

CURRICULUM VITAE

CARMEN G. MONTAÑA-SCHALK

Department of Biology

Stephen F. Austin State University

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EDUCATION

Ph.D. Wildlife and Fisheries Sciences –2012– Texas A&M University, College Station, TX

Dissertation title: Species assemblage structure and ecomorphological convergence in perciform fishes (Cichlidae and Centrarchidae) in tropical and temperate floodplain rivers

MSc. Wildlife and Fisheries Management – 2004– Universidad Nacional de los Llanos

Occidentales Ezequiel Zamora, Venezuela (National University of the Western Plains Ezequiel Zamora, Venezuela)

B.A. Environmental Sciences, major Natural and Renewal Resources – 2001– Universidad Nacional de los Llanos Occidentales Ezequiel Zamora (UNELLEZ), Venezuela

PROFESSIONAL EXPERIENCE

Assistant Professor, Fall 2019 - Present– Department of Biology, Stephen F. Austin State University, Nacogdoches, TX

Assistant Professor and Associate Curator of Ichthyology, Fall 2018–Summer 2019 –Department of Biological Sciences, Sam Houston State University (SHSU). Huntsville, TX

Visiting Assistant Professor, August 2015 - May 2018– Department of Biological Sciences, SHSU

Post-Doctoral Research Associate, August 2013 - July 2015 – Department of Applied Ecology, North Carolina State University, NC

Post-Doctoral Research Associate, August 2012 - July 2013 –Department of Wildlife and Fisheries, Texas A&M University, TX

Fisheries Consultant Specialist, 2006 –National Institute of Fisheries and Aquaculture (Venezuela)

TEACHING EXPERIENCE

Stephen F. Austin State University, Department of Biology

General Ecology (Fall 2019, Spring 2020)

Introduction to Ecology and Evolution (Fall 2019)

Ichthyology (Spring 2020)

Supervised Practicum in Advanced Biology (Spring 2020)

Advanced Graduate Studies (Spring 2020)

Sam Houston State University, Department of Biological Sciences

Contemporary Biology (Fall 2015, Spring 2016, Fall 2016, Fall 2017, Spring 2018, Fall 2018)

General Ecology (Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018, Spring 2019)

Community Ecology (Spring-2017)

Undergraduate Seminar (Fall 2018)

Ichthyology (Spring 2019)

Freshwater Bioassessment (Summer 2019)

Colegio de la Frontera Sur (ECOSUR), Mexico

Invited lecturer, Mini-Course in Stable Isotope Analysis in Ecology. Mexico (Spring 2015)

Texas A&M University, Department of Wildlife and Fisheries Sciences

Ichthyology (Graduate Assistantship: Spring 2010)

Natural History of the Vertebrates (Graduate Assistantship: Fall 2010)

UNELLEZ-Guanare, Department of Natural and Renewal Resources, Venezuela

Freshwater fishes (Graduate Assistantship: 2001-2006)

PEER-REVIEWED PUBLICATIONS: Google Scholar citations=2861, h-index=15, i10-index=21
(U = Undergraduate Student, G = Graduate Student)

- Perkin, J.S., **C.G. Montaña**, E.J. Nogueira, B.B. Brandao, G.M. Mattox & K.W. Conway. (*In Review*). Miniature metacommunities: Do minuscule fishes minimize competition by more finely subdividing their habitats? *Ecosphere*
- Soria-Barreto, M. **C.G. Montaña**, K. O. Winemiller, M., M.M. Castillo & R. Rodiles-Hernandez (*Accepted*). Seasonal variation in production sources supporting fish biomass along the longitudinal gradient of the Río Usumacinta, Mesoamerica's largest river. *Marine & Freshwater Research*
- Keppeler, F., **C.G. Montaña**, K.O. Winemiller. 2020. The relationship between trophic level and body size in fishes depends on functional traits. *Ecological Monographs*
<http://dx.doi.org/10.1002/ecm.1415>
- Arbour, J.A, **C.G. Montaña**, K.O. Winemiller, A. Pease M. Soria-Barreto, J. Cochran-Biederman & H. López-Fernández. 2020. Macroevolutionary analyses indicate that repeated adaptive shifts towards predatory diets affect functional diversity in Neotropical cichlids. *Biological Journal of Linnean Society*. blaa001.<https://doi.org/10.1093/biolinnean/blaa001>
- Montaña, C.G.**, C. Ou, F. Wolfgang Keppeler^G & K.O. Winemiller. 2020. Functional and trophic diversity of fishes in the Mekong-3S river system: comparison of morphological and isotopic patterns. *Environmental Fish Biology* DOI:10.1007/s10641-020-00947-y
- Jobe, K.L.^U, **C.G. Montaña** & C.M Schalk. 2019. Emergent patterns between salamander prey and their predators. *Food Webs* e00128.
- Montaña, C.G.**, S. Silva^G, D. Hagyar^G, J. Wager^U, L. Tiegs^G, C. Sadeghian^G, T.A. Schriever, C.M. Schalk. 2019. Revisiting 'What do tadpoles really eat?' A ten-year perspective. *Freshwater Biology* 64: 2269-2282
- Zhang, C. R. Zhong, Z. Wang, **C. G. Montaña**, Y. Song, K. Pan, S. Wang & Y. Wu. 2019. Intra-annual variation of zooplankton community structure and dynamics in response to the changing strength of biomanipulation with two planktivorous fishes. *Ecological Indicators* 101:670-678.
- Winemiller, K.O, D.C. Taphorn, L.C. Kelso-Winemiller, E.O. López, F. Keppeler, **C.G. Montaña**. 2018. Fish metacommunity structure in Caño Maraca, an important nursery habitat in the Western Llanos of Venezuela. *Neotropical Ichthyology* 16(4): e180074
- Allgeier, J., C.A Layman, **C.G. Montaña**, S. Hensel, R. Appaldo & A. Rosemond. 2018. Anthropogenic versus fish-derived nutrient effects on seagrass community structure and function. *Ecology* 99(8):1792-1801
- Montaña, C.G.** & C.M. Schalk. 2018. Correlates of elemental-isotopic composition of stream fishes: the importance of land-use, species identity and body size. *Journal of Fish Biology* 92:944-960
- Schalk, C.M., **C.G. Montaña**, K. Kralman^U, D.J. Leavitt. 2018. Functional distance and establishment of non-native species with complex life cycles. *Biological Invasions* 20(8): 1945-1952

