

CURRICULUM VITA
Christopher L. Higgins, Ph.D.

CONTACT INFORMATION



Assistant Teaching Professor & BIO 100 Coordinator
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EDUCATION

- Ph.D., Biology, Texas Tech University (2005)
- Dissertation: *Functional groups in stream fishes: spatiotemporal variation, predictability, and patterns of diversity*
 - Advisor: Dr. Richard E. Strauss
- M.S., Biology, Texas Tech University (2001)
- Thesis: *Discrimination of foraging paths produced by different search tactics*
 - Advisor: Dr. Richard E. Strauss
- B.S., Biology, Angelo State University (1999)
- Research: *Home range of the nine-banded armadillo, Dasypus novemcinctus, in the Concho Valley of Texas*
 - Advisor: Dr. Robert C. Dowler

PROFESSIONAL EMPLOYMENT

- Arizona State University
- Assistant Teaching Professor, School of Mathematical and Natural Sciences (2023 – present)
 - Lecturer, School of Mathematical and Natural Sciences (2020 – 2022)
- Tarleton State University
- Professor, Department of Biological Sciences (2018 – 2019)
 - Director, Timberlake Biological Field Station (2015 – 2019)
 - Associate Professor, Department of Biological Sciences (2012 - 2018)
 - Assistant Professor, Department of Biological Sciences (2005 - 2012)
- South Plains College
- Instructor of Zoology (2004 - 2005)
- Texas Tech University
- Teaching Assistant (2000 – 2005)
 - Instructor (Summer 2002, Summer 2003)
 - Research Assistant (2001, 2004, 2005)

ACADEMIC AWARDS AND PROFESSIONAL HONORS

2020 – Recipient of a Serving University Needs (SUN) Award at Arizona State University

- This award was given for exemplary service and supporting student success while planning and effectively deploying two sections of BIO 182 and one section of LSC 322.

2019 – Recipient of the university-wide Barry B. Thompson Service Award at Tarleton State University

- This award is given annually to a faculty member for their contributions to student-faculty relations outside the classroom.

2017 – Recipient of the Barry B. Thompson Service Award for the College of Science and Technology at Tarleton State University

- This award is given annually to a faculty member for their contributions to student-faculty relations outside the classroom.

2016 – Selected to participate in the Faculty Unscripted program at Tarleton State University

- The goal of this program is to provide students as well as other faculty with a sense of what motivates me as a professor and of the diverse personalities we have in Tarleton's faculty.

2013 – Recipient of the Faculty Excellence in Scholarship Award for the College of Science and Technology at Tarleton State University

- This award was based on peer evaluations and is given to faculty members who have exemplary performance in scholarship

2012 – Recipient of the Texas A&M University System Student Recognition Award for Teaching Excellence

- This award was based on student evaluations and designed to reward those educators who go above and beyond in their classroom

2007- Selected to be a faculty mentor for Tarleton's Faculty Partner Program

- The overall goal of this program is to encourage meaningful partnerships with students to assist in successful student transition and persistence to graduate.

2003- Selected to be a graduate mentor for a McNair scholar

- The McNair Program is designed to prepare first-generation students for doctoral studies through involvement in research and other scholarly activities.

2003- Selected to be a Teaching Effectiveness And Career eHancement (TEACH) fellow

- The TEACH program assists graduate students in further developing their teaching skills and exploring faculty roles in academia.

2002- Inducted into The Honor Society of Phi Kappa Phi

- The Honor Society of Phi Kappa Phi is a 104-year-old organization whose mission is to recognize and promote academic excellence.

TEACHING EXPERIENCE (ARIZONA STATE UNIVERSITY)

Animal Behavior in a Changing Environment (ENV 394 – in-person)

- Fall 2022

Conservation in Practice (BIO 412 – in-person)

- Spring 2022, Spring 2023

General Biology II (BIO 182 - iCourse)

- Summer 2020

Fundamentals of Ecology Lab (LSC 322 - iCourse)

- Summer 2020-Summer 2022

The Living World (BIO 100 – ASU Sync/in-person)

- Fall 2020 – Spring 2023

TEACHING EXPERIENCE (TARLETON STATE UNIVERSITY)

Ecology (BIOL 401)

- Fall 2010 – Fall 2019

Ecology and Evolution (BIOL 353)

- Fall 2008 – Spring 2018

First Year Seminar (BIOL 100)

- Fall 2013 – Spring 2014

General Biology I (BIOL 120)

- Fall 2005 - Summer 2010

General Biology II (BIOL 121)

- Spring 2006 – Spring 2011

Ichthyology (BIOL 462)

- Spring 2006 – Spring 2019

Measuring Biological Diversity (BIOL 590)

- Spring 2012 – Spring 2019

Research Design and Analysis (BIOL 598)

- Fall 2005 – Fall 2019

Tropical Ecology (BIOL 4390)

- Summer 2015 – Summer 2019

TEACHING EXPERIENCE (SOUTH PLAINS COLLEGE)

General Zoology (BIOL 1204, lecture)

- Fall 2004 – Spring 2005

General Zoology (BIOL 1204, lab)

- Fall 2004 – Spring 2005

TEACHING EXPERIENCE (TEXAS TECH UNIVERSITY)

