

# Dr. Elizabeth “Liz” Renner

## CONTACT INFORMATION

Personal Cell: 605-929-2778	Personal Website: <a href="https://elizabethrenner.owlstown.net/">https://elizabethrenner.owlstown.net/</a>
Mailing address: University of Nebraska-Lincoln 401 Hardin Hall 3310 Holdrege Avenue Lincoln, NE, USA 66503	Google Scholar: <a href="https://scholar.google.com/citations?user=fvg8bhOAAAAJ&amp;hl=en">https://scholar.google.com/citations?user=fvg8bhOAAAAJ&amp;hl=en</a> Research Gate: /Elizabeth_Renner2 LinkedIn: <a href="https://www.linkedin.com/in/elizabethrenner/">linkedin.com/in/elizabethrenner/</a>
Institutional Email: <a href="mailto:erenner58@unl.edu">erenner58@unl.edu</a>	ORCID: 0000-0001-6940-8264
Personal Email: <a href="mailto:elizabethrennerphd@gmail.com">elizabethrennerphd@gmail.com</a>	LinkedIn: elizabethrenner

## EDUCATION

Degree	Institution	GPA	Location	Degree Conferred
<b>Doctorate of Philosophy</b> <i>Fisheries Biology</i>	<b>Kansas State University</b>	3.79 <i>Magna cum laude</i>	Manhattan, KS	May 2022
<b>Dissertation:</b> “Disentangling the ecological role of gizzard shad in Kansas small impoundment food webs: changes in limnology, fish communities, and predator diets after rotenone manipulation.” PhD Advisor: Dr. Keith B. Gido. Graduate Committee: Walter K. Dodds, John Blair, Theodore Harris (Kansas Biological Survey).				
<b>Bachelor of Arts</b> <i>Biology</i> <i>(Ecology Emphasis)</i> <b>Bachelor of Arts</b> <i>Spanish (Concurrent)</i>	<b>Augustana University</b>	3.82 <i>Magna cum laude;</i> Biology and Spanish Dept. Honors; Civitas Honors Program	Sioux Falls, SD	May 2017
<b>Senior Honors Thesis (2017):</b> “People Over Pipelines: A critical analysis of the environmental, legal, ethical, and socioeconomic implications of the Dakota Access Pipeline.” Advisor: Dr. David O’Hara. <b>Spanish Honors Thesis (2017):</b> “Derribando la muralla: Un análisis de las perspectivas sobre la frontera en la literatura chicana y americana-mexicana y estrategias para la promoción del entendimiento intercultural.” Advisor: Dr. Pilar Cabrera Fonte.				

**Kansas State University NSF REU Research Project (2016):** “The effects of small impoundments on macroinvertebrate and fish community structure in headwater tallgrass prairie streams.” Advisor: Dr. Keith Gido

**Undergraduate Research Project (2015):** “Limnological analysis of a man-made reservoir in eastern South Dakota.” Advisor: Dr. Craig Spencer

**Undergraduate Research Project (2015):** “Analysis of the daily activity patterns of the endangered American burying beetle *Nicrophorus americanus*.” Advisors: Dr. Dan Howard and Dr. Carrie Hall

**Undergraduate Research Project (2014-2015):** “Reconstructing historic plant communities at Good Earth State Park via stable isotope analysis of soil cores and analysis of tree cores.” Advisor: Dr. Craig Spencer.

**Undergraduate Research Project (2013-2014):** “Analysis of the effect of a broad-spectrum herbicide on the reproductive success of *Nicrophorus marginatus*.” Advisor: Dr. Carrie Hall

## TEACHING EXPERIENCE

### University of Nebraska-Lincoln School of Natural Resources - Postdoctoral Research Associate

- Instructor of Record:
  - Quantitative Fisheries Analysis - SP 2026

### Tri-Valley School District and West Central School District - K-12 Substitute Teacher 2025

- Courses taught:
  - HS Chemistry, Biology, Physics, Robotics, English, Spanish, Agriculture, ESL

### Kansas State University Division of Biology - Graduate Teaching Assistant 2017 - 2021

- Courses taught:
  - Fisheries Management – FA 2020
  - Principles of Biology - FA 2017, SP 2018, FA 2018, SP 2019, SP2020, FA 2021
  - Organismic Biology – FA 2019, SP 2021

### Undergraduate Guest Lectures Delivered

- Fisheries Management (University of Nebraska-Lincoln, 2025)
- Ichthyology (Ball State University, 2025)
- Aquatic Ecology (Mount Marty University, 2025)
- Introduction to Fisheries and Wildlife Management (K-State, 2020 & 2021)
- Aquatic Ecology (Kansas State University, 2021)

## GRANTS AWARDED

- Assessment of fine-scale habitat use in Fate Dam, a small impoundment. 2024. SDGFP Research Review Committee (\$75,000)
- “Disentangling the ecological role of gizzard shad in Kansas small impoundment food webs.” 2020. K-State Biology Graduate Student Association Research Grant (\$500)

## GRANT PROPOSALS SUBMITTED

- “Quantifying the risk of recreational anglers as vectors of upstream AIS spread and invasive carp range expansion in Nebraska waters via angler knowledge surveys.” 2025. FY26 USFWS Missouri River Basin Invasive Carp Partnership Grant (\$40,190).
- “Flexing our Mussels: Recruitment of a Regional Malacologist for Legacy Region 6.” 2024. USFWS Fisheries and Aquatic Conservation Fisheries Innovation Grant (\$150,000).

