### STEPHEN ASHTON BULLARD, PhD, Associate Professor of Parasitology

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#### Present academic positions

ASSOCIATE PROFESSOR, School of Fisheries, Aquaculture, & Aquatic Sciences, since 2014. DEPUTY DIRECTOR, Southeast Cooperative Fish Parasite & Disease Laboratory, since 2015. ASSOCIATE EDITOR, Journal of Parasitology, American Society of Parasitologists, since 2009. ADJUNCT FACULTY: Dauphin Island Sea Lab (Marine Sciences, Univ. South Alabama), since 2014; Biological Sciences (College of Science & Mathematics, AU), since 2010; Dept. Biology (Middle Tennessee State Univ.), since 2015; Gulf Coast Research Laboratory (Coastal Sciences, Univ. Southern Mississippi), since 2008.



#### Former academic positions

2008-2014. Assistant Professor, School of Fisheries, Aquaculture & Aquatic Sciences, Auburn University, Auburn, AL.

2007-2008. Postdoc (Robin M. Overstreet). University of Southern Mississippi. Ocean Springs, MS.

1997-2007. Research Assistant (Robin M. Overstreet). Gulf Coast Research Laboratory. Ocean Springs, MS.

1997-2004. Research Associate (George W. Benz), SE Aquatic Research Institute (TN Aquarium). Cohutta, GA.

1995. Aquarist Assistant & Volunteer Diver. Riverbanks Aquarium. Columbia, SC.

1995-1996. NSF-REU (George W. Benz). Tennessee Aquarium Research Institute. Chattanooga, TN.

1994. REU (Joseph M. Quattro). Dept. Marine Sciences, Univ. South Carolina. Columbia, SC.

1994-1995. Research Intern (George W. Benz). Tennessee Aquarium. Chattanooga, TN.

#### Education

PhD, Coastal Sciences, University of Southern Mississippi (Gulf Coast Research Laboratory, Ocean Springs, Mississippi), May 2007. "Ecology & Evolution of Fish Blood Flukes (Aporocotylidae)." Unpublished dissertation, 684 pages in 2 volumes. MSc, Coastal Sciences, University of Southern Mississippi (Gulf Coast Research Laboratory, Ocean Springs, Mississippi), May 2002. "Blood flukes from commercially & recreationally important fishes in the Gulf of Mexico." Unpublished thesis, 128 pp. BSc, (Cum Laude) Marine Sciences (Marine Biology), University of South Carolina, Columbia, May 1997.

Aquatic Parasitology Laboratory: APL comprises a main office (UH 324), storage room, and four analytical laboratories (UH 325, 326, 329, 331: ~2,100 ft²) that house graduate student desks and workspaces, numerous dissecting and compound microscopes variously equipped with differential interference contrast optics, drawing tubes, and digital cameras, centrifuges and shaker baths, a fully-equipped histology suite with tissue processor, embedding center, oven, bath, microtome, and automated tissue stainer, wet laboratory space, stainless-steel sinks and counters aside dedicated necropsy areas, a sizeable parasitological reference library, a large Gulf of Mexico fish reference collection, a large volume of preserved biological samples in various forms (vials, slides, blocks, liquids, frozen, etc.) along with field and fishing gear (seines, kicknets, castnets, Penn Intls. 30-130 class, spearguns, crossbow, Kristal electric reels) plus two research vessels (26' Mako 261CC 2x200hp; 18' Whaler Outrage 186CC w/150hp) and trailers.

Southeastern Cooperative Fish Parasite & Disease Laboratory: Hosted by the School of Fisheries, Aquaculture, and Aquatic Sciences at Auburn University and sponsored by the Alabama Department of Conservation & Natural Resources continuously since 1964, the SCFPDL (CR Arias, Director; SA Bullard, Deputy Director) is a multidisciplinary disease diagnostics laboratory comprising the Aquatic Parasitology Laboratory, Aquatic Microbiology Laboratory, and related infrastructure and personnel. Technicians and graduate students (MSc & PhD) plus undergraduate research interns cross-train while handling case submissions with oversight from tenured/tenure-track faculty members with expertise in the relevant specialization. Cooperative member states pay an annual fee plus additional costs for specific tests, examinations, or surveillance activities carried out by SCFPDL personnel. The SCFPDL is a fully-equipped, full-spectrum laboratory capable of diagnosing a wide spectrum of aquatic animal diseases (virology, bacteriology, parasitology, pathology, infectious disease, non-infectious disease). SCFPDL faculty advise wildlife resource commissions pertaining to all aspects of aquatic animal health and fish kills.

### Honors, awards, elected positions, opportunities (to Bullard's students)

2016. Orélis-Ribeiro, R (PhD) (co-authors Halanych, Bullard), Best student paper (Byrd-Dunn Award): *Broad-scale phylogeny of craniate blood flukes (Digenea: Schistosomatoidea), with emphasis on "fish blood flukes" (Aporocotylidae)*, Southeastern Society of Parasitologists, Fort Mill, South Carolina, 6-8 Apr 2016.

2016. AU Office of Global Programs, Study Abroad Fellowships to CF Ruiz, JR Roberts, and M Warren. 19 Feb 2016.

2016. Womble, MR (MSc), Knauss Marine Policy Fellow (Science Fellow; NOAA Office of the Chief Scientist), National Sea Grant. Feb 2016-Feb 2017.

2015. AU Office of Global Programs, York fellowships to Roberts, Orélis-Ribeiro & Ruiz. 5 Dec 2015.

2015. Roberts, J (MSc), President, American Fisheries Society (AU Fisheries Chapter). 5 May 2015.

2015. AU Office of Global Programs, York fellowships Daniels, Roberts, Orélis-Ribeiro & Womble. 1 Oct 2015.

2015. Womble, MR (MSc), Outstanding Senator, AU Graduate Student Council 2014-15. 23 April 2015.

2015. Orélis-Ribeiro, R (PhD), Outstanding International Grad Student, AU. 22 April 2015.

2015. McElwain, A (PhD), J Frances Allen Institute of Malacology Outstanding Publication Award: *Histological Atlas of Freshwater Mussels*, Institute of Malacology, the journal Malacologia. 23 Oct 2015.

2014. Orélis-Ribeiro, R (PhD), Swingle Award (PhD student). 5 Dec 2014.

- 2014. Orélis-Ribeiro, R (PhD), invited seminar, Middle Tennessee State University. 6 Nov 2014.
- 2014. Womble, MR (MSc), field scientist, NOAA/NMFS Fall Pelagics Survey, Gulf of Mexico 1-21 Nov.
- 2014. Shugg, R (REU), field scientist, NOAA/NMFS Fall Pelagics Survey, Gulf of Mexico 8-31 Oct.
- 2014. Womble, MR (MSc), ASP Marc Dresden Student Travel Award, New Orleans, LA, \$150.
- 2014. Orélis-Ribeiro, R (PhD), ASP Marc Dresden Student Travel Award, New Orleans, LA, \$150.
- 2013. Womble, MR (MSc), David Partridge Memorial Award, School of Fisheries.
- 2013. Patella, R (REU), Brazil CNPg-Science Without Borders Fellow.
- 2013. Womble, MR (MSc). Grad Student Council Senator, College of Agriculture, AU, Aug 2013-Jun 2015.
- 2013. McElwain, A (PhD). Oral Presentation Award. US Aquaculture Soc, Nashville, TN, 18-22 Feb.
- 2011. Truong, TN (MSc). Gamma Sigma Delta (Honor Soc., Auburn Univ.) 21 Apr 2011.
- 2011. Broder, E (FAA BSc). AU International. \$1,750. 07/01/11-07/31/11. (Bullard hosted).
- 2010. Truong, TN (MSc). Student Presentation Award. Int. Symp. Aquatic Animal Health, Tampa, 5-9 Sep.
- 2010. McElwain, A (PhD). Student Presentation Award, WAS, San Diego, 1-5 Mar.
- 2010. Ferrell, M (REU). Nat. Conf. on Undergraduate Research, Univ. Montana, Missoula, 15-17 Apr.
- 2009-10. Ferrell, M (REU). Auburn University Undergraduate Research Fellowship Program. \$6,100.
- 2009. McVay, M (REU). Auburn University Lloyd and Ruth Maxwell Scholarship.
- 2009. Ferrell, M (REU). Swingle Award, Department of Fisheries and Allied Aquacultures. \$250.

# Honors & awards (to Bullard)

- 2016. Past-president, Southeastern Society of Parasitologists.
- 2015. President, Southeastern Society of Parasitologists.
- 2015. York Fellow, College of Agriculture, Office of Global Programs.
- 2015. Mentor Award Nominee (nominated by SAB's graduate students), AU Graduate School, April 2015.
- 2014. President elect, Southeastern Society of Parasitologists.
- 2013. Council Member-at-Large, American Society of Parasitologists.
- 2013. Vice President, Southeastern Society of Parasitologists.
- 2012. Director's Research Award, Jr. Researcher. AU College of Agriculture & Experiment Station.
- 2011. Dean's Grantsmanship Award. AU College of Agriculture, Agriculture Experiment Station.
- 2009-present. Associate Editor, Journal of Parasitology.
- 2008. Ashton Cuckler New Investigator Award, American Society of Parasitologists.
- 2005. Outstanding PhD Student, College of Science & Technology, University of Southern Mississippi.
- 2004. Jessup Fellow, Academy of Natural Sciences Philadelphia.
- 2002. People's Choice Best Student Presentation, Marine-Estuarine Graduate Symposium.
- 2001. Figure selected for cover of Journal of Parasitology 87(5).
- 2000. Sea Grant Fellow, Mississippi-Alabama Sea Grant Consortium.
- 1997. Cum Laude (BSc, Marine Biology), University of South Carolina.
- 1996-97. Howard Hughes Scholar, University of South Carolina.
- 1993-97. Presidential Scholar, University of South Carolina.
- 1993-95, 97. Dean's List, University of South Carolina.

