

WILLIAM J. RADIGAN

CURRICULUM VITAE

University of Nebraska – Lincoln
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EDUCATION

- PhD **University of Nebraska – Lincoln, NE** (January 2021-)
Major: Natural Resource Sciences
Concentration: Applied Ecology
GPA: 4.0/4.0
Advisors: Dr. Mark Pegg, Chris Longhenry, Dr. Kevin Pope, Dr. Cameron Goble, Dr. Erin Blankenship
- M.S. **South Dakota State University – Brookings, SD** (June 2014-June 2017)
Major: Wildlife and Fisheries Sciences
Concentration: Fisheries Sciences
GPA: 3.85/4.0
Advisors: Dr. Brian D.S. Graeb, Dr. Mark J. Fincel, Dr. Steven R. Chipps
- B.S. **Colorado State University – Fort Collins, CO** (August 2010- May 2014)
Major: Fisheries, Wildlife, and Conservation Biology
Concentration: Fisheries and Aquatic Sciences
GPA: 3.37/4.0

PUBLICATIONS

- 10) **Radigan, W. J.**, S. Fopma, J. Sorenson, and C. Longhenry. 2022. Factors affecting the catch and harvest rates of paddlefish downstream of Gavins Point Dam, South Dakota, 2000-2020. *Fisheries Management and Ecology*. *In Press*.
- 9) **Radigan, W. J.**, and M. J. Fincel. 2021. Factors related to age-0 sport-fish abundance in four mainstem Missouri River reservoirs. *Fisheries Management and Ecology*. 29:57-68.
- 8) **Radigan, W. J.**, and M. J. Fincel. 2020. Factors related to age-0 native fish catch per unit effort in the South Dakota Missouri River reservoirs. *Journal of Fish and Wildlife Management*: 11: 1-16.
- 7) **Radigan, W. J.**, and M. J. Fincel. 2019. Factors affecting White Bass abundance in two Missouri River reservoirs. *The Prairie Naturalist* 51: 3-16.

6) **Radigan, W. J.**, A. K. Carlson, M. J. Fincel, and B. D. S. Graeb. 2019. Effects of the 2011 Missouri River flood on Walleye natal recruitment and habitat use in Lake Sharpe, South Dakota. *Journal of Freshwater Ecology* 34: 213-228.

5) **Radigan, W. J.**, A. K. Carlson, M. J. Fincel, and B.D.S. Graeb. 2018. Assessing the utility of otolith chemistry for management of six freshwater fishes from a river-reservoir system. *North American Journal of Fisheries Management* 38: 316-326.

4) **Radigan, W. J.**, A. K. Carlson, M. J. Fincel, and B.D.S. Graeb. 2018. Otolith chemistry as a fisheries management tool after flooding: the case of Missouri River Gizzard Shad. *River Research and Applications* 34: 270-278.

3) **Radigan, W. J.**, A. K. Carlson, J. L. Kientz, S. R. Chipps, M. J. Fincel, and B.D.S. Graeb. 2018. Species- and habitat-specific otolith chemistry patterns inform riverine fisheries management. *River Research and Applications* 34: 279-287.

2) Fincel, M. J., R. P. Hanten, M. J. Smith, and **W. J. Radigan**. 2017. Recommendations for stocking Gizzard Shad in large upper-Midwest reservoirs. *North American Journal of Fisheries Management* 37: 3.

1) Fincel, M. J., **W. J. Radigan**, and C. Longhenry. 2016. Entrainment of Rainbow Smelt through Oahe Dam during the 2011 Missouri River flood. *North American Journal of Fisheries Management* 36: 844-851.

In preparation

Radigan, W. J., M. Pegg, C. M. Longhenry, and C. Goble. *Anticipated 2025*. Entrainment estimates of larval walleye in Lewis and Clark Lake.

Radigan, W. J., M. Pegg, C. M. Longhenry, and C. Goble. *Anticipated 2025*. Movement of walleye and sauger in Lewis and Clark Lake inferred from telemetry.

Dissertation

Radigan, W. J. Walleye movement and entrainment in Lewis and Clark Lake. Dissertation. University of Nebraska – Lincoln, NE.

Thesis

Radigan, W. J. The Contribution of Missouri River Reservoir Side-Channel and Floodplain Habitats to Mainstem Fish Populations: The Effects of Losing Connectivity Between Hipple Lake and Lake Sharpe. M. S. thesis. South Dakota State University. Brookings, SD.