- Ceneviva-Bastos, M., **C.G. Montaña**, C.M. Schalk, L. Casatti & P.B. Camargo. 2017. Does the addition of structural complexity and basal resource diversity affect food web structure of degraded streams? *Austral Ecology* 42:908-919
- Ou C., **C.G. Montaña** & K.O. Winemiller. 2017. Body size–trophic position relationships among fishes of the Lower Mekong Basin. *Royal Society Open Science* 4:160645
- Schalk, C.M., **C.G. Montaña**, K.O. Winemiller & L.A. Fitzgerald. 2017. Trophic plasticity, environmental gradients, and food web structure of tropical pond communities. *Freshwater Biology* 62:519-529
- Layman, C.A., J. Allgeier & **C.G. Montaña**. 2016. Mechanistic evidence of enhanced production on artificial reefs: A case study in a Bahamian seagrass ecosystem. *Ecological Engineering* 95:574-579
- Schalk, C.M., **C.G. Montaña** & L.E. Springer^U. 2015. Morphological diversity and community organization of desert anurans. *Journal of Arid Environments* 122:132-140
- Montaña, C.G.**, Layman C.A. & K.O. Winemiller. 2015. Species-area relationship within benthic habitat patches of a tropical floodplain river: an experimental test. *Austral Ecology* 40:331-336
- Willis, S.C., K.O. Winemiller, **C.G. Montaña**, P. Reiss, J. Macrander, I.P. Farias & G. Ortí. 2015. Population genetics of the speckled peacock bass (*Cichla temensis*): implications for management of South America’s most important sportfishery. *Conservation Genetics* 16:1345-1357
- Winemiller, K.O., **C.G. Montaña**, D.L. Roelke, J.B. Cotner, J.V. Montoya, L. Sanchez, M.M. Castillo & C.A. Layman. 2014. Pulsing hydrology determines top-down control of basal resources by fish and meiofauna in a tropical river-floodplain ecosystem. *Ecological Monographs* 84(4):621-635
- Schalk, C.M., **C.G. Montaña**, J.L. Klemish & E.R. Wild. 2014. On the Diet of the Frogs of the Ceratophryidae: Synopsis and New Contributions. *South American Journal of Herpetology* 9:90-105
- Montaña, C.G.**, K.O. Winemiller & A. Sutton. 2014. Intercontinental comparison of fish ecomorphology: null model tests of community assembly at the patch scale in rivers. *Ecological Monographs* 84(1): 91–107
- Schalk, C.M., **C.G. Montaña** & M. Libson^U. 2014. Reproductive strategies of two Neotropical killifish, *Austrolebias vanderbergi* and *Neofundulus ornatipinnis* (Cyprinodontiformes: Rivulidae) in the Bolivian Gran Chaco. *Revista de Biología Tropical* 62(1):109-117
- Montaña, C.G.** & K.O. Winemiller. 2013. Evolutionary convergence in Neotropical cichlids and Nearctic centrarchids: evidence from morphology, diet and stable isotope analysis. *Biological Journal of Linnean Society* 109:146-164
- López-Fernández, H., K.O. Winemiller, **C.G. Montaña** & R.L. Honeycutt. 2012. Diet-morphology correlations in the radiation of South American Geophagine Cichlids (Perciformes: Cichlidae: Cichlinae). *PlosOne* 7(4):e33997
- Willis, S.C., H. López-Fernández, **C.G. Montaña**, I.P. Farias & G. Orti. 2012. Species-level phylogeny of ‘Satan’s perches’ based on discordant gene trees (Teleostei: Cichlidae: *Satanoperca* Günther 1862). *Molecular Phylogenetics and Evolution* 63:789-808
- Montaña, C.G.**, C.M. Schalk & D.C. Taphorn. 2012. First record of Van den Berg's Pearlfish, *Austrolebias vanderbergi* Huber, 1995 (Cyprinodontiformes, Rivulidae) in Bolivia with comments on its diet and reproductive biology. *Check List* 8:589-591

- Ou, C., C.G. **Montaña**, K.O. Winemiller & K.W. Conway. 2011. *Schistura diminuta*, a new miniature loach from the Mekong River drainage of Cambodia (Teleostei: Nemacheilidae). *Ichthyological Explorations of Freshwaters* 22(3):193-200
- Montaña**, C.G., C.A. Layman & K.O. Winemiller. 2011. Gape size influences seasonal patterns of piscivore diets in three Neotropical rivers. *Neotropical Ichthyology* 9(3):647-665
- Montaña**, C.G., S. Choudhary & K.O. Winemiller. 2011. Seasonal dynamics of fisheries in the Ganges River, Bhagalpur, India. *Fisheries Management and Ecology* 18:282-296
- Montaña**, C.G., C.A. Layman & D.C. Taphorn. 2011. Inventario de la ictiofauna del Caño La Guardia, afluente del río Capanaparo (cuenca del Orinoco), estado Apure, Venezuela. *Biota Colombiana* 11(1-2):75-88
- Montaña**, C.G. & K.O. Winemiller. 2010. Local-scale habitat influences morphological diversity of species assemblages of cichlid fishes in a tropical floodplain river. *Ecology of Freshwater Fish* 19:216-227
- Willis, S.C., M. Numes, C.G. **Montaña**, I.P. Farias, G. Orti & N.R. Lovejoy. 2010. The Casiquiare River acts a corridor between the Amazons and Orinoco river basins: biogeographic analysis of the genus *Cichla*. *Molecular Ecology* 19:1014-1030
- Layman, C. A., C.G. **Montaña** & J. E. Allgeier. 2010. Linking community assembly and rates of water level change in river littoral habitats. *Aquatic Ecology* 44:269–273
- Montaña** C.G. & K.O. Winemiller. 2009. Comparative feeding ecology and habitats use of *Crenicichla* species (Perciformes: Cichlidae) in a Venezuelan floodplain river. *Neotropical Ichthyology* 7:267-274
- Montaña**, C.G., C.A. Layman & D.C. Taphorn. 2008. Comparison of fish assemblages in two littoral habitats in a Neotropical morichal stream in Venezuela. *Neotropical Ichthyology* 6(4):577-582
- Montaña**, C.G., H. López-Fernández & D.C. Taphorn. 2008. A new species of the genus *Crenicichla* (Perciformes: Cichlidae) from Ventuari River, Upper Orinoco River, Amazonas State, Venezuela. *Zootaxa* 1856:3340
- Post, D.M., D.A. Arrington, C.A. Layman, G. Takimoto, J. Quattrochi & C.G. **Montaña**. 2007. Getting to the fat of the matter: model, methods and assumptions for dealing with lipids in stable isotopes analysis. *Oecologia* 152:179-189
- Layman, C.A., D.A. Arrington, C.G. **Montaña** & D.M. Post. 2007. Can stable isotope ratios provide for community-wide measures of trophic structure? *Ecology* 86(9): 2530-2535
- Willis, S.C., M. Numes, C.G. **Montaña**, I.P. Farias & N.R. Lovejoy. 2007. Systematics, biogeography, and evolution of *Cichla* (Perciformes: Cichlidae) with insight into the origin of tropical freshwater fish diversity in South America. *Molecular Phylogenetics and Evolution* 44: 291-307
- Montaña**, C.G., D.C. Taphorn, C.A. Layman & C. Lasso. 2007. Distribución, alimentación y reproducción de tres especies de pavones *Cichla* spp. (Perciformes, Cichlidae) en la cuenca baja del río Ventuari, Estado Amazonas, Venezuela. *Memoria de la Fundación La Salle de Ciencias Naturales* 165: 83-102
- Taphorn, D.C., C.G. **Montaña** & P. Buckup. 2006. *Characidium longum* (Characiformes: Crenuchidae): A New Species of Fish from Venezuela. *Zootaxa* 1247:1-12