### Taxonomic patronyms

- 2015. Acanthocercodes bullardi Kritsky & Diggles, 2015 (Monogenoidea: Diplectanidae).
- 2014. Cardicola bullardi Nolan and Cribb 2014 (Digenea: Aporocotylidae).
- 2009. Triloculatum bullardi Caira & Jensen, 2009 (Cestoda: Onchobothriidae).
- 2001. Acanthobothrium bullardi Goshroy & Caira, 2001 (Cestoda: Onchobothriidae).

# **TEACHING**

Courses taught (all 100% Bullard unless otherwise indicated)

Compoter	Title (or hye)	hrs	hrs/wk		
Semester	Title (cr. hrs.)	Lect.	Lab	Enrolled	
Sum '16	FISH 4960 Marine Vertebrate Zoology (4)	1	3	TBD	
Sum '16	FISH 4960/8960 Marine Parasitology (2)	1	1	TBD	
Spr '16	FISH 7420 Fish Diseases (4)	3	1	13 G	
Sum '15	FISH4960/8960 Marine Parasitology (2)	0	2	1 G, 11 U	
Spr '15	FISH 6440/5440 Fish Anatomy & Physiology (4)	3	1	3 U, 7 G	
Sum '14	FISH 5725/6725 Marine Ichthyology (6)	3	3	13 U, 2 G	
Spr '14	FISH 6440/5440 Fish Anatomy & Physiology (4)	3	1	1U, 6G	
Spr '14	FISH 8960 Data Analysis Fish Pathogens (4)	0	4	2G	
Fall '13	FISH 4960 Special Problems, Parasitology (4)	0	4	1U	
Sum '13	FISH 5725/6725 Marine Ichthyology (6)	3	20	11U, 2G	
Spr '13	FISH 6970 Aquatic Symbioses (2)	2	0	7G	
Spr '13	FISH 7960 Pathology of Aquatic Organisms (2)	0	2	2G	
Sum '12	FISH 5725/6725 Marine Ichthyology (6)	3	20	12U, 3G	
Spr '12	FISH 6440/5440 Fish Anatomy & Physiology (4)	3	4	7G	
Spr '12	FISH 4960 Parasitology (2)	0	6	1U	
Fall '11	FISH 8930 Departmental Graduate Seminar (1)	1	0	3G	

Sum '11	FISH 5725/6725 Marine Ichthyology (6)	3	20	9U, 2G
Spr '11	FISH 4960 Parasitology (2)	0	6	2U
Spr '11	FISH 6440/5440 Fish Anatomy & Physiology (4)	3	4	3U, 3G
Spr '11	FISH 7960 Pathology of Aquatic Organisms (2)	0	6	1G
Fall '10	FISH 8930 Departmental Graduate Seminar (1)	1	0	12G
Fall '10	FISH 4920 Marine Science Internship (1)	3	0	1U
Fall '10	FISH 4960 Parasitology (2)	6	0	2U
Fall '10	FISH 7960 Pathology of Aquatic Organisms (2)	0	6	2G
Fall '10	FISH 7960 Trends Marine Aquaculture (2)	2	0	8G
Sum '10	FISH 5725/6725 Marine Ichthyology (6)	3	20	14U, 1G
Spr '10	FISH 6440/5440 Fish Anatomy & Physiology (4)	3	4	2U, 7G
Fall '09	FISH 7970 Grad Research in Parasitology (2)	0	6	1G
Sum '09	FISH 5725/6725 Marine Ichthyology (6)	1	5	12U
Spr '09	FISH 7440 Fish Anatomy & Physiology (4)	3	4	6G
Spr '09	FISH 4970 Fish Anatomy & Physiology (4)	3	4	2U
Sum '08	COA 421/521 Marine Ichthyology (6)	3	3	14U
Sum '05	COA 490 Marine Parasitology Methods (6) (TA)	0	6	3
Fall '03	COA 651 Marine Symbiosis (3) (TA)	3	0	6G

Students in progress (C= chair; CC= Co-Chair; M= member; RS= REU sponsor)

Stu	dent			Committee role	Start date
1.	Carlos Ruiz (Bullard)	SFAAS	PhD	С	Jan 2016
2.	Brett Warren (Bullard)	SFAAS	REU	RS	Jan 2016
3.	Lindsay Biermann (Szedlmayer)	SFAAS	MSc	M	Aug 2015
4.	Jackson Roberts (Bullard)	SFAAS	MSc	С	Aug 2014
5.	Eric Bauer (Santos)	COSAM	PhD	M	Jan 2014
6.	Candis Ray (Arias)	SFAAS	MSc	M	Jan 2014
7.	Carl Klimah (DeVries, Wright)	SFAAS	MSc	M	Jan 2014
8.	Raphael Orélis-Ribeiro (Bullard)	SFAAS	PhD	С	Jan 2012

tudent	Degree yr (unit)	Role	Post-graduate position
. Matthew Womble (Bullard)	MSc 2015 (SFAAS)	С	NOAA Office of Chief Scientist, DC
2. Jay Williams (Szedlmayer)	PhD 2015 (SFAAS)	M	NMFS
B. Haitham Mohammed (Arias)	PhD 2015 (SFAAS)	M	Cairo University
Margaret Maynard	MAq 2015 (SFAAS)	M	Tech, Auburn University
5. Riley Shugg (Bullard)	BSc 2015 (ANISCI)	RS	Univ. Florida, Vet School
6. Brittany Daniels (Bullard)	BSc 2016 (SFAAS)	RS	BSc, SFAAS
'. Margaret Maynard (Bullard)	BSc 2014 (BIOL)	RS	MAq, SFAAS
3. Andrea Larsen (Arias)	PhD 2014 (SFAAS)	M	Post-doc, Mote Marine Laboratory
Reid Nelson (DeVries)	MSc 2014 (SFAAS)	M	PhD, Dauphin Island Sea Lab
Michael Hart (Stoeckel)	MSc 2014 (SFAAS)	M	NRDA contract
Jennifer Herbig (Szedlmayer)	MSc 2014 (SFAAS)	M	MS Department of Marine Resources
2. Danielle Horn (Szedlmayer)	MSc 2014 (SFAAS)	M	job search, Washington state
3. Raquel Patella	BSc (CNPq)	RS	Private Sector, Brazil
4. Catlin Ames (Stoeckel)	MSc 2013 (SFAAS)	M	Missouri Dept. of Conservation
5. Carlos Ruiz (Bullard)	MSc 2013(SFAAS)	С	Texas A&M Galveston
6. Zhen Tao (Arias)	PhD 2013 (FAA)	M	Ningbo University, Ningbo, China
7. Madeline Wedge (Anderson)	MSc 2013 (SFW)	M	indeterminate, job search
8. Andrew McElwain (Bullard)	PhD 2012 (FAA)	CC	State University of New York
9. Candis Ray (Bullard)	BSc (FAA)	RS	MSc, SFAAS
20. Wenlong Cai (Arias)	MSc 2012 (FAA)	M	PhD, SFAAS
21. Andrew Austin (Bullard)	BSc 2012 (BIOL)	RS	Private Sector
22. Maria Piraino (Szedlmayer)	MSc 2011 (FAA)	M	AIS Science, New Bedford, MA
23. Elliot Broder (Bullard)	BSc 2011 (FAA)	RS	Private Sector
24. Triet Truong (Bullard)	MSc 2011 (FAA)	С	Vice Dean, Dong Thap College
25. Peter Mudrak (Szedlmayer)	MSc 2011 (FAA)	M	Research Associate, FAA, AU
26. Elizabeth Cameron (Bullard)	BSc 2011 (BIOL)	RS	UAB Ophthalmology School
27. Tara Syc (Szedlmayer)	MSc 2011 (FAA)	M	FL Marine Res. Inst., St. Petersburg
28. Stephanie Cox (Bullard)	BSc 2011 (BIOL)	RS	Auburn University Veterinary School
29. Matthew McVay (Bullard)	BSc 2010 (FAA)	RS	MSc, Biological Sciences, AU
0. Michael Hart (Bullard)	BSc 2010 (FAA)	RS	MSc, SFAAS
31. Matthew Ferrell (Bullard)	BSc 2010 (FAA)	RS	Private Sector
32. Mary-Kath. Boiling (Bullard)	BSc 2008 (FAA)	RS	indeterminate
33. Hannah Fouasnon (Bullard)	HS 2006 (MSMS)	RS	BSc, Reed College
34. Kacee Mott (Bullard)	HS 2005 (OSHS)	RS	BSc Univ Southern Mississippi