Technical reports

Dodd, H. R., D. G. Peitz, J. T. Cribbs, **W. J. Radigan**, A. De Goei, J. Roiland, G. Rowles, B. D. S. Graeb, and K. N. Bertrand. 2016. Fish community monitoring at Pipestone National Monument: 2015 update. National Park Service, Fort Collins, Colorado.

Popular articles

3) Rezac, C. R., and **W. J. Radigan**. A small fish with a big impact: Lake Herring's role in growing trophy-sized fish in Lake Oahe. South Dakota Conservation Digest. May/June 2017. South Dakota Department of Game, Fish and Parks.

2) **Radigan, W. J.**, and A. K. Carlson. The uncertain future of Hipple Lake: lasting effects of the 2011 Missouri River flood. South Dakota Conservation Digest. July/August 2015. South Dakota Department of Game, Fish and Parks.

1) Carlson, A. K., and **W. J. Radigan**. Mysteries of Lake Oahe Walleye: Using ear stones to decode spawning and movement. North Dakota Outdoors. June 2015. North Dakota Department of Game, Fish and Parks.

AWARDS

2021	American Fisheries Society Certificate of Appreciation
2017-2020	National Defense Service Medal, Army Certificate of Appreciation, Army Service Ribbon, Global War on Terrorism Service Medal, Global War on Terrorism Expeditionary Medal, Overseas Service Ribbon, Army Achievement Medal, Army Commendation Medal
2016	Robert A. Klumb HAMMS (Habitat, Aquatics, and Management of the Missouri River System) Award.

PROFESSIONAL EXPERIENCE

1/04/21-Current PhD Candidate
University of Nebraska (UNL); Lincoln, Nebraska

- 1) Assessed movement and entrainment of adult walleye and sauger in Lewis and Clark Lake using acoustic telemetry
- 2) Used ichthyoplankton nets to assess larval walleye entrainment through Fort Randall Dam and Gavins Point Dam.
- 3) Surgically implanted and jaw-tagged walleye and sauger with acoustic tags.
- 4) Welded and designed receiver bases, anchors and grappling hooks.
- 6) Aided Nebraska Game and Parks Commission personnel in attempting to extract otoliths from age-0 shovelnose sturgeon
- 7) Aided South Dakota Game, Fish and Parks and US Fish and Wildlife Service personnel in various capacities; coded wire-tagged paddlefish, collected blue catfish for broodstock and fertilized pallid sturgeon eggs.

- 8) Reviewed a manuscript for the *Journal of Fish and Wildlife Management* and a manuscript to satisfy FSP for a Cooperative Unit.
- 9) Aided UNL personnel in various capacities; Collected water samples for bighead carp and silver carp eDNA analysis, collected silver carp for University personnel, assisted in sturgeon chub and sicklefin chub sampling on the mainstem Missouri River, and assisted with active and passive tracking of pallid sturgeon in the Platte River
- 10) Barge-electrofished with University of Nebraska – Kearney personnel.

**6/29/19-10/31/20 Maintenance Platoon Leader/Maintenance Control Officer
Second Lieutenant O-1/First Lieutenant O-2
J Co., 1/8 IN, 3 ABCT, 4 ID
Camp Buehring, Kuwait; Fort Carson, Colorado; Iraq**

- 1) Responsible for the discipline, training, health, welfare, and performance of a platoon of over 50 Soldiers.
- 2) Enforced safety, accountability and security of platoon equipment valued over \$80,000,000.
- 3) Held mechanics accountable for ensuring vehicles were repaired immediately upon receipt of parts, and that all discovered vehicle faults were being addressed.
- 4) As the Unit Movement Officer, was accountable for the shipping and arrival of 110 vehicles, containers, and secondary cargo to Ft. Irwin, CA and Camp Buehring, Kuwait.
- 5) Planned and executed convoys of up to 50 vehicles during field exercises and planned, briefed, orchestrated, and supervised company M4 rifle ranges.

**04/24/17-06/20/18 Officer Candidate/ Ordnance Officer
Specialist E-4/Second Lieutenant O-2
Fort Benning, GA; Fort Lee, VA**

- 1) Completed the 10-week Basic Combat Training course, where I was taught discipline and to work effectively in a team.
- 2) Completed the 12-week Officer Candidate School, where I was taught to lead a 9-person squad in simulated combat situations.
- 3) Completed the 16-week Basic Officer's Leadership Course, where I was taught how to lead an Ordnance platoon.

