Benjamin A. Staton, PhD

Columbia River Inter-Tribal Fish Commission
700 NE Multnomah St., Ste. 1200
Portland, OR 97232

✉ bstaton@critfc.org
📞 (503) 731-1248
○ bstaton1

EDUCATION

2016–2019	PhD in Fisheries Management, Auburn University
2014–2016	MSc in Fisheries Management, Auburn University
2009–2013	BSc in Fisheries and Wildlife Biology and Management (with Honors), Michigan State University

EXPERIENCE

2019–Present
Q. Ecol. Svcs., LLC
Grants Pass, OR

Quantitative Ecologist and Owner
• Develop Shiny applications and R packages to facilitate analyses
• Write documentation, provide trainings, and independently verify results obtained by others
• Serve on scientific peer review panels

2019–Present
CRITFC
Portland, OR
Dr. Seth White

Quantitative Fisheries Scientist
• Lead collaborative development of Columbia River spring Chinook salmon life cycle models
• Evaluate the likely impacts of habitat restoration and climate change on population status
• Provide general quantitative support for fisheries analyses

2016–2019
Auburn University
Auburn, AL
Dr. Matt Catalano

Graduate Research Assistant (PhD)
• Developed simulation models for use in salmon management strategy evaluations
• Assessed the reliability and utility of salmon run timing forecast models
• Simulation-tested hierarchical Bayesian models for multi-stock spawner-recruit analysis
• Assessed methods for updating estimates of salmon run size using Bayesian inference
• Built an interactive tool to allow managers and stakeholders to evaluate risks and trade-offs of harvesting based on the most current run assessment information
• Extensive use of programs R, JAGS, and BUGS for specifying and fitting models
• Presented research findings to subsistence fishery stakeholders, area biologists, and managers and lead these groups through participatory modeling exercises
• Aided in teaching population dynamics and quantitative fisheries assessment courses

2016–2019
Yukon Delta NWR
USFWS
Bethel, AK
Dr. Lew Coggins

Pathways Student
• Produced daily assessments of incoming salmon runs and distribute to all interested parties
• Developed and applied methods to estimate effort and harvest in subsistence fishery openings
• Served as a technical advisor to the federal in-season harvest manager
• Worked closely with state and tribal management organizations
• Frequently presented findings from run assessments including run size estimates, harvest estimates, and risk analyses to decision-makers and stakeholders

2014–2015
Auburn University
Auburn, AL
Dr. Matt Catalano

Graduate Research Assistant (MSc)
• Tested the sensitivity of integrated Bayesian population models for stock assessment
• Conducted age-structured spawner-recruit analyses for Alaska Chinook salmon stocks
• Developed a habitat-based model for deriving biological reference points for data-poor stocks
• Assisted other graduate students with field, laboratory, and statistical work

2013 May–Oct
Indiana DNR
Martinsville, IN
Rhett Wisener

Fisheries Field Technician
• Aided in standardized fish sampling of reservoirs and streams
• Use boat and tow-barge electrofishers, gill nets, and trap nets
• Completed other tasks as needed: data entry, scale pressing/aging, and gear maintenance

2012 Jun–Aug
Marine Sci. Institute
Port Aransas, TX
Dr. Ben Walther

Undergraduate Research Assistant (NSF-REU)
• Sampled fish and invertebrates with bottom trawls on coastal vessels
• Extracted, embedded, sectioned, photographed, and measured otoliths
• Compiled and organized data and conducted statistical analyses

PEER-REVIEWED PUBLICATIONS ⓘ

In Review | **B.A. Staton**, W.R. Becthol, L.G. Coggins Jr., G. Decossas, and J. Esquible. In-season monitoring of harvest and effort from a large-scale subsistence salmon fishery in western Alaska. *Canadian Journal of Fisheries and Aquatic Sciences*. Submitted Dec. 2023

2024 | T.S. Coleman, R.W. Eckelbecker, A.K. Carlson, D.R. Devries, R.A. Wright, **B.A. Staton**, S.W. Parker, C.R. Chittam, R.G. Lovell, and M.J. Catalano. Evaluation of shoreline rotenone application to control Largemouth Bass recruitment in small impoundments. *North American Journal of Fisheries Management*, 44(1):57–69. ↗

2023 | L. Horne, D. DeVries, R. Wright, E. Irwin, **B.A. Staton**, H. Abdelrahman, and J. Stoeckel. Thermal performance of the electron transport system Complex III in seven Alabama fishes. *Journal of Experimental Zoology, Part A: Ecological and Integrative Physiology*, 339:153–162. ↗