35. Emily Williams (Bullard) HS 2005 (OSHS) RS BS 36. Ladonna Arrington (Bullard) BSc 2005 (Alcorn) RS inc

BSc Mississippi State Univ indeterminate

**Bullard's graduate students** 

- **7. Carlos Fernando Ruiz.** *incoming Jan 2016.* Doctorate of Philosophy. School of Fisheries, Aquaculture, and Aquatic Sciences. Committee and project to be determined.
- **6. Jackson Ryan Roberts.** Aug 2014-*present*. Master of Science. School of Fisheries, Aquaculture, & Aquatic Sciences. "Taxonomy and systematics of turtle blood flukes (Digenea: "Spirorchiidae") in Alabama." (SA Bullard {chair}, C Arias, and P Johnson).
- **5. Raphael Orélis-Ribeiro**. Jan 2012-*present*. Doctorate of Philosophy. School of Fisheries, Aquaculture, & Aquatic Sciences. *"Taxonomy & phylogenetics of fish blood flukes using morphology, life history, & molecular markers."* (SA Bullard [chair], C Arias, J Armbruster, K Halanych).
- **4. Matthew Ryan Womble**. Jan 2013-2015. Master of Science. School of Fisheries, Aquaculture, & Aquatic Sciences. "Revisionary systematics, alpha taxonomy, and biogeography of Proterometra spp. (Digenea: Azygiidae) in Alabama rivers and adjacent waters." Pending (SA Bullard [chair], C Arias, M Catalano, D DeVries).
- 3. Carlos Fernando Ruiz. 2010-2013. Master of Science. School of Fisheries, Aquaculture, & Aquatic Sciences. "Parasite component community of Gulf killifish, Fundulus grandis, in an oiled Louisiana saltmarsh, Barataria Bay." 21 Jun 2013 (A Bullard [chair], CR Arias, and C Anderson).
- 2. Andrew McElwain. 2008-2012. Doctorate of Philosophy. Department of Fisheries & Allied Aquacultures. "Histological atlas of freshwater mussels (Bivalvia: Unionidae) with comparison of Alabama rainbow (Villosa nebulosa), Gulf pigtoe (Fusconaia cerina), Alabama creekmussel (Strophitus connasaugaensis), from the Mobile River Basin, Alabama. 8 Dec 2012 (SA Bullard [chair], C Arias, J Stoeckel, P Johnson, M Miller [external reader]).
- 1. Triet Nhat Truong. 2009-2011. Master of Science. Department of Fisheries & Allied Aquacultures. "Biodiversity of metazoan parasites infecting channel catfish (Ictalurus punctatus), blue catfish (Ictalurus furcatus), and C×B hybrid catfish (female Ictalurus punctatus × male Ictalurus furcatus) in earthen pond aquaculture." 6 Aug 2011 (SA Bullard [chair], CR Arias, and RJ Phelps).

### Courses & curricula developed

- **Fish Diseases FISH 7420** (4 cr hrs): Spring 2016-present. This graduate level course was overhauled and modernized to cover all major taxa of infectious diseases and parasites affecting aquatic organisms. This course has relevance to students in several colleges and departments on campus: including veterinary, forestry, biology, and fisheries students.
- Marine Parasitology FISH 4960/7960 (2 cr hrs) (taught on the campus of the Dauphin Island Sea Lab, Dauphin Island, AL). Summer 2015-present. This intensive field course introduces students to the ecological and taxonomic diversity of parasites that infect marine and coastal invertebrates and fish. Students emerge from the course with a basic appreciate of the field collection techniques and laboratory practices required for processing and identifying parasites.
- Aquatic Symbioses FISH 6970 (2 cr hrs): Spring 2013-present. This graduate level course is part of SFAAS's aquatic animal health, parasite, and disease curriculum. It provides a theoretical and ecological perspective that is a useful add-on to other SFAAS courses that treat systematic and applied aspects of fish diseases in freshwater and marine aquaculture settings. At present, the course is offered as a Special Topics, but enrollment and student feedback was good, which encourages the further development of the course as a member of the SFAAS's fish disease curriculum.
- **Fish Anatomy & Physiology FISH 6440/5440** (alternates w/ FISH 6970) (4 cr hrs): Spring 2009-present. This split level course was originally a graduate level course that was offered alternating yrs. I added an undergraduate section as FISH 4970 to increase enrollment in 2009. In 2010, this course was offered as FISH 6440/5440. The course is now grounded in the modern, widely-accepted principals of anatomy and physiology and utilizes a comparative biology perspective to explain and contrast the interrelatedness, origins, and adaptive significance of anatomical and physiological systems in fishes.
- Marine Ichthyology FISH 5725/6725 (each July) (6 cr hrs): Summer 2008-present. This AU course offers a classical, intensive field experience in the Gulf of Mexico and is taught on the campus of the Dauphin Island Sea Lab (from 2008-2014 taught at the Gulf Coast Research Laboratory, Ocean Springs, Mississippi). Class begins at 7:45 am and officially ends at 5:00 pm Monday through Friday, although students typically remain working in the field or lab until after 10:00 pm. The course emphasizes field collection and taxonomic identification of coastal and estuarine fishes. Students are challenged to collect fishes with various gear types from a multitude of marine habitats during the 4-week course and assemble an appropriately accessioned fish collection.
- Special Problems in Pathology of Aquatic Organisms FISH 7960 (on demand) (variable credit hours; usually 2 cr hrs). Fall 2010-present. This laboratory-based, experiential learning course emphasizes a project that complements the student's graduate research topic. The student is expected to publish a peer-reviewed scientific paper or contribute a paper to a scientific meeting. Graduate students taking this course have co-authored 5 peer-reviewed publications in international Pathology journals (Olivares-Fuster et al., 2011; Bullard et al., 2011; McElwain et al., 2013; Ruiz et al., 2013; Orélis-Ribeiro et al., 2013).
- Special Topics in Trends in Marine Aquaculture FISH 7960 (component of USDA International Science Education project of Arias [PI] and Bullard [Co-PI], see "Grants received related to teaching) (2 cr hrs). Fall 2010. This course emphasizes a global view of aquaculture but focuses on marine systems. Students perused primary literature on intensive culture systems and lead peer discussions. Students from this course then were selected to travel to Spain in Spring and Summer 2011 to directly experience the modern fish and shellfish culture systems they discussed during the course. USDA ISE engaged students with overseas collaborators and colleagues.
- Special Problems in Parasitology FISH 4960 (on demand) (2 cr hrs). Fall 2010-present. This laboratory-based and experiential learning course offers research experiences to undergraduate students for credit. It emphasizes a project that complements an ongoing project in the laboratory, provides opportunities for graduate students to mentor undergraduates, and results in students publishing a peer-reviewed paper or presenting results at a scientific meeting. AU undergraduates participating in this course have published 3 papers in international Parasitology journals (McVay et al. 2011; Ruiz et al. 2012; McElwain et al. 2013).

#### Grants received that relate to teaching

- 2011. National Science Foundation: "Research Experiences for Undergraduates (REU Supplement)- RAPID: Ectoparasites and endoparasites of fishes as bioindicators of acute and chronic environmental perturbation after the 2010 Deepwater Horizon Oil Spill in the Gulf of Mexico (DEB-1112729)." PI: SA Bullard. Co-PI: GW Benz. \$7,500. 02/01/11-10/31/13. (also reported under 'Extramural funds')
- 2010. United States Department of Agriculture: "AM-SPAN: Sharpening AU's global aquaculture competitiveness via American-Spanish Research Education and Extension Partnerships in Marine Aquaculture." PI: CR Arias. Co-PIs: SA Bullard, L Swann. \$149,987. 09/01/10-08/31/13. (also reported under 'Extramural funds')

#### Publications that relate to teaching

- 4. (also with 'Other publications') Bullard, SA, D DeVries, A Wilson, G Lockaby, P Clement, H Kinnucan, and C Newland. 2015. Peer-review in the Cyber Age. In "Auburn Speaks: On Cyber & The Digital Domain" (Leslie Parson & Robert Norton, eds), Auburn University Office of the Vice President for Research, Auburn University Press, Auburn, AL pp 202-211(invited contribution, editor reviewed).
- 3. (also with 'Other publications') Benz, GW & SA Bullard. 2006. Parasites of fishes: list and dichotomous key to identification of major metazoan groups. 9 pp. Conference Proceedings 2005. Anonymous (ed.). AAZA, Silver Spring, MD.
- 2. (also with 'Other publications') Benz, GW, **SA Bullard**, & ADM Dove. 2002. Metazoan parasites of fishes: Synoptic information for aquarists. Proceedings of the Meeting of the American Zoologists & Aquarists, Chattanooga, TN.
- 1. (also with 'Other publications') Benz, GW, **SA Bullard**, & ADM Dove. 2001. Metazoan parasites of fishes: synoptic information and portal to the literature for aquarists. *In:* Regional Conference Proceedings 2001. Anonymous (ed.). American Zoo & Aquarium Association, Silver Spring, MD.

