CHRISTOPHER L. HIGGINS, PH.D.

CURRICULUM VITAE

2025

CONTACT INFORMATION

Assistant Teaching Professor | School of Mathematical & Natural Sciences
New College of Interdisciplinary Arts & Sciences | Arizona State University
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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 & BIO 100 Coordinator, School of Mathematical and Natural Sciences (2023 – present)
- Lecture & BIO 100 Coordinator, 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)

TEACHING EXPERIENCE (ARIZONA STATE UNIVERSITY)

- **Animal Behavior in Changing Environments (ENV 394)** explores how animals adapt their behavior in response to environmental shifts, including climate change, habitat loss, and human activity. This course examines key behavioral strategies such as migration, foraging, communication, and social dynamics, highlighting their ecological and evolutionary implications.
- **Conservation in Practice (BIO 412)** provides a hands-on exploration of real-world conservation strategies used to protect biodiversity and ecosystems. Students will examine case studies, field techniques, policy approaches, and community-based initiatives that address challenges such as habitat loss, climate change, and species conservation.
- **General Biology I (BIO 181)** is the first semester introductory course that introduces biological concepts, emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. It is intended for life sciences, biology, and health-related science majors.
- **General Biology II (BIO 182)** is the second semester introductory coursre that introduces biological concepts at the interplay of structure and function at the organismal, population, and community levels. It is intended for life sciences, biology, and health-related science majors.
- **Fundamentals of Ecology Lab (LSC 322)** introduces students to essential research methods in ecology, including manipulative experiments, observational studies, and ecological modeling. Through hands-on laboratory and field activities, students will explore key ecological concepts, analyze data, and develop scientific inquiry skills used in contemporary ecological research.
- **The Living World (BIO 100)** introduces fundamental biological concepts with a focus on real-world applications. Topics include genetics, evolution, biodiversity, and ecology. Designed for students without a science background, this course emphasizes critical thinking, scientific literacy, and the relevance of biology in everyday life

TEACHING EXPERIENCE (TARLETON STATE UNIVERSITY)

- **Ecology** was an upper-level course exploring the interactions between organisms and their environments at individual, population, community, and ecosystem levels. Students will examine ecological principles, including energy flow, nutrient cycling, species interactions, and biodiversity, with an emphasis on real-world applications and environmental challenges.
- **Ecology and Evolution** was an upper-level course exploring the interactions between organisms and their environments through an evolutionary lens. Students will examine key ecological principles, such as population dynamics, species interactions, and ecosystem processes, alongside evolutionary mechanisms like natural selection, speciation, and adaptation.
- **First-Year Seminar** is an interactive course designed to introduce students to critical thinking, academic inquiry, and interdisciplinary learning. Through discussions, readings, and experiential activities, students will explore diverse topics while developing essential skills in communication, research, and problem-solving.

- **General Biology I** was the first semester introductory course that introduced biological concepts, emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. It was intended for life sciences, biology, and health-related science majors.
- **General Biology II** was the second semester introductory course that introduced biological concepts at the interplay of structure and function at the organismal, population, and community levels. It was intended for life sciences, biology, and health-related science majors.
- **Ichthyology** is the study of fish, focusing on their biology, evolution, ecology, and diversity. Students will explore the anatomy, physiology, behavior, and environmental roles of fish species, as well as their conservation. Through lectures, lab work, and field studies, this course provides a comprehensive understanding of fish and their importance in aquatic ecosystems.
- **Measuring Biological Diversity** explored methods and techniques used to quantify and assess biodiversity across different ecosystems. Students will examine species richness, evenness, and functional diversity, along with tools for collecting and analyzing biodiversity data. This course emphasizes the importance of biodiversity measurement in conservation, ecology, and environmental management.
- **Research Design and Analysis** was a graduate-level course that focuses on the principles and methodologies of designing and analyzing scientific research. Students will learn about experimental design, data collection techniques, statistical analysis, and interpreting research results. Emphasizing both theoretical understanding and practical application, this course equips students with the skills needed to conduct robust, reproducible research.
- **Tropical Ecology** offered immersive, hands-on experience studying the ecology of tropical ecosystems. Students will explore the rich biodiversity of Costa Rica's rainforests, wetlands, and coastal habitats, learning about species interactions, forest dynamics, and conservation challenges. Through field excursions, data collection, and ecological analysis, this course provided a deep understanding of tropical ecosystems and their environmental significance.

