a-1. SUMMARY OF ACTIVITIES

<table>
<tr><th colspan="2">TEACHING 30%</th></tr>
<tr><td>Courses Taught at AU
BIOL 1030: Organismal Biology
BIOL 3010: Comparative Anatomy
BIOL 3030: Evolution & Systematics
BIOL 3033: Evolution & Systematics, Distance
BIOL 4980: Undergraduate Research
BIOL 7160: Systematic Ichthyology
BIOL 7200: Organic Evolution
BIOL 7970: Phylogenetic Systematics
BIOL 7970: Museum Curation
BIOL 7970: Museum Practicum</td><td>Advising
Completed
Ph.D., 8 Chair, 7 member
MS, 7 chair, 6 member
Current
Ph.D., 5 chair, 3 member
MS, 2 chair, 1 member
Undergraduate
>200
Textbooks Written
BIOL 1010 Lab Manual
BIOL 1030 Lab Manual</td></tr>
<tr><th colspan="2">RESEARCH 45%</th></tr>
<tr><td>Total External Awards
$12,290,411 TL, $4,899,932 AU
Select Research Awards
Biogeography and Ecology of Diversification After a Transcontinental Freshwater Fish Migration NSF 2024. $1,446,947, $499,364 AU
All Cypriniformes Species Inventory: NSF, $2,680,578 TL, $785,482 AU
Collection Improvement Grants: NSF, $429,878, $347,602, and $195,000
Metrics
H-index 34, 6659 citations</td><td>Presentations
+100 Presentations at National Meetings
30 invited talks and symposium presentations, 1 plenary talk
Organized 3 symposia
Awards
AU Alumni Professor, 2007-2011
Publications
Journal: 179
Chapters: 9
Award: Robert H. Gibbs, Jr. Memorial Award for Excellence in Systematic Ichthyology, 2023</td></tr>
<tr><th colspan="2">SERVICE and OUTREACH 10%</th></tr>
<tr><td>Professional
9 NSF panels
>800 Journal Articles Reviewed
Leader, Neotropical Ichthyological Association
Associate Editor Copeia (2003-2006)
Associate Editor Zootaxa (2016-now)
Board of Governors, American Society of Ichthyologists and Herpetologists (ASIH)
Robert H. Gibbs Award for Systematic Ichthyology, ASIH
University
Outside Reader – 9 Ph.D.
Grant reviewer</td><td>COSAM
Dean’s Medalist Committee
AUExplore/Destination STEAM
Department
9 search committees
Chair of Evolutionary Genetics and Systematics Core (former)
Committees: Graduate Studies, Strategic Planning, Collection (chair), Tenure and Promotion
Museum Open Houses, camps
Played Charles Darwin during 2009 Darwin Celebration
Dinosaur Egg, Tiger displays</td></tr>
<tr><th colspan="2">Administration 15%</th></tr>
<tr><td>Director, Auburn University Museum of Natural History</td><td>Supervise 9 staff members and research and outreach activities</td></tr>
</table>

b. PERCENTAGE BREAKDOWN OF DUTIES

Allocation of time:	**Activity**	**Percent**
	Teaching	30
	Research	45
	Service	10
	Administration	15

c. HONORS AND AWARDS

Robert H. Gibbs, Jr. Memorial Award for an outstanding body of work in systematic ichthyology, American Society of Ichthyologists and Herpetologists, 2023.

Associate Editor, Ichthyology, Zootaxa, January 2016-present.

Alumni Professor, Auburn University Alumni Association, October 2007-2011.

Associate Editor, General Ichthyology, American Society of Ichthyologists and Herpetologists, October 2002-2006.

Chair of Special Publications Committee, American Society of Ichthyologists and Herpetologists, 2001-present.

Teacher of the Year, Auburn University Beta Beta Beta, Biological Honor Society, 2000-2001

Board of Governors, American Society of Ichthyologists and Herpetologists, 2009–2012, 2022–present.

Dean's Research Initiative, College of Science and Math, Auburn University, $4,400, Air-breathing in Loricariid Catfishes - A Potentially Unique Method of Respiration in Fishes. 2000.

Philip W. Smith Memorial Fund Award, Illinois Natural History Survey, $375 for travel to South America, March 1997.

University of Illinois at Urbana-Champaign, incomplete list of teachers ranked excellent by their students, Ecology, Ethology, and Evolution 337 Ichthyology, 1995.

Edward C. Raney Memorial Fund Award, American Society of Ichthyologists, 1995.

The Department of Ecology, Ethology, and Evolution of the University of Illinois Graduate Student Award, 1995.

Philip W. Smith Memorial Fund Award, Illinois Natural History Survey, 1995.

Ernst Mayr Award, Harvard University, 1994.

University of Illinois at Urbana-Champaign, Incomplete list of teachers ranked excellent by their students, for Biology 120 Genetics, Evolution, and Biodiversity, 1994.

d. SCHOLARLY CONTRIBUTIONS

1. Teaching

a. Courses taught in last 3 years

Semester	Course #	Course Title	% Taught	Contact Hours	Lab Hours	Enrollment
Fall 2024	BIOL 4980	Undergraduate Research	100	0	2	2
Fall 2024	BIOL 7960	Museum Education	100	0	3	2
Fall 2024	BIOL 7990	Research and Thesis		0	0	1
Fall 2024	BIOL 8990	Research and Dissertation		0	0	1
Summer 2024	BIOL 4980	Undergraduate Research	100	0	2	1
Summer 2024	BIOL 7960	Museum Education	100	0	3	2
Summer 2024	BIOL 8990	Research and Dissertation		0	0	1
Spring 2024	BIOL 3010	Comparative Anatomy	100	3	1	96
Spring 2024	BIOL 4980	Undergraduate Research	100	0	2	1
Spring 2024	BIOL 7960	Museum Education	100	0	2-3	2
Spring 2024	BIOL 7990	Research and Thesis		0	0	1
Spring 2024	BIOL 8990	Research and Dissertation		0	0	2
Fall 2023	BIOL 4950	Senior Seminar	100	1	1	9
Fall 2023	BIOL 4980	Undergraduate Research	100	0	2	2
Fall 2023	BIOL 7990	Research and Thesis		0	0	1
Fall 2023	BIOL 8990	Research and Dissertation		0	0	2

Fall 2023	BIOL 7960	Museum Education	100	0	3	2
Summer 2023	BIOL 4980	Undergraduate Research	100	0	2	1
Summer 2023	BIOL 7990	Research and Thesis		0	0	3
Summer 2023	BIOL 8990	Research and Dissertation		0	0	2
Spring 2023	BIOL 3010	Comparative Anatomy	100	3	1	79
Spring 2023	BIOL 4980	Undergraduate Research	100	0	2	2
Spring 2023	BIOL 8990	Research and Dissertation		0	0	2

b. Graduate Students Completed

AS MAJOR PROFESSOR

Name	Institution	Degree	Completion	Current Position
Justin Evans	AU-DBS	MS	2002	City Engineer, Tampa, FL
Carrie Allison	AU-DBS	MS-NT	2003	U.S. Fish and Wildlife, Louisville, KY
T. Paul Pera	AU-DBS	MS	2004	Lawyer, Memphis, TN
David Werneke	AU-DBS	MS	2005	Curator, AUMNH
Nathan Lujan	AU-DBS	Ph.D.	2009	Curator of Fishes, Royal Ontario Museum, Toronto, ON, Canada
Ricardo Betancur	AU-DBS	Ph.D.	2009	Assoc. Prof., University of San Diego, CA
Marcelo Melo	AU-DBS	Ph.D.	2009	Professor Departmento de Oceanografia Biológica, Federal University of São Paulo
C. Keith Ray	AU-DBS	MS	2010	Director of Conservation, Southeastern Trust for Parks and Land, Avondale Estates, GA.
Lesley de Souza	AU-DBS	Ph.D.	2011	Rapid Inventories Program, Field Museum of Natural History
Shobnom Ferdous	AU-DBS	Ph.D.	2013	Senior Lecturer, Auburn University
Paul Wieczorek	AU-DBS	MS	2015	Ph.D. Student, U. South Florida
Milton Tan	AU-DBS	Ph.D.	2016	Research Scientist, Illinois Natural History Survey, Champaign, IL
Pamela Hart	AU-DBS	MS	2016	Asst. Prof. U. Alabama, Tuscaloosa, AL
Carla Stout	AU-DBS	Ph.D.	2017	Asst. Prof. Norco College, Norco CA
Edward Burress	AU-DBS	Ph.D.	2017	Asst. Prof. U. Alabama, Tuscaloosa, AL
Tobit Liyandja	AU-DBS	MS	2018	Postdoctoral Fellow, Royal Ontario Museum, Toronto, ON, Canada

Jennifer Weber	AU-DBS	MS	2018	Field Ecologist, Conservation Management Inst., Virginia Tech, Blacksburg, VA
Malorie Hayes	AU-DBS	Ph.D.	2020	Instructor, Southern Union State Community College, Opelika, AL
Charles Stephen	AU-DBS	Ph.D.	2022	Assistant Professor, Georgia State University Perimeter College, Atlanta, GA
Daniel Akin	AU-DBS	MS	2022	PhD Student, U. Louisiana, Lafayette
Corinthia Black	AU-DBS	Ph.D.	2022	Postdoctoral Fellow, Smithsonian Institution, Washington, DC
Jordan Sykes	AU-DBS	MS-NT	2024	Preparing for a Ph.D. program
Courtney Weyand	AU-DBS	Ph.D.	2025	Looking for employment

Justin D. Evans, MS, June 1999 - May 2002. Taxonomic and phylogenetic assessment of the *Hemiacistrus annectens* group by morphometric and molecular methods (Teleostei: Loricariidae)

Carrie Allison, MS (nonthesis), August 2001-August 2003, a guide to the loricariids of the Rupununi District, Guyana.

Thomas Paul Pera, MS, August 2000 - December 2004. Taxonomic assessment of the silverjaw minnow, *Notropis buccatus* Cope (Cyprinidae).

David C. Werneke, MS, August 2000 - May 2005. Variation within the genus *Labidesthes* Cope (Atheriniformes: Atherinopsidae) and its influence on the validity of the fiery-finned silverside (*Labidesthes vanhyingi* Bean and Reid.

Ricardo Betancur, Ph.D., August 2004 – May 2009. Systematics and evolutionary history of sea catfishes (Siluriformes: Ariidae).

Nathan Lujan, Ph.D., August 2002 – May 2009. Jaw morpho-functional diversity, trophic ecology, and historical biogeography of the neotropical suckermouth armored catfishes (Siluriformes: Loricariidae).

Marcelo Melo, Ph.D., August 2004 – August 2009. Taxonomic and phylogenetic revision of the family Chiasmodontidae (Perciformes:Acanthomorpha).

Keith Ray, MS., August 2006 – December 2010. Redescription and morphometric analysis of *Isorineloircaria* (Siluriformes: Loricariidae).

Lesley de Souza, Ph.D., August 2003 – December 2011. Hydrological link between the Amazon River Basin and the eastern Guiana Shield on the Neotropical ichthyofauna.

Shobnom Ferdous, Ph.D., August 2004 – December 2014. Geometric Morphometrics and Phylogeny of the Catfish genus *Mystus* Scopoli (Siluriformes: Bagridae) and North American Cyprinids (Cypriniformes).

Paul Wieczorek, MS, August 2012-December 2015. Ecomorphological analysis of cyprinids in the Mobile Bay Basin

Milton Tan, Ph.D., August 2009-August 2016. Evolution of Miniaturization and Paedomorphism in Fishes of the Order Cypriniformes.

Pamela Hart, MS, May 2013-August 2016. Diversity and Conservation of the Southern Cavefish, *Typhlichthys subterraneus*.

Carla C. Stout, Ph.D. August 2010-May 2017. Minnows and molecules: resolving the broad and fine-scale evolutionary patterns of Cypriniformes.

Edward Buress, Ph.D. August 2012-August 2017. Patterns and rate of ecological diversification among Neotropical cichlid fishes

Jennifer M. Weber. August 2015-May 2018. Variation in morphology and physiology of introduced populations of the Virile Crayfish, *Faxonius virilis* Hagen 1870. *served as foster advisor after her original advisor moved to Troy University.

Tobit Liyandja, MS. August 2016-August 2018. Body shape evolution of African/Asian minnows of the genus *Labeo* Cuvier 1817 (Cyprinidae, Labeonini) and variations in *Labeo parvus*.

Malorie Hayes, Ph.D. August 2011-August 2020. Molecular Investigations of the Diversity of Freshwater Fishes across Three Continents.

Charles Stephen, Ph.D. August 2014-May 2022. Gene flow, morphology, and taxonomic revision of cave-obligate *Hesperochernes* pseudoscorpions. Served as advisor for last three years after his advisor left Auburn.

Daniel Akin. August 2019-August 2022. Descriptions and Phylogenetic Relationships of the Guiana Shield Pencil Catfishes.

Corinthia Black, Ph.D. May 2017-August 2022. Evolutionary Ecology of Loricariid Catfishes.

Courtney Weyand, Ph.D. August 2017-May 2025. Systematics of the Riffle Dace with Special Emphasis on the Blacknose Daces (Leuciscidae: *Rhinichthys*).

AS COMMITTEE MEMBER

Name	School	Degree	Completion	Current Position
Brian Phillips	AU-FAA	MS	2001	Environmental Consultant, TX
Abigail Sorenson	AU-DBS	MS	2004	Deceased
Michael Gangloff	AU-DBS	Ph.D.	2004	Professor, Appalachian State College

Steven J. Herrington	AU-FAA	Ph.D.	2004	Research Scientist, The Nature Conservancy, St. Louis, MO
Jeremy Wright	U. Florida	MS	2007	Curator, New York State Museum
Alfred Thomson	U. Florida	MS	2008	Machine Operator, Halkey-Roberts
Tiago Carvalho	PUCRS,	MS	2008	Professor, Pontifica Universidad Javeriana, Bogota, Colombia
Matthew Thomas	SIUC	Ph.D.	2011	Kentucky Fish and Wildlife, Frankfort, KY
Alexis Janosik	AU-DBS	Ph.D.	2012	Professor, University of West Florida
Alfred Thomson	U. Florida	Ph.D.	2014	Machine Operator, Halkey-Roberts
Christopher Hamilton	AU-DBS	Ph.D.	2015	Assistant Professor, University of Idaho
Kellie Bourguignon	AU-DBS	MS	2017	Lab Technician III, Auburn University
Rebecca Godwin	AU-DBS	Ph.D.	Transferred to another University	Assistant Professor, Piedmont University, GA
Fredericka Hamilton	AU-ENT	Ph.D.	2019	Unknown
João Pedro Fontanelle	U. Toronto	Ph.D.	2020	Postdoctoral Fellow, U. Toronto
Viktoria Bogantes	AU-DBS	Ph.D. 2015	2019	Assistant Professor, U. W Florida
Steven Ksepka	AU-FISH	Ph.D.	2024	Postdoctoral Fellow. Auburn U.
Brett Warren	AU-FISH	Ph.D.	2024	Postdoctoral Fellow. Auburn U.

c. Graduate Students – Current

AS MAJOR PROFESSOR

Name	Institution	Degree	Start	Expected Completion	Progress
Akila Abisinghe	AU-DBS	Ph.D.	2021	2026	Candidate
Benjamin Allen	AU-DBS	M.S.	2022	2025	Writing
Carly Woodfin (co-advisor)	AU-DBS	Ph.D.	2023	2028	Courses
Asmaul Husna	AU-DBS	Ph.D.	2024	2030	Courses
Sara Barck	AU-DBS	M.S.	2025	2028	Courses
Emalee Swisshelm	AU-DBS	Ph.D.	2025	2030	Courses

AS COMMITTEE MEMBER

Name	Institution	Degree	Start	Expected Completion	Progress
Claire Merchant	AU-FISH	MS	2024	2026	Courses
Alejandra Fabres	AU-DBS	Ph.D.	2023	2027	Candidate
Sam Donohoo	AU-FISH	Ph.D.	2023	2027	Candidate

d. Courses and Curricula Developed

Biology 1010, The Diversity of Life - on committee that designed the course and wrote the labs. Enrollment ~700/year. Basic science course for nonmajors.

Biology 1030, Organismal Biology – helped develop labs, wrote lectures for the course. Taught 3 times. Enrollment ~800/year. Required for all majors in biology related disciplines.

Biology 3010, Comparative Anatomy - developed the quarter and semester courses including lecture and lab. This is a comprehensive course on the evolution of vertebrate organ systems. We follow characters as they develop and change into features that we see in living vertebrates. Course was completely revamped in 2014. Taught >30 times. Enrollment 100–260/year. Most biomedical sciences, prevet, premed, and predent, students must take this or another course.

Biology 3030, Evolution and Systematics – developed a modern course on evolution in Fall 2008. The course covers basic phylogenetics and evolution. The course covers both traditional evolution as well as advanced concepts in genetics, genomics, and development. Taught 7 times since 2008. Enrollment ~160/year. Underwent a full revision in 2014 and preparation as an online course. Required course for most non-professional students in biology-related disciplines.

Biology 3033, Evolution and Systematics, distance – developed my BIOL 3030 course for distance learning. Enrollment ~60/year. Taught 3 times since 2015.

Biology 7160, Systematic Ichthyology - developed a graduate course on systematics and how it applies to fishes. This course was a survey of fish taxa and modern phylogenetic literature. The lab usually involved a web component, including designing a web page to identify fishes. Taught 3 times since 2000. Enrollment 6/semester.

Biology 7960, Museum Education – codeveloped a 1–3-hour graduate course that gives Department of Education graduate students experience with informal education in various museum programs. 1–2 students almost every semester.

Biology 7970, Phylogenetic Systematics – developed a graduate course in systematics with Ken Halanych and Leslie Goertzen. Taught the first third of the course on history, taxonomy, and basic phylogenetic techniques. Taught once. Enrollment 20.

Biology 7970, Museum Curation – codeveloped a 2-hour graduate lecture/discussion course on museum curation. Taught once, 2012. Enrollment 10.

Biology 7970, Museum Practicum – codeveloped a 2-hour graduate course on direct museum curation (which involved moving the collections). Taught once, 2013. Enrollment 10.

Biology 7200, Organic Evolution - developed a graduate course on evolution. This course was a survey of evolution literature for graduate students. Taught once. Enrollment 9.

e. Grants received related to teaching

NONE

f. Publications pertaining to teaching.

2. Lishak, E. Wester, J. Dobie, **J. Armbruster**, R. Boyd, D. Folkerts, and C. Guyer. 2001. Survey of Life, Biology 1010. Contemporary Publishing of Raleigh, Raleigh.

1. Folkerts, D., **J. Armbruster**, J. Feminella, R. Dute, R. Lishak, M. Dalrymple, F. Lawrence, W. Mason, and C. Peterson. 2002. Organismal Biology: Biology 1030 Lab Manual. Contemporary Publishing of Raleigh, Raleigh.

g. Other Contributions to Teaching

Biology 1030, Organismal Biology Website. WebCT. Provided lecture notes and slides and a weekly bonus quiz that is graded electronically. No longer active.

Biology 1030, Organismal Biology Lab Website. www.auburn.edu/~armbrjw/Biology_1030. Mainly provides photographs of the rat dissection. No longer active.

Biology 3010, Comparative Anatomy Website. Canvas (formerly Blackboard and WebCt): supplementary notes, outlines, and drawings for the course. Also provides updated grade lists for the students.

Biology 3010/3013. Course Redesign. Fall 2020-present.

Biology 3030, Evolution and Systematics Website. Canvas (formerly Blackboard): supplementary notes, outlines, and drawings for the course. Also provides updated grade lists for the students.

Biology 3033, Evolution and Systematics, distance, Website. Canvas: supplementary notes, outlines, and drawings for the course. Also provides updated grade lists for the students. Additionally provides discussion groups, videoed lectures via Panopto, and exams for distance students.