**6/2/14-4/1/17 Graduate Research Assistant (M.S.)
South Dakota State University (SDSU); Brookings, South Dakota**

- 1) Ablated otoliths at UC Davis using Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICPMS) and evaluated natal origins of gizzard shad and walleye.
- 2) Assessed non-flood year walleye entrainment using otolith microchemistry.
- 3) Validated rainbow trout hatchery or wild origin stable isotope findings using otolith microchemistry.
- 4) Evaluated feasibility of otolith microchemistry to evaluate natal origins and movement of blue sucker, a state-listed vulnerable species.
- 5) Aided in various state operations; shocked, lavaged, and removed otoliths from largemouth bass on a Texas Ranch, removed otoliths from sand shiners and pearl dace, trap-netted and

helped with jaw-tagging efforts of walleye, used hydroacoustics equipment to track schools of rainbow smelt and lake herring on Lake Oahe, SD, aided in spawning Chinook salmon in an artificial rearing facility, deployed Mossback artificial habitat “trees” in private ponds in SD and TX, and lavaged, removed pectoral spines from, and fin-clipped flathead catfish and aged channel catfish spines.

8/27/13-5/16/14 Laboratory Technician
CSU Fisheries Ecology Laboratory; Fort Collins, Colorado

- 1) Sampled, counted, measured and determined gender of *Mysis* samples.
- 2) Prepared fish, *Mysis* and zooplankton samples for mercury and isotope analysis.
- 3) Extracted, embedded, sectioned and aged adult rainbow trout, lake trout, walleye and perch otoliths.
- 4) Identified, measured and counted zooplankton (*Daphnia*, *Bosmina*, *Leptodora*, Copepods).

11/22/13-1/24/14 Volunteer Laboratory Technician
Colorado Parks and Wildlife; Fort Collins, Colorado

- 1) Completed counts of gill lice adults and eggs.
- 2) Weighed kokanee otoliths for age determination.

1/1/14-5/16/14 Laboratory Technician
8/22/12-7/12/13 CSU Larval Fish Laboratory; Fort Collins, Colorado

- 1) Identified, counted and measured preserved fish specimens.
- 2) Pressed and aged smallmouth bass scales daily.
- 3) Repaired fyke and trammel nets.
- 4) Found, cited and scanned LFL documents for online access.
- 5) Grinded and aged juvenile northern pike otoliths.

5/22/13-8/18/13 Field Technician
5/14/12-8/18/12 CSU Larval Fish Laboratory; Fort Collins, Colorado

- 1) Removed and destroyed non-native species captured using electrofishing from boats and rafts in Browns Park, CO.
- 2) Surveyed small-bodied fish species using seines (both electric and mesh) in the Yampa and Green Rivers. Sampled for larval native endangered fish species using drift nets in Echo Park, Dinosaur National Monument, CO.
- 3) Performed Floy-tagging and fin-clipping of fish for mark-recapture estimations.
- 4) Caught by angling and pit-tagged endangered adult pikeminnow.
- 5) Worked with one to eight other technicians for 4-10 days in a row in isolation, living in a tent and hiking to sample sites and navigating river stretches up to 8 miles in length by canoe daily.

PROFESSIONAL/SCHOLASTIC ASSOCIATIONS

12/09/20-Present AFS- North Central Division

- 1) Chair of the NCD Centrarchid Technical Committee
 - a. Scheduled and facilitated quarterly meetings.
 - b. Drafted meeting minutes and set Committee priorities.
 - c. Created a budget and fundraising to increase Committee monies.
 - d. Ensured Committee website was up to date.
 - 2) Student Affairs Committee member
 - 3) Rivers and Streams Technical Committee member
 - 4) Walleye Technical Committee member
- 01/29/21- 11/10/21 AFS - Student and Early Career Professionals Subsection
- 1) Student Activities Committee
 - a. Planned, orchestrated, and supervised both the in-person and virtual AFS Mock Interview/CV Review Workshop for the 151st Annual Meeting.
 - b. Created mock interview questions and secured 5 mock interviewers.
 - c. Scheduled and facilitated both weekly and monthly planning meetings.
 - d. Orchestrated the AFS National Aquarium Animal Care and Rescue Facility tour for the 151st AFS Annual Meeting for 135 attendees.
 - e. Secured an invited National Aquarium speaker for the Student Networking Event.
- 02/14/21-Present AFS-Dakota Chapter
- 1) Served as the Chair of the Centrarchid Technical Committee for the Dakotas
 - a. Provided updates on Centrarchid research occurring in the Dakotas.
- 02/27/21-Present UNL Student Chapter AFS
- 1) Attended fishing derbies
- 01/24/21-Present South Dakota Walleyes Unlimited – Sioux Empire Chapter
- 01/11/21-Present AFS- Nebraska Chapter
- 1) Awards Committee member – approved nominations for awards
 - 2) Judged student presentations at the 52nd Annual Meeting
- 6/30/18-Present Military Officers Association of America
- 6/25/14-Present American Fisheries Society- National Chapter
- 9/2/14-4/1/17 AFS- South Dakota State University Chapter
- 1) Served as Vice President.
 - 2) Helped with bi-weekly events (talks, BBQs, banquets, fishing derbies).
 - 3) Helped determine scholarship recipients.
- 3/18/15-6/1/15 SDSU Natural Resource Management Graduate Student Association
- 8/25/13-5/16/14 AFS- Colorado State University Chapter
- 1) Served as an Officer, caring for sport fish and threatened native fish aquariums.
 - 2) Attended routine meetings and banquets.
 - 3) Helped orchestrate the bi-annual fishing derby.