PUBLICATIONS (STUDENT AUTHORS ARE BOLDED)

1. 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.
2. 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.
3. **Grimshaw, J.R**. and C.L. Higgins. 2017. Environmental correlates of phylogenetic structure in Mexican bat communities. *Journal of Mammalogy* 98:1657-1666.
4. **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.
5. **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.

6. **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 Ploin Texas. *Aquatic Ecology* 50:247-259.
7. **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.
8. 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.
9. 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.
10. 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.
11. **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.
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.
13. **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.
14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. Higgins, C.L. 2009. Spatiotemporal variation in functional and taxonomic organization of stream-fish assemblages in central Texas. *Aquatic Ecology* 43: 1133-1141.
20. 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.

21. 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.
22. 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.
23. 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.
24. 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.
25. 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.
26. 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.
27. 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.
28. 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.

PUBLISHED ABSTRACTS (STUDENT AUTHORS ARE BOLDED)

- 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

1. 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
2. Higgins, C.L. 2019. Timberlake Biological Field Station: education, outreach, and research. Mills County Soil and Water Conservation District. Goldthwaite, TX
3. 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
4. Higgins, C.L. 2016. How to maintain a productive research program: the importance of engaging students in scholarly activity. Tarleton State University, Stephenville, TX
5. Higgins, C.L. 2014. Major scientific discoveries and their incorporation into the mainstream with a special emphasis on evolution. Tarleton State University. Stephenville, TX
6. Higgins, C.L. 2009. The effects of hurricanes on biodiversity in the Caribbean National Forest, Puerto Rico. Texas Bioscience Institute. Temple, TX
7. 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)

1. **Walsh, E., D. Webner,** and C.L. Higgins. 2025. Assessing the decline of saguaros: investigating health patterns in urban and natural landscapes. 66th Annual Meeting of the Arizona Nevada Academy of Sciences. Glendale, AZ
2. **Walsh, E., D. Webner,** and C.L. Higgins. 2025. Assessing the decline of saguaros: investigating health patterns in urban and natural landscapes. New College Undergraduate Inquiry and Research Experiences Symposium. Glendale, AZ
3. **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
4. **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
5. **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
6. **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
7. **Kaulfus, A.K.** and C.L. Higgins. 2018. Mark-recapture efforts of the pistolgrip (*Quadrula verruccosa*) at Timberlake Biological Field Station. 65th Annual Meeting of the Southwestern Association of Naturalists. San Marcos, TX
8. **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
9. **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
10. **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
11. **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
12. **Kaulfus, A.** and C.L. Higgins. 2016. Water quality and management at Timberlake Biological Field Station. Tarleton State University Student Research Symposium. Stephenville, TX
13. **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
14. **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
15. **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

16. **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
17. **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
18. **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
19. **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
20. **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 Mammologists. Junction, TX
21. **Hays, V.** and C.L. Higgins. 2015. Effects of turbidity on intra- and inter-specific shoaling preferences. Tarleton State University Research Symposium. Stephenville, TX
22. **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
23. **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
24. **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
25. 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
26. **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
27. **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
28. **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
29. **Wiegreffe, W**., J. Giocomo, C.L. Higgins, A. Nelson, andd 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
30. **Medina-Torres, K.M.** and C.L. Higgins. 2014. Taxonomic and functional changes in metacommunity striucture of stream-fish assemblages in Texas from 1988-2009. Tarleton State University Research Symposium. Stephenville, TX

31. **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
32. **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
33. **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
34. **Price, C.J.,** C.L. Higgins, D.H. Kattes, K.K. Herrmann, and T.W. Schwertner. 2013. Population dynamics of spinose ear ticks (*Otobius megini*) within animal shelters. 60th Annual Meeting of the Southwestern Association of Naturalists. Lake Charles, LA
35. **Wiegreffe, 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
36. **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
37. **Wiegreffe,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
38. **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
39. **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
40. **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
41. **DeGarmo, S.** and C.L. Higgins. 2011. Patterns of species richness in freshwater fishes across North America. Tarleton State University Research Symposium. Stephenville, TX
42. **Munz, J.Y.** and C.L. Higgins. 2011. Reproductive ecology of cyprinids in the Paluxy River. Southwestern Association of Naturalist. Tyler, TX
43. **Munz, J.Y.** and C.L. Higgins. 2010. Reproductive ecology of the mimic shiner. Tarleton State University Student Research Symposium. Stephenville, TX
44. **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
45. **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
46. **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