Biology 4980: Supervised over 100 students in the past 10 years.

h. Teaching Philosophy

I believe that I should give students everything possible to succeed and then let them be adults and choose how they want to learn. In modern times, this includes a comprehensive website. I have designed websites for my two major courses that include lecture notes, quizzes, access to current grades, etc. Students have found these sites to be very helpful. I also believe that it is the job of a teacher to keep in touch with his/her students at all times. In small classes this is easy, but in large classes it is virtually impossible. In the large classes, I try to e-mail the students frequently with information and have an open-door philosophy.

I believe in making classes challenging. I believe that it is better to give a difficult exam and then curve the grades than to design an exam that does not as effectively test material, but gives a good grade distribution. I believe that I have found the right combination of difficulty and fairness in my classes and my evaluations are high suggesting that I have found that combination.

With graduate work, I feel my role is more to help steer the students in the correct direction and not to micromanage them. The most important lesson to be learned in graduate school is self- reliance. I currently have students working on a wide range of ichthyology and they are all doing wonderful, publishable work. Research at an undergraduate level is also extremely important. I have had

numerous undergraduates work for me in the recent past. Three have published with me. Three students received COSAM Undergraduate Research Fellowships. The way I now run undergraduate projects is that the first semester the students work for me, and the second semester (if they return), they work on a project that they will publish.

2. Research/Creative Work

Articles on original research published in refereed publications. In my discipline, first author papers are the most critical, and author order indicates the amount of work each author has performed. On occasion, lab leader is last author, and these can be identified by a higher than expected percent contribution by me. Most papers are available as pdf's on my website: www.auburn.edu/~armbrjw.

[g]indicates paper with a graduate student author
[u] indicates paper with undergraduate student author

a. Books

NONE

b. Article-length Publications

i. Book Chapters (peer reviewed)

11. Akin, D.R., **J.W. Armbruster**, B.F. Melo, N.K. Lujan, K.O. Winemiller, and J.S. Albert. Benthic algivores and detritivores. To be published 8 or 9/2025. *In:* J.S. Albert et al. (eds.), "Historical Ecology of Neotropical Freshwater Fishes". 20% JWA.

10. **Armbruster, J.W.,** R.E. Reis, A. Londoño-Burbano. To be published 9/2025. Phylogeny and classification of the family Loricariidae. In, G. Arratia and R.E. Reis, Catfishes. 75% JWA.

9. **Armbruster, J.W.**, P. van der Sleen, and N.K. Lujan. 2018. Subfamily Rhinelepinae – rhineleipine plecos. P. 298 in van der Sleen, P. and J.S. Albert eds. "Field Guide to the fishes of the Amazon, Orinoco, and Guianas". Princeton University Press, Princeton, NJ. 75% JWA.

8. **Armbruster, J.W.**, P. van der Sleen, and N.K. Lujan. 2018. Subfamily Lithogeninae – climbing armored catfishes. Pp. 286–287 in P. van der Sleen and J.S. Albert. Eds. "Field Guide to the fishes of the Amazon, Orinoco, and Guianas". Princeton University Press, Princeton, NJ. 75% JWA.

7. **Armbruster, J.W.**, P. van der Sleen, and N.K. Lujan. 2018. Subfamily Hypostominae – plecos and relatives. Pp. 259–286 in P. van der Sleen and J.S. Albert. Eds. "Field Guide to the fishes of the Amazon, Orinoco, and Guianas". Princeton University Press, Princeton, NJ. 75% JWA.

6. **Armbruster, J.W.**, P. van der Sleen, and N.K. Lujan. 2018. Family Loricariidae – suckermouth armored catfishes. Pp. 253–254 in P. van der Sleen and J.S. Albert. Eds. "Field Guide to the fishes of the Amazon, Orinoco, and Guianas". Princeton University Press, Princeton, NJ. 75% JWA.

5. Taphorn, D.C., **J.W. Armbruster**, D. Fernandes, M. Kolmann, E. Liverpool, H. López Fernández and D.C. Werneke. 2017. Chapter 8: Fishes of the Upper Potaro River, Guyana. Pp. 142–154 in L.E. Alonso, J. Persaud, and A. Williams, *Biodiversity Assessment Survey of the Kaieteur Plateau and*

Upper Potaro, Guyana, BAT Survey Report 2. World Wildlife Fund, Georgetown, Guyana. 15% JWA.

4. **Armbruster, J.W.** 2015. Presentacíon (Forward). In Prado, P.J., W. Aguirre, E.L. Moncayo, R.N. Amaya, F.N. Salazar, E.R. Monsalve, E.Z. Hugo, A.T. Noboa, and J.V. Rivera. Guía de Peces para Aguas Continentales en la Vertiente Occidental del Ecuador. Pontificia Universidad Católica del Ecuador Sede Esmeraldas (PUCESE); Universidad del Azuay (UDA) y Museo Ecuatoriano de Ciencias Naturales (MECN) del Instituto Nacional de Biodiversidad. Esmeraldas, Ecuador. Pp. 6–7.

3. **Armbruster, J.W.** 2013. Darwin and Collections. In Bradley, J. and J. Lamar, eds. Charles Darwin: A Celebration of His Life and Legacy, NewSouth Books. Pp. 41-56.

2. **Armbruster, J.W.** 2011. Global Catfish Biodiversity. American Fisheries Society Symposium 77:15–37.

1. *Lujan, N.K. and **J.W. Armbruster**. 2011. Geological and hydrological history of the Guyana Shield and historical biogeography of its fishes. Pp. 211–224 In Albert, J.A. and R. E. Reis, eds. "Historical Biogeography of Neotropical Freshwater Fishes". University of California Press. 40% JWA.

ii. Articles on original research published in refereed publications.

182. Hart, P.B., M.R. Sandoval, F. Melendez, R. Betancur-R., **J.W. Armbruster**, M.L. Niemiller, D. Arcila. 2025. Ancient climate change and relaxed selection shape cave colonization in North American cavefishes. Proceedings of the Royal Society B 292:20242516: 1–12. https://doi.org/10.1098/rspb.2024.2516. 10% JWA. Impact Factor: 3.8.

181. Albert, J.S., V. Abrahão, D.R. Akin, J. Allen, M. Ândrade, M. Arce, **J.W. Armbruster**, R. Benine, M. Bernt, M. Bichuette, J. Birindelli, P. Bragança, M.R. Britto, P.A. Buckup, M.D. Burns, B.B. Calegari, F.G. Carvalho, T.P. Carvalho, L. Casatti, W. Costa, W.G.R. Crampton, F. da Costa Ramos, R.G. da Silva, F. Dagosta, J. Egan, L. Fernádez, J. Figueirdo, D. Fitzgerald, J.P. Fontanelle, T. Hrbek, F. Langeani, P. Lehmann, R. P. Leitão, F.C.T. Lima, M.V. Loeb, C.A.S. Lucena, P.H.F. Lucinda, N.K. Lujan, L.R. Malabarba, W.A. Matamoros, B.F. Melo, A. Netto-Ferreira, C.S. Pavanelli, F.M. Pelicice, E.H.L. Periera, M. Rocha, F. Roxo, V. Sant'Anna, O. Shibatta, V. Slobodian, M. Stange, V.A. Tagliacollo, M. Tan, K.T. Torgensen, K.O. Winemiller, and R. Reis. 2025. An ecological trait matrix of Neotropical freshwater fishes. Nature Scientific Data 12 (1127): 1–9. https://doi.org/10.1038/s41597-025-04674-w. 5% JWA. Impact factor: 6.9.

180. **Armbruster, J.W.** and R.E. Jenkins. 2025. Evidence for a greater Pleistocene range for the Copper Redhorse in North America (Catostomidae: *Moxostoma hubbsi*). Fishes 2025 10:1–11. https://www.mdpi.com/2410-3888/10/3/101. 95% JWA. Impact Factor: 2.1.

179. Jenkins, R.E., S.D. Favrot, B. Freeman, B. Albanese, and **J.W. Armbruster**. 2025. Description of the Sicklefin Redhorse (Catostomidae: *Moxostoma*). Ichthyology and Herpetology 113: 27–43. https://doi.org/10.1643/i2024049. 75% JWA. Impact Factor: 1.857.

178. **Armbruster, J.W.** and N.K. Lujan. 2025. New tribe-level classification of Hypostominae (Loricariidae) based on morphological character-state changes on a DNA-based phylogeny with descriptions of

three new tribes and two new genera. Neotropical Ichthyology 22: 1–32. https://doi.org/10.1590/1982-0224-2024-0108. 80% JWA. Impact factor: 2.0.

177. [g]Akin, D.R., C.A. Weyand, M. Buehler, and **J.W. Armbruster**. 2024. Phylogenetics and Biogeography of the Guiana Shield Pencil Catfishes, Genus *Trichomycterus*. Ichthyology and Herpetology 2024:600–614. https://doi.org/10.1643/i2024002. 100% JWA lab. 20% JWA. Impact Factor: 1.857.

176. **Armbruster, J.W.** 2024. A new genus for the Blackfin Sucker, *Thoburnia atripinnis*. Zootaxa 5536:325–335. DOI: 10.11646/ZOOTAXA.5536.2.8 100% JWA. Impact Factor: 0.9.

175. [g]Hart, P.B., M.L. Niemiller, **J.W. Armbruster**, and P. Chakrabarty. 2024. Conservation implications for the most widely distributed cavefish species complex based on population genomics (*Typhlichthys,* Percopsiformes). Conservation Genetics (2024) 25:1–13. https://doi.org/10.1007/s10592-023-01562-x. 10% JWA. Impact Factor: 3.092.

174. **Armbruster, J.W.** 2023. *Ancistrus leoni*. The IUCN Red List of Threatened Species 2023: e.T176108827A176108876. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176108827A176108876.en. 100% JWA.

173. **Armbruster, J.W.** 2023. *Ancistrus lithurgicus*. The IUCN Red List of Threatened Species 2023: e.T176170353A176170507. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176170353A176170507.en. 100% JWA.

172. **Armbruster, J.W.** 2023. *Ancistrus macrophthalmus*. The IUCN Red List of Threatened Species 2023: e.T176013270A176013276. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176013270A176013276.en. 100% JWA.

171. **Armbruster, J.W.** 2023. *Ancistrus nudiceps*. The IUCN Red List of Threatened Species 2023: e.T177262168A177262359. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T177262168A177262359.en. 100% JWA.

170. **Armbruster, J.W.** 2023. *Ancistrus patronus*. The IUCN Red List of Threatened Species 2023: e.T176109022A176109037. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176109022A176109037.en. 100% JWA.

169. **Armbruster, J.W.** 2023. *Ancistrus saudades*. The IUCN Red List of Threatened Species 2023: e.T176109105A176109111. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176109105A176109111.en. 100% JWA.

168. **Armbruster, J.W.** 2023. *Ancistrus triradiatus*. The IUCN Red List of Threatened Species 2023: e.T49829936A176013285. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T49829936A176013285.en. 100% JWA.

167. **Armbruster, J.W.** 2023. *Ancistrus yutajae*. The IUCN Red List of Threatened Species 2023: e.T176109122A176109127. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176109122A176109127.en. 100% JWA.

166. **Armbruster, J.W.** 2023. *Aphanotorulus ammophilus*. The IUCN Red List of Threatened Species 2023: e.T176013317A176013476. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176013317A176013476.en. 100% JWA.

165. **Armbruster, J.W.** 2023. *Baryancistrus beggini*. The IUCN Red List of Threatened Species 2023: e.T176014163A176014261. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176014163A176014261.en. 100% JWA.

164. **Armbruster, J.W.** 2023. *Corydoras bondi*. The IUCN Red List of Threatened Species 2023: e.T175717813A175717876. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T175717813A175717876.en. 100% JWA.

163. **Armbruster, J.W.** 2023. *Corymbophanes ameliae*. The IUCN Red List of Threatened Species 2023: e.T176455453A176455469. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176455453A176455469.en. 100% JWA.

162. **Armbruster, J.W.** 2023. *Corymbophanes ameliae*. The IUCN Red List of Threatened Species 2023: e.T176455453A176455469. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176455453A176455469.en. 100% JWA.

161. **Armbruster, J.W.** 2023. *Corymbophanes andersoni*. The IUCN Red List of Threatened Species 2023: e.T176171085A176171091. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176171085A176171091.en. 100% JWA.

160. **Armbruster, J.W.** 2023. *Exastilithoxus fimbriatus*. The IUCN Red List of Threatened Species 2023: e.T176016131A176016173. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176016131A176016173.en. 100% JWA.

159. **Armbruster, J.W.** 2023. *Hemiancistrus guahiborum*. The IUCN Red List of Threatened Species 2023: e.T176016722A176016733. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176016722A176016733.en. 100% JWA.

158. **Armbruster, J.W.** 2023. *Hemiancistrus subviridis*. The IUCN Red List of Threatened Species 2023: e.T176016869A176016911. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176016869A176016911.en. 100% JWA.

157. **Armbruster, J.W.** 2023. *Hypancistrus debilittera*. The IUCN Red List of Threatened Species 2023: e.T176016969A176016973. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176016969A176016973.en. 100% JWA.

156. **Armbruster, J.W.** 2023. *Hypancistrus furunculus*. The IUCN Red List of Threatened Species 2023: e.T176016988A176016993. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176016988A176016993.en. 100% JWA.

155. **Armbruster, J.W.** 2023. *Hypancistrus lunaorum*. The IUCN Red List of Threatened Species 2023: e.T176017009A176017025. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176017009A176017025.en. 100% JWA.

154. **Armbruster, J.W.** 2023. *Hypostomus argus*. The IUCN Red List of Threatened Species 2023: e.T64792630A64890585. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T64792630A64890585.en. 100% JWA.

153. **Armbruster, J.W.** 2023. *Hypostomus plecostomus*. The IUCN Red List of Threatened Species 2023: e.T176017246A176017284. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176017246A176017284.en. 100% JWA.

152. **Armbruster, J.W.** 2023. *Hypostomus rhantos*. The IUCN Red List of Threatened Species 2023: e.T176017321A176017326. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176017321A176017326.en. 100% JWA.

151. **Armbruster, J.W.** 2023. *Hypostomus robinii*. The IUCN Red List of Threatened Species 2023: e.T176110833A176111021. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176110833A176111021.en. 100% JWA.

150. **Armbruster, J.W.** 2023. *Hypostomus sculpodon*. The IUCN Red List of Threatened Species 2023: e.T176017362A176017377. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176017362A176017377.en. 100% JWA.

149. **Armbruster, J.W.** 2023. *Hypostomus taphorni*. The IUCN Red List of Threatened Species 2023: e.T176216213A176216223. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176216213A176216223.en. 100% JWA.

148. **Armbruster, J.W.** 2023. *Isorineloricaria acuarius*. The IUCN Red List of Threatened Species 2023: e.T176111416A176111420. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176111416A176111420.en. 100% JWA.

147. **Armbruster, J.W.** 2023. *Lasiancistrus tentaculatus*. The IUCN Red List of Threatened Species 2023: e.T176018159A176018188. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176018159A176018188.en. 100% JWA.

146. **Armbruster, J.W.** 2023. *Leporacanthicus triactis*. The IUCN Red List of Threatened Species 2023: e.T176020477A176020525. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176020477A176020525.en. 100% JWA.

145. **Armbruster, J.W.** 2023. *Lithoxancistrus orinoco*. The IUCN Red List of Threatened Species 2023: e.T176024105A176024151. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176024105A176024151.en. 100% JWA.

144. **Armbruster, J.W.** 2023. *Melanocharacidium blennioides*. The IUCN Red List of Threatened Species 2023: e.T176107222A176107229. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176107222A176107229.en. 100% JWA.

143. **Armbruster, J.W.** 2023. *Neblinichthys brevibracchium*. The IUCN Red List of Threatened Species 2023: e.T176217746A176217750. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176217746A176217750.en. 100% JWA.

142. **Armbruster, J.W.** 2023. *Neblinichthys echinasus*. The IUCN Red List of Threatened Species 2023: e.T176217795A176217805. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176217795A176217805.en. 100% JWA.

141. **Armbruster, J.W.** 2023. *Paulasquama callis*. The IUCN Red List of Threatened Species 2023: e.T176218012A176218017. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176218012A176218017.en. 100% JWA.

140. **Armbruster, J.W.** 2023. *Panaqolus maccus*. The IUCN Red List of Threatened Species 2023: e.T176021046A176021104. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176021046A176021104.en. 100% JWA.

139. **Armbruster, J.W.** 2023. *Panaque nigrolineatus*. The IUCN Red List of Threatened Species 2023: e.T18246613A176021252. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T18246613A176021252.en. 100% JWA.

138. **Armbruster, J.W.** 2023. *Paralithoxus boujardi*. The IUCN Red List of Threatened Species 2023: e.T176216766A176216772. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176216766A176216772.en. 100% JWA.

137. **Armbruster, J.W.** 2023. *Paralithoxus pallidimaculatus*. The IUCN Red List of Threatened Species 2023: e.T176216819A176216837. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176216819A176216837.en. 100% JWA.

136. **Armbruster, J.W.** 2023. *Paralithoxus planquettei*. The IUCN Red List of Threatened Species 2023: e.T176217049A176217207. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176217049A176217207.en. 100% JWA.

135. **Armbruster, J.W.** 2023. *Paralithoxus stocki*. The IUCN Red List of Threatened Species 2023: e.T176217241A176217285. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176217241A176217285.en. 100% JWA.

134. **Armbruster, J.W.** 2023. *Paralithoxus surinamensis*. The IUCN Red List of Threatened Species 2023: e.T176217563A176217590. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176217563A176217590.en. 100% JWA.

133. **Armbruster, J.W.** 2023. *Peckoltia cavatica*. The IUCN Red List of Threatened Species 2023: e.T176218324A176218329. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176218324A176218329.en. 100% JWA.

132. **Armbruster, J.W.** 2023. *Peckoltia lineola*. The IUCN Red List of Threatened Species 2023: e.T176023661A176023671. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176023661A176023671.en. 100% JWA.

131. **Armbruster, J.W.** 2023. *Peckoltia lujani*. The IUCN Red List of Threatened Species 2023: e.T176112424A176112516. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176112424A176112516.en. 100% JWA.

130. **Armbruster, J.W.** 2023. *Pseudancistrus megacephalus*. The IUCN Red List of Threatened Species 2023: e.T176016770A176016793. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176016770A176016793.en. 100% JWA.

129. **Armbruster, J.W.** 2023. *Pseudancistrus nigrescens*. The IUCN Red List of Threatened Species 2023: e.T176227234A176227238. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176227234A176227238.en. 100% JWA.

128. **Armbruster, J.W.** 2023. *Pseudancistrus sidereus*. The IUCN Red List of Threatened Species 2023: e.T176024212A176024225. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176024212A176024225.en. 100% JWA.

127. **Armbruster, J.W.** 2023. *Pseudolithoxus dumus*. The IUCN Red List of Threatened Species 2023: e.T176024249A176024307. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176024249A176024307.en. 100% JWA.

126. **Armbruster, J.W.** 2023. *Pseudolithoxus kelsorum*. The IUCN Red List of Threatened Species 2023: e.T176024528A176024534. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176024528A176024534.en. 100% JWA.

125. **Armbruster, J.W.** 2023. *Pseudolithoxus nicoi*. The IUCN Red List of Threatened Species 2023: e.T176024557A176024585. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176024557A176024585.en. 100% JWA.

124. **Armbruster, J.W.** 2023. *Pseudolithoxus tigris*. The IUCN Red List of Threatened Species 2023: e.T176024607A176024648. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176024607A176024648.en. 100% JWA.

123. **Armbruster, J.W.** 2023. *Pterygoplichthys multiradiatus*. The IUCN Red List of Threatened Species 2023: e.T13151303A13151310. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T13151303A13151310.en. 100% JWA.

122. **Armbruster, J.W.** 2023. *Trichomycterus conradi*. The IUCN Red List of Threatened Species 2023: e.T176237858A176238096. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176237858A176238096.en. 100% JWA.