- Environmental Problems (BIOL 1113, lab)
 - Spring 2003 – Fall 2004
- Biology of Animals (BIOL 1402, lecture)
 - Summer 2002 – Summer 2003
- Biology of Animals (BIOL 1402, lab)
 - Spring 2001 – Summer 2003
- Human Anatomy (ZOOL 2403, lab)
 - Summer 2001
- Comparative Invertebrate Zoology (ZOOL 3406, lab)
 - Spring 2003 – Spring 2005
- Introduction to Ichthyology (ZOOL 4410, lab)
 - Spring 2004 – Spring 2005

REFEREED ARTICLES (STUDENT AUTHORS ARE UNDERLINED)

- De la Sancha, N.U., R. Maestri, R.S. Bovendorp, and C.L. Higgins. 2020. Disentangling drivers of small mammal diversity in a highly fragmented forest system. *Biotropica* 52:182-185.
- Presley, S.J., L.M. Cisneros, C.L. Higgins, B.T. Klingbeil, S.M. Scheiner, and M.R. Willig. 2018. Phylogenetic and functional underdispersion in Neotropical phyllostomid bat communities. *Biotropica* 50:135-145.
- Grimshaw, J.R. and C.L. Higgins. 2017. Environmental correlates of phylogenetic structure in Mexican bat communities. *Journal of Mammalogy* 98:1657-1666.
- Lingbeek, B.J., C.L. Higgins, J.P. Muir, D.H. Kattes, and T.W. Schwertner. 2017. Arthropod diversity and assemblage structure response to deforestation and desertification in the Sahel of western Senegal. *Global Ecology and Conservation* 11:165-176.
- Ruehle, B.P., K.K. Herrmann, and C.L. Higgins. 2017. Helminth parasite assemblages in two cyprinids with different life-history strategies. *Aquatic Ecology* 51:247-256.
- Medina Torres, K.M. and C.L. Higgins. 2016. Taxonomic and functional organization in metacommunity structure of stream-fish assemblages among and within river basins in Texas. *Aquatic Ecology* 50:247-259.
- Price, C.J., C.L. Higgins, K.K. Herrmann, and D.H. Kattes. 2015. Spatiotemporal variation in the distribution of spinose ear ticks (*Otobius megnini*) within animal shelters at Fossil Rim Wildlife Center. *The Southwestern Naturalist* 60:224-230.
- Higgins, C.L., A.R. Love-Snyder, W.W. Wiegreffe, and R.S. Pfau. 2015. Lack of hybridization between red and blacktail shiner (*Cyprinella lutrensis* and *C. venusta*) in two Texas rivers, but evidence of introgression among three lineages of the *C. lutrensis* species group. *Copeia* 103:272-280.

- Lopez-Gonzalez, C., S.J. Presley, A. Lozano, R.D. Stevens, and C.L. Higgins. 2014. Ecological biogeography of Mexican bats: the relative contribution of habitat heterogeneity, beta diversity, and environmental gradients to species richness patterns. *Ecography* 38:261-272.
- De la Sancha, N.U., C.L. Higgins, S.J. Presley, and R.E. Strauss. 2014. Understanding the relative contribution of historical biogeography and human-induced deforestation on metacommunity structure of Atlantic Forest small mammals. *Diversity and Distributions* 20:1058-1070.
- Lange, J.R., R.M. Harp, J.M. Cadle, R.S. Tarpley, C.L. Higgins, and B.D. Lambert. 2014. Lunar influence on post-castration performance of baby piglets. *The Texas Journal of Agriculture and Natural Resources* 27:1-12.
- Erős, T., P. Takács, P. Sály, C.L. Higgins, P. Bíró, and D. Schmera. 2014. Quantifying temporal variability in the metacommunity structure of stream fishes: the influence of non-native species and environmental drivers. *Hydrobiologia* 722:31-43.
- Munz, J.T. and C.L. Higgins. 2013. The influence of discharge, photoperiod, and temperature on the reproductive ecology of cyprinids in the Paluxy River, Texas. *Aquatic Ecology* 47:67-74.
- Lopez-Gonzalez, C., S.J. Presley, A. Lozano, R.D. Stevens, and C.L. Higgins. 2012. Metacommunity structure of Mexican bats: a test of metacommunity paradigms in an area of high geographic and environmental complexity. *Journal of Biogeography* 39: 177-192.
- Willig, M.R., S.J. Presley, C.P. Bloch, I. Castro-Arellano, L. Cisneros, C.L. Higgins, and B.T. Klingbeil. 2011. Tropical metacommunities and elevational gradients: disentangling effects of forest type from other elevational factors. *Oikos* 120: 1497-1508.
- Presley, S.J., M.R. Willig, C.P. Bloch, I. Castro-Arellano, C.L. Higgins, and B.T. Klingbeil. 2011. A complex metacommunity structure for gastropods along an elevational gradient: axes of specialization and environmental variation. *Biotropica* 43:480-488.
- Presley, S.J., C.L. Higgins, and M.R. Willig. 2010. Toward a comprehensive framework for the evaluation of metacommunity structure. *Oikos* 119: 908-917.
- Higgins, C.L. 2010. Patterns of functional and taxonomic organization of stream fishes: inferences based on α , β , and γ diversities. *Ecography* 33:678-687.
- Higgins, C.L. 2009. Spatiotemporal variation in functional and taxonomic organization of stream-fish assemblages in central Texas. *Aquatic Ecology* 43: 1133-1141.
- Presley, S.J., C.L. Higgins, C. Lopez-Gonzalez, and R.D. Stevens. 2009. Elements of metacommunity structure of Paraguayan bats: multiple gradients require analysis of multiple axes. *Oecologia* 160: 781-793.

