

Quarterly Journal Article search: April-June 2024
Columbia Basin Fish & Wildlife Library

Adelfio, L. A., S. M. Wondzell, N. J. Mantua, and G. Reeves. 2024. Expanded, compressed, or equal? Interactions between spawning window and stream thermal regime generate three responses in modeled juvenile emergence for Pacific Salmon. *Canadian Journal of Fisheries and Aquatic Sciences* 81(5):573-588. <https://doi.org/10.1139/cjfas-2023-0238>

Species: Pacific salmon

Location: Alaska

Other Keywords: Climate change effects

Baetscher, D. S., M. R. Pochardt, P. D. Barry, and W. A. Larson. 2024. Tide impacts the dispersion of eDNA from nearshore net pens in a dynamic high-latitude marine environment. *Environmental DNA* 6(2):e533. <https://doi.org/10.1002/edn3.533>

Species: Chum salmon

Location: Amalga Harbor, Alaska

Other keywords: eDNA signal strength, eDNA detection

Ball, S. C., J. P. Meador, C. A. James, and J. K. McIntyre. 2024. Exposure of juvenile Chinook salmon to effluent from a large urban wastewater treatment plant. part 1. physiological responses. *Aquaculture and Fisheries* 9(3):355–366. <https://doi.org/10.1016/j.aaf.2023.06.006>

Species: Chinook salmon

Location: Puget Sound

Other Keywords: Water pollution, wastewater effluent, physiological changes

Beamer, E. M., C. M. Greene, J. W. Chamberlin, W. G. Hood, C. S. Ellings, S. Hodgson, and W. T. Zackey. 2024. Landscape determinants of aquatic estuarine habitat use by juvenile Chinook salmon. *Canadian Journal of Fisheries and Aquatic Sciences* 81(6):747-767. <https://doi.org/10.1139/cjfas-2023-0249>

Species: Chinook salmon

Location: Various Puget Sound river deltas

Other Keywords: Habitat preference, landscape features

Beecher, H. A., S. N. Boessow, K. K. Gates, J. P. Losee, R. Freeman, and G. M. Madel. 2024. Evaluation of alternative approaches to PHABSIM modeling of coastal cutthroat trout spawning habitat. *River Research and Applications* 40(4):599-611. <https://doi.org/10.1002/rra.4257>

Species: Coastal cutthroat trout

Location: Skookum Creek, Washington

Other Keywords: Habitat preference

Blankenship, S. M., A. Scherer, C. Dean, K. Sellheim, J. Sweeney, and J. Merz. 2024. Applying parentage methods to detect gravel augmentation effects on juvenile Chinook salmon recruitment rates. *River Research and Applications*. <https://doi.org/10.1002/rra.4264>

Species: Chinook salmon

Location: American River, California

Other Keywords: Reproductive success, performance evaluation

Blasko, T., and M. Phelps. 2024. Streamside detection of Chinook salmon (*Oncorhynchus tshawytscha*) environmental DNA with CRISPR technology. *Environmental DNA* 6(2):e549.

<https://doi.org/10.1002/edn3.549>

Species: Chinook salmon

Location: Snake River, Washington

Other Keywords: CRISPR-Cas systems

Bower, S. D., A. Jeanson, J. A. Robichaud, M. L. Piczak, N. Young, A. Clarke, A. J. Danylchuk, and S. J. Cooke. 2024. Predicting differences in angler beliefs, threat perceptions, and actions in British Columbia's Rainbow Trout and steelhead fisheries. *Environmental Challenges* 15:100868.