- “Post-stocking survival of juvenile paddlefish in Lake Sharpe.” 2024. SDGFP Research Review Committee (\$45,000).\*Funded shortly after my departure from the agency.
- Assessment of fine-scale habitat use in Fate Dam, a small impoundment. 2024. SDGFP Research Review Committee (\$75,000).
- “Evaluating gizzard shad stocking success in Lake Oahe using ddRADSeq.” 2023. SDGFP Research Review Committee (\$15,000).
- “Documenting the spread of zebra mussels in a large Midwest reservoir.” 2023. SDGFP Research Review Committee (\$30,000).

## PROFESSIONAL EXPERIENCE

Position	Employer	Location	Time
<i>Postdoctoral Research Associate in Fish Ecology</i>	University of Nebraska-Lincoln School of Natural Resources	Lincoln, NE	May 2025 - Present
<b>Duties and Accomplishments:</b> <ul style="list-style-type: none"> <li>• Organize and analyze data for spatial ecology and invasive species range expansion analyses</li> <li>• Analyze fish population and community data with existing and ongoing data collection efforts in collaboration with biologists from the Nebraska Game and Parks Commission.</li> <li>• Wrote and was awarded a \$40,190 grant from USFWS and NGPC to study impact of an educational outreach campaign on angler AIS knowledge and identification skills</li> <li>• Prepare manuscripts and technical reports for publication in peer reviewed scientific journals</li> <li>• Mentor graduate and undergraduate students.</li> <li>• Present at scientific meetings and serve on departmental committees</li> <li>• Teach a graduate seminar course on the quantitative analysis of fisheries data</li> </ul>			
<i>Fish Biologist (GS-09)</i>	US Fish & Wildlife Service Region 6 Gavins Point National Fish Hatchery	Yankton, SD	May 2024 - Feb 2025
<b>Duties and Accomplishments:</b> Conducted standardized mark-recapture monitoring and active radio telemetry tracking for endangered pallid sturgeon. Performed ultrasounds on and collected genetic and blood samples from wild pallid sturgeon. Assisted with stocking, spawning and rearing of wild and hatchery-origin pallid sturgeon broodstock, Kendall Warm Springs Dace, Rainbow Trout, Plain Pocketbook mussels, and other propagated species. Selected as regional representative for the national Fisheries Academy leadership program. Oversaw digital records management and database architecture for hatchery. Conducted research on pallid sturgeon spawning phenology, KWS Dace, and collaborative projects with external university and agency partners.			
<i>Fisheries Biologist</i>	SD Department of Game, Fish & Parks	Fort Pierre, SD	Jan 2023 - May 2024
<b>Duties and Accomplishments:</b> Coordinated hydroacoustic prey fish monitoring in Lake Oahe. Collected and analyzed fisheries survey data and wrote reports. Conducted research on and developed management plans for Lake Oahe and Lake Sharpe fisheries. Developed grant			

proposals in collaboration with agency biologists and resource managers. Published papers on Gizzard Shad movement ecology, the use of passive acoustic telemetry to study predation and movement of Chinook salmon in Lake Oahe, Goldeye dynamic rate functions in a large river-reservoir complex, and published the first Goldeye standard L-W equation. Oversaw undergraduate & seasonal field technicians, equipment maintenance and purchasing. Presented updates at public information meetings to angler interest groups and the general public, and submitted reports to the State Legislature and SDGFP Commissioners.

*Fisheries Resource Biologist*

SD Department of Game, Fish and Parks

Fort Pierre, SD

Feb 2022 - Jan 2023

**Duties and Accomplishments:** Coordinated statewide walleye spawning operations. Collected and analyzed fisheries survey data. Conducted research on and developed management plans for Lake Oahe and Lake Sharpe fisheries. Collaborated with state fish hatchery staff to execute spawning, propagation, translocation, and stocking efforts for game and nongame fishes statewide.

*Directorate Fellows Program (DFP) Fellow*

US Fish & Wildlife Service Region 8

Las Vegas, NV (Remote)

Jan 2023 - May 2024

**Duties and Accomplishments:** Analyzed long-term water quality dataset from Lake Mead to assess impact of quagga mussel invasion on endangered razorback sucker. Performed multivariate statistical analyses and modeling in R. Presented findings to agency leadership and drafted a 35-page technical report to summarize findings. Obtained 2 yrs noncompetitive hiring status with USFWS upon successful project completion.