- Higgins, C.L. and R.E. Strauss. 2008. Modeling stream-fish assemblages with niche apportionment models: patterns, processes, and scale dependence. *Transactions of the American Fisheries Society* 137: 696-706.
- Willig, M.R., C.P. Bloch, N. Brokaw, C.L. Higgins, J. Thompson, and C.R. Zimmermann. 2007. Cross-scale responses of biodiversity to hurricane and anthropogenic disturbance in a tropical forest. *Ecosystems* 10: 824-838.
- Bloch, C.P., C.L. Higgins, and M.R. Willig. 2007. Effects of large-scale disturbance on community structure: temporal trends in nestedness. *Oikos* 116: 395-406.
- Higgins, C.L., M.R. Willig, and R.E. Strauss. 2006. The role of stochastic processes in producing nested patterns of species distributions. *Oikos* 114: 159-167.
- Chizinski, C.J., C.L. Higgins, C.E. Shavlik, K.L. Pope. 2006. Multiple hypotheses testing of fish incidence patterns in an urbanized ecosystem. *Aquatic Ecology* 40: 97-109.
- Higgins, C.L., and G.R. Wilde. 2005. The role of salinity in structuring fish assemblages in a prairie stream system. *Hydrobiologia* 549: 197-203.
- Smith, C.D., C.L. Higgins, G.R. Wilde, and R.E. Strauss. 2005. Development of a morphological index of the nutritional status of juvenile largemouth bass. *Transactions of the American Fisheries Society* 134: 120-125.
- Higgins, C.L. and R.E. Strauss. 2004. Discrimination and classification of search paths produced by different search-tactic models. *Behavioral Ecology* 15: 248-254.

MANUSCRIPTS IN REVIEW (STUDENT AUTHORS ARE UNDERLINED)

None

MANUSCRIPTS IN PREP (STUDENT AUTHORS ARE UNDERLINED)

None

PUBLISHED ABSTRACTS

Higgins, C.L., P.J. Butler, and R.E. Strauss. 2000. Discrimination of foraging paths produced by different search models. *American Zoologist* 40: 1055-1056.

INVITED SEMINARS AND WORKSHOPS

- Higgins, C.L. 2019. Native Fish Conservation Areas of Central Texas: identifying current and future conservation needs. Department of Inland Fisheries within Texas Parks and Wildlife Department. Castell, TX
- Higgins, C.L. 2019. Timberlake Biological Field Station: education, outreach, and research. Mills County Soil and Water Conservation District. Goldthwaite, TX

- Higgins, C.L., J. Barkley, T. Shelly, G.F. Burch, K. Guay, J. Yeager, and C.D. Nugen. 2017. Panel Discussion: Finding and securing funding. Tarleton State University. Stephenville, TX
- Higgins, C.L. 2016. How to maintain a productive research program: the importance of engaging students in scholarly activity. Tarleton State University, Stephenville, TX
- Higgins, C.L. 2014. Major scientific discoveries and their incorporation into the mainstream with a special emphasis on evolution. Tarleton State University. Stephenville, TX
- Higgins, C.L. 2009. The effects of hurricanes on biodiversity in the Caribbean National Forest, Puerto Rico. Texas Bioscience Institute. Temple, TX
- Higgins, C.L. 2006. Incorporating Research Experiences into the Curriculum. Tarleton State University. Stephenville, TX

INVITED SYMPOSIA

- Higgins, C.L., R.E. Strauss, and G.R. Wilde. 2004. I survived and was released: my journey back home. Symposium titled "I Survived: A Fish's-Eye View in Black Bass Fishing Competitions." American Fisheries Society. Madison, WI

PRESENTATIONS (STUDENT AUTHORS ARE UNDERLINED)

- Zamzow, B. and C.L. Higgins. 2019. Spatial variation in taxonomic, functional, and phylogenetic diversity of freshwater fish assemblages in Texas. 66th Annual Meeting of the Southwestern Association of Naturalists. Chihuahua, Mexico
- Woolam, L.A., E. Sandoval, V.L. Chraibi, and C.L. Higgins. 2019. Assessing habitat quality for Texas state-threatened mussels by developing a diatom-based water quality metric using mesocosm experiments and field applications. 66th Annual Meeting of the Southwestern Association of Naturalists. Chihuahua, Mexico
- Hays, V. and C.L. Higgins. 2018. Effects of turbidity on intra- and interspecific shoaling preferences in two gregarious cyprinids. 65th Annual Meeting of the Southwestern Association of Naturalists. San Marcos, TX
- Vincik, J. and C.L. Higgins. 2018. Diversity of bat populations at Texas Army National Guard bases. 65th Annual Meeting of the Southwestern Association of Naturalists. San Marcos, TX
- Kaulfus, A.K. and C.L. Higgins. 2018. Mark-recapture efforts of the pistolgrip (*Quadrula verrucosa*) at Timberlake Biological Field Station. 65th Annual Meeting of the Southwestern Association of Naturalists. San Marcos, TX
- Woolam, L. and C.L. Higgins. 2018. Population and habitat assessment of freshwater mussels in the middle Colorado River and its tributaries. 65th Annual Meeting of the Southwestern Association of Naturalists. San Marcos, TX

