

CHAD WESLEY HARGRAVE
Curriculum Vitae

Office of Research & Sponsored Programs
Sam Houston State University
Huntsville, Texas 77341

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EDUCATION

PH.D. ZOOLOGY University of Oklahoma, Norman, Oklahoma. May 2005
Advisor: William J. Matthews
DISSERTATION: Effects of Fish Density, Identity, and Diversity
on Stream Ecosystems.

M.S. ZOOLOGY University of Oklahoma, Norman, Oklahoma. May 2000
Advisor: William J. Matthews
THESIS: Spatial and Temporal Variation in Fish Assemblages of the
Upper Red River After a Summer Drought.

B.S. BIOLOGY *Cum Laude* University of Arkansas, Fayetteville, Arkansas. May 1998
Honors Thesis Advisor: James E. Johnson
THESIS: Status of the Arkansas Darter (*Etheostoma cragini*) and
Least Darter (*Etheostoma microperca*) in Arkansas.

ACADEMIC EMPLOYMENT

ADMINISTRATIVE APPOINTMENTS

Interim Associate Vice President, Office of Research and Sponsored Programs, Sam Houston
State University, Huntsville, TX. January 2017 – Present.

Department Chair, Department of Biological Sciences, Sam Houston State University,
Huntsville, TX. September 2012 – September 2017.

FACULTY APPOINTMENTS

Associate Professor, Department of Biological Sciences, Sam Houston State University,
Huntsville, TX. September 2012 - Present.

Assistant Professor, Department of Biological Sciences, Sam Houston State University,
Huntsville, TX. September 2006 - August 2012.

POST-DOCTORAL APPOINTMENT

Post-Doctoral Research Fellow, University of Oklahoma Biological Station, Kingston, OK.
2005- 2006.

ACADEMIC ADMINISTRATION

INTERIM ASSOCIATE VICE PRESIDENT – OFFICE OF RESEARCH AND SPONSORED PROGRAMS

General Operations & Personnel

- Reviewed/Revised organizational structure for ORSP
- Worked with all College Deans to plan ORSP support for colleges
- Provided support for 15 departments across campus
- Review/rewrite Faculty Workload Policy for Federally Funded Projects
- Reviewed/revised following university policy: Ethical Conduct in Research & Appointment of Faculty Research Members
- Built database of faculty scholarly interests
- Managed FY17 & FY18 Budget, \$1.9 million, including Salaries
- Developed Strategic Plan and aligned Budget Request for FY18
- Increased ORSP budget by 6% through this process.
- Oversaw and coordinated the renovation of new office space.
- Managed 24 staff including: executive directors, directors, proposal administrators, compliance officer, intellectual property officer, staff scientists, administrative assistants, and student assistants.
- Search and Hiring Administrative Assistant, Proposal Administrator, Media Specialist and Laboratory Technician (research centers)

Proposal Administration

- In FY17, oversaw submission of 150 funding proposals (\$39,929,453 total requests) from six colleges, ORSP and research centers: 50 funded at \$7 million to date.

ORSP Staff Support

- Supported ORSP Staff Meetings
Texas Army National Guard, Houston Galveston Area Council, Army Corps of Engineers, University of Texas Rio Grande Valley, Montgomery Hospital District, Houston Advanced Research Center, Texas Parks and Wildlife Department, Adickes Foundation, National Park Service
- Supported ORSP attendance at workshops and conferences

Development and Support for SHSU community

- Hosted Normandy Group visit to SHSU – established faculty connections with Normandy Group from 10 departments
- Oversaw review and administration of internal grants - \$205,000
- Supported independent scholarly activity for faculty to attend various research/grant writing workshops in following disciplines:

Mass Communications, Criminal Justice, History, Psychology, Nursing, Computer Science, Agriculture, Engineering Technology.

- Funding matches with College & Department for faculty research equipment, supplies, travel & student support; Departments supported:
Art, Geology, Health, Engineering Technology, Agriculture, Physics
- Worked to meet growing space needs of Impaired Driving Institute
- Helping to secure building for Natural History and Art Museum from private donor.
- Developing system-wide field station network in collaboration with Chancellor's office and Chief Research Officers of other University in the Texas State System

Advocacy for SHSU

- Worked with Normandy Group in Washington D.C as an advocate for the following areas: Digital Forensics - Computer Science; University Research Centers; Texas Invasive Species Institute; Field Stations.

Congressional Offices: Austin Agrella - Will Hurd's Office, Austin Bray - Kevin Brady's Office, Ashley Close – John Cornyn's Office, Ronald Madlock – Alcee Hastings Office (pollinator caucus), Stacy Revels - House Agriculture Committee

Agencies: U.S. Department of Homeland Security – Cyber Security Division & Science and Technology Directorate; Secret Service - Electronic Crimes Task Force; Office of Pest Management; Bee Research Lab – USDA; Wildlife Research Center – USGS.

Non-governmental Agencies: Global Security Innovative Strategies; Crop Life America

Intellectual Property

- Supported Director of IP activity/investigation into four areas
AWS – water filtration system, Superphobic Technology, Discover Life, INSITE technology

Research Compliance

- Reviewed responsibilities and needs of compliance officer and Faculty Chairs of IRB and IACUC – discuss ORSP support for compliance
- Evaluated time allocation of IRB and IACUC chairs and budgeted chair compensation for FY18
- Supported Compliance Officer training:
Responding to Noncompliance in Human Subjects Research; AER Virtual Meeting; Reducing Noncompliance While Facilitating Research: Strategies for

IACUCs; Research with Children and Adolescents in Elementary and Secondary Schools; Social Media as a Research Recruitment Tool: Ethical Considerations and Guidelines for IRBs; Electronic Informed Consent: Ethical, Regulatory, and Practical Considerations; Implications for University Export Compliance; IACUC Conference ; EAR/ITAR Compliance Workshop: Understanding and Managing Export Control in University Research and Technology Transfer; Faculty or Consultant: Interactive EAR Compliance Workshop; Focus on the Revised Common Rule Webinar Series