*Graduate Research Assistant*

Kansas State University Division of Biology - Gido Fish Ecology Lab

Manhattan, KS

May 2017 - Jan 2022

**Duties and Accomplishments:** Helmed four-year collaborative study on how gizzard shad influence water quality and growth rates of largemouth bass and bluegill in 12 state fishing lakes in collaboration with Kansas Dept. of Wildlife and Parks biologists. Prepared annual collecting permit reports, research progress reports and budgeting reports. Processed thousands of fish diet samples, zooplankton and phytoplankton samples, otoliths, and water samples. Presented findings at regional and international conferences. Taught biology and fisheries management labs. Engaged in science communication and outreach activities.

*NSF REU Undergraduate Research Intern*

Kansas State University Division of Biology - Gido Fish Ecology Lab

Manhattan, KS

May 2016-Aug 2016

**Duties and Accomplishments:** Designed and executed an NSF-funded research project studying the effects of small impoundments on downstream fish and macroinvertebrate communities in headwater tallgrass prairie streams. Gained experience with statistical analysis in R, stream sampling, and fish and macroinvertebrate identification.

*Writing Tutor*

Augustana Writing Center

Sioux Falls, SD

Jan 2016 - May 2017

**Duties and Accomplishments:** Assisted students with the writing process by editing their

papers, helping students to develop outlines and craft thesis statements, and worked with international students and English language learners to teach grammar and punctuation.

<i>Stream Ecology Intern</i>	Cook Inletkeeper Stream Ecology Laboratory	Homer, AK	Sept 2015 - Dec 2015
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**Duties and Accomplishments:** Collected, sorted, and identified stream macroinvertebrates down to the genus level, quantified the number of macroinvertebrates found in each sample, performed accuracy checks on HOBO thermal data loggers using water baths. Collected data for a long-term ecological monitoring program studying the impact of rising stream temperatures on stream ecosystems and salmon populations in the Cook Inlet watershed.

<i>Endangered Species Stream Survey Intern</i>	SD Dept. of Transportation Environmental Division	Pierre, SD	May—Aug 2015
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**Duties and Accomplishments:** Conducted habitat surveys for the northern long-eared bat, created and maintained a statewide geodatabase of bat survey sites using ArcMap, seined streams for Topeka shiner at box culverts and bridge construction sites, assisted with roadside wetland delineations, learned wetland plant identification, and used TRIMBLE GPS software to mark survey sites.

<i>Park Attendant and Research Assistant</i>	SD Dept. of Game, Fish & Parks: Newton Hills State Park	Canton, SD	May—Oct 2014
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**Duties and Accomplishments:** Led hikes and nature programs, sold park entrance permits, assisted with trail restoration, performed maintenance duties such as cleaning park bathrooms and campsites, and conducted ecological surveys by collecting tree cores and soil samples for a stable isotope study at a native prairie restoration site.

<i>Senate Intern</i>	Office of US Senator Tim Johnson	Washington, DC	July 2014 - Aug 2014
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**Duties and Accomplishments:** Processed constituent mail and drafted response letters, researched legislation and environmental issues, attended Senate Energy & Natural Resources committee hearings, wrote memos, archived legislative records, led Capitol tours, and compiled a daily digest of South Dakota news articles for legislative staffers.

<i>Earth Team Volunteer Intern</i>	Natural Resources Conservation Service	Sioux Falls, SD	June 2012 – April 2014
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**Duties and Accomplishments:** Created wetland maps using ArcMap, filed records, sorted and stocked NRCS equipment, assisted conservationists with paperwork, helped with Conservation Reserve Program fieldwork and site inspections, and answered the phone.

Tree Crew Technician	Minnehaha County Conservation District	Sioux Falls, SD	April—August 2013
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Tree Crew Technician: Planted trees in shelter belts, corrected tree alignment using a spade, installed tree fabric, and learned the value of attention to detail while performing hard manual labor.

# PUBLICATIONS

\*Denotes a student I have mentored.

