

Hilary A Meyer

South Dakota Game, Fish and Parks
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Education

2011 M.S. Wildlife and Fisheries Science-Fisheries Option. South Dakota State University (SDSU), Brookings, SD.

Thesis: Influence of Diet and Environmental Variation on Physiological Responses of Juvenile Pallid Sturgeon (*Scaphirhynchus albus*).

2009 B.S. Fisheries and Water Resources-Fisheries Option, and Biology with Aquaculture minor. University of Wisconsin-Stevens Point (UWSP), Stevens Point, WI.

Professional Experience

Environmental Review Senior Biologist October 2018-present

SD Game, Fish and Parks, Pierre, SD

I review proposed development projects in the state of South Dakota. As part of the review process, I provide information on wildlife, wildlife habitat and work with developers to help them avoid or minimize conflicts with wildlife and wildlife habitat. I serve on the Interagency Review Team (IRT) for reviewing wetland mitigation projects and banking instruments. I work extensively with other state agencies to provide information and recommendations related to wildlife and provide expert opinion and testimony. I represent South Dakota on the Midwest Landscape Initiative Wind Energy Working Group and the Western Association of Fish and Wildlife Agencies (WAFWA) Crucial Habitat Assessment Tool Technical and Policy Committee.

Fisheries Biologist April 2013 – October 2018

SD Game, Fish and Parks, Ft. Pierre, SD

I lead and assisted field crews to complete biological surveys on Lake Sharpe and Lake Oahe in central South Dakota. Biological surveys included deploying gear such as: mono and multifilament gill nets, boat electrofishing, trotlines, fyke nets and drifted trammel

nets. I was the project lead for conducting nighttime hydroacoustics surveys on Lake Oahe for coldwater prey fish (rainbow smelt and lake herring). I assisted with age-estimation of hard structures (otoliths, scales and fin rays), annual report review and preparation, manuscript preparation, manuscript reviews, creating presentations for public outreach, creating professional presentations and reviewing presentations for co-workers. I managed a multi-species acoustic telemetry database as part of multiple research projects on Lake Sharpe, SD. I wrote and reviewed research proposals to secure project funding. I hired, trained, supervised and mentored seasonal fisheries technicians (1-2 per field season) and assisted with mentoring and training numerous fisheries interns. I assisted with the development of new station projects, and performed data analysis as needs arose. I presented results of such analyses in the form of technical presentations to stakeholder groups and peer groups at professional meetings. I participated in and assisted in coordinating multiple outreach and education events throughout South Dakota.

Biological Science Technician (Fisheries)

December 2011 – April 2013

U.S. Fish and Wildlife Service, Columbia, MO.

I lead and assisted field crews to complete biological assessments on the lower Missouri River. Biological assessments include deploying gear such as the otter trawl, experimental mesh gillnets, trotlines, mini-fyke nets, drifted trammel nets, push trawl and electrofishing. I conduct and assist in data collection on field computers (tablets), and oversee data management/quality control. I conduct standardized sampling to monitor long-term pallid sturgeon population trends and long-term fish community trends. I have also lead electrofishing crews in the Chicago Area Waterway System (CAWS) to monitor for Asian carp presence, and assisted with environmental DNA (eDNA) sampling in the CAWS. I assisted the USFWS-Carterville office with reviewing Dual Frequency Identification Sonar (DIDSON) videos. I am responsible for writing annual reports, paper datasheet quality control, analyzing long-term datasets and maintaining multiple databases (Microsoft Access) for the Pallid Sturgeon Population Assessment Program. I participated in and assisted in coordinating multiple outreach and education events throughout the Columbia, Missouri area. I supervised and trained seasonal employees on Pallid Sturgeon Monitoring Protocols. I assisted with the development of new station projects, and performed data analysis as needs arose. I presented results of such analyses in the form of technical presentations to stakeholder groups and peer groups at professional meetings.

Graduate Research Assistant (M.S.)

June 2009 – November 2011

South Dakota State University, Brookings, SD.

I conducted research on pallid sturgeon physiology, including the effects of diet and temperature regime on growth, food consumption and metabolism. I maintained the U.S.G.S. cooperative research unit wet lab at SDSU, where we housed 48 federally

endangered pallid sturgeon and supervised and trained technicians. I presented the results of my research in the form of posters and technical presentations.

