Astrid N. Schwalb, Ph.D.

Department of Biology
Texas State University
San Marcos, TX, 78666

I. Academic/Professional Background

A. Name: Astrid N. Schwalb Title: Associate Professor

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
PhD	2010	University of Guelph, ON, Canada	Integrative Biology	Host infection strategies determine dispersal abilities in freshwater mussels (Bivalvia: Unionidae).
MS	2004	University of Potsdam, Germany	Biology	Horizontal and vertical movements of unionid mussels in the River Spree.
BS	2001	University of Konstanz, Germany	Biology	NA

C. University Experience

Position	*University*	*Dates*
Professor	Texas State University	2025-present
Associate Professor	Texas State University	2020-2025
Assistant Professor	Texas State University	2014-2020
Postdoctoral Fellow	University of Lethbridge	2013-2014
Postdoctoral Fellow	University of Waterloo	2010-2012
Graduate Research Assistant	University of Guelph	2005-2009
Teaching Assistant	University of Guelph	2005-2009

D. Relevant Professional Experience

Position	*Entity*	*Dates*
Research Assistant – Ecotoxicologial research	University of Guelph	2005
Research Assistant – Aquatic Biomonitoring	Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Berlin, Germany	2002, 2003

II. TEACHING

B. Courses Taught:

Aquatic Ecology (BIO 3460)	2022-present
Aquatic Biology (BIO 3460)	2015 – 2020
Stream Ecology (BIO 7419)	2015, 2016, 2018, 2020, 2023, 2025
Ecology of Temporary Waters (BIO 7311)	2024, 2026
Ecology of Temporary Waters (BIO 7361B),	2017, 2019, 2021
Ecology of Temporary Waters (BIO 4351D)	2019
Seminar Aquatic Resources	2016

Various research courses, taught frequently since 2015:
Undergraduate research (BIO 4299)
Research experience (MS students, BIO 5114, 5214, 5314)
Thesis hours (BIO 5199B, 5299B, 5399a, 5399B)
Research experience (PhD students, BIO7114, 7214, 7314)
Dissertation hours (BIO 7199A, 7299A, 7999A)
Research (BIO 7303)

C. Graduate Theses/Dissertations, Honors Theses, or Exit Committees

Theses and Dissertations Directed

Amanda Williams. *In progress.* TBD. Texas State University, MS-Aquatic Resources.
Julia Rabinovich. *In progress.* TBD. Texas State University, MS-Aquatic Resources.
Connor Flinn. *In progress.* TBD. Texas State University, MS-Aquatic Resources.
Christine Adams. *In progress.* TBD. Texas State University, MS-Aquatic Resources.
Emily Pody. *In progress.* TBD. Texas State University, PhD-Aquatic Resources.
Andreia Alves. *Graduated 2026.* When streams run dry: From community assembly to ecosystem function in isolated remnant pools. Texas State University, PhD-Aquatic Resources.
Justin Greenfield. *Graduated 2025.* Examining distribution of freshwater mussels in flow refuges at various spatial scales in the San Saba River, Texas. Texas State University, MS-Aquatic Resources.
Sarah Stannard. *Graduated 2025.* Risky business: Evaluating the risk of catfish-mediated dispersal of zebra mussels (*Dreissena* polymorpha) in Canyon Lake, Texas. Texas State University, MS-Aquatic Resources.
Eleanor Krellenstein. *Graduated 2024.* Assessing the distribution and survival of mussel communities in the Upper Colorado River Basin, Texas after exceptional drought conditions. Texas State University, MS-Aquatic Resources.
Kiara Cushway. *Graduated 2023.* Go with the flow: impacts of high and low flow conditions on freshwater mussel assemblages and distribution. Texas State University, MS-Aquatic Resources.
Meghan Martinski. *Graduated 2023.* Freshwater mussels vary in substrate preference and mobility in pairwise behavioral experiments. Texas State University, MS-Aquatic Resources.
Emily Lorkovic. *Graduated 2023.* Two invaders, one ecosystem: Exploring interactions between *Dreissena polymorpha* and *Hydrilla verticillata*. Texas State University, MS-Aquatic Resources.

David Swearingen. *Graduated 2021.* The impact of summer mortality of invasive zebra mussels on nutrient cycling in a Texas reservoir. Texas State University, MS- Aquatic Resources

Ericah Beason. *Graduated 2021*. Impact of zebra mussels on physiological conditions of unionid mussels in Texas. Texas State University, MS- Aquatic Resources

Kayla Hayes. *Graduated 2020*. Comparing life history traits and responses to environmental variation between mussel species in the San Saba River. Texas State University, MS- Aquatic Resources

Zachary Mitchell. *Graduated 2020* The role of life history strategies and drying events for JEDI

Alison Tarter. *Graduated 2019.* Distribution of unionid mussels in the Big Thicket region of Texas. Texas State University, MS – Aquatic Resources.

Stacey Britton. *Graduated 2018*. Impact of environmental contaminants on the Threeridge mussel (*Amblema plicata*) in the Guadalupe River basin, Texas. Texas State University, MS – Aquatic Resources, co-advised with Dr. Dutton

Brittney Sanchez. *Graduated 2018*. Detectability affects the performance of survey methods: A comparison of sampling methods of freshwater mussels in Central Texas. Texas State University, MS – Biology.

Linus Delices. *Graduated 2018*. Variation in minimum temperature tolerance of two invasive snails in central Texas, USA. Texas State University, MS – Biology.

Ashley Seagroves. *Graduated 2017*. Reproductive Ecology of *Lampsilis bracteata* (Bivalvia: Unionidae). Texas State University, MS – Aquatic Resources.

Rebecca Zawalski. *Graduated 2017*. Benthic macroinvertebrate metacommunity structure of the Guadalupe River Basin, TX. Texas State University, MS – Population and Conservation Biology, co-advised with Dr. Nowlin

Jenae Olson. *Graduated 2016*. Dispersal of zebra mussels downstream of an invaded reservoir. Texas State University, MS – Aquatic Resources.

Bianca Hernandez. *Graduated 2016*. Movement behavior of unionid mussels in Central Texas. Texas State University, MS – Aquatic Resources.

Service as Committee Member and Mentor

Jasmine Rodriguez (Nowlin). *In progress.* Texas State University, PhD – Aquatic Resources.

Alyssa Haram (Martina). *In progress.* Texas State University, PhD – Aquatic Resources.

Jonah Jimmerson (Zanatta). *Graduated 2025. Central Michigan University, MS - Biology*

Megan Conley (Lane). *Graduated 2025. Utah State University, PhD- Civil and Environmental Engineering*

Carolyn Trombley. *Graduated 2024.* University of Guelph, PhD- Integrative Biology; co-advised with Dr. Cottenie

Hanna Gingerich. 2024. BSc Research Project. University of Guelph, Canada. Assessing Sampling Site Accuracy, Water Clarity Effects, and Historical Trends: A Study of Freshwater Mussel Species in the Thames River, Ontario

Eryl Austin-Bingamon (Schwartz). *Graduated 2023.* Texas State University, MS – Aquatic Resources.

Kirby Wright (Nowlin). *Graduated 2022.* Texas State University, MS – Aquatic Resources.

Veronika Hillebrand (Geist). *Graduated 2022.* Technical University of Munich, Germany, MS-Environmental Engineering.

Lukas Kohl (Geist). 2022. BSc Research Project. Technical University of Munich, Germany,

Joseph Bakker (Dutton). *Graduated 2021.* Texas State University, MS – Aquatic Resources.

Nina Noreika (Nowlin). *Graduated 2019.* Texas State University, MS – Aquatic Resources.

Erin Dascher (Meitzen). *Graduated 2017*. Texas State University, PhD – Geography.

Michael Markowski (Schwartz). *Graduated 2016*. Texas State University, MS – Aquatic Resources.