NATURAL HISTORY NOTES

- Montaña**, C.G., M. Cenevica-Bastos & C.M. Schalk. 2014. New vertebrate prey for the aquatic salamander *Amphiuma means* (Caudata: Amphiumidae). *Herpetology Notes* 7:755-756
- Schalk, C.M. & C.G. **Montaña**. 2012. *Liophis peocilogyrus* (Yellow-bellied Liophis): Diet and foraging behavior. Natural history notes. *Herpetological Review* 43(1):148

- Schalk, C.M. & C.G. **Montaña**. 2011. *Ceratophrys cranwelli* (Cranwell's Horned Frog): Diet. *Herpetological Review* 42(3):409-410
- Montaña, C.G.** 2008. Cichlids in a Neotropical Blackwater Floodplain River-Cinaruco River, Venezuela. Part I: Overview. *Buntbarsche Bulletin* 248:11-16

BOOK CHAPTERS & TECHNICAL REPORTS

- Montaña, C.G.** 2008. *Cichla ocellaris* del Río Cuyuni. In: J.P Rodríguez & F. Rojas-Suárez. *Libro Rojo de Peces amenazados de Venezuela*. Provita, Caracas
- Montaña, C.G.**, D.C. Taphorn, C.A. Layman & C.A. Lasso. 2005. Ecology and Conservation of Peacock Cichlids (*Cichla* spp.) in lower Ventuari River, Amazonas State, Venezuela. In: RAP Bulletin of Biological Assessment. Conservation International. Washington DC, USA
- Montaña, C.G.**, D.C. Taphorn, L. Nico, C.A. Lasso, O. Leon-Mata, A. Giraldo, O.Lasso-Alcala, C. DoNascimento & N. Milan. 2005. Fishes of the Ventuari River Basin, Amazonas state (Venezuela): Results of BioCentro, Fundacion La Salle and Fundacion Tierra Parima Research's. In: RAP Bulletin of Biological Assessment. Conservation International. Washington DC, USA
- Winemiller, K.O., C.G. **Montaña**, C. Krabbenhoft, K. Conway & K. Mayes. 2014. *Flow dependent species: life history and habitat associations in Texas Gulf Coast rivers*. Technical Report prepared to Texas Park and Wildlife Department (USA) by Texas A&M University.
- K.O. Winemiller, R.I. Pizano & C.G. **Montaña**. 2014. *Findings on environmental flow needs in the lower Neches River to mitigate effects of climate change on its ecology*. 2014. Technical Report prepared to Big Thicket National Preserve, US National Park Service by Texas A&M University

MANUSCRIPTS IN ADVANCED STAGE OF PREPARATION

- Montaña C.G.**, F. Keppeler, C. Laughrey & C.M. Schalk. Species co-occurrence patterns along environmental gradients in pond microhabitats. Target journal: *Freshwater Biology*
- Lebow C., E. Liverpool & **Montaña C.G.** Evidence of Mercury Concentrations in Freshwater Fishes of The Guianas: Is There a Risk for Fish Consumption? Target journal: *Science of Total Environments*
- Montaña C.G.**, W. Alvarado, C.M. Schalk & J.D. Daza. Tail Pigmentation in *Acris blanchardi* tadpoles along an environmental pond gradient. Target journal: *Southeastern Naturalist*
- Montaña C.G.**, E. Liverpool & D. Taphorn. Mercury contamination food webs in a tropical river of the Guyana Shield. Target journal: *Environmental Research*

MENTORING EXPERIENCE

Graduate Advisor

- 2020-present. Jake Swanson**– M.S. Student. Division of Environmental Science, SFASU *Project*: Fish functional diversity and occupancy across Texas riverscapes. Co-advised with C.M. Schalk.
- 2019-present. Morgan Beckham**– M.S. Student (Non-thesis). Department of Biology, SFASU. *Project*: Historical and contemporary assessment of fish assemblages in La Nana Creek Basin, East Texas.
- 2017-2019. Caroline Obkirchner** – M.S. Student. Department of Biological Sciences. SHSU *Project*: The effects of gold mining in mercury methylation and microbiome in a freshwater ecosystem. Co-advised with M. Choudhary

Graduate Committee Member

- 2020-present. David Rosenbaum**– M.S. Student, Forestry, SFASU.