47. 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
48. 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
49. **Barmore, A.M.** and C.L. Higgins. 2007. Habitat selection in blacktail shiners. Texas A&M University System Pathways Student Research Symposium. Stephenville, TX
50. Higgins, C.L. 2006. Modeling stream-fish assemblages with niche apportionment models: patterns, processes, and scale dependence. Ecological Society of America. Memphis, TN
51. 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
52. 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
53. 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
54. 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
55. 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
56. 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
57. 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
58. Higgins, C.L., O. Konu, and R.E. Strauss. 2000. Discrimination of foraging paths produces by different search tactics. Animal Behavior Society. Atlanta, GA
59. 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

GRANTS AND FUNDING RECEIVED (TOTAL = $498,628)

1. Walsh, E., D. Webner, and C.L. Higgins. 2024. Assessing the decline of saguaros: investigating health patterns in urban and natural landscapes. $1,000 from New College Undergraduate Inquiry and Research Experiences program.
2. 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.
3. 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.
4. 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.
5. 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.

6. 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.
7. Higgins, C.L. 2014. Effects of turbidity on intra- and inter-specific shoaling preferences. $10,159 from Tarleton State University, Organized Research Grant.
8. 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.
9. Higgins, C.L. 2011. Historic hybridization within the genus *Cyprinella*. $14,003 from Tarleton State University, Organized Research Grant.
10. Higgins, C.L. 2010. Hybridization between blacktail and red shiners in the Paluxy River. $13,485 from Tarleton State University, Organized Research Grant.
11. Higgins, C.L. 2009. The role of acoustic communication in shoal formation in fishes. $15,535 from Tarleton State University, Organized Research Grant.
12. Higgins, C.L. 2006. Habitat selection in stream-dwelling cyprinids: combining experimental and observational approaches. $16,437 from Tarleton State University, Organized Research Grant.
13. 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.
14. 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.
15. 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.

ACADEMIC AWARDS AND PROFESSIONAL HONORS

- 2023 – Recipient of a Teaching Impact Award at Arizona State University - this award was given for teaching more than 400 students
- 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.

SERVING UNIVERSITY NEEDS AWARDS (ARIZONA STATE UNIVERSITY)

- SUN Award (Spring 2025) - your service as a judge plays a vital role in fostering undergraduate research and driving student engagement, retention, and success within MNS, across New College, and throughout ASU.
- SUN Award (Spring 2025) - your dedication to presenting Animal & Plant Picture Bioblitz helped create an engaging, hands-on experience for visitors, showcasing ASU's commitment to education and community outreach.
- SUN Award (Spring 2025) – organizing a training event for the Greater Phoenix City Nature Challenge at Thunderbird Conservation Park.
- SUN Award (Spring 2025) – participating in Open Door by handing out coyote origami and encouraging campus bioblitz.
- SUN Award (Fall 2024) – amazing mentorship of the West Valley student garden.
- SUN Award (Fall 2024) – fostering an inclusive learning environment for advanced first year composition students
- SUN Award (Summer 2024) – my running a campus bioblitz for the Trio Summer Upward Bound camp, emphasizing the benefits of nature relatedness on mental health.
- SUN Award (Fall 2023) – helping arrange a lab tour for Peoria's CTE high school students
- SUN Award (Summer 2020) – supporting student success while planning and effectively deploying two sections of BIO 182 and one section of LSC 322.

STUDENT MENTORING (ARIZONA STATE UNIVERSITY)

1. Erin Walsh (2025) – Assessing the decline of saguaros: investigating health patterns in urban and natural landscapes (NCUIRE Team Award)
2. Daphne Webner (2025) – Assessing the decline of saguaros: investigating health patterns in urban and natural landscapes (NCUIRE Team Award)
3. Eduardo Vallarta (2025) – Effects of climate on desert life. (Honors Enrichment Contract)
4. Ashley Raap (2024) – Training for the 2024 Greater Phoenix City Nature Challenge (Honors Enrichment Contract)
5. Deborah Ehuwa (2024) – Effects of soil type on bell pepper growth (Honors Enrichment Contract)
6. Devanshi Acharya (2023) – Promoting citizen science: the Saguaro Snapshot Challenge (Honors Enrichment Contract)
7. Jenna Walters (2023) – A conservation video for burrowing owls (Honors Enrichment Contract)
8. Vanessa Karuhje (2023) – Racial differences in the relationship between nature relatedness and mental health (Honors Enrichment Contract)