H.M. Nuetzel, P.F. Galbreath, **B.A. Staton**, C.A. Crump, L.M. Naylor, and G.E. Shippentower. 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. ↗

2022 | B.M. Connors, M.R. Siegle, J. Harding, S. Rossi, **B.A. Staton**, M.L. Jones, M.J. Bradford, R. Brown, B. Bechtol, B. Doherty, S. Cox, and B.J.G. Sutherland. Chinook salmon population diversity contributes to fishery stability and trade-offs with mixed-stock harvest. *Ecological Applications*, 32(8):e2709. ↗

B.A. Staton, C. Justice, S. White, E.R. Sedell, L.A. Burns, and M.J. Kaylor. Accounting for uncertainty when estimating drivers of imperfect detection: An integrated approach illustrated with snorkel surveys for riverine fishes. *Fisheries Research*, 249:106209. ↗

A. Bass, A. Bateman, B. Connors, **B.A. Staton**, E. Rondeau, G. Mordecai, A. Teffer, K. Kaukinen, S. Li, A. Tabata, D. Patterson, S. Hinch, and K. Miller. Identification of infectious agents in early marine Chinook and coho salmon associated with cohort survival. *FACETS*, 7:742–773. ↗

2021 | **B.A. Staton**, M.J. Catalano, S.J. Fleischman, and J. Ohlberger. Incorporating demographic information into spawner–recruit analyses alters biological reference point estimates for a western Alaska salmon population. *Canadian Journal of Fisheries and Aquatic Sciences*, 78(12):1755–1769. ↗

P.F. Galbreath, **B.A. Staton**, H.M. Nuetzel, C.A. Stockton, C.M. Knudsen, L.R. Medeiros, I.J. Koch, W.J. Bosch, and A.L. Pierce. Precocious maturation of hatchery-raised spring Chinook salmon as age-2 minijacks is not detectably affected by sire age. *Transactions of the American Fisheries Society*, 151(3):333–346. ↗

M.J. Kaylor, C. Justice, J.B. Armstrong, **B.A. Staton**, L.A. Burns, E. Sedell, and S.M. White. Temperature, emergence phenology and consumption drive seasonal shifts in fish growth and production across riverscapes. *Journal of Animal Ecology*, 90(7):1727–1741. ↗

2020 | **B.A. Staton**, M.J. Catalano, B.M. Connors, L.G. Coggins Jr., M.L. Jones, C.J. Walters, S.J. Fleischman, and D.C. Gwinn. Evaluation of methods for spawner-recruit analysis in mixed-stock Pacific salmon fisheries. *Canadian Journal of Fisheries and Aquatic Sciences*, 77(7):1149–1162. ↗

B.M. Connors, **B.A. Staton**, L.G. Coggins Jr., C.J. Walters, M.L. Jones, M.J. Catalano, D.C. Gwinn, and S.J. Fleischman. Incorporating harvest – population diversity trade-offs into harvest policy analyses of salmon management in large river basins. *Canadian Journal of Fisheries and Aquatic Sciences*, 77(6):1076–1089. ↗

2019 | **B.A. Staton** and M.J. Catalano. Bayesian information updating procedures for Pacific salmon run size indicators: Evaluation in the presence and absence of auxiliary migration timing information. *Canadian Journal of Fisheries and Aquatic Sciences*, 76(10):1719–1727. ↗

A.P. Moses, **B.A. Staton**, and N.J. Smith. Migratory patterns of Chinook salmon bound for the Kwethluk and Kisaralik Rivers using radio telemetry, 2015-2016. *Submitted to the Journal of Fish and Wildlife Management*, 10(2):419–431. ↗

2017 | **B.A. Staton**, M.J. Catalano, T.M. Farmer, A. Abebe, and F.S. Dobson. Development and evaluation of a migration timing forecast model for Kuskokwim River Chinook salmon. *Fisheries Research*, 194:9–21. ↗

B.A. Staton, M.J. Catalano, and S.J. Fleischman. From sequential to integrated Bayesian analyses: Exploring the continuum with a Pacific salmon spawner-recruit model. *Fisheries Research*, 186:237–247. ↗

PEER-REVIEWED PUBLICATIONS ⓘ (CONTINUED)

2017   D.A. Dippold, G.D. Adams, T.M. Farmer, and **B.A. Staton**. Maximize your meeting: A student's guide to AFS meetings. *Fisheries*, 42(4):187–189. ⇗