- 2018-2020. Javier Gomez** – M.S. Department of Biological Sciences. SHSU
2016-2018. Supuni DGTM Silva – M.S. Department of Biological Sciences. SHSU
2016-present. Edgar Abraham Aragón Flores– Ph.D. Department of Biodiversity and conservation, Colegio de la Frontera Sur (ECOSUR), Mexico
2016-present. Elford Liverpool– Ph.D. University of Guyana, East Coast Demerara, Guyana

Undergraduate students

- 2019-present. Jordan Griffin**– (Biology, SFASU). Project: Range of distribution of Sheepshead minnow (*Cyprinodon variegatus*) in Texas waters. Outcome: Three poster presentations at SFASU, Texas Chapter American Fisheries Society, and The Ecological Integration Symposium. **Awarded Best Undergraduate poster presentation** at TAMU Ecological Integration Symposium 2020.
- 2020-present. Zachary Hutchens**– (Biology, SFASU). Project: Getting to know the status of two invasive Cyprinodontiformes (Sheepshead minnow-*Cyprinodon variegatus* and Gulf Killifish-*Fundulus grandis*) in Texas waters. Outcome: One poster presentation. **Awarded Best Undergraduate poster presentation** at TAMU Ecological Integration Symposium 2020.
- 2020- Jessica O’Neill**– (Biology, SFASU). Morphological and trophic ecology of sunfishes (*Lepomis* species) inhabiting an urban stream in East Texas.
- 2019- Alejandra Martinez**– (Forestry, SFASU). Project: Examining life history parameters and organismal stoichiometry of the Western Mosquito Fish (*Gambusia affinis*) in streams in East Texas. Outcome: One poster presentation at Texas Chapter American Fisheries Society.
- 2019- Kathy Li**– (Biology, SFASU). Project: Taxonomic and morphological diversity of fishes in East Texas streams. Outcome: One poster presentation at TAMU Ecological Integration Symposium 2020.
- 2019- Janessa Estrada**– (SHSU). Project: Life History Strategies of the Western Mosquito Fish (*Gambusia affinis*) in rural and urban streams in East Texas. Outcome: Poster presentation at SHSU Undergrad Research Symposium 2019.
- 2018-2019 Chelsea Veloso**– (SHSU). Project: Trophic ecology of native and non-native fishes in an urban stream in East Texas. Outcome: Poster presentation at SHSU Undergrad Research Symposium 2019, at the Ecological Integration Symposium 2019 at Texas A&M University, and at the Southern Division of American Fisheries Society 2019 at Galveston, TX.
- 2018-2019 Alexis Alexander**– (SHSU). Project: Aquatic macroinvertebrate diversity in ponds at the Center of Biological of Field Studies at Sam Houston State University
- 2018- 2019. Breanna Moore** – (SHSU). Project: Tadpole functional diversity in pond ecosystems in East Texas.
- 2017-2019 Edan Morag**– (SHSU). Project: Taxonomic and functional diversity of fishes in rural and urban streams in East Texas. Outcome: Poster presentation at SHSU Undergrad Research Symposium 2019, at the Ecological Integration Symposium 2019 at Texas A&M University.
- 2016-2018. Clay Laughrey** – (SHSU). Project: Species co-occurrence patterns across pond microhabitats. Outcome: Successfully funded grant proposal by COSET- SHSU. Poster presentations at SHSU Undergrad Research Symposium 2017 and 2018, at Ecological Integration Symposium 2017 and 2018 at Texas A&M University, and at the American Society of Ichthyologists and Herpetologists 2017
- 2017-2018. Wendi Alvarado** – (SHSU). Project: Phenotypic plasticity of Cricket frog (*Acris blanchardi*) across pond microhabitats. Outcome: Poster presentation at SHSU Undergrad Research Symposium 2018 and at the Ecological Integration Symposium 2018 at Texas A&M University

- 2016-2018. Kelsey Kralman** – (SHSU). Project: Functional perspectives on frog invasions. Outcome: Poster presentation at SHSU Undergrad Research Symposium 2017 and 2018 and at the Ecological Integration Symposium 2017 and 2018 at Texas A&M University, Co-authored publication published in Biological Invasions
- 2014. Claro Navarro** (Student from Brazil) –Project: Ecological stoichiometry of fishes along a gradient of urbanization in Piedmont streams in North Carolina. North Carolina State University. Outcome: Poster presentation at the Joint Meeting of Ichthyologists and Herpetologists, publication under review
- 2012-2013. Laura Springer** – (TAMU). Project: Morphological diversity of Chihuahuan Desert anurans. Outcome: Poster presentation at TAMU Ecological Integration and coauthored one publication in Journal of Arid Environments
- 2009-2012. Monica Libson** – (TAMU). Project: Fish assemblages from oxbow lakes-Brazos River and Reproductive biology Chaco killifish. Outcome: Poster presentation at TAMU Ecological Integration Symposium and co-authored publication at Revista de Biologia Tropical
- High School Student Mentor - Hutton Junior Fisheries Biology Program, American Fisheries Society
- 2017. Lilith Meng** – The Woodlands College Park High School, TX. Project: Functional and taxonomic diversity of fishes along a gradient of land use in Harmon creek, Huntsville. Mentorship through Hutton Junior Fisheries Biology Program, American Fisheries Society