121. **Armbruster, J.W.** 2023. *Trichomycterus guianensis*. The IUCN Red List of Threatened Species 2023: e.T176043835A176044136. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176043835A176044136.en. 100% JWA.

120. **Armbruster, J.W.** 2023. *Ancistrus amaris*. The IUCN Red List of Threatened Species 2023: e.T176108753A176108770. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T176108753A176108770.en. 100% JWA.

119. Bagley, J.C., C.C. Johnson, S.W. McGregor, M.F. Breirman, **J.W. Armbruster**, P.M. Harris, and P.E. O'Neil. 2023. Marine and freshwater fishes of Alabama: a revised checklist and discussion of taxonomic issues. Zootaxa 5357: 301–341. 2% JWA. Impact Factor: 1.028

118. MacBeath, T., D.A. Ardón, Y. Quintana, A. Angulo, T. Lyons, C. Lardizabal, C.D. McMahan, D.J. Elias, W.A. Matamoros, J.E. Barraza, R. González, C.E. Fiuentes-Montejo, **J.W. Armbruster**, J.C. Carrasco, and M.B. Rodriguez. 2022. Freshwater fishes of Central America: distribution, assessment, and major threats. Diversity 14(10): 1–28. https://www.mdpi.com/1424-2818/14/10/793#. 5% JWA. Impact factor: 2.1.

117. [g]Black, C.R. and **J.W. Armbruster**. 2022. Integration and modularity in the diversity of the suckermouth armored catfishes. Royal Society Open Science 9:220713: 1–17. https://doi.org/10.1098/rsos.220713. 20% JWA, 100% JWA lab. Impact Factor: 3.5.

116. Taphorn, D.C., E. Liverpool, N.K. Lujan, C. DoNascimiento, D.D. Hemraj, W.G.R. Crampton, J.P. Fontenelle, L.S. de Souza, M. Ram, D.D. Bloom, E. Holm, J.G. Lundberg, M.H. Sabaj, **J.W. Armbruster**, H. López-Fernández. 2022. Annotated checklist of the primary freshwater fishes of Guyana. Proceedings of the Academy of Natural Sciences of Philadelphia 168(1):1–95. https://doi.org/10.1635/053.168.0101. Monograph. 10% JWA (JWA co-last author). Impact factor: 1.67.

115. [g]Black, C.R. and **J.W. Armbruster**. 2022. Chew on this: oral jaw shape is not correlated with diet type in loricariid catfishes. PLoS One 17(11):e0277102:1–18. 20% JWA, 100% JWA lab. Impact Factor: 3.24.

114. [g]Stout, C.C., S. Schönhuth, R.L. Mayden, N. Garrison, and **J.W. Armbruster**. 2022. Phylogenomics and classification of *Notropis* and related shiners (Cypriniformes: Leuciscidae) and the utility of exon capture on lower taxonomic groups. PeerJ 10: e14072. https://peerj.com/articles/14072/. 50% JWA, 95% JWA lab. Impact Factor 2.984.

113. [g]Liyandja, T.L., **J.W. Armbruster**, M.O. Poopola, and M.L. Stiassny. 2022. Evolutionary convergence in body shape obscures taxonomic diversity in species of the African *Labeo forskalii* group: Case study of *L. parvus* Boulenger 1902 and *L. ogunensis* Boulenger 1910. Journal of Fish Biology 101: 898–913. https://doi.org/10.1111/jfb.15148. 20% JWA, 50% JWA lab. Impact Factor: 2.051.

112. **Armbruster, J.W.** and N.K. Lujan. 2022. Identification of the Oligocene to early Miocene loricariid catfish †*Taubateia paraiba* as a member of the Rhinelepinae. Journal of Paleontology 96(3):729–733. doi: 10.1017/jpa.2021.111. 80% JWA. Impact Factor: 1.471.

111. [g]Black, C.R and **J.W. Armbruster**. 2021. New method of isotopic analysis: Baseline Standardized Isotope Vector Analysis show trophic partitioning in loricariids. Ecosphere 12(5):1–10. DOI: 10.1002/ecs2.3503. 20% JWA, 100% JWA lab. Impact Factor: 3.171.

110. **Armbruster, J.W.**, N.K. Lujan, and D.D. Bloom. 2021. Redescription of the Guiana Shield darter species *Characidium crandellii* and *C. declivirostre* (Crenuchidae) with descriptions of two new species. Ichthyology and Herpetology 109:102–122. 80% JWA. Impact Factor: 1.402.

109. Stolbunov, I.A., T. Duc Dien, and **J.W. Armbruster**. 2020. Suckermouth-armored catfish (Siluriformes: Loricariidae) of Central and Southern Vietnam. Inland Water Biology 13:626–639. 10% JWA. Impact factor: 0.481.

108. Torres-Pineda, P. and **J.W. Armbruster**. 2020. The Amazon sailfin catfish *Pterygoplichthys pardalis* (Siluriformes: Loricariidae), a new exotic species extablished in the Dominican Republic. Novitates Caribaea 16:20–31. 10% JWA. Impact factor 0.17.

107. **Armbruster, J.W.** & T.J. Lyons. 2020. *Hypostomus aspidolepis*. *The IUCN Red List of Threatened Species* 2020: e.T164694057A164695443. 75% JWA.

106. **Armbruster, J.W.**, Angulo, A. & Lyons, T.J. 2020. *Hyphessobrycon panamensis*. *The IUCN Red List of Threatened Species* 2020: e.T49829641A149252567. 50% JWA.

105. **Armbruster, J.W.** & Lyons, T.J. 2020. *Astroblepus mendezi*. *The IUCN Red List of Threatened Species* 2020: e.T168621390A170643520.

104. **Armbruster, J.W.** & Lyons, T.J. 2020. *Astroblepus pirrense*. *The IUCN Red List of Threatened Species* 2020: e.T149252092A165529615. 75% JWA.

103. **Armbruster, J.W.** & Lyons, T.J. 2020. *Cynodonichthys birkhahni*. *The IUCN Red List of Threatened Species*2020: e.T53875516A161824504. 75% JWA.

102. **Armbruster, J.W.**, Snoeks, J., Lalèyè, P., Contreras MacBeath, T. & Lyons, T.J. 2020. *Ancistrus spinosus*. *The IUCN Red List of Threatened Species* 2020: e.T169370A149119745. 75% JWA.H-index

101. Contreras MacBeath, T., **Armbruster, J.W.** & González, R. 2020. *Cynodonichthys frommi*. *The IUCN Red List of Threatened Species* 2020: e.T53875718A161824519. 20% JWA.

100. González, R., Contreras MacBeath, T. & **Armbruster, J.W.** 2020. *Roeboides carti*. *The IUCN Red List of Threatened Species* 2020: e.T150106336A150107012. 20% JWA.

99. González, R., Contreras MacBeath, T. & **Armbruster, J.W.** 2020. *Eretmobrycon bayano*. *The IUCN Red List of Threatened Species* 2020: e.T149248842A149252607. 20% JWA.

98. González, R., Contreras MacBeath, T. & **Armbruster, J.W.** 2020. *Characidium marshi*. *The IUCN Red List of Threatened Species* 2020: e.T149248636A149252597. 20% JWA.

97. González, R., **Armbruster, J.W.** & Contreras MacBeath, T. 2020. *Cynodonichthys weberi*. *The IUCN Red List of Threatened Species* 2020: e.T53876256A161824579. 30% JWA.

96. González, R., Contreras MacBeath, T. & **Armbruster, J.W.** 2020. *Eretmobrycon gonzalezi*. *The IUCN Red List of Threatened Species* 2020: e.T149114729A149122021. 20% JWA.

95. Lyons, T.J., **Armbruster, J.W.** & González, R. 2020. *Chaetostoma fischeri*. *The IUCN Red List of Threatened Species* 2020: e.T49829796A164695393. 30% JWA.

94. Lyons, T.J. & **Armbruster, J.W.** 2020. *Leptoancistrus canensis*. *The IUCN Red List of Threatened Species*2020: e.T164694120A164695448. 40% JWA.

93. Lyons, T.J., González, R. & **Armbruster, J.W.** 2020. *Sturisomatichthys panamensis*. *The IUCN Red List of Threatened Species* 2020: e.T164694478A164695473. 30% JWA.

92. Lyons, T.J., González, R. & **Armbruster, J.W.** 2020. *Crossoloricaria variegata*. *The IUCN Red List of Threatened Species* 2020: e.T49829674A164695388. 30% JWA.

91. Lyons, T.J., González, R. & **Armbruster, J.W.** 2020. *Ancistrus chagresi*. *The IUCN Red List of Threatened Species* 2020: e.T164693838A164695438. 30% JWA.

90. [g]Hart, P.B., M.L. Niemiller, E.D. Burress, **J.W. Armbruster**, W.B. Ludt, and P. Chakrabarty. 2020. Cave-Adapted Evolution in the North American Amblyopsid Fishes Inferred Using Ultraconserved Elements. Evolution 74–5:936–949. https://doi.org/10.1111/evo.13958. 10% JWA. Impact Factor: 3.698.

89. [g]Bressman, N.R., **J.W. Armbruster**, N.K. Lujan, I. Udoh, and M.A. Ashley-Ross. 2020. Evolutionary optimization of an anatomical suction cup: lip collagen content and its correlation with flow and substrate in neotropical suckermouth catfishes (Loricarioidei). Journal of Morphology. 281:676–687. https://doi.org/10.1002/jmor.21136. 35% JWA. Impact Factor: 1.588.

88. [g] [u] Hayes, M.M., H.J. Paz, C.C. Stout, D.C. Werneke, and **J.W. Armbruster**. 2020. A hotspot atop: rivers of the Guyana highlands hold high diversity of endemic pencil catfish (Teleostei: Ostariophysi: Siluriformes). Biological Journal of the Linnean Society XX:1–13. Doi: 10.1093/biolinnean/blaa023. 30% JWA, 100% JWA lab. Impact factor: 2.203.

87. de Souza, L.S., **J.W. Armbruster**, & P. Willink. 2020. Connectivity of neotropical river basins in the central Guiana Shield based on fish distributions. Frontiers in Forests and Global Change 3(8): 1–15. doi: 10.3389/ffgc.2020.00008. 30% JWA, 90% JWA lab. Impact factor: none available, average for Frontiers journals is 3.63.

86. [g] Anjos, M.A., J.A. Bitencourt, L.A. Nunes, L.M. Sarmento-Soares, D.C. Carvalho, **J.W. Armbruster**, P.R.A.M. Alfonso. 2020. Species delimitation based on integrative approach suggests reallocation of genus in Hypostomini catfish. Hydrobiologia 847: 563–578. 3% JWA. Impact factor: 2.056.

85. Lujan, N.K., **J.W. Armbruster**, and D.C. Werneke, T.F. Texeira, and N.R. Lovejoy. 2019. Phylogeny of the shield-restricted *Corymbophanes* clade (Loricariidae: Hypostominae: Ancistrini), with descriptions of two new species and one new genus. Zoological Journal of the Linnean Society, XX:1–23. 45% JWA, 50% JWA lab. Impact factor: 2.685.

84. de Souza, L.S., D.C. Taphorn, and **J.W. Armbruster**. 2019. Review of *Ancistrus* (Siluriformes:Loricariidae) from the northwestern Guiana Shield with description of six new species. Zootaxa (monograph) 4552:1–67. 33% JWA. Impact factor: 0.972.

83. [u]**Armbruster, J.W.**, L. Greene, and N.K. Lujan. 2018. Using Morphology to Test DNA-based Phylogenetic Relationships Within the Guiana Shield Catfish Tribe Lithoxini (Siluriformes: Loricariidae). Copeia 104:671–680. JWA 75%, 90% JWA lab. Impact Factor: 1.220.

82. [g] Tan, M. and **J.W. Armbruster.** 2018. Phylogenetic classification of extant genera of fishes of the order Cypriniformes (Teleostei: Ostariophysi). Zootaxa 4476:6–39. https://biotaxa.org/Zootaxa/article/view/zootaxa.4476.1.4. 30% JWA, 100% JWA lab. Impact Factor: 0.972.

81. Lujan, N.K., **J.W. Armbruster**, and N.R. Lovejoy. 2018. Multilocus phylogeny and generic revision of the Guiana Shield endemic *Lithoxus* clade of suckermouth armored catfishes (Loricariidae: Hypostominae). Zoological Journal of the Linnean Society 2018:1–18. https://doi.org/10.1093/zoolinnean/zly025. 40% JWA. Impact factor: 2.711.

80. Prathapan, K.D., R. Pethiyagoda, K.S. Bawa, P.H. Raven, P.D. Rajan and 172 co-signatories. 2018. When the cure kills–CBD limits biodiversity research. Science 360:1405–1406. JWA as co-signatory. Impact Factor: 37.205

79. [g]Staley, M., G.E. Hill, C.C. Josefson, **J.W. Armbruster,** and C. Bonneaud. 2018. Bacterial pathogen emergence required more than direct contact with a novel passerine host. Infection and Immunity 86:1–9. 5% JWA. Impact factor: 3.593.

78. [g]Bonato, K.O., E.D. Burress, C.B. Fihalo, and **J.W. Armbruster.** 2018. Resource partitioning among syntopic Characidae corroborated by gut content and stable isotope analyses. Hydrobiologia 805:311-324. DOI 10.1007/s10750-017-3314-0. 10% JWA, 90% JWA lab. Impact factor: 2.056.

77. [g]Burress, E.D., L. Piálek, J. R. Casciotta, A. Almirón, M. Tan, **J. W. Armbruster**, and O. Říčan. 2018. Lake- and island-like adaptive radiations replicated in rivers. Proceedings of the Royal Society B 285: 20171762. DOI: 10.1098/rspb.2017.1762. 10% JWA, 78% JWA lab. Impact Factor: 4.94.

76. [g]Burress E. D., F. Alda, A. Duarte, M. Loureiro, **J. W. Armbruster**, and P. Chakrabarty. 2018. Phylogenomics of pike cichlids (Cichlidae: *Crenicichla*): the rapid evolution and trophic diversification of an incipient species flock. Journal of Evolutionary Biology 31:14–30. DOI: 10.1111/jeb.13196. 5% JWA, 90% JWA lab. Impact Factor: 2.792.

75. [g]Hayes, M.M. and **J.W. Armbruster.** 2017. The taxonomy and relationships of the African small barbs (Cypriniformes: Cyprinidae). Copeia 105:348–362. DOI: 10.1643/CI-15-348. 45% JWA, 100% JWA lab. Impact Factor: 0.980.

74. [g]Burress, P.B.H., E.D. Burress, and **J.W. Armbruster.** 2017. Body shape variation within the Southern Cavefish, *Typhlichthys subterraneus* (Percopsiformes: Amblyopsidae)**.** Zoomorphology 2017 (13 pages). doi:10.1007/s00435-017-0360-0. 30% JWA, 100% JWA lab. Impact factor: 1.242.

73. [g] Moran, C.J., M. O'Neill, **J.W. Armbruster**, and A.C. Gibb. 2017. Can members of the Southwestern *Gila robusta* species complex be distinguished by their morphological features? Journal of Fish Biology (15 pages). doi:10.1111/jfb.13348. 15% JWA. Impact Factor: 1.038.

72. [g]Burress, E.D., J.M. Holcomb, M. Tan, and **J.W. Armbruster**. 2017. Ecological diversification associated with the benthic-to-pelagic transition by North American minnows. Journal of Evolutionary Biology 2017:549–560. 15% JWA, 95% JWA lab. Impact Factor: 2.792.

71. Arcila, D., R. Vari, L.J. Revell, **J.W. Armbruster**, M.L.J. Stiassny, K. Ko, M.H. Sabaj, J. Lundberg, G. Orti, and R. Betancur-R. 2017. Gene genealogy interrogation advances resolution of recalcitrant phylogenies. Nature Ecology and Evolution 1(20):1–10. DOI: 10.1038/s41559-016-0020. 5% JWA. Impact Factor: not available, new journal.

70. Godwin, J.C., D.C. Werneke, D.A. Steen, and J.W. Armbruster. 2016. Two significant records of exotic neotropical freshwater fish observed in southern Alabama. Southeastern Naturalist 15:N57–N60. 10% JWA. Impact Factor: 0.513.

69. [g]Stout, C.C., M. Tan, A.R. Lemmon, E.M. Lemmon, and **J.W. Armbruster.** 2016. Resolving Cypriniformes relationships using an anchored enrichment approach. BMC Evolutionary Biology 16:244 (13 pages). 25% JWA, 90% JWA lab. Impact Factor: 3.406.

68. [g]Niemiller, M.L., K.S. Zigler, P.B. Hart, B.R. Kuhajda, **J.W. Armbruster**, B.N. Ayala, and A.S. Engel. 2016. First defininitive record of a stygobiotic fish (Percopsiformes: Amblyopsidae: *Typhlichthys*) from the Appalachians karst region in the eastern United States. Subterranean Biology 20:39–50. 10% JWA, 20% JWA lab. Impact Factor: 1.1.

67. [g]**Armbruster, J.W.**, M.L. Niemiller, and P.B. Hart. 2016. Morphological Evolution of the Cave-, Spring- and Swampfishes of the Amblyopsidae (Percopsiformes). Copeia 104:763–777. 90% JWA, 95% JWA lab. Impact Factor: 1.144.

66. Matamoros, W.A., C.D. McMahan, C.R. Mejia, P.H. House, **J.W. Armbruster**, P. Chakrabarty. 2016. First record of the non-native armored catfish *Hypostomus* cf. *niceforoi* (Fowler, 1943) (Siluriformes: Loricariidae) from Central America. Occasional Papers of the Museum of Natural Science, Louisiana University 87: 1–12. 20% JWA. Impact Factor: not available.

65. [g]Tan, M., L.S. de Souza, and **J.W. Armbruster**. 2016. A new species of *Panaqolus* (Siluriformes: Loricariidae) from the rio Branco. Neotropical Ichthyology 14: e150033. DOI: 10.1590/1982-0224-20150033. 25% JWA, 100% JWA lab. Impact Factor: 0.802.

64. Liu S., J. Yao, L. Bao, C. Jiang, R. Wang, L. Sun, Y. Li, Y. Zhang, J. Zhang, T. Zhou, Q. Zeng, Q. Fu, S. Gao, N. Li, S. Koren, Y. Jiang, A. Zimin, P. Xu, A. Phillippy, X. Geng, L. Song, F. Sun, C. Li, X. Wang, A. Chen, Y. Jin, Z. Yuan, Y. Yang, S. Tan, E. Peatman, J. Lu, Z. Qin, R. Dunham, Z. Li, T. Sonstegard, J. Feng, R. Danzmann, S. Schroeder, B. Scheffler, M. Duke, L. Ballard, H. Kucuktas, L. Kaltenboeck, H. Liu, **J. Armbruster**, Y. Xie, M. Kirby, Y. Tian, M. Flanagan, W. Mu, G. Waldbieser. 2016. The channel catfish genome sequence provides insights into the evolution of scale formation in teleosts. Nature Communications 7:11757. DOI: 10.1038/ncomms11757. 5% JWA. Impact Factor: 11.470.

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61. **Armbruster, J.W**. & N.K. Lujan. 2016. A New Species of *Peckoltia* from the Upper Orinoco (Siluriformes: Loricariidae). Zookeys 569:105–121. 75% JWA. Impact Factor: 0.9333.

60. [g] Ray C.K. & **J.W. Armbruster**. 2016. The Genera *Isorineloricaria* and *Aphanotorulus* (Siluriformes: Loricariidae) with description of a new species. Zootaxa 4072:501–539. 40% JWA, 100% JWA lab. Impact Factor: 0.994.