<https://doi.org/10.1016/j.envc.2024.100868>

Species: Rainbow trout, steelhead

Location: British Columbia

Other Keywords: Angler types, fisheries management

Buchanan, R. A. 2024. Route use of emigrating steelhead in a heavily modified river delta. *North American Journal of Fisheries Management* 44(3):714-734. <https://doi.org/10.1002/nafm.11005>

Species: Steelhead

Location: Sacramento–San Joaquin River Delta, California

Other Keywords: Remote management metrics, migratory survival

Burch, C. A., S. L. Jardine, C. Lewis-Smith, and B. Van Deynze. 2024. Who prioritizes what? A cross-jurisdictional comparative analysis of salmon fish passage strategies in western Washington. *Conservation Science and Practice* 6(5):e13102. <http://dx.doi.org/10.1111/csp2.13102>

<http://dx.doi.org/10.1111/csp2.13102>

Species: Pacific salmon

Location: Western Washington

Other Keywords: Prioritization indices, culverts

Canada Department of Fisheries and Oceans. 2024. Information for refining candidate critical habitat of white sturgeon (*Acipenser transmontanus*), upper Columbia River population. *Canadian Science Advisory Secretariat Science Response* 2024/025. <https://publications.gc.ca/pub?id=9.937326&sl=0>

Species: White sturgeon

Location: Kinnard Reach, upper Columbia River

Other Keywords: Habitat utilization, spawning activity

Claeson, K. M., B. L. Sidlauskas, R. Troll, Z. M. Prescott, and E. B. Davis. 2024. From sabers to spikes: a newfangled reconstruction of the ancient, giant, sexually dimorphic Pacific Salmon, *Oncorhynchus*

rastrosus (salmoninae: Salmonini). PLOS ONE 19(4):e0300252.

<http://dx.doi.org/10.1371/journal.pone.0300252>

Species: *Oncorhynchus rastrosus*

Location: Pacific Northwest

Other Keywords: Paleontology, extinct species, Pleistocene era

Dayan, D. I., N. M. Sard, M. A. Johnson, C. K. Fitzpatrick, R. Couture, and K. G. O'Malley. 2024. A single generation in the wild increases fitness for descendants of hatchery-origin Chinook salmon (*Oncorhynchus tshawytscha*). *Evolutionary Applications* 17:e13678. <https://doi.org/10.1111/eva.13678>

Species: Chinook salmon

Location: South Fork McKenzie River, Oregon

Other Keywords: Reintroduction, reproductive success

Davenport, K. A., R. G. Twibell, M. S. Piteo, D. P. Peterson, W. P. Baker, R. K. Simmons, and A. R. Whiteley. 2024. Lab-based evaluation of the reproductive performance of Trojan (MY) brook trout (*Salvelinus fontinalis*). *Canadian Journal of Fisheries and Aquatic Sciences*. 81(5):525-534.

<https://doi.org/10.1139/cjfas-2023-0245>

Species: Brook trout

Location: n/a (lab study)

Other Keywords: Invasive species control

Eberhardt, E., C. A. Murphy, W. J. Gerth, P. Konstantinidis, and I. Arismendi. Documenting historical anchorworm parasitism of introduced warmwater fishes in the Willamette River basin, Oregon.

Northwest Science 97(1-2):113-121. <https://doi.org/10.3955/046.097.0111>

Species: Various non-native warmwater fishes

Location: Willamette River basin

Other keywords: Parasite hosts, non-native species impacts

Gilligan-Lunda, E. K., A. Duarte, and J. T. Peterson. 2024. Habitat use of anadromous and amphidromous sturgeons in North America: a systematic review. *Canadian Journal of Fisheries and Aquatic Sciences* 81(5):508-524. <https://doi.org/10.1139/cjfas-2023-0222>

Species: Various sturgeon

Location: North America

Other Keywords: Species-habitat relationships

Harvey, B. C., J. L. White, R. J. Nakamoto, and S. F. Railsback. 2024. Empirical and model-based evaluation of a step-pool stream restoration project: Consequences for a highly valued fish population. *North American Journal of Fisheries Management* 44(3):637-649. <https://doi.org/10.1002/nafm.11000>

Species: Steelhead

Location: West Weaver Creek watershed, California

Other keywords: Individual-based modeling

Huber, E. R., R. E. Ryan, R. C. Johnson, A. M. Sturrock, R. A. Lusardi, and S. M. Carlson. 2024. Seventy years of diminishing biocomplexity of California Central Valley hatchery steelhead, *Oncorhynchus mykiss*. Canadian Journal of Fisheries and Aquatic Sciences. 81(4):355-367.