- Kaulfus, A. and C.L. Higgins. 2017. Water quality and management at Timberlake Biological Field Station. 64th Annual Meeting of the Southwestern Association of Naturalists. Lawton, OK
- Hays, V. and C.L. Higgins. 2017. Effects of turbidity on intra- and interspecific shoaling preferences in two gregarious cyprinids. 64th Annual Meeting of the Southwestern Association of Naturalists. Lawton, OK
- Castaneda, E. and C.L. Higgins. 2017. Phylogenetic diversity of small mammals in a highly fragmented forest. 64th Annual Meeting of the Southwestern Association of Naturalists. Lawton, OK
- Kaulfus, A. and C.L. Higgins. 2016. Water quality and management at Timberlake Biological Field Station. Tarleton State University Student Research Symposium. Stephenville, TX
- Jensen, J.R. and C.L. Higgins. 2016. Examining species richness and phylogenetic diversity in bat assemblages across Mexico. 96th Annual Meeting of the American Society of Mammalogists. Minneapolis, MN
- Lingbeek, B., C.L. Higgins, D.H. Kattes, and J. Muir. 2016. Arthropod diversity response to deforestation and desertification in the Sahel region of western Senegal. 63rd Annual Meeting of the Southwestern Association of Naturalists, Mexico City, Mexico
- Jensen, J.R. and C.L. Higgins. 2016. Examining species richness and phylogenetic diversity patterns in bat communities across Mexico. 63rd Annual Meeting of the Southwestern Association of Naturalists, Mexico City, Mexico
- Hays, V. and C.L. Higgins. 2016. The importance of vision in shoaling behavior in *Cyprinella lutrensis* and *Cyprinella venusta*. 63rd Annual Meeting of the Southwestern Association of Naturalists, Mexico City, Mexico
- Ruehle, B.P., K.K. Herrmann, and C.L. Higgins. 2016. Relationship between diversity and abundance of parasites and reproductive potential in two cyprinids with different mating strategies. 63rd Annual Meeting of the Southwestern Association of Naturalists, Mexico City, Mexico
- Telgenhoff, G., P.D. Sudman, C.L. Higgins, and J.B. Breeden. 2016. A retrospective analysis of factors affecting reproductive success of captive cheetah, *Acinonyx jubatus*, at Fossil Rim Wildlife Center. 63rd Annual Meeting of the Southwestern Association of Naturalists, Mexico City, Mexico
- Lingbeek, B.*, D.H. Kattes, C.L. Higgins, J. Muir, and T.W. Schwertner. 2016. Arthropod diversity response to deforestation and desertification in the Sahel. 64th Annual Meeting of the Southwestern Branch of the Entomological Society of America. Tyler, TX
- Jensen, J.R.* and C.L. Higgins. 2016. Assessing the feasibility of using NABat monitoring protocol to characterize bat assemblages across Texas. 34th Annual Meeting of the Texas Society of Mammalogists. Junction, TX

Hays, V. and C.L. Higgins. 2015. Effects of turbidity on intra- and inter-specific shoaling preferences. Tarleton State University Research Symposium. Stephenville, TX

Lingbeek, B., C.L. Higgins, D. Kattes, and J. Muir. 2015. Biodiversity response to deforestation and desertification in the Sahel. Tarleton State University Research Symposium. Stephenville, TX

Jensen, J.R. and C.L. Higgins. 2015. Using NABat monitoring protocol to characterize bat assemblages in the Cross Timbers and Edward's Plateau ecoregions of Texas. Tarleton State University Research Symposium. Stephenville, TX

Ruehle, B., C.L. Higgins, and K. Herrmann. 2015. The relationship between parasitic infection and reproductive potential of two cyprinids with different reproductive strategies. 145th Annual Meeting of the American Fisheries Society. Portland, OR

Noé U. de la Sancha*, R. Maestri, S.J. Presley, and C.L. Higgins. 2015. Phylogenetic and functional diversity in a highly fragmented forest system. 95th Annual Meeting of the American Society of Mammalogists. Jacksonville, FL

Medina Torres, K.M. and C.L. Higgins. 2015. Taxonomic and functional changes in the metacommunity structure of stream-fish assemblages in Texas from 1988-2009. 62nd Annual Meeting of the Southwestern Association of Naturalists. San Diego, CA

Ruehle, B., C.L. Higgins, and K. Herrmann. 2015. The relationship between parasitic infection and reproductive potential of two cyprinids with different reproductive strategies. 62nd Annual Meeting of the Southwestern Association of Naturalists. San Diego, CA

Pyle, C.S. and C.L. Higgins. 2015. Mammals of Palo Pinto Mountains State Park: the initiation of a long-term survey. 62nd Annual Meeting of the Southwestern Association of Naturalists. San Diego, CA