59. [g] [u]Hayes, M.M., E.R. Krahl, D.C. Werneke, & **J.W. Armbruster.** 2016. Conservation genetics of the Broadstripe Shiner, *Pteronotropis euryzonus*, an endemic species of the middle Chattahoochee River. Aquatic Conservation: Marine and Freshwater Ecosystems 26:429–444. DOI: 10.1002/aqc.2602. 20% JWA, 100% JWA lab. Impact Factor: 2.415.

58. Winemiller, K.O. & 39 coauthors. 2016. Hydropower expansion in the Amazon, Congo and Mekong–a looming threat to global biodiversity. Science 351:128–129. 3% JWA. Impact Factor: 34.661.

57. [g]Tan, M. & **J.W. Armbruster**. 2016. Two new species of spotted *Hypancistrus* from the rio Negro drainage (Loricariidae: Ancistrini). Zookeys 552:123–135. 40% JWA, 100% JWA lab. Impact Factor: 0.933.

56. [g]**Armbruster, J.W.,** C.C. Stout, & M.M. Hayes. 2016. An Empirical Test for Convergence and Social Mimicry Using African Barbs (Cypriniformes: Cyprinidae). Evolutionary Ecology 30:435–450. doi:10. 1007/ s10682-015-9811-6. 65% JWA**, 100% JWA lab**. Impact Factor: 1.875.

55. Werneke, D.C. & **J.W. Armbruster**. 2015. Silversides of the genus *Labidesthes* (Atheriniformes: Atherinopsidae). Zootaxa 4032: 535–550. 25% JWA, 100% JWA lab. Impact Factor: 0.906.

54. Khaironizam, M.Z., M. Zakaria-Ismail, & **J.W. Armbruster**. 2015. Cyprinid fishes of the genus *Neolissochilus* in peninsular Malaysia. Zootaxa 3962:139–157. Doi: 10.11646/zootaxa.3962.1.7. 30% JWA. Impact Factor: 0.906.

53. [g]**Armbruster, J.W.,** D.C. Werneke, & M. Tan. 2015. Three new species of saddled loricariid catfishes and a review of *Hemiancistrus, Peckoltia* and allied genera (Siluriformes). ZooKeys 480: 97–123. doi: 10.3897/zookeys.480.6540. 75% JWA, 100% JWA lab. Impact Factor: 0.9333.

52. Lujan, N.K., **J.W. Armbruster**, N. Lovejoy, & H. López-Fernández. 2015. Multilocus molecular phylogeny of the suckermouth armored catfishes (Siluriformes: Loricariidae) with a focus on subfamily Hypostominae. Molecular Phylogenetics and Evolution 82:269-288. 15% JWA. Impact Factor: 4.064.

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49. [g]Taphorn, D. C., **J. W. Armbruster**, F. Villa-Navarro, & C. K. Ray**.** 2013. Transandean *Ancistrus* (Siluriformes: Loricariidae). Zootaxa 4: 343–370. 30% JWA, 40% JWA lab.

48. **Armbruster, J. W.** & D. C. Taphorn. 2013. Description of *Neblinichthys peniculatus*, a new species of loricariid catfish from the Río Paragua. Neotropical Ichthyology 11:65–72. 80% JWA.

47. **Armbruster, J.W.** 2012. Standardized measurements, landmarks, and meristic counts for cypriniform fishes. Zootaxa 3586:8–16. 100% JWA.

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41. [g]Lujan, N.K., **J. W. Armbruster**, and B. Rengifo. 2011. A New Basal Ancistrini Genus and Species from the Andes of Northern Peru (Siluriformes: Loricariidae). Copeia 2011:497–502. 35% JWA, 100% JWA lab.

40. [g]Lujan, N.K. and **J. W. Armbruster**. 2011. Two new genera and species of Ancistrini (Siluriformes: Loricariidae) from the Western Guiana Shield. Copeia 2011: 216–225. 40% JWA**,** 100% JWA lab.

39. **Armbruster, J. W.** and D.C. Taphorn. 2011. A New Genus and Species of Weakly Armored Catfish from the Upper Mazaruni River (Siluriformes: Loricariidae). Copeia 2011:46-52. 75% JWA.

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(Siluriformes: Loricariidae), and recognition of *N. roraima* and *N. yaravi* as distinct species. Neotropical Ichthyology 8:615–624. 40% JWA.

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36. [g]Betancur-R, R. and **J.W. Armbruster**. 2009. Molecular clocks provide new insights into the evolutionary history of galeichthyine sea catfishes. Evolution 63:1232–1243. 15% JWA, 100% JWA lab.

35. [g]Lujan, N.K., M. Arce, and **J.W. Armbruster**. 2009. A new black *Baryancistrus* with blue sheen from the upper Orinoco (Siluriformes: Loricariidae). Copeia 2009:50–56. 30% JWA, 100% JWA lab.

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33. **Armbruster, J.W.** 2008. The Genus *Peckoltia* with the Description of Two New Species and a Reanalysis of the Phylogeny of the Genera of the Hypostominae (Siluriformes: Loricariidae). Zootaxa 1822:1–76. 100% JWA.

32. **Armbruster J.W.** and D.C. Taphorn. 2008. A new species of *Pseudancistrus* from the Río Caroni, Venezuela (Siluriformes: Loricariidae). Zootaxa 1731:33–41. 75% JWA.

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30. [g]Lujan, N.K., **J.W. Armbruster**, and M.H. Sabaj. 2007. Two new species of *Pseudancistrus* (Siluriformes: Loricariidae) from southern Venezuela. Ichthyological Exploration of Freshwaters 18:163–174. 25% JWA, 90% JWA lab.

29. [g]**Armbruster, J.W.,** N.K. Lujan, and D.C. Taphorn. 2007. Four new species of *Hypancistrus* from southern Venezuela (Siluriformes: Loricariidae). Copeia 2007:62–79. 60% JWA.

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27. [g]Pera, T.P. and **J.W. Armbruster**. 2006. *Notropis amplamala*, a new species of silverjaw minnow (Cypriniformes: Cyprinidae). Copeia 2006:423–430. 30% JWA, 100% JWA lab.

26. [g]Reis R. E., E. H. L. Pereira, and **J. W. Armbruster**. 2006. Delturinae, a new loricariid catfish subfamily (Teleostei, Siluriformes), with a revision of *Delturus* and *Hemipsilichthys*. Zoological Journal of the Linnean Society 147:277-299. 30% JWA.

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Hemiancistrus subviridis, two new uniquely colored species of loricariids from Venezuela (Siluriformes: Loricariidae). Neotropical Ichthyology 3: 533–542. 20% JWA, 95% JWA lab.

24. [g]Werneke, D.C., **J.W. Armbruster**, N.K. Lujan, and D.C. Taphorn. 2005. *Hemiancistrus guahiborum*, a new suckermouth armored catfish from Southern Venezuela (Siluriformes: Loricariidae) Neotropical Ichthyology 3: 543–548. 35% JWA, 100% JWA lab.

23. **Armbruster, J.W.** 2005. The loricariid catfish genus *Lasiancistrus* (Siluriformes) with description of two new species. Neotropical Ichthyology 3: 549–569. 100% JWA.

22. [g]**Armbruster, J. W.** and L. de Souza. 2005. *Hypostomus macushi*, a new species of the *Hypostomus cochliodon* group from Guyana. Zootaxa 920:1–12. 60% JWA, 100% JWA lab.

21. [g]**Armbruster, J. W.** and D. C. Werneke. 2005. *Peckoltia cavatica*, a new loricariid catfish from Guyana and a redescription of *P. braueri* Eigenmann (Siluriformes). Zootaxa 882:1-14. 75% JWA, 100% JWA lab.

20. **Armbruster, J. W.** 2004. *Pseudancistrus sidereus*, a new species from southern Venezuela (Siluriformes: Loricariidae) with a redescription of *Pseudancistrus*. Zootaxa 628:1–15.

19. **Armbruster, J. W.** 2004. Phylogenetic relationships of the suckermouth armored catfishes (Loricariidae) with emphasis on the Hypostominae and the Ancistrinae. Zoological Journal of the Linnean Society 141:1-80. (Monograph). 50% Auburn.

18. **Armbruster, J. W.** 2003. *Peckoltia sabaji*, a new species from the Guyana Shield (Siluriformes: Loricariidae). Zootaxa 344:1-12.

17. **Armbruster, J. W.** 2003. The species of the *Hypostomus cochliodon* group (Siluriformes: Loricariidae). Zootaxa No. 249: 1-60. 75% Auburn.

16. [g] Hardman, M., L. M. Page, M. H. Sabaj, **J. W. Armbruster**, and J. H. Knouft. 2002. Comparison of fish surveys in the Essequibo and other coastal drainages of Guyana in 1908 and 1998. Ichthyological Exploration of Freshwaters 13:225-238. 15% JWA.

15. [u]Chockley, B. R. and **J. W. Armbruster**. 2002. *Panaque changae*, a new species of loricariid catfish (Teleostei) from eastern Peru. Ichthyological Exploration of Freshwaters. 50%, JWA, 100% JWA lab.

14. **Armbruster, J. W.** 2002. *Hypancistrus inspector*, a new species of suckermouth armored catfish (Loricariidae: Ancistrinae) with comments on loricariid feeding modes. Copeia 2002:86-92. 100% JWA.

13. **Armbruster, J. W.** and F. Provenzano. 2000. Four new species of the suckermouth armored catfish genus *Lasiancistrus* (Loricariidae: Ancistrinae). Ichthyological Exploration of Freshwaters 11:241-254. 90% JWA.

12. [g]**Armbruster, J. W.**, M. H. Sabaj, M. Hardman, L. M. Page, and J. H. Knouft. 2000. Catfish genus *Corymbophanes* (Loricariidae: Hypostominae) with description of one new species: *Corymbophanes kaiei*. Copeia 2000:997-1006. 80% JWA.

11. [g]Sabaj, M. H., **J. W. Armbruster**, and L. M. Page. 1999. Spawning in *Ancistrus* with comments on the evolution of snout tentacles as a novel reproductive strategy: larval mimicry. Ichthyological Exploration of Freshwaters 10:217-229. 50% Auburn, 30% JWA.

10. [g]**Armbruster, J. W.** and M. Hardman. 1999. Redescription of *Pseudorinelepis genibarbis* (Loricariidae: Hypostominae) with comments on behavior as it relates to air-holding. Ichthyological Exploration of Freshwaters 10:53-61. 25% Auburn, 80% JWA.

9. **Armbruster, J. W.** 1998. Modifications of the digestive tract for holding air in loricariid and scoloplacid catfishes. Copeia 1998:663-675. 5% Auburn.

8. **Armbruster, J. W.** 1998. Phylogenetic relationships of the suckermouth armored catfishes of the *Rhinelepis* group (Loricariidae: Hypostominae). Copeia 1998:620-636. 5% Auburn.

7. **Armbruster, J. W.** 1998. Review of the loricariid catfish genus *Aphanotorulus* and redescription of *A. unicolor* (Teleostei: Siluriformes). Ichthyological Exploration of Freshwaters 8:253-262. 5% Auburn.

Remaining publications from before coming to Auburn University.

6. **Armbruster, J. W.** and L. M. Page. 1997. Generic reassignments of the loricariid species *Monistiancistrus carachama* Fowler 1940, *Plecostomus lacerta* Nichols 1919, and *Rhinelepis levis* Pearson 1924 (Teleostei: Siluriformes). Copeia 1997:227-232. 80% JWA.

5. Page, L. M., **J. W. Armbruster**, and M. H. Sabaj. 1996. Redescription of *Glyptoperichthys scrophus* (Cope), a loricariid catfish from Peru. Ichthyological Exploration of Freshwaters 7:185-191. 30% JWA.

4. Johnston, C. E., **J. W. Armbruster**, and C. A. Laird. 1996. Parallel swims as a means of intra- and interspecific assessment in stream fishes. Environmental Biology of Fishes 46:405-408. 20% JWA.

3. **Armbruster, J. W.** and L. M. Page. 1996. Redescription of *Aphanotorulus* (Teleostei: Loricariidae) with description of one new species, *A. ammophilus*, from the Río Orinoco basin. Copeia 1996:379-389, 90% JWA.

2. **Armbruster, J. W.** and L. M. Page. 1996. Convergence of a cryptic saddle pattern in benthic freshwater fishes. Environmental Biology of Fishes 45:249-25. 75% JWA.

1. **Armbruster, J. W.** 1994. Early season nesting success of mourning doves (*Zenaida macroura*) in central Illinois. Transactions of the Illinois Academy of Science 87:71-82. 100% JWA.

iii. Popular articles on my original research published in non-refereed publications.

2. **Armbruster, J.W.**, N.K. Lujan, and D.C. Werneke. 2017. Fishes and Waterfalls. Explore Guyana. 2017: 16-18.

1. **Armbruster, J. W.** 2001. In Search of the Lost World of Loricariids: An Adventure to the Potaro River, Guyana. Harnischwelse II, special publication of D.A.T.Z. 100% Auburn. Article on our 1998 trip to Guyana.

iv. Publications submitted or soon to be submitted.

[g]Akin, D.R., R.E. Jenkins, and **J.W. Armbruster**. Accepted 8/25. Description of the Apalachicola Redhorse (Catostomidae: *Moxostoma*). Zootaxa. 40% JWA. Impact factor: 0.9.

Armbruster, J.W. Submitted 7/25. Y2K – a fish story. *In:* P. Chakrabarty (ed.) "Never the Same Waters Twice: Stories from the Field of Ichthyology".

[g]Barck, S. and **J.W. Armbruster**. Submitted 8/25. Sexual dimorphism in the sucker tribe Thoburnini (Cypriniformes: Catostomidae). Southeastern Naturalist. 20% JWA, 100% JWA Lab. Impact factor: 0.6.

Meza-Vargas, V., N.K. Lujan, **J.W. Armbruster**, and R.E. Reis. To be submitted 10/25. Taxonomically comprehensive multilocus phylogeny of the armored catfish genus *Hemiancistrus* (Loricariidae): monophyletic classification of a highly paraphyletic taxon. Neotropical Ichthyology. 10% JWA.

Miller, E.C., R. Faucher, A. Santaquiteria, J. West, **J.W. Armbruster**, C. Baldwin, T.J. Buser, K. Carpenter, J.M.D. de Astarloa, S. Gartner, S.-P. Huang, J.-K. Kim, H. López-Fernández, N. Mandrak, M. Miya, M. Neves, M. Paquin, J. Pogonoski, E. Troyer, M. Westneat, W. White, E.O. Wiley, G. Carnevale, G. Orti, C.M. Martinez, L.C. Hughes, R. Betancur-.R, K. Evans, D. Arcila. To be submitted 10/2025. Marine and freshwater habitats differentially shape skull evolution in a massive fish radiation. 2% JWA.

[g]Sperstad, Z.E., P.B. Berendzen, A.M. Simons, **J.W. Armbruster**, C.C. Stout, E.M. Lemmon, and A.R. Lemmon. Submitted 6/18, needs completion. Resolving the evolutionary history of the freshwater suckers using anchored hybrid enrichment (Cypriniformes: Catostomidae). Molecular Phylogenetics and Evolution. 10% JWA. Impact factor: 4.018.

[g]Stephen, C.D.R. and **J.W. Armbruster**. To be submitted. Standardized characters and landmarks for geometric morphometrics with Pseudoscorpiones: a case study assessing sexual dimorphism in *Hesperochernes mirabilis*.

[g]Vilardo, P.J., A.M. Katz, **J.W. Armbruster**, and W.J.E.M. Costa. Submitted 12/2025. Taxonomic status and redescription of *Trichomycterus laticeps* Kner, 1863 (Siluriformes: Trichomycteridae). Ichthyology and Herpetology. 30% JWA Lab (from visiting student), 10% JWA. Impact Factor: 1.857.

[g]Weyand, C.A. and **J.W. Armbruster**. Submitted 9/2025. Using GenBank records to elucidae the phylogeny of the Riffle Daces (Leuciscidae: *Rhinichthys*). 20% JWA.

[g]Weyand, C.A. and **J.W. Armbruster**. To be submitted 11/2025. Population dynamics of the Western Blacknose Dace, *Rhinichthys obtusus* in Alabama. 20% JWA.

c. Papers or Lectures

i. Invited Lectures (lectures prior to 1998 as graduate student)

2022. Louisiana State University Museum of Nature and Science. Discovering fishes in the lost world: biogeography and taxonomy in the Guiana Shield. Baton Rouge, LA.

2019. Federation of Texas Aquarium Societies. Biogeography of the Guiana Shield – Fishes of the Lost World. Keynote Speaker. Baton Rouge, LA.

2019. Illinois Natural History Survey, University of Illinois. Biogeography of the Guiana Shield – Fishes of the Lost World.

2010. Catfish 2010: Conservation, Ecology, and Management of Catfish: The Second International Symposium. Plenary Speaker, "Global Catfish Diversity".

2008. Gothenburg Aquarium Society, Gothenburg, Sweden. "Paraphyly and the plecostomus: unraveling the taxonomic nightmare of loricariids."

2007. Bucks County Aquarium Society, Philadelphia, PA. "Paraphyly and the plecostomus: unraveling the taxonomic nightmare of loricariids."

2006. Greater Potomac Aquarium Society Catfish Meeting, Baltimore, MD. "Paraphyly and the plecostomus: unraveling the taxonomic nightmare of loricariids."

2004. Department of Fisheries and Allied Aquacultures, Auburn, AL. "The Catfishes of the World and How We Intend to Describe Them All"

2004. Catfish Research Group, Wigan, England, two talks presented. "Paraphyly and the plecostomus: unraveling the taxonomic nightmare of loricariids" and "The Fishes of Guyana".

2003. Reinhardt College, Waleska, GA. "The Fishes of Guyana: Journeys into the Mountains and Savannas".

2001. Auburn University, Beta Beta Beta honors biology society, Auburn, AL.

2001. Auburn University, Department of Fisheries and Allied Aquacultures, Auburn, AL.

2000. Atlanta Area Aquarium Society, Atlanta, GA.

2000. Auburn University, Beta Beta Beta, biological honors society, Auburn, AL.

2000. Auburn University, Department of Physics Awards Banquet, Talasee, AL.

2000. Auburn University, College of Science and Math Awards Banquet, Auburn, AL.

1999. Auburn University, Department of Biological Sciences, Auburn, AL.

1998. National Museum of Natural History, Smithsonian Institution, Washington, DC.

1998. Los Angeles County Natural History Museum, Los Angeles, CA.

1998. University of Minnesota, St. Paul, MN.

1998. Smithsonian Tropical Research Institute, Balboa, Panamá.

1998. Auburn University, Department of Zoology and Wildlife Science, Auburn, AL.

1997. Cornell University, Ithaca, NY

1997. University of Illinois, Department of Ecology, Ethology, and Evolution, Urbana, IL.

1997. Champaign-Urbana Aquarium Society, Urbana, IL.

Papers presented at Professional Meetings (papers prior to 1998 as graduate student)
[g]indicates paper with a graduate student author
[u] indicates paper with undergraduate student author
§ indicates invited presentations

135. [g] Allen, B., **J.W. Armbruster**, and R.E. Jenkins. Sucker for a mystery: description and population genetics of the Brassy Jumprock. Joint Meeting of Ichthyologists and Herpetologists. St. Paul, MN. 20% JWA.

134. Black, C.R., M. Tan, and **J.W. Armbruster**. 2025. Decoupling the two-jae system in the true minnows (Leuciscidae). Joint Meeting of Ichthyologists and Herpetologists. St. Paul, MN. 20% JWA.

133. [g] Abeseinghe, A., C.A. Weyand, M.D. Buehler, H. Sundasinghe, J. Freyhoff, and **J.W. Armbruster**. 2025. Resolving evolutionary relationships in *Mystus* catfish using RAD-seq genomic analysis. Joint Meeting of Ichthyologists and Herpetologists. St. Paul, MN. 20% JWA.

132. **J.W. Armbruster**. 2024. A new genus for the Blackfin Sucker, *Thoburnia atripinnis* (Cypriniformes: Catostomidae). Southeastern Fishes Council. 2023. Little Rock, AR. 100% JWA.