11. Haake CJE, Waltzek TB, Eckstrand CD, Hickey N, Reno JL, Wolking RM, Sriwanayos P, Lovy J, **Renner E**, Taylor KR, Oliveira R. 2025. Pathology, tissue distribution, and phylogenetic characterization of Largemouth Bass Virus isolated from a wild Smallmouth Bass (*Micropterus dolomieu*). *Viruses*. 2025 Jul 23;17(8):1031.
10. K. M. Reed\*, J. VanDeHey, H. A. Morey, R. P. Hanten, **E. A. Renner**, and M. J. Fincel. 2025. Seasonal movements of Gizzard Shad *Dorosoma cepedianum* in a Missouri River reservoir. *Journal of Freshwater Ecology* 40(1).
9. **Renner, E. A.**, K. B., Gido, B. C. Neely, J. D. Koch, C. J. Chance-Ossowski, T. D. Harris, J. DeNoyelles, I. G. Evelyn\*, T. C. Jones\*, and W. K. Dodds. 2025. Associations between gizzard shad (*Dorosoma cepedianum*) relative abundances and limnological parameters in small impoundments. *Hydrobiologia* 852:1485-1495.
8. **E.A. Renner**, B.K. Miller, and K.R. Danda\*. 2024. Goldeye (*Hiodon alosoides*) population dynamics in Lake Oahe and Lake Sharpe, South Dakota. *Environmental Biology of Fishes* 107(12):1485-1495.
7. D.A. Gravenhof, M.R. Wuellner, **E.A. Renner**, and M.J. Fincel. 2024. Estimating predation rates of stocked juvenile Chinook Salmon using novel acoustic predation transmitters. *North American Journal of Fisheries Management* 44(2):216-221.
6. Miller, B.T., **E. A. Renner**, and K.R. Danda\*. 2024. Proposed standard weight (Ws) equation and standard length categories for Goldeye. *North American Journal of Fisheries Management* 44(1):216-221.
5. Gido, K. B., Hedden, S. C., Bruckerhoff, L. A., Pennock, C. A., Hedden, C. K., Hopper, G. W., **Renner, E. A.**, Johnson, E. R., and B. J. Postlethwait. 2023. A perched culvert and natural obstructions limit fish dispersal in an intermittent prairie stream. *Freshwater Science*, 42(1):22-43.
4. Neely, B. C., J. D. Koch, K. B. Gido, C. J. Chance-Ossowski, and **E. A. Renner**. 2020. Factors influencing Bluegill growth in small Kansas impoundments. *Journal of Fish and Wildlife Management*, 11(1): 121-129.
3. Dodds, W. K., L. Bruckerhoff, D. Batzer, A. Schechner, C. Pennock, **E. Renner**, F. Tromboni, K. Bigham, and S. Grieger. 2019. The freshwater biome gradient framework: predicting macroscale properties based on latitude, altitude, and precipitation. *Ecosphere*, 10(7), e02786.
2. Hedden, S. C., **E. A. Renner**, K. B. Gido, and K. J. Hase. 2018. Impacts of small impoundments on an intermittent headwater stream committee. *Southwestern Naturalist*, 63(1): 34-42.
1. Spencer, C. N., M. D. VanEssen, **E. A. Renner**, and W. C. Johnson. 2015. Prairie or Woodland? Reconstructing past plant communities at Good Earth State Park via soil core and tree ring analysis. *Proceedings of the South Dakota Academy of Science*, 94: 227-236.

## MANUSCRIPTS SUBMITTED OR IN PREPARATION

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1. Bearden, K. M., M. J. Fincel, **E. A. Renner**, P. E. Bailey, and A. A. Coulter. Walleye (*Sander vitreus*) movement dynamics in Lake Oahe, USA across two management jurisdictions. *Under review at North American Journal of Fisheries Management*.
2. **E.A. Renner**, M. Pegg, Kirk Steffensen, and T. Auten. *In prep for submission to Aquatic Invasions*. Modeling where carp may go with the flow: A risk assessment of Silver Carp and Bighead Carp range expansion in Nebraska waterways.
3. Gido, K. B., S. M. Bonjour, L. A. Bruckerhoff, S. C. Hedden, C. A. Pennock, J. S. Perkin, Z. Ratajczak, **E. A. Renner**, and J. E. Whitney. *In prep*. Cascading effects of woody encroachment on tallgrass prairie stream fishes.
4. **E. A. Renner**, B. T. Miller, K. B. Gido, B. C. Neely, J. D. Koch, T. C. Jones, I. G. Evelyn, A. C. Tennant, and N. M. Hunhoff. *In prep for submission to Biological Invasions*. Aquatic community response to zebra mussel invasion of a small Kansas impoundment.
5. **E.A. Renner**, D. Jost, D. Gravenhof, R. Hanten, K. Potter, J. Jungwirth, and M. Fincel. *In prep for submission to Transactions of the American Fisheries Society*. Long-term trends in Walleye (*Sander vitreus*) reproductive phenology in a Missouri River tributary: spawn peak is shifting later over time.
6. **E.A. Renner**, D. Gravenhof, K. Danda, B. Roth, C. Goble, M. Fincel, and R. Hanten. *In prep for submission to Animal Biotelemetry*. Variation in detection range of acoustic transmitters as a function of transmitter depth and seasonality using passive receivers in a mainstem Missouri River reservoir.
7. **Renner, E. A.**, John R. Beaver, B. Albrecht, and M. R. Schwemm. *In prep*. Lake Mead's food web has not moved a mussel: no evidence of quagga mussel effects on plankton communities, endangered Razorback Sucker abundance in Lake Mead after 15 years of monitoring.
8. **Renner, E. A.**, K. B. Gido, B. C. Neely, J. D. Koch, C. J. Chance-Ossowski, T. C. Jones, E. N. Sprenkle, and B. T. Miller. *Submitted to NAJFM*. Seasonal and ontogenetic variation in largemouth bass (*Micropterus salmoides*) diets across a gradient of gizzard shad abundance: bass piscivory does not change with shad eradication via low-dose rotenone.
9. **Renner, E. A.**, K. B. Gido, B. C. Neely, J. D. Koch, T. D. Harris, W. K. Dodds, C. J. Chance-Ossowski, F. Jerry DeNoyelles, E. N. Sprenkle, B. T. Miller, I. G. Evelyn, and T. C. Jones. *In prep for submission to North American Journal of Fisheries Management*. Characterizing changes to lentic food webs in response to low-dose rotenone manipulations in Kansas small impoundments.

