

CURRICULUM VITAE
Kathryn Boyer

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EDUCATION:

Central High School, Phoenix, AZ, Class of 1968
B.S Biology, University of Arizona, Tucson, 1972
M.S. Zoology, Oregon State University, Corvallis, 1984

POSITIONS HELD:

Courtesy Faculty, Department of Fisheries and Wildlife, Oregon State University,
Corvallis, Oregon, 1997- present
Fishery Biologist, West National Technology Support Center, USDA Natural Resources
Conservation Service, 2004 - 2012
Fishery Scientist, Wildlife Habitat Management Institute of the Natural Resources
Conservation Service, Corvallis, Oregon, 1997-2004
Fish and Wildlife Program Leader, USDA Forest Service, White Mountain National
Forest, Laconia, New Hampshire, 1992-1997
District Fish Biologist, USDA Forest Service, Wenatchee National Forest, Cle Elum,
Washington, 1990-1992
Research Associate, Department of Biological Sciences, Northern Arizona University,
Flagstaff, 1984-1988
Graduate Research Assistant, Department of Zoology, Oregon State University,
Corvallis, Oregon, 1980-1983
Water Quality Specialist, City of Boise, Boise, Idaho, 1977-1980
Senior Research Assistant, Faculty of Medicine, University of British Columbia,
Vancouver, British Columbia, 1974-1977
Staff Research Associate, Thiaman Laboratories, University of California, Santa Cruz,
California, 1973-1974
Curatorial Assistant, Department of Ichthyology, California Academy of Sciences, San
Francisco, California, 1972-1973

HONORS AND AWARDS:

Special Achievement Awards, USDA Forest Service, 1991, 1995, 2001
Special Achievement Awards, USDA Natural Resources Conservation Service, 1998, 2000,
2002, 2003, 2008, 2012
Wildlife Management Institute Touchstone Award, 2000
US Department of Interior Partners in Conservation Award, 2010

PROFESSIONAL ACTIVITIES:

US Atlantic Salmon Assessment Committee member for NASCO, 1992-1997
All-H Interagency Task Group, 1997-1999
Chairperson, Education and Outreach Committee, American Fisheries Society, Oregon Chapter, 1998-2000
Co-chair, Endangered Species Committee, American Fisheries Society, 2000 - 2001
Chair, Endangered Species Committee, American Fisheries Society, 2001 to 2003
Willamette Basin Technical Advisory Group, 2003-2004
Member, American Fisheries Society, 1980 to present
Member, Desert Fishes Council, Executive Committee 2007 to present
Member Desert Fishes Council, 1997 to present
Executive Steering Committee, Desert Fish Habitat Partnership, 2007 to 2011
President, Desert Fishes Council 2013 to present

RECENT INTERDISCIPLINARY RESEARCH PROJECTS

Willamette River Restoration Project: Partners include OSU Stream Team, Cascade Pacific RC and D, OWEB, Eric Horning, Bill Chambers, Sam Dawes Improvement District. Project includes restoration of floodplain forest plant community and installation of log structures to reduce erosion of stream bank; current responsibilities include development and oversight of a 10-year monitoring program contract with OSU to evaluate effectiveness of riparian conservation actions in meeting landowner objectives for protecting property and improving fish and riparian habitat.

Constructed impoundments and wetland developments in floodplains: source or sink for native prairie fishes in South Dakota, especially Topeka shiner. Partners include NRCS South Dakota, South Dakota State University, USGS. Off-channel water-holding structures are a common practice in upper Midwest agricultural lands, where floodplain habitats are critical for native cyprinids and their habitats. This study explores water facility designs that enhance off-channel fish habitat.

Interactions between riparian and stream communities relevant to fish production on range lands. Partners include Colorado State University, NRCS, TNC's Red Canyon Ranch (Lander, WY). This study evaluated effects of different grazing regimes in riparian ecotones on aquatic and riparian food webs, instream and riparian habitat structure, and fish production.