GRANTS & FELLOWSHIPS

2020. Montaña, C.G., C.M. Schalk, K. Mayes. Texas Parks and Wildlife Department. Conservation status and life histories of imperiled fish species in East Texas streams. (\$139,175). *Submitted*
2020. MRI: National Science Foundation (NSF) (\$ 112,006). Project: Acquisition of Tekran mercury speciation system for mercury biotransformation and ecotoxicology research and training at UT Tyler. Co-PI with R. Yu (PI), N. Ford (Co-PI), T. Shtoyko (Co-PI), S. Anil (Co-PI). *Re-Submitted*
2019. RCA Grant, Stephen F. Austin State University (\$20,000). Project: Examining the effects of predators on energy and nutrient exports across aquatic-terrestrial boundaries. (PI). *Funded*
2019. Texas Parks and Wildlife Department (\$74,580). Project: Assessing pathways of introduction of non-native fishes (Sheepshead Minnow: *Cyprinodon variegatus*, and Gulf Killifish: *Fundulus grandis*) in Texas streams. (PI), with Joshua Perkin (CoPI). *Funded*
2019. MRI: National Science Foundation (NSF) (\$ 112,006). Project: Acquisition of Tekran mercury speciation system for mercury biotransformation and ecotoxicology research and training at UT Tyler. Co-PI with R. Yu (PI), N. Ford (Co-PI), T. Shtoyko (Co-PI), S. Anil (Co-PI). *Not funded*
2019. Texas Parks and Wildlife Department (\$60,000). Project: Conservation status of fish communities in La Nana Bayou, East-Central Texas: Historical and current perspectives of native imperiled species following the introduction of non-native species. (PI), with C.M. Schalk (Co.PI), D. Peterson (Co.PI), K. Mayes (Co.PI). *Not funded*
2018. EURECA FAST Grant, Sam Houston State University (\$8,000). Project: Primary productivity and nutrient enrichment effects on mercury methylation in stream biota. (PI). *Not Funded*.
2018. ORSP. Internal Grant Program: Interdisciplinary Collaborations Program (\$14,916). Project: Primary productivity and nutrient enrichment effects on mercury methylation in stream biota. (PI), with Madhusudan Choudhary (Co-PI), Amber Ulseth (Co-PI). *Not Funded*
2018. EURECA FAST Grant, Sam Houston State University (\$8,000). Project: Mercury contamination in freshwater ecosystems: Examining impacts on microbial communities and identifying pathways of mercury methylation. PI. *Funded*

2018. Association of American Colleges and Universities (AASCU/RFY) Mini-grant (\$2,500). Project: Using *iNaturalist* to engage freshman non-science students connect with scientific research. PI. *Funded*
2018. Enhancement Research Grant (ERG)- Sam Houston State University (\$15,000). Project: Effects of gold mining on mercury methylation and freshwater microbiome. Co-PI with Madhusudan Choudhary. *Funded*
2018. Texas Ecolab Grant (\$3, 000). Project: Seasonal variation of diversity and trait composition of species inhabiting stream and pond habitats along a landscape gradient. *Funded*
2018. Texas Parks and Wildlife Department (\$98,042). Project: Assessment of the effects of invasive Sheepshead Minnow (*Cyprinodon variegatus*) and Gulf Killifish (*Fundulus grandis*) on native fish communities of Brazos and Red river basins: An approach based on trophic ecology and functional diversity. PI. *Not Funded*
2017. National Geographic Society's Committee for Research and Exploration Grant (\$25,000). Project: Fisheries, food webs, and Amerindian communities in a threatened tropical river: ecological and cultural impacts of gold mining in the Mazaruni River, Guyana. PI. *Not Funded*
2016. World Wildlife Fund (\$10,000). Mercury contamination in fish and food webs Mazaruni River-Guyana. Co.PI with E. Liverpool, D.C. Taphorn, Hernán López-Fernández. *Funded*
2016. EURECA FAST Grant, Sam Houston State University (\$8,000). Co-PI with C.M. Schalk and C.W. Hargrave. *Funded*
2016. Faculty Research Grant (FRG), Sam Houston State University (\$5,000). Co-PI with C.W. Hargrave 2016. *Funded*
- 2016-2019. ECOSUR- Research Grant [Southeast Ecological Research Center-Mexico] (\$ 160,000). *Funded*
2011. Tom Slick Graduate Research Fellowship Award, Texas A&M University (\$32,000)
2011. GPEF- Travel and Presentation Grant, Dep. WFSC, Texas A&M University (\$500)
2010. GPEF Travel and Presentation Grant, Dep. WFSC, Texas A&M University (\$300)
2009. P.E.O International Women Fellowship (\$10,000)
2008. American Cichlid Association, ACA Paul V. Loiselle Conservation Fund (\$1,500)
2008. Ecology and Evolutionary Biology Travel Grant, Texas A&M University (\$600)
2008. GPEF Travel and Presentation Grant. Dep. WFSC, Texas A&M University (\$300)
2007. Neotropical Grassland Conservancy-Francis Smith Remembrance Grant (\$500)
2003. Neotropical Grassland Conservancy, Research award (\$500)
2002. Foundation Cisneros, Logistic & Research grant (\$1,000)
2001. U.S. Fisheries & Wildlife Services. Graduate Fellowship (\$2,500)

HONOR & AWARDS

- 2019. Distinguished Research/Creative Activity Award.** Stephen F. Austin State University.
- 2012. Outstanding Fisheries Worker Award.** Texas Chapter of the American Fisheries Society.
- 2011. Vice Chancellor's Award in Excellence.** Texas A&M University. 2011
- 2011. Clark Hubbs Student Research Award.** Texas Chapter of the American Fisheries Society.
- 2009. Outstanding PhD student Award.** Texas A&M University.

INVITED TALKS

2019. (Fall) – Stable Isotope Analysis: *a tool in ecological research of freshwater ecosystem*. National Science Foundation Workshop. Fort Collins, Colorado
2018. (Spring) – The Essential for women competing in Science: experiences and opportunities. Society of Women for Excellence in Science and Technology. Sam Houston State University, Huntsville, TX
2017. (Fall) – Fishes and food webs in floodplain rivers: *the things we doing to them!* TRI-Beta Association. Honor College. Sam Houston State University, Huntsville, TX
2016. (Fall) – Use of “Floy tags” to study movement of *Cichla* species (Cichlidae) in a Venezuelan floodplain river. Sam Houston State University, Huntsville, TX
2016. (Fall) – Fish assemblages and aquatic food-web structure in tropical floodplain rivers. Sam Houston State University, Huntsville, TX
2016. (Spring) – Fish assemblage structure and food-web dynamics in freshwater ecosystems. Clemson University Clemson, South Carolina.
2015. (Spring) – Ecological connectivity in freshwater ecosystems. Department of Biodiversity Conservation at Colegio de la Frontera Sur (ECOSUR), Mexico
2014. (Fall) – Community assembly in freshwater systems and ecomorphological convergence. Department of Wildlife and Fisheries, Texas A&M University. College Station, TX

CONFERENCE ACTIVITY/PARTICIPATION

Conference Organized

2010. 11th Annual Ecological Integration Symposium: Understanding Patterns and Processes Across Scales. Texas A&M University, College Station, TX.