L.M. White, M.E. Meade, and **B.A. Staton**. Physiological ecology of four endemic Alabama species and the exotic Asiatic weatherfish, *Misgurnus anguillicaudatus* (Cantor, 1842). *Southeastern Fishes Council Proceedings*, 1(57). ⇗

GREY LITERATURE PUBLICATIONS

2023   C. Justice, M. Kaylor, A. Ringelman, and **B. Staton**. Evaluating salmonid and stream ecosystem response to conservation measures and environmental stressors in the Columbia River Basin: Annual report 2021-2022. Technical Report 23-03, Columbia River Inter-Tribal Fish Commission, Portland, OR, May. ⇗

2021   **B.A. Staton**. Improving the Kuskokwim in-season salmon harvest estimation workflow. Project summary report, Quantitative Ecological Services, LLC, Portland, OR, Nov. ⇗

S. White, C. Justice, L. Burns, **B. Staton**, and M. Kaylor. Assessing the status and trends of spring Chinook habitat in the Upper Grande Ronde River and Catherine Creek: annual report 2020. Technical Report 21-02, Columbia River Inter-Tribal Fish Commission, Portland, OR, Apr. ⇗

2020   S. White, C. Justice, L. Burns, **B. Staton**, D. Graves, and M. Kaylor. Assessing the status and trends of spring Chinook habitat in the Upper Grande Ronde River and Catherine Creek: annual report 2019. Technical Report 20-04, Columbia River Inter-Tribal Fish Commission, Portland, OR, Apr. ⇗

2019   B.M. Connors, L.G. Coggins Jr., **B.A. Staton**, M.L. Jones, C.J. Walters, and D.C. Gwinn. Harvest-population diversity tradeoffs for Kuskokwim Chinook. Final project report submitted to the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative, Jul. ⇗

B.A. Staton. *Development and evaluation of assessment tools and management strategies for salmon fisheries in western Alaska*. PhD thesis, Auburn University, Auburn, AL, May. ⇗

M.J. Catalano, **B.A. Staton**, L.G. Coggins Jr., M.L. Jones, and Z. Liller. In-season management policies for kuskokwim chinook. Final project report submitted to the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative, Apr. ⇗

2018   **B.A. Staton**. In-season harvest and effort estimates for 2018 Kuskokwim River subsistence salmon fisheries during block openers. Project summary report, Yukon Delta National Wildlife Refuge, U.S. Fish and Wildlife Service, Bethel, AK. ⇗

B.A. Staton. *Intro to R for Natural Resource Scientists*. ⇗

M.J. Catalano and **B.A. Staton**. Run timing forecast models for Kuskokwim River Chinook salmon. Final project report submitted to the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative. ⇗

B.A. Staton. In-season Chinook salmon Bayesian risk assessment tool: Technical documentation. ⇗

B.A. Staton. In-season Chinook salmon Bayesian risk assessment tool: User manual. ⇗

2017   **B.A. Staton** and L.G. Coggins Jr. In-season harvest and effort estimates for 2017 Kuskokwim River subsistence salmon fisheries during block openers. Project summary report, Yukon Delta National Wildlife Refuge, U.S. Fish and Wildlife Service, Bethel, AK. ⇗

2016   **B.A. Staton** and L.G. Coggins Jr. In-season harvest and effort estimates for 2016 Kuskokwim River subsistence salmon fisheries during block openers. Project summary report, Yukon Delta National Wildlife Refuge, U.S. Fish and Wildlife Service, Bethel, AK. ⇗

M.J. Catalano, **B.A. Staton**, T.M. Farmer, D.C. Gwinn, and S.J. Fleischman. Evaluating assessment strategies for Kuskokwim River Chinook salmon. Final project report submitted to the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative. ⇗

2015   **B.A. Staton**. Assessment strategies for data-limited Chinook salmon stocks of Western Alaska. Master's thesis, Auburn University, Auburn, AL, Dec. ⇗

B.A. Staton, M.J. Catalano, L.G. Coggins, D.C. Gwinn, and B. Bechtol. Description of the Kuskokwim River Chinook salmon run reconstruction and an investigation of data weighting. Technical report, Invited Independent Model Review Team. ⇗

2014   **B.A. Staton**, M.J. Catalano, and S.J. Fleischman. Overview of the Kuskokwim River Chinook salmon stock assessment and the application of a Bayesian state-space run reconstruction with integrated stock-recruitment productivity. Semi-annual report for funding agency AYK SSI