<https://doi.org/10.1139/cjfas-2023-0077>

Species: Steelhead

Location: Sacramento-San Joaquin Valley, California

Other Keywords: Intraspecific diversity

Johnson, R. C., M. S. Hoy, K. D. Stenberg, J. H. Mclean, B. L. Jensen, T. J. Code, C. O. Ostberg, and D. A. Beauchamp. 2024. Shift in piscivory by salmonids following invasion of a minnow in an oligotrophic reservoir. Ecology of Freshwater Fish 33(3):e12778. <https://doi.org/10.1111/eff.12778>

Species: Pacific salmon, redbside shiner

Location: Upper Skagit River, Washington

Other Keywords: Introduced species, predator-prey dynamics

Kanigan, A. M., S. G. Hinch, A. G. Lotto, K. Szlachta, S. D. Johnston, and S. A. Lingard. 2024. Acoustic telemetry tracking of Coho Salmon smolts released from a community-run hatchery into a marine inlet reveals low early ocean survival. North American Journal of Fisheries Management 44(2):359-376.

<https://doi.org/10.1002/nafm.10979>

Species: Coho salmon

Location: Strait of Georgia, British Columbia

Other Keywords: Hatchery practice improvement

Kirsch, J. E., J. T. Peterson, A. Duarte, D. Goodman, A. Goodman, S. Hugentobler, M. Meek, R. W. Perry, C. Phillis, L. Smith, and J. Stuart. 2024. Imperfect detection and misidentification affect inferences from data informing water operation decisions. North American Journal of Fisheries Management 44(2):335-358. <https://doi.org/10.1002/nafm.10974>

Species: Chinook salmon

Location: Sacramento River, California

Other Keywords: River flow regimes, gate-controlled channels

Kobayashi, K. M., R. M. Bond, K. Reid, J. C. Garza, J. D. Kiernan, and E. P. Palkovacs. 2024. Genetic divergence and one-way gene flow influence contemporary evolution and ecology of a partially migratory fish. Evolutionary Applications 17(6):e13712. <https://doi.org/10.1111/eva.13712>

Species: Steelhead and rainbow trout

Location: Scott Creek watershed, California

Other Keywords: Eco-evolutionary dynamics, anadromy

Larson, M. S., A. Choudhury, E. N. Gardner, P. Konstantinidis, C. A. Murphy, M. L. Kent, J. Peterson, C. E. Couch. 2024. Unique diet and *Philonema* sp. infections in reservoir-rearing juvenile Chinook Salmon. *Transactions of the American Fisheries Society* 153(3):312-325. <https://doi.org/10.1002/tafs.10462>

Species: Chinook salmon

Location: Willamette River, Oregon

Other keywords: Parasite-associated mortality

Lerner, J. E., and B. P. V. Hunt. 2024. Stable isotopes delineate regional pelagic food web structure in British Columbia's coastal ocean. *Canadian Journal of Fisheries and Aquatic Sciences* 81(4):368-386. <https://doi.org/10.1139/cjfas-2023-0057>

Species: Pacific salmon

Location: British Columbia Coast

Other Keywords: Trophic ecology

LoScerbo, D. C., S. M. Wilson, K. A. Robinson, J. W. Moore, and D. A. Patterson. 2024. Physiological condition infers habitat choice in juvenile sockeye salmon. *Conservation Physiology* 12(1):coae011. <https://doi.org/10.1093/conphys/coae011>

Species: Sockeye salmon

Location: Fraser River, British Columbia

Other Keywords: Salinity preference, stopover habitat

Margetts, W., and B. A. Heise. 2024. Small mouth, big appetite: diet analysis of invasive smallmouth bass (*Micropterus Dolomieu*) in Cultus Lake, British Columbia. *Environmental Biology of Fishes* 107(4):471-489. <https://doi.org/10.1007/s10641-024-01543-0>

