

McPhee, Megan Publications List

* = student author; ** = post-doc

50. Reich*, AG, **MV McPhee**, CD Waters, SA May, MD Adkison. 2025. Phenotypic divergence between hatchery pink and coho salmon and their wild counterparts. *Canadian Journal of Fisheries and Aquatic Sciences* 82:1-12. doi: 10.1139/cjfas-2024-0276

49. Wilson, LI,* MD Adkison, RD Brenner, EM Yasumiishi, **MV McPhee**. 2025. Spatial variation in age-specific growth of female Chinook salmon. *Environmental Biology of Fishes* 108:875-895. doi: 10.1007/s10641-025-01697-5

48. McMahon, J*, SA May**, PS Rand, KB Gorman, **MV McPhee**, PAH Westley. 2025. Phenotypic sorting of pink salmon hatchery strays may alleviate adverse impacts of reduced variation in fitness-associated traits. *Ecology & Evolution* 15:e70781. doi: 10.1002/ece3.70781

47. Shi, Y**, CM Dick, K Karpan, D Baetscher, MJ Henderson, SA Sethi, **MV McPhee**, WA Larson. 2025. Towards absolute abundance for conservation application: estimating the number of contributors via microhaplotype genotyping of mixed-DNA samples. *Molecular Ecology Resources* 25:e13816. doi: 10.1111/1755-0998.13816

46. Somov, A, EV Farley, EM Yasumiishi, and **MV McPhee**. 2024. Comparison of juvenile Pacific salmon abundance, distribution, and body condition between western and eastern Bering Sea using spatiotemporal models. *Fisheries Research* 278:107068. doi: 10.1016/j.fishres.2024.107086

45. Rosenbaum, SW*, SA May, KR Shedd, CJ Cunningham, RL Peterson, BW Elliot, and **MV McPhee**. 2024. Reliability of trans-generational genetic mark-recapture (tGMR) for enumerating Pacific salmon. *Evolutionary Applications* 17:e13647. doi.org/10.1111/eva.13647

44. **McPhee, MV**, PD Barry**, C Habicht, SC Vulstek, JR Russell, WW Smoker, JE Joyce, and AJ Gharrett. 2024. Hatchery supplementation provides a demographic boost but alters age composition in sockeye salmon in Auke Lake, Southeast Alaska. *Evolutionary Applications* 17:e13640. doi: 10.1111/eva.13640

43. King, E*, **MV McPhee**, SE Vulstek, CJ Cunningham, J Russell, and DA Tallmon. 2023. Alternative life history strategy contributions to effective population size in a naturally spawning salmon population. *Evolutionary Applications* 16:1472-1482. doi: 10.1111/eva.13580

42. King, EM*, DA Tallmon, SC Vulstek, JR Russell, and **MV McPhee**. 2023. Reproductive success of jack and full-size males in a wild coho salmon population. *Royal Society Open Science* 10:221271. doi: 10.1098/rsos.221271

41. Dokai, WK*, PD Barry**, DT Zanatta, KM Gruenthal, **MV McPhee**, PB McIntyre, and WA Larson. 2023. Two for the price of one: eDNA metabarcoding reveals temporal and spatial variability of fish and mussel co-distributions in Michigan riverine systems. *Environmental DNA* 5:424-437. doi: 10.1002/edn3.390

40. Shi, Y**, KL Bouska, GJ McKinney, W Dokai*, A Bartels, **MV McPhee**, and WA Larson. 2023. Gene flow influences the genome architecture of local adaptation in six riverine fish species. *Molecular Ecology* doi: 10.1111/mec.16317
([featured cover article](#))