Fisheries technician

April - June 2009

Wisconsin Department of Natural Resources, Oshkosh, WI

I assisted with the spring lake sturgeon spawning assessment, including capturing and PIT tagging large spawning adults. I also embedded, sectioned, and aged otoliths for a Lake Winnebago System-wide research project.

Assistant Laboratory Manager

September 2004 – May 2009

Aquatic Biomonitoring Laboratory, UWSP, Stevens Point, WI

My primary job duties were to prepare slide mounts of Chironomidae larvae for identification, and sorting biotic index samples. I also prepared and updated laboratory protocols, tested new protocols, trained new personnel on laboratory protocols and participated in hiring and retention decisions. I identified aquatic insects to family level, assisted in quality control and assurance checks of sorted samples, and performed data transcription of sample information to proper log sheets.

Aquaculture Laboratory Assistant

January - May 2009

Aquaculture Laboratory, UWSP, Stevens Point, WI

I assisted in designing and conducting a compensatory growth study using juvenile yellow perch. Juvenile yellow perch were reared on three different feeding regimes, and growth was measured weekly. Duties included collecting and analyzing growth data, and general maintenance of aquaculture facilities.

Fisheries Genetics Researcher

September 2008 – May 2009

Molecular Conservation Genetics Laboratory, UWSP, Stevens Point, WI

I worked as an independent researcher identifying molecular markers for hybrid detection in *Morone* species. Job duties included DNA extraction from fin clips, polymerase chain reaction, microsatellite genotyping, data analysis and primer optimization.

Student Ambassador

May – August 2008

Nyumbani Village, Kitui, Kenya

Through the Global Environmental Management program at UWSP, I was selected to travel to Nyumbani Village, Kenya to assist in managing an organic farm. I created crop rotation, harvest, and planting schedules to maximize yields and reduce pest problems. Our overarching objective was to produce a surplus of food for the villagers

to sell in organic markets to bring income into the village. This position required collaboration with many different village officials, residents and farm laborers.

Fish Pathology Researcher

September 2007 – May 2009

Histology Laboratory, UWSP, Stevens Point, WI

I worked as an independent researcher, characterizing the pathology of “white-tail syndrome” in cultured yellow perch using histological methods including preparing and embedding specimens, sectioning specimens, reagent preparation, microtome sectioning and examination of specimens using light microscopy. As part of a two person team, I worked with a number of private aquaculturists in central Wisconsin to collect specimens and determine a cause for this uncategorized disease.

Hydrologic Technician

May – August 2007

Chequamegon-Nicolet National Forest, USDA Forest Service, Park Falls, WI

I conducted road-stream crossing inventories and fish passage surveys across the Chequamegon-Nicolet National Forest. I also assisted with hook and line surveys, remnant logging dam surveys, and stream crossing construction. I managed road-stream crossing data in Microsoft excel and access and used the program FishXing to identify possible fish passage barriers throughout the forest.

Hydrologic Technician

May – July 2006

Chequamegon-Nicolet National Forest, USDA Forest Service, Park Falls, WI

I performed road-stream crossing inventories, fish passage surveys and backpack electro-fishing across the Chequamegon-Nicolet National Forest. I also assisted biologists with hook and line surveys and remnant logging dam surveys. I managed road-stream crossing data in Microsoft excel and access and used the program FishXing to identify possible fish passage barriers throughout the forest.

Fisheries Technician/Intern

May – August 2005

Utah Division of Wildlife Resources, Vernal, UT

I performed extensive backpack electro-fishing in the Uinta Mountains. We used depletion-removal techniques to remove invasive brook trout and hybrid cutthroat trout to restore native and genetically pure Colorado River strain cutthroat trout. Other duties included riparian habitat improvements (i.e. - removing invasive plant species), trout egg collection and fertilization and various maintenance on stream sampling equipment.

Professional Affiliation

2004 – Present	American Fisheries Society Parent society (2009-Present) Fisheries Management Section (2013- 2018) Education Section (2010-2018) Genetics Section (2009-2018) Dakota Chapter (2009-present) South Dakota State University Student Sub-unit (2009-2011) Wisconsin Chapter (2008-2012) University of Wisconsin-Stevens Point Student Sub-unit (2004-2009)
2012 - 2018	North American Sturgeon and Paddlefish Society
2018-Present	The Wildlife Society South Dakota Chapter
2018-Present	Association of State Wetland Managers