D. Courses Prepared and Curriculum Development:

MS Aquatic Resources, existing degree program revised	2022
Ecology of Temporary Waters (BIO 4351D), new course developed.	2019
Ecology of Temporary Waters (BIO 7361B), new course developed.	2016
Stream Ecology (BIO 7419), revised existing course.	2015
Aquatic Biology (BIO 3460), revised existing course 2015, developed online course	2020

I. Other:

Guest Lecturer:

Aquatic Biology (BIOL 3460), Texas State University, TX	2014
River Science (ENV 4000/5000), University of Lethbridge, AB.	2013
Aquatic Ecology (BIOL 351), University of Waterloo, ON.	2010
Population Ecology (BIOL 3110), University of Guelph, ON.	2008

Teaching Development

Office of Distance and Extended Learning Teaching Online at Texas State certification	2020
Mentoring training for STEM Undergraduate Research Experience (SURE) program	2018, 2020
Completed program for Excellence in Teaching and Learning, Texas State University	2014-2015
Attended teaching development seminar series, Centre for teaching excellence, University of Waterloo, ON.	2011
Attended University Teaching: Theory/Practice, University of Guelph, ON.	2009

Teaching Assistant:

University of Guelph, ON:

Ecology (BIOL 2060DE)	2009
Biology II (BIOL 1040)	2008, 2009
Population Ecology (BIOL 3110)	2007
Biology of Polluted Waters (ZOO 4350)	2007
Introduction to Aquatic Environments (BIOL 3450)	2006
Project/Colloq. in Environmental Science (ENVS 4011/2)	2005, 2006
Laboratory and Fieldwork in Ecology (BIOL 3010)	2005
Statistics for Biology. Tutorial, University of Potsdam, Germany.	2004
Introduction to Botany. Lab exercise, University of Konstanz, Germany.	2001

III. SCHOLARLY/CREATIVE

A. Works in Print

2. Articles

a. Refereed Journal Articles: *denotes graduate, #doctoral student advised and mentored

Foxfoot, I. R., Cushway, K.C., Rosenberg, R.R., Schwalb, A. N., Swannack T. M. 2026. SAMPL: An agent based model to evaluate spatial sampling strategies. Ecological modelling. https://doi.org/10.1016/j.ecolmodel.2026.111767

Dobler, A.H., Schwalb, A. N. (equal contribution first authors), Geist, J. 2026. Higher mobility of freshwater mussels in response to unsuitable habitat conditions. Plos one, 21(4), e0345804.

Gudgell, L.J., Swarm, S.J., Beason, E.D., Lanzer T.L., Robertson C.R. and A. N. Schwalb. 2025. Acute Ammonia Toxicity of Texas Unionid Mussels. Environmental Toxicology and Chemistry. https://doi.org/10.1093/etojnl/vgaf246

Foxfoot, I.R., Cushway, K. C., Schwalb, A.N., Smith D.R., and T.M. Swannack. 2025. Evaluating freshwater mussel sampling methodologies using a simulation model. *Ecological Indicators* 179, 2025, 114172. https://doi.org/10.1016/j.ecolind.2025.114172

Lorkovic*, E., Martina, J.P., McGarrity, M., and A. N. Schwalb. 2025. Two invaders, one reservoir: Hydrilla shapes the distribution of zebra mussels and may facilitate their growth. *Aquatic Invasions* 20(3): 273–290. https://doi.org/10.3391/ai.2025.20.3.156675

Cushway*, K., Geist, J., Schwalb, A.N. 2024. Surviving global change: A review on the impact of drought on freshwater mussels. *Biological Reviews* 100, 275-307. http://doi.org/10.1111/brv.13142

Perez Rocha, M., Cottenie, K., Clein, K., Elkins, L., Mangold, R., Nowlin, W., Perkin, J., Wright, K.; Schwalb, A. N. 2024. Using a nested sampling design across spatial scales to gain insights into distribution patterns of fishes, mussels, and macroinvertebrates in a riverine system. *Journal of Biogeography* 51, 2456–2468.

Hillebrand*, V., Dobler, A.H., Schwalb, A.N., Geist, J. 2024. Physiological effects of interacting native and invasive bivalves under thermal stress. *Biological Invasions* 26, 2281–2293. https://doi.org/10.1007/s10530-024-03315-4

Winemiller, K.O., Perkin, J. S., Trungale, J.F., Hoeinghaus, D.J., Moore, G., Schwalb, A.N., Mitchell, Z. A., Trimble, A., Reeves, C., Acre, M.R., Wheeler, K., Hardy, T.B., Buzan D. 2024. Advancing Environmental Flows Science: Monitoring, Hindcasting and Forecasting Flow-Ecology Relationships. *Fisheries,* https://doi.org/10.1002/fsh.11092

Cushway*, K. C., Harris, A. E., Piercy, C. D., Mitchell#, Z. A., and A. N. Schwalb. 2024. Go with the flow: impacts of high and low flow conditions on freshwater mussel assemblages and distribution. PLoS ONE 19(2): e0296861.

Cushway*, K. C., and A. N. Schwalb. 2023. When rivers run dry: perennial pools as ecological refuges for freshwater mussels during drought. Freshwater Biology 69: 226-239.

Mitchell,# Z., Cottenie, K., Schwalb, A.N. 2023. Trait-based and multi-scale approach provides insight on responses of freshwater mussels to environmental heterogeneity. *Ecosphere,* 14, 4533.

Perez Rocha, M. Cottenie, K., Morris, T. Schwalb, A.N. 2023. Limitations of beta diversity in conservation site selection. *Biological Indicators,* 154, 110732.

Atkinson, C. L., Hooper, G. W., Kreeger, D. A., Lopez, J., Maine, A. N., Schwalb, A. N., Vaughn, C. C. 2023. Gains and gaps in knowledge surrounding freshwater mollusk ecosystem services. *Freshwater Mollusk Biology and Conservation*, 26, 20-31.

Rodriguez, D. Harding, S. F., Sirsi, S., McNichols, K., Morris, T., Forstner, M. R. J., Schwalb, A. N. 2023. Mitochondrial sequence data reveal population structure within *Pustolosa pustulosa*. *PeerJ11:e15974*

Schwalb, A. N., Swearingen*, D, Robertson, J., Locklin, J., Moore, J., McGarrity, M. 2022. Living on the edge. Thermal limitations of zebra mussels (Dreissena polymorpha) in Central Texas. *Biological Invasions* https://doi.org/10.1007/s10530-022-02950-z

Beason*, E., Schwalb, A. N. (2022) Impact of zebra mussels on physiological conditions of unionid mussels in Texas. *Aquatic Sciences* 84, 21. https://doi.org/10.1007/s00027-022-00853-8

Tarter*, A. A., Ford, D., Symonds, D.E., Ford, N.B., Schwalb, A. N. (2022) Impact of extreme climatic events on unionid mussels in a subtropical river basin. *Hydrobiologia. https://doi.org/10.1007/s10750-022-04819-7*

Hernández*, B. A., Mitchell#, Z. A., Robertson, C. R., Schwalb, A. N. (2021) Burrowing behavior of unionid mussels in subtropical rivers: Implications for survey guidelines. *Aquatic Conservation Marine and Freshwater Ecosystems,* 31, 903-915.

Trombley#, C. A., Schwalb, A. N., Hardy, T. B., Cottenie, K. (2021) Spatio-temporal analyses show conflicting evidence of the role of an invasive minnow in the decline of an endangered desert fish endemic to the south-western U.S.A. *Freshwater Biology* 00, 1–12. https://doi.org/10.1111/fwb.13823

Mitchell,# Z., Schwalb, A.N (2021) Seasonality of gamete production of Cyclonaias species in central Texas. *Freshwater Mollusk Biology and Conservation*, 24, 7-17.

Robertson#, J., Swannack, T. M., McGarrity, M., Schwalb, A. N. (2020) Zebra mussel invasion of Texas Lakes: Estimating dispersal potential via boats. *Biological Invasions,* 22, 3425–3455.

Mitchell,# Z., Burlakova, L. E., Karatayey, Schwalb, A. N. (2019) Changes in community composition of riverine mussels after a severe drought depend on local conditions: A comparative study in four tributaries of a subtropical river. *Hydrobiologia 848, 3015-3029.*

Sanchez*, B., Schwalb. A.N. (2019) Detectability affects the performance of survey methods: A comparison of sampling methods of freshwater mussels in Central Texas. *Hydrobiologia*. *Hydrobiologia*, 848, 2919-2929.