4) Created informational posters for the AFS aquariums.

PROFESSIONAL FISHERIES-RELATED ORAL PRESENTATIONS

- 08/23/22 **Radigan, W. J.**, S. Fopma, J. Sorensen, C. Longhenry. Factors affecting catch and harvest rates of paddlefish downstream of Gavins Point Dam in South Dakota, 2000-2020. 152nd Annual Meeting of the American Fisheries Society. Spokane, Washington, Virtual live format.
- 08/12/22 **Radigan, W. J.**, M. Pegg, C. Longhenry, C. Goble, K. Pope. Assessing movement and entrainment of walleye and sauger in Lewis and Clark Lake. South Dakota Game, Fish, and Parks Region III Meeting. Sioux Falls, SD.
- 11/08/21 **Radigan, W. J.**, and M. J. Fincel. Factors related to age-0 abundances of 21 fish species in the four mainstem Missouri River reservoirs of South Dakota. 151st Annual Meeting of the American Fisheries Society. Baltimore, Maryland. Virtual format.
- 3/29/21 **Radigan, W. J.** and M. J. Fincel. Factors affecting white bass abundance in two Missouri River reservoirs. South Dakota State University Student Chapter of the American Fisheries Society. Brookings, South Dakota. Virtual format.
- 3/11/21 **Radigan, W. J.** and M. J. Fincel. Factors affecting age-0 fish abundances in the four Missouri River Reservoirs of South Dakota. 57th Annual Meeting, Dakota Chapter, American Fisheries Society. Virtual format.
- 5/4/16 **Radigan, W. J.**, M. J. Fincel, and B. D. S. Graeb. The effects of losing connectivity between Hipple Lake and Lake Sharpe. M.S. completion seminar. SDSU Department of Natural Resources. Brookings, SD.
- 8/17/15 **Radigan, W. J.**, A. K. Carlson, M. J. Fincel, and B.D.S. Graeb. Natal contribution of gizzard shad in Lake Sharpe, South Dakota. 145th Annual Meeting. Portland, Oregon.
- 7/29/15 **Radigan, W. J.**, A. K. Carlson, M. J. Fincel, and B.D.S. Graeb. Natal origins of gizzard shad in Lake Sharpe, South Dakota. Summer Fish Meeting, Yankton, South Dakota.
- 7/23/15 **Radigan, W.J.**, A. K. Carlson, M. J. Fincel, and B.D.S. Graeb. Natal contribution and movement of walleye in Lake Sharpe, SD evaluated using otolith microchemistry. Joint Technical Meeting. North Central Division of the AFS. Brookings, South Dakota.
- 3/26/15 **Radigan, W. J.**, M. J. Fincel, and B. D. S. Graeb. Natal origins of gizzard shad in Lake Sharpe, SD. Colorado State University Student Chapter of the American Fisheries Society, Fort Collins, Colorado.

- 2/7/15 **Radigan, W. J.**, M. J. Fincel, and B. D. S. Graeb. Natal contribution of gizzard shad in Lake Sharpe, SD. 51st Annual Meeting, Dakota Chapter, American Fisheries Society. Bismarck, North Dakota.
- 12/3/14 **Radigan, W. J.**, M. J. Fincel, and B. D. S. Graeb. Use of otolith microchemistry to evaluate the contribution of Hipple Lake to Lake Sharpe's fishery. M. S. proposal seminar. SDSU Department of Natural Resources. Brookings, SD.
- 5/18/14 **Radigan, W. J.**, and J. A. Hawkins. My experiences with aging fish. Colorado State University Student Chapter of the American Fisheries Society. Fort Collins, Colorado.