Aquatic community structure of flooded agricultural wetlands in the Willamette Valley. Partners include ARS, OSU Department of Fisheries and Wildlife, OSU Department of Forest Engineering, OSU Department of Crop and Soil Science, NRCS OR, NRCS WHMI, WED-EPA, Oregon Seed Council, Don Wirth. This project evaluated the degree to which aquatic species utilize flooded agricultural lands during winter, and effects of agronomic practices on water quality, aquatic and riparian community diversity, fish species diversity, and nutrient dynamics in the watershed.

Effects of Stream Barbs on Biological Processes of Streams. Partners include NRCS, OSU Department of Fisheries and Wildlife. This project assesses engineered conservation practices used to stabilize streams, to determine their effects on native aquatic species.

Winter use of controlled and natural floodplain wetlands by anadromous salmonids and other aquatic species. Partners include NRCS, USGS, OSU Department of Fisheries and Wildlife,

USEPA, Washington Department of Fisheries and Wildlife. This project begins to assess the effects of construction and management of wetland water-control structures on anadromous salmonids, with the objective of identifying designs and management regimes that protect native aquatic species and their winter habitats.

Validation Studies on the newly Revised NRCS Stream Visual Assessment Protocol. Version 2. Partners include NRCS, OSU Department of Fisheries and Wildlife, EPA. This project compares multiple physical habitat assessment tools to determine accuracy, and repeatability and diagnostic value for land managers.

Technical Product Development

2015. Desert Fishes Council Species Account Database for website

2011. NRCS Stream Visual Assessment Protocol. Version 2. Spanish Translation.

2008. NRCS Stream Visual Assessment Protocol. Version 2.

2007. Technical Note: Stream Habitat Improvement and Management Code 395. NRCS.

2006. NRCS Habitat Suitability Tool for Conservation Security Program Qualification.

2004. NRCS Stream Design Guide. Partners include NRCS, ARS, WHMI. This project provides technical design guidance to resource conservationists working on streams, with the objective of integrating ecological and geomorphic considerations into stream projects.

2003. USDA Natural Resources Conservation Service National Biology Handbook. Partners included Utah State University, Watershed Science Institute, NRCS.

2003. Reconstructing a historical "fly-over" of the Willamette River Valley, circa 1850. Partners include UO, PNW ERC, NRCS. Digital maps generated from Government Land Office survey data were combined to produce a simulated aerial view as if flying over the Willamette Basin, with fade-in representations of the Willamette River floodplain as it has changed over the past 150 years. This tool was developed as a means to show landowners the changes that have occurred in and along the river, and help them visualize the conditions that are expected to occur in the future under different conservation scenarios. DVD format.

2002. Understanding the Landscape. Training course co-producer. Partners included Colorado State University, Oregon State University, NRCS Soil Quality Institute.

SELECTED PUBLICATIONS:

Staley, K.B. 1984. Seawater adaptation and purine deposition in the skin of coho salmon, *Oncorhynchus kisutch* Walbaum. Master's thesis, Oregon State University, Corvallis, 74 pp.

Montgomery, W.L., G.E. Goslow, **K. B. Staley**, and J.R. Mills. 1987. Alternative mating behaviors of male Atlantic salmon (*Salmo salar*), with special reference to mature male parr. IN: Community and Evolutionary Ecology of North American Stream Fishes, Matthew, W.J. and Heins, D.C., editors. University of Oklahoma Press, Norman. 320 pp.

Staley, K.B. and R.D. Ewing. 1992. Purine levels in the skin of juvenile coho salmon (*Oncorhynchus kisutch*) during parr-smolt transformation and adaptation to seawater. *Comp. Biochem. Physiol.* 101B(3):447-452.

Staley, K. B., S. Gregory, J.B. Kauffman, J. Hall, K.A. Dwire, C. Baxter, and J. Brookshire. 2000. Scientists as citizens: integrating ecological considerations with riverfront development. Pages 369-374 *in* P. J. Wigington and R. L. Beschta, editors. *Riparian Ecology and Management in Multi-Land Use Watersheds*. American Water Resources Association, Middleburg, Virginia, 616 pp.

Gregory, S., **K. Boyer**, and A. Gurnell. 2003. *The Ecology and Management of Wood in World Rivers*. American Fisheries Society, Bethesda, MD. 431 pages.