Seagroves*,L.A., Barnhart, M.C., Hardy, T., Schwalb, A.N. (2019) Reproductive ecology of the threatened and endemic freshwater mussel *Lampsilis bracteata. Aquatic Conservation: Marine and Freshwater Ecosystems,* 29,1216-1226.

Strayer, D. L., Adamovich, B. V., Schwalb (21/24 in alphabetical order), A.N., Steinman, A. D., Jeschke, J. M. (2019) Long-term population dynamics of dreissenid mussels (*Dreissena polymorpha* and *D. rostriformis*): a cross-system analysis. *Ecosphere. 10(4):e02701. 10.1002/ecs2.2701*

Zawalski*, R., Nowlin W.H., Cottenie, K., Grubh, A., Schwalb, A. N. (2019). Distinctive macroinvertebrate communities in a subtropical river network. *Freshwater Ecology,* 34, 135-150.

Mitchell#, Z. A., McGuire, J., Abel, J., Hernandez*, B. A., Schwalb, A. N. (2018). Move on or take the heat: Can life history strategies of freshwater mussels predict their physiological and behavioural responses to drought and dewatering? *Freshwater Biology* 63, 1579-1591.

Olson*, J., Robertson#, J., Swannack, T. M., McMahon, R. F., Nowlin, W. H., Schwalb, A. N. (2018). Dispersal of zebra mussels (*Dreissena polymorpha*) downstream of an invaded reservoir. *Aquatic Invasions*, 13, 199-209.

Trombley#, C. A., Hardy, T. B., Schwalb, A. N. (2018). Disturbance-driven changes in fish assemblages caused by a sudden increase in salinity in a perennial desert stream. *Environmental Biology of Fishes,* 101,791-798.

Dascher#, E., Burlakova, L. E., Karatayey, A. Y., Ford, D., Schwalb, A. N. (2018). Distribution of unionid freshwater mussels and host fishes in Texas. A study of broad scale spatial patterns across basins and a strong climate gradient. *Hydrobiologia*, 810, 315-331.

Schwalb, A. N., Bouffard, D., Boegman, L., Leon, L., Winter, J. G., Molot, L., Smith, R. E. (2015). 3D modeling of dreissenid mussel impacts on phytoplankton in a large lake supports the nearshore shunt hypothesis and the importance of wind-driven hydrodynamics. *Aquatic Sciences, 77*, 95-114.

Schwalb, A. N., Alexander, A. C., Paul, A. P., Cottenie, K., Rasmussen, J. B. (2015). Changes in migratory fish communities and their health, hydrology, and water chemistry in rivers of the Athabasca oil sands region: A review of historical and current data. *Environmental Reviews, 23*, 1-18.

Schwalb, A. N., Morris, T. J., Cottenie, K. (2015). Dispersal abilities of riverine freshwater mussels influence metacommunity structure. *Freshwater Biology, 60*, 911-921.

Schwalb, A. N., Morris, T. J., Mandrak, N. E., Cottenie, K. (2013). Distribution of unionid freshwater mussels depends on the distribution of host fish on a regional scale. *Diversity and Distributions, 19*, 446-454.

Schwalb, A. N., Bouffard, D., Ozersky, T., Boegman, L., Smith, R. E. (2013). Impacts of hydrodynamics and benthic communities on phytoplankton distributions in a large, dreissenid-colonized lake (Lake Simcoe, Ontario, Canada). *Inland Waters, 3*, 269-284.

North, R. L., Barton, D., Schwalb (27/32 in aphabetical order), A., Young, J. D. (2013). The state of Lake Simcoe (Ontario, Canada): the effects of multiple stressors on phosphorus and oxygen dynamics. *Inland Waters, 3*, 51-74.

Schwalb, A., Morris, T. J., Josef, A. D. (2012). The effect of settling velocity on the transport of mussel larvae in a cobble-bed river: Water column and near-bed turbulence. *Limnology and Oceanography: Fluids and Environments, 2*, 28-40.

Schwalb, A. N., Poos, M. S., Cottenie, K., Ackerman, J. D. (2011). Dispersal limitation of unionid mussels and implications for their conservation. *Freshwater Biology, 56*, 1509-1518.

Schwalb, A. N., Poos, M. S., Ackerman, J. D. (2011). Movement of logperch: Implications for dispersal of endangered snuffbox mussels via its obligate host fish. *Aquatic Sciences, 73*, 223-231.

Schwalb, A., Ackerman, J. D. (2011). Settling velocities of juvenile Lampsilini mussels (Mollusca: Unionidae): The influence of behavior. *Journal of the North American Benthological Society, 30*, 702-709.

Schwalb, A., Garvie, M., Ackerman, J. D. (2010). Dispersion of freshwater mussel larvae in a lowland river. *Limnology and Oceanography, 55*, 628-638.

Poos, M. S., Dextrase, A. J., Schwalb, A. N., Ackerman, J. D. (2010). Secondary invasion of the round goby into high diversity Great Lakes tributaries and species at risk hotspots: potential new concerns for endangered freshwater species. *Biological Invasions, 12*, 1269-1284.

Fudge, D. S., Szewciw, L. J., Schwalb, A. N. (2009). Morphology and Development of Blue Whale Baleen: An Annotated Translation of Tycho Tullberg's Classic 1883 Paper. *Aquatic Mammals, 35*, 226-252.

Gillis, P. L., Mitchell, R. J., Schwalb, A., Mackie, G. L., Wood, C. M., Ackerman, J. D. (2008). Sensitivity of the glochidia (larvae) of freshwater mussels to copper: Assessing the effect of water hardness and dissolved organic carbon on the sensitivity of endangered species. *Aquatic Toxicology, 88*, 137-145.

Schwalb, A.N., Pusch, M. T. (2007). Horizontal and vertical movements of unionid mussels (Bivalvia: Unionidae) in a lowland river. *Journal of the North American Benthological Society, 26*, 261-272.

Stirk, W. A., Schwalb, A., Light, M. E., Medkova, J., Lenobel, R., Strnad, M., van Staden, J. (2003). Potential Medicinal Value of Some South African Seaweeds. *South African Journal of Botany, 69*, 262-268.

5. Reports:

Schwalb, A. N., Grob, N. (2025). *Zebra mussel Monitoring in Texas Water Bodies. Final Performance Report for Contract no. CA-0007096.* Texas Parks and Wildlife.

Harris, A., Cushway, K., Mitchell, Z., Schwalb, A. N. (2024) Hydraulic (HEC-RAS) model of the Lower San Saba River between Harkeyville and San Saba, TX, USA [Dataset]. Dryad. doi:10.5061/dryad.44j0zpcpq

Schwalb, A. N. (2024). Assessing ammonia toxicity of Texas unionid mussels. Final performance report for SWG grant. Texas Parks and Wildlife /USFWS.

Schwalb, A. N., Stannard, S, Grob, N. (2024). *Zebra mussel Monitoring in Texas Water Bodies. Final Performance Report for Contract no. CA-0005623.* Texas Parks and Wildlife.

Harris, A., Wiest, S., Cushway, K., Mitchell, Z., Schwalb, A. N. (2023). Hydraulic model (HEC-RAS) of the Upper San Saba River between Fort McKavett and Menard, TX [Dataset]. Dryad. https://doi.org/10.5061/dryad.pc866t1tt

Schwalb, A. N., Stannard, S, York, H. (2023). *Zebra mussel Monitoring in Texas Water Bodies. Final Technical Report.* Texas Parks and Wildlife.

Schwalb, A. N., Swearingen D. (2022). *Canyon Lake Monitoring. Final Technical Report.* Texas Parks and Wildlife.

Winemiller, K,, Trungale, J., Schwalb A., Hardy, T., Moore, G., Perkin, J., Hoeinghaus, D., Buzan, D., (2021). *Environmental Flow Regime Assessment and Development of a Monitoring Framework.* Final Project Report. Texas Water Development Board.

Schwalb, A. N., Swearingen D., Beason, E. (2021). *Impact of zebra mussels on unionid mussels, population dynamics and limiting factors for growth and survival. - Final Report*. Texas Parks and Wildlife.

Schwalb, A. N., Swearingen D., Lorkovic, E. (2021). *Zebra mussel monitoring in Texas waterbodies. Final Technical Report.* Texas Parks and Wildlife.