Professional Service

Wind Energy Work Group Member Midwest Landscape Initiative Midwest Association of Fish and Wildlife Agencies	2019
Crucial Habitat Assessment Tool Technical Committee Western Association of Fish and Wildlife Agencies	2019
Crucial Habitat Assessment Tool Policy Committee Western Association of Fish and Wildlife Agencies	2019
AFS Professional Certification Committee American Fisheries Society	2017-Present
Website Manager Dakota Chapter AFS	2015-2018
Secretary North Central Division AFS Walleye Technical Committee	2015-2018

Poster Judge February 2015
Annual Meeting, Dakota Chapter AFS, Bismarck, ND

Young Professional Committee Member 2013-2018
Fisheries Management Section

Committee Chair 2013-2014
North Central Division AFS Walleye Technical Committee

Peer Reviewer September 2009 – November 2011
Fisheries Management and Ecology and Transactions of the American Fisheries Society.

Awards

- 2018 Outstanding Performance Award South Dakota Game, Fish and Parks
- 2018 Best Professional Poster Award Dakota Chapter AFS (co-author)
- 2017 Best Professional Poster Award Dakota Chapter AFS (co-author)
- 2017 Emerging Leader Mentorship Award American Fisheries Society
- 2016 Best Professional Poster Award Dakota Chapter AFS (lead author)
- 2016 Award of Merit American Fisheries Society Fish Management Section
- 2014 MICRA Sturgeon and Paddlefish Committee Travel Award
- 2011 American Fisheries Society John E. Skinner Memorial Award
- 2011 Honorable Mention for Best Student Poster Competition, 141st Annual Meeting of the American Fisheries Society, Seattle, WA.
- 2011 World Sturgeon Conservation Society-North American Chapter Student Travel Award
- 2011 2nd Place Oral Presentation, Missouri River Natural Resources Conference, Nebraska City, NE
- 2011 Graduate School Travel Award, South Dakota State University
- 2009 Clive A. David Memorial Research Scholarship, UWSP
- 2009 Royal Anderson Ecology Award 2009, UWSP
- 2009 Gerhardt Outstanding Water Student, UWSP

Publications

- Fincel, M., N. Kludt, **H. Meyer**, M. Weber and C. Longhenry. 2019. Long-term data suggest potential interactions of introduced walleye and smallmouth bass on native sauger in four Missouri River impoundments. *Journal of Fish and Wildlife Management*. In Press.
- Maahs, B.C., **H.A. Meyer**, N.D. Huysman, J.M. Voorhees and M.E. Barnes. 2018. Mortality of landlocked fall chinook salmon broodstock after electrofishing or ascending a fish ladder. *Jacobs Journal of Aquaculture and Research* 3:1-3.
- Huysman N., J.M. Vorhees, **H. Meyer**, E. Krebs and M.E. Barnes. 2018. Characteristics of landlocked fall chinook salmon producing either viable or completely non-viable eggs. *International Journal of Fisheries and Aquatic Sciences* 6: 86-88.
- Reese, S.E., A.J. Long, H.A. **Meyer** and M.E. Barnes. 2017. Landlocked fall chinook salmon sperm motility after short term milt storage. *International Journal of Innovative Studies in Aquatic Biology and Fisheries*, 3:9-13.
- Meyer**, HA, SR Chipps, BDS Graeb, and RA Klumb. 2017. Growth, food consumption and energy status of age-0 pallid sturgeon (*Scaphirhynchus albus*) fed a commercial or invertebrate diet. *Journal of Fish and Wildlife Management*.
- Kaemingk, MA, DJ Dembkowski, **HA Meyer**, and LM Gigliotti. 2013. Some insight for undergraduates seeking an advanced degree in wildlife and fisheries sciences. *Fisheries*.

Reports

- Meyer**, HA, RP Hanten, K Potter, MJ Fincel and MJ Smith. 2015. Annual Fish Population and Angler Use, Harvest and Preference Surveys on Lake Oahe, South Dakota, 2014.
- Meyer**, HA, CJ Wrasse, CJ Ridenour, WJ Doyle and TD Hill. 2012. Pallid sturgeon population assessment and associated fish community monitoring for the Missouri River: Segment 14 2011 annual report. U.S. Fish and Wildlife Service, Columbia Fish and Wildlife Conservation Office, Columbia, Missouri. Prepared for the U.S. Army Corps of Engineers Missouri River Recovery Program.
- Ridenour, CJ, **HA Meyer**, CJ Wrasse, WJ Doyle and TD Hill. 2012. Pallid sturgeon population assessment and associated fish community monitoring for the Missouri River: Segment 13 2011 annual report. U.S. Fish and Wildlife Service,

Columbia Fish and Wildlife Conservation Office, Columbia, Missouri. Prepared for the U.S. Army Corps of Engineers Missouri River Recovery Program.