Wiegrefe, W., J. Giocomo, C.L. Higgins, A. Nelson, and P. Sudman. 2015. Territorial aspects of the painted bunting (*Passerina ciris*) in the Texas Cross Timbers. 62nd Annual Meeting of the Southwestern Association of Naturalists. San Diego, CA

Medina-Torres, K.M. and C.L. Higgins. 2014. Taxonomic and functional changes in metacommunity structure of stream-fish assemblages in Texas from 1988-2009. Tarleton State University Research Symposium. Stephenville, TX

Ruehle, B. and C.L. Higgins. 2014. The effects of parasitic infection on the reproductive potential of two cyprinids with different reproductive strategies. Tarleton State University Research Symposium. Stephenville, TX

Price, C.J., J.L. Glass, C.N. Niebuhr, D.H. Kattes, K.K. Herrmann, T.W. Schwertner, and C.L. Higgins. 2013. Spatio-temporal dynamics of spinose ear ticks (*Otobius megnini*) at Fossil Rim Wildlife Center. 4th International Scientific Symposium for PhD Students and Students of Agricultural Colleges. Bydgoszcz, Poland

Kutovoy, G. and C.L. Higgins. 2013. Experimental studies of shoaling behavior in red shiner (*Cyprinella lutrensis*) and blacktail shiner (*C. venusta*). Texas BioScience Institute – part of NSF-STEP Grant “*The Central Texas 2-STEP.*” Temple, TX

- Price, C.J., C.L. Higgins, D.H. Kattes, K.K. Herrmann, and T.W. Schwertner. 2013. Population dynamics of spinose ear ticks (*Otobius megnini*) within animal shelters. 60th Annual Meeting of the Southwestern Association of Naturalists. Lake Charles, LA
- Wiegrefe, W., A.R. Love, C.L. Higgins, and R.S. Pfau. 2013. Lack of mitochondrial DNA introgression between red and blacktail shiners (Genus *Cyprinella*) in two Texas River. 60th Annual Meeting of the Southwestern Association of Naturalists. Lake Charles, LA
- Price, C.J., D.H. Kattes, C.L. Higgins, K. Herrmann, and T.W. Schwertner. 2013. Spatial and temporal variation in distribution and abundance of spinose ear ticks (*Otobius megnini*) within animal shelters at Fossil Rim Wildlife Center. Entomological Society of America – Southwestern Branch. Las Cruces, NM
- Wiegrefe, W., A. Love, C.L. Higgins, and R.S. Pfau. 2012. Lack of introgressive hybridization between red shiners and blacktail shiners in the Bosque and Paluxy Rivers. Tarleton State University Research Symposium. Stephenville, TX
- Price, C., D. Kattes, and C.L. Higgins. 2012. Spatial and temporal variation in distribution and abundance of spinose ear ticks (*Otobius megnini*) within animal shelters at Fossil Rim Wildlife Center. Tarleton State University Research Symposium. Stephenville, TX
- Love, A., C.L. Higgins, and R. Pfau. 2011. Hybridization between red shiner and blacktail shiner in the Paluxy River and Bosque River. Tarleton State University Research Symposium. Stephenville, TX
- Taylor, J., A.R. Love, and C.L. Higgins. 2011. Hybridization that produces morphological differences in minnows of the Paluxy and Bosque Rivers. Tarleton State University Research Symposium. Stephenville, TX
- DeGarmo, S. and C.L. Higgins. 2011. Patterns of species richness in freshwater fishes across North America. Tarleton State University Research Symposium. Stephenville, TX
- Munz, J.Y. and C.L. Higgins. 2011. Reproductive ecology of cyprinids in the Paluxy River. Southwestern Association of Naturalist. Tyler, TX
- Munz, J.Y. and C.L. Higgins. 2010. Reproductive ecology of the mimic shiner. Tarleton State University Student Research Symposium. Stephenville, TX
- Stone, K. and C.L. Higgins. 2010. Spatial and temporal variation in fish-assemblage structure along the Paluxy River. Tarleton State University Student Research Symposium. Stephenville, TX
- Munz, J.Y. and C.L. Higgins. 2009. Comparative analysis of biotic integrity between the Bosque and Paluxy. Tarleton State University Student Research Symposium. Stephenville, TX
- Blalack, E.A. and C.L. Higgins. 2009. Partitioning biodiversity of stream-fish assemblages in central Texas. Tarleton State University Student Research Symposium. Stephenville, TX