Swearingen, D., Schwalb, A. N. (2020). *Zebra mussel monitoring in Texas water bodies – Final Report.* Texas Parks and Wildlife.

Robertson, J., Schwalb A. N. (2019). *Dispersal, survival, and growth of zebra mussels (Dressenia polymorpha) downstream of invaded Central Texas reservoirs– Final Report*. Texas Parks and Wildlife Department.

Schwalb, A. N., Hernandez, B., Olson, J., Mitchell, Z. (2018). *Dispersal and migration of freshwater mussels - Final Report*. Texas Parks and Wildlife.

Robertson, J., Schwalb A. N. (2018). *Dispersal of zebra mussels downstream of invaded reservoirs and assessing the impact of zebra mussels Texas – Final Report*. Texas Parks and Wildlife Department.

Schwalb, A. N., Rodriguez, D., Barnhart, C., Harding, S., Hardy, T., Hernandez, B., Olson, J., Mitchell, Z, Sanchez B., Seagroves, A. (2018). *Evaluating the Effectiveness of Freshwater Mussel Mitigation Strategies – Final Report for project no. 0-6882.* Texas Department of Transportation.

Robertson, J., Swannack, T., Nowlin, W., Schwalb A. N. (2017). *Dispersal of zebra mussels downstream of an invaded reservoir and assessing the risk of dreissenid mussel invasion into lakes of Texas – Final Report*. Texas Parks and Wildlife Department.

Zawalski, R. Nowlin, W., Hardy, T., Cottenie K., Schwalb A. N. (2017). *Development of Habitat Suitability Criteria for Benthic Macroinvertebrates in the Lower Guadalupe River – Final Report*. Texas Parks and Wildlife Department.

Seagroves, A., Sanchez, B., Mitchell, Z., Hernandez, B. A., Schwalb, A. N. (2017). *Evaluating the Effectiveness of Freshwater Mussel Mitigation Strategies - Interim Technical Memorandum 3*. Texas Department of Transportation.

Harding, S., Schwalb, A.N., Rodriguez, D. (2017). *Evaluating the Effectiveness of Freshwater Mussel Mitigation Strategies - Interim Technical Memorandum 2*. Texas Department of Transportation.

Hart, M., Randklev C., Dickson, Ford, N., J., Hernandez, B., Schwalb, A.N. (2016). *A literature review of freshwater mussel survey and relocation guidelines – Final report 0-6865.* Texas Department of Transportation. https://library.ctr.utexas.edu/hostedpdfs/0-6865.pdf

Hernandez, B. A., Olson, J., Schwalb, A. N. (2016). *Dispersal and migration of freshwater mussels - Interim Report*. Texas Parks and Wildlife.

Seagroves, A., Sanchez, B., Hernandez, B. A., Hardy, T. B., Schwalb, A. N. (2016). *Evaluating the Effectiveness of Freshwater Mussel Mitigation Strategies - Interim Technical Memorandum 1*. Texas Department of Transportation.

Molot, L. A., Schwalb, A. N., Bouffard, D., Tennant, T., Smith, R. E., Boegman, L., Winter, J., Ginn, B. (2012). *Predicting the influence of mixing hydrodynamics and food web structure on spatial variability of phosphorus concentrations in Lake Simcoe with a 3-D model*. Final Report to the Lake Simcoe Clean Up Fund, Environment Canada.

Schwalb, A. N. (2010). *Freshwater mussel metacommunity analyses*. Report for the Department of Fisheries and Ocean.

Woolnough, D. A., McNichols, K. A., Schwalb, A. N., Ackerman, J. D., Mackie, G. L. (2007). *Endangered unionid mussels in Ontario*. 2007 Final Report (2007-ESRF-1350-a) Endangered Species Recovery Fund.

McNichols, K. A., Schwalb, A. N., Mackie, G. L., Ackerman, J. D. (2006). *Fish host identification and rearing of juvenile unionid species at risk in recovery habitat in Southern Ontario Rivers*. 2005/2006 Final Report (2006-ESRF-1094) Endangered Species Recovery Fund.

B. Works not in Print

1. Presentations at Professional Meetings: denotes undergraduate**, graduate*, #doctoral student advised and mentored

Rojas-Pina, I., Newbauer, M. Alves, A., Schwalb, A., Nowlin W., Furey, P. 2026. Game of Flows: Algal Functional Groups & their response to the presence and absence of grazers in Texas intermittent riverine pools. Poster presentation. SFS meeting, Spokane, Washington.

Jimmerson, J., Schwalb, A, Johnson, N., Zanatta D. 2026. Genetic variation and population structure of Glebula rotundata (Round Pearlshell, Bivalvia: Unionidae) across Gulf of Mexico tributaries. Oral presentation. SFS meeting, Spokane, Washington.

Pody, E. and A. Schwalb 2026. Comparing mussel communities in different habitats of the lower Neches River, Texas. The Southern Division of the American Fisheries Society. New Orleans, Louisiana.

Mitchell, Z. and A. Schwalb. 2026. Scale invariant patterns of life history strategies of riverine mussels are shaped by hydrologic factors. Texas Chapter AFS meeting, Galveston, Texas.

Young*, C., Dodson, T., Barrett, J. Greenfield J., Schwalb, A., Swannack, T., Windemiller, K, and J. S Perkin. 2025. Quantifying movement of mussel host fishes to advance ecological modeling at a micro- and meso-habitat scale. Oral presentation. AFS meeting, San Antonio, Texas.

Schwalb, A. N., Mitchell, Z., Cushway, K., and A. Harris. 2025. Distribution patterns of mussels in relation to flow: An exploration across spatial scales. Oral presentation. SFS meeting, San Juan, Puerto Rico.

Alves#, A. T., Nowlin, W. H., Cottenie, K., and A. N. Schwalb. 2025. Impacts of drying and flowing conditions on stream functioning in remmnant pools. Oral presentation. SFS meeting, San Juan, Puerto Rico.

Perez Rocha, M., Austin-Bingamon E. A., Schwartz B., Sams, M., Nowlin, W., DiNicola, M. and A. N. Schwalb. 2025. The role of flow regime and biotic interactions for community composition in a river system prone to drying and flash flooding. Poster presentation. SFS meeting, San Juan, Puerto Rico.

Rojas Pina**, I., Alves#, A., Schwalb, A.N., Nowlin, W., Furey, P. 2025. It's a dry, hard life: How climate change alters algal functional groups in Texas riverine pools. Poster presentation. SFS meeting, San Juan, Puerto Rico.

Greenfield*, J. L. and A. N. Schwalb. 2025 Examining the distribution of mussels in pools and riffles of the San Saba River. Oral presentation. FMCS meeting, Ann Arbor-Ypsilanti, Michigan.

Pody#, E. K., and A. N. Schwalb. 2025. Comparing mussel community structure, growth, and survival in different habitat types of the lower Neches River. Poster presentation. FMCS meeting, Ann Arbor-Ypsilanti, Michigan. (*Best student poster*).

Jimmerson*, J., Schwalb, A., and D. T. Zanatta. 2025. Species distribution modeling reveals salinity concentration as a major driver of presence for the estuarine bivalve *Rangia cuneata* (order Venerida). Oral presentation. FMCS meeting, Ann Arbor-Ypsilanti, Michigan.

Foxfoot, I. R., Cushway, K.C., Rosenberg, R.R., Schwalb, A. N., Swannack T. M. 2025. SAMPL: An agent based model to evaluate spatial sampling strategies. Oral presentation. FMCS meeting, Ann Arbor-Ypsilanti, Michigan.

Young, C., Barrett, J., Dodson T., Greenfield*, J., Schwalb, A.N., Swannack, T., Winemiller, K., and J. S. Perkin. 2025. Quantifying short-term movement of mussel host fishes to advance ecological modeling. Texas Chapter AFS meeting, College Station, Texas.

Dobler, A., Schwalb, A.N., and J. Geist. 2024. Avoidance behavior of Unionid mussels in response to changing habitat conditions? Poster presentation, FMCS meeting, Karlstad, Sweden.

Schwalb, A.N., Cushway, K., and J. Geist. 2024. Reviewing the impacts of drought and dewatering on freshwater mussels. Oral Presentation, AFS meeting, Honolulu, Hawaii.