9. Erik Hernandez (2022) - Using surveys to examine the relationship between nature connectedness and mental health (Honors Enrichment Contract)
10. Obriannie Davies (2022) - Using surveys to examine the relationship between nature connectedness and mental health (Honors Enrichment Contract)
11. Megan Cooksey (2022) - Using surveys to examine the relationship between nature connectedness and mental health (Honors Enrichment Contract)
12. Sofia Hoover (2022) – Enhancing nature connectedness to improve mental health (NCUIRE Team award)
13. Trisha Nevado (2022) – Enhancing nature connectedness to improve mental health (NCUIRE Team award)
14. Sophia McMahon (2022) – Enhancing nature connectedness to improve mental health (NCUIRE Team award)
15. Crimsen Curry (2022) – Enhancing nature connectedness to improve mental health (NCUIRE Team award)
16. Samantha Lohmann (2022) – Enhancing nature connectedness to improve mental health (NCUIRE Team award)
17. Danika Russell (2022) – The Colorado River: a lifeline of the southwest (Honors Enrichment Contract)
18. Gabriela Dimas (2022) – Why endangered species in Indonesia must be saved (Honors Enrichment Contract)
19. Vanessa Maciel (2021) – Using citizen science for monitoring biodiversity (Honors Enrichment Contract)
20. Charles Collins (2021) – How to participate in the ASU West Global BioBlitz (Honors Enrichment Contract)

UNDERGRADUATE STUDENT MENTORING (TARLETON STATE UNIVERSITY)

1. Ambar Melendez (2019) – Effects of grazing on arthropod distribution and abundance.
2. Julia Granger (2019) – Survey of mammals at Timberlake Biological Field Station
3. Mary Wallace (2018) – Comparison of arthropod diversity in different agroecosystems.
4. Robert Martin (2018) – Survey of bats at Camp Bowie and Camp Swift
5. Madison Gover (2017) – Survey of bats at Camp Bowie
6. Elexis Hargis (2017) – Survey of bats at Camp Swift
7. Melody Cagel (2016) – Survey of mammals at Palo Pinto Mountains State Park
8. Sarah Brown (2016) – Characterization of woody vegetation in areas used by small mammals at Palo Pinto Mountains State Park
9. Paul Boettiger (2015) – Using acoustic detectors to survey bat assemblages in the Cross Timbers and Edward's Plateau ecoregions of Texas
10. Elizabeth Grisham (2014) - Survey of mammals at Palo Pinto Mountains State Park
11. Allen Williams (2014) - Survey of mammals at Palo Pinto Mountains State Park
12. Jacob Henson (2013) – Habitat selection in cyprinids from the Bosque and Paluxy Rivers
13. Gennady Kutovoy (2013) – The importance of vision in shoaling preference of *Cyprinella lutrensis* and *Cyprinella venusta*
14. Collin Dannemiller (2013) – Comparing fecundity estimates for blacktail and red shiner from two tributaries of the Brazos River
15. Amanda Kimmel (2013) - Laboratory documentation of hybridization between blacktail and red shiners

16. Philip Sterle (2013 - Using passive integrated transponders (PIT tags) to assess dispersal limitation in blacktail shiner
17. Abby Jones (2013) - Monitoring tick abundance at Fossil Rim Wildlife Center
18. Wesley Wiegreffe (2012) - Historic hybridization between blacktail and red shiners as evidenced by mtDNA
19. Stefanie Musick (2012) - Estimating abundance of larval spinose ear ticks at Fossil Rim Wildlife Center
20. Jessica Taylor (2011) – Landmark based morphometrics of blacktail shiner in the Bosque and Paluxy Rivers
21. Sarah DeGarmo (2011) – Patterns of species richness in freshwater fishes across North America
22. Janet Reid (2011) – Maximum body size of North American freshwater fishes
23. Crystal Neff (2011) – Using online databases to gather data for macroecological studies
24. Jennifer Major (2010) – Ecomorphology of blacktail shiner, red shiner, and their hybrids
25. Christian Perez (2010) – Genetic analysis of blacktail shiner, red shiner, and their hybrids
26. Crystal Ibarra (2010) – Geographic distributions of North American freshwater fishes
27. Caitlin Pyle (2010) – Sound production in red shiner
28. Jeremy Munz (2009) - Comparative analysis of biological integrity between the Bosque and Paluxy Rivers
29. Emily Blalack (2009) - Partitioning biodiversity of stream-fish assemblages in central Texas
30. Melissa Edwards (2009) - Using mark-recapture data to generate population growth models
31. Shy Eisenbach (2007) – Current preferences in blacktail shiner