## RESEARCH PRESENTATIONS

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1. N. D. Antonson, **E. A. Renner**, D. R. Howard, & C. L. Hall. Daily activity patterns and temporal niche comparison of the endangered American burying beetle (*Nicrophorus americanus*). Poster. 2015 Arthur Olsen Student Research Symposium, Augustana University, Sioux Falls, SD. April 18, 2015.
2. **E. A. Renner**. The effects of small impoundments on macroinvertebrate and fish community structure in headwater tallgrass prairie streams. Lightning talk. 2016 ECOGEN Research Symposium, Konza Prairie Biological Station, Kansas State University, Manhattan, KS. June 28, 2016.
3. **E. A. Renner**. The effects of small impoundments on macroinvertebrate and fish community structure in headwater tallgrass prairie streams. Oral presentation. 2016

- K-State Biology REU Program Symposium. Kansas State University, Manhattan, KS. August 5, 2016.
4. **E. A. Renner.** My research and experiences in the K-State Biology REU Program. Oral presentation. 2016 Augustana Biology Summer Undergraduate Research Seminar. Augustana University, Sioux Falls, SD. October 11, 2016.
5. **E. A. Renner**, S.C. Hedden, and K. B. Gido. The effects of small impoundments on headwater prairie stream macroinvertebrate and fish community structure. Poster. 2017 Annual Meeting of the Dakota Chapter of the American Fisheries Society, Jamestown, ND. February 22, 2017.
6. **E. A. Renner.** Derribando la muralla: un análisis de las perspectivas sobre la frontera en la literatura chicana y americana-mexicana y estrategias para la promoción del entendimiento intercultural. Oral Presentation. 2017 Arthur Olsen Student Research Symposium, Augustana University, Sioux Falls, SD. April 8, 2017.
7. **E. A. Renner.** People Over Pipelines: A critical analysis of the environmental, legal, ethical, and socioeconomic implications of the Dakota Access Pipeline. Oral presentation. 2017 Arthur Olsen Student Research Symposium, Augustana University, Sioux Falls, SD. April 8, 2017.
8. **E. A. Renner.** Analyzing the effects of small impoundments on headwater prairie stream macroinvertebrate and fish community structure. Poster. 2017 Arthur Olsen Student Research Symposium, Augustana University, Sioux Falls, SD. April 8, 2017.
9. **E. A. Renner** and K.B. Gido. Characterization of food webs in small impoundments with emphasis on gizzard shad. Oral presentation. Kansas Department of Wildlife, Parks, and Tourism Statewide Fisheries Division Meeting, Emporia, KS. August 3, 2017.
10. **E. A. Renner**, K. B. Gido, B. C. Neely, J. F. Koch, and C. J. Chance-Ossowski. Analyzing the role of gizzard shad in Kansas small impoundment food webs. Oral presentation. 2018 Kansas Natural Resources Conference, Manhattan, KS. February 9, 2018.
11. **E. A. Renner**, K. B. Gido, B. C. Neely, J. F. Koch, and C. J. Chance-Ossowski. Variation in centrarchid diet composition across variable densities of gizzard shad (*Dorosoma cepedianum*). Poster. 2018 Annual Meeting of the American Fisheries Society, Atlantic City, NJ. August 20, 2018.
12. **E. A. Renner**, K. B. Gido, B. C. Neely, J. D. Koch, and C. J. Chance-Ossowski. Characterizing limnological parameters in Kansas small impoundments across a gradient of gizzard shad densities. Oral presentation. 2019 Kansas Natural Resources Conference, Manhattan, KS. January 31, 2019.
13. **E. A. Renner**, K. B. Gido, B. C. Neely, J. D. Koch, and C. J. Chance-Ossowski. Characterizing limnological parameters in Kansas small impoundments across a gradient of gizzard shad densities. Oral presentation. 2019 Kansas State University Division of Biology Graduate Research Forum. March 30, 2019.
14. **E. A. Renner**, K. B. Gido, B. C. Neely, J. D. Koch, and C. J. Chance-Ossowski. Characterizing limnological parameters in Kansas small impoundments across a gradient of gizzard shad densities. Oral presentation. 2019 Annual Meeting of the Society for Freshwater Science, Salt Lake City, UT. May 23, 2019.
15. **E. A. Renner**, B. C. Neely, J. D. Koch, C. J. Chance-Ossowski, and K. B. Gido. 2019. Evaluating Largemouth Bass diet composition and condition across Gizzard Shad densities in Kansas small impoundments. Oral presentation. Kansas Department of Wildlife, Parks, and Tourism Statewide Fisheries Division Meeting, Junction City, KS. December 3, 2019.
16. **E. A. Renner**, K. B. Gido, B. C. Neely, J. D. Koch, and C. J. Chance-Ossowski. 2020. Assessing changes in fish diets following food web manipulation with rotenone in Kansas small