# International teaching

Semester	Title	Lecture hrs/wk	Lab hrs/wk	Enrolled
Spring 2013	AQUA 303: Advanced Aquatic Animal Physiology (Advanced	20	0	30U
	Aquaculture Program, Can Tho University, Can Tho, Vietnam)			
Spring 2007	Fish-borne Zoonotic Parasites (Research Institute Aquaculture #3,	10	20	19U
	Nha Trang, Vietnam)			

#### Web postings

http://www.aquaticparasitologylab.org/Bullard Lab/Home.html

### Guest lectures / Class field excursions

- 2016. Gulf Islands National Seashore, National Park Service, "BioBlitz," coordinated 3 sessions with (20+ participants each) to collect and field-identify estuarine and marine fishes of the Gulf of Mexico., Naval Live Oaks, FL. Cassidy Bromley & Del Mucci, coordinators. 21 May 2016.
- 2015. Assisted with field excursion and laboratory demonstrations at Dauphin Island Sea Lab for Field Ecology course and Parasitology course (Mississippi University for Women, Columbus, MS), Paul Mack, Nicole Welch, 23 Sep 2015.
- 2014. "Predatory publishing & peer review." AU School of Forestry, Graeme Lockaby, 11 Nov 2014.
- 2013. "Parasitology and conservation biology." SFAAS-Conservation of Aquatic Organisms, 12 Apr.
- 2011. "Multidisciplinary Marine Fisheries Biology." AU Marine Biology Club, Dept of Biological Sciences, 15 Nov.
- 2010. "Teaching, training, learning in Marine Sciences." Auburn University Marine Science Club. 16 Nov.
- 2008. "Procedures for preparing and submitting halftone images and line art for publication using Photoshop, Adobe Illustrator, and Adobe Acrobat." Describing Species 1 (COA 793), U. Southern Mississippi, 27 Feb.
- 2006. "Why does Marine Parasitology matter?" Marine Biology (MTSU BIO 4580/5580), Middle Tennessee State University, Murfreesboro, TN. 16 Mar.
- 2005. "Ecology of fish parasites in the Gulf of Mexico." Parasitology, Dept. of Ecology and Evolutionary Biology, University of Kansas, Lawrence, KS. 21 Nov.
- 2005. "Parasites of elasmobranchs." Elasmobranch Biology, USM-GCRL, Ocean Springs, MS. 22 Jul.
- 2004. "Chondrichthyan parasites." Elasmobranch Biology, USM-GCRL, Ocean Springs, MS. 19 Jul.
- 2003. "Parasites of elasmobranchs." Elasmobranch Physiology, USM-GCRL, Ocean Springs, MS. 7 Jul.
- 2002. "Monogeneans: Taxonomy, biology, and potential for causing disease among cultured and aquarium-held fishes." Invertebrate Zoology class, Univ. Texas at Corpus Christie, Corpus Christie, TX. 6 Apr.

### **Short courses**

- 2015. Alabama Department of Conservation and Natural Resources, Inland Fisheries, Fish Kill Workshop. Guest Co-instructors SA Bullard and CR Arias. This 5 day course trained state and federal fisheries agency personnel to assess and quantify fish kills. SAB lectured on fish diseases, parasitology, pathology, and necropsy techniques. Lakepoint State Park, Alabama. 16-20 November 2015.
- 2013. Advanced Fish Physiology. Instructor SA Bullard. This two-week course exposed advanced aquaculture students (undergraduates) to upper level comparative fish anatomy and physiology. Advanced Aquaculture Program, Can Tho University, Can Tho, Vietnam. 17 March-2 April 2013. (also listed as 'International Teaching')

- 2010. Fish Disease Workshop & Training Course. Co-instructors GW Benz & SA Bullard. Two-day workshop provided husbandry staff and veterinary personnel foundational information regarding identification, biology, treatment, and pathology associated with metazoan parasites that affect fishes exhibited in public aquaria. Aquarium of the Pacific, Long Beach, CA. 15-18 February 2010.
- 2007. Fish-borne Zoonotic Parasites in Vietnam: Training Course on Identification of Trematode Metacercaria in Marine and Freshwater Fishes of Vietnam. Co-instructors RM Overstreet & SA Bullard. Through lectures and laboratory exercises focused on taxa of zoonotic importance, participants were taught techniques for fish necropsy, metacercarial cyst extraction and larval excystment, experimental transmission of parasites using experimental hosts. Co-instructor. Research Institute Aquaculture #3. FIBZOPA. Nha Trang, Vietnam. 22-26 Jan 2007. (also listed as 'International Teaching')
- 2005. Aquarists & Zookeepers Association Regional Fish Disease Workshop. Co-instructors GW Benz & SA Bullard. Two-day course provided fish health workers with information on fish diseases, systematic life history and ecological information on major fish parasite groups, necropsy techniques, parasite fixation and identification, and quarantine and diseases in closed recirculating systems. Knoxville Zoo, Pellissippi State Community College, Ripley's Aquarium. Knoxville, TN. 11-12 Apr 2005.
- 2004. Fish Disease Workshop & Training Course. Co-instructors GW Benz & SA Bullard. Two-day course provided fish health professionals with an overview of fish anatomy and physiology, identification and affects of fish pathogens, laboratory fixation, preparation techniques, quarantine, disease control, fish necropsy. Aquarium of the Pacific, Long Beach, CA. 4-5 Oct 2004.
- 2002. Aquarists & Zookeepers Association Fish Disease Training Course. Co-instructors GW Benz & SA Bullard. This full-day training course provided an in-depth look at the major groups of parasites that infect freshwater, estuarine, and marine fishes in nature and captivity. Meeting of the Aquarists and Zookeepers Association, Chattanooga, TN. 5 Apr 2002.

#### RESEARCH

First and last authors share majority responsibility for manuscript data acquisition, management, and preparation; if a student is first author, the head of laboratory hosting the research is, herein, typically the last and corresponding author. (\*graduate student; \*undergraduate student; †corresponding author)

# Article-length publications

#### 2016

- 79. Roberts\*, JR, TR Platt, R. Orélis-Ribeiro\*, & **SA Bullard†**. *Accepted 31 March 2016*. New genus of blood fluke (Digenea: Schistosomatoidea) from Malaysian freshwater turtles (Geomydidae) and its phylogenetic placement within the Schistosomatoidea. Journal of Parasitology.
- 78. Womble\*†, MR & **SA Bullard**. *Accepted 10 March 2016*. Taxonomic redescription, morphological and molecular diagnosis, and life cycle of *Proterometra catenaria* Smith, 1934 (Digenea: Azygiidae) from the Choctawhatchee River, Florida, USA. Comparative Parasitology.
- 77. Orélis-Ribeiro\*† R & **SA Bullard**. *Accepted 4 January 2016*. Two new genera of fish blood flukes (Digenea: Aporocotylidae) from catfishes in the Peruvian Amazon. Journal of Parasitology.
- 76. McElwain, A., R. Fleming, M. Jaloie, C Maney, B Springall, and SA Bullard. 2016. Pathological changes associated with eggs and larvae of *Unionicola* sp. (Acari, Unionicolidae) infecting *Strophitus connasaugaensis* (Bivalvia, Unionidae) from Alabama Creeks. Journal of Parasitology 102(1):75-86.

#### 2015 (9)

- 75. Womble\*†, MR, SJ Cox-Gardiner\*\*, TR Cribb, & **SA Bullard**†. 2015. First record of *Transversotrema* (Digenea) from the Americas, with comments on the taxonomy of *Transversotrema patialense* (Soparkar, 1924) Crusz and Sathananthan, 1960 and an updated list of its hosts and geographic distribution. Journal of Parasitology 101(6):717-725.
- 74. Womble\*, MR & **SA Bullard†.** 2015. Ocular deformity in midshipmen *Porichthys plectrodon* from the north-central Gulf of Mexico off Louisiana. Journal of Fish Biology 2015:1-6.
- 73. Womble\*† M & **SA Bullard.** 2015. A new species of *Proterometra* (Digenea: Azygiidae) and its life cycle in the Chickasawhay River, Mississippi, with supplemental observations of *Proterometra autraini*. Parasitology International 65:31-43.
- 72. **Bullard† SA,** MR Womble\*, MK Maynard\*\*, R Orélis-Ribeiro\*, & CR Arias. 2015. Skin lesions on yellow tuna, *Thunnus albacares* from the Gulf of Mexico's Outer Continental Shelf: morphological, molecular, and histological diagnosis. Parasitology International 64:609-621.
- 71. Orélis-Ribeiro\*† R & **SA Bullard.** 2015. Blood flukes (Digenea: Aporocotylidae) infecting body cavity of South American catfishes (Siluriformes: Pimelodidae): two new species from rivers in Bolivia, Guyana, and Peru with a re-assessment of *Plehniella* Szidat, 1951. Folia Parasitologica 62:1-17.
- 70. Larsen\*, A, Z Tao\*, **SA Bullard**, & CR Arias†. 2015. Community structure of skin microbiome of Gulf killifish, *Fundulus grandis*, is driven by seasonality and not exposure to oiled sediments in a Louisiana salt marsh. FEMS Microbial Ecology DOI 10.1007/s00248-015-0578-7.
- 69. Blaylock R & **SA Bullard.** 2015. Counter-insurgents in the Blue Revolution: Parasites, Diseases, and Perceptions. Journal of Parasitology 100(6):743-755.
- 68. Womble\* M, R. Orélis-Ribeiro\*, & **SA Bullard**†. 2015. *Proterometra epholkos* n. sp. (Azygiidae) from Terrapin Creek, Alabama, USA: molecular characterization of life cycle, redescription of *Proterometra albicauda*, and host and geographic locality records for *Proterometra* spp. in North America. Parasitology International 64:50-69.
- 67. **Bullard, SA**, D DeVries, A Wilson, G Lockaby, P Clement, H Kinnucan, and C Newland. 2015. Peer-review in the Cyber Age. *In* "Auburn Speaks: On Cyber & The Digital Domain" (Leslie Parson & Robert Norton, eds), Auburn University Office of the Vice President for Research, Auburn University Press, Auburn, AL pp 202-211 (invited contribution, editor reviewed).

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- 65. Orélis-Ribeiro\* R, TH Cribb, K Halanych, CR Arias, & **SA Bullard†**. 2014. Diversity and ancestry of flatworms infecting the blood of non-tetrapod craniates. Advances in Parasitology 85:1-62.

