

Quarterly Journal Article search : October-December 2022
Columbia Basin Fish & Wildlife Library

Al-Chokhachy, R., B. H. Letcher, C. C. Muhlfeld, J. B. Dunham, T. Cline, N. P. Hitt, James J. Roberts, and David Schmetterling. Stream size, temperature, and density explain body sizes of freshwater salmonids across a range of climate conditions. *Canadian Journal of Fisheries and Aquatic Sciences* 79(10):1729-1744. <https://doi.org/10.1139/cjfas-2021-0343>

Species: Freshwater trout

Location: Various

Other: Body size, climate change

Bailey, C. J., K. L. Wilson, M. More O'Ferrall, and J. W. Moore. Fish length back-calculation from scales: advancing methodology and correction of bias. *Canadian Journal of Fisheries and Aquatic Sciences* 79(11):1780-1797. <https://doi.org/10.1139/cjfas-2021-0270>

Species: Steelhead

Location: n/a

Other: Fish length estimates, measurement error models

Biagi, C. A., R. A. Leggatt, D. Sakhrani, M. Wetklo, W. E. Vandersteen, K. A. Christensen, E. B. Rondeau, B. M. Watson, K. W. Wellband, B. F. Koop, R. E. Withler, and R. H. Devlin. 2022. Timing of postfertilization pressure shock treatment for the production of mitotic gynogens in six salmonid species. *North American Journal of Aquaculture*. 84(4):505-515. <https://doi.org/10.1002/naaq.10266>

Species: Various salmonids

Location: n/a

Other: Doubled haploid gynogens, postfertilization pressure shock

Buchanan, R. A., and S. L. Whitlock. 2022. Understanding salmon migration dynamics in a data-limited environment. *North American Journal of Fisheries Management* 42(5):1111-1133.

<https://doi.org/10.1002/nafm.10799>

Species: Fall chinook

Location: Sacramento–San Joaquin River Delta, California

Other: Survival patterns and models

Buxton, T. H., and D. N. Bradley. 2022. Evolution of tributary junctions and their capacity for rearing juvenile chinook salmon (*Oncorhynchus tshawytscha*) on a regulated river. *Ecohydrology* 15(8):e2463. <https://doi.org/10.1002/eco.2463>

Species: Chinook salmon

Location: Trinity River, California

Other: Channel morphology, flow regulation

Cheng, M. L. H., S. G. Hinch, F. Juanes, S. J. Healy, A. G. Lotto, S. J. Mapley, and N. B. Furey 2022. Acoustic imaging observes predator–prey interactions between bull trout and migrating sockeye salmon smolts. *North American Journal of Fisheries Management* 42(6):1494-1501.

<https://doi.org/10.1002/nafm.10833>

Species: Bull trout, sockeye

Location: Chilko Lake, British Columbia

Other: DIDSON, predator-prey interactions

Courter, I. I., T. Chance, R. Gerstenberger, M. Roes, S. Gibbs, and A. Spidle. Hatchery propagation did not reduce natural steelhead productivity relative to habitat conditions and predation in a mid-Columbia River subbasin. *Canadian Journal of Fisheries and Aquatic Sciences*. 79(11):1879-1895.

<https://doi.org/10.1139/cjfas-2021-0351>

Species: Steelhead

Location: Hood River basin

Other: Hatchery effects, population dynamics

Coykendall, D. K., T. A. Delomas, M. Belnap, and M. R. Campbell. 2022. Improving abundance estimates of spring–summer Snake River chinook salmon for fisheries management. *North American Journal of Fisheries Management* 42(6):1454-1464. <https://doi.org/10.1002/nafm.10823>

Species: Spring-summer chinook

Location: Snake River

Other: Parentage-based tagging, population estimates

Freshwater, C., C. K. Parken, S. Tucker, A. Velez-Espino, and J. King. Nonstationary patterns in demographic traits covary with chinook salmon marine distributions. *Canadian Journal of Fisheries and Aquatic Sciences* 79(11):1860-1878. <https://doi.org/10.1139/cjfas-2021-0312>

Species: Chinook salmon

Location: Pacific Northwest coast

Other: Marine survival, spatial distribution

Gallinat, M. P., J. D. Bumgarner, and L. A. Ross. 2022. Efficacy of a short-term captive broodstock program compared with hatchery-origin spring chinook salmon derived from the same population. *North American Journal of Aquaculture* 84(4):454-468. <https://doi.org/10.1002/naaq.10259>

Species: Spring chinook

Location: Tucannon River

Other: Survival rates, captive broodstock programs

Griswold, R. G., A. E. Kohler, K. A. Tardy, K. E. Griswold, and D. Taki. 2022. Density dependence in three Snake River sockeye salmon nursery lakes in central Idaho. *North American Journal of Fisheries Management* 42(6):1477-1493. <https://doi.org/10.1002/nafm.10835>

Species: Sockeye salmon

Location: Sawtooth Valley, Idaho

Other: Lake habitats, density dependence

Harrison, L. R., C. J. Legleiter, V. K. Sridharan, P. N. Dudley, and M. E. Daniels. 2022. Evaluating the sensitivity of multi-dimensional model predictions of salmon habitat to the source of remotely sensed river bathymetry. *Water Resources Research* 58(12): e2022WR033097.