Ridenour, CJ, CJ Wrasse, **HA Meyer**, WJ Doyle and TD Hill. 2012. Pallid sturgeon population assessment and associated fish community monitoring for the Missouri River: 2011 Contingency Sampling. U.S. Fish and Wildlife Service, Columbia Fish and Wildlife Conservation Office, Columbia, Missouri. Prepared for the U.S. Army Corps of Engineers Missouri River Recovery Program.

Presentations

Goble, C., H. **Meyer**, M. Fincel, C. Pasbrig and D. Turner. 2019. Using acoustic telemetry to re-establish historic fisheries. Midwest Fish and Wildlife Conference Annual Meeting, Cleveland, OH.

Meyer, H., C. Pasbrig and M. Fincel. 2018. Population dynamics and movement of shovelnose sturgeon in a Missouri River impoundment. North American Sturgeon and Paddlefish Society Annual Meeting, Columbia, MO.

Turner, D., H. Meyer, L. Pierce and D. James. 2018. Movement of hatchery-reared Age-0 paddlefish in Lake Sharpe, South Dakota (poster). North American Sturgeon and Paddlefish Society Annual Meeting, Columbia, MO.

Jungwirth, J., B. Miller, H. **Meyer**, J. Davis, M. Fincel and C. Longhenry. 2018. Selective removal of largemouth bass in small prairie impoundments (presenting author). North Central Division AFS Walleye Technical Committee Meeting, Spirit Lake, IA.

Fincel, M., R. Hanten, D. Jost, J. Jungwirth, H. **Meyer**, K. Potter and M. Smith. 2018. Success of stocking walleye (*Sander vitreus*) in select bays of a large Missouri River reservoir. Dakota Chapter of the American Fisheries Society Annual Meeting, Brookings, SD.

Maahs, B., H. **Meyer**, R. Hanten and M. Fincel. 2018. Comparison of short-term survival of electroshocked and ladder caught chinook salmon in Lake Oahe, South Dakota (poster). Dakota Chapter of the American Fisheries Society Annual Meeting, Brookings, SD.

Gravenhof, D., B. Maahs, H. **Meyer**, R. Hanten and M. Fincel. 2018. Catch raceway escapement of chinook salmon at Whitlocks Bay spawning station (poster). Dakota Chapter of the American Fisheries Society Annual Meeting, Brookings, SD.

Turner, D., D. James, L. Pierce, H. **Meyer**, N. Starzl and J. Powell. 2018. Acoustic tag retention and initial dispersal of hatchery-reared juvenile paddlefish. Dakota Chapter of the American Fisheries Society Annual Meeting, Brookings, SD.

Davis, J., N. Kludt, H. **Meyer** and M. Fincel. 2018. Feasibility of hydro-acoustic surveys to monitor Rainbow smelt (*Osmerus mordax*) and rainbow trout (*Oncorhynchus mykiss*) in Pactola Reservoir, South Dakota. Dakota Chapter of the American Fisheries Society Annual Meeting, Brookings, SD.

Meyer, H.A., M.J. Fincel and R.P. Hanten. 2017. Use of acoustic telemetry to assess over-winter survival of gizzard shad. American Fisheries Society Annual Meeting, Tampa, FL.

Stacy, W., K. Grohs, D. James, L. Pierce, H. **Meyer** and D. Shuman. 2017. Distribution and movement of translocated paddlefish: Implications for future sport fishery potential in Lake Sharpe, SD. Dakota Chapter of the American Fisheries Society Annual Meeting, Jamestown, ND.

Reese, S., T. Long, H. **Meyer** and M. Barnes. 2017. Effects of short term storage on chinook salmon sperm motility (poster). Dakota Chapter of the American Fisheries Society Annual Meeting, Jamestown, ND.

Meyer, HA, R.P. Hanten, M.J. Fincel. 2016. Movement of tagged gizzard shad in a large Missouri River reservoir. American Fisheries Society Annual Meeting, Kansas City, MO.

Meyer, H.A., R.P. Hanten, M.J. Fincel and J.L. Davis. 2016. Survival of gizzard shad after dummy transmitter implantation (poster). Dakota Chapter of the American Fisheries Society Annual Meeting, Spearfish, SD.