CHAIR – DEPARTMENT OF BIOLOGICAL SCIENCES

General

- Worked with Dean of Science and Engineering Technology to secure funding for new hires, capital improvements and equipment
- Worked with building programmers, architects, and administration in physical plant to design and build a new animal facility (\$1.5 million budget; completed Fall 2015)
- Worked with building programmers, architects to design a new biology building (\$65 million budget; to be completed Spring 2018)
- Worked with Graduate Dean to conduct internal review of graduate programs
- Worked with founding Dean of College of Health Sciences and founding Director of Nursing to provide support for developing programs
- Worked with Associate Vice President for Research to secure funding for faculty research and startup packages
- Worked with the Provost, Dean of Science and Engineering Technology and AVP for Research to secure funding for American Society of Microbiologist Conference (Fall 2015)
- Worked with Assistant Vice President for Centers to develop and Aquatics Research Division at the Texas Research Institute for Environmental Studies
- Cooperatively worked with Chairs of Science to allocate resources (hires and funding) among departments

Personnel

- Hired 1 new tenure-track faculty (began in Fall 2015)
- Hired administrative assistant existing funding (Fall 2015)
- Hired laboratory prep technician (Spring 2016)
- Reallocated funding and hired 5 Teaching Post Doctoral Researchers
- Received funding and hired Manager for Biological Field Station (began Fall 2014)
- Received funding and hired Coordinator for Pre-Nursing courses (began Fall 2014)
- Oversaw the startup and integration of 3 new tenure-track faculty beginning Fall 2012

- Oversaw workload and managed compensation for 18 Tenure Track Faculty (~1.3 million in salaries)
- Prepared annual projections of revenue and expenses for departmental operating budget (~\$300,000; not including salaries), and oversaw day-to-day budgetary accounting
- Coordinated the retirement of 2 faculty members
- Conducted annual evaluation and reviews of 5 staff
- Oversaw annual merit review of faculty
- Oversaw promotion of 2 faculty from Associate to Full Professor
- Oversaw the Tenure and Promotion of 3 faculty to Associate Professor
- Successfully defended Department against internal grievance and EEOC complaint in negative tenure decision
- Worked with Office of International Programs and Law firm to receive three H1 Visas and 1 Green Card for 3 new hires
- Oversaw and managed day-to-day activities of two departmental assistants
- Oversaw and managed day-to-day activities of undergraduate lab coordinator
- Oversaw and managed day-to-day activities laboratory preparatory staff member
- Oversaw and management of undergraduate student office assistants
- Developed a mentorship program from new, tenure-track Assistant Professors
- Devoted departmental funding for scholarship support (research and travel) and capital improvements

Departmental Operations, Strategic Plan & Budget

- Held first Departmental Strategic Visioning retreat in 10 years; will begin a new recurring 4 year cycle
- Developed annual strategic plans and aligned budget requests to promote curriculum development and scholarship in the biological sciences
- Prepared annual projections of revenue and expenses for departmental operating budget (~\$300,000; not including salaries), and oversaw day-to-day budgetary accounting

Programs & Curriculum

- Oversaw scheduling, annual review and assessment of 5 programs in the department of Biological Sciences – B.A. Biology, B.S. Biology, B.S. Biomedical Sciences, M.A. Biology and M.S. Biology
- Expanded Online offerings from one class (1 section per year) to 6 classes with labs (~10 sections per year)
- Revised rotation of course offerings for a 4 year window

- Managed course offerings and scheduling to accommodate program growth of about 2% annually
- Oversaw maintenance and edits of course descriptions
- Developed & recommended plan of studies for degree programs
- Worked to maintain articulation agreements with regional colleges and community colleges
- Overseeing development of a new M.A. curriculum
- Oversaw application and acceptance of 7 courses in Biological Sciences into the State-Designated Core Curriculum
- Oversaw implementation and growth of a new Biomedical Sciences Curriculum

Program Assessment

- Established departmental assessment to measure knowledge of graduating seniors in core fields of biology
- Conducted annual assessment of progress toward departmental goals and vision per the strategic plan
- Conducted annual assessment of goals established for each program in Biological Sciences

Student Recruitment/Retention & Support

- Directed marketing efforts in the Department of Biological Sciences for recruitment and retention of majors
- Participated in annual University recruitment day “Saturday at SAM” to market programs in Biological Sciences to prospective students
- Advised student for efficient course completion and retention within the Biological Sciences
- Enhanced department-level funding for scholarship for faculty to support student research and research-related travel
- Oversaw annual banquet for graduating seniors and student awards ceremony

RESEARCH INTERESTS

Fish Ecology; Fish Conservation; Human Affects to Aquatic Ecosystems; Ecosystem Ecology; Community Ecology; Population Ecology; Physiological Ecology

RESEARCH FUNDING

EXTRAMURAL PROJECTS FUNDED (\$718,222)

14. Texas Military Department (2017 – 2018)
Amount: \$41,020

Title: *Aquatic Herpetofaunal Survey on Camp Bowie Training Center in Brownwood, Texas*

PI: Kaitlen P. Gary; Co-PIs: Chad W. Hargrave, William I. Lutterschmidt

13. Texas Army National Guard (2016-2018)

Amount: \$20,866

Title: *Invertebrate Planning Level Survey at a Texas Army National Guard Rotary – Wing Military Facility: Martindale Army Air Field, San Antonio, Texas*

PI: Kaitlen P. Gary; Co-PIs: Jerry L. Cook, Chad W. Hargrave, John B. Pascarella

12. Texas Army National Guard (2016-2018)

Amount: \$72,281

Title: *Habitat Drivers of Aquatic and Terrestrial Invertebrate Assemblages at Camp Bowie and Eagle Mountain Maneuver Site*

PI: Kaitlen P. Gary (TRIES); Co-PI: Jerry Cook, Chad Hargrave, and John Pascarella