<https://doi.org/10.1029/2022WR033097>

Species: Chinook salmon

Location: Sacramento River, California

Other: Hyperspectral imagery, multispectral imagery, multi-dimensional flow models

Hause, C. L., G. P. Singer, R. A. Buchanan, D E. Cocherell, N. A. Fangué, and A. L. Rypel. Survival of a threatened salmon is linked to spatial variability in river conditions. *Canadian Journal of Fisheries and Aquatic Sciences* 79(12):2056-2071. <https://doi.org/10.1139/cjfas-2021-0243>

Species: Chinook salmon

Location: San Joaquin River, California

Other: Habitat variability, survival dynamics

Hilbert-Wolf, H. L. and A. K. Gerlak. 2022. The evolution of the modern dam conflict on the Snake River, USA. *Water International* 47:(8)1349-1369. <https://doi.org/10.1080/02508060.2022.2090147>

Species: n/a

Location: Snake River

Other: Dam removal

Holder, P. E., C. M. Wood, M. J. Lawrence, T. D. Clark, C. D. Suski, J-M Weber, A. J. Danylchuk, and S. J. Cooke 2022. Are we any closer to understanding why fish can die after severe exercise? *Fish and Fisheries* 23(6):1400-1417. <https://doi.org/10.1111/faf.12696>

Species: Various

Location: n/a

Other: Post-exercise mortality

Kastl, B., M. Obedzinski, S. M. Carlson, W. T. Boucher, and T. E. Grantham. 2022. Migration in drought: receding streams contract the seaward migration window of endangered salmon. *Ecosphere* 13(12): e4295. <https://doi.org/10.1002/ecs2.4295>

Species: Coho salmon

Location: Russian River basin, California.

Other: Climate change impacts, low flow

Kinziger, A. P., S. R. Fong, J. C. and Garza. 2022. Pedigree Analysis of an integrated hatchery steelhead program from the Mad River, California, provides insight into life history patterns and informs management. *North American Journal of Fisheries Management* 42(5):1285-1295.

<https://doi.org/10.1002/nafm.10821>

Species: Steelhead

Location: Mad River, California

Other: Parentage-based tagging, domestication selection

Knoth, B. A., J. S. Hargrove, M. Dobos, T. Copeland, and B. J. Bowersox. 2022. Rapid colonization of upstream habitats by *Oncorhynchus Mykiss* following culvert modification. *North American Journal of Fisheries Management* 42(5):1173-1184. <https://doi.org/10.1002/nafm.10809>

Species: Steelhead

Location: Big Meadow Creek, Idaho

Other: Fish habitat improvement, genetic composition

Lewis, M. C., C. S. Guy, E. W. Oldenburg, and T. E. McMahon. 2022. Temporal variation in capture efficiency underrepresents spring out-migrating bull trout in a trap-and-haul program. . *North American Journal of Fisheries Management* 42(5):1237-1249. <https://doi.org/10.1002/nafm.10817>

Species: Bull trout

Location: Lower Clark Fork River, Montana

Other: Migration dynamics, trap-and-haul programs

Littles, C., J. Karnezis, K. Blauvelt, A. Creason, H. Diefenderfer, G. Johnson, L. Krasnow, and P. Trask. 2022. Adaptive management of large-scale ecosystem restoration: increasing certainty of habitat outcomes in the Columbia River Estuary, U.S.A. *Restoration Ecology* 30(8): e13634.

<https://doi.org/10.1111/rec.13634>

Species: n/a

Location: Columbia River Estuary

Other: Ecosystem restoration, adaptive management

Malick, M. J., M. E. Moore, and B. A. Berejikian. 2022. Higher early marine mortality of steelhead associated with releases of hatchery coho salmon but not chinook salmon. *Marine Coastal Fisheries* 14(6):e10225. <https://doi.org/10.1002/mcf2.10225>

Species: Steelhead, coho, chinook

Location: Puget Sound

Other: Marine predation

McInturf, A. G., K. W. Zillig, K. Cook, J. Fukumoto, A. Jones, E. Patterson, D. E. Cocherell, C. J. Michel, D. Caillaud, and N. A. Fague. 2022. In hot water? assessing the link between fundamental thermal physiology and predation of juvenile chinook salmon. *Ecosphere* 13(11):e4264.

