfas-2022-0112>

Species: Chinook salmon

Location: Chena River, Alaska

Other keywords: Territorial competition

Nuetzel, H. M., P. F. Galbreath, B. A. Staton, C. A. Crump, L. M. Naylor, and G. E. Shippentower. 2023. Improved productivity of naturalized spring Chinook salmon following reintroduction from a hatchery stock in Lookingglass Creek, Oregon. *Canadian Journal of Fisheries and Aquatic Sciences* 80(2):375-392. <https://doi.org/10.1139/cjfas-2022-0114>

Species: Chinook salmon

Location: Lookingglass Creek, Oregon

Other keywords: Supplementation, reproductive success

Peacock, S. J., D. C. Braun, E. E. Hodgson, B. M. Connors, K. Bryan, and K. Connors. 2023. Testing for broad-scale relationships between freshwater habitat pressure indicators and Pacific salmon population trends. *Ecological Indicators* 147:109935. <https://doi.org/10.1016/j.ecolind.2023.109935>

Species: Pacific salmon

Location: British Columbia

Other keywords: Habitat pressure indicators, Bayesian modelling

Ramos, M. M., and D. M. Ward. 2023. Modelling the reestablishment of coho salmon (*Oncorhynchus kisutch*) in Klamath River tributaries after dam removal. *Ecology of Freshwater Fish* 32(1):133-146. <https://doi.org/10.1111/eff.12679>

Species: Coho salmon

Location: Klamath River Basin, California

Other keywords: Rearing habitat and capacity

Rheinsmith, S. E., T. P. Quinn, A. H. Dittman, and K. E. Yopak. 2023. Ontogenetic shifts in olfactory rosette morphology of the sockeye salmon, *Oncorhynchus nerka*. *Journal of Morphology* 284(1):e21539. <https://doi.org/10.1002/jmor.21539>

Species: Sockeye salmon

Location: n/a

Other keywords: Olfactory rosette development

Roegner, G. C., and G. E. Johnson. 2023. Export of macroinvertebrate prey from tidal freshwater wetlands provides a significant energy subsidy for outmigrating juvenile salmon. *PLoS One* 18(3):e0282655. <https://doi.org/10.1371/journal.pone.0282655>

Species: Pacific salmon

Location: Lower Columbia River

Other keywords: Tidal marsh energy export

Roni, P., M. J. Camp, K. Connelly, K. Ross, and H. Berge. 2023. A comparison of methods for estimating juvenile salmon habitat capacity to assist with restoration planning and evaluation. *Transactions of the American Fisheries Society* 152(2):201-216. <https://doi.org/10.1002/tafs.10399>

Species: Chinook salmon

Location: Grande Ronde River, Oregon

Other keywords: Habitat rearing capacity

Roper, B., W. C. Saunders, J. V. and Ojala. 2023. The relationship between disturbance events and substantial changes in stream conditions on public lands in the inland Pacific Northwest. *North American Journal of Fisheries Management* 43(1):268-290. <https://doi.org/10.1002/nafm.10858>

Species: n/a

Location: Interior Columbia River and upper Missouri River basins

Other keywords: Stream channel disturbances

Satterthwaite, W. H., and A. O. Shelton. 2023. Methods for assessing and responding to bias and uncertainty in U.S. West Coast salmon abundance forecasts. *Fisheries Research* 257:106502 <https://doi.org/10.1016/j.fishres.2022.106502>

Species: Chinook and coho salmon

Location: n/a

Other keywords: Bias correction, uncertainty buffers

Sorel, M. H., A. R. Murdoch, R. W. Zabel, J. C. Jorgensen, C. M. Kamphaus, and S. J. Converse. 2023. Juvenile life history diversity is associated with lifetime individual heterogeneity in a migratory fish. *Ecosphere* 14(1):e4366. <https://doi.org/10.1002/ecs2.4366>

Species: Chinook salmon

Location: Wenatchee River, Washington

Other keywords: Life history pathways, life history diversity

Swartz, A., and D. Warren. 2023. Wildfire in western Oregon increases stream temperatures, benthic biofilms, and juvenile coastal cutthroat trout size and densities with mixed effects on adult trout and coastal giant salamanders. *Canadian Journal of Fisheries and Aquatic Sciences* 80(3):503-516. <https://doi.org/10.1139/cjfas-2022-0053>

Species: Coastal cutthroat trout, Pacific giant salamanders

Location: McKenzie River Basin, Oregon

Other keywords: Riparian cover, thermal effects

Tuohy, A. M., A. T. Jorgenson, and J. R. Skalski. 2023. Maximizing salmonid bycatch survival with passively operated commercial fish traps. *Fisheries Research* 257:106495.

<https://doi.org/10.1016/j.fishres.2022.106495>

Species: Coho and Chinook salmon

Location: Lower Columbia River

Other keywords: Selective harvesting

Watson, T. R., T. J. Bruce, J. Ma, K. D. Cain. 2023. Comparison of injection and immersion challenges of *Renibacterium salmoninarum* strains in Rainbow Trout. *Journal of Aquatic Animal Health* 35(1):34-40.

<https://doi.org/10.1002/aah.10175>

Species: Rainbow trout

Location: University of Idaho Coldwater Laboratory

Other keywords: Bacterial kidney disease

White, S. L., D. A. Fox, T. Beridze, S. K. Bolden, S. L. Johnson, T. F. Savoy, F. Scheele, A. D. Schreier, and D. C. Kazyak. 2023. Decades of global sturgeon conservation efforts are threatened by an expanding captive culture industry. *Fisheries* 48(2):54-61. <https://doi.org/10.1002/fsh.10865>

Species: Sturgeon

Location: Worldwide

Other keywords: Commercial sturgeon culture

Zillig, K. W., R. A. Lusardi, D. E. Cocherell, and N. A. Fangue. 2023. Interpopulation variation in thermal physiology among seasonal runs of Chinook salmon. *Canadian Journal of Fisheries and Aquatic Sciences* 80(1):1-13. <https://doi.org/10.1139/cjfas-2022-0133>

Species: Chinook salmon

Location: Sacramento River Basin, California

Other keywords: Physiological population differences