Schwalb, A.N., Dobler A., and J. Geist. 2024. Are freshwater mussels more mobile when habitat is less suitable? Poster presentation, SFS meeting, Philadelphia, Pennsylvania

Krellenstein*, E. and A.N. Schwalb. 2024. The effect of drought on depauperate mussel communities in the Colorado River basin, Texas and differences in growth and survival between river segments. Oral presentation, SFS meeting, Philadelphia, Pennsylvania.

Stannard*, S. and A.N. Schwalb. 2024. Examining the role of predation in population dynamics and dispersal of zebra mussels (*Dreissena polymorpha*) in Canyon Lake, Texas. Poster presentation, SFS meeting, Philadelphia, Pennsylvania.

Perkin, J., Elkins. L, Mangold, R., Wolff, J., Perez Rocha, M., Schwalb, A.N., Schwartz, B., Nowlin, W., Troia, M., Cottenie, K., Saltus, C., Johansen R., Smith, D. 2024. Integrating climate and land use projections to assess ecological futures for stream fish assemblages arranged along an aridity gradient. Oral presentation, SFS meeting, Philadelphia, Pennsylvania.

Perez Rocha, M., Sams, M., Santee, N., Schwartz, B., Perkin, J., Nowlin, W., and A. N. Schwalb. 2024 Hydrological gradients affect facets of biodiversity in different ways across distinct organism groups. Oral presentation, SFS meeting, Philadelphia, Pennsylvania.

Schwalb, A.N., Cushway*, K. C., Mitchell#, Z., Martinksi*, M., Hayes*, K, Cottenie, K., Perkin J. S., Perez Rocha, M. 2023. Gaining insights on responses of freshwater mussels to environmental heterogeneity and on their distribution. Oral presentation, FMCS meeting, Portland, Oregon.

Lorkovic*, E. and A.N. Schwalb. 2023. Interaction between two invasive species, *Dreissena polymorpha* and *Hydrilla verticillata.* Oral presentation, FMCS meeting, Portland, Oregon.

Cushway*, K. C. and A.N. Schwalb. 2023. Holding their ground: Impacts of high and low flow conditions on freshwater mussel distribution and community composition. Oral presentation, FMCS meeting, Portland, Oregon.

Beason*, E. D., Swarm, S. J., Gudgell L., Lanzer, T.L., Roberston, C, and A. N. Schwalb. 2023. Assessing ammonia toxicity of Texas unionid mussels. Oral presentation, FMCS meeting, Portland, Oregon.

Martinksi*, M. and A.N. Schwalb. 2023. Choosing sides: Unionids exhibit substrate "preference" and varying activity levels in a behavioral choice experiment. Oral presentation, FMCS meeting, Portland, Oregon.

Gudgell L., Swarm, S. J., Beason, E. D., Lanzer, T.L., Roberston, C, and A. N. Schwalb. 2023. Assessing ammonia toxicity of Texas unionid mussels. Oral presentation, SETAC meeting, Louisville, Kentucky.

Perkin, J. S., Elkins, L. S., Mangold, R., Perez Rocha, M., Schwalb, A., Schwartz, B., Nowlin, W. H., Troia M. J., Cottenie, K., Saltus, C., Johansen, R., Smith, D. 2023. Fish Assemblage structure along an existing aridity gradient predicts future assemblage projections under climate change scenarios. Southern Division American Fisheries Society, Norfolk, VA.

Perkin, J. S., Elkins, L. S., Mangold, R., Perez Rocha, M., Schwalb, A., Schwartz, B., Nowlin, W. H., Troia M. J., Cottenie, K., Saltus, C., Johansen, R., Smith, D. 2022. Testing the cold-water climate shield model with stream fishes in the middle Colorado River of Texas. Texas Chapter American Fisheries Society, Corpus Christi, TX.

Perkin, J. S., Elkins, L. S., Mangold, R., Perez Rocha, M., Schwalb, A., Schwartz, B., Nowlin, W. H., Troia M. J., Cottenie, K., Saltus, C., Johansen, R., Smith, D. 2022. Fish Assemblage structure along an existing aridity gradient mirrors future assemblage projections under climate change scenarios. Desert Fish Council Meeting. St. George, Utah.

Beason*, E., and A. N. Schwalb. 2022. Ammonia toxicity of unionid mussels in Texas. Poster presentation. FMCS Meeting, Duck River, TN.

Martinski*, M., Schwalb, A. N. 2022. Freshwater mussels differ in substrate preference: Observations from a behavioral choice experiment. Poster presentation. FMCS Meeting, Duck River, TN.

Cushway*, K. C. Schwalb, A. N. 2022. When Rivers Run Dry: Perennial Pools as Ecological Refuges for Freshwater Mussels. Poster Presentation. FMCS Meeting, Duck River, TN

Perez Rocha, M., Cottenie, K, Elkins, L., Kline, C., Mangold R., Mitchell, Z., Nowlin, W., Perkin, J., Schwalb, A.N. 2022. Differential responses of riverine communities to environmental heterogeneity. A multi-taxon approach across different spatial scales. Oral presentation. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

Martinski*, M., Schwalb, A. N. 2022. Freshwater mussels differ in substrate preference: Observations from a behavioral choice experiment. Oral presentation. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

Cushway*, K. C. Schwalb, A. N. 2022. When Rivers Run Dry: Perennial Pools as Ecological Refuges for Freshwater Mussels. Oral presentation. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

Schwalb, A.N., Swearingen*, D. 2022. Living on the edge: Population dynamics of zebra mussels at their thermal limit in Canyon Lake, Texas. Oral presentation. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

Winemiller, K., Moore, G., Perkin, J., Trungale, J., Hoeinghaus, D., Schwalb, A., Hardy T., Trimble A., Reeves, C., 2022. Methods for establishing flow-ecology relationships useful for validating environmental flow standards for Texas rivers. Texas Chapter of the American Fisheries Society Annual Meeting, Mo-Ranch, North Fork Guadalupe River, TX.

Mitchell,# Z., Robledo**, J.T., Cottenie, K., Schwalb, A.N. 2021. Combining taxonomic and functional approaches to examine how riverine communities respond to environmental heterogeneity at different scales: a freshwater mussel case study. Society of Freshwater Science conference. Online meeting.

Swearingen*, D., Lorkovic**, E., Nowlin W., Schwalb A. N. 2021. Do summer mortality events of zebra mussels cause nutrient pulses in Lake Canyon? Society of Freshwater Science conference. Online meeting.

Moore, G., Winemiller, K., Trungale, J., Schwalb, A., Hardy T., Perkin, J., Hoeinghaus, D., Reeves, C., Trimble A. 2021. Environmental flow regimes needed to maintain a sound ecological environment in Texas rivers. American Geophysical Union, Conference, New Orleans, LA. Poster presentation.

Atkinson, C. L., Hopper, G. W., Schwalb, A.N., Archambault, J., Kreeger, D., Vaughn C. C. 2021. Freshwater mollusks: What are they good for? Absolutely ecosystem services. Freshwater Mollusk Conservation Society Meeting. Virtual Symposium

Beason*, E., and A. N. Schwalb. 2021. Impacts of Zebra Mussels on Texas Unionid Mussels. Freshwater Mollusk Conservation Society Meeting. Virtual Symposium

Woolam#, L. A. Mitchell, Z. A., and A. N. Schwalb. 2021. Linking age distribution and growth rates of freshwater mussels to antecedent flow conditions. Freshwater Mollusk Conservation Society Meeting. Virtual Symposium

Mitchell#, Z. A., and A. N. Schwalb. 2021. Comparing convenience and probability sampling designs for describing riverine mussel communities. Freshwater Mollusk Conservation Society Meeting. Virtual Symposium

Roberston#, J. A., and A. N. Schwalb. 2019. Living on the edge: Population dynamics of zebra mussels in a reservoir at their southern distribution limit in Texas. Poster presentation. Society of Freshwater Science conference, Salt Lake City, Utah.

Mitchell#, Z. A., McGuire, J., Abel, J., Hernandez*, B. A., and A. N. Schwalb. 2019. Move on or take the heat: Can life history strategies of freshwater mussels predict their physiological and behavioral responses to drought and dewatering? Oral presentation. Freshwater Mollusk Conservation Society Meeting, San Antonio, Texas.