131. **J.W. Armbruster** and R.E. Jenkins. 2024. Pleistocene distribution of the Copper Redhorse. Southeastern Fishes Council. Little Rock, AR. 100% JWA.

130. [g] Akin, D.R., R.E. Jenkins, and **J.W. Armbruster**. 2023. Getting back on the redhorse: Describing the *Moxostoma* in the Apalachicola. Southeastern Fishes Council. Chattanooga, TN. 20% JWA.

129. [g] Allen, B. and **J.W. Armbruster**. 2023. Down to brass tacks: Distinguishing characters and the geographic range of *Moxostoma* sp. 'Brassy Jumprock'. Southeastern Fishes Council. 2023. Chattanooga, TN. 20% JWA.

128. Jenkins, R.E. and **J.W. Armbruster.** 2023. I got a name: the Sicklefin Redhorse. Southeastern Fishes Council. 2023. Chattanooga, TN. 95% JWA.

127. [g] Weyand, C.A. and **J.W. Armbruster**. 2023. Historical connections between river systems revealed through phylogeographic analysis of Western Blacknose Dace. Southeastern Fishes Council. 2023. Chattanooga, TN. 20% JWA. 2nd Place in Student Competition.

126. [gu] Weyand, C.A., P.V. Doan, and **J.W. Armbruster**. 2023. Shapes of dace: assessing morphometric differences between and within the Eastern and Western Blacknose Dace *(Rhinichthys atratulus* and *Rhinichthys obtusus*). Southeastern Fishes Council. 2023. Chattanooga, TN. 20% JWA.

125. [g] Akin, D.R., C.A. Weyand, M. Buehler, and **J.W. Armbruster**. 2023. Phylogeography of the Guiana Shield Clade of Trichomycterus Pencil Catfishes. Joint Meeting of Ichthyologists and Herpetologists. Norfolk, VA. 20% JWA.

124. **Armbruster, J.W.** 2023. Working through Redhorse (Cotostomidae: *Moxostoma*). Joint Meeting of Ichthyologists and Herpetologists. Norfolk, VA. 100% JWA.

123. de Souza, L.S., N. Pitman, N. Kotlinski, A. Ormiston, J. Bicknell, A. Snyder, **J.W. Armbruster**, D. Taphorn, M. Thompson, M. Hallett, B. Lim, D. Stotz. Using vertebrate species distributions to identify freshwater conservation priority areas for Guyana. Joint Meeting of Ichthyologists and Herpetologists. Norfolk, VA. 10% JWA.

122. Tan, M. and **J.W. Armbruster**. 2023. Ecology and Biogeography of the Diversification of Minnows (Cypriniformes: Leuciscidae) of the Holarctic. Joint Meeting of Ichthyologists and Herpetologists. Norfolk, VA. 20% JWA.

121. [g] Weyand, C.A., P.V. and **J.W. Armbruster**. 2023. Historical connections between river systems revealed through phylogeographic analysis of Western Blacknose Dace. Joint Meeting of Ichthyologists and Herpetologists. Norfolk, VA. 20% JWA.

120. [g] Weyand, C.A. and **J.W. Armbruster**. 2022. Population dynamics of the Western Blacknose Dace (*Rhinichthys obtusus*) in Alabama. Southeastern Fishes Council. 2022. Athens, GA. 20% JWA.

119. Tan, M. and **J.W. Armbruster**. 2022. Ecology and biogeography of diversification of minnows (Cypriniformes: Leuciscidae) of the Holarctic. Cleveland, OH. 20% JWA.

118. [g] Black, C. and **J.W. Armbruster**. 2022. Modularity drives diversity in armored catfishes. Joint Meeting of Ichthyologists and Herpetologists. Spokane, WA. 20% JWA.

117. [g] Weyand, C.A. and **J.W. Armbruster**. 2021. Population dynamics of the Western Blacknose Dace (*Rhinichthys obtusus*) in Alabama. Southeastern Fishes Council. 2021. Columbus, GA. 20% JWA.

116. [g] Black, C. and **J.W. Armbruster**. 2020. Chew on This: Oral Jaw Shape is not Correlated to Diet Type in Loricariid Catfishes. Joint Meeting of Ichthyologists and Herpetologists. Phoenix, AZ. 20% JWA.

115. [g] Weyand, C.A. and **J.W. Armbruster**. 2020. Taxonomic relationships within the genus *Rhinichthys* using previously accessioned GenBank sequence data. Southeastern Fishes Council, Virtual, Hosted by Auburn University. 20% JWA.

114. [g] Black, C. and **J.W. Armbruster**. 2020. Shape Variation of Armored Catfishes in a Phylogenomic and Ecological Context Using 3D Geometric Morphometric Techniques (Loricariidae). Society of Integrative and Comparative Biology. Austin, TX. 10% JWA

113. [g] Weyand, C.A. and **J.W. Armbruster**. 2019. Daced and confused: a phylogenetic assessment of the genus *Rhinichthys*. Southeastern Fishes Council. Knoxville, TN. 20% JWA.

112. Tan, M and **J.W. Armbruster**. 2019. Shape Evolution and diversification in North American Leuciscidae (Cypriniformes). Society for Evolution. Providence, RI. 20% JWA.

111. [g] Hart, P.B., M.L. Nielmiller, E.D. Burress, **J.W. Armbruster**, and P. Chakrabarty. 2019. Phylogenomics and shape variation among amblyopsid fishes. Society for Integrative and Comparative Biology. Tampa, FL. 5% JWA.

110. Helms, B., E. Bauer, D. Werneke, C. Black, J. Feminella, **J. Armbruster**. 2018. Aquatic refuge and recovery in the face of drought in a biodiversity hotspot. Ecological Society of America. New Orleans, LA. 10% JWA.

109. [g] Black, C., E. Bauer, D. Werneke, **J.W. Armbruster**, B. Helms. 2018. Drought effects on ecological endpoint curves in a biodiversity hotspot. Southeastern Fishes Council Annual Meeting, Hickory Knob State Park, SC. 20% JWA

108. [g] Sperstad, Z.E., P.B. Berendzen, A.M. Simons, **J.W. Armbruster**, C.C. Stout, E.M. Lemmon, and A.R. Lemmon. 2018. Resolving the evolutionary history of the freshwater suckers using anchored hybrid enrichment (Cypriniformes: Catostomidae). Southeastern Fishes Council Annual Meeting, Hickory Knob State Park, SC. 75% JWA (paper was presented by JWA).

107. [g] Liyandja, T. and **J.W. Armbruster**. 2018. Geometric morphometric and molecular phylogeny provide new insights about convergent evolution, distribution and diversity within the African carp: *Labeo parvus*. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Rochester, NY. 20% JWA

106. [g] Black, C. and **J.W. Armbruster.** 2018. Shape analyses of the *Peckoltia* clade using 3d geometric morphometric techniques (Loricariidae: Hypostominae). Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Rochester, NY. 20% JWA

105. [g] Weyand, C., J.C. Godwin, and **J.W. Armbruster**. 2018. Using environmental dna to detect species found within the Black Warrior River basin after a flash drought event. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Rochester, NY. 20% JWA

104. de Souza, L.S., D.C. Taphorn, and **J.W. Armbruster.** 2018. Review of *Ancistrus* (Siluriformes: Loricariidae) from the northwestern Guiana Shield with description of six new species. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Rochester, NY. 60% JWA

103. [g] [u]Paz, Holden, M. Hayes, and **J.W. Armbruster**. 2018. Phylogenetic placement of a new species of *Trichomycterus* from the Pakaraima Mountains in Guyana. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Rochester, NY. 20% JWA

102. [g]Black, C., E. Bauer, D. Werneke**, J.W. Armbruster**, B. Helms. 2018. Drought effects on ecological endpoint curves in a biodiversity hotspot*.* Society for Freshwater Science. Detroit, MI. 20% JWA.

101. §Lujan, N.K., R. Betancur R., V. Astudillo-Clavijo, N.R. Lovejoy, H. López-Fernández, **J.W. Armbruster**. 2017. A fossil-calibrated, phylogenomically constrained phylogeny for Hypostominae catfishes (Loricariidae) and its biogeographical implications. Second International Symposium on the Phylogeny and Classification of Neotropical Fishes. Londrina, Brazil. Invited. 30% JW.

100. Silva, G.S.C., F.F. Roxo, L.E. Ochoa, B.F. Melo, F. Ashikaga, **J.W. Armbruster**, M.E. Alfaro, F.A. Bockmann, O. A Shibatta, and C. Oliveira. 2017. Phylogenomics of the family Pseudopimelodidae (Ostariophysi: Siluriformes). Second International Symposium on the Phylogeny and Classification of Neotropical Fishes. Londrina, Brazil. Poster. 3% JWA

99. **Armbruster, J.W.** and N.K. Lujan. 2017. A new hypostomine (Loricariidae) genus-level taxonomy incorporating molecular and morphological data. Second International Symposium on the Phylogeny and Classification of Neotropical Fishes. Londrina, Brazil. 75% JWA

98. §Arcila, D. G. Ortí, R. Vari, **J.W. Armbruster**, M.L.J. Stiassny, M.H. Sabaj, J.G. Lundberg, and R. Betancur-R. 2017. The legacy of Rich Vari in ostariophysan systematics: genome-wide analyses resolve the morphological tree of S. Fink and W. Fink. Second International Symposium on the Phylogeny and Classification of Neotropical Fishes. Londrina, Brazil. Invited. 5% JWA

97. [g]Black C., D.C. Werneke, E. Bauer, B. Helms, **J.W. Armbruster**. 2017. Aquatic Refuge and Recovery in the Face of Drought in a Biodiversity Hotspot. Southeastern Fishes Council. Chattanooga, TN. 25% JWA.

96. [g]Stout, C.M. and **J.W. Armbruster.** 2017. Phylogenomics of *Notropis* and related shiners (Cypriniformes: Leuciscidae). Southeastern Fishes Council. Chattanooga, TN. 40% JWA (presented by JWA).

95. Tan, M, and **J.W. Armbruster.** 2017. Diagnosing Effects of Systematic Error and Phylogenetic Signal in Phylogenomics: A Case Study on the Order Cypriniformes. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Austin, TX. 20% JWA.

94. [g]Sperstad, Z., P. Berendzen, A. Simons, **J.W. Armbruster**, E. Lemmon, and A. Lemmon. 2017. Phylogenomics of Catostomidae. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Austin, TX. 5% JWA.

93. [g]Stout. C.C. and **J.W. Armbruster.** 2017. Molecular systematics of Notropis and related shiners (Cypriniformes: Leuciscidae). Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Austin, TX. 40% JWA (presented by JWA).

92. **J.W. Armbruster**, N.K. Lujan, D.C. Werneke, and D. Bloom. 2017. The *Characidium declivirostre* group with description of two new species (Characiformes: Crenuchidae). Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Austin, TX. 80% JWA.

91. Tan, M, and **J.W. Armbruster.** 2017. Diagnosing Effects of Systematic Error and Phylogenetic Signal in Phylogenomics: A Case Study on the Order Cypriniformes. Evolution 2017, Portland, OR. 20% JWA.

90. [g]Hart, P. and **J.W. Armbruster**. 2016. Molecular relationships within *Typhlichthys subterraneus* (Percopsiformes: Amblyopsidae) and conservation implications. Southeastern Fishes Council Annual Meetings, Jackson, MS. 30% JWA. Third place in best student paper competition.

89. [g]Burress, E.D., J.M. Holcomb, M. Tan, and **J.W. Armbruster**. 2016. Ecological diversification associated with the benthic-to-pelagic transition by North American Minnows. Southeastern Fishes Council Annual Meetings, Jackson, MS. 30% JWA. Third place in best student paper competition.

88. **Armbruster, J.W.**, N.K. Lujan, and L.S. deSouza. The Proto-Berbice, an Ancient River that Influences the Modern Distributions and Conservation Challenges of Freshwater Fishes throughout the Western Guiana Shield. IVth International Congress on Biodiversity of the Guiana Shield, Georgetown, Guyana.

87.[g]Tan, M, and **J.W. Armbruster.** 2016. Transcriptome Evolution of Paedomorphic Cyprinidae. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, New Orleans, LA. 30% JWA.

86. [g] Hayes, M. and **J.W. Armbruster**. 2016. A new genus of minnow in West Africa and a new species from the Ogooué River Basin in Gabon (Cypriniformes: Cyprinidae). Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, New Orleans, LA. 30% JWA.

85. [g] Burress, E.D., J. Casciotta, O. Rican, L. Piálek, M. Tan, and **J.W. Armbruster. 2016.** Parallel Phenotypic Diversification and Rapid Speciation of *Crenicichla* Species Flocks: Riverine Analogs to the East African Great Lake Cichlids. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, New Orleans, LA. 10% JWA.

84. [g] Burress, E.D., F. Alda, P. Chakrabarty, and **J.W. Armbruster**. 2016. Phylogenomics of the Pike Cichlids (Cichliformes: Cichlidae: Crenicichla). Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, New Orleans, LA. 10% JWA.

83. [g]Burress, E.D., J. Casciotta, O. Rican, L. Piálek, M. Tan, and **J.W. Armbruster. 2016.** Parallel Phenotypic Diversification and Rapid Speciation of *Crenicichla* Species Flocks: Riverine Analogs to the East African Great Lake Cichlids. Evolution 2016, Austin, TX. 10% JWA.

82.[g]Tan, M, and **J.W. Armbruster.** 2016. Functional genomic evolution of paedomorphic Cypriniformes. Evolution 2016, Austin, TX. 30% JWA.

81.[g]Staley, M, G. Hill, **J.W. Armbruster**, and C. Bonneaud. 2016. Insights into the factors limiting disease emergence in a natural host-pathogen system. Evolution 2016, Austin, TX. 5% JWA.

80.[g]Tan, M, and **J.W. Armbruster.** 2016. The All Cypriniformes Tree of Life: A Resource for Comparative Studies Applied to Diversification and Evolution of Body Size. Society for Integrative and Comparative Biologists, Portland, OR. 30% JWA.

79. [g] [u] Benesh, K., M. Tan, & **J.W. Armbruster**. 2015. Urbanization and range stability of *Etheostoma tallapoosae* and *Etheostoma stigmaeum*. Southeastern Fishes Council, Gainesville, FL. 25% JWA.

78. [g]Tan, M. & **J.W. Armbruster**. 2015. Minnows on the Edge: Incorporating Phylogeny into Conservation Biology. Southeastern Fishes Council, Gainesville, FL. 25% JWA.

77. [g] [u]Hayes, M., E.R. Krahl, D.C. Werneke, & **J.W. Armbruster**. 2015. Population genetics of the Broadstripe Shiner, *Pteronotropis euryzonus*, an endemic species of the Middle Chattahoochee River. Southeastern Fishes Council, Gainesville, FL. 25% JWA. **WINNER**, best student paper.

76. [g] Hart, P.B. & **J.W. Armbruster**. 2015. Shape Variation among Lineages of the Southern Cavefish Species Complex in the Southeastern U.S. Southeastern Fishes Council, Gainesville, FL. 30% JWA.

75. [g]**Armbruster, J.W.,** E.D. Burress, S. Ferdous, M. Tan, and P.L. Wieczorek. 2015. Evolutionary ecology of the Cyprinidae. Southeastern Fishes Council, Gainesville, FL. 75% JWA.

74. [g]Tan M. & **J.W. Armbruster**. 2015. Transcriptome Evolution of Paedomorphic Cyprinids. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Reno, NV. Cypriniformes Inventory Symposium. 30% JWA.

73. §[g]Tan M. & **J.W. Armbruster**. 2015. The All Cypriniformes Tree of Life: A Resource for Comparative Studies Applied to Diversification and Evolution of Body Size. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Reno, NV. Cypriniformes Inventory Symposium. 30% JWA.

72. §[g]Stout, C.C., M. Tan. & **J.W. Armbruster**. 2015. Phylogeography of Leuciscinae. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Reno, NV. Cypriniformes Inventory Symposium. 30% JWA.

71. §[g]Hayes, M.M. & **J.W. Armbruster**. 2015. Morphological Investigation of the African Minnow Genus *Enteromius*. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Reno, NV. Cypriniformes Inventory Symposium. 30% JWA.

70. [g]Hart, P.B. & **J.W. Armbruster**. 2015. Systematics of the Southern Cavefish Species Complex in the Southeastern U.S. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Reno, NV. 30% JWA.

69. [g]Burress, E.D., M. Tan, & **J.W. Armbruster**. 2015. Craniofacial Diversification Across the Cichlid Fish Adaptive Radiation. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Reno, NV. 10% JWA.

68. [g] [u]Benesh, K. M. Tan, & **J.W. Armbruster**. 2015. Shape Variation and Evolution in the Genus *Phenacobius*. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Reno, NV. 10% JWA.

67. §[g]**Armbruster, J.W.,** M. Tan, M.M. Hayes, & C.C. Stout. 2015. The Cyprinform African Invasion. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Reno, NV. Cypriniformes Inventory Symposium. 80% JWA.

66. §[g] [u]Hayes, M., E.R. Krahl, D.C. Werneke, and **J.W. Armbruster**. 2015. Population Genetics of the Broadstripe Shiner. Southern Division of the American Fisheries Society (SDAFS). Savannah, GA. (Oral Presentation), 25% JWA.

65. §[g]**Armbruster, J.W.,** E.D. Burress, S. Ferdous, and P.L. Wieczorek. 2015. Evolutionary ecology of the Cyprinidae. Southern Division of the American Fisheries Society (SDAFS). Savannah, GA. (Oral Presentation), 75% JWA.

64. [g]Tan, M., C.C. Stout, A.R. Lemmon, E.M. Lemmon, & **J.W. Armbruster**. 2015. Phylogeny of paedomorphic fishes of Cypriniformes using anchored phylogenomics. Society of Integrative and Comparative Biology, West Palm Beach, FL.

63. [g]Burress, E.D., Holcomb, J.M., & **Armbruster, J.W**. 2014. The influence of phylogeny on minnow ecology, behavior, and physiology. Southeastern Fishes Council. Annual Meeting, Asheville, NC. (Oral presentation). 20% JWA. **WINNER**, best student paper.

62. [g]Hart, P.B., and **J.W. Armbruste**r. 2014. Preliminary data for diagnosing putative lineages of the Southern Cavefish (*Typhlichthys subterraneus*) in Alabama. Southeastern Fishes Council Conference. Asheville, NC. (Poster). 20% JWA. **WINNER**, best student poster.

61. [g]Burress, E.D., M. Tan, & **J.W. Armrbuster**. 2014. Ecological diversification among Neotropical Cichlid fishes. Joint Meeting of Ichthyologists and Herpetologists. Annual Meeting, Chattanooga, TN. 10% JWA

60. Ferdous, S. & **J.W. Armbruster**. 2014. Molecular phylogeny of catfish genus *Mystus* (Siluriformes:Bagridae). Asian Fish Biodiversity Conference (AFBC), Penang, Malaysia. (Oral Presentation). 20% JWA.

59. [g] [u]Krahl, Erika R., M. M. Hayes, D. C. Werneke, C. C. Stout, **J. W. Armbruster**. 2014. Genetic Structure and Dispersal Potential of the *Pteronotropis euryzonus* (Suttkus, 1955). American Society of Ichthyologists and Herpetologists. Chattanooga, TN. (Oral Presentation). 20% JWA.

58. [g]M. Tan, C.C. Stout, A.R. Lemmon, E.M. Lemmon, & **J.W. Armbruster**. 2014. Phylogenomics and the evolution of paedomorphism in Cyprinidae. Evolution 2014, Raleigh, NC. (Oral Presentation). 10% JWA.

57. [g]Tan, M. & **J.W. Armbruster**. 2014. What is Miniaturization? Evolution of body size in diminutive southeast Asian minnows of the subfamily Danioninae. Auburn University Graduate Scholars Forum. (Oral Presentation). 10% JWA.