- Bloch, C.P., C.L. Higgins, and M.R. Willig. 2009. Long-term trends in spatial partitioning of biodiversity: considerations of disturbance and recovery. Long Term Ecological Research Network All Scientist Meeting. Estes park, CO
- Higgins, C.L., C.P. Bloch, and M.R. Willig. 2008. Temporal changes and the effects of disturbance on the partitioning of biodiversity of terrestrial gastropods at various spatial scales. Ecological Society of America. Milwaukee, WI
- Barmore, A.M. and C.L. Higgins. 2007. Habitat selection in blacktail shiners. Texas A&M University System Pathways Student Research Symposium. Stephenville, TX
- Higgins, C.L. 2006. Modeling stream-fish assemblages with niche apportionment models: patterns, processes, and scale dependence. Ecological Society of America. Memphis, TN
- Higgins, C.L. 2006. Spatiotemporal variation in fish assemblages based on species composition and functional groups. Southern Division of the American Fisheries Society. San Antonio, TX
- Chizinski, C.J., C.L. Higgins, and K.L. Pope. 2005. Fish communities in urban settings: multiple hypotheses testing of fish incidence patterns. Texas Chapter of the American Fisheries Society. Grapevine, TX
- Chizinski, C.J., C.L. Higgins, C.E. Shavlik, and K.L. Pope. 2004. Multiple hypotheses testing of fish incidence patterns in an urbanized ecosystem. American Fisheries Society. Madison, WI
- Higgins, C.L. and G.R. Wilde. 2003. The role of salinity in structuring stream-fish assemblages in a prairie stream system. TTUAB Graduate Forum. Lubbock, TX
- Higgins, C.L. and R.E. Strauss. 2001. Effects of temperature and diet on the timing of ossification in the livebearing fishes *Xiphophorus helleri* and *X. maculatus* (Poeciliidae). Society for the Study of Evolution. Knoxville, TN
- Higgins, C.L., P.J. Butler, and R.E. Strauss. 2001. Discrimination of foraging paths produced by different search models. Society for Integrative and Comparative Biology Chicago, IL
- Morris-Olson, L., M.A. Houck, C.L. Higgins, and G. de Grande. 2000. Honeybee wing morphology: multivariate discrimination of thelytokous populations. Entomological Society of America. Montreal-Quebec, Canada
- Higgins, C.L., O. Konu, and R.E. Strauss. 2000. Discrimination of foraging paths produced by different search tactics. Animal Behavior Society. Atlanta, GA
- Higgins, C.L. and J. Powers. 1998. Home range of the nine-banded armadillo, *Dasypus novemcinctus*, in the Concho Valley of Texas. Angelo State University. San Angelo, TX

PROFESSIONAL DEVELOPMENT ACTIVITIES ATTENDED

2019. 54th Annual Meeting of the Organization of Biological Field Stations. Brussels, Belgium

2019. 66th Annual Meeting of the Southwestern Association of Naturalists. Chihuahua, Mexico
2019. NSF BIO REU PI workshop. Arlington, VA
2019. Annual Meeting of the Texas Society of Mammalogists. Junction, TX
2018. National REU student scholar meeting. Alexandria, VA
2018. 53rd Annual Meeting of the Organization of Biological Field Stations
2018. Webinar “REU Registration Pilot Information Session” sponsored by the National Science Foundation. Stephenville, TX
2018. Workshop “Strategies for success: a mini-course for field station leaders” sponsored by the Organization of Biological Field Stations. Bangor, ME
2018. 65th Annual Meeting of the Southwestern Association of Naturalists. San Marcos, TX
2018. Annual meeting of the Texas Society of Mammalogists. Junction, TX 2017. NSF REU PI workshop. Arlington, VA
2016. 63rd Annual Meeting of the Southwestern Association of Naturalists, Mexico City, Mexico
2015. 62nd Annual Meeting of the Southwestern Association of Naturalist. San Diego, CA
2014. Webinar “SimBio's Flipping the Ecology Classroom Webinar Series” sponsored by the National Science Foundation. Stephenville, TX
2013. Webinar “Research Ethics for Undergraduate Research Programs” sponsored by the Council of Undergraduate Research. Stephenville, TX
2013. 60th Annual Meeting. Southwestern Association of Naturalist. Lake Charles, LA
2011. 58th Annual Meeting. Southwestern Association of Naturalist. Tyler, TX
2010. 57th Annual Meeting. Southwestern Association of Naturalists. Junction, TX
2010. 113th Annual Meeting. Texas Academy of Sciences. Stephenville, TX
2009. Beginning a Research Program in the Natural Sciences at a Predominantly Undergrad Institutions. Council of Undergraduate Research. Grand Rapids, MI
2008. 93rd Annual Meeting. Ecological Society of America. Milwaukee, WI
2007. 54th Annual Meeting. Southwestern Association of Naturalists. Stephenville, TX
2006. 91st Annual Meeting. Ecological Society of America. Memphis, TN
2006. 11th National Conference. Council of Undergraduate Research. Greencastle, IN
2006. 14th Annual Meeting. Southern Division of the American Fisheries Society. San Antonio, TX

GRANTS AND FUNDING RECEIVED (TOTAL = \$497,728)