CONFERENCE PRESENTATIONS (last 5 years, U = Undergraduate and G = Graduate)

Oral presentations

2019. Jobe K.L.^U, **C.G. Montaña** & C.M. Schalk. Caudates as prey: Predator diversity and size-relationship patterns. Joint Meeting of Ichthyologists and Herpetologists. Snowbird, Utah
2019. **Montaña, C.G.** C. Obkirchner^G, E. Liverpool, S. Gonzalez^G & M. Choudhary. Gold mining erodes fish assemblages and food web structure in a Neotropical river. Office Research Sponsored Program at SHSU, Huntsville, TX.
2019. Schalk, C.M., C.P. Laughrey^U, L.M. Bower^G & **C.G. Montaña**. Species co-occurrence patterns along environmental gradients in pond microhabitats. Texas Chapter of the Wildlife Society, Montgomery, TX.
2018. **Montaña C.G.**, C.M. Schalk, T.A. Schriever, S. Silva^G, D. Hagyar^G, J. Wagner^U, L. Tiegs^G, C. Sadeghian^G. Revisiting ‘What do tadpoles really eat?’: A ten-year perspective. Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY
2018. Laughrey, C.^U, **Montaña C.G.** & C.M. Schalk. Distribution of larval amphibians along a gradient in pond microhabitats. Ecological Integration Symposium. College Station, TX
2018. Schalk, C.M., **Montaña C.G.**, K. Kralman^U, D.J. Leavitt. Functional distance and establishment of non-native species with complex life cycles. Texas Chapter of the Wildlife Society. Dallas, TX.
2017. **Montaña C.G.**, E. Liverpool, D.C. Taphorn, H. López-Fernández & K. Alofs. Fish, food webs, and mercury levels in a floodplain river in Guyana. International Symposium on Flood Pulse Ecosystems, Siem Reap, Cambodia
2017. **Montaña C.G.**, E. Liverpool, D.C. Taphorn, H. López-Fernández & K. Alofs. Trophic relationships and mercury levels in a tropical food web. Joint Meeting of Ichthyologists and Herpetologists, Austin, TX

2017. Schalk, C.M., **Montaña C.G.**, K. Kralman^U & D.J. Leavitt. Functional distance and establishment of non-native species with complex life cycles. Joint Meeting of Ichthyologists and Herpetologists, Austin, TX
2016. **Montaña C.G.**, M. Soria-Barreto, R. Rodiles-Hernández & K.O. Winemiller. Food web dynamics in a Mesoamerica floodplain river. Joint Meeting of Ichthyologists and Herpetologists, New Orleans, LA
2015. **Montaña C.G.**, C.A. Layman & C.M. Schalk. Elemental stoichiometry of stream consumers and basal sources along a rural to urban gradient. Postdoctoral Research Symposium. North Carolina State University. Raleigh, NC
2014. **Montaña C.G.**, *et al.* Hydrology and habitat mediate top-down effects of fishes and meiofauna on basal resources in a tropical river ecosystem. Postdoctoral Research Symposium, North Carolina State University. Raleigh, NC
2013. **Montaña C.G.**, C.A. Layman & K.O. Winemiller. Gape size influences seasonal patterns of piscivore diets in three Neotropical rivers. Texas Chapter American Fisheries Society, Conroe, TX

Poster presentations

2020. Pinson A.^U, H. Bays^U, D. Peterson & **C.G. Montaña**. Research and teaching collections: rescuing past and present of fish specimens to learn about fishes of East Texas. Ecological Integration Symposium. College Station, TX.
2020. Li K.^U, **C.G. Montaña** & C.M. Schalk. Morphological variation of bluegill (*Lepomis macrochirus*) populations across environmental gradients in East Texas. Ecological Integration Symposium. College Station, TX.
2020. Griffin J.^U, Z. Hutchens^U, **C.G. Montaña**, J. Perkin & Kevin Mayes. Distribution of the non-native Sheepshead minnow (*Cyprinodon variegatus*) in the Brazos River, Texas: Implications for niche overlap with its native congener Red River Pupfish (*Cyprinodon rubrofluvialtilis*). Ecological Integration Symposium. College Station, TX.
2020. Swanson J.^G, **C.G. Montaña**, C.M. Schalk. Fish community assembly across riverine systems of east-central Texas. Ecological Integration Symposium. College Station, TX
2020. Griffin J.^U & **C.G. Montaña**, Morphological variation and distribution of *Cyprinodon variegatus* and *C. rubrofluvialtilis* in Brazos River, Texas. Chapter of the American Fisheries Society. Waco, TX.
2020. Mattox G., **C.G. Montaña**, K. Conway & J. Perkin. Fish assemblage structure in leaf litter patches of the Jacunda River, Lower Amazon. Texas Chapter of the American Fisheries Society. Waco, TX
2020. **Montaña C.G.**, M. Beckham^G, D. Peterson, C.M. Schalk. The complex nature of conservation in urbanized streams: A case study in La Nana Bayou, East Texas. Texas Chapter of the American Fisheries Society. Waco, TX
2020. Martinez A.^U, **C.G. Montaña**, C.M. Schalk. Does urbanization affect life history parameters of the Western Mosquito fish (*Gambusia affinis*)? Texas Chapter of the American Fisheries Society. Waco, TX.
2020. Swanson J.^G, **C.G. Montaña**, C.M. Schalk. Fish community assembly across riverine systems of east-central Texas. SFASU Graduate Research Conference. Nacogdoches, TX
2020. Arnett J.M.^U, C.S. Adams^G, **C.G. Montaña**, C.M. Schalk. Mediterranean House Geckos exploit novel resources in a recipient lizard assemblage. SFASU's Undergraduate Research Conference, Nacogdoches, TX.
2020. Arnett J.M.^U, C.S. Adams^G, **C.G. Montaña**, C.M. Schalk. Mediterranean House Geckos exploit novel resources in a recipient lizard assemblage. Southeast Partners in Amphibian