56. [g]Diallo, S., **J.W. Armbruster**, et al. 2014. The Freshwater Fishes of Guinea. American Society of Ichthyologists and Herpetologists, Chattanooga, TN, 30 July – 3 August 2014.

55. [g]Hart, P.B. and **J.W. Armbruster.** 2014. Morphological Variation Among Southern Cavefish (Typhlichthys subterraneus) Lineages in Alabama. American Society of Ichthyologists and Herpetologists, Chattanooga, TN, 30 July – 3 August 2014.

54. Lujan, N.K., **J.W. Armbruster**, N.R. Lovejoy, and H. López-Fernández. 2014. Multilocus Molecular Phylogeny of the Suckermouth Armored Catfishes (Siluriformes: Loricariidae) with a Focus on the Subfamily Hypostominae. American Society of Ichthyologists and Herpetologists, Chattanooga, TN, 30 July – 3 August 2014.

53. [g]Ferdous, S. and **J.W. Armbruster**. 2014. The Identity of Catfishes Identified as *Mystus gulio* (Hamilton, 1822) (Teleostei: Bagridae), and Designation of a Neotype. American Society of Ichthyologists and Herpetologists, Chattanooga, TN, 30 July – 3 August 2014.

52. [g]**Armbruster, J.W.,** C.C. Stout, and M.M. Hayes. 2014. An Empirical Test for Convergence and Social Mimicry Using African Barbs (Cypriniformes). American Society of Ichthyologists and Herpetologists, Chattanooga, TN, 30 July – 3 August 2014.

51. [g]Tan, M., C.C. Stout, A.R. Lemmon, and **J.W. Armbruster**. 2014. Phylogenomics and the Evolution of Paedomorphism in the Cyprinidae. American Society of Ichthyologists and Herpetologists, Chattanooga, TN, 30 July – 3 August 2014.

50. [g]Stout, C.C., M. Tan, A.R. Lemmon, and **J.W. Armbruster**. 2014. Preliminary phylogeny of Cypriniformes based on anchored hybrid enrichment with a focus on Leuciscinae (true minnows). American Society of Ichthyologists and Herpetologists, Chattanooga, TN, 30 July – 3 August 2014.

49. [g]Hayes, M.M. and **J.W. Armbruster**. 2014. Making Sense of the Confusion: A molecular assessment of the genus 'Barbus' (Cypriniformes: Cyprinidae). American Society of Ichthyologists and Herpetologists, Chattanooga, TN, 30 July – 3 August 2014.

48. [g]Burress, E.D., M. Tan, **J.W. Armbruster**. 2014. Ecological Diversification Among Adaptive Radiations of Neotropical Cichlids. American Society of Ichthyologists and Herpetologists, Chattanooga, TN, 30 July – 3 August 2014.

47. [g]Tan, M., C.C. Stout, A.R. Lemmon, and **J.W. Armbruster**. 2014. Many Trees for Mini Fishes: Phylogenomic analysis and gene tree discordance in paedomorphic cyprinid fishes. Southeastern Ecology and Evolution Conference, Georgia Southern University, GA.

46. [g]Stout, C.C., M. Tan, A.R. Lemmon, and **J.W. Armbruster**. 2014. Preliminary phylogeny of Cypriniformes based on anchored hybrid enrichment with a focus on Leuciscinae (true minnows). Southeastern Ecology and Evolution Conference, Georgia Southern University, GA.

45. [g]**Armbruster. J.W**., M. L. Niemiller, and P.B. Hart. 2013. Status of the Southern Cavefish (*Typhlichthys subterraneus*) in Alabama and Tennessee. Southeastern Fishes Council, Guntersville State Park, AL, 14-15 November 2013.

44. [g] [u]Krahl, E. M.M. Hayes, D. C. Werneke, and **J. W. Armbruster**. 2013. Genetic Structure and Dispersal Potential of *Pteronotropis euryzonus* (Suttkus, 1955). Southeastern Fishes Council, Guntersville State Park, AL, 14-15 November 2013.

43. [g]Ray, C.K. and **J. W. Armbruster**. 2013. Where Did You Come From, Where Did You Go? A Look at *Rhinchthys atratulus* in the Black Warrior Basin. Southeastern Fishes Council, Guntersville State Park, AL, 14-15 November 2013.

42. [g]Stout, C.C., M. Raley, and **J.W. Armbruster**. 2013. Genetic structure and geometric morphometrics of *Notropis longirostris*. Southeastern Fishes Council, Guntersville State Park, AL, 14-15 November 2013.

41. [g]Wieczorek, P. and **J.W. Armbruster**. 2013. Can morphology accurately predict the successfulness of introduced species? Southeastern Fishes Council, Guntersville State Park, AL, 14-15 November 2013. 20% JWA.

40. [g]Hayes, M.M. and J**. W. Armbruster**. 2013. A Preliminary Phylogeny of West African '*Barbus*' (Cyprinidae). Fifth International conference of the PanAfrican Fish And Fisheries Meeting, Bujumbura, Burundi, 18-22 Spetember, 2013.

39. [g]**Armbruster, J.W.,** C.C. Stout, and M.M. Hayes. 2013. Convergence of Species of "*Barbus*" in Cameroon. Fifth International conference of the PanAfrrican Fish And Fisheries Meeting, Bujumbura, Burundi, 18-22 Spetember, 2013.

38. [g]Hayes, M.M. and **J. W. Armbruster**. 2013. A Preliminary Phylogeny of West African '*Barbus*' (Cyprinidae). American Society of Ichthyologists and Herpetologists, Albuquerque, NM, 10-15 July 2013.

37. [g]Tan, M. and **J.W. Armbruster**. 2013. What is Miniaturization?: Lack of Miniaturization in the Evolution of Body Size in a Group Including Some of the Smallest Fishes in the World (Danioninae: Cyprinidae). American Society of Ichthyologists and Herpetologists, Albuquerque, NM, 10-15 July 2013. ASIH Stoye Award in General Ichthyology best student oral presentation. 20% JWA.

36. [g]Wieczorek, P. and **J.W. Armbruster**. 2013. Can morphology accurately predict the successfulness of introduced species? American Society of Ichthyologists and Herpetologists, Albuquerque, NM, 10-15 July 2013.20% JWA.

35. [g]Tan, M. and **J.W. Armbruster.** 2013. Body size evolution of the Danioninae. Southeastern Ecology and Evolution Conference, University of Central Florida, FL. 20% JWA.

34. [g]**Armbruster, J. W.,** M. Hayes, and S. Ferdous, 2012. The shapes of *Lythrurus* and what they mean for systematics and ecology. All Cypriniformes Species Inventory Project (ACSII) International Conference in Chiang Mai, Thailand, 13–16 January 2012.

33. [g]**Armbruster, J. W.** 2012. Standardized measurements, landmarks, and meristic counts for cypriniform fishes. All Cypriniformes Species Inventory Project (ACSII) International Conference in Chiang Mai, Thailand, 13–16 January 2012.

32. [g]**Armbruster, J. W.** 2012. Workshop on using Geometric Morphometrics. All Cypriniformes Species Inventory Project (ACSII) International Conference in Chiang Mai, Thailand, 13–16 January 2012.

31. [g]Ferdous, S. and **J. W. Armbruster.** 2012. Geometric Morphometrics as a tool to elucidate phylogenies: a review and test. Evolution Society, Ottawa, Canada, 2012.

30. Lujan, N.K., K. O. Winemiller, and **J. W. Armbruster**. 2012. Trophic diversity in the evolution and community assembly of loricariid catfishes. Evolution Society, Ottawa, Canada, 2012.

29. [g] [u]Tan, M. E., C. Williams, and **J. W. Armbruster.** 2011. Geometric morphometric analysis of *Hybopsis* (Cyprinidae). Southeasterm Fishes Council, Chattanooga, TN.

28. [g]**Armbruster, J. W.,** M. Hayes, and S. Ferdous, 2011. The shapes of *Lythrurus* and what they mean for systematics and ecology. Southeasterm Fishes Council, Chattanooga, TN.

27. [g]Ray, C. K. and **J. W. Armbruster**. 2011. Redescription and morphometric analysis of *Isorineloricaria* (Siluriformes: Loricariidae). Joint Meeting of Ichthyologists and Herpetologists, Minneapolis, MN.

26. [g]**Armbruster, J. W.** 2010. Linear Thinking and its Perils in Understanding the Evolution of Amblyopsid Cavefishes (Teleostei: Percopsiformes). Joint Meeting of Ichthyologists and Herpetologists, Providence, RI.

25. §**Armbruster, J. W.** 2010. "Global Catfish Diversity". Catfish 2010: Conservation, Ecology, and Management of Catfish: The Second International Symposium. Plenary.

24. §**Armbruster, J.W.** 2009. Loricarioid Catfishes: Species Diversity and Phylogeny. Joint Meeting of Ichthyologists and Herpetologists, Portland, OR; All Catfish Species Inventory Symposium.

23. **Armbruster, J.W.** 2008. Morphological phylogeny of the cavefishes (Amblyopsidae). Southeasterm Fishes Council, Chattanooga, TN.

22. [g]Correa, S.B., **J.W. Armbruster**, and R. Betancur-R. 2008. Feeding Ecology of an Introduced Generalist Frugivorous Fish: the Fate of Pacu in the Sepik River, Papua New Guinea. Joint Meeting of Ichthyologists and Herpetologists, Montreal, Canada. 10% JWA.

21. **Armbruster, J.W.** and D.C. Werneke. 2008. Status survey of the Crystal Darter in Uphapee Creek, Mason Co., Alabama Department of Conservation and Natural Resources and Department of Fisheries and Allied Aquacultures, Auburn University, Annual Review Meeting. Auburm, AL. 75% JWA.

20. [g]**Armbruster, J.W.,** N.K. Lujan, and L. S. de Souza. 2007. Repeated trends in the biogeography of loricariid catfishes. American Society of Ichthyologists and Herpetologists. St. Louis, MO. 75% JWA.

19. **Armbruster, J.W.** and M.H. Hardman. 2006. Can morphology be misleading in loricariid phylogenetics? American Society of Ichthyologists and Herpetologists, New Orleans, LA.

18. [g]de Souza, L.S. and **J.W. Armbruster**. 2006. Taxonomy and biogeography of the loricariid catfish *Peckoltia sabaji.* American Society of Ichthyologists and Herpetologists, New Orleans, LA. 30% JWA.

17. [g]Lujan, N.K. and **J.W. Armbruster**. 2006. Phylogenetically informative new loricariid genera from the Western Guyana Shield. Poster. American Society of Ichthyologists and Herpetologists, New Orleans, LA. 30% JWA.

16. §Sabaj, M.H., **J.W. Armbruster**, C.J. Ferraris, Jr., J.P. Friel, J. G. Lundberg, and L.M. Page. All Catfish Species Inventory (ACSI) midterm report. American Society of Ichthyologists and Herpetologists, New Orleans, LA. 10% JWA.

15. **Armbruster, J.W.** 2005. Revisions of the Loricariid Catfish of the Genera *Lasiancistrus* and *Peckoltia* Sensu Stricto, American Society of Ichthyologists and Herpetologists,Tampa, Fl.

14. Friel, J.P., **Armbruster, J. W.**, Ferraris, C. J. Jr.; Lundberg, J. G.; Page, L. M.; Sabaj, M. H. 2005. All catfish species inventory: 2005 progress report. American Society of Ichthyologists and Herpetologists,Tampa, Fl. 10% JWA.

13. **Armbruster, J.W.** 2004. Neotropical catfishes and how we plan to describe them all. Southeastern Division of the American Fisheries Society, Oklahoma City, OK.

12. **Armbruster, J. W.** 2003. The hypostomine loricariids of Guyana. American Society of Ichthyologists and Herpetologists, Manaus, Brazil.

11. Sabaj, M. H. and **J. W. Armbruster**. 2003. Interesting fishes from 2002 Guyana Expedition with comments on their biogeography. American Society of Ichthyologists and Herpetologists, Manaus, Brazil. 25% JWA.

10. Reis, R., E. L. Pereira, and **J. W. Armbruster**. 2003. Delturinae, a new loricariid catfish subfamily (Teleostei, Siluriformes). American Society of Ichthyologists and Herpetologists, Manaus, Brazil. 10% JWA.

9. **Armbruster, J. W.** 2002. What is a Genus? American Society of Ichthyologists and Herpetologists, Kansas City, MO.

8. [g]**Armbruster, J. W.** 2000. New Insights in Loricarioid Systematics and a Reappraisal of the Decoupling Hypothesis. American Society of Ichthyologists and Herpetologists, La Paz, Baja California Sur, Mexico.

7. **Armbruster, J. W.** 2000. Resurrection of the Auburn University Museum Fish Collection. Alabama Fisheries Society, Alabama.

6. **Armbruster, J. W.** 1998. Relationships of the Suckermouth Armored Catfishes (Loricariidae) and the Evolution of Wood-eating in *Cochliodon*. American Society of Ichthyologists and Herpetologists, Guelph, Ontario, Canada.

5. **Armbruster, J. W.** 1997. Systematics of the neotropical catfish family Loricariidae with particular emphasis on Hypostominae. American Society of Ichthyologists and Herpetologists, Seattle, WA.

4. Sabaj, M. H., **J. W. Armbruster**, and L. M. Page. 1997. Spawning in *Ancistrus* (Siluriformes: Loricariidae) with comments on the evolution of snout tentacles as a novel reproductive strategy: Larval mimicry. American Society of Ichthyologists and Herpetologists, Seattle, WA. 20% JWA.

3. **Armbruster, J. W.** 1996. Adaptations for air breathing in loricariid and scoloplacid catfishes. Neotropical Ichthyological Association Symposium, American Society of Ichthyologists and Herpetologists, New Orleans, LA.

2. **Armbruster, J. W.** 1995. Revision of *Aphanotorulus* and its relationships within Hypostominae (Siluriformes, Loricariidae). American Society of Ichthyologists and Herpetologists, Edmonton, Alberta, Canada.

1. **Armbruster, J. W.** and L. M. Page. 1993. Convergence in a camouflage pattern in benthic freshwater fishes. American Society of Ichthyologists and Herpetologists, Austin, TX.

d. Exhibitions

Provided material for All Catfish Species Inventory exhibit, Academy of Natural Sciences, Philadelphia, PA. 2003-present.



Auburn University's "Theropod Dinosaur Egg Display" (opened June 1, 2022). Designed content, provided photos and video, and directed construction of the exhibit. Conducted opening day ceremony to ~200 people.

Auburn University's "It's Great to be a Tiger" (opened 3 September 2022). Designed content, provided materials.

The Auburn University Museum of Natural History: From Field to Publication. Auburn University Library (2/23-6/23). Designed content. Currently expanding for an entrance display in the museum (2024–2025).

e. Performances (local)

Spring 2009. Played Charles Darwin for the Department of Biological Sciences Darwin Celebration. Dressed as Darwin for lectures and for a birthday celebration on the Auburn University concourse.



f. Patents and inventions.

NONE.

g. Other Research/creative contributions

NONE

h. Grants and Contracts.

PI is listed first, on collaborative proposals, lead institution is indicated. On all grants, the work performed by all listed researchers is equal.

Funded/Pending Grants and Invited Preproposals

Title	PI's	Source Budget Period	Funded/Pending (mo/yr)
Use of habitat suitability modeling and field-based site assessment to identify potential sites for Spring Pygmy Sunfish reintroduction	K. Lawson, J Godwin, and **J.W. Armbruster** I will do the EDNA portion and contribute to field work	North Alabama Land Trust $180,000 5/1/2024–4/30/2027	**Funded 1/25**
Biogeography and Ecology of Diversification After a Transcontinental Freshwater Fish Migration	M. Tan (INHS) and **J.W. Armbruster** I will handle the morphological and ecological portions	National Science Foundation 10/1/2024 – 9/30/2027 $1,446,947, $499,364 AU	**Funded 10/24**
Characterization of Blackwater Reference Sites in Alabama	B. Helms (Troy), **J.W. Armbruster**, A. Guillaumet (Troy), K. Lawson, A. Schotz, D. Laurencio, C. Boyd (Troy) I will handle the fish portion	United States Environmental Protection Agency 6/1/2024 – 5/31/2027 $468,253, Auburn total: $203,868	**Funded 7/24**
Environmental Education at the Robert G. Wehle Nature Center	Michelle Simpson and **J.W. Armbruster** I am advisory	Alabama Department of Conservation and Natural Resources $15,000	**Funded 9/24**

		9/15/2024-7/31/2024	
Environmental Education at the Robert G. Wehle Nature Center	Michelle Simpson and **J.W. Armbruster** I am advisory	Alabama Department of Conservation and Natural Resources $15,000 10/1/2023-7/31/2024	**Funded 9/23**
Propeller Scarring Hot Spot Analysis and Behavior Change – Social Marketing Campaign for Tampa Bay	K. Lawson and **J.W. Armbruster** I am advisory	Environmental Protection Agency $4,400 02/02/2022-12/30/2023	**Funded 12/21**
Investigation of Alabama Red-Bellied Turtle Nesting in American Alligator Nests	J. Godwin and **J.W. Armbruster** I am advisory	Alabama Department of Conservation and Natural Resources $30,603 10/1/2021-9/30/2022	**Funded 10/21**
Environmental Education at the Robert G. Wehle Nature Center	Toni Bruner and **J.W. Armbruster** I am advisory	Alabama Department of Conservation and Natural Resources $21,000 8/16/2021-7/31/2022	**Funded 7/21**
Aquatic Biodiversity of the New River Triangle, Guyana	**J.W. Armbruster** and N.K. Lujan Co-lead the expedition	Coypu Foundation $49,822 10/1/2020-10/1/2023	**Funded 10/20**
Investigation of Alabama Red-Bellied Turtle Nesting in American Alligator Nests	J. Godwin and **J.W. Armbruster** I am advisory	Alabama Department of Conservation and Natural Resources $30,062 10/1/2020-09/30/2022	**Funded 9/20**
Collaborative TCN: Documenting Marine Biodiversity through Digitization of Invertebrate Collections	**J.W. Armbruster** (originally K. Halanych) Managing the effort	National Science Foundation $31,088.57 11/1/20/-10/30/24	**Funded 8/20**
Environmental Education at the Robert G. Wehle Nature Center	Toni Bruner and **J.W. Armbruster** I am advisory	Alabama Department of Conservation and Natural Resources $21,000 11/4/2020-7/31/2021	**Funded 7/20**
AUMNH Mobile Museum	Toni Bruner and **J.W. Armbruster**	Alabama Association of RC&D Councils $9,795 10/1/20-7/17/21	**Funded 10/20**
Flattened Musk Turtle & Black Warrior Waterdog Population Status Study In Bankhead National Forest	J. Godwin and **J.W. Armbruster** I am advisory	US Fish and Wildlife Service $85,852 10/1/2020-12/31/2022	**Funded 10/20**