- impoundments. Oral presentation. Kansas Natural Resources Conference, Manhattan, KS. January 30, 2020.
17. **E. A. Renner**, K. B. Gido, B. C. Neely, J. D. Koch, and C. J. Chance-Ossowski. 2021. Responses of Kansas small impoundment littoral fish communities to gizzard shad introductions and removals. Poster. 2021 Kansas Natural Resources Conference (Virtual). January 30, 2021.
  18. **E. A. Renner**. 2021. A silver bullet or a BandAid: Can whole-lake rotenone manipulations mitigate the ecosystem effects of an invasive fish? Kansas State University Three Minute Thesis (3MT) Competition (Virtual). February 24, 2021.
  19. **E. A. Renner**, K. B. Gido, B. C. Neely, J. D. Koch, and C. J. Chance-Ossowski. 2021. Assessing responses of Kansas small impoundment littoral fish communities to gizzard shad introductions and removals. Oral presentation. 2021 Annual Meeting of the Dakota Chapter of the American Fisheries Society (Virtual). February 25, 2021.
  20. **E. A. Renner**. 2021. Responses of Kansas small impoundment littoral fish communities to gizzard shad (*Dorosoma cepedianum*) removals and introductions. Kansas State University Division of Biology Annual Graduate Research Forum (Virtual). April 3, 2021.
  21. **E. A. Renner**, K. B. Gido, B. C. Neely, J. D. Koch, C. J. Chance-Ossowski, T. Harris. 2021. Evaluating associations between gizzard shad abundance and limnological parameters in Kansas small impoundments. Oral presentation. Society for Freshwater Science Annual Meeting (Virtual). May 25, 2021.
  22. **E. A. Renner**, M. R. Schwemm. 2021. Assessing the effect of invasive quagga mussels on plankton communities and endangered Razorback Sucker in Lake Mead. Oral presentation. US Fish & Wildlife Service Legacy Region 8 Summer 2021 DFP Presentations. (Virtual). July 27, 2021.
  23. **E. A. Renner**, M. R. Schwemm, R. Rogers, and B. Albrecht. 2021. The food web has not moved a mussel: no evidence of quagga mussel effects on plankton communities, endangered Razorback Sucker (*Xyrauchen texanus*) abundance after 15 years of monitoring in Lake Mead. Oral presentation. Desert Fishes Council Meeting (Virtual). November 17, 2021.
  24. **E. A. Renner**, K. B. Gido, B. C. Neely, J. D. Koch, T. D. Harris, W. K. Dodds, C. J. Chance-Ossowski, F. J. DeNoyelles, E. N. Sprenkle., B. T. Miller, I. G. Evelyn, and T. C. Jones. 2022. Characterizing lentic food web responses to low-dose rotenone manipulations in Kansas small impoundments. Oral presentation. Joint Aquatic Sciences Meeting (co-hosted by the American Fisheries Society and Society for Freshwater Science), Grand Rapids, MI, May 20, 2022.
  25. **E.A. Renner**, D.A. Gravenhof, K. Danda, B. Roth, C. Goble, M. J. Fincel, and R. P. Hanten. Variation in detection range of acoustic transmitters as a function of transmitter depth and seasonality using passive receivers in a mainstem Missouri River reservoir. Poster. Midwest Fish and Wildlife Conference, January 28, 2023.
  26. **E.A. Renner**, B. Miller, K. Danda, and B. Roth. Going for the Goldeye: Development of a standard weight equation for Goldeye (*Hiodon alosoides*). 2023 American Fisheries Society National Meeting. Oral presentation (virtual). August 22, 2023.
  27. **E.A. Renner**, D. Jost, D. Gravenhof, R. Hanten, K. Potter, J. Jungwirth, and M. Fincel. 2024. Long-term trends in Walleye (*Sander vitreus*) reproductive phenology in a Missouri River tributary: spawn peak is shifting later over time. Midwest Fish and Wildlife Conference. Poster. January 2024.
  28. K. Bearden, M. Fincel, **E. A. Renner**, P. Bailey, A. Coulter. 2025. Walleye (*Sander vitreus*) movement dynamics in Lake Oahe, USA across two management jurisdictions. Dakota Chapter of the American Fisheries Society Annual Meeting. Oral presentation. Bismarck, ND, February 27, 2025.

29. **E. A. Renner**, M. Pegg, K. Steffensen, and T. Auten. 2025. Carp shall not pass: quantifying invasive carp range expansion risk in Nebraska waters. 2025 Great Plains Limnology Society Annual Meeting. Poster. Manhattan, KS, October 4, 2025.