- and Reptile Conservation. Nauvoo, AL.
2019. Arnet J.M. ^t^U, C.S. Adams^G, **C.G. Montaña**, C.M. Schalk. Mediterranean House Geckos exploit novel resources in a recipient lizard assemblage. Arthur Temple College of Forestry and Agriculture Undergraduate Research Showcase, Nacogdoches, TX.
Awarded Seventh Place Poster Presentation.
2019. **Montaña C.G.**, David Peterson & C.M. Schalk. Historical and contemporary assessment of urban stream fish assemblages: taxonomic and functional perspectives. Joint Meeting of Ichthyologists and Herpetologists. Snowbird, Utah
2019. Morag E^U, C.M. Schalk. & **C.G. Montaña** Fish taxonomic and functional diversity in an East Texas stream. Ecological Integration Symposium. College Station, TX.
2019. Morag E^U, **C.G. Montaña** & C.M. Schalk. Assessing historical fish community structure using taxonomic, functional, and historical-contemporary data. ASLO 2019 Aquatic Sciences Meeting. Puerto Rico.
2019. Jobe K.L.^U, **C.G. Montaña** & C.M. Schalk. Caudates as prey: Predator diversity and size-relationship patterns. Texas Chapter of the Wildlife Society, Montgomery, TX.
2019. Veloso C. ^U, **C.G. Montaña** & C.M. Schalk. Niche segregation among sunfishes (*Lepomis* spp.) in an East Texas urban stream. Southern Division American Fisheries Society, Galveston, TX.
2019. **Montaña C.G.**, E. Morag, David Peterson & C.M. Schalk. Long-term changes in a fish community from an East Texas urban stream: A 28-year perspective. Southern Division American Fisheries Society, Galveston, TX.
2018. **Montaña C.G.**, A. Murfin, R. Pecen, L. Van Raalte & G. Wiedenfeld. Introducing research activities in freshman classes across disciplines. Association of American Colleges and Universities, Seattle WA
2018. Keppeler F.^G, **C.G. Montaña** & K.O. Winemiller. Exploring asymmetries in the relationship between body size and trophic level using a multi-trait approach. Ecological Society of America, New Orleans, LA
2018. Caceres I.^U C. Obkirchner^G, **C.G. Montaña** & M. Choudhary. Identification of factors that differentiate the gold-mining and non-gold-mining sites in the Mazaruni River, Guyana. Undergraduate Research Symposium at SHSU. Huntsville, TX
2018. Kralman K.^U, C. Laughrey^U, **C.G. Montaña**, & C.M. Schalk. Temporal variation in population structure of Western Mosquito Fish (*Gambusia affinis*) in an East Texas wetland. Ecological Integration Symposium. College Station, TX
2018. Kralman K.^U, C. Laughrey^U, **C.G. Montaña**, & C.M. Schalk. Temporal variation in population structure of Western Mosquito Fish (*Gambusia affinis*) in an East Texas wetland. Undergraduate Research Symposium at SHSU. Huntsville, TX
2018. Alvarado W.^U, C. Laughrey^U, **C.G. Montaña**, C.M. Schalk & J.D. Daza. Tail pigmentation in *Acris blanchardi* tadpoles along an environmental pond gradient. Ecological Integration Symposium. College Station, TX
2018. Alvarado W.^U, C. Laughrey^U, **C.G. Montaña**, C.M. Schalk & J.D. Daza. Tail pigmentation in *Acris blanchardi* tadpoles along an environmental pond gradient. Ecological Integration Symposium. College Station, TX
2018. **Montaña C.G.**, E. Liverpool, D. Taphorn & H. López-Fernández. Gold at what cost? Mercury levels in aquatic food webs in Mazaruni River, Guyana. Texas Chapter America Fisheries Society, College Station, TX
2018. Keppeler F.^G, **C.G. Montaña** & K.O. Winemiller. Is trophic level related to body size in Texas fishes? Texas Chapter America Fisheries Society, College Station, TX

2017. Laughrey C.^U, **C.G. Montaña**, C.M. Schalk & K. Kralman*. Distribution of larval amphibians along a gradient in pond microhabitats. Joint Meeting of Ichthyologists and Herpetologists, Austin, TX
2017. Kralman K.^U, C.M. Schalk, **Montaña C.G.** & D. J. Leavitt. Functional distance and establishment of non-native species with complex life cycles. Ecological Integration Symposium. College Station, TX
2017. Laughrey C.^U, **C.G. Montaña**, C.M. Schalk & K. Kralman*. Species co-occurrence patterns along environmental gradients in pond microhabitats. Ecological Integration Symposium. College Station, TX
2016. **Montaña C.G.**, C.A. Layman & C.M. Schalk. Intraspecific and interspecific variation in stoichiometry of fishes in Piedmont streams of North Carolina. Joint Meeting of Ichthyologists and Herpetologists. New Orleans, LA
2016. Kralman K.^U, **C.G. Montaña**, C.M. Schalk & D. J. Leavitt. Non-native species and novel niches: Using morphology to understand ecological invasions. Undergraduate Research Symposium, Sam Houston State University
2015. Schalk C.M., **C.G. Montaña**, L.A. Fitzgerald & K.O. Winemiller. Trophic plasticity of tropical tadpoles along environmental gradients. The Statistics and Zoology Graduate Student Research Symposium, North Carolina State University, Raleigh, NC
2015. Schalk C.M. & **C.G. Montaña**. Community assembly of anurans in the Bolivian Gran Chaco: A morphological approach. The Statistics and Zoology Graduate Student Research Symposium, North Carolina State University, Raleigh, NC
2015. Schalk C.M., **C.G. Montaña** & N.L. Smolensky. Intercontinental convergence of arid adapted amphibians. Joint Meeting of Ichthyologists and Herpetologists. Albuquerque, NM
2014. Schalk C.M., **C.G. Montaña**, L.A. Fitzgerald & K.O. Winemiller. Trophic plasticity of tropical tadpole ecomorphs. Joint Meeting of Ichthyologists and Herpetologists. Albuquerque, NM

SERVICE TO PROFESSION

Associate Editor (2013-present): *Neotropical Ichthyology*, Ecology section.