TEACHING EXPERIENCE

- 03/09/21 "Efficacy of Long-Term Native Fish Management Programs". Lecture for Managed Aquatic Systems. NRES-965. University of Nebraska-Lincoln.
- 4/20/15 "Trophic Groups and Functional Groups". Lecture for Fish Ecology. South Dakota State University.

GRANT PROPOSALS

- 2015 Willis Fisheries Research Award. Natal origins and adult movement of Lake Herring and Rainbow Smelt in Lake Oahe evaluated using otolith microchemistry. \$1000. Rejected.

RELEVANT COURSEWORK

University of Nebraska – Lincoln (PhD): Managed Aquatic Systems, Ecological Statistics, Sampling, Data Management and Visualization, Vertebrate Population Analysis, Quantitative Fishery Analysis

South Dakota State University (M.S.): Fisheries Ecology and Management, Limnology of Lakes and Streams, Wildlife Research Design, Statistical Methods II, Quantitative Fisheries Statistics, Advanced Fisheries Management, Aquatic Trophic Ecology

Colorado State University (B.S.): Applied and General Entomology, Principles of Animal Biology, Principles of Plant Biology, Animal Behavior, Stream Biology and Ecology, Fundamentals of Organic Chemistry, Forest Ecology, Wildlife Ecology and Conservation, Introduction of Fishery Biology, Principles of Wildlife Management, Ichthyology, Design of Fish and Wildlife Projects, Conservation of Fish in Aquatic Ecosystems, Fishery Science, Fish Culture, Environmental Issues in Agriculture, Ecology, Calculus for Biological Scientists, Natural Resource Ecology and Measurements, Biological Diversity, Geospatial Applications in Natural Resources, Natural Resources History and Policy, Social Aspects of Natural Resource Management, Public Speaking, Principles of Genetics

WORKSHOPS

- 3/2/22 Data Management. Keith Hurley. Nebraska Game and Parks Commission. Lincoln, NE.
- 2/13/22 Designing and Conducting Acoustic Telemetry Studies. Dr. Chris Vandergoot. Great Lakes Acoustic Telemetry Observation System. Des Moines, IA.
- 2/10/21 The Stock Assessment Process: Counting Fish. Erik Williams. NOAA Fisheries. AFS Webinar.
- 3/9-3/13/15 Program R Short Course. Darrel McKenzie. Proteus Consulting Ltd. Brookings, SD.
- 3/16-3/20/15 Modeling Patterns and Dynamics of Species Occurrence Workshop. Darrel McKenzie. Proteus Consulting Ltd. Brookings, SD.
- 8/16/15 Age and Growth Analyses Using R. Derek Ogle. Portland, OR.
- Proficient In: Program R, ArcGIS, ArcMap, Program PRESENCE, GENPRes6, Program MARK, Glitter, Iolite

VOLUNTEERING

- 4/22/18 James River Stream Cleanup. Richmond, VA.
- 2/20/16 Frost Fest Fishing Derby. Brookings, SD.
- 6/13/15 Water Resource Day. Watertown, SD.
- 5/16/15 Kid's Trout Fishing Extravaganza. Brookings, SD.
- 5/12/15 Big Sioux Water Festival. Brookings, SD.
- 4/15/14 College Lake Fishing Derby. Fort Collins, CO.
- 3/4-3/6/14 CO/WY AFS Regional Meeting. Laramie, WY.
- 9/15/14 College Lake Fishing Derby. Fort Collins, CO.

ENDORSEMENTS

- 01/07/21 Institutional Animal Care and Use Committee (IACUC) Training
- 12/16/20 Sexual Misconduct Prevention and Awareness
- 12/16/20 Title IX & Equal Opportunity Training
- 12/09/19 Certified Associate Fisheries Professional
- 08/18/17 Secret Security Clearance
- 04/09/15 Hazardous Waste Removal Certification
- 01/28/14 Responsible Conduct of Research Training
- 08/09/03 South Dakota Hunter Safety Certification

REFERENCES

Dr. Mark Pegg
Fisheries Ecologist
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Christopher Longhenry
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Dr. Cameron Goble
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Dr. Steven R. Chipps
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