11. Texas Office of the Comptroller – Endangered Species Research (2015-2018)

Amount: \$107,544

Title: *Current Status, Critical Habitat and General Ecology of the Bluehead Shiner (Pteronotropis hubbsi) in Texas*

PI: Chad Hargrave; Co-PI: Kaitlen P. Gary (TRIES)

10. U.S. Fish and Wildlife Service (2013-2017)

Amount: \$115,789

Title: *Developing a predictive habitat model for the Comanche Springs Pupfish (Cyprinodon elegans) to be used in species recovery.*

PI: Chad Hargrave; Co-PI: Gary Garrett (TPWD) & David Riskind (TPWD)

9. United States Bureau of Reclamation (2010-2013)

Amount: \$150,000

Title: *Conservation of Fish Species in Phantom Spring Lake*

PI: Chad Hargrave

8. United States Department of Agriculture, Sustainable Agriculture Water Conservation, Rio Grande Basin Initiative (2010-2011)

Amount: \$49,800

Title: *Aquatic Habitat Quality in the Trans Pecos (Big Bend) Ecoregion, Southwest Texas*

PI: Chad Hargrave

7. Texas Parks and Wildlife Department (2010-2011)

Amount: \$23,884

Title: *Long-term monitoring of the Endangered Pecos Gambusia and Comanche Springs Pupfish.*

PI: Chad Hargrave,

- Co-PI: P. Raelynn Deaton (St. Edwards University)
6. U.S. Fish and Wildlife Service (2009-2011)
Amount: \$61,152
Title: *Conservation Status of Comanche Springs pupfish (Cyprinodon elegans) and Pecos gambusia (Gambusia nobilis) in the ciénegas of Balmorhea State Park, Texas*
PI: Chad Hargrave, Co-PI: P. Raelynn Deaton (St. Edwards University),
Co-PI: Gary Garrett (TPWD)
5. United States Department of Agriculture, Sustainable Agriculture Water Conservation Research (2009-2011)
Amount: \$50,376
Title: *Local processes driving fish assemblages in the Rio Grande Basin*
PI: Chad Hargrave
4. Texas Parks and Wildlife Department (2008-2009)
Amount: \$2,200
Title: *Baseline Data: Ecosystem-level Conservation of the Endangered Pecos Gambusia and Comanche Springs Pupfish*
PI: Chad Hargrave, Co-PI: P. Raelynn Deaton
3. Big Thicket Association (2008-2010)
Amount: \$15,330
Title: *Local, Regional, and Temporal Drivers of Fish Communities in the Big Thicket National Preserve*
PI: Chad Hargrave
2. National Science Foundation, Doctoral Dissertation Improvement Grant (2003-2004)
Amount: \$6,980
Title: *A Mechanistic Test of Consumer-Mediated Regulation of Primary Production*
PI: William J. Matthews (advisor), Co-PI: Chad Hargrave
1. McCarley Student Research, Southwestern Association of Naturalists (2003-2004)
Amount: \$1,000
Title: *A Mechanistic Test of Consumer-Mediated Regulation of Primary Production*
PI: Chad Hargrave

INTRAMURAL PROJECTS FUNDED (\$50,475)

7. Sam Houston State University, Competitive Undergraduate Research (2016-2017)
Amount: \$8,000
Title: *Effects of experimental warming on tadpole excretion and metamorphosis rates*

PI: Chad Hargrave & Carmen Montaña (Postdoctoral Research/Teaching Fellow)

6. Sam Houston State University Competitive Intramural Research (2016-2017)

Amount: \$5,000

Title: *Food web connectivity in a tropical floodplain river*

PI: Chad Hargrave & Carmen Montaña (Postdoctoral Research/Teaching Fellow)

5. Sam Houston State University Competitive Intramural Research (2012-2013)

Amount: \$15,000

Title: *Effects of Global Warming on Stream Ecosystems*

PI: Chad Hargrave

4. Sam Houston State University Competitive Intramural Research(2007-2008)

Amount: \$5,000

Title: *Effects of Elevated Atmospheric CO₂ on Stream Ecosystems*

PI: Chad Hargrave

3. University of Oklahoma Competitive Intramural Research (2002-2003)

Amount: \$6,975

Title: *Effects of Fish Species Richness on stream ecosystems*

PI: Chad Hargrave

2. Sam Noble Oklahoma Museum of Natural History, Hoving Ph.D. Fellowship (2001-2005)

Amount: \$10,000

Title: *Effects of Fish Density, Identity and Diversity on Stream Ecosystems*

PI: Chad Hargrave

1. University of Arkansas Competitive Intramural Research (1997-1998)

Amount: \$500

Title *Status of the Arkansas Darter and Least Darter in Arkansas*

PI: Chad Hargrave

EXTRAMURAL PROJECTS PENDING (\$1,076,797)

2. United States Department of Agriculture, NIFA (2017 – 2022)

Amount: \$1,000,000

Title: *Effects of Floral and Hydrocarbon VOCs on Native Pollinator Community Structure and Habitat Preference*

PI: Chad W. Hargrave; Co-PIs: Jerry L. Cook, Kaitlen P. Gary, John B. Pascarella, Jay Olaguer (HARC)

1. Texas Military Department (2017 – 2019)

Amount: \$76,797

Title: *Invertebrate Planning Level Survey at two Texas Army National Guard Training Sites: Camp Bowie & Eagle Mountain Lake Maneuver (Extension)*
PI: Kaitlen P. Gary; Co-PIs: Jerry L. Cook, Chad W. Hargrave, John B. Pascarella

EXTRAMURAL PROJECTS NOT FUNDED (\$896,260 – REPEAT SUBMISSIONS EXCLUDED)

12. Texas Military Department (2016 – 2018)

Amount: \$65,495

Title: *Aquatic Herpetofaunal and Macroinvertebrate Survey of two Recreational-Use Ponds at Camp Mabry in Austin, Tx*