Hayes*, K. J., Mitchell#, Z. A., and A. N. Schwalb. 2019. Growth and age structure estimates for mussel populations in Central Texas. Poster presentation. Freshwater Mollusk Conservation Society Meeting, San Antonio, Texas.

Roberston[#], J. Swannack, T.M., McGarrity, M., and A.N. Schwalb. 2019. Zebra mussel invasion of Texas lakes: Estimating potential for over-land dispersal via boats. Southern Division – American Fisheries Society Meeting, Galveston Island, Texas.

Trombley#, C. A, Hardy, T., Schwalb, A.N., and K. Cottenie, 2018. Patterns in the fish meta-assemblage of the Virgin River. Oral presentation. Canadian Society for Ecology & Evolution Meeting, Guelph, ON.

Britton*, S., Schwalb, A.N., Jackson, B., Wiseman, S., Roberston, C., and J. Dutton. 2018. Physiological response of *Amblema plicata* to contaminants in the Guadalupe River basin, Texas. Poster presentation. SETAC North America Annual Meeting, Sacramento, CA.

Roberston[#], J. Swannack, T.M., McGarrity, M., and A.N. Schwalb. 2018. Zebra mussel invasion of Texas lakes: Estimating potential for over-land dispersal via boats. Oral presentation. Southwestern Association of Naturalists, San Marcos, TX.

Britton*, S., Schwalb, A.N., Jackson, B., Wiseman, S., Roberston, C., and J. Dutton. 2018. Physiological response of *Amblema plicata* to contaminants in the Guadalupe River basin, Texas. Poster presentation. Southwestern Association of Naturalists, San Marcos, TX.

Mitchell*, Z.A., L.E. Burlakova, and A.N. Schwalb. 2017. Response of freshwater mussels to drought in Central Texas. Poster presentation. American Fisheries Society Annual Meeting, Tampa, FL.

Sanchez* B., and A.N. Schwalb. 2017. Comparing sampling methods for freshwater mussels in Central Texas. Poster presentation. Society of Freshwater Science conference, Raleigh, NC.

Robertson* J., Swannack T., and A.N. Schwalb. 2017. Examining riverine dispersal of zebra mussels (*Dreissena* polymorpha) and the invasion risks to Texas reservoirs and streams. Oral presentation. Society of Freshwater Science conference, Raleigh, NC.

Seagroves*, A. and A.N. Schwalb. 2017. Identifying the most efficient host fish for the Texas Fatmucket (Lampsilis bracteata) for captive breeding. Poster presentation. Texas Chapter of the American Fisheries Society Annual Meeting, Corpus Christi, TX. (*Best student poster*).

Hernández*, B.A., T.B. Hardy, C. Robertson, and A.N.Schwalb. 2016. Burrowing behavior of unionid mussels in central Texas. Oral presentation. Society of Freshwater Science conference, Sacramento, CA.

Olson*, J., R.F. McMahon, T. Swannack, and A.N. Schwalb. 2016. Dispersal of zebra mussels, *Dreissena polymorpha*, downstream of an invaded reservoir. Poster presentation. Society of Freshwater Science conference, Sacramento, CA.

Trombley*, C. A.,K. Cottenie, A.N. Schwalb, and T.B.Hardy 2016. Alien invasion: Effects of the release of a bait fish on the abundance and distribution of a critically endangered endemic fish in the Virgin River. Oral presentation. Ontario Ecology, Ethology, and Evolution Colloquium, Toronto, ON.

Hernández*, B.A., T.B. Hardy, C. Robertson, and A.N.Schwalb. 2016. Burrowing behavior of unionid mussels in central Texas. Oral presentation. Texas Mollusk Symposium, Dallas, TX.

Olson*, J., R.F. McMahon, T. Swannack, W.H. Nowlin, and A.N. Schwalb. 2016. Dispersal of zebra mussels, *Dreissena polymorpha*, downstream of an invaded reservoir. Oral presentation. Texas Mollusk Symposium, Dallas, TX.

Zawalski*, R., W.H. Nowlin, and A.N. Schwalb. 2016. Metacommunity structuring of macroinvertebrates in the Guadalupe River basin, TX. Poster presentation. Society of Freshwater Science conference, Sacramento, CA.

Hernández*, B.A., T.B. Hardy, C. Robertson, Clint, and A.N.Schwalb. 2016. Seasonal movements of unionid mussels in central Texas. Oral presentation. Central Texas Eurycea Symposium, Georgetown, TX.

Dascher[#], E., Olson J., Burlakova L.E., Karatayev AY., Bonner T., and A.N. Schwalb. 2015. How does the distribution of unionid freshwater mussels in Texas relate to the distribution of fishes? International Meeting on Biology and Conservation of Freshwater Bivalves, Buffalo, NY.

Schwalb, A.N., A.C. Alexander, A.J. Paul, K. Cottenie, P.A. Chambers, and J.B. Rasmussen. 2014. Changes in hydrology, water chemistry, and fish communities in the lower Athabasca region: A review of historical and current data. Joint Aquatic Sciences Meeting, Portland, OR.

Schwalb, A.N., and J.B. Rasmussen. 2013. Changes in fish community composition and fish health in the lower Athabasca region: a review of historical and current data. Poster presentation. SETAC North America Annual Meeting, Nashville, TN.

Schwalb, A.N., and J.B. Rasmussen. 2013. Changes in fish health and community composition in rivers of the Athabasca oil sands - a review of historical and current data. Poster presentation. SETAC – PNC Annual Meeting, Lethbridge, AB.

Schwalb, A.N., T.J. Morris, N.E. Mandrak, and K. Cottenie. 2012. Distribution of unionid freshwater mussels depends on the distribution of host fish on a regional scale. Poster presentation. Society of Freshwater Science conference, Louisville, KY.

Bocaniov, S.A., A.N. Schwalb, C.M. Spillman, M.R. Hipsey, L.F. Leon, and R.E.H. Smith. 2011. Can we model the impact of invasive dreissenid mussels on large lake ecosystems? A three-dimensional modeling study of Lake Erie and Lake Simcoe. Oral presentation. International Association for Great Lakes Research's Annual Conference, Duluth, MN.

Schwalb, A.N., S.A. Bocaniov, L.F. Leon, L.A. Molot, and R.E.H.Smith. 2011. Assessing direct and indirect effects of invasive benthic filter feeders in a large lake – 3D modeling of processes in a lake invaded by dreissenid mussels. Oral presentation. North American Benthological Society conference, Providence, RI.

Spillman, C.M., M.R. Hipsey, S.A.Bocaniov, A.N. Schwalb, and R.E.H. Smith. 2011. The nearshore shunt. Three dimensional modeling of dreissenid mussel effects in nearshore and offshore waters of Lake Erie. Oral presentation. Canadian Conference for Fisheries

Research/Society of Canadian Limnologists/Society of Wetland Scientists joint conference, Toronto, ON.

Schwalb, A.N., and J.D. Ackerman. 2010. Early life history traits in Lampsilini-mussels in relation to their host infection strategy. Poster presentation. American Society of Limnology and Oceanography and North American Benthological Society joint conference, Santa Fe, NM.

Schwalb, A.N., and J.D. Ackerman. 2009. Hitching a ride and going with the flow – Dispersal of unionid mussels (Bivalvia: Unionidae). Oral presentation. North American Benthological Society conference, Grand Rapids, MI.

Schwalb, A.N., M. McGarvie, and J.D Ackerman. 2008. Freshwater mussel larval dispersal in rivers – a transport model and its empirical evaluation in the field. Oral presentation, Ontario Ecology and Ethology colloquium, Guelph, ON.

Schwalb, A.N., Poos M., and J.D. Ackerman. 2008. Can a bad hitchhiking choice slow you down? Limitations to the dispersal of the endangered Snuffbox mussel (*Epioblasma triquetra*). Poster presentation, North American Benthological Society conference, Salt Lake City, UT.

Schwalb, A.N., and J.D. Ackerman. 2007. Dispersal in freshwater mussels. Oral presentation, International Society of Limnology conference, Montreal, QC.