Species: Smallmouth bass, sockeye salmon

Location: Cultus Lake, British Columbia

Other Keywords: Predation of salmonids, invasive species effects

Mastick, N., R. Welicky, A. Katla, B. Odegaard, V. Ng, and C. L. Wood. 2024. Opening a can of worms: Archived canned fish fillets reveal 40 years of change in parasite burden for four Alaskan salmon species. *Ecology and Evolution* 14(4):e11043. <https://doi.org/10.1002/ece3.11043>

Species: Anisakidae, Pacific salmon

Location: Alaska

Other Keywords: Parasitic loads, parasite risk

Matsuda, K. 2024. How much light intensity to induce repulsion or attraction behaviour in juvenile salmon? *Hydrobiologia* 851(9):2237-2248. <https://doi.org/10.1007/s10750-023-05452-8>

Species: Chum salmon, Masu salmon

Location: Japan

Other Keywords: Phototaxis, fish guiding

Mehltretter, S., A. Bradford, S. Longboat, and B. Luby. 2024. In a good way: Braiding indigenous and Western knowledge systems to understand and restore freshwater systems. *Water* 16(7):934. <http://dx.doi.org/10.3390/w16070934>

Species: n/a

Location: n/a

Other Keywords: Indigenous knowledge systems; freshwater social-ecological systems

Moravek, J. A., T. Soto, J. S. Brashares, and A. Ruhí. 2024. Restored off-channel pond habitats create thermal regime diversity and refuges within a Mediterranean-climate watershed. *Restoration Ecology* 32(4):e14110 <https://doi.org/10.1111/rec.14110>

Species: Coho salmon, steelhead

Location: Klamath River, Oregon and California

Other Keywords: Floodplain restoration, human-made thermal refuges

Morrison, W. E., S. A. Oakes, M. A. Karp, M. H. Appelman, and J. S. Link. 2024. Ecosystem-level reference points: Moving toward ecosystem-based fisheries management. *Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science* 16(2):e10285. <https://doi.org/10.1002/mcf2.10285>

Species: n/a

Location: n/a

Other Keywords: ecosystem-level reference points

Naman, S. M., K. J. Pitman, D. S. Cunningham, A. Potapova, S. M. Chartrand, M. R. Sloat, and J. W. Moore. 2024. Forestry impacts on stream flows and temperatures: A quantitative synthesis of paired catchment studies across the Pacific salmon range. *Ecological Solutions and Evidence* 5(2):e12328. <https://doi.org/10.1002/2688-8319.12328>

Species: Pacific salmon

Location: Pacific coast of North America

Other Keywords: Forestry practices

Narum, S. R., M. Campbell, K. Coykendall, M. Meek, K. G. O'Malley, and M. Wellenreuther. 2024. Advances in salmonid genetics—Insights from Coastwide and beyond. *Evolutionary Applications* 17:e13732. <https://doi.org/10.1111/eva.13732>

Species: Salmonids

Location: various

Other keywords: Coastwide Salmonid Genetics Meeting, article synopsis

O'Neal, J. S., C. Riordan, J. Jay, E. D. Lowery, M. LeMoine, and S. Dickerson-Lange. 2024. Variables influencing stream-type juvenile Chinook Salmon density within floodplain habitat in the Skagit River basin, Washington. *Transactions of the American Fisheries Society*, 153(3):267-288.

<https://doi.org/10.1002/tafs.10468>

Species: Chinook salmon

Location: Skagit River basin

Other keywords: Habitat variables

Pearsons, T. N., and R. R. O'Connor. 2024. Comparisons of donor stray percentages between hatchery- and natural-origin Chinook salmon and steelhead in the upper Columbia watershed. *North American Journal of Fisheries Management* 44(2):276-298. <https://doi.org/10.1002/nafm.10988>

Species: Chinook salmon, steelhead

Location: Upper Columbia River basin

Other Keywords: Spatial scales, impacts of straying

Peltola III, E. R., D. J. Rinella, A.-M. Benson, and J. Gerken. 2024. Methodological factors affecting capture of juvenile salmon in baited "minnow" traps. *North American Journal of Fisheries Management* 44(3):650-659. <https://doi.org/10.1002/nafm.11004>

Species: Coho and Chinook salmon

Location: Campbell Creek watershed

Other Keywords: Trap materials, bait types, soak times

Quinn, T. P., J. Epifanio, P. B. Moyle, S. Gregory, D. J. Hasselman, E. Merrill, K. Rose, T. F. Turner, and T. C. Wainwright. 2024. Ecological interactions between non-native American shad and Pacific salmon: the Columbia River case study. *Reviews in Fisheries Science & Aquaculture* 32(3):435-449.