- Nevado, T., L. Lohmann, C. Curry, S. Hoover, S. McMahon, and C.L. Higgins. 2022. Improving nature connectedness in urban environments to improve mental health. \$3,000 from New College Undergraduate Inquiry and Research Experiences program.
- Higgins, C.L. (PI) and B. Bellows (Co-PI). 2017. REU Site: Restoring working cattle ranches for sustainable land and water resources. \$349,822 from the National Science Foundation's Research Experience for Undergraduates program.
- Higgins, C.L. 2017. Survey of bat assemblages at Camp Bowie and Camp Swift military training facilities. \$31,416 Wildlife Research Grant from Texas Military Department.
- Higgins, C.L. and P.D. Sudman. 2014. The mammals of Palo Pinto Mountains State Park, Texas. \$24,147 Wildlife Research Grant from Texas Parks and Wildlife Department.
- Pyle, C. and C.L. Higgins. 2014. A comparative study of small-mammal assemblages in riparian zones along perennial and ephemeral creeks. \$1,900 Student Research Grant from Tarleton State University, Office of Student Research and Creative Activities.
- Higgins, C.L. 2014. Effects of turbidity on intra- and inter-specific shoaling preferences. \$10,159 from Tarleton State University, Organized Research Grant.
- Higgins, C.L. 2012. Impact of culverts on partial migration in cyprinids along the Paluxy River. \$13,324 from Tarleton State University, Organized Research Grant.
- Higgins, C.L. 2011. Historic hybridization within the genus *Cyprinella*. \$14,003 from Tarleton State University, Organized Research Grant.
- Higgins, C.L. 2010. Hybridization between blacktail and red shiners in the Paluxy River. \$13,485 from Tarleton State University, Organized Research Grant.
- Higgins, C.L. 2009. The role of acoustic communication in shoal formation in fishes. \$15,535 from Tarleton State University, Organized Research Grant.
- Higgins, C.L. 2006. Habitat selection in stream-dwelling cyprinids: combining experimental and observational approaches. \$16,437 from Tarleton State University, Organized Research Grant.
- Higgins, C.L. 2004. Functional groups in stream fishes: spatiotemporal variation, ontogenetic change, and patterns of diversity. \$2,000 from Texas Tech University, Graduate School.
- Higgins, C.L. 2001. Evolutionary significance of growth rates among five species from the family Poeciliidae. \$2,000 from Texas Tech University, Department of Biological Sciences.
- Higgins, C.L. 2000. Discrimination and classification of search paths produced by different search-tactic models. \$2,400 from Texas Tech University, Department of Biological Sciences.

PENDING GRANTS (TOTAL = \$000,000)

None

CURRENT GRADUATE STUDENTS

None

CURRENT UNDERGRADUATE STUDENTS

None

PREVIOUS GRADUATE STUDENTS

Austin Kaulfus (2019) – Monitoring the water quality of the Colorado River at Timberlake Biological Field Station

Vanessa Hays (2018) - Effects of turbidity on shoaling behavior in two stream-dwelling cyprinids: visual and olfactory cues

Jenna Jensen (2016) – Patterns of phylogenetic dispersion in bat assemblages across Mexico: evidence from multiple measures of phylogenetic diversity.

Brandon Lingbeek (2016) – Arthropod diversity response to deforestation and desertification in the Sahel region of western Senegal (Co-Chair Dr. Jim Muir)

Brandon Ruehle (2016) – Effects of parasitism on life-history traits in two minnows with different reproductive strategies

Caitlin Pyle (2015) – The initiation of a long-term mammal survey of Palo Pinto Mountains State Park, Strawn, Texas

Kryztal Medina Torres (2015) – Taxonomic and functional changes in the metacommunity structure of stream-fish assemblages in Texas from 1988–2009

Callie Price (2013) – Spatial and temporal variation in the distribution and abundance of spinose ear ticks at Fossil Rim Wildlife Center

Allison Love (2012) – Hybridization between blacktail and red shiners in the Paluxy River

Jeremy Munz (2012) – Reproductive ecology of cyprinids in the Paluxy River

Karla Stone (2011) – Spatial and temporal variation in fish assemblage structure in the Paluxy River

PREVIOUS UNDERGRADUATE STUDENTS

Vanessa Maciel (2021) – Making a bioblitz fun

Charles Collins (2021) – How to participate in the ASU West Global BioBlitz

Ambar Melendez (2019) – Effects of grazing on arthropod distribution and abundance.

- Julia Granger (2019) – Survey of mammals at Timberlake Biological Field Station
- Mary Wallace (2018) – Comparison of arthropod diversity in different agroecosystems.
- Robert Martin (2018) – Survey of bats at Camp Bowie and camp Swift
- Madison Gover (2017) – Survey of bats at Camp Bowie
- Elexis Hargis (2017) – Survey of bats at Camp Swift
- Melody Cagel (2016) – Survey of mammals at Palo Pinto Mountains State Park
- Sarah Brown (2016) – Characterization of woody vegetation in areas used by small mammals at Palo Pinto Mountains State Park
- Paul Boettiger (2015) – Using acoustic detectors to survey bat assemblages in the Cross Timbers and Edward’s Plateau ecoregions of Texas
- Elizabeth Grisham (2014) - Survey of mammals at Palo Pinto Mountains State Park
- Allen Williams (2014) - Survey of mammals at Palo Pinto Mountains State Park
- Jacob Henson (2013) – Habitat selection in cyprinids from the Bosque and Paluxy Rivers
- Gennady Kutovoy (2013) – The importance of vision in shoaling preference of *Cyprinella lutrensis* and *Cyprinella venusta*
- Collin Dannemiller (2013) – Comparing fecundity estimates for blacktail and red shiner from two tributaries of the Brazos River
- Amanda Kimmel (2013) - Laboratory documentation of hybridization between blacktail and red shiners
- Philip Sterle (2013 - Using passive integrated transponders (PIT tags) to assess dispersal limitation in blacktail shiner
- Abby Jones (2013) - Monitoring tick abundance at Fossil Rim Wildlife Center
- Wesley Wiegrefe (2012) - Historic hybridization between blacktail and red shiners as evidenced by mtDNA
- Stefanie Musick (2012) - Estimating abundance of larval spinose ear ticks at Fossil Rim Wildlife Center
- Jessica Taylor (2011) – Landmark based morphometrics of blacktail shiner in the Bosque and Paluxy Rivers
- Sarah DeGarmo (2011) – Patterns of species richness in freshwater fishes across North America
- Janet Reid (2011) – Maximum body size of North American freshwater fishes
- Crystal Neff (2011) – Using online databases to gather data for macroecological studies
- Jennifer Major (2010) – Ecomorphology of blacktail shiner, red shiner, and their hybrids
- Christian Perez (2010) – Genetic analysis of blacktail shiner, red shiner, and their hybrids
- Crystal Ibarra (2010) – Geographic distributions of North American freshwater fishes