Schwalb, A.N., K.A. McNichols, and T.J. Morris. 2007. The endangered Wavyrayed Lampmussel in the Grand River – A few pieces in a puzzle. Oral presentation. Grand River Watershed Research Forum, Cambridge, ON.

Gillis, P.L., A.N. Schwalb, R.J. Mitchell, K.A. McNichols, G.L. Mackie, and J.D. Ackerman. 2006. The effect of water composition on the acute toxicity of copper to glochidia of freshwater mussels. Poster presentation. Annual Meeting of the North American Society of Environmental Toxicology and Chemistry, Montreal, QC.

Schwalb, A.N., K.A. McNichols, and J.D Ackerman. 2006. Rearing Fatmuckets in small buckets – Culturing of juvenile freshwater mussels. Oral presentation, College of Biological Sciences Graduate Symposium, University of Guelph, ON.

Schwalb, A.N. 2005. Moving on one foot – Horizontal and vertical movements of unionid mussels in a lowland river. Poster presentation, Peter Yodzis Colloquium, University of Guelph, ON.

2. Invited Talks, Lectures, and Presentations:

Schwalb, A. N. 2025. Insights on flooding impacts on zebra mussels in Canyon Lake, Guadalupe River Basin. 2025 Texas Invasive Mussel Partner meeting. Webinar.

Schwalb, A. N. 2025. Investigating spatial distribution and community dynamics
and the impact of drought, flooding, and predation. US Army ERDC Next Generation Ecological Modeling and TRIAGE annual meeting. Online.

Schwalb, A. N. 2024. Zebra mussel research at Texas State University. Gulf & South Atlantic regional panel on aquatic invasive species. Austin, TX.

Schwalb, A. N. 2024. The potential importance of groundwater to freshwater mussels. Texas Groundwater Invertebrate Forum, San Marcos, TX.

Schwalb, A. N. 2023. When rivers run dry: The impact of drought on freshwater mussels. US Fish and Wildlife Service's Climate Change Webinar.

Schwalb, A. N, Cushway, K. 2023. Gaining insights on responses of freshwater mussels to environmental heterogeneity and on their distribution. US Army ERDC Next Generation Ecological Modeling Seminar. Online.

Schwalb, A. N., Ford, D., Tarter*, A. A., Mitchell#, Z. A., Karatayev, A. Y., Burlakova, L. E. 2022. Assessing the effects of extreme climatic events on unionid mussels. Invited talk. FMCS Workshop, Survey Guidelines and Techniques Workshop, Henry Horton State Park - Duck River, TN.

Lorkovic**, E., Swearingen D., Nowlin W., Cottrell, A., Schwalb, A. N. 2021. How much phosphorous is released by decaying zebra mussels? Undergraduate Research Conference. Honors College. Online meeting.

Schwalb, A.N. 2018. Dispersal of zebra mussels. Invited talk. Gulf & South Atlantic Regional Panel meeting of the Aquatic Nuisance Species Task Force, San Antonio, TX.

Sanchez*, B. and A.N. Schwalb. 2017. Comparison of survey methods in Central Texas. Invited talk. Texas Freshwater Mussel Conservation and Stakeholder Summit, Austin, TX.

Schwalb, A.N. 2016. How I became a scientist or my personal journey into the world of science in academia. Guest lecture for the Professional Development Course at Texas State University, San Marcos, TX.

Schwalb, A.N. 2014. Distribution of mussels – A metacommunity approach. Invited talk. Aquatic Biology Society Seminar, San Marcos, TX.

Schwalb, A.N. 2013. Freshwater mussels – Findings of nine years of research. Invited talk. Limnological Institute, University of Konstanz, Germany.

Schwalb, A.N. 2013. Consequences of different ways to hitch a ride - Dispersal, distribution, and impact of freshwater mussels. Invited talk. Department of Biology, University of Regina, SK.

Schwalb, A. N. 2007. Early life history of freshwater mussels – dispersal and settlement processes. Oral presentation, Loaves and Fishes Seminar Series, University of Guelph, ON

4. Workshops:

Workshop of the Freshwater Mollusk Conservation Society. Propagation and captive care of freshwater mollusks. March 2006, Columbus, Ohio.

5. Other Works not in Print; denotes **undergraduate, *graduate and #doctoral student advised and mentored

a. Works "submitted"

Geist, J. Aldrige D. C., Boon, P. Denic, M., Gumpinger, C., Hauer, C., Klunzinger M., Lopes-Lima M., Moorkens E., Newton, T., Ondina, P., Ozgo, M., Sousa R., Taskinen J., Thielen, F., Zajac T., Zanatta, D., Schwalb, A. N., Matters Arising: Cautionary notes on the design of studies informing conservation and reintroduction projects with native freshwater mussels. Submitted to Freshwater Science.

b. Works "in progress":

Cushway, K., Mitchell, Z. A., Morris, T., Cottenie, K., Woolnough, D., and A. N. Schwalb. Bridge bias: is convenience sampling misleading conservation? In preparation for submission to Ecological Applications.

Harris A., Cushway, K.C. Stowe, E. S., Schwalb, A.N., McKay S. K., Swannack T. M. Identifying drivers of mussel distribution using hydraulic simulation and machine learning In preparation for submission to Ecosphere

C. Grants and Contracts

1. Funded External Grants and Contracts:

2025-2026. TPWD. Zebra mussel monitoring in Texas waterbodies (PI: A Schwalb).

2023-2026. U.S. Army Corps of Engineers. Integrating Long Term Datasets with Next Generation Ecological Models to Quantify Ecological Response in Aquatic Systems. (PI: AN Schwalb, co-PIs: B Schwartz, WH Nowlin).

2024-2025. TPWD. Zebra mussel monitoring in Texas waterbodies (PI: A Schwalb).

2023-2024. TPWD. Zebra mussel monitoring in Texas waterbodies (PI: A Schwalb).

2021-2024. U.S. Army Corps of Engineers. Examining changes to hyporheic exchange flow and nutrient dynamics and their interaction with microbial, algal, and macroinvertebrate communities in response to drying and re-wetting in Texas rivers (PI: AN Schwalb, co-PIs: B Schwartz, WH Nowlin).

2022-2023. TPWD. Zebra mussel monitoring in Texas waterbodies and outreach (PI: A Schwalb).

2021-2024. TPWD/USFWS. Assessing ammonia toxicity of Texas unionid mussels. (PI: A Schwalb).

2020-2025. U.S. Army Corps of Engineers. Quantifying drivers of native and non-native aquatic species abundance and distribution in drought- and flood-prone Texas basins (PI: WH Nowlin, co-PIs: A Schwalb, B Schwartz, T Hardy).

2021-2022. TPWD. Zebra mussel monitoring in Texas waterbodies (PI: A Schwalb).

2020-2021. TPWD. Zebra mussel monitoring in Texas waterbodies (PI: A Schwalb).

2019-2021. TPWD. Impact of zebra mussels on unionid mussels, population dynamics and limiting factors for growth and survival (PI: A Schwalb).

2019-2021. TWDB. Environmental Flow Regime Assessment and Development of a Monitoring Framework (PI: Kirk Winemiller, TAMU).

2019-2020. TPWD. Zebra mussel monitoring in Texas waterbodies (PI: A Schwalb).

2018-2019. TPWD. Downstream dispersal, survival and growth of zebra mussels (Dressenia polymorpha) downstream of invaded Central Texas reservoirs (PI: A Schwalb, co-PI: TM Swannack).

2017-2019 Big Thicket Association. Freshwater mussel biodiversity survey within the Big Thicket National Preserve. (PI: A Schwalb)

2017-2018. TPWD/USFWS. Dispersal of zebra mussels downstream of invaded reservoirs and assessing the impact of zebra mussels (PI: A Schwalb, co-PIs: WH Nowlin, TM Swannack).

2016-2021. TPWD/USFWS - Section 6. ($81,915) The Impact of Environmental Contaminants on Texas Unionid Mussels in the Guadalupe Basin. (PI: Jessica Dutton, co-PI: A Schwalb)

2015-2018. Texas Department of Transportation. Evaluating the Effectiveness of Freshwater Mussel Mitigation Strategies. (PI: A Schwalb, co-PIs: D Rodriguez, MRJ Forstner, TB Hardy, collaborator: MC Barnhart).