PI: Kaitlen P. Gary; Co-PIs: Chad W. Hargrave and William I. Lutterschmidt

11. Texas Military Department (2016 – 2018)

Amount: \$65,495

Title: *Aquatic Herpetofaunal and Macroinvertebrate Survey of two Recreational-Use Ponds at Camp Maxey in Powderly, Tx*

PI: Kaitlen P. Gary; Co-PIs: Chad W. Hargrave and William I. Lutterschmidt

10. Southeastern Association of Fish and Wildlife Agencies (2016 – 2017)

Amount: \$48,623

Title: *Current Status and Habitat of the Bluehead Shiner (Pteronotropis hubbsi)*

PI: Chad W. Hargrave; Co-PI: Kaitlen P. Gary

9. U. S. Fish and Wildlife Service – Aquatic Nuisance Species (2016 – 2017)

Amount: \$24,609

Title: *Giant Salvinia (Salvinia molesta) effects on pelagic and littoral ecosystem processes*

PI: Chad W. Hargrave; Co-PI: Kaitlen P. Gary

8. U. S. Fish and Wildlife Service - Aquatic Nuisance Species (2015 - 2016)

Amount: \$28,600

Title: *Parasite Infection Dynamics and Implications for Conservation of the Endangered Pecos Gambusia (Gambusia nobilis) and Comanche Springs Pupfish (Cyprinodon elegans)*

PI: Autumn J. Smith-Herron (TISI); Co-PIs: Kaitlen P. Gary and Chad W. Hargrave

7. National Science Foundation (2013 - 2016)

Amount: N/A

Title: *Preliminary Proposal: RUI: Consumer roles in a changing climate - interactions between elevated temperature and consumer regulation of ecosystem structure and function*

PI: Chad W. Hargrave

6. National Science Foundation (2012 - 2015)
Amount: N/A
Title: *DEB: Preliminary Proposal: RUI: Consumer roles in a changing climate - interactions between elevated temperature and consumer regulation of ecosystem structure and function*
PI: Chad W. Hargrave
5. U.S. Fish and Wildlife Service (2011-2014)
Amount: \$61,152
Title: *Genetic confirmation and geographic extent of possible hybridization between the invasive Gambusia geiseri and endangered G. nobilis in West Texas*
PI: Chad Hargrave, Co-PI: Chris Randle, Gary Garrett (TPWD)
4. National Science Foundation (2010 - 2013)
Amount: \$396,684
Title: *RUI: Consumer roles in a changing climate: the interactions between elevated atmospheric carbon dioxide and consumer-mediated effects on ecosystem properties and functions*
PI: Chad Hargrave
3. U.S. Fish and Wildlife Service, (2010-2013)
Amount: \$104,230
Title: *Genetic analysis of putative hybrids between the invasive Gambusia geiseri and endangered G. nobilis and the relative threat of hybridization for long-term conservation of this endangered fish*
PI: Chad Hargrave, Co-PI: Chris Randle, Gary Garrett (TPWD)
2. National Science Foundation (2009 - 2012)
Amount: \$396,684
Title: *RUI: Consumer roles in a changing climate: the interactions between elevated atmospheric carbon dioxide and consumer-mediated effects on ecosystem properties and functions*
PI: Chad Hargrave
1. Bureau of Reclamation (2008-2013)
Amount: \$101,372
Title: *Continued Monitoring of Aquatic Biota in Flaming Gorge Tailwater, 2008-2013*
PI: Chad Hargrave

MENTORSHIP

GRADUATE STUDENTS

Jessica Sanchez (M.S. 2013; currently Ph.D. Candidate at Florida International University)
Kaitlen P. Gary (M.S. 2014; currently operations manager of Aquatics Research Division at Texas Research Institute for Environmental Studies)
Kelbi Delaune (M.S. 2015; currently Ph.D. candidate at Texas Tech University)
Victoria Rodriguez (M.S. 2017; currently Ph.D. candidate George Washington University)
Jessica McWilliams (M.S. 2017)
Cyrus Sadeghian (M.S. 2017)

UNDERGRADUATE RESEARCH STUDENTS

Chelsae Thron (2016-present); Savanah Hamilton (2016-present); Hanna Waters (2016-2017); Kathrine Chatum (2016-2017); Terry Ball (2015-2016); Anne Marie Bledsoe (2015-2016); Christian Poradek (2015- 2016); Alexandria Tromely (2014-2015); Emmaline Heckmann (2014-2015); Harmony Lorentzen (2014); Lakeith Henson (2013); Melanie Menchaca (2013); Meirha Bridges (2013); Stacie Gray (2012-2013); Daniel Traube (2012-2013); Jaqueline Lee (2012-2013); Jessica McWilliams (2011 – 2013); Krytal Ramsey (2011 – 2012); Nkenna Odom (2011 – 2012); Ashley Sequiera (2011 – 2012); Chad Cambell (2010 - 2011); Kelbi Deluane (2010 - 2011); Heather Otell (2009- 2010); Assumpta Nwaneri (REU 2010); Jessica Sanchez (2009 - 2010); Ivy McClellan (REU 2009), Samir K. Rosado (2008- 2009); Laura A. Gaides (2008-2009); Kaitlen Gary (2007-2008); Landis Shoemaker (2006-2008); Andrea Heim (REU (2008); Samuel Hamontree (2006-2008); Hanna Turner (REU 2007)

PEER-REVIEWED PUBLICATIONS

† indicates undergraduate in my lab when submitted.