- 64. **Bullard, SA†**. 2014. Blood flukes (Digenea: Aporocotylidae) of Elopomorpha: emended diagnosis of *Paracardicoloides*, supplemental observations of *Paracardicoloides yamagutii*, and a new genus and species from ladyfish, *Elops saurus* in the northern Gulf of Mexico. Journal of Parasitology 100(3):305-316.
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#### 2013 (10)

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- 57. Ruiz\*, CF, C Ray\*\*, M Grace, M Cook, & **SA Bullard**†. 2013. A new species of Trichosomoididae (Nematoda) from skin of red snapper, *Lutjanus campechanus* (Perciformes: Lutjanidae), on the Texas-Louisiana shelf, Northern Gulf of Mexico. Journal of Parasitology 99(2):318-326.
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- 39. Kritsky†, DC, **SA Bullard**, & M Bakenhaster. 2011. First report of gastrocotylinean post-oncomiracidia (Platyhelminthes: Monogenoidea: Heteronchoinea) on gills of flyingfish (Exocoetidae), snapper (Lutjanidae), dolphinfish (Coryphaenidae), and amberjack (Carangidae) from the Gulf of Mexico: Decoy hosts and the dilution effect. Parasitology International 60(3):274-282.
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# 2008 (3)

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- 28. **Bullard†, SA** & K Jensen. 2008. Blood flukes (Digenea: Aporocotylidae) of stingrays (Myliobatiformes: Dasyatidae): *Orchispirium heterovitellatum* from *Himantura imbricata* in the Bay of Bengal and a new genus and species from *Dasyatis sabina* in the Northern Gulf of Mexico. Journal of Parasitology 94:1,311-1,321.
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   2001 (3)
- 8. Benz†, GW, BE Smith, & **SA Bullard**. 2001. *Kroyerina deetsorum* n. sp. (Copepoda: Kroyeriidae) from the olfactory sacs of Atlantic sharpnose sharks (*Rhizoprionodon terraenovae*) captured in the Gulf of Mexico and Northwestern Atlantic and first report of copepodids of Kroyeriidae. Journal of Parasitology 87(6):1279-1290.
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# 2000 (5)

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- 4. **Bullard†, SA**, GW Benz, RM Overstreet, EH Williams, Jr, & J Hemdal. 2000. Six new host records and updated list of wild hosts for *Neobenedenia melleni* (McCallum, 1927) (Capsalidae). Comparative Parasitology 67(2):190-196.
- 3. **Bullard†**, **SA** & RM Overstreet. 2000. *Calicotyle californiensis* n. sp. and *Calicotyle urobati* n. sp. (Monogenea: Calicotylinae) from elasmobranchs in the Gulf of California. Journal of Parasitology 86(5):939-944.
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- 1. Benz†, GW, Z Kabata, & **SA Bullard**. 2000. *Margolisius abditus* n. gen., n. sp. (Copepoda: Lernaeopodidae) from gill lamellae of a remora (*Remora remora*) collected in the Gulf of California. Journal of Parasitology 86(2):241-244.

# Chapters & invited reviews

- 5. Bullard, SA, D DeVries, A Wilson, G Lockaby, P Clement, H Kinnucan, and C Newland. 2015. Peer-review in the Cyber Age. In "Auburn Speaks: On Cyber & The Digital Domain" (Leslie Parson & Robert Norton, eds), Auburn University Office of the Vice President for Research, Auburn University Press, Auburn, AL pp 202-211 (invited contribution, editor reviewed) (see Article length publications).
- 4. Blaylock, RB and **SA Bullard.** 2014. Counterinsurgents in the Blue Revolution? Parasites and diseases affecting aquaculture and science. Journal of Parasitology 100(6). (invited review, peer-reviewed) (see Article length publications).
- 3. Orélis-Ribeiro\* R, TH Cribb, K Halanych, CR Arias, & **SA Bullard†**. 2014. Diversity and ancestry of flatworms infecting the blood of non-tetrapod craniates. Advances in Parasitology 85:1-62. (peer-reviewed) (*see Article length publications*).
- Bullard†, SA & RM Overstreet. 2008. Chapter 14: Digeneans as enemies of fishes. In: Fish Diseases. J Eiras, H Segner, T Wahil, BG Kapoor (eds.). Science Publishers, US, pages 817-976. (invited review, peer-reviewed) (see Article length publications).
- 1. Benz†, GW & **SA Bullard**. 2004. Chapter 24: Metazoan parasites and associates of chondrichthyans with emphasis on taxa harmful to captive hosts. In: The husbandry of elasmobranch fishes. MFL Smith, DA Thoney, & RE Hueter (eds.). Special Publication No. 16, Ohio Biological Survey, Columbus, OH. Pages 325-416. (invited review, peer-reviewed) (see Article length publications).

#### Nomenclatural acts, established species, genera, & families

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(\underline{37} \text{ new species assigned to } \underline{28} \text{ genera}, \underline{12} \text{ families, and } \underline{4} \text{ phyla; } \uparrow \text{new/resurrected genera= } \underline{17})
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† Margolisius Benz, Kabata, et Bullard, 2000 (Arthropoda: Copepoda; Lernaeopodidae)

Margolisius abditus Benz, Kabata, et Bullard, 2000 (Arthropoda: Copepoda; Lernaeopodidae)

Calicotyle californiensis Bullard et Overstreet, 2000 (Platyhelminthes: Monogenoidea: Monocotylidae)

Calicotyle urobati Bullard et Overstreet, 2000 (Platyhelminthes: Monogenoidea: Monocotylidae)

Kroyerina deestorum Benz, Smith et Bullard, 2001 (Arthropoda: Copepoda: Kroyeridae)

† Elaphrobates Bullard et Overstreet, 2003 (Platyhelminthes: Digenea; Aporocotylidae)

Elaphrobates euzeti Bullard et Overstreet, 2003 (Platyhelminthes: Digenea; Aporocotylidae)

† Branchotenthes Bullard et Dippenaar, 2003 (Platyhelminthes: Monogenea: Hexabothriidae)

Branchotenthes robinoverstreeti Bullard et Dippenaar, 2003 (Platyhelminthes: Monogenea: Hexabothriidae)

Kudoa hypoepicardialis Blaylock, Bullard et Whipps, 2004 (Cnidaria: Myxozoa: Kudoidae)

Cardicola palmeri Bullard et Overstreet, 2004 (Platyhelminthes: Digenea: Aporocotylidae)

Cardicola currani Bullard et Overstreet, 2004 (Platyhelminthes: Digenea: Aporocotylidae)

† Listrocephalos Bullard, Payne et Braswell, 2004 (Platyhelminthes: Monogenoidea: Capsalidae)

Listrocephalos whittingtonti Bullard, Payne et Braswell, 2004 (Platyhelminthes: Monogenoidea: Capsalidae)

Listrocephalos kearni Bullard, Payne et Braswell, 2004 (Platyhelminthes: Monogenoidea: Capsalidae)

Listrocephalos guberleti (Caballero & Bravo-Hollis, 1962) Bullard, Payne et Braswell, 2004 n. comb. (Platyhelminthes: Monogenoidea: Capsalidae)

Listrocephalos corona (Hargis, 1955) Bullard, Payne et Braswell, 2004, n. comb. (Platyhelminthes: Monogenoidea: Capsalidae)

Psettarium anthicum Bullard et Overstreet, 2006 (Platyhelminthes: Digenea: Aporocotylidae)

Selachohemecus benzi Bullard, Carlson et Overstreet, 2006 (Platyhelminthes: Digenea: Aporocotylidae)

† Janinecaira Benz, Smith, Bullard et Braswell, 2007 (Arthropoda: Copepoda: Eudactylinidae)

Janinecaira darkthread Benz, Smith, Bullard et Braswell, 2007 (Arthropoda: Copepoda: Eudactylinidae)

† Acipensericola Bullard, Snyder, Jensen et Overstreet, 2008 (Platyhelminthes: Digenea: Aporocotylidae)

Acipensericola petersoni Bullard, Snyder, Jensen et Overstreet, 2008 (Platyhelminthes: Digenea: Aporocotylidae)

† Myliobaticola Bullard et Jensen, 2008 (Platyhelminthes: Digenea: Aporocotylidae)

Myliobaticola richardheardi Bullard et Jensen, 2008 (Platyhelminthes: Digenea: Aporocotylidae)

Orchispirium heterovitellatum Madhavi et Rao, 1970 (Platyhelminthes: Digenea: Aporocotylidae), redescription

Neotetraonchus vergrandis Kritsky, Bullard et Martinez, 2009 (Platyhelminthes: Monogenoidea: Dactylogyridae)

Aporocotylidae Odhner, 1912, established as earliest available family-group name (Bullard et al. 2009).