2015-2018. Wildlife Research Grant, TPWD/USFWS. Dispersal and migration of freshwater mussels. (PI: A Schwalb, co-PI: D Rodriguez).

2015-2018. US Army Corps of Engineers. Developing quantitative-based approaches for determining impacts of navigation and ecosystem restoration projects on endangered freshwater mussels in the navigable waters of the United States (PI: A Schwalb, co-PI: TB Hardy).

2016-2017. TPWD/USFWS - Aquatic Invasive Species Grants. Dispersal of zebra mussels downstream of an invaded reservoir and assessing the risk of dreissenid mussel invasion into lakes of Texas (PI: A Schwalb, co-PIs: WH Nowlin, TM Swannack).

2015-2017. Texas Parks and Wildlife Department. Development of Habitat Suitability Criteria for Benthic Macroinvertebrates in the Lower Guadalupe River. (PI: A Schwalb, co-PI: WH Nowlin).

2015-2016. US Army Corps of Engineers. Validating modeled effects of turbulence, boater behavior and colonization of zebra mussel dynamics in new environments. (PI: A Schwalb)

2015-2016. Texas Department of Transportation. Grant. Cost effective Mitigation Strategy for State Listed Freshwater Mussels. (co-PI with CR Randklev, TAMU and NB Ford, UT Tyler).

2014 – 2017. Texas Department of Transportation. Contract. for survey and relocation of protected freshwater mussels and aquatic vertebrate species. (PI: MRJ Forstner, co-PIs: TH Bonner and AN Schwalb).

2013. Fisheries and Oceans Canada. Contract to analyze the relationship between differences in dispersal abilities and factors structuring mussel assemblages.

2013. Keefer Ecological Services Ltd. Contract to analyze plant community and environmental data with multivariate statistics.

2012. Fisheries and Oceans Canada. Contract to analyze the impact of host fish for distribution of mussels with multivariate statistics.

2010 – 2012. Environment Canada. Lake Simcoe Cleanup Fund. Examining the role of non-summer and nearshore processes in phosphorus dynamics and oxygen depletion in Lake Simcoe." (PI: Dr. R. Smith, University of Waterloo, ON)

2010. Fisheries and Oceans Canada. Contract to examine the distribution of mussels in Ontario with multivariate statistics and to prepare report.

2008. Fisheries and Oceans Canada's Species at Risk program (SARCEP) and Interdepartmental Recovery Fund. Investigating the early life stages of the Endangered Wavyrayed Lampmussel (Lampsilis fasciola). (co-PI with TJ Morris, DFO Canada).

2. Submitted, but not Funded, External Grants and Contracts:

2020-2024 USFWS. Assessing the impact of disturbance events on freshwater mussels in Central Texas Rivers. Not funded (PI: A Schwalb).

2020-2025 NSF- CAREER grant. A multiscale experimental approach to disentangle drivers of metacommunity structure and dynamics of riverine freshwater mussels. Not funded (PI: A Schwalb).

2019-2024 NSF- CAREER grant. A multiscale observational and experimental approach to disentangle drivers of metacommunity structure and dynamics of riverine freshwater mussels Not funded (PI: A Schwalb).

2017-2019 TPWD/USFWS - Section 6. Modeling Trace Element Bioaccumulation in Texas Unionid Mussels. Not funded (PI: Jessica Dutton, co-PI: A Schwalb).

2017-2018 TPWD/USFWS - Section 6. The Impact of Drought and Dewatering on Texas Unionid Mussels in the Colorado River Basin. Not funded (PI: A Schwalb).

2015. TPWD/USFWS - Section 6. The impact of dams and hydraulic habitat on the distribution of freshwater mussels in the Colorado River – a network scale approach. Not funded (PI: A Schwalb, co-PI: TB Hardy).

3. Funded Internal Grants and Contracts:

2026-2027 Research Enhancement Program. SmartShell: Deep Learning and 3D Morphometrics for Accurate Identification (PI: Siciliano-Martina, Farias, co-PI: Lorkovic, Schwalb)

2015 Research Enhancement Program. Vertical migration of unionid mussel species in rivers of Central Texas. (PI: A Schwalb).

D. Fellowships, Awards, Honors:

Presidential Research Award, Texas State University	Spring 2022
College Achievement Award for Excellence in Scholarly/Creative Activities, College of Science and Engineering, Texas State University	2020
NABS (North American Benthological Society) President's Award	2009
University of Guelph International Graduate Scholarship	2008
Norman James Scholarship in Aquatic Animal Ecology	2007
NABS Graduate Student Conservation Research Award	2007
University of Guelph Graduate Scholarship	2006, 2007
Brock Doctoral Scholarship Nominee by the College of Biological Sciences, University of Guelph. (not received)	2005
Graduated "with distinction" at the University of Potsdam, Germany.	2004

IV. SERVICE

A. Institutional

Director for Aquatic Resources MS program, Texas State University 2021-present

Member of Departmental Graduate Committee 2019-present

Member of departmental scholarships committees 2015-present

Member of Assistant Professor Tracking committee (Chattopadhyay) 2026-present

Member of Faculty Search Committee 2024/2025
For Ecohydrology, College of Science and Engineering, Texas State University

Mentor of the SURE program at Texas State 2018, 2020

Member of Faculty Search Committee 2018/2019
For Aquatic Wetland/Plant Ecology, Department of Biology, Texas State.

Judge for poster session at Departmental colloquium 2016, 2017

Judge for departmental 3MT competition 2016

Member of Faculty Search Committee 2014/2015
For Aquatic Toxicology, Department of Biology, Texas State.

Member of the weekly Departmental seminar committee. 2014/2015

Member of Undergraduate Curriculum Committee. 2007, 2008
Department of Integrative Biology, University of Guelph, ON.

Member of Faculty Search Committee. 2007
For Ecosystem Ecology, Department of Integrative Biology, University of Guelph, ON.

B. Professional:

Associate Editor for Freshwater Science 2024-present

Editorial board member for Freshwater Biology 2024 - present

<u>Reviewer of manuscripts for:</u>
Aquatic Conservation: Marine and Freshwater Ecosystems,
Biological Invasions,
Conservation Biology,
Diversity and Distributions,
Earth Interactions,
Environmental Reviews,
Environmental Science and Technology,
Earth Interactions
Freshwater Mollusk Biology and Conservation,

Freshwater Science,
Freshwater Biology,
Hydrobiologia,
Integrative Zoology
Journal of Biogeography,
Journal of Great Lakes Research,
Limnology,
New Zealand Journal of Marine and Freshwater Research
Oecologia,
Science of the Total Environment

Judge of student presentations at SFS Meeting, San Juan, Puerto Rico 2025

Member of the Collaborative Wildlife Protection and Recovery Initiative Freshwater Mussel Working Group 2024 – present

Judge of student presentations at SFS Meeting, Philadelphia, Pennsylvania 2024

Member of the scientific committee for the 2nd Freshwater Mollusk Conservation Society Meeting in Europe, 2023-2024

Member of the Freshwater Mollusk Conservation Society Field studies and Ecosystem Services committee since 2023

Judge of student presentations at Freshwater Mollusk Conservation Society Meeting, 2023 Portland, Oregon

Judge of student presentations at Joint Aquatic Sciences Meeting, Grand Rapids, Michigan 2022

Reviewer for Texas Academy of Science student proposal 2018, 2022

Member of the Conference Planning Committee for the 2019 meeting of the Freshwater Mollusk Conservation Society in San Antonio. 2017-2019

Judge of student presentations at SFS meeting in Salt Lake City, Utah, and at FMCS meeting in San Antonio. 2019

Reviewer for Canada-Alberta Joint Oil Sands Monitoring (JOSM) synthesis report on fish health and invertebrates 2017

Reviewer for Sigma Delta Epsilon, Graduate Women in Science fellowship applications 2016

Appointed member 2012 – 2015
of COSEWIC's (Committee on the Status of Endangered Wildlife in Canada) Molluscs Species Specialist Subcommittee, Canada

C. Community:

Board member of Burnett Ranch River Park Association (2020 – 2026)

Founder and organizer of outdoor group for kids in Wimberley (2020 – 2025)

Volunteer at PPCP Preschool in San Marcos (2019-2020)