Green Salamander Habitat Modeling and Survey	J. Godwin and **J.W. Armbruster** I am advisory	Alabama Department of Conservation and Natural Resources Section 6 $39,054 3/1/2020-9/30/2020	**Funded 3/20**
Mississippi Gopher Frog Survey	J. Godwin and **J.W. Armbruster** I am advisory	Alabama Department of Conservation and Natural Resources $25,784 12/1/2019-9/30/2021	**Funded 12/19**
Escambia Map Turtle Survey	J. Godwin and **J.W. Armbruster** I am advisory	Alabama Department of Conservation and Natural Resources $17,023 12/1/2019-9/30/2020	**Funded 12/19**
Waterdog and Musk Turtle eDNA Survey	J. Godwin and **J.W. Armbruster** I am advisory	The Nature Conservancy $60,191 3/1/2019-11/30/2021	**Funded 3/19**
Environmental Education at the Robert G. Wehle Nature Center	Toni Bruner and **J.W. Armbruster** I am advisory	Alabama Department of Conservation and Natural Resources $24,688.15 11/4/2019-7/31/2020	**Funded 7/20**
Gopher Frog Environmental DNA (eDNA) Survey at Arnold Air Force Base	J. Godwin and **J.W. Armbruster** Did the eDNA lab work	US Department of Defense $47,500 7/30/18-8/30/2021	**Funded 7/18**
Environmental DNA Analysis for Bankhead National Forest	J. Godwin and **J.W. Armbruster** Did the eDNA lab work	USDA Forest Service $8,000 7/06/18-1/31/19	**Funded 7/18**
Planning Level Survey of Redstone Arsenal for At-Risk Species and Ecologically Significant Communities	**J.W. Armbruster**, David Werneke, Melissa Callahan Lead grant and fish portion	Department of Defense, Redstone Arsenal 7/1/18-5/30/19 $100,000	**Funded (5/17)**
CSBR: Natural History: Compactorized Shelving for the Wet Collections of the Auburn University Museum of Natural History	**J.W. Armbruster**, J.E. Bond, K. Halanych, D. Warner, J.R. Oaks Led effort	NSF 5/15/2018-5/14/2020 $195,450	**Funded** 1/2018
Establishment of Wetland Reference Sites in Alabama	**J.W. Armbruster** B. Helms, M. Barbour, A. Schotz, J. Godwin, D. Laurencio Lead grant and fish portion	Environmental Protection Agency 8/17-8/23 $229,452	**Funded 8/2017**

Planning Level Survey of Redstone Arsenal for At-Risk Species and Ecologically Significant Communities	**J.W. Armbruster**, Jim Godwin, David Steen, Brian Helms, Jason Bond, Michael Barbour, David Werneke Lead grant and fish portion	Department of Defense, Redstone Arsenal 5/1/17-12/15/18 $150,000	**Funded (5/17)**
RAPID: Aquatic refuge and recovery in the face of drought in a biodiversity hotspot	B. Helms, **J.W. Armbruster**, M. Barbour, J. Godwin, and D.C. Werneke Co-lead of grant	NSF 3/15/2017-3/14/2018 $170,986	**Funded 3/17**
Addition to Planning Level Survey of Redstone Arsenal for At-Risk Species and Ecologically Significant Communities	**J.W. Armbruster**, Michael Barbour, Jim Godwin, Curtis Hansen, Al Schotz, David Steen, Jason Bond Lead grant and fish portion	Department of Defense, Redstone Arsenal 9/30/16-12/15/17 $29,000	**Funded 9/16**
Planning Level Survey of Redstone Arsenal for At-Risk Species and Ecologically Significant Communities	**J.W. Armbruster**, Michael Barbour, Jim Godwin, Curtis Hansen, Al Schotz, David Steen, Jason Bond Lead grant and fish portion	Department of Defense, Redstone Arsenal 9/30/16-12/15/17 $170,000	**Funded 9/16**
Preliminary Proposal: ARTS: The African Small Barbs (Pisces: Cyprinidae) and the Pace of Morphological Change in a Continental Invasion	**J.W. Armbruster (lead PI)** R. Betancur-R (U. of Puerto Rico), M.L.J. Stiassny, American Museum of Natural History Lead grant	NSF	**Invited for Full 5/16**
Preliminary Proposal: Systematics: Phylogenomics and investigations of the evolutionary ecologies of the Holarctic minnows of the Subfamily Leuciscinae (Teleostei: Cypriniformes)	R.L. Mayden (SLU, lead PI), **J.W. Armbruster** Came up with idea, would lead morphology and ecology portions	NSF	**Invited for Full 5/16**
Impacts of mining on fish diversity and diet in the	E. Liverpool, D.C. Taphorn	University of Guyana $33,000	**Funded (2/2015)**

Mazaruni river basin, Guyana	H. López- Férnandez **J.W. Armbruster** Advisory	No money to Auburn (3/1/15-3/1/16)	
Aquatic Biodiversity of the Western Guiana Shield	**J.W. Armbruster (PI)** N.K. Lujan Lead Field Effort	COYPU Foundation $48,983 (10/1/14-10/1/16)	**Funded (10/2014)**
The Range and Relationships of Three Undescribed Species of *Typhlichthys* (Percopsiformes: Amblyopsidae) in Alabama	**J.W. Armbruster (PI)** M.L. Niemiller Led field and sequencing efforts	Alabama Department of Conservation and Natural Resources Section 6 $14,800.00 (10/1/15-10/1/16)	**Funded (10/2014)**
Conservation status of amblyopsid cavefishes (family Amblyopsidae) and other cave-obligate fauna in Tennessee	M.L. Niemiller (PI) **J.W. Armbruster** K. Zigler Aided in taxonomy	Tennessee State Wildlife Grants $14,000	**Funded (6/2012)**
Documenting new undescribed species of the cavefish genus *Typhlichthys* (Percopsiformes: Amblyopsidae) in Alabama	**J.W. Armbruster (PI)** M.L. Niemiller Led field and sequencing efforts	Alabama Department of Conservation and Natural Resources Section 6 $11,091.00	**Funded (10/2012)**
Collaborative PBI: All Cypriniformes Species – Phase II of an Inventory of the Otophysi	L.M. Page (UF, lead institution) **J.W. Armbruster** R.L. Mayden (SLU) Led African portion and sequencing	National Science Foundation 2010-2014 $785,482 AU portion $2,680,578 total	**Funded (9/10)**
Improvements to the Auburn University Natural History Museum	L. Goertzen (PI) **J.W. Armbruster** J. Feminella (AU-DBS) C. Guyer (AU-DBS) Led fish portion in obtaining new shelving. Created class	National Science Foundation 2010-2013 $429,878	**Funded (2/10)**
Environmental Impact Assessment of a Bauxite Mine in Suriname	**J.W. Armbruster** Led field and sequencing efforts	ERM (contract) 2009-2010 ~$23,000 to date	**Funded (9/09)**
Supplement to All Catfish Species Inventory Project (supplement provided from the parent grant's participant funds)	**J.W. Armbruster (PI)** R. Betancur (AU-DBS) L.S. de Souza (AU-DBS) **Led field work**	National Science Foundation/University of Florida 2007 $32,000	**Funded (07/07)**
Viability of the Crystal Darter in Uphapee Creek	**J.W. Armbruster (PI)** D.C. Werneke (AU-DBS)	Alabama Department of Conservation and Natural Resources	**Funded (10/06)**

	Led effort	2006-2007 $6,000	
Supplement to Systematics of Guyana and Brazilian Shield Endemic Catfishes of the Tribe Ancistrini and Biogeographty of the Shield Regions	**J.W. Armbruster** Led effort	National Science Foundation 2004-2005 $18,304	**Funded (04/04)**
The Acoustical Environment of Suckermouth Armored Catfishes and How it is Affected by Morphology	**J.W. Armbruster** Led effort	Auburn University Competitive Research Grants 2004-2005 $2,954	**Funded (04/04)**
PBI: All Catfishes Species Inventory – Phase I of an Inventory of the Otophysi	L.M. Page (PI, UF) **J.W. Armbruster** C.J. Ferraris (UF) J.P. Friel (Cornell) J.L. Lundberg (ANSP) M.H. Sabaj (ANSP) Loricariid lead (~25% of catfishes)	National Science Foundation 2003-2009 $447,089 AU portion $4,688,504 total	**Funded (09/03)**
Improvements to the Auburn University Aquatic Invertebrate, Fish, and Reptile Collections	**J.W. Armbruster (PI)** J. Feminella (AU-DBS) C. Guyer (AU-DBS) Managed project	National Science Foundation 2003-2005 $347,602	**Funded (05/03)**
Sound Production as a Potential Management Tool for Cavefishes (Amblyopsidae)	**J.W. Armbruster (PI)** C.E. Johnston (AU-FAA) Did field work	Alabama Department of Conservation and Natural Resources 2001-2002 $10,000	**Funded (06/01)**
Systematics of Guyana and Brazilian Shield Endemic Catfishes of the Tribe Ancistrini and Biogeographty of the Shield Regions	**J.W. Armbruster**	National Science Foundation 2001-2004 $238,267	**Funded (08/01)**
Recovery of a Swamp Fish Assemblage from Drought	**J.W. Armbruster (PI)** C.E. Johnston (AU-FAA) Led field work	USDA Forest Service 2001 $6,000	**Funded (02/01)**
Herp and Fish Georeferencing Project	C. Guyer (PI, AU-DBS) **J.W. Armbruster** Led fish work	Alabama State Lands Division 2000-2001 $15,000	**Funded (04/04)**
Herp and Fish Georeferencing Project	C. Guyer (PI, AU-DBS) **J.W. Armbruster** Led fish work	USDA Forest Service 1999-2000 $1,500	**Funded (09/99)**

Herp and Fish Georeferencing Project	C. Guyer (PI, AU-DBS) **J.W. Armbruster** Led fish work	Alabama State Lands Division 1999-2000 $12,700	**Funded (07/98)**
The Fishes of Guyana	L.M. Page (PI, INHS) **J.W. Armbruster** Co-lead of field work	National Geographic $25,000	**Funded (06/98)**

Unfunded Grant Proposals

Title	PI's	Source Budget Period	Funded (mo/yr)/Not funded
Fish Diversity in a Changing Guyana	**J.W. Armbruster**	Fulbright US Scholar Program (teaching/research) 8/31/2025-12/20/2025 $38,590	Not Funded (letter writer failed to submit letter) 9/24
Collaborative Research: Ecology and Biogeography of Diversification in a Transcontinental Fish Radiation	M. Tan (INHS) and **J.W. Armbruster**	National Science Foundation $784,370 (AU) 6/1/2023-5/30/2026	Not Funded 6/23
Collaborative Research: BEE: The Influence of Evolutionary Ecology and Biogeography on Diversification of a Paleogene Transcontinental Invasion by North American Minnows	**J.W. Armbruster (AU),** Milton Tan (UI, lead institution), Richard Mayden (SLU)	NSF $681,869 7/01/21-6/30/24	Not funded 12/20
Preliminary Proposal: ARTS: The African Small Barbs (Pisces: Cyprinidae) and the Pace of Morphological Change in a Continental Invasion	**J.W. Armbruster (lead PI)** R. Betancur-R (U. of Puerto Rico), M.L.J. Stiassny, American Museum of Natural History	NSF	Not Invited Submitted 1/17
Preliminary Proposal: Systematics: Phylogenomics and investigations of the evolutionary ecologies of the Holarctic minnows of the Subfamily Leuciscinae (Teleostei: Cypriniformes)	R.L. Mayden (SLU, lead PI), **J.W. Armbruster**	NSF	Not Invited Submitted 1/17
Collaborative Research: ARTS: The African Small Barbs (Pisces: Cyprinidae) and the Pace of Morphological Change in a	**J.W. Armbruster (lead PI),** R. Betancur-R (U. of Puerto Rico), M.L.J.	NSF/ 1/1/17-12/30/19/ $931,466 AU, $1,397,756 total	Not Funded

Continental Invasion	Stiassny, American Museum of Natural History		
Collaborative Research: Phylogenomics and investigations of the evolutionary ecology of the Holarctic minnows of the Subfamily Leuciscinae (Teleostei: Cypriniformes: Cyprinidae)	R.L. Mayden (SLU) and **J.W. Armbruster**	NSF 4/1/17-3/31/20 $673,116 AU, $1,408,305 total	Not Funded
Preliminary Proposal: Systematics:Phylogenomics and Evolutionary Ecologies of the Holarctic Subfamily Leuciscinae (Cypriniformes: Cyprinidae)	R.L. Mayden (SLU) R. Wood (SLU), **J.W. Armbruster**	NSF	1/15 Not Invited
Preliminary Proposal: ARTS: The African Small Barbs (Pisces: Cyprinidae) and the Pace of Morphological Change in a Continental Invasion	**J.W. Armbruster (PI)** R. Betancur-R (U. of Puerto Rico)	NSF	1/15 Not Invited
DISSERTATION RESEARCH: Phylogenomics, Comparative Phylogenetics and Transcriptomics of Miniaturization in Cypriniform Fishes	**J.W. Armbruster (PI)** M. Tan	NSF $19,240	Not Funded 3/2015
CSBR: Natural History: Enhancing the capacity of the Auburn University Museum of Natural History for the future	J.E. Bond (PI), B. Helms, **J.W. Armbruster,** C. Guyer, J.W. Feminella	NSF $437,830	Not Funded 2/2015
Preliminary Proposal: Diversification of Guiana Shield Fishes in Relation to Ancient and Ongoing River Capture Events	**J.W. Armbruster (PI, lead institution)** J. Albert (ULL) H. Lopez-Fernandez (ROM)	NSF	Not Invited (5/2014)
Preliminary Proposal: The African Small Barbs and the Cyprinid African Invasion	**J.W. Armbruster (PI)**	NSF	Not Invited (5/2014)
Collaborative Research: Fishes and Ichthyoparasites from the Pakaraima Mountains. Guyana	**J.W. Armbruster (PI, lead institution)** S. Bullard (AU- FAA) J. Albert (ULL) H. Lopez-Fernandez (ROM)	National Science Foundation 2013-2017	Not Funded (12/13)

Collaborative Research: Fishes and Ichthyoparasites from the Pakaraima Mountains. Guyana	**J.W. Armbruster (PI, lead institution)** S. Bullard (AU- FAA) J. Albert (ULL) H. Lopez-Fernandez (ROM)	National Science Foundation 2011-2014 $586,865 AU portion $917,146 total	Not Funded (5/11)
Digitization TCN: Collaborative Research: SouthEast Regional Network of Expertise and Collections-All Taxa (SERNEC-AT)	L. Goertzen (PI) B. Helms **J.W. Armbruster**	National Science Foundation 2011-2015 $426,862 AU portion	Not funded (5/11)
Collaborative Research: Fishes and Ichthyoparasites from the Pakaraima Mountains. Guyana	**J.W. Armbruster (PI, lead institution)** S. Bullard (AU- FAA) J. Albert (ULL) H. Lopez-Fernandez (ROM)	National Science Foundation 2010-2013 $707,234 AU portion $917,146 total	Not funded (5/10)
Invasion of Lower Mesoamerica by Loricariid Catfishes	**J.W. Armbruster (PI)** D.C. Taphorn (ret.)	National Science Foundation 2009-2011 $428,360	Not Funded
Conservation Genetics of Imperiled Alabama Catfishes	**J.W. Armbruster (PI)** D.C. Werneke (AU-DBS)	Alabama Department of Conservation and Natural Resources 2008-2011 $263,650	Not Funded
Molecular Phylogenetics and Functional Morphology of Suckermouth Armored Catfishes and Diversification in the Neotropics	**J.W. Armbruster (PI)** M. Hardman (Finland)	National Science Foundation 2008-2011 $485,246	Not Funded
Molecular Phylogenetics and Functional Morphology of Suckermouth Armored Catfishes and Diversification in the Neotropics	**J.W. Armbruster (PI)** M. Hardman (Finland)	National Science Foundation 2007-2010 $474,107	Not Funded
Collaborative Research: Form, Function, and Evolution of Swim Bladder Modifications in Loricariid Catfishes	M. Smith (PI, UKBG) **J.W. Armbruster** J. Humphries (U. Texas)	National Science Foundation 2005-2008 $325,894	Not Funded
Systematics of Loricariid Catfishes and the Function and Evolution of Accessory Respiratory Structures	**J.W. Armbruster**	National Science Foundation (CAREER) 2001-2006 $477,000	Not funded

9. Description of Scholarly Program

My work is on the systematics, taxonomy, and evolutionary ecology of South American Catfishes, minnows and their relatives in North America, Eurasia, and Africa, and the North American Cavefishes. My lab has also worked on the systematics of the deep-sea swallowers (Chiasmodontidae) and the marine catfishes (Ariidae), evolutionary ecology of cichlids, population genetics of the Rupununi Region of Guyana, and biogeography of freshwater and marine fishes. I use morphology, genetics, and genomics to assess relationships of fishes, and use those phylogenies to ask questions on the origins and maintenance of diversity in fishes. I also do basic survey work, with most work currently concentrated in the caves of Alabama and the South American country of Guyana (last 10 years: Cameroon, Democratic Republic of Congo, Guinea, Guyana, Peru, Suriname, Thailand, Uruguay, Venezuela, Redstone Arsenal, AL). We were also awarded an NSF RAPID award in 2017 to study the ability of fishes, crayfishes, and mussels to recolonize drought affected streams based on the vagility of the species; this study will involve quantified sampling and environmental DNA. The main projects are listed below.

The systematics of the South American catfish subfamily Hypostominae (Loricariidae) based on osteology, digestive tract anatomy, genetics, and genomics.

Description of new species of suckermouth armored catfishes (Loricariidae), worm catfishes (Trichomycteridae), cavefishes (Amblyopsidae), and South American darters (Crenuchidae).

Functional ecology of feeding in loricariid catfishes.

Survey of the fishes of Guyana.

Phylogenetics and taxonomy of the North American cavefishes (Amblyopsidae).

Taxonomy of minnows of the tribe Smiliogastrini in Africa.

Evolutionary ecology of North American minnows.

Effects of vagility of stream organisms to recolonize streams after extreme drought.

In addition, as curator of the Auburn University Museum Fish Collection, I am concerned with collection maintenance and growth. I have increased access to the collections via the internet, have increased the number of loans of material we fill, and increased the number of specimens accessioned into the museum. We received NSF collections improvement grants in 5/03, 5/10, and 5/18 for the collections. Partially due to my leadership, we have hired four collection managers, received funding for casework for the bird and mammal collections, and built a new building to house the collections on the central campus. The fish collection database is searchable on its own database, vertnet, and GBIF.

3. Outreach

a. Commentary

a. Description. My involvement with the Auburn University Museum entails a significant amount of outreach to the community. The collections are served on the web so that anyone can retrieve the data. I am also actively involved in identifying exotic species around the world.

I have produced a web page on the fishes that I study that is used widely by the scientific and aquarium communities. Aquarists have translated the pages a few times into other languages. The fishes I study are in high demand by aquarists, and I frequently give talks at aquarium societies where I describe the process of what goes into describing species. A colleague that attended one of these meetings called my description of modern taxonomy the best presentation of the information he has heard.

I have also been involved in AUExplore and Destination STEM, COSAM's annual presentation to younger students and I give tours of the museum collections.

As director of the museum, I am in charge of the numerous outreach efforts of the museum, and am seeking to develop educational materials to go along with museum activities. We have received funding for the museum's first official display (for a dinosaur egg) in 2017.

b. Mission. Make collections data and taxonomic information broadly available.

c. Scholarship. I produce all of my own materials based on my scientific studies.

d. Impact. My web site is broadly used by scientists and aquarists.

2. Activities and products

a. Instructional Activities.
Osher Lifelong Learning Institute: OLLI is a continuing education series for adults. Gave invited lectures in 2010, 2021, 2022 (2) and tours of the museum in 2023–2024.
Museum Education Course: Oversee the production of informal education lesson plans by Department of Education students for use in museum programs.

b. Technical Assistance.
None.
c. Outreach publications- sample of publications on or about my research
Note, the Peckoltia greedoi*, description was taken up by news organizations around the world, and below are just 2 of the earliest examples. Also, the dinosaur egg display that we planned has received significant local press, and below are two examples.*

19. McLeod, H. 2025. 'The fish that wears a feather': Sicklefin Redhorse fish given scienctific name. Smoky Mountain News, Tuesday 25 March 2025.
https://smokymountainnews.com/outdoors/item/39288-the-fish-that-wears-a-feather-sicklefin-redhorse-fish-given-scientific-name

18. Scharpf, C. 2025. Etyfish name of the week, 12 March 2025: *Moxostoma ugidatli*.
https://etyfish.org/name-of-the-week2025/

17. Dixon, S. 2025. Auburn researcher names newly discovered fish species, honoring Cherokee knowledge and advancing conservation. Auburn University Wire.
https://wire.auburn.edu/content/cosam/2025/02/201005-new-fish-species-named.php

16. Boddy, J. 2019. Megapixels: these tentacle-nosed catfish are aquatic superheroes. Popular Science.
https://www.popsci.com/megapixels-tentacle-nosed-catfish.