21. Chad W. Hargrave. 2018. The Mosquitofishes, *Gambusia spp.* In B.R. Chapman and W.I. Lutterschmidt (eds). *Endangered Species of Texas*. Texas A&M University Press.
22. Chad W. Hargrave. 2018. The Pupfishes, *Cyprinodon spp.* In B.R. Chapman and W.I. Lutterschmidt (eds). *Endangered Species of Texas*. Texas A&M University Press.
20. Kaitlen P. Gary and Chad W. Hargrave. 2016. In-stream structure alters density dependent fish effects in stream ecosystems. *Ecology of Freshwater Fish*, doi: 10.1111/eff.12284.
19. Chad W. Hargrave and Kaitlen P. Gary. 2016 Historical Distribution of Bluehead shiner (*Pteronotropis hubbsi*). *Southeastern Naturalist*, 15:109-115.
18. Chad W. Hargrave. 2014. Least Darter, *Etheostoma microperca* Jordan and Gilbert 1888. In M. Eberle and F. Cross (eds). *Kansas Fishes*. Pp. 398-399. University of Kansas Press.

17. Chad W. Hargrave. 2014. River Redhorse, *Moxostoma carinatum* Cope 1870. In M. Eberle and F. Cross (eds). **Kansas Fishes**. Pp. 266-267. University of Kansas Press.
16. Chad W. Hargrave. 2014. Black Redhorse, *Moxostoma duquesnei* Lesuer 1817. In M. Eberle and F. Cross (eds). **Kansas Fishes**. Pp. 268-269. University of Kansas Press.
15. Chad W. Hargrave, K. David Hambright, and Lawrence J. Weider. 2011. Variation in resource consumption across a gradient of increasing intra- and inter-specific richness. **Ecology**, 92:1226-1235.
14. Chad W. Hargrave, Samuel Hamontree[†], and Kaitlen P. Gary. 2010. Direct and indirect food web regulation of microbial decomposers in headwater streams. **Oikos**, 119:1785-1795.
13. Chad W. Hargrave and Christopher M. Taylor. 2010. Spatial and temporal variation in fishes of the upper Red River drainage (Oklahoma-Texas). **The Southwestern Naturalist**, 55:149-159.
12. Chad W. Hargrave, Kaitlen P. Gary[†], Samir K. Rosado[†]. 2009. Potential effects of elevated atmospheric carbon dioxide on benthic autotrophs and consumers in stream ecosystems: a test using experimental stream mesocosms. **Global Change Biology**, 15:2779-2790.
11. Keith B. Gido and Chad W. Hargrave. 2009. Fish, Productivity. In Gene E. Likens (Ed.). **Encyclopedia of Inland Waters**, vol. 3, pp. 473-481 Oxford: Elsevier.
10. Chad W. Hargrave. 2009. Effects of fish species richness and assemblage composition on stream ecosystem function. **Ecology of Freshwater Fish** 18:24-32.
9. Chad W. Hargrave. 2006. A test of three alternative pathways for consumer regulation of primary productivity. **Oecologia** 149:123-132.
8. Chad W. Hargrave, Raul Ramirez, Melody Brooks, Michael A. Eggleton, Katherine Sutherland, Raelynn Deaton, and Heather Galbraith. 2006. Indirect food web interactions increase growth of an algivorous stream fish. **Freshwater Biology** 51:1901-1910.
7. Chad W. Hargrave, Katherine Sutherland, Edie Marsh-Matthews, and William J. Matthews. 2005. Multiple interacting factors affect pH in museum storage fluids. **Collection Forum** 19:23-31.
6. Michael A. Eggleton, Raul Ramirez, Chad W. Hargrave, Keith B. Gido, Jason R. Masoner, Gary D. Schnell, William J. Matthews. 2005. Predictability of littoral-zone fish communities through ontogeny in Lake Texoma, Oklahoma-Texas, USA. **Environmental Biology of Fishes** 73:21-36.
5. Chad W. Hargrave and Keith B. Gido. 2004. Evidence of reproduction by exotic grass carp

in the Red and Washita Rivers (Oklahoma). *Southwestern Naturalist* 49:89-93.

4. Chad W. Hargrave and James E. Johnson. 2003. Status of Arkansas darter, *Etheostoma cragini*, and least darter, *E. microperca*, in Arkansas. *Southwestern Naturalist* 48:89-92.
3. Keith B. Gido, Chad W. Hargrave, William J. Matthews, Gary D. Schnell, and Darrell W. Poque. 2002. Structure of littoral-zone fish assemblages along physical and chemical gradients in a southern reservoir: local versus system-wide effects. *Environmental Biology of Fishes* 63:253-263.
2. Kerri E. Pratt, Chad W. Hargrave, and Keith B. Gido. 2002. Rediscovery of *Labidesthes sicculus* (Atherinidae) in Lake Texoma (Oklahoma-Texas). *Southwestern Naturalist* 47:112-118.
1. Thomas M. Buchanan, Chad Hargrave, Drew Wilson, Les. G. Claybrook, and Phillip W. Penny, Jr. 1996. First Arkansas records for bigscale logperch, *Percina macrolepida* Stevenson (Pisces: Percidae), with comments on habitat preference and distinctive characters. *Proceedings of the Arkansas Academy of Science* 50:28-35.

ARTICLES IN REVIEW OR REVISION

1. Chad W. Hargrave and Kaitlen P. Gary. (In Revision) Regional, local and temporal drivers of fish species richness and assemblage composition in Gulf Coastal streams of the Big Thicket National Preserve, Texas, USA. *Environmental Biology of Fishes*.