## INVITED GUEST LECTURES AND SEMINARS

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1. **E. A. Renner**. 2021. Are gizzard shad bad? Disentangling the ecological role of a nuisance fish in small impoundment food webs via replicated whole-lake manipulations. Oral presentation. 2021 Augustana University Biology Spring Seminar Series Invited Seminar (Virtual). April 28, 2021.
2. **E.A. Renner**. 2023. Hooked on conservation: ten years of science and adventures in the Great Outdoors. Keynote Address. Annual Meeting of the South Dakota Chapter of the National Wild Turkey Federation, Deadwood, SD, January 20, 2023.
3. **E.A. Renner**. 2025. Of Pallid Sturgeon and Pick-Sloan: Research and Reflections on Missouri River Recovery Efforts. Invited seminar. Mount Marty University Biology Department, Yankton, SD. February 10, 2025.
4. **E. A. Renner**. 2025. Urgin' for Sturgeon: An Introduction to the Acipenseridae. Ichthyology Class Virtual Guest Lecture. Ball State University Biology Department, Muncie, IN. November 13, 2025.

## HONORS

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- 2025 - Selected for 2025 US Fish and Wildlife Service Fisheries Academy Leadership Program
- 2024 - Selected for Billie Sutton Leadership Institute Rural Power Annual Cohort
- 2021 - Best Student Paper Award – Dakota Chapter of the AFS
- 2021 - K-State Division of Biology Robel Award for Outstanding Ecology Grad Student (\$500)
- 2021 - Kansas State University Three Minute Thesis (3MT) Competition finalist
- 2021 - Otto Tiemeier–Frank Cross Student Scholarship (\$300), Kansas Chapter of the AFS
- 2019 - James E. Ackert Award for Outstanding Presentation by a Graduate Student (\$500), Kansas State University Division of Biology Graduate Research Forum
- 2019 - Best Student Presentation Award – Kansas Chapter of the American Fisheries Society
- 2017 - Best Student Poster Award – Dakota Chapter of the AFS
- 2016 - National FFA American Star in AgriScience Scholarship (\$4,000)
- 2016 - Dilwyn E. Rogers Ecology Scholarship, Augustana University Biology Department (\$500)
- 2015 - Udall Scholarship Honorable Mention
- 2014 - Sven Froiland Biology Scholarship for Outstanding Freshmen (\$500)
- 2013- 2017 Augustana University Dean's List
- 2013 National Wild Turkey Federation National Conservation Scholarship (\$10,000)

## SKILLS, CERTIFICATIONS, AND CONTINUING ED

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- Electrofishing (boat and backpack) - Nebraska AFS Continuing Education Course - September 2025
- Python for Everyone (ESRI) -May 2025

- USFWS Coldwater Fish Culture and Intro to Fish Hatchery Management Intensive Course - January 2025
- USCG Motorboat Operator Certification Course (MOCC) - June 2024
- 2023 South Dakota Master Naturalist Certification
- Intermediate GIS training workshop – 2023 Midwest Fish & Wildlife Conference
- Side-scan sonar habitat mapping workshop – July 2023
- ATV / ROV Operator Training, SDGFP - Certified April 2023
- SSI Open Water Diver SCUBA Certified-September 2022
- Netting , trammel netting, trap netting, hoop netting, gill netting -
- Seining (wading, boat)
- Fish age estimation with otoliths, scales, and spines
- Otolith microchemistry – applications to fisheries
- Fisheries genetics – high throughput sequencing using ddRADSeq
- Safe boating certified; trailering and trailer axle bearing maintenance experience
- PIT tagging and passive acoustic telemetry antenna operation
- Active fish tracking via radio telemetry for fine-scale positioning of migratory sturgeon
- Technician hiring, training, and supervision
- Fish and aquatic invertebrate identification
- Use and maintenance of aquatic sensors, sondes, and limnological sampling gear
- R programming for data visualization and statistical modeling
- ArcGIS Pro and R for mapping, spatial database management, and spatial statistics
- Google Earth Engine for spatial data layer extraction, analysis, and visualization
- Logistical planning and project management
- Long-term monitoring database organization and good data management practices
- Technical writing and editing
- Microsoft Excel, Microsoft Access, Photoshop, Illustrator, BioRender, Canva