Greiner, M.J., R.P. Hanten, H.A. **Meyer**, and M.J. Fincel. 2016. Detection efficiency of acoustic transmitters in three reservoir habitats (poster). American Fisheries Society Annual Meeting, Kansas City, MO.

Meyer, HA, K Grohs, D Shumann and MJ Fincel. 2015. Movement of translocated paddlefish in Lake Sharpe, South Dakota. North American Sturgeon and Paddlefish Society Annual Meeting, Oshkosh, WI.

Meyer, HA and MJ Fincel. 2015. Fast food: movement of gizzard shad in Lake Sharpe, South Dakota. North Central Division of the American Fisheries Society, Walleye Technical Committee Annual Meeting, Brookings, SD.

Meyer, HA, MJ Fincel, WE Adams and CL Longmire. 2014. The business of fishing: use and satisfaction of anglers on a large reservoir. 144th Annual Meeting of the

Meyer, HA, CJ Ridenour, WJ Doyle and TD Hill. 2012. Influence of flow regime on the condition of blue suckers in the lower Missouri River. 142nd Annual Meeting of the American Fisheries Society, St. Paul, MN.

Meyer, HA, SR Chipps, BDS Graeb, and RA Klumb. 2012. Evidence for countergradient variation in pallid sturgeon physiology (Poster). Missouri River Natural Resources Committee Conference, Pierre, SD.

Meyer, HA, CJ Ridenour, and TD Hill. 2012. Seasonal resource selection by blue suckers in the lower Missouri River (Poster). Missouri River Natural Resources Committee Conference, Pierre, SD.

Meyer, HA, CJ Ridenour, WJ Doyle and TD Hill. 2012. Lateral distribution of *Scaphirhynchus* sturgeon during flood flows in the lower Missouri River: 2010 case study. Mississippi Interstate Cooperative Resource Association Sturgeon and Paddlefish Committee Annual Meeting, Kirkwood, MO.

Meyer, HA, SR Chipps, BDS Graeb, and RA Klumb. 2011. Latitudinal variation in pallid sturgeon physiology. 141st Annual Meeting of the American Fisheries Society, Seattle, WA.

Meyer, HA, SR Chipps, BDS. Graeb, and RA Klumb. 2011. Growth and energy status of age-0 pallid sturgeon fed a commercial or invertebrate diet (Poster). 141st Annual Meeting of the American Fisheries Society, Seattle, WA.

Meyer, HA, SR Chipps, BDS Graeb, and RA Klumb. 2011. Growth, metabolism and energy density of juvenile pallid sturgeon fed commercial and natural diets. Missouri River Natural Resources Committee Conference, Nebraska City, NE.

Meyer, HA, BL Sloss and R Franckowiak. 2009. Hybrid detection in four species of temperate basses (*Morone spp.*). 2009 College of Natural Resources Undergraduate Research Symposium, Stevens Point, WI.

Meyer, HA, and J Sheffy. 2009. Quantifying organic food production in Nyumbani village, Kitui, Kenya (Poster). 2009 College of Natural Resources Undergraduate Research Symposium, Stevens Point, WI.

Meyer, HA, AM Purdy, C Hartleb, and R Schmitz. 2009. Investigation of white-tail syndrome in yellow perch in Wisconsin. 2009 Wisconsin, Minnesota and Ottawa Tri-Chapter meeting of the American Fisheries Society, Duluth, MN.

Training Received

Mitigation Banking and In-Lieu Fee Program Interagency Review Team Training The Conservation Fund	June 2019
Writing and reviewing NEPA documents Shipley Group	March 2019
Overview of the NEPA Process Shipley Group	January 2019
Nationwide Permits Wetland Training Institute	January 2019
First Aid, Adult CPR Red Cross	August 2018
S.C.U.B.A.-Openwater Diving SSI	October 2017
Program MARK Workshop Iowa State University	July 2017
Sturgeon and Paddlefish tagging and age estimation North American Sturgeon and Paddlefish Society	October 2015
ATV Operation Training SDGFP	September 2014
R for Fisheries Scientists Michigan State University/American Fisheries Society	August 2013
Electrofishing Safety (FWS-CSP2202-OLT)	June 2012
Sturgeon Osmoregulation Workshop North American Sturgeon Conservation Society	July 2011
National Safety Council Defensive Driving Course Department of the Interior	January 2011

Motorboat Operators Certification Course
Department of the Interior

May 2010