Reviewer for: Transactions of the American Fisheries Society, Science of the Total Environment, Global Ecology and Biogeography, Freshwater Biology, Freshwater Science, Biological Journal of the Linnean Society, Ecology of Freshwater Fish, Hydrobiologia, Journal of Fish Biology, Austral Ecology, Revista Mesoamericana de la Conservación, Pan-American Journal of Aquatic Sciences, Aquaculture, Aquarium, Conservation & Legislation-International Journal of the Bioflux Society, Wetlands, Neotropical Ichthyology, Revista de Biología Tropical, Endangered Species Research Journal, Journal of Applied Ecology

Scientific Consultant for British Broadcasting Corporation (BBC), Fall 2019. Fishes of the Guiana Shield. Guyana

Professional ASIH Scientist: Speed Networking Workshop 2019, Joint Meeting of Ichthyologists and Herpetologists (JMIH) in Snowbird, UT.

Hutton Program Committee Member of American Fisheries Society. Serving in the committee: Pipelines and pathways for scholars. Fall 2017- present

Mentor for the Hutton Junior Fisheries Biology Program, American Fisheries Society
Summer 2017 – present

Chair Judging committee, Storer Ichthyology, Joint Meeting of Ichthyologists and Herpetologists. Austin, TX 2017

Reviewer panel for CONACYT-Mexico (2019-2020) Invited reviewer panel for The National Council of Science and Technology, Mexico. Research Proposals within the context of “Frontier Science 2019”

Reviewer panel for Swiss National Science Foundation (SNSF) 2019. Invited Reviewer Panel Research project "Molecular evolution and ontogenetic development of dietary adaptations in vertebrates at the micro- and macro-evolutionary scale"

National Science Foundation Workshop (2019). Invited scientist in isotope geochemistry and ecological applications. Fort Collins, Colorado

DEPARTMENTAL-UNIVERSITY SERVICE

2020-(Summer). Workshop Organizer. R-Workshop for Graduate students. R: Introduction and Applications in Ecology. Department of Biology, SFASU.

2020. Volunteer (Registration) at the 123rd meeting Texas Academic Sciences 2020. SFASU.

2019. Assistant Professor of Microbiology, Search Committee, Department of Biology, SFASU.

2019-present. Curator of Ichthyology. Stephen F. Austin State University, Nacogdoches, TX.

2019-(Fall). Workshop Organizer. R-Workshop for Graduate students. R: Introduction and Applications in Ecology. Department of Biological Sciences, SHSU.

2018-2019. Associated Curator of Ichthyology, Sam Houston State University Natural History Collections, Huntsville, TX.

2018. Committee member: Governance Committee Center Biological Field Studies, SHSU.

2018. Professional Workshop Speaker: Summer. Use of Stable Isotope Analysis in Ecology. SFASU.

2018. Professional Development Workshop Speaker: Spring. Techniques in stable isotope analysis in ecology and freshwater habitat bioassessment. University of Guyana, Guyana.

2018. Community Outreach: BioBlitz_Team leader fish group, SHSU.

2016-2018. Coordinator and active participant of the ‘Ecology Journal Club’ for graduate and undergraduate students. Department of Biological Sciences, SHSU.

2007-2012. Community Outreach: BioBlitz_Team leader fish group, Texas A&M University.

2012. Symposia Judge committee: Student Research Week. Texas A&M University.

2012. Symposia Volunteer: Ecological Society of America. Austin, TX.

2010. Co-chair Ecological Integration Symposium Organizing Committee, Texas A&M University.

MEDIA

2019. SFA Today, Nacogdoches, TX. “Carmen G. Montaña participated in a National Science Foundation Ecosystem Science Workshop” Sept 20th, 2019.

<https://graphite.sfasu.edu/sfatoday/edition/2019/09/20/sfatoday-20190920.html>

2020. SFA Today, Nacogdoches, TX. “Carmen G. Montaña presented research at State conference: Fish assemblage structure in leaf-litter patches of the Jacunda River, Lower Amazon”.

<https://graphite.sfasu.edu/sfatoday/edition/2020/01/29/sfatoday-20200129.html>

2020. SFA Today, Nacogdoches, TX. “ SFA Biology students taken first place in Undergraduate poster presentation at Ecological Symposium” <http://www.sfasu.edu/about-sfa/newsroom/2020/sfa-biology-students-take-first-place-undergraduate-poster-presentation>

PROFESSIONAL DEVELOPMENT

2019. Foundation of Teaching and Learning. Stephen F. Austin State University.

2018. 15th Annual SHSU Teaching & Learning Conference: *Incorporating High Impact Research Undergraduate*

- 2018.** 15th Annual SHSU Teaching & Learning Conference: *Graduate Education at SHSU: The Big Picture*
- 2018.** 15th Annual SHSU Teaching & Learning Conference: *Team-Based Learning: Increase Student Engagement, Motivation, & Success*
- 2018.** MoSI - STEM Center's Mobile Summer Institute. *One-week Workshop at Sam Houston State University.*

FIELD RESEARCH

United States: Florida, North Carolina, Texas

International: Venezuela, Peru, Bolivia, India, Brazil, Cambodia, The Bahamas, Guyana, Mexico.

PROFESSIONAL AFFILIATIONS

Neotropical Ichthyology Association, NI-(2003-present)

American Society of Ichthyologists and Herpetologists, ASIH-(2001-present)

American Cichlid Association, ACA-(2007-2012)

Texas Chapter of the American Fisheries Society, TCAFS-(2007-present)

American Fisheries Society, AFS-(2007-present)

Ecological Society of America, ESA-(2010-present)

ADDITIONAL SKILLS

Multivariate statistics (PC-Ord, PRIMER, R, SPSS, JMP)

Fish collecting techniques (seining, electrofishing, gill netting, larval fish collecting)

Museum curation techniques

Spanish (native language), English proficiency (writing, reading and speaking), and Portuguese (writing and reading)

PROFESSIONAL REFERENCES

1. **Dr. Kirk O. Winemiller** (Ph.D. advisor, Postdoctoral advisor, and Collaborator), Professor at the Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX 77843-2258; telephone: (979) 862-4020; E-mail: k-winemiller@tamu.edu
2. **Dr. Craig A. Layman** (Postdoctoral advisor), Professor at the Department of Applied Ecology. North Carolina State University, Raleigh, NC 26607, telephone: 919-513-7274; E-mail: cal1634@yahoo.com
3. **Dr. Kevin Conway** (Collaborator), Professor at the Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX 77843-2258; telephone: 979-845-2620; E-mail: kevin.conway@tamu.edu, conwaykw@gmail.com