PRESENTATIONS

INVITED SEMINARS

Department of Biology, University of Texas at Tyler, September 2011;

Hosted by: Dr. Lance Williams

Department of Biology, Trinity University, October 2010;

Hosted by: Dr. Kelly Lyons

Department of Biology, Texas State University, September 2009;

Hosted by: Dr. Michael Huston

Big Thicket Association, Big Thicket National Preserve, October 2009;

Hosted by: Linda Brindle

Department of Earth and Environmental Sciences, University of New Orleans, November 2008;

Hosted by: Dr. Martin O'Connell

Department of Ecology and Evolutionary Biology, Rice University, October 2007;

Hosted by: Dr. Jennifer Rutgers

Department of Biological Sciences, University of Southern Mississippi, November 2006;

Hosted by: Dr. Jacob Schaefer

Department of Wildlife and Fisheries Sciences, Texas A & M University, May 2006

Hosted by: Dr. Gil Rosenthal

Department of Zoology, University of Oklahoma, May 2004

Hosted by: Dr. Bill Matthews - Ph.D. Seminar

FIRST AUTHORED PRESENTATIONS ONLY

29. Fish community structure in the Big Cypress drainage (Texas) with special emphasis on the Bluehead Shiner (*Pteronotropis hubbisi*).
At: Southwestern Association of Naturalists, 2017
28. Population Size and Dispersion Patterns of Bluehead Shiner within Iron Ore Lake and Pruitt Lake, Texas.
At: American Fisheries Society, Texas Chapter, 2017
27. Fish assemblage dynamics in a small stream within the Piney Woods of East Texas.
At: Big Thicket and Texas Piney Woods Science Conference, 2015
26. Historic Distribution of the Bluehead Shiner.
At: Southwestern Association of Naturalists, 2015
25. Effects of Experimental warming on fish growth.
At: Texas Chapter American Fisheries Society, 2015
24. Potential effects of global warming on stream ecosystem structure and function.
At: Texas Academy of Science, Southwestern Association of Naturalists, 2014
23. Long-Term population dynamics of the endangered *Gambusia nobilis* and *Cyprinodon elegans* and associated environmental correlates.
At: Texas Academy of Science, 2013
22. Regional land-use effects on fishes of the Big Thicket ecoregion.
At: American Fisheries Society – Texas Chapter, Southwestern Association of Naturalists 2013
21. Local, regional and temporal processes affecting fish communities in Big Thicket Streams.
At: Texas Academy of Science, 2012
20. A preliminary analysis of potential hybridization between endangered *Gambusia nobilis* and invasive *G. geiseri* in a reconstructed desert wetland, San Solomon Ciénega, Balmorhea State Park, TX.
At: Texas Invasive Plant and Pest Conference, 2011
19. Population dynamics, food web interactions and possible ecosystem management options for the endangered *Gambusia nobilis* and *Cyprinodon elegans* in San Solomon Ciénega, Balmorhea State Park, Texas.
At: Rio Grande Fishes Recovery Meeting, 2011
18. Local, regional and temporal processes affecting fish communities in Big Thicket Streams.
At: Big Thicket Science Conference, 2011
17. Potential hybridization between invasive *Gambusia geiseri* and endangered *Gambusia nobilis*.
At: Desert Fishes Council, 2010
16. Interactive effects of stream habitat complexity and consumers on stream ecosystem function (Invited).
At: North American Benthological Society, 2010

15. Regional patterns in environment and fishes of the Rio Grande Basin, Texas (Invited).
At: Rio Grande Basin Initiative, 2010
14. On the Population and Community Ecology of Fishes in a small Second-order Stream Ecosystem.
At: Texas Academy of Science, 2009; Southwestern Association of Naturalists, 2009
13. Regional and Local variation in fishes of the Big Thicket National Preserve, Texas.
At: OK-TX Aquatics Research Group and Great Plains Limnology Conference, 2008
12. Mosquitofish ecology and a changing climate: the current and future ecological role of the *Gambusia affinis* in temperate streams.
At: 3rd European Poeciliid Biologists Conference, 2008
11. Global warming affects nutrient dynamics in small second order stream ecosystems.
At: Texas Academy of Sciences, 2008; Southwestern Association of Naturalists, 2008
10. Trophic and Functional effects of fishes in first- and second order perennial streams.
At: Southwestern Association of Naturalists, 2007.
9. Effects of Genetic Diversity on Ecosystem Function: Grazing Rates in Clonal and Non-Clonal *Daphnia* assemblages.
At: Southwestern Association of Naturalists, 2006; American Society of Limnology and Oceanography, 2006.
8. Interactive consumer effects on ecosystem properties and functions.
At: Joint meeting of the Oklahoma-Texas Aquatics Research Group and Texas River and Reservoir Management Society, 2005.
7. Fish effects on stream ecosystems: a mechanistic test.
At: North American Benthological Society, 2005; Southwestern Association of Naturalists, 2005.
6. Fish diversity enhances ecosystem function.
At: North American Benthological Society, 2003; Texas A&M Conservation Ecology Symposium, 2004.
5. Evidence of natural grass carp reproduction in the Red and Washita rivers (Oklahoma).
At: American Fisheries Society, Oklahoma Chapter Annual Meeting, 2003.
4. Effects of fishes on stream ecosystem function.
At: Southwestern Association of Naturalists, 2002; Great Plains Limnology Conference, 2002.
3. Persistence and stability of fishes in a harsh prairie river system (upper Red River): Effects of scale.
At: North American Benthological Society - Invited landscape ecology session, 2000; Oklahoma Academy of Science, 2002; Southwestern Association of Naturalists, 2000.
2. Rediscovery of *Labidesthes sicculus* (Atherinidae) in Lake Texoma (Oklahoma-Texas).
At: Great Plains Limnology conference, 2000.
1. Current Status of Arkansas Darter (*Etheostoma cragini*) and Least Darter (*E. microperca*) in Arkansas.

At: Arkansas Academy of Science, 1998; Great Plains Limnology conference, 1998;
Oklahoma Academy of Science, 1998.