Boyer, K., D. R. Berg, and S. Gregory. 2004. Riparian management for wood in rivers. Pages 407-420 *in* S. Gregory, K. Boyer and A. Gurnell. *The Ecology and Management of Wood in World Rivers*. American Fisheries Society, Bethesda, MD.
<http://andrewsforest.oregonstate.edu/pubs/pdf/pub3728.pdf>

Giannico, G.R, J.L. Li, **K.L. Boyer**, R.W Colvin, W.J. Gerth. 2005. Fish and amphibian use of intermittent Agricultural Waterways in the South Willamette Valley. *IN* Seed Production Research at Oregon State University, W. C. Young III, ed.. USDA-ARS Seed Laboratory.

Gregory, S., A. Allen, M. Baker, **K. Boyer**, T. Dillaha, J. Elliott. 2006. Realistic expectations of timing between Conservation and Restoration Actions and Ecological Responses. *IN*. M. Schnepf and E. Cox (editors): *Environmental Benefits of Conservation on Cropland: The Status of our Knowledge*.

Boyer, K.L. and F. D. Shields. 2007. *Ecological Considerations for Stream Projects*. Chapter 1 in *Stream Restoration Design*, National Engineering Handbook Part 654, USDA-NRCS Washington, DC.

Knight, S. S., and **K. L. Boyer** 2007. Effects of Conservation Practices on Aquatic Habitats and Fauna. *IN*: *Fish and Wildlife Response to Farm Bill Conservation Practices*. The Wildlife Society Technical Review 07-1: 85-103.

Gumiero, B., **K. Boyer**, and S. Gregory. 2009. Introduction: Biodiversity and restoration of hydromorphological processes. *IN*: *IVth ECRR International Conference on River Restoration 2008*, Italy. B. Gumiero, M. Rinaldi, and B. Fokkens, editors.

Colvin, R., G. Giannico, J. Li., and **K. Boyer**. 2009. Fish use of intermittent drainages of agricultural lands in the Willamette Valley, Oregon. 2009, *Trans Am. Fish. Soc.* 138:1302-1313.

A. Chin, A., L. R. Laurencio, M. D. Daniels, E. Woho, M. A. Urban, **K.L. Boyer**, A. Butt, H. Piegay, and K. Gregory. **2014**. The significance of perceptions and feedbacks for effectively managing wood in rivers. *River Research and Applications* 30:98-111.

TECHNICAL PRESENTATIONS:

Native Fish Conservation and Management in the West: An Epitaph or a New Hope? **Kathryn Boyer**, NRCS Wildlife Habitat Management Institute and Department of Fisheries and Wildlife, Oregon State University. Corvallis, Oregon. Western Division American Fisheries Society Meeting, July 2000 Telluride, Colorado

Closing Remarks. **Kathryn Boyer**, NRCS Wildlife Habitat Management Institute and Department of Fisheries and Wildlife, Oregon State University. Corvallis, Oregon. The 1st International Conference on the Ecology and Management of Wood in World Rivers. La Sells Stewart Center, OSU October 2000

Facilitating aquatic habitat conservation on agricultural lands. **Kathryn Boyer** and Dan Edge, NRCS Wildlife Habitat Management Institute and Department of Fisheries and Wildlife, Oregon State University. Corvallis, Oregon. Presented at the Oregon Wildlife Society/American Fisheries Society, February 2001, Portland, OR

Juvenile coho salmon in the Salmon River Watershed, British Columbia: seasonal distribution and habitat use. Guillermo R. Giannico and **Kathryn Boyer**. Department of Fisheries and Wildlife, Wildlife Habitat Management Institute, Oregon State University. Corvallis, Oregon. Presented at the Canadian Conference on Fisheries Research, January 2002. Vancouver, BC

Understanding the Landscape: A giant step towards sustaining ecological processes on working lands. **Kathryn Boyer** and Wendell Gilgert. NRCS Wildlife Habitat Management Institute and Department of Fisheries and Wildlife, Oregon State University. Corvallis, Oregon. Presented at the Ecological Society of America, August 2002, Tucson, AZ

Flooded agricultural land as winter habitat for aquatic species. **Kathryn Boyer**, Judith Li, Guillermo Giannico, William Gerth, and Randall Colvin. NRCS Wildlife Habitat Management Institute and Department of Fisheries and Wildlife, Oregon State University, Corvallis, OR. Presented at the 51st Annual Meeting North American Benthological Society, May 30, 2003, Athens, GA