GRADUATE STUDENTS MENTORED (TARLETON STATE UNIVERSITY)

1. Austin Kaulfus (2019) – Monitoring the water quality of the Colorado River at Timberlake Biological Field Station
2. Vanessa Hays (2018) - Effects of turbidity on shoaling behavior in two stream-dwelling cyprinids: visual and olfactory cues
3. Jenna Jensen (2016) – Patterns of phylogenetic dispersion in bat assemblages across Mexico: evidence from multiple measures of phylogenetic diversity.
4. Brandon Lingbeek (2016) – Arthropod diversity response to deforestation and desertification in the Sahel region of western Senegal (Co-Chair Dr. Jim Muir)
5. Brandon Ruehle (2016) – Effects of parasitism on life-history traits in two minnows with different reproductive strategies
6. Caitlin Pyle (2015) – The initiation of a long-term mammal survey of Palo Pinto Mountains State Park, Strawn, Texas
7. Kryztal Medina Torres (2015) – Taxonomic and functional changes in the metacommunity structure of stream-fish assemblages in Texas from 1988–2009
8. Callie Price (2013) – Spatial and temporal variation in the distribution and abundance of spinose ear ticks at Fossil Rim Wildlife Center
9. Allison Love (2012) – Lack of hybridization between red and blacktail in two Texas rivers, but evidence of introgression among three lineages of the *C. lutrensis* group.
10. Jeremy Munz (2012) – The influence of discharge, photoperiod, and temperature on the reproductive ecology of cyprinids in the Paluxy River, Texas.
11. Karla Stone (2011) – Spatial and temporal variation in fish assemblage structure in the Paluxy River

ARIZONA STATE UNIVERSITY SERVICE

- **New College of Interdisciplinary Arts and Sciences**
  1. Faculty Advisor for Society for Promoting Indian Culture and Ethnicity (SPICE) club (2024 – present) – My role is to provide guidance, mentorship, and support, ensuring the club operates effectively, aligns with institutional policies, and fosters student development.
  2. Volunteer for Pitchfork Pantry (2024) – I helped packed food from St. Marys food bank to hand out to students on the West Valley campus.
  3. Member of the NCUIRE Application Review Committee (2024, 2025) – I served on a review committee for student proposal.
  4. Judge for NCUIRE symposium (2023-2025) – I judged student posters at the New College Undergraduate Inquiry and Research Experience symposium
  5. Member of NCIAS By-laws Committee (2021 – 2023) – I was part of the inclusion of DEI and changes in career track faculty wording, serving as Chair my last year.
  6. BioBlitzing with Upward Bound Summer Program (2024) – I gave a brief presentation over citizen science, then had the students photograph campus wildlife and upload to the ASU West Valley BioBlitz.
  7. BioBlitzing with students from the Boys and Girls Club of Arizona (2024) – I had the students conduct a quick experiment, answering the question of which flower color attracts the most pollinators. After they surveyed the flowerbeds surrounding the rec center, we regrouped to discuss their findings. Then we discussed the importance of nature and mental health.
- **School of Mathematical and Natural Sciences**
  1. Course Coordinator for BIO 100 – The Living World (2020 – present) – I have maintained consistency among lecture and lab sections
  2. Participant for Solera (2023) – I served as the SMNS representative during a Q&A session during the Solera Experience designed for incoming students.
  3. Participant for Major Monday (2023) – I answered student questions regarding different majors within the unit
  4. West Valley Biological Scavenger Hunt (2022 – 2023) – I was guest speaker for two ASU Prep events in which students were introduced to the concept of citizen science
  5. Member of MNS Personnel Committee (2022 – 2023) – I served as first CTF representative on committee, even before bylaws allowed.
  6. Member of MNS Teaching Equity Task Force (2021 – 2023) – I was asked about the amount of teaching credit that should be given for a 4 credit integrated lecture/lab course
  7. Member of MNS Service Equity Task Force (2021 – 2023) – I was involved in trying to get a list of activities career track faculty could do for service
  8. Guest speaker for NC Environmental Health Science Scholar program (2021 – 2022)
  9. Member of Student Engagement Working Group (2020 - 2021) – I held two walk-and-learn events on campus to engage students in a Zoom world
- **Program (Environmental Sciences)**
  1. Created flyer for Luke Days (2024) that should kids how to create an origami coyote with a QR code that linked to our ENV program
- **Community**