39. McKinney, GJ**, PD Barry**, C Pascal, JE Seeb, LW Seeb, and **MV McPhee**. 2022. A new genotyping-in-thousands-by-sequencing single nucleotide polymorphism panel for mixed-stock analysis of Chum Salmon from coastal western Alaska. *North American Journal of Fisheries Management* 42:1134-1143. doi.org/10.1002/nafm.10805
38. Sergeant*, CJ, EK Sexton, JW Moore, AR Westwood, SA Nagorski, JL Ebersole, DM Chambers, SL O'Neal*, RL Malison, FR Hauer, DC Whited, J Weitz, J Caldwell, M Capito, M Connor, CA Frissell, G Knox, ED Lowery, R MacNair, V Marlatt, J McIntyre, **MV McPhee**, N Skuce. 2022. Risks of mining to salmonid-bearing watersheds. *Science Advances* 8:eabn0929. doi: 10.1126/sciadv.abn0929
37. Shi, Y**, J Homola, P Euclide, D Isermann, D Caroffino, **MV McPhee**, and WA Larson. 2022. High-density genomic data reveal fine-scale population structure and pronounced islands of adaptive divergence in lake whitefish (*Coregonus clupeaformis*) from Lake Michigan. *Evolutionary Applications* 15:1776-1791. doi: 10.1111/eva.13475
36. Chenoweth, EM*, KM Boswell, AS Friedlander, **MV McPhee**, JA Burrows, RA Heintz, and JM Straley. 2021. Confronting assumptions about prey selection by lunge-feeding whales using a process-based model. *Functional Ecology* 35:1722-1735. doi: 10.1111/1365-2435.13852. ([featured article](#))
35. Frost, TJ*, EM Yasumiishi, B Agler, MD Adkison, and **MV McPhee**. 2021. Density-dependent effects of eastern Kamchatka pink salmon (*Oncorhynchus gorbuscha*) and Japanese chum salmon (*O. keta*) on the growth of western Alaska chum salmon. *Fisheries Oceanography* 30:99-109. doi: 10.1111/fog.12505
34. Fergusson, E*, T Miller, **MV McPhee**, C Fugate, and H Schulz. 2020. Trophic dynamics of Pacific salmon (*Oncorhynchus* spp.) during cold and warm periods in Icy Strait, AK. *Progress in Oceanography* 186:102378. doi: 10.1016/j.pocean.2020.102378
33. McKinney, GJ, **MV McPhee**, C Pascal, LW Seeb, JE Seeb. 2020. Network analysis of linkage disequilibrium reveals genome architecture in chum salmon. *G3: Genes, Genomes, Genetics* 10:1553-1561. doi: 10.1534/g3.119.400972
32. Catterson, MR*, DC Love, TM Sutton, and **MV McPhee**. 2020. Interactions between marine growth and life history diversity in steelhead *Oncorhynchus mykiss* from the Situk River, Alaska. *North American Journal of Fisheries Management* 40:242-255. doi: 10.1002/nafm.10405
31. Graham, CJ*, TM Sutton, **MV McPhee**, and MD Adkison. 2019. Evaluation of growth, survival, and recruitment of Chinook Salmon in Southeast Alaska. *Transactions of the American Fisheries Society* 148:243-259. doi: 10.1002/tafs.10148
30. Kohan, ML*, FJ Mueter, JA Orsi, and **MV McPhee**. 2019. Variation in condition and abundance of juvenile chum salmon (*Oncorhynchus keta*) in relation to marine factors in Southeast Alaska. *Deep-Sea Research II* 165:340-347. doi: 10.1016/j.dsr2.2017.09.005
29. Siegel, JE*, MD Adkison, and **MV McPhee**. 2018. Changing maturation reaction norms and the effects of growth history in Alaskan Chinook salmon. *Marine Ecology Progress Series* 595:187-202. doi: 10.3354/meps12564
28. McConnell, CJ*, PAH Westley, and **MV McPhee**. 2018. Do hatchery and naturally produced chum salmon (*Oncorhynchus keta*) differ in fitness-related traits in a stream subject to chronic immigration of strays? *Aquaculture Environment Interactions* 10:99-113. doi: 10.3354/aei00261