<https://doi.org/10.1080/23308249.2024.2337434>

Species: American shad, Pacific salmon

Location: Columbia River Basin

Other Keywords: Invasive species, predation of salmon

Quinn, T. P., L. A. Wetzel, D. J. Hasselman, and K. Larsen. 2024. Differences in life history patterns of American shad, *Alosa sapidissima*, populations between ancestral, Atlantic coast, and non-native, Pacific coast rivers of North America. *Canadian Journal of Fisheries and Aquatic Sciences*. 81(7): 862-878

<https://doi.org/10.1139/cjfas-2023-0286>

Species: American shad

Location: U.S. Pacific and Atlantic coasts

Other Keywords: Growth, migration

Ramey, A. M., C. M. McKeeman, E. L. Petrou, D. M. Menning, O. L. Russ, and J. A. López. 2024. Environmental DNA as a tool for better understanding the distribution, abundance, and health of Atlantic Salmon and Pacific Salmon. *Fisheries* 49(4):169-180. <https://doi.org/10.1002/fsh.11038>

Species: Atlantic salmon, Pacific salmon

Location: N/A

Other Keywords: Environmental DNA

Reid, S. B., and D. H. Goodman. 2024. Exploring thermal conditions occupied by lampreys (*Petromyzontidae*) in California and northern Baja California: current environment and implications for

future scenarios. *Environmental Biology of Fishes* 107(5):537–550. <https://doi.org/10.1007/s10641-024-01549-8>

Species: Pacific Lamprey

Location: California, Baja California

Other Keywords: Water temperatures, climate change impacts

Romer, J. D., B. J. Clemens, J. S. Ziller, and E. Garner. 2024. Detection efficiency of adult Pacific lamprey passage counts at Leaburg Dam and upstream distribution in the McKenzie River (Oregon, USA). *Ecology of Freshwater Fish* 33(2):e12751. <https://doi.org/10.1111/eff.12751>

Species: Pacific lamprey

Location: McKenzie River, Oregon

Other Keywords: Video monitoring effectiveness

Rood, S. B., G. C. Hoffman, N. Merz, P. Anders, R. Benjankar, M. Burke, G. Egger, M. L. Polzin, and S. Soult. 2024. Collateral benefits: River flow normalization for endangered fish enabled riparian rejuvenation. *River Research and Applications* 40(4):587-598. <https://doi.org/10.1002/rra.4255>

Species: White sturgeon

Location: Kootenay/Kootenai River, Canada and U.S.

Other Keywords: Flow management, hybrid system management

Rosburg, A. J., and M. E. Barnes. 2024. Density affects rearing performance of juvenile landlocked fall Chinook salmon. *North American Journal of Aquaculture* 86(2):255-259.

<https://doi.org/10.1002/naaq.10337>

Species: Chinook salmon

Location: n/a - lab study

Other Keywords: Tank size effects

Sadeghi, J., F. Zaib, and D. D. Heath. 2024. Genetic architecture and correlations between the gut microbiome and gut gene transcription in chinook salmon (*Oncorhynchus tshawytscha*). *Heredity* 133: 54–66. <https://doi.org/10.1038/s41437-024-00692-3>

Species: Chinook salmon

Location: British Columbia

Other Keywords: Gut immune gene transcription, gut bacterial community composition

Shaffer, J. T., A. P. Kinziger, E. P. Bjorkstedt, and A. Buchheister. 2024. Comparison of environmental DNA and underwater visual count surveys for detecting juvenile coho salmon in small rivers. *North American Journal of Fisheries Management* 44(2):449-462. <https://doi.org/10.1002/nafm.10993>

Species: Coho salmon

Location: Smith River, California

Other Keywords: Abundance estimates

Sorel, M. H., J. C. Jorgensen, R. W. Zabel, M. D. Scheuerell, A. R. Murdoch, C. M. Kamphaus, and S. J. Converse. 2024. Incorporating life history diversity in an integrated population model to inform viability analysis. *Canadian Journal of Fisheries and Aquatic Sciences* 81(5):535-548.