PRESENTATIONS BY TITLE AND PRESENTING COAUTHOR

28. Potential effects of global warming fish mediated nutrient dynamics in stream ecosystems.
At: Texas Chapter of American Fisheries Society, 2017
Presenter: Jessica McWilliams – Graduate student
27. Current Status of Bluehead Shiner (*Pteronotropis hubbsi*) in Texas.
At: Texas Chapter of American Fisheries Society, 2017
Presenter: Chelsea Thorn – Undergraduate
26. Fish Assemblages Structure Across a Habitat Gradient in the Big Cypress Drainage, Texas.
At: Texas Chapter of American Fisheries Society, 2017.
Presenter: Kaitlen P. Gary
25. Invasive allochthonous input: the Chinese Tallow tree and stream food webs.
At: Southwestern Association of Naturalists, 2017.
Presenter: Cyrus Sadeghian – Graduate Student
24. The potential hybridization between the endangered pecos *Gambusia* and invasive large spring *Gambusia*.
At: Integrated Ecology Symposium, TX A&M, 2016.
Presenter: Victoria Rodriguez – Graduate Student
23. Comparative effects of low and high quality allochthonous input on stream food webs.
At: Joint Meeting of Ichthyologists and Herpetologists, 2016.
Presenter: Cyrus Sadeghian – Graduate Student
22. The Historic Distribution of Bluehead Shiner (*Pteronotropis hubbsi*).
At: Big Thicket and Texas Piney Woods Science Conference, 2015.
Presenter: Kaitlen P. Gary
21. Flow dependent competitive interactions between invasive *Gambusia geiseri* and endangered *G. nobilis*.
At: Texas Invasive Plant and Pest Council, 2014, Southwestern Association of Naturalists, 2015, Texas Chapter American Fisheries Society, 2015, Texas Academy of Sciences.
Presenter: Kelbi Delaune – Graduate Student
20. Potential effects of global warming on fish effects on stream ecosystems.
At: Texas Academy of Sciences, Southwestern Association of Naturalists, 2013.
Presenter: Jaqueline Lee - Undergraduate
19. Competition between invasive *Gambusia geiseri* and endangered *G. nobilis* – implications For species conservation.
At: Desert Fishes Council, Southwestern Association of Naturalists, Texas Academy of Sciences, 2013.
Presenter: Kelbi Delaune – Graduate Student
18. Population dynamics, Food Web Structure and Potential Community-level interactions in a reconstructed desert wetland, San Solomon Cienega, Balmorhea State Park, Texas;
At: Texas Academy of Science, 2012.
Presenter: Ashley Sequeria - Undergraduate

17. Potential hybridization between endangered *Gambusia nobilis* and invasive *G. geiseri* in a reconstructed desert wetland;
At: Texas Academy of Science, 2012.
Presenter: Kelbi Delaune - Graduate Student
16. Comparison of metabolic scope between the invasive *Gambusia geiseri* and endangered *G. nobilis*: potential importance of flow for endangered species management.
At: Texas Academy of Science, 2012.
Presenter: Krystal Ramsey - Undergraduate
15. Thermal minimum and maximum for three species of temperate *Gambusia*.
At: Texas Academy of Science, 2012.
Presenter: Nkenna Odom - Undergraduate
14. Population dynamics and possible competition between the endangered *Gambusia nobilis* and invasive *Gambusia geiseri*, San Solomon Ciénega, Balmorhea State Park, Texas
At: Texas Invasive Pest and Plant Conference, 2011.
Presenter: Kelbi Delaune - Graduate Student
13. How riparian protection can affect ecosystem structure and function in streams.
At: Big Thicket Science Conference, 2011.
Presenter: Kaitlen Gary - Graduate Student
12. Gut contents, diet overlap and potential competitive interactions among fishes in a reconstructed desert wetland: implications for endangered species conservation.
At: Desert Fishes Council, 2010.
Presenter: Sam Hamontree - Graduate Student
11. Population dynamics of *Cyprinidon elegans* and *Gambusia nobilis* in two reconstructed desert wetlands.
At: Desert Fishes Council, 2010.
Presenter: Kelbi Delaune - Undergraduate
10. Population and community ecology of in San Solomon Cienega at Balmorhea State Park, Texas.
At: Texas Academy of Science, 2010.
Presenter: Kelbi Delaune - Undergraduate
9. Preliminary analysis of critical current speed between *Gambusia nobilis* and *G. geisier* in Balmorhea State Park, TX.
At: Texas Academy of Science, 2010.
Presenter: Sam Hamontree - Graduate Student
8. Regional and Local variation in fishes of the Big Thicket National Preserve, Texas.
At: Texas Academy of Science, 2009; Southwestern Association of Naturalists, 2009.
Presenter: Kaitlen Gary - Undergraduate
7. A context-dependent trophic cascade in a simple stream food web.
At: OK-TX Aquatics Research Group and Great Plains Limnology Conference, 2008; Texas Academy of Science, 2009; Southwestern Association of Naturalists, 2009.
Presenter: Landis Shoemaker - Undergraduate

6. Fish mediated secondary production in stream ecosystems.
At: OK-TX Aquatics Research Group and Great Plains Limnology Conference, 2008;
Texas Academy of Science, 2009; Southwestern Association of Naturalists, 2008.
Presenter: Laura Gaddis - Undergraduate
5. Effects of elevated CO₂ on stream ecosystem properties and functions.
At: Texas Academy of Science 2008, Southwestern Association of Naturalists, 2008.
Presenter: Kaitlen Gary – Undergraduate, Samir Rosado - Undergraduate
4. Direct and indirect effects of fish on leaf litter decomposition.
At: Texas Academy of Sciences, 2008; Southwestern Association of Naturalists, 2008.
Presenter: Sam Hamontree - Undergraduate
3. Predator-induced phenotypic plasticity in the western mosquitofish (*Gambusia affinis*).
At: 3rd European Poeciliid Biologists Conference, 2008; Southwestern Association of Naturalists, 2008.
Presenter: Samir Rosado - Undergraduate
2. A simple solution to a complex problem: a hypothesis based hierarchical approach for teaching general concepts in an ecology lab.
At: Texas Academy of Sciences, 2008; Southwestern Association of Naturalists, 2008.
Presenter: Chris Felder - Undergraduate
1. Taxon-specific effects of microbial-mediated leaf litter decomposition in aquatic ecosystems.
At: Texas Academy of Sciences, 2008; Southwestern Association of Naturalists, 2008.;
Presenter: Landis Shoemaker - Undergraduate