Homes on the Range: Aquatic Habitat Conservation on Working Rangelands. **Kathryn Boyer** and Wendell Gilgert, NRCS Wildlife Habitat Management Institute, Co-conveners. Presented at the 57th Annual Meeting of the Society for Range Management, January, 2004. Salt Lake City

Fish Habitats in Seasonally Flooded Agricultural Lands. Guillermo Giannico, **Kathryn Boyer**, Judith Li, William Gerth, and Jeff Steiner. NRCS Wildlife Habitat Management Institute and Oregon State University. Corvallis, Oregon. Presented at the 4th World Fisheries Congress, May 2-6, 2004. Vancouver, British Columbia

Ecological considerations for stream design professionals. **Kathryn Boyer**, NRCS Wildlife Habitat Management Institute and Department of Fisheries and Wildlife, Oregon State University. Corvallis, Oregon. Presented at the American Society of Agricultural Engineers 2004 Conference, St. Paul, MN, September 2004

Reconciling Fisheries With Conservation: Overview of the 4th World Fisheries Congress and its relevance to NRCS. **Kathryn Boyer**, NRCS Wildlife Habitat Management Institute and Department of Fisheries and Wildlife, Oregon State University. Corvallis, Oregon. Presented at the Science and Technology Consortium Seminar Series, NRCS National Headquarters, Washington, DC, September 2004

Aquatic habitat conservation on agricultural lands: 2 case studies from the Pacific Northwest. **Kathryn Boyer**, Julie Henning and Randall Colvin. Presented at the American Fisheries Society Meeting, Anchorage, AK, September 2005.

From Landscapes to Riverscapes: Adding Fish to the Main Stream of Wildlife Habitat Initiatives. **Kathryn Boyer** and William Taylor. Special Session Convened and Presented at the 71st North American Wildlife and Natural Resources Conference, Columbus OH, 2006.

Onsite, Downstream, and Downcurrent Effects of Managing Aquatic Habitats in Agricultural Landscapes. **Kathryn Boyer**, Symposium Convener and Presenter: 137th Meeting of the American Fisheries Society, San Francisco, 2007.

Targeting Native Desert Fish Recovery and Conservation in the West: The Desert Fish Habitat Partnership. **Kathryn Boyer**, et al. Western Division of the American Fisheries Society, Portland, OR.2008.

Career Options for undergraduates and advanced degree graduates: **Kathryn Boyer**, USDA Natural Resources Conservation Service. Invited Presentation to the OSU Fish and Wildlife Club, February 2009.

Desert Fishes Council: Dedicated to the preservation of America's desert fishes. Heidi Blasius, Stewart Reid, Phil Pister, **Kathryn Boyer**, Krissy Wilson, Melissa Trammell, Dean Hendrickson, Shawn Goodchild. Poster presented at Western Division of the American Fisheries Society, 2009. <http://f1000research.com/posters/4-818>

The Battle Against Extinction Still Rages: The Desert Fishes Council approaches 50 years of arid land fish and habitat conservation. **Kathryn Boyer**, Department of Fisheries and Wildlife, and Phil Pister, California Department of Fish and Game, Retired. Invited Presentation at the 145th Meeting of the American Fisheries Society, Portland, OR August 2015

The Battle Against Extinction: The Desert Fishes Council's dedication to an imperiled fauna, in tribute to UNLV scientist and pupfish advocate James Deacon. **Kathryn Boyer**, Department of Fisheries and Wildlife, Oregon State University. Invited Presentation to the 47th meeting of the Desert Fishes Council, Death Valley National Park, California. November 2015. <http://f1000research.com/channels/desertfishcouncil?&selectedDomain=SLIDES>

Technical Reports

NRCS Stream Visual Assessment Protocol. Version 2. 2009. USDA Natural Resources Conservation Service National Biology Handbook. Part 614. www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_042678.pdf

NRCS/TNC Protocolo de Evaluación Visual de Corrientes de Agua Versión 2. 2015. Guía Nacional de Biología, Subparte B. Planificación de la conservación. Parte 614.