Sanguinicolidae von Graff, 1907, junior subjective synonym of Aporocotylidae Odhner, 1912 (Bullard et al., 2009)

Cardicola nonamo Bullard, 2010 (Platyhelminthes: Digenea: Aporocotylidae)

† Littorellicola Bullard, 2010 (Platyhelminthes: Digenea: Aporocotylidae)

Littorellicola billhawkinsi Bullard, 2010 (Platyhelminthes: Digenea: Aporocotylidae)

Littorellicola sebastodorum (Holmes, 1971) Bullard, 2010 n. comb. (Platyhelminthes: Digenea: Aporocotylidae)

Capsala laevis (Verrill, 1875) Johnston, 1929 redescription (Platyhelminthes: Monogenoidea: Capsalidae)

Cardicola parvus Bullard, Baker et de Buron, 2012 (Platyhelminthes: Digenea: Aporocotylidae)

Pearsonellum lemusi Bullard, 2012 (Platyhelminthes: Digenea: Aporocotylidae)

† Primisanguis Bullard, Williams et Williams, 2012 (Platyhelminthes: Digenea: Aporocotylidae)

Primisanguis caribbeanensis Bullard, Williams et Williams, 2012 (Platyhelminthes: Digenea: Aporocotylidae)

Cardicola langeli Bullard, 2013 (Platyhelminthes: Digenea: Aporocotylidae)

Huffmanela oleumimica Ruiz et Bullard, 2013 (Nematoda: Trichosomoididae: Huffmanelinae)

*† Nomasanguinicola* Truong et Bullard, 2013 (Platyhelminthes: Digenea: Aporocotylidae)

Nomasanguinicola canthoensis Truong et Bullard, 2013 (Platyhelminthes: Digenea: Aporocotylidae)

Plehniella dentata as incertae sedis (Nomasanguinicola) in Truong et Bullard (2013) (Platyhelminthes: Digenea: Aporocotylidae)

Sanguinicola clarias as incertae sedis (Nomasanguinicola) in Truong et Bullard (2013) (Platyhelminthes: Digenea: Aporocotylidae)

Huffmanela markgracei Ruiz et Bullard, 2013 (Nematoda: Trichosomoididae: Huffmanelinae)

Hyperandrotrema walterboegeri Orélis-Ribeiro et Bullard (Platyhelminthes: Digenea: Aporocotylidae)

Hyperandrotrema cetorhini Maillard et Ktari, 1978, redescription (Platyhelminthes: Digenea: Aporocotylidae)

† Mobulicola Patella et Bullard, 2013 (Platyhelminthes: Monogenoidea: Hexabothriidae)

Mobulicola enantiomorphica Patella et Bullard, 2013 (Platyhelminthes: Monogenoidea: Hexabothriidae)

Mobulicola dubium (Euzet et Maillard, 1967) Patella et Bullard, 2013 (Monogenoidea: Hexabothriidae), n. comb.

† Elopicola Bullard, 2014 (Platyhelminthes: Digenea: Aporocotylidae)

Elopicola nolancribbi Bullard, 2014 (Platyhelminthes: Digenea: Aporocotylidae)

Paracardicoloides yamagutii Martin, 1974 (Platyhelminthes: Digenea: Aporocotylidae), redescription

Proterometra epholkos Womble et Bullard, 2015 (Platyhelminthes: Digenea: Azygiidae)

Capsala biparasiticum (Goto, 1894) Price, 1938 (Platyhelminthes: Monogenoidea: Capsalidae), redescription

† Plehniella Szidat, 1951, revision (Orélis-Ribeiro et Bullard, 2015) (Platyhelminthes: Digenea: Aporocotylidae)

Plehniella sabajperzi Orélis-Ribeiro et Bullard, 2015 (Platyhelminthes: Digenea: Aporocotylidae)

Plehniella armbrusteri Orélis-Ribeiro et Bullard, 2015 (Platyhelminthes: Digenea: Aporocotylidae)

Proterometra ariasae Womble et Bullard, 2015 (Platyhelminthes: Digenea: Azygiidae)

Proterometra albicauda Anderson & Anderson, 1967 (Platyhelminthes: Digenea: Azygiidae), redescription

† Baracktrema Roberts, Platt et Bullard, 2015 (Platyhelminthes: Digenea: "Spirorchiidae")

Baracktrema obamai Roberts, Platt et Bullard, 2015 (Platyhelminthes: Digenea: "Spirorchiidae")

† Cladocaecum Orélis-Ribeiro et Bullard, 2015 (Platyhelminthes: Digenea: Aporocotylidae)

Cladocaecum tomasscholzi Orélis-Ribeiro et Bullard, 2015 (Platyhelminthes: Digenea: Aporocotylidae)

† Kritsky Orélis-Ribeiro et Bullard, 2015 (Platyhelminthes: Digenea: Aporocotylidae)

Kritsky platyrhynchi Orélis-Ribeiro et Bullard, 2015 (Platyhelminthes: Digenea: Aporocotylidae)

Proterometra catenaria Smith, 1934, redescription (Womble et al., 2016) (Platyhelminthes: Digenea: Azygiidae)

† Coeuritrema Mehra, 1933 revision, resurrection (Platyhelminthes: Digenea: "Spirorchiidae")

Coeuritrema platti Roberts, Platt et Bullard, 2016 (Platyhelminthes: Digenea: "Spirorchiidae")

Coeuritrema rugatus (Brooks et Sullivan, 1981) Roberts, Platt et Bullard, 2016 n. comb. (Platyhelminthes: Digenea: "Spirorchiidae")

### Invited seminars, presentations, departmental seminars

- 31. Bullard, SA, CR Arias. 2015 Fish Kill Workshop, Eufaula, Alabama, 17-18 Nov (see workshops, below).
- 30. **Bullard, SA.** Lower Mekong Basin ecosystem functioning and aquatic animal health: monitoring and interpreting ecosystem-level (decadal) anthropogenic change. NSF 2015 National Workshop to Explore Research Frontiers through US Engagement in the Lower Mekong Basin (US/LMB 2015). Laurel, Maryland, 25-26 Sept 2015.
- 29. **Bullard, SA.** Auburn Parasitology in Vietnam's South China Sea & Mekong River. Office of Global Programs, ET and Vam York Endowment, International Scholars Seminar. Auburn, AL 3 Sept 2015. AU.
- 28. **Bullard, SA.** "Parasites as indicators of environmental perturbation in the Gulf of Mexico." International Conference on Marine Biotechnology and Environment 2015. Nha Trang University. Nha Trang, Vietnam 12 Jun 2015 (*also listed under Professional Meetings*, *below*).
- 27. **Bullard, SA.** "George W. Benz: In Memorium." Southeastern Society of Parasitologists. Virginia Tech. Blacksburg, VA 10 April 2015
- 26. **Bullard, SA.** "Predatory publishers and peer review at odds in the information age; threats to what we think we know, public policy, and public trust in science." School of Forestry, Auburn University, graduate seminar course. Auburn, AL 11 Nov 2014.
- 25. **Bullard, SA.** "Safe and secure food, water, and energy 2050: Grand challenges, grand opportunities." School of Fisheries, Aquaculture, & Aquatic Sciences stakeholders' meeting. Auburn, AL, 19 Sept 2014.
- 24. **Bullard, SA.** "The marine parasitologist/pathobiologist in 2020 and beyond." (assigned title of presentation- not penned by SAB). Graduate student reunion & living homage to Prof. Robin Miles Overstreet, Gulf Coast Research Laboratory, Ocean Springs, MS 20 Sept 2013.
- 23. **Bullard**, **SA**. "Restore Act update: source and scope of upcoming funding opportunities related to the criminal and civil penalties resulting from the 2010 BP *Deepwater Horizon* Oil Spill. School of Fisheries, Aquaculture, & Aquatic Sciences, 16 Aug 2013.
- 22. **Bullard, SA.** "Potential opportunities for collaborative teaching and research between Dong Thap Community College & Auburn University's School of Fisheries, Aquaculture, & Aquatic Sciences. Dong Thap Community College, 29 March 2013.
- 21. **Bullard, SA.** "Marine fisheries, parasites, and the 2010 BP *Deepwater Horizon* Oil Spill." Editors' Symposium, American Society of Parasitologists, Richmond, VA, 15 July 2012.
- 20. Salmon\*, ER, GW Benz, **SA Bullard**, CF Ruiz, AM Faronel, MB Faronel, K Sadler, & A Popovich. "Prevalence and intensity of gill parasites collected from *Fundulus grandis* in oiled and non-oiled locations associated with the Deepwater Horizon Oil Spill." NSF-RAPID outreach conducted at Smyrna High School, Smyrna, TN 9 Feb 2012.
- 19. **Bullard, SA.** "Fisheries Biology and the application of parasitological tools for studying offshore/pelagic marine fish stocks" AU, Dept of Biological Sciences, 18 Nov 2011.
- 18. Bullard, SA. "Importance of professional meetings and service." Auburn Chapter, American Fisheries Society. 26 Oct 2011.
- 17. Bullard, SA. "Teaching, training, & learning in Marine Sciences." AU Marine Science Club 16 Nov 2010.
- 16. **Bullard, SA.** "Relevance of the 'host-parasite relationship' concept in fish disease diagnostics, management, and treatment." Special Session (Andrew Mitchell, chair) of the International Triennial Meeting of the National Shellfisheries Association, American Fisheries Society Fish Culture Section, and World Aquaculture Society, San Diego, CA, 1-5 Mar 2010.
- 15. **Bullard, SA.** "Richton Salt Dome Project: Past, Present, and Future?" University of Southern Mississippi Honors College Colloquium, Hattiesburg, MS, 28 Oct 2008.
- 14. **Bullard, SA.** "Richton Salt Dome Project: Past, Present, and Future?" Issues and Answers, Gulf Coast Public Lecture Series 2007-08 sponsored by The Sun Herald and University of Southern Mississippi, Ocean Springs, MS, 7 Aug 2008.
- 13. **Bullard, SA.** "Pathology & Phylogeny: Perspectives on Fish-Parasite Coevolution." Auburn University, Dept. of Allied Fisheries and Aquacultures. Auburn. AL. 12 Jun 2008.
- 12. **Bullard, SA.** "Fish-Parasite Coevolution: Ecological Interactions and Phylogenetic Signal." Southern Illinois Univ. Carbondale, Dept. of Zoology, Carbondale, IL, 14 Apr 2008.
- 11. **Bullard, SA.** "What can South Mississippi expect from DOE's Richton Salt Dome Project?" Jackson Co. Chamber of Commerce, Leadership Jackson Co., USM-GCRL, Ocean Springs, MS, 3 Apr 2008.
- 10. **Bullard, SA.** "FAQs about The Dept. of Energy's (DOE) Strategic Petroleum Reserve and Richton Salt Dome Project: Distillation of information for stakeholders in the North-Central Gulf of Mexico and Pascagoula River Drainage." Dept. of Coastal Sciences Fall Seminar Series, USM-GCRL, Ocean Springs, MS, 21 Feb 2008.
- 9. **Bullard, SA.** "How do hosts deal with parasites?" Dept. of Coastal Sciences Fall Seminar Series, University of Southern Mississippi, Ocean Springs, MS, 17 Jan 2008.
- 8. **Bullard, SA.** "Evolutionary trends within an ancient and taxonomically diverse group of gnathostome blood parasites." Dept Biological Sciences, Sam Houston State Univ, Huntsville, TX. 8 Nov 2007.
- 7. **Bullard, SA.** "Evolutionary Biology as a conservation tool." De Hoop Nature Reserve. Dept. of Zoology and Entomology, University of the Free State, Potberg, South Africa. 1 Apr 2007.
- 6. Bullard, SA. "Fish blood flukes as pathogens of cultured fishes." Res. Inst. Aquaculture #3, Nha Trang, Vietnam. 26 Jan 2007.
- 5. Bullard, SA. "Introduction to the biology of monogeneans." Research Inst. Aquaculture No. 3, Nha Trang, Vietnam. 26 Jan 2007.
- 4. **Bullard, SA.** "A few questions for a few worms." Middle Tennessee State University, Dept. Seminar sponsored by MTSU Tri-Beta Society, Murfreesboro, TN. 16 Mar 2006.