15. Warren, M. 2019. Panthers, propellers and catfish – February's best science images. Nature News. https://www.nature.com/articles/d41586-019-00807-5

14. Buehler, J. 2019. Six newly discovered catfish species have faces full of tentacles. Earther. https://earther.gizmodo.com/six-newly-discovered-catfish-species-have-faces-full-of-1832405065.

13. Field Museum. 2019. Six new species of hideously adorable tentacle-nosed catfish discovered in Amazon. https://phys.org/news/2019-02-species-hideously-adorable-tentacle-nosed-catfish.html.

12. Lujan, N.K. 2017. Rediscovering a lost loricariid. Amazonas September/October 2017: 48-55.

11. Yawn, A.J. 2017. Montgomery Advertiser, Modern tech has Alabama dinosaur egg ready to hatch. http://www.wsfa.com/story/34659638/cr-12-rare-dinosaur-egg-at-auburn

10. Davis, J. 2017. County Road 12, WSFA: Rare dinosaur egg at Auburn. http://www.wsfa.com/story/34659638/cr-12-rare-dinosaur-egg-at-auburn

9. Landau, J. 2015. Auburn professor names new catfish species after 'Star Wars' character Greedo. New York Daily News. http://www.nydailynews.com/new-catfish-species-named-star-wars-character-greedo-article-1.2152656.

8. Izadi, Elahe. 2015. The newest species of catfish is named after Greedo from 'Star Wars'. Washington Post. http://www.washingtonpost.com/news/speaking-of-science/wp/2015/03/17/the-newest-species-of-catfish-is-named-after-greedo-from-star-wars/

7. Dell'Amore, C. 2012. Pictures: New Suckermouth Armored Catfish Discovered. National Geographic Daily News. April 10, 2012. http://news.nationalgeographic.com/news/2012/04/pictures/120410-new-armored-suckermouth-catfish-discovery-animals-science/#/tan-armbruster-catfish-1_51291_600x450.jpg

6. Barnett, A. 2004. Strange but true: Bush-face. BBC Wildlife Magazine,22(2):32. Popular description of larval mimicry hypothesis of Sabaj et al. (1999).

5. Hoover, A. 2004. Catfish Hunters. Explore: Research at the University of Florida, Spring 2004:18-23.

4. Leslie, M. 2003. Netting new catfish. Science 299:1289. Description of website developed for the All Catfish project.

3. Montaigne, F. 2002. Catfish Hunters. National Geographic Magazine, May 2002. Article on our 1998 expedition to Guyana.

2. **Armbruster, J. W.** 2001. In Search of the Lost World of Loricariids: An Adventure to the Potaro River, Guyana. Harnischwelse II, special publication of D.A.T.Z. 100% Auburn. Article on our 1998 trip to Guyana.

1. Seidel, I. 2001. Interview: Jonathan W. Armbruster. Harnischwelse II, special publication of D.A.T.Z. German aquarium magazine that caters to catfish enthusiasts.

d. Electonic products.

2023. Created new website for the Neotropical Ichthyological Association. https://www.nia-net.org.

2023. Revised Armbruster Lab Website. https://www.armbrusterlab.org

2002. FISHBOT - a computer-based fish identification tool. The FISHBOT is designed to take keys and species field guides into the 21st century. The FISHBOT uses interactive tables instead of couplets to separate species, provides photographs and short comparisons to other species to make sure that you have identified the fish correctly, and then leads you to a detailed description of the species. This project was designed and implemented by my systematic ichthyology class. 100% Auburn. No longer active.

2001, revised in 2005 by COSAM IT. Auburn University Museum Mammal Database Access site. https://fp.auburn.edu/cosam/fish_search/search.asp. 100% Auburn. No longer active.

2000. Duckfest: an Ichthyological Exploration of the Duck River, Tennessee. A description and photos of a collecting trip to the Duck River attended by most of the major ichthyologists in the southeastern United States. http://george.cosam.auburn.edu:591/duckfest/duckfest.html. 100% Auburn. No longer active.

1999, revised 2001, 2002. Auburn University Museum Fish Collection Website. The website details the collection and includes a searchable database designed by **J.W. Armbruster** that provides locality information for all of the fish collection and photographs for some of the specimens. http://www.auburn.edu/cosam/collections/fish/index.htm. 100% Auburn. No longer active, but a new site is up for specimens (http://www.csm.auburn.edu/specify-solr/fishvouchers/) and tissues (http://www.csm.auburn.edu/specify-solr/fishtissues/), and collections are available on fishnet (fishnet2.net), vertnet (http://portal.vertnet.org/search), and GBIF (http://www.gbif.org).

1999, revised by COSAM IT in 2005. Auburn University Museum Herp Database Access site. https://fp.auburn.edu/cosam/herp_search/search.asp. 100% Auburn.

1999, majorly revised in 2005. Loricariidae Home Page. A set of pages detailing my work on the suckermouth armored catfishes. The pages provide a key to the genera and detailed descriptions and photographs of all genera. Some species are also described and keys are provided. The pages are accessed by scientists and aquarists the world over. http://www.auburn.edu/academic/science_math/res_area/loricariid/fish_key/lorhome/index.html. 100% Auburn.

e. Other outreach products: videos, job aids, etc.

NONE.

f. Copyrights, patents, and inventions.

NONE.

g. Contracts, grants, and gifts.

NONE.

4. Service

a. University Service

i. University Service

Spring 2021, 2022, 2024 – Ad Hoc reviewer of grant proposals

Fall 2019 – ORAU Ralph E. Powel Junior Faculty Enhancement Awards reviewer panel

Fall 2017 – Fisheries Five Year Review Committee

Spring 2016 – Alumni Professor Awards Committee

Spring 2016 – Auburn University Intramural Grants Program Panel.

Spring 2010-present – Faculty Advisor for the Auburn Secular Students Alliance.

Spring 2009 – played the role of Charles Darwin in the department's celebration of the 200th anniversary of his birth and 150th anniversary of the publication of "Origin of Species". Attended lectures and events dressed as Darwin.

October 2002 – Helped in the development of a display for the Auburn University Natural History Learning Center in the Dean's tent at Homecoming.

November 2000, February 2001 - provided tours of the Auburn University Museum Fish Collection to Auburn University classes.

February 1999 – talked to kindergarten children about fishes at the Child Study Center, Auburn University.

ii. College

Search Committee Member, Paleobiologist Search, Geosciences, Sept. 2021-May 2022.

GUTS (getting under the surface) program – October 2016, provided a lesson on fish anatomy and morphology to fifth-sixth graders.

Science Café – August 2016, provided a lecture/discussion on the use of drones in biodiversity research.

Provided displays/demonstrations at AUExplore/Destination Stem – April 2005-present

March 1999, 2000, February 2001 – Science Olympiad, wrote and proctored the test for the water quality section.

Member of the Dean's Medalist Committee, 1999-2016.

iii. Department

Chair of Anatomy, Physiology, and Histology Search Committee, 2019-2020, 2020-2021

Member of the Graduate Studies Committee, 2016-2018.

Member of the Ecophysiologist Search Committee, 2015-2016.

Tenure and Promotion Committee, member 2015-present, chair 2023-present

Leader of the Evolutionary Genetics and Systematics Core, 2014-2016, 2019-2023.

Member of the DBS Strategic Planning Committee, 2013-2016.

Chair of the Director of the Auburn University Museum of Natural History search committee 2010-2011.

Member of the Vertebrate Physiologist search committee 2009-2011

Member of the Plant Systematist search committee 2003-2004

Member of the awards committee 2002-2005

Member of the Department Chair Search Committee 2002-2003

Member of the Funds for Excellence Undergraduate Research Awards Committee, 2000-2022.

Member of the Marine Biologist Search Committee, 2000-2002.

Member Biology 1010 Course Committee, Dept. of Biological Sciences, 2000.

Member of Museum Collections Committee, Dept. of Biological Sciences, 1998-present, chair 2003-2006, 2016-present

Marine Biological Society Faculty Advisor, 1998-2002.

b. Professional Service

Society Affiliations

American Association for the Advancement of Science: 1997-2004

American Society of Ichthyologists and Herpetologists: 1991-present

Biological Society of Washington: 1997-2004

Neotropical Ichthyological Association: 1995-present, leader 2015-present.

Society of Systematic Biologists: 1997-present

Editorship/Editorial Boards
Associate Editor, Ichthyology, *Zootaxa*. January 2016-present.

Associate Editor, General Ichthyology, *Copeia* (the journal of the American Society of Ichthyologists and Herpetologists). October 2002-2006.

Editorial Board, *Copeia*. October 2018-December 2019, 2025.

Committees

Member Awards Committee, Annual meeting of the American Society of Ichthyologists and Herpetologists, American Elasmobranch Society, and Herpetologist's League, Kansas City, MO, 2002.

Chair Special Publications Committee, American Society of Ichthyologists and Herpetologists, 2001 - present.

Member Awards Committee, Annual meeting of the American Society of Ichthyologists and Herpetologists, American Elasmobranch Society, and Herpetologist's League, Guelph, Ontario, Canada, 1999.

Member Local Committee, Annual meeting of the American Society of Ichthyologists and Herpetologists, American Elasmobranch Society, and Herpetologist's League, Champaign, Illinois, 1992.

Boards
Specify Collections Consortium Board of Members – Specify is museum cataloging software. 2019-present.

Meetings
Co-chair of Southeastern Fishes Council virtual meetings November 2020.

Chair of Southeastern Fishes Council Conference, Columbus, GA, 17-19 November 2021.

IUCN
2020 - present: Served on Central America Freshwater Fishes, Orinoco River, and Guyana Working Groups. Wrote and published 17 species accounts and reviewed several others in 2020 for Central America. Publication published in 2022 by the working group on Central American Fishes. Wrote 55 species accounts and reviewed 33 others in 2020–2022 for Orinoco River and Guyana Working groups, accounts published in 2023.

Reviews (834 journal articles and other reviews as of 2024)

2024: 28 + 26 as Associate Editor. American Museum of Natural History Novitates – 1, Aquatic Invasions – 1, Book Chapter for upcoming book – 1, Contributions to Zoology – 1, European Journal of Taxonomy – 1, Journal of Fish Biology – 3, Journal of Tropical Ecology – 1, Nature Communications – 1 (3x), Neotropica – 1, Neotropical Ichthyology – 4, Plos One – 1, Proceedings of the Academy of Natural Sciences of Philadelphia – 1, Proceedings of the Royal Society B – 1,

Proceedings of the Southeastern Fishes Council – 1, Reviews in Fish Biology and Fisheries – 1, Zookeys – 1, Zoological Journal of the Linnean Society – 2, Zoologica Scripta – 1, Zoologischer Anzeiger – 1, Zoosystematics and Evolution – 1, Zootaxa – 27 as associate editor.

2023: 28 + 33 as Associate Editor. American Museum of Natural History Novitates – 1, Aquatic Invasions – 1, Biota Neotropica – 1, Fishes – 3, Frontiers in Zoolology – 1, Ichthyological Exploration of Freshwaters – 1, Journal of Fish Biology – 1, Molecular Phylogenetics and Evolution – 2, Nature Communicaions – 1 (3x), North American Journal of Fisheries Management – 1, Neotropical Ichthyology – 1, NSF (DEB Panel) – 8, Systematics and Biodiversity - 1, Zoological Journal of the Linnean Society – 2, Zoologica Scripta – 1, Zoologischer Anzeiger – 1, Zootaxa – 1+ 33 as associate editor.

2022: 16 + 37 as Associate Editor. Aquatic Invasions – 1, Biological Invasions – 2, Cybium – 1, Fisheries – 1, Journal of Ichthyology – 1, Journal of Fish Biology – 1, Neotropical Ichthyology – 2, Systematics and Biodiversity – 1, Taxonomy – 1, Zoological Journal of the Linnean Society – 1, Zoologischer Anzeiger – 1, Zoosystematics and Evolution – 1, Zootaxa – 37 as associate editor

2021: 26 + 19 as associate editor. Aquaculture – 1, Biological Invasions – 2, European Journal of Taxonomy – 2, Hydrobiologia – 1, Ichthyological Exploration of Freshwaters – 2, IUCN species account – 1, Journal of Fish Biology – 2, Journal of Marine Biology – 1, Journal of Science – 1, Molecular Phylogenetics and Evolution – 1, Neotropical Ichthyology – 4, NSF (DBI Panel) – 6, Zoologica Scripta – 1, Zootaxa – 19 as associate editor.

2020: 53 + 28 as associate editor. Anais da Academia Brasileira de Ciências – 1, Canadian Journal of Zoology – 1, CRDF (grant) – 1, Evolution – 1, Hydrobiologia – 2, Ichthyological Exploration of Freshwaters – 2, IUCN species account – 30, Journal of Biogeography – 2, Journal of Fish Biology – 3, Molecular Phylogenetics and Evolution – 1, NSF – 1, PLOS 1 – 3, Proceedings of the Academy of Natural Sciences of Philadelphia – 1, Revista de Biologia Neotropical – 1, Zoological Journal of the Linnean Society – 1, Zootaxa – 1 + 28 as associate editor.

2019: 17+ 28 as associate editor. Copeia – 3, Ecosphere – 1, Festschrift – 1, Hydrobiologia – 1, Journal of Cave and Karst Studies – 1, Journal of Fish Biology – 2, Molecular Phylogenetics and Evolution – 1, Nature Scientific Reports – 3, Neotropical Ichthyology – 2, PeerJ – 1, Plos1 – 1, Zoosystematics and Evolution – 1, Zootaxa – 28.

2018: 19 + 27 as associate editor. American Museum of Natural History Novitates – 1, Biodiversity Records – 1, Copeia – 1, Freshwater Biology – 1, Hydrobiologia – 2, Historical Biology – 1, Ichthyological Explorations of Freshwaters – 1, Journal of Fish Biology – 1, Journal of Systematic Paleontology – 1, Molecular Phylogenetics and Evolution – 1, PLOS1 – 3, PeerJ – 1, Zoological Journal of the Linnean Society – 2, Zookeys – 1, Zootaxa – 27.

2017: 21 + 44 as associate editor. Aquatic Invasions – 1, Canadian Journal of Zoology – 1, European Journal of Taxonomy – 1, Evolution – 1, Fisheries – 1, Fishes – 1, Hydrobiologia – 3, Journal of Anatomy – 1, Journal of Fish Biology – 2, Journal of Zoological Systematics and Evolutionary Research – 1, Molecular Phylogenetics and Evolution – 2, Neotropical Ichthyology – 1, Plos One – 1, Systematics and Biodiversity – 1, Proceedings of the Academy of Natural Sciences of Philadelphia – 1, Zookeys – 1, Zoological Journal of the Linnean Society – 1, Zootaxa – 44 (as editor)

2016: 12 + 27 as associate editor. Biological Journal of the Linnean Society – 2, Copeia – 1, European Journal of Taxonomy – 1, Journal of Fish Biology – 1, Molecular Phylogenetics and Evolution -1, Neotropical Ichthyology – 1, Peer J – 1, Zoological Journal of the Linnean Society – 1, Plos 1 – 1, Zookeys – 1, Zoologica Scripta – 1, Zootaxa (associate editor) - 27

2015: 31. Acta Ethologica – 1, Aquatic Conservation, Marine and Freshwater Ecosystems – 1, Bioinvasion Records – 1, Copeia – 3, Cybium – 1, Hydrobiologia – 1, Journal of Biogeography – 1, Journal of Fish Biology – 2, Molecular Phylogenetics and Evolution – 1, Neotropical Ichthyology –

2, NSF – 1, Subterranean Biology – 1, Systematic Biology – 2, Zoological Journal of the Linnean Society – 6, Zoologica Scripta – 2, Zookeys – 2, Zootaxa – 3.

2014: 13. Animal Biodiversity and Conservation – 1, Biodiversity Data Journal – 1, Copeia – 1, Evolutionary Biology – 1, Molecular Phylogenetics and Evolution – 1, Neotropical Ichthyology – 1, NSF – 1, Revista Caldasia – 1, Zookeys – 3, and Zootaxa – 2

2013: 29. African Journal of Biotechnology – 1, AUJUS – 1, Bioinvasions – 1, Biology Letters – 2, Checklist - 1, Copeia – 1, Journal of Tropical Ecology – 1, Neotropical Ichthyology – 1, Zoological Journal of the Linnean Society – 2, NSF (IOS Panel) – 12, Zookeys – 1, and Zootaxa – 5

2012: 16. Bioinvasions – 2, Bioscience – 1, Copeia – 1, Journal of Biogeography – 1, Journal of Fish Biology – 1, Journal of Natural History – 1, Neotropical Ichthyology – 2, Revista Biologiá Tropicál – 1, Zoological Journal of the Linnean Society – 1, and Zootaxa – 5.

2011: 6. Journal of Fish Biology – 2, Neotropical Ichthyology – 1, Zoological Journal of the Linnean Society (3).

2010: 4. Copeia -2, Zoological Studies – 1, Neotropical Ichthyology – 1.

2009: 8. Aquatic Invasions -1, Biosciences -1, Copeia -2, Neotropical Ichthyology -2, NSF -1, Zootaxa -1.

2008: 12. Acta Ichthyologica et Piscatoria – 1, Biochemical Genetics -1, Biological Invasions – 1, Book Chapter – 1, Copeia – 1, Marine and Freshwater Research – 1, National Geographic Grant – 2, Neotropical Ichthyology – 2, NSF – 1, Proceedings of the Academy of Natural Sciences of Philadelphia – 1.

2007: 14. Bioscience – 1, Copeia - 2, Environmental Biology of Fishes – 2, Journal of Fish Biology -2, Neotropical Ichthyology – 2, NSF – 1, Physiological and Biochemical Zoology – 1, Southeastern Naturalist – 1, Zoological Journal of the Linnean Society – 1, Zootaxa – 1.

2006: 16 + 16 as associate editor. Copeia –18 (all but 2 as associate editor), Neotropical Ichthyology – 2, Environmental Biology of Fishes – 1, Journal of Fish Biology – 1, General Biology Text – 4 chapters, National Science Foundation – 3, Zootaxa – 3.

2005: 34 plus 27 as associate editor. Copeia –28 (all but 1 as associate editor), Neotropical Ichthyology – 5, General Biology Text – 3 chapters, National Science Foundation – 22 (served on the Biological Research Collections panel in September), Zootaxa – 3.

2004: 37 plus 26 as associate editor. Copeia –27 (all but 1 as associate editor), Neotropical Ichthyology – 3, Genetica – 1, General Biology Text – 13 chapters, Journal of Fish Biology – 1, National Science Foundation – 17 (served on the Biological Research Collections panel in September), Zootaxa – 1.

2003: 7 + 28 as associate editor. Biological Society of Washington-1, Copeia 29 (28 as associate editor), Neotropical Ichthyology – 2, Zootaxa-1, National Science Foundation-1, Comparative Anatomy lab manual.

2002: 19 + 8 as associate editor. Copeia-13 (8 as associate editor), Ichthyological Exploration of Freshwaters-1, Journal of Fish Biology-1, National Science Foundation-2, 10 chapters of a general biology text.

2001: 22. Copeia-3, Ichthyological Exploration of Freshwaters-3, Proceedings of the Academy of Natural Sciences of Philadelphia-1, National Science Foundation-15

2000: 2. Journal of Fish Biology-1, National Science Foundation-1

1999: 3. Ichthyological Exploration of Freshwaters-1, Copeia-2

1998: 3. Book: *Phylogeny and Classification of Neotropical Fishes*-1, Copeia-1, Ichthyological Exploration of Freshwaters-1.

NSF Panels

Division of Environmental Biology, six panels. Division of Integrative Organismal Systems – one panel and one preproposal panel.