PROFESSIONAL PRESENTATIONS

2024 | State-space life cycle models and their application to Grande Ronde Basin spring Chinook salmon. Invited Guest Speaker at OSU Dept. of Fisheries and Wildlife Monday Morning Seminar Series, Feb

2023 | Improved productivity of naturalized spring Chinook in Lookingglass Creek, OR. Grande Ronde State of the Science Meeting, La Grande, OR, Nov. Co-presented with H. Nuetzel

Sensitivity of S_{MSY} to temporally changing demographics in Kuskokwim River Chinook salmon. Annual National AFS Meeting, Grand Rapids, MI, Aug

Integrated population modeling of Grande Ronde Basin spring Chinook salmon. Grande Ronde Model Watershed Atlas Implementation Team, Apr

Integrated population modeling of Grande Ronde Basin spring Chinook salmon. Grande Ronde Model Watershed Atlas Implementation Team, Corvallis, OR, Feb

2022 | An integrated model for quantifying covariates of detectability: Illustrated with snorkel surveys for riverine juvenile salmonids. Annual National AFS Meeting, Spokane, WA, Aug

Grande Ronde spring Chinook life cycle model: Modeling framework and description of freshwater juvenile dynamics. Adaptive Management Implementation Plan Summer Meeting, Jun

2021 | Grande Ronde spring Chinook life cycle model: Model update/overview. Grande Ronde Model Watershed Life Cycle Modeling and Restoration Scenarios Workshop, Nov

Grande Ronde spring Chinook life cycle model: update and overview. Invited Presentation to Grande Ronde Model Watershed ATLAS Implementation Team, Feb

2020 | A hierarchical approach to joint estimation of juvenile salmonid abundance and probability of detection. Annual Oregon Chapter AFS Meeting, Bend, OR, Mar

Rethinking methods for quantifying snorkel survey detection efficiency. CRITFC Brown Bag Seminar, Portland, OR, Feb

2019 | State-space models for estimating sub-population diversity in mixed-stock Pacific salmon fisheries. Annual National AFS Meeting, Reno, NV, Sep

Development and evaluation of assessment tools and management strategies for salmon fisheries in western Alaska. Departmental Exit Seminar, Auburn, AL, May

2018 | The expected value of information for intra-annual harvest management in Pacific salmon fisheries. Annual National AFS Meeting, Atlantic City, NJ, Aug

Evaluation of several approaches to Bayesian updating of pre-season indicators of run strength in Pacific salmon fisheries. Annual Western Division AFS Meeting, Anchorage, AK, May

Development and evaluation of a migration timing forecast model for Kuskokwim River Chinook salmon. Annual Western Division AFS Meeting, Anchorage, AK, May

A decision support tool for considering Kuskokwim Chinook salmon harvest targets during the run. A presentation to Kuskokwim River Salmon Managers, Bethel, AK, Apr

2017 | Problems and solutions in the assessment of mixed-stock salmon fisheries. Invited Guest Speaker, Quantitative Group Seminar Series, University of British Columbia, Vancouver, BC., Dec

In-season simulation models for assessing the potential value of information for community-based monitoring activities in the Kuskokwim River: Part Two. NCEAS Working Group Meeting, Santa Barbara, CA, Oct

Evaluation of several approaches to Bayesian updating of pre-season indicators of run strength in Pacific salmon fisheries. Annual National AFS Meeting, Tampa, FL, Aug

In-season simulation models for assessing the potential value of information for community-based monitoring activities in the Kuskokwim River: Part One. NCEAS Working Group Meeting, Bethel, AK, May

Run timing forecast models for Kuskokwim River Chinook salmon and their utility for in-season management. Stakeholder Capacity Building Workshop, Bethel, AK, May

In-season simulation models for harvest strategy evaluation and participatory modeling exercises: Part Three. Stakeholder Capacity Building Workshop, Bethel, AK, May

Development and evaluation of a migration timing forecast model for Kuskokwim River Chinook salmon. Annual Southern Division AFS Meeting, Oklahoma City, OK, Feb

2016 | 3 Total: stakeholder capacity building workshop (2); society conference (1)

2015 | 4 Total: graduate student seminar (2); society conference (1); agency meeting (1)

2014 | 1 Total: Society Conference (1)