1. Held training event at Thunderbird Conservation Park for 2025 Greater Phoenix City Nature Challenge in which we taught the public how to use iNaturalist by adding photo to the Saguaro Snapshot Challenge

TARLETON STATE UNIVERSITY SERVICE

- Chair, Timberlake Biological Field Station 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)
- Served as reviewer for several peer-reviewed journals (multiple times for many journals)

1. American Midland Naturalist
2. American Naturalist
3. Behavioral Ecology
4. Caribbean Naturalist
5. Ecology
6. Ecography
7. Ecology of Freshwater Fish
8. Environmental Biology of Fishes
9. European Journal of Operational Research
10. Diversity
11. Diversity and Distributions
12. Hydrobiologia
13. International Journal of Primatology
14. Journal of Biogeography
15. Marine and Freshwater Research
16. Naturwissenschaften
17. North American Journal of Fisheries Management
18. Oecologia
19. Oikos
20. PLoS ONE
21. Proceedings of the Southeastern Fishes Council
22. Southeastern Naturalist
23. Southwestern Naturalist
24. Texas Journal of Science
25. Transactions of the American Fisheries Society
26. US Geological Survey, Cooperative Research Units
27. Western North American Naturalist

PROFESSIONAL DEVELOPMENT ACTIVITIES ATTENDED

1. Engage 2025: a focus on non-majors. Cengage. Tuscon, AZ (2025)
2. What students need to feel supported in 7 key areas. Inside Higher Education Webinar. Online. (2022)
3. #CitePedagoy. The Teaching, Innovation, and Excellence Collaborative. Glendale, AZ (2021)
4. 54th Annual Meeting of the Organization of Biological Field Stations. Brussels, Belgium (2019)
5. 66th Annual Meeting of the Southwestern Association of Naturalists. Chihuahua, Mexico (2019)
6. National Science Foundation BIO REU PI workshop. Arlington, VA (2019)
7. Annual Meeting of the Texas Society of Mammalogists. Junction, TX (2019)
8. National REU student scholar meeting. Alexandria, VA (2018)
9. 53rd Annual Meeting of the Organization of Biological Field Stations (2018)
10. Webinar “REU Registration Pilot Information Session” sponsored by the National Science Foundation. Stephenville, TX (2018)
11. Workshop “Strategies for success: a mini-course for field station leaders” sponsored by the Organization of Biological Field Stations. Bangor, ME (2018)

12. 65th Annual Meeting of the Southwestern Association of Naturalists. San Marcos, TX (2018)
13. Annual meeting of the Texas Society of Mammalogists. Junction, TX 2017. NSF REU PI workshop. Arlington, VA (2018)
14. 63rd Annual Meeting of the Southwestern Association of Naturalists, Mexico City, Mexico (2016)
15. 62nd Annual Meeting of the Southwestern Association of Naturalist. San Diego, CA (2015)
16. Webinar "SimBio's Flipping the Ecology Classroom Webinar Series" sponsored by the National Science Foundation. Stephenville, TX (2014)
17. Webinar "Research Ethics for Undergraduate Research Programs" sponsored by the Council of Undergraduate Research. Stephenville, TX (2013)
18. 60th Annual Meeting. Southwestern Association of Naturalist. Lake Charles, LA (2013)
19. 58th Annual Meeting. Southwestern Association of Naturalist. Tyler, TX (2011)
20. 57th Annual Meeting. Southwestern Association of Naturalists. Junction, TX (2010)
21. 113th Annual Meeting. Texas Academy of Sciences. Stephenville, TX (2010)
22. Beginning a Research Program in the Natural Sciences at a Predominantly Undergrad Institutions. Council of Undergraduate Research. Grand Rapids, MI (2009)
23. 93rd Annual Meeting. Ecological Society of America. Milwaukee, WI (2008)
24. 54th Annual Meeting. Southwestern Association of Naturalists. Stephenville, TX (2007)
25. 91st Annual Meeting. Ecological Society of America. Memphis, TN (2006)
26. 11th National Conference. Council of Undergraduate Research. Greencastle, IN (2006)
27. 14th Annual Meeting. Southern Division of the American Fisheries Society. San Antonio, TX (2006)