- 3. Bullard, SA. "Proper fixation of metazoan fish parasites." Univ. Nacional de la Amazonia Peruana), Iquitos, Peru. 18 Aug 2005.
- 2. **Bullard, SA.** "The great beyond below and within: Tracking the mysterious lives of parasites." Summer Seminar Series, GCRL Summer Program, Ocean Springs, MS. 23 Jun 2005.
- 1. Bullard, SA. "Parasitism: Nature's weapon of mass destruction?" Philadelphia Acad. Nat. Sci., Philadelphia, PA. 7 Feb 2005.

#### Papers or lectures

Professional meetings (\*graduate student; \*\*undergraduate student; †presenter)

### 2016 (12)

- 139. Womble†\*, MR, **SA Bullard**. What is *Leuceruthrus micropteri* (Digenea: Azygiidae)? Southeastern Society of Parasitologists, Fort Mill, NC, 6-8 April 2016.
- 138. Ruiz†\*, CF, MR Womble, R Orélis-Ribeiro\*, JR Roberts\*, JM Rash, DA Besler, CR Arias, **SA Bullard.** "Gill lice" (Copepoda: Lernaeopodidae: *Salmincola*) infecting epithelia of rainbow trout (*Oncorhynchus mykiss*) and brook trout (*Salvelinus fontinalis*) in North Carolina rivers and aquaculture facilities. Southeastern Society of Parasitologists, Fort Mill, NC, 6-8 April 2016.
- 137. Roberts, JR†\*, R Orélis-Ribeiro\*, KM Halanych, BD Thuy, **SA Bullard.** Blood flukes (Digenea: Schistosomatoidea) of softshell turtles (Testudines: Trionychidae) in Asia, a previously ignored but distinctive lineage. Southeastern Society of Parasitologists, Fort Mill, NC, 6-8 April 2016.
- 136. **Bullard†, SA,** CF Ruiz\*, R Orélis-Ribeiro\*, JR Roberts\*, MR Womble, C Ray, JM Rash, DA Besler, CR Arias. Myxobolus cerbralis (etiological agent of "whirling disease") infecting trouts and oligochaetes in North Carolina. Southeastern Society of Parasitologists, Fort Mill, NC, 6-8 April 2016.
- 135. Orélis-Ribeiro\*†, R. KM Halanych, **SA Bullard**. Broad-scale phylogeny of craniate blood flukes (Digenea: Schistosomatoidea), with emphasis on "fish blood flukes" (Aporocotylidae). Southeastern Society of Parasitologists, Fort Mill, NC, 6-8 April 2016.
- 134. **Bullard, SA**, CR Arias, CF Ruiz, R Orélis-Ribeiro, W Cai, JR Roberts. 2016. First detection of *Myxobolus cerebralis* (causative agent of whirling disease) in the Southeastern United States. Annual Alabama Department of Conservation and Natural Resources project review meeting. 29 Jan 2016.
- 133. Arias†, CR, **SA Bullard**, CF Ruiz, R Orélis-Ribeiro, C Ray, W Cai, JR Roberts. 2016. Activities of the Southeastern Cooperative Fish Parasite and Disease Project 2015. Annual Alabama Department of Conservation and Natural Resources project review meeting. 29 Jan 2016.
- 132. Roberts\*†, JR, MR Womble\*, R Orélis-Ribeiro\*, **SA Bullard**. 2016. Biodiversity of blood flukes (Digenea: Schistosomatoidea) infecting Alabama turtles, including new geographic and host locality records. Southeast Partners in Amphibian & Reptile Conservation, Nauvoo, AL, 18-21 Feb 2016.
- 131. Roberts\*†, JR, MR Womble\*, R Orélis-Ribeiro\*, **SA Bullard**. 2016. Taxonomic diversity of blood flukes (Digenea: Schistosomatoidea) infecting Alabama turtles. Georgia Chapter of the American Fisheries Society, Columbus, GA, 9-11 Feb 2016
- 130. Plunkett\*, RA, P Blackwelder, R Orélis-Ribeiro\*, MC Diaz, **SA Bullard,** SA Pomponi. 2016. Discovery of *Loxosomella vivipara* (Entoprocta: Loxosomatidae) in the novel sponge host, *Spongia* spp. Society for Integrative and Comparative Biology, Portland, OR, 3-7 Jan 2016.
- 129. Rash†, J, **SA Bullard**, B Hickson, T King, A Bushon, D Goodfred, K Fining, K Hodges, P Wheeler, C Wood, D Deaton. Gill lice and whirling disease within North Carolina trout populations: Past, current, and future efforts to understand these recently discovered threats. North Carolina Chapter of the American Fisheries Society, Danville, VA, 15-17 Mar 2016.
- 128. Rash†, J, **SA Bullard**, B Hickson, T King, A Bushon, D Goodfred, K Fining, K Hodges, P Wheeler, C Wood, D Deaton. Gill lice and whirling disease within North Carolina trout populations: Past, current, and future efforts to understand these recently discovered threats. Southern Division of the American Fisheries Society, Wheeling, WV, 17-21 Feb 2016. **2015** (16)
- 127. Womble\* MR, R Orélis-Ribeiro\*, JR Roberts\*, JM Rash, DA Besler, CR Arias, **Bullard SA†.** Parasitic copepod (Lernaeopodidae: *Salmincola*) infections in gill and buccal cavity of rainbow trout and brook trout in North Carolina. Southeastern Association of Fish & Wildlife Agencies, Asheville, NC, 1-4 Nov 2015.
- 126. Orélis-Ribeiro\* R, MR Womble\*, JR Roberts\*, CR Ray\*, JM Rash, DA Besler, S Lafrenz, CR Arias, and **SA Bullard†**. Detection of *Myxobolus cerebralis* (causative agent of "whirling disease") infecting trouts and oligochaetes in North Carolina. Southeastern Association of Fish & Wildlife Agencies, Asheville, NC, 1-4 Nov 2015.
- 125. McElwain, A† and **SA Bullard.** Cellular changes associated with nematode infections in foot of Alabama rainbow (*Villosa nebulosa*). 2<sup>nd</sup> International Meeting on Biology and Conservation of Freshwater Bivalves, Buffalo, NY, 4-8 October 2015.
- 124. Cribb, TH, **SA Bullard,** R Orélis-Ribeiro\*, RC Chick, W O'Connor, S O'Connor, D Johnson, S Cutmore. 2015. Phylogenetic position of a fish blood flukes (Trematoda: Aporocotylidae) infecting a bivalve. 9<sup>th</sup> International Symposium of Fish Parasites, Valencia, Spain, 31 Aug-4 September 2015.
- 123. Orélis-Ribeiro, R\* & **SA Bullard†.** Diversity and ancestry of flatworms (Digenea: Schistosomatoidea) infecting the blood of craniates. Southeastern Society of Parasitologists, Blacksburg, VA, 9-11 April 2015.
- 122. Womble, MR\*† & **SA Bullard.** Small things considered: the luring life of *Proterometra* and cryptic nature of *Leuceruthrus* (Digenea: Azygiidae). Southeastern Society of Parasitologists, Blacksburg, VA, 9-11 April 2015.
- 121. **Bullard, SA†,** M Womble\*, R Orélis-Ribeiro\*, J Roberts\*. Parasites too can cause lesions on Gulf of Mexico fishes. Southeastern Society of Parasitologists, Blacksburg, VA, 9-11 April 2015.
- 120. Roberts, JR\*†, TR Platt, & **SA Bullard.** Diversity, host specificity, and taxonomic identities of turtle blood flukes (Digenea: paraphyletic "Spirorchiidae"). Southeastern Society of Parasitologists. Blacksburg, VA, 9-11 April 2015.
- 119. McElwain, A, R Fleming, M Lajoie, C Maney, B Spingall, & **SA Bullard.** Gross and histopathological changes associated with the eggs, larvae, and cuticular remnants of *Unionicola* sp. (Acari, Unionicolidae) infecting *Strophitus connasaugaensis* (Bivalvia, Unionidae). American Society of Parasitologists, Omaha, Nebraska 25-28 June 2015.