GRANTS & AWARDS

2023	Upkeep and Improvement of Kuskokwim Harvest Estimation Software. Awarded to Quantitative Ecological Services, LLC by the Kuskokwim River Inter-Tribal Fish Commission; $5,400
2021–2023	Kuskokwim Salmon In-Season Harvest Predictive Tools. Awarded to Quantitative Ecological Services, LLC by the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative, Administered Under Bering Sea Fisherman's Association Project AC-2016; $57,070
2022	Commissioned peer reviewer for Canadian Science Advisory Report 2022/007: Estimates of Biological Benchmarks for the Canadian-Origin Yukon River Mainstem Chinook Salmon Stock Aggregate. Administered by the Alaska Department of Fish & Game; $3,021.
2021	Improving the Kuskokwim In-Season Salmon Harvest Estimation Workflow. Awarded to Quantitative Ecological Services, LLC by the Kuskokwim River Inter-Tribal Fish Commission, Adminstered Under Bering Sea Fisherman's Association Projects AC-2101 and AC-2105; $20,328
2018	Swingle Award for Best PhD Student, Auburn University SFAAS
2016–2018	Run Timing Forecast Models for Kuskokwim River Chinook Salmon. Awarded to M. J. Catalano, B. A. Staton, and T. M. Farmer by the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative; $110,478
2014–2018	Travel funds to conduct graduate work by participating in meetings, scientific conferences, and working groups. Auburn University; $15,000+
2014–2018	Three separate travel awards to present research at scientific conferences. Auburn Chapter of the American Fisheries Society; $500
2015	Swingle Award for Best MSc Student, Auburn University SFAAS
2013	Graduated with Honors from Michigan State University with a BSc (GPA 3.91)
	Niles R. Kevern Scholarship for Excellence in Undergraduate Studies in Fisheries and Wildlife

TEACHING

2023		
	Co-instructor	BUGS/JAGS for Fish Biologists, Annual National AFS Meeting, Grand Rapids, MI, Aug (16 hrs.)
2022		
	Co-instructor	BUGS/JAGS for Fish Biologists, Annual National AFS Meeting, Spokane, WA, Aug (16 hrs.)
	Sole Instructor	Intro Topics in Bayesian Inference, Annual MTAFS Virtual Meeting, March (4 hrs.)
2021		
	Lead Instructor	BUGS/JAGS for Fish Biologists, Annual WDAFS Virtual Meeting, May (16 hrs.)
2020		
	Lead Instructor	BUGS/JAGS for Fish Biologists, Annual AFS Virtual Meeting, Sep (16 hrs.)
2019		
	Sole Instructor	BUGS/JAGS for Fish Biologists, CRITFC Main Office, Portland, OR, Nov (16 hrs.)
	Lead Instructor	BUGS/JAGS for Fish Biologists, Annual National AFS Meeting, Reno, NV, Sep (16 hrs.)
2018		
	Lead Instructor	Intro to R for Natural Resource Scientists, Auburn University, AL, Autumn (12 hrs.)
	Guest Lecturer	Bayesian Methods in Biology, Auburn University, Sep (3 hrs.)
	Lead Instructor	BUGS/JAGS for Fish Biologists, Annual National AFS Meeting, Atlantic City, NJ, Aug (16 hrs.)
	Teaching Assistant	Fish Population Dynamics, Auburn University, Spring (12 hrs.)
2017		
	Sole Instructor	Intro to R for Natural Resource Scientists, Auburn University, AL, Autumn (12 hrs.)
	Lead Instructor	BUGS/JAGS for Fish Biologists, Annual National AFS Meeting, Tampa, FL, Aug (16 hrs.)
	Teaching Assistant	Quantitative Assessment of Fish Populations, Auburn University, Spring (12 hrs.)
	Co-instructor	Graphing and Fisheries Modeling with R, Southern Division AFS Meeting, Feb (8 hrs.)
2016		
	Sole Instructor	Intro to R for Natural Resource Scientists, Auburn University, AL, Autumn (12 hrs.)
	Guest Lecturer	Bayesian Methods in Biology, Auburn University, Sep (3 hrs.)
	Lead Instructor	BUGS/JAGS for Fish Biologists, Annual National AFS Meeting, Kansas City, MO, Aug (16 hrs.)
	Teaching Assistant	Fish Population Dynamics, Auburn University, Spring (12 hrs.)
2014-2015		Workshop sole instructor (22 hrs.); workshop teaching assistant (16 hrs.); guest lecturer (3 hrs.)