27. Fraley, KM*, JA Falke, **MV McPhee**, and A Prakash. 2018. Rainbow trout movement behavior and habitat occupancy are influenced by sex and Pacific salmon presence in an Alaska river system. *Canadian Journal of Fisheries and Aquatic Sciences* 75:525-537. doi: 10.1139/cjfas-2016-0459
26. Siegel, JE*, **MV McPhee**, MD Adkison. 2017. Evidence that marine temperatures influence growth and maturation of western Alaskan Chinook Salmon *Oncorhynchus tshawytscha*. *Marine and Coastal Fisheries* 9:441-456. doi: 10.1080/19425120.2017.1353563
25. Chenoweth, EM*, JM Straley, **MV McPhee**, S Atkinson, S Reifensstuhl. 2017. Humpback whales feed on hatchery-released juvenile salmon. *Royal Society Open Science* 4:170180. doi: 10.1098/rsos.170180
24. Garvin, MR, WD Templin, AJ Gharrett, N DeCovich, CM Kondzela, JR Guyon, and **MV McPhee**. 2017. Potentially adaptive mitochondrial haplotypes as a tool to identify divergent nuclear loci. *Methods in Ecology and Evolution* 8:821-834. doi: 10.1111/2041-210X.12698
23. **McPhee, MV**, JM Leon*, LI Wilson, JE Siegel*, and BA Agler. 2016. Changing growth and maturity in western Alaskan Chinook salmon *Oncorhynchus tshawytscha*, brood years 1975-2005. *North Pacific Anadromous Fish Commission Bulletin* 6:307-327. doi: 10.23849/npafcb6/307-327
22. Wechter, ME*, BR Beckman, AG Andrews, AH Beaudreau, and **MV McPhee**. 2016. Growth and condition of juvenile chum and pink salmon in the northeastern Bering Sea. *Deep-Sea Research II* 135:145-155. DOI: 10.1016/j.dsr2.2016.06.001
21. Brennan SR*, CE Zimmerman, DP Fernandez, TE Cerling, **MV McPhee**, and MJ Wooller. 2015. Strontium isotopes provide new tool for fine-scale biodiversity conservation of Pacific salmon. *Science Advances* 1:e1400124. doi: 10.1126/sciadv.1400124
20. Shanley, CS, S Pyare, MI Goldstein, P Alaback, DM Albert, C Beier, TJ Brinkman, RT Edwards, E Hood, A Mackinnon, **MV McPhee**, T Patterson, LH Suring, DA Tallmon, and MS Wipfli. 2015. Climate change implications in the northern coastal temperate rainforest of North America. *Climatic Change* 130:155-170. doi: 10.1007/s10584-015-1355-9
19. Turner TF, MJ Osborne, **MV McPhee**, and C Kruse. 2015. High and dry: endorheic watersheds provide a test case for genetic response of fish to climate-change effects in high desert streams. *Conservation Genetics* 16:399-410. doi: 10.1007/s10592-014-0666-0
18. **McPhee, MV**, DC Whited, KV Kuzishchin, and JA Stanford. 2014. The effects of riverine physical complexity on genetic diversity and anadromy in steelhead/rainbow trout, *Oncorhynchus mykiss*, around the Pacific Rim. *Journal of Fish Biology* 85:132-150. DOI: 10.1111/j.1600-0633.2007.00248.x
17. Stafford, CP, **MV McPhee**, LA Eby, and FW Allendorf. 2014. Introduced lake trout exhibit life history and morphological divergence with depth. *Canadian Journal of Fisheries and Aquatic Sciences* 70:10-20. doi: 10.1139/cjfas-2013-0115
16. **McPhee, MV**, DLG Noakes, and FW Allendorf. 2012. Developmental rate: a unifying mechanism for sympatric divergence in postglacial fishes? *Current Zoology* 58:21-34. doi: 10.1093/czoolo/58.1.21