<https://doi.org/10.1139/cjfas-2023-0118>

Species: Chinook salmon

Location: Wenatchee River, Washington

Other Keywords: Age of emigration

Thompson, T. Q., S. O'Leary, S. O'Rourke, C. Tarsa, M. R. Baerwald, P. Goertler, and M. H. Meek. 2024. Genomics and 20 years of sampling reveal phenotypic differences between subpopulations of outmigrating Central Valley Chinook salmon. *Evolutionary Applications* 17:e13705.

<https://doi.org/10.1111/eva.13705>

Species: Chinook salmon

Location: Central Valley, California

Other Keywords: Intraspecific diversity, body size

Twibell, R. G., and James Barron. 2024. Effects of rearing system on growth responses and saltwater tolerance in spring Chinook salmon (*Oncorhynchus tshawytscha*). *Aquaculture* 586:740753.

<https://doi.org/10.1016/j.aquaculture.2024.740753>.

Species: Chinook salmon

Location: n/a (lab study)

Other Keywords: Water reuse vs. traditional single-pass aquaculture systems

Wells, C. D., J. Connor, M. P. Small, and P. Spruell. 2024. Population assignment of migratory Westslope Cutthroat Trout (WCT) in the Clark Fork–Pend Oreille River Basin. *Transactions of the American Fisheries Society* 153(3):347-381. <https://doi.org/10.1002/tafs.10465>

Species: Westslope cutthroat trout

Location: Clark Fork–Pend Oreille River basin

Other Keywords: Population connectivity, dam impacts on population genetics

Whitman, G., J. Messner, R. C. Johnson, M. Willmes, B. P. Kennedy, and C. Jeffres. 2024. Forensic geochemistry identifies the illegal introduction of Walleye into Lake Cascade, Idaho. *North American Journal of Fisheries Management*, 44(2):407-414. <https://doi.org/10.1002/nafm.10985>

Species: Walleye

Location: Lake Cascade, Idaho

Other Keywords: Origin determination of invasive species

Williams, J. E., S. Gregory, and R. Wildman. 2024. Fish assemblage structure and habitat relationships of a large floodplain river in western North America. *River Research and Applications* 40(5):809-820.

<https://doi.org/10.1002/rra.4273>

Species: Various

Location: Willamette River, Oregon

Other keywords: Habitat fidelity, non-native species encroachment

Wohner, P. J., R. F. Thurow, and J. T. Peterson. 2024. Evaluating streamflow and temperature effects on bull trout migration and survival with linear spatial capture–recapture models. *Transactions of the American Fisheries Society* 153(3):326-346. <https://doi.org/10.1002/tafs.10464>

Species: Bull trout

Location: Rapid and Salmon rivers, Idaho

Other Keywords: Climate change impacts, streamflow variability

Wolf, J. M., N. G. Clancy, and L. R. Rosenthal. 2024. Bull trout passage at beaver dams in two Montana streams. *Northwest Science* 97(1-2):68-77. <https://doi.org/10.3955/046.097.0108>

Species: Bull Trout

Location: East Fork Bitterroot River basin and Middle Fork Flathead River basin, Montana

Other keywords: Beaver restoration and mimicry

Xu, Y., Q. Liu, C. Fu, and J. Holmes. 2024. Assessing the impacts of environmental and ecological variables on the performance of Fraser sockeye salmon forecast. *Canadian Journal of Fisheries and Aquatic Sciences* 81(6):715-730. <https://doi.org/10.1139/cjfas-2023-0139>

Species: Sockeye Salmon

Location: Fraser River, British Columbia

Other Keywords: Forecast models, migration