<https://doi.org/10.1002/ecs2.4264>

Species: Chinook salmon

Location: Sacramento–San Joaquin River Delta, California

Other: Thermal physiology, predator-prey interactions

Meeuwig, M. H., E. J. Bailey, S. P. Clements, and B. L. Hodgson. 2022. Inferred trophic characteristics and ecological roles of native and nonnative fishes in Odell Lake, Oregon. *North American Journal of Fisheries Management* 42(5):1301-1323. <https://doi.org/10.1002/nafm.10822>

Species: Bull trout, lake trout

Location: Odell Lake, Oregon

Other: Native-nonnative fish interactions and competition

Nelson, T. R., C. J. Michel, M. P. Gary, B. M. Lehman, N. J. Demetras, P. N. Dudley, J. J. Hammen, and M. J. Horn. 2022. Riverine fish density, predator–prey interactions, and their relationships with artificial light at night. *Ecosphere* 13(10):e4261. <https://doi.org/10.1002/ecs2.4261>

Species: Chinook salmon, rainbow trout

Location: Sacramento River, California

Other: Artificial illumination, predator-prey interactions

Ogaz, M. H., A. L. Rypel, R. A. Lusardi, P. B. Moyle, and C. A. Jeffres. 2022. Behavioral cues enable native fishes to exit a California floodplain while leaving non-native fishes behind. *Ecosphere* 13(12):e4293.

<https://doi.org/10.1002/ecs2.4293>

Species: Chinook salmon

Location: Cosumnes River, California

Other: Habitat connectivity, outmigration cues

Ohms, H. A., D. N. Chargualaf, G. Brooks, C. Hamilton, E. P. Palkovacs, and D. A. Boughton. Poor downstream passage at a dam creates an ecological trap for migratory fish. *Canadian Journal of Fisheries and Aquatic Sciences* 79(12):2204-2215. <https://doi.org/10.1139/cjfas-2022-0095>

Species: Steelhead
Location: Carmel River, California
Other: Ecological traps, dam passage

Powers, P., B. Staab, B. Cluer, and C. Thorne. 2022. Rediscovering, reevaluating, and restoring Entiatqua: Identifying pre-Anthropocene valleys in North Cascadia, USA. *River Research and Applications* 38(9):1527– 1543. <https://doi.org/10.1002/rra.4016>
Species: Chinook salmon, steelhead
Location: Entiat River
Other: River-wetland corridors, river restoration

Snyder, M. N., N. H. Schumaker, J. B. Dunham, J. L. Ebersole, M. L. Keefer, J. Halama, R. L. Comeleo, P. Leinenbach, A. Brookes, B. Cope, J. Wu, and J. Palmer. 2022. Tough places and safe spaces: can refuges save salmon from a warming climate? *Ecosphere* 13(11):e4265. <https://doi.org/10.1002/ecs2.4265>
Species: Summer steelhead, fall chinook
Location: Columbia River (Bonneville Dam to Snake River confluence)
Other: Thermal refuges, climate change

Tigano, A., and M. A. Russello. 2022. The genomic basis of reproductive and migratory behaviour in a polymorphic salmonid. *Molecular Ecology* 31(24):6588-6604. <https://doi.org/10.1111/mec.16724>
Species: Sockeye salmon
Location Okanagan River, British Columbia
Other: Sequence and structural variation, ecotypic differentiation

Tuckey, N.P.L., C. T. Ashton, J. Li, H. T. Lin, S. P. Walker, J. E. Symonds, and M. Wellenreuther. 2022. Automated image analysis as a tool to measure individualised growth and population structure in chinook salmon (*Oncorhynchus tshawytscha*). *Aquaculture, Fish and Fisheries* 2(5):402-413. <https://doi.org/10.1002/aff2.66>
Species: Chinook salmon
Location: n/a
Other: Phenotype measurements, automated image analysis

Venditti, D. A., C. A. Steele, B. S. Ayers, and J. L. McCormick. 2022. How long can dead fish tell tales? Effects of time, tissue, preservation, and handling on genotyping success. *Northwest Science* 95(3–4):337–349. <https://doi.org/10.3955/046.095.0309>
Species: Chinook salmon
Location: N/A
Other: Tissue sample handling, non-invasive genetic sampling

Xuereb, A., Q. Rougemont, X. Dallaire, J-S Moore, E. Normandeau, B. Bougas, A. Perreault-Payette, B. F. Koop, R. Withler, T. Beacham, and L. Bernatchez. 2022). Re-evaluating Coho salmon (*Oncorhynchus kisutch*) conservation units in Canada using genomic data. *Evolutionary Applications* 15(11):1925-1944. <https://doi.org/10.1111/eva.13489>
Species: Coho salmon
Location: British Columbia
Other: Conservation genomics, genotype-environment association

Young, M. K., D. J. Isaak, D. Nagel, D. L. Horan, K. J. Carim, T. W. Franklin, V. A. Zeller, B. Roper, and M. K. 2022. Broad-scale eDNA sampling for describing aquatic species distributions in running waters: Pacific lamprey *Entosphenus tridentatus* in the upper Snake River, USA. *Journal of Fish Biology* 101(5):1312–1325. <https://doi.org/10.1111/jfb.15202>

Species: Pacific Lamprey

Location: Upper Snake River

Other: eDNA-based sampling, DNA surveys