TEACHING

UNDERGRADUATE COURSES

General Ecology & Lab (BIOL3409 -- SHSU); fall, spring 2006-2016; ~75 students/class
Tropical Ecology in Costa Rica (BIOL4380); summer 2016; ~10 students
Physiological Ecology (BIOL4481); spring 2016; ~25 students
Aquatic Biology (BIOL4330 -- SHSU); spring 2007, 2014; fall 2017 ~20 students
Environmental Science (BIOL1401-- SHSU); fall 2006; ~60 students
Reservoir Fish Ecology (ZOO4970/5970 -- OU) summer 2005-2006; ~16 students/class

GRADUATE COURSES

Limnology (BIOL5390 -- SHSU); spring 2012, 2014; ~10 students
Community Ecology (BIOL5394 -- SHSU); spring 2010, 2012; ~10 students
Ichthyology (BIOL5382 -- SHSU); fall 2009, 2011, 2015; ~9 students/class
Experimental Design (BIOL5320 -- SHSU); spring 2009, 2011; 2017 ~15 students
Fish Ecology (BIOL5394 -- SHSU); fall 2010; ~6 students
Reservoir Fish Ecology (ZOO5970 -- OU) summer 2005-2006; ~16 students/class
Microbial Ecology (BIOL5394 -- SHSU); fall 2016; 15 students

AWARDS

Best Graduate Student Paper, Conservation Ecology Symposium, Texas A & M 2004
Wilk's Award, Best Student Paper, Southwestern Association of Naturalists 2002
James Thompson Award, Excellence in Graduate Teaching, Univ. of Oklahoma 2000
2nd Place, best Undergraduate Paper, Arkansas Academy of Science 1998
Samuel Dillenger Award: Outstanding Senior Zoologist, University of Arkansas 1998
Outstanding Achievement in Biology, University of Arkansas Fort Smith 1995

PROFESSIONAL SOCIETIES

Ecological Society of America; American Society for Freshwater Science; Oklahoma-Texas Aquatic Research Group; Organization of Biological Field Stations; Southwestern Association of Naturalists; Texas Academy of Science

SERVICE

MANUSCRIPTS REVIEWED FOR

<i>American Midland Naturalist</i> (2)	<i>J. Comparative Parasitology</i>
<i>Canadian J. Fisheries & Aquatic Sciences</i>	<i>Lakes and Reservoirs Research & Management</i>
<i>Copeia</i> (2)	<i>North American Journal of Fisheries Management</i>
<i>J. Fisheries & Aquatic Sciences</i>	<i>Oecologia</i> (7)
<i>Ecology</i> (5)	<i>Oikos</i> (4)
<i>Ecology of Freshwater Fish</i> (16)	<i>Plos-One</i>
<i>Evolutionary Ecology</i>	<i>Southwestern Association of Naturalists</i> (7)
<i>Freshwater Biology</i> (2)	<i>Transactions American Fisheries Society</i> (3)
<i>Hydrobiologia</i> (2)	

GRANTS REVIEWED FOR

National Science Foundation
Southwestern Association of Naturalists (student grants)
Big Thicket Association

DEPARTMENTAL COMMITTEES

Departmental Events (2011 – present)
Departmental Budget (2008– present)
Center for Biological Field Studies (2006 – present)
Department Merit Review (2010 - present)

Environmental Science Program (2010 – 2013)
 Distance Learning (2010 – 2012)
 Student Research Award (2008 – 2012)
 Seminar Committee (Chair, 2007 – 2009)
 Graduate Selections (2006 – 2008)
 Anatomy and Physiology Coordinator Search (2014)
 Functional Morphologist Search (2014)
 Field Station Manager Search (2013)
 Environmental Toxicology Search Committee (2012)
 Wetland Ecologist Search (2012)

COLLEGE AND UNIVERSITY COMMITTEES

Academic Affairs Council (2012-present)
 Meta-Assessment Committee for Accreditation (2013-2015)
 University Budget Focus Group (2014-2015)
 SHSU Faculty Senate (2009-2012),
 SHSU Faculty Research Council (2008-2011)
 SHSU Capital Fund Campaign (2006-2009)

ELECTED POSITIONS

Board of Trustees, Southwestern Association of Naturalists (2017-present).
 Science Committee for the Big Thicket National Preserve (2010 - Present)
 Chair of Fresh Water Science Section, Texas Academy of Sciences (2012-2015)
 Vice President, Executive Council, Big Thicket Association (2010 - 2013)
 Executive Council, Huntsville Senior Citizen Center (2010 - 2013)
 Board of Governors Southwestern Association of Naturalists (2006-2009).

PUBLIC OUTREACH

2013, 2015	Wetland Delineation Training Course
2013	Judge Student Posters at annual meetings of Texas Academy of Sciences and Southwestern Naturalists
2012	Lead Aquatic Biology Field Trip for Huntsville High school,
2011	Public Presentation, Fishes of the Big Thicket Ecoregion, Big Thicket Association
2011	Public Presentation- Understanding Human-Related Impacts to Aquatic Ecosystems in Texas, Big Thicket Association, Beaumont, TX,
2010	Fish collecting trip on Neches River, Big Thicket Association
2009	Fishes of the Big Thicket National Preserve, Identification Workshop, Big

	Thicket Association
2007	Public Presentation, Bats of Texas, Huntsville Down-town Association and Rotary Club
2005	Co-host, Joint meeting of the Oklahoma Texas Aquatic Research Group and Texas Rivers and Reservoir Management Society, University of Oklahoma Biological Station
2005-06	Public Outreach Specialist, University of Oklahoma Biological Station 2005-2006
2005-07	Public presentation on Ecology of Lake Texoma, West End Association
2004-05	Instructor for Science Institute for Secondary and Elementary School Teachers, Sam Noble Oklahoma Museum of Natural History
2003	Various presentations at elementary schools on fish diversity and functional Ecology