Caitlin Pyle (2010) – Sound production in red shiner

Jeremy Munz (2009) - Comparative analysis of biological integrity between the Bosque and Paluxy Rivers

Emily Blalack (2009) - Partitioning biodiversity of stream-fish assemblages in central Texas

Melissa Edwards (2009) - Using mark-recapture data to generate population growth models

Shy Eisenbach (2007) – Current preferences in blacktail shiner

PROFESSIONAL MEMBERSHIPS

None

SERVICE AS REVIEWER (MULTIPLE TIMES FOR MANY JOURNALS)

American Midland Naturalist

American Naturalist

Behavioral Ecology

Caribbean Naturalist

Ecology

Ecography

Ecology of Freshwater Fish

Environmental Biology of Fishes

European Journal of Operational Research

Diversity

Diversity and Distributions

Hydrobiologia

International Journal of Primatology

Journal of Biogeography

Marine and Freshwater Research

Naturwissenschaften

North American Journal of Fisheries Management

Oecologia

Oikos

PLoS ONE

Proceedings of the Southeastern Fishes Council
Southeastern Naturalist
Southwestern Naturalist
Texas Journal of Science
Transactions of the American Fisheries Society
US Geological Survey, Cooperative Research Units

ARIZONA STATE UNIVERSITY SERVICE

Member of MNS Personnel Committee (2022 – present)
Member of MNS Teaching Equity Task Force (2021 – present)
Member of MNS Service Equity Task Force (2021 – present)
Member of NCIAS By-laws Committee (2021 – present)
Course Coordinator for BIO 100 – The Living World @ ASU West (2020 – present)
Presenter for NCEHHS summer research program @ ASU West (June 4, 2021)
Event coordinator for Walk & Learn Series (February 19, 2021; April 9, 2021)
Member of MNS Student Engagement Working Group (2020 - 2021)

TARLETON STATE UNIVERSITY SERVICE

Chair, TBFS Steering Committee (2018 – 2019)
Carnegie Steering Committee (2017 – 2018)
Writing Intensive Task Force (2017 – 2019)
COST Tenure and Promotion Teaching Guidelines (2016 – 2018)
Chair, COST Study Abroad Programing Committee (2014 – 2019)
COST Representative on the Global Engagement Board (2014 – 2019)
Academic Appeals Committee (2006 - 2016)
PIFAC Advisory Committee for Maestro (2014 – 2016)
Education Subcommittee of the Bosque River Trails Project (2013 – 2015)
Search Committee for Limnologist position in Biology Department (2016)
Chair, COST Research Appreciation Week Committee (2015)
Search Committee for Director of the Center for Environmental Studies (2014)
Event Coordinator for Science Olympiad (2006 - 2013)
Faculty Senate (2008 – 2011)
General Education Advisory Council (2009 – 2011)

Task Force for the College Readiness Initiative (2008 – 2010)
Edit Review Committee (2008 - 2009)
Faculty Achievement Grants Committee (2008 – 2009)
Faculty Development Leave Committee (2008 – 2009)
COST Curriculum Committee (2007 – 2009)
Faculty Mentor for Faculty Partner Program (2007 - 2009)
Speaker Symposium Committee (2007 – 2009)
Task Force for Diversity Within the Curriculum (2007 – 2009)
University Curriculum Committee (2007 – 2009)

PROFESSIONAL SERVICE

Member of the Communications Committee for the international Organization of Biological Field Stations (2019)
External reviewer for Bailey Jacobson's dissertation defense, a PhD student of Dr. Pedro Peres-Neto at the University of Quebec and Montreal (2014)
Judge for poster awards at annual SWAN meeting (2013, 2015)
Participated as faculty recruiter for GEMS program at Northwest Vista Community College in San Antonio, Texas (2012)
Guest speaker for STAR Council Bosque Safari Summer Camp (2010)
External reviewer for University of Central Oklahoma in-house grant proposals (2010)
Judge for Texas Academy of Science Student Proposal Competition (2010, 2013)
Judge for San Antonio Agriscience Fair (2008 – 2009)
Annual Meeting Committee - Southwestern Association of Naturalists (2007)