15. **McPhee, MV**, MS Zimmerman, TD Beacham, BR Beckman, JB Olsen, LW Seeb, and WD Templin. 2009. A hierarchical framework to identify influences on Pacific salmon population abundance and structure in the Arctic-Yukon-Kuskokwim region. *American Fisheries Society Symposium* 70:1177-1198. doi: 10.47886/9781934874110.ch58
14. Utter, FM, **McPhee, MV**, and FW Allendorf. 2009. Population genetics and the management of Arctic-Yukon-Kuskokwim salmon populations. *American Fisheries Society Symposium* 70:97-123. doi: 10.47886/9781934874110.ch7
13. **McPhee, MV**, TH Tappenbeck*, DC Whited, and JA Stanford. 2009. Genetic diversity and population structure in the Kuskokwim River drainage support the 'recurrent evolution' hypothesis for sockeye salmon life histories. *Transactions of the American Fisheries Society* 138:1481-1489. doi: 10.1577/T08-220.1
12. **McPhee, MV** and TF Turner. 2009. Genealogical diversity suggests multiple introductions of white sucker (*Catostomus commersoni*) into the Rio Grande, New Mexico. *Southwestern Naturalist* 54:485-492. doi: 10.1894/MRD-02.1
11. Stephenson, JJ, MR Campbell, JE Hess, C Kozfkay, AP Matala, **McPhee, MV**, P Moran, SR Narum, MM Paquin, O Schlei, MP Small, DM Van Doornik, and JK Wenburg. 2009. A centralized model for creating shared, standardized, microsatellite data that simplifies inter-laboratory collaboration. *Conservation Genetics* 10:1145-1149. doi: 10.1007/s10592-008-9729-4
10. Turner TF, TE Dowling, MJ Osborne, **McPhee, MV**, RE Broughton, and JR Gold. 2009. Polymorphic microsatellite primers for the endangered sucker, *Xyrauchen texanus* (Catostomidae), are widely applicable to genetic studies of other catostomine fishes. *Conservation Genetics*: 10:551-553. doi: 10.1007/s10592-008-9563-8
9. **McPhee, MV**, MJ Osborne, and TF Turner. 2008. Genetic diversity, population structure and demographic history of the Rio Grande sucker, *Catostomus (Pantosteus) plebeius*, in New Mexico. *Copeia* 2008:191-199. doi: 10.1643/CI-06-120
8. **McPhee, MV**, F Utter, JA Stanford, KV Kuzishchin, KA Savvaitova, DS Pavlov, and FW Allendorf. 2007. Population structure and partial anadromy in *Oncorhynchus mykiss* from Kamchatka: relevance for conservation strategies around the Pacific Rim. *Ecology of Freshwater Fish* 16: 539-547. doi: 10.1111/j.1600-0633.2007.00248.x
7. Kanda, N, M Goto, H Kato, **McPhee, MV**, and LA Pastene. 2007. Population genetic structure of Bryde's whales (*Balaenoptera brydei*) at the inter-oceanic and trans-equatorial levels. *Conservation Genetics* 8: 853-864. doi: 10.1007/s10592-006-9232-8
6. **McPhee, MV**. 2007. Age, growth and life history comparisons between the native Rio Grande sucker (*Catostomus plebeius*) and the invasive white sucker (*Catostomus commersoni*) in the Rio Grande, New Mexico. *Southwestern Naturalist* 52: 15-25. doi: 10.1894/0038-4909(2007)52[15:AGALHC]2.0.CO;2
5. Moyer, GM, KO Winemiller, **McPhee, MV**, and TF Turner. 2005. Historical demography, selection, and coalescence of mitochondrial and nuclear genes in *Prochilodus* species of northern South America. *Evolution* 59: 599-610. doi: 10.1111/j.0014-3820.2005.tb01019.x

4. **McPhee, MV** and TF Turner. 2004. No genetic evidence for hybridization between Rio Grande sucker, *Catostomus plebeius*, and the introduced white sucker, *Catostomus commersoni*, in the Upper Rio Grande of New Mexico. *Environmental Biology of Fishes* 71: 85-93.
doi: 10.1023/B:EBFI.0000043179.44431.d4
3. Turner, TF, **MV MCPhee**, P Campbell, and KO Winemiller. 2004. Phylogeography and intraspecific genetic variation of prochilodontid fishes (Characiformes) endemic to rivers of northern South America. *Journal of Fish Biology* 64: 186-201. doi: 10.1111/j.1095-8649.2004.00299.x
2. Quinn, TP and **MV MCPhee**. 1998. Effects of senescence and density on the aggression of adult female sockeye salmon. *Journal of Fish Biology* 52: 1295-1300.
doi: 10.1111/j.1095-8649.1998.tb00974.x
1. **McPhee, MV** and TP Quinn. 1998. Factors affecting the duration of nest defense and reproductive lifespan of female sockeye salmon, *Oncorhynchus nerka*. *Environmental Biology of Fishes* 51: 369-375. doi: 10.1023/A:1007432928783

* = student author; ** = post-doc