## MEDIA COVERAGE

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1. 2018. News coverage of the rotenone manipulations carried out for my thesis research: <https://www.cjonline.com/story/sports/outdoors/2018/10/06/shawnee-state-fishing-lake-three-other-impoundments-to-undergo-gizzard-shad-kill/9626793007/>
2. Women of Fisheries Profile. 2023. Website. <https://womenoffisheries.org/profiles-of-early-career-scientists-2023-edition/>
3. SD Searchlight, Nov 2025. Website. <https://southdakotasearchlight.com/2025/11/24/biologist-cautions-next-generation-aga-inst-trusting-a-career-with-the-federal-government/>
4. DOGE Layoff Yankton Daily Press and Dakotan, Feb 2025 [https://www.yankton.net/community/article\\_9a4b9884-f007-11ef-b6e3-8331c934d945.html#comments](https://www.yankton.net/community/article_9a4b9884-f007-11ef-b6e3-8331c934d945.html#comments)
5. SD Searchlight, February 2025 <https://southdakotasearchlight.com/2025/02/21/cruelty-was-the-point-sd-federal-workers-programs-feel-the-pain-of-trump-firings-and-freezes/>
6. Augustana Mirror <https://www.augiemirror.news/2016/11/10/renner-only-one-of-four-students-to-receive-a-ward/>
7. AgWeek <https://www.agweek.com/news/south-dakota-student-recognized-as-national-ffa-star>
8. National FFA Organization <https://www.youtube.com/watch?v=nrxUS1oXCil>

9. AgDaily <https://www.agdaily.com/lifestyle/south-dakota-ffa-star-blue-means/>
10. AgUpdate [https://agupdate.com/news/on-the-farm/two-from-south-dakota-in-running-for-national-ffa-award/article\\_a06f90b5-0ff8-56c8-b214-4cef622925e3.html](https://agupdate.com/news/on-the-farm/two-from-south-dakota-in-running-for-national-ffa-award/article_a06f90b5-0ff8-56c8-b214-4cef622925e3.html)

## PROFESSIONAL AFFILIATIONS, SERVICE, & LEADERSHIP

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- **External Reviewer and Subject Matter Expert**, Lake Champlain Sea Grant USGS Nonindigenous Aquatic Species Database (2025)
- **External Reviewer**, USGS Ecosystems Mission Area Sturgeon Science Document, *The State and Science of Sturgeon and Paddlefish Research in the U.S. Geological Survey: Past Activities and Future Directions* (2025)
- **American Fisheries Society North Central Division**
  - **Centrarchid Technical Committee – Dakota Chapter Representative 2023-2024**
  - **Student and Early Career Professionals Committee**
    - **Continuing Ed Committee Co-Chair 2023-2024**
  - **K-State Student Chapter**
    - Graduate Student Advisor (2017-2018)
    - President (2018-2019)
    - Kansas Chapter member since 2018
    - Dakota Chapter member since 2017
    - Parent society member since 2016
    - Member, Introduced Fishes Subsection
- **2024 Midwest Fish and Wildlife Conference Steering Committee**
  - Fisheries Symposia and Technical Sessions Abstract Chair
  - Student Activities Committee Co-Chair
- **South Dakota Wildlife Federation - Youth Conservation Camp**
  - Guest Plenary Speaker 2022, 2023
  - Volunteer Youth Outreach Instructor, Stream Ecology 2022-2024
  - Volunteer Counselor, Youth Conservation Camp
- **South Dakota Democratic Party**
  - Chairwoman, Stanley County Democratic Party 2022-2024
  - Co-chaired 2022 State SDDP Convention in Fort Pierre, SD
- **Society for Freshwater Science** – Member since 2017
- **K-State Biology Graduate Student Association** – Food and Fun Committee Chair (2018-2020)
- **K-State Out in STEM (O-STEM) LGBTQ Scientists Society** – Member 2018-2020
- **Augie Green Environmental Club** – President (2015-2017)—Coauthored a \$300,000 sustainability grant to develop a new Environmental Studies major and upgrade campus facilities for improved energy and water conservation.
- **Volunteer** – Manhattan USD-383 School District Families in Transition Closet – September 2019 – January 2021; I volunteered for two hours each week as a Spanish interpreter and clothing donation sorter for the FIT Closet.
- **Volunteer** – Alaska Sea Life Center Marine Mammal Stranding Program – Homer, Alaska – Aug – Dec 2017; Responded to reports of dead and dying sea otters during the 2015 North Pacific “Blob” *Pseudo-nitzschia* bloom and subsequent mass die-off event. Assisted with necropsies, hauled animals, and called in veterinarians to perform euthanasia as needed.

- **Volunteer Counselor**– South Dakota Wildlife Federation Conservation Camp – June 2011-2013. Chaperoned campers and assisted with field trips to Cleghorn Springs State Fish Hatchery.

## JOURNALS REFEREED

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- Canadian Journal of Fisheries and Aquatic Sciences
- North American Journal of Fisheries Management
- Freshwater Biology
- Hydrobiologia
- Transactions of the American Fisheries Society
- Ecosphere
- Oecologia
- Transactions of the Kansas Academy of Science

## OUTREACH

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- Hatchery and aquarium tour guide, Gavins Point National Fish Hatchery (2024-2025)
- Volunteer Course Instructor, SD Master/Volunteer Naturalists (2023-2025)
- Instructor, SD Wildlife Federation Youth Conservation Camp (2022-2023)
- FFA Agriscience Fair Judge (2017-2023)