- 118. **Bullard, SA.** Parasites as indicators of environmental perturbation in the Gulf of Mexico. International Conference on Biotechnology and Environment, Nha Trang University, Nha Trang, Vietnam. June 2015.
- 117. Roberts, J\*† & **SA Bullard.** Biodiversity and ecology of turtle blood flukes (Digenea: Spirorchiidae). International Conference on Biotechnology and Environment, Nha Trang University, Nha Trang, Vietnam. June 2015.
- 116. Daniels, B\*\*† & **SA Bullard.** Investigations of blood flukes (Digenea: Aporocotylidae) that infect sturgeon and paddlefish (Acipenseriformes) in North America. International Conference on Biotechnology and Environment, Nha Trang University, Nha Trang, Vietnam. June 2015.
- 115. Orélis-Ribeiro, R\*† & **SA Bullard.** Phylogeny of vertebrate blood flukes. International Conference on Biotechnology and Environment, Nha Trang University, Nha Trang, Vietnam. June 2015.
- 114. Womble, MR\*† & SA Bullard. Luring life: cryptic biodiversity and life cycles of freshwater fish flukes (Digenea: Azygiidae). International Conference on Biotechnology and Environment, Nha Trang University, Nha Trang, Vietnam. June 2015.
- 113. Ruiz, CF\*†, MR Womble, & **SA Bullard**. Parasite component communities of *Fundulus grandis* as an indicator of acute and chronic environmental effects of the 2010 BP Deepwater Horizon Oil Spill in Barataria Bay, Louisiana. Oil Spill and Ecosystem Science Conference, Gulf of Mexico Research Initiative, Houston, TX, 16-19 February 2015.
- 112. Womble, MR\*† & **SA Bullard**. Putative eye abnormalities in Atlantic midshipman, *Porichthys plectrodon* (Batrachoidiformes: Batrachoididae) from the north-central Gulf of Mexico off Louisiana. Oil Spill and Ecosystem Science Conference, Gulf of Mexico Research Initiative, Houston, TX, 16-19 February 2015.

### 2014 (13)

- 111. **Bullard, SA†,** M Maynard\*, MR Womble\*, R Orélis-Ribeiro \*, J Roberts\*, & B Daniels\*\*. Parasites can cause lesions on Gulf of Mexico fishes. Bays and Bayous Symposium 2014, Mobile, AL, 2-3 Dec 2014.
- 110. Womble M, A McElwain, & **SA Bullard**. Putative eye abnormalities in Atlantic midshipman, *Porichthys plectrodon*, off Louisiana. Bays and Bayous Symposium 2014, Mobile, AL, 2-3 Dec 2014.
- 109. Orélis-Ribeiro, R\*†, CR Arias, & **SA Bullard.** Black yeasts (*Exophiala* spp.) from inland and coastal habitats in the southeastern United States. Bays and Bayous Symposium 2014, Mobile, AL, 2-3 Dec 2014.
- 108. **Bullard, SA†,** M Maynard\*, M Womble\*, R Orélis-Ribeiro\*, J Roberts\*, & B Daniels\*\*. Parasites can cause lesions on Gulf of Mexico fishes. Bays and Bayous Symposium 2014, Mobile, AL, 2-3 Dec 2014.
- 107. Orélis-Ribeiro, R\*†, CR Arias, & **SA Bullard.** Black yeasts (*Exophiala* spp.) from inland and coastal habitats in the southeastern United States. American Society of Parasitologists, New Orleans, LA, 24-28 July 2014.
- 106. Orélis-Ribeiro, R\*†, MR Womble, KM Halanych, CR Arias, & **SA Bullard**. Evidence from morphology, molecules, and life history: diversity and ancestry of flatworms infecting blood of non-tetrapod craniates ("fishes"). American Society of Parasitologists, New Orleans, LA, 24-28 July 2014.
- 105. Womble, MR\*†, R Orélis-Ribeiro, & **SA Bullard**. The lure of *Proterometra*: Taxonomic diversity, life cycles, and host-parasite relationships within an intriguing genus of freshwater fish trematodes. American Society of Parasitologists, New Orleans, LA, 24-28 July 2014.
- 104. Womble, MR\*†, R Orélis-Ribeiro, & **SA Bullard**. The lure of *Proterometra*. Southeastern Society for Parasitologists, Statesboro, GA, 8-14 Apr 2014.
- 103. Orélis-Ribeiro, R\*†, KM Halanych, CR Arias, & **SA Bullard**. Evolutionary expansion of flatworm parasitism in blood of vertebrates (Platyhelminthes: Digenea: Schistosomatoidea), with emphasis on "fish blood flukes" (Aporocotylidae). Southeastern Society for Parasitologists, Statesboro, GA, 8-14 Apr 2014.
- 102. Womble, MR\*†, R Orélis-Ribeiro, & **SA Bullard**. Host-parasite relationships and taxonomic diversity of freshwater fish trematodes (*Proterometra*, Azygiidae). Alabama Academy of Sciences, Auburn, AL, 12-14 Mar 2014.
- 101. Orélis-Ribeiro, R\*†, KM Halanych, CR Arias, & **SA Bullard**. Phylogeny of vertebrate blood flukes (Platyhelminthes: Digenea; Schistosomatoidea), with emphasis on "fish blood flukes" (Aporocotylidae). Alabama Academy of Sciences, Auburn, AL, 12-14 Mar 2014.
- 100. Womble, MR\*†, R Orélis-Ribeiro, & **SA Bullard**. Alabama's cryptic biodiversity: host-parasite relationships among freshwater snails (*Elimia*), sunfishes and basses (Centrarchidae), and their trematodes (*Proterometra*, Azygiidae). Auburn University Research Week (Graduate Student Research Forum), Auburn, AL, 14-17 Apr 2014.
- 99. Orélis-Ribeiro, R\*†, KM Halanych, CR Arias, MR Womble, & **SA Bullard**. Molecular studies of fish blood flukes (Platyhelminthes: Digenea: Schistosomatidae). Auburn University Research Week (Graduate Student Research Forum), Auburn, AL, 14-17 Apr 2014.

#### 2013 (11)

- 98. Arias, CR†, S LaFrentz, **SA Bullard,** & P Johnson. Mussels are not alone: exploring the microbial diversity in unionids. Freshwater Mollusk Conservation Society, Guntersville, AL, 10-14 Mar 2013.
- 97. McElwain, A\*† & **SA Bullard.** Histopathology of *Unionicola* cf. *tumida* in gill and mantle of Alabama creekmussel (*Strophitus connasaugaensis*) a freshwater mussel species with high aquaculture potential. World Aquaculture Society, Nashville, TN, 21-25 Feb 2013.
- 96. McElwain, A\*†, P. D. Johnson, & **SA Bullard.** Cellular anatomy of the digestive tract of Alabama rainbow *Villosa nebulosa* towards an understanding of trophic bottlenecks to culture and stock enhancement of freshwater mussels. World Aquaculture Society, Nashville, TN, 21-25 Feb 2013.
- 95. McElwain, A\*† & **SA Bullard.** Eggs and nymphs of *Unionicola* cf. *tumida* as potential threats to propagation and stock enhancement of the Alabama creekmussel (*Strophitus connasaugaensis*). Freshwater Mollusk Conservation Society, Guntersville, AL, 10-14 Mar 2013.
- 94. McElwain, A\*† & **SA Bullard.** Approaching trophic bottlenecks to stock enhancement of freshwater mussels with a histological map of the digestive tract of the Alabama rainbow (*Villosa nebulosa*). Freshwater Mollusk Conservation Society, Guntersville, AL, 10-14 Mar 2013.

- 93. McElwain, A\*† & **SA Bullard.** Histopathological observations of nematodes infecting foot and intestine of the Alabama rainbow (*Villosa nebulosa*). Freshwater Mollusk Conservation Society, Guntersville, AL, 10-14 Mar 2013.
- 92. McElwain, A\*† & **SA Bullard.** Cellular anatomy of the mantle edge of Alabama rainbow (*Villosa nebulosa*), Gulf pigtoe (*Fusconaia cerina*), and Alabama creekmussel (*Strophitus connasaugaensis*), insights into shell formation and histopathological biomarker potential in Unionidae. Freshwater Mollusk Conservation Soc, Guntersville, AL, 10-14 Mar 2013.
- 91. Orélis-Ribeiro, R\*†, CR Arias, & **SA Bullard.** Survey of waterborne yeasts (*Exophiala* spp.) from freshwater aquaculture ponds in Alabama. World Aquaculture Society, Nashville, TN, 21-25 Feb 2013.
- 90. McElwain, A\*†, PD Johnson, & **SA Bullard.** Cellular anatomy of the digestive tract of Alabama rainbow (*Villosa nebulosa*) towards an understanding of trophic bottlenecks to culture and stock enhancement of freshwater mussels. World Aquaculture Society, Nashville, TN, 21-25 Feb 2013.
- 89.McElwain, A\*† & **SA Bullard.** Histopathology of infections by *Unionicola* cf. *tumida* in gill and mantle of Alabama creekmussel (*Strophitus connasaugaensis*). World Aquaculture Society, Nashville, TN, 21-25 Feb 2013.
- 88. **Bullard†, SA**, H Mohammed\*, & CR Arias. *Flavobacterium columnare* genomovar II from bluegill (*Lepomis macrochirus*) in Alabama ponds, with observations on associated lesions. World Aquaculture Society, Nashville, TN, 21-25 Feb 2013. **2012** (9)
- 87. **Bullard†, SA** & CF Ruiz\*. Marine fisheries, parasites, and the 2010 BP Deepwater Horizon Oil Spill. American Society of Parasitologists, Richmond, VA. 15 Jul 2012.
- 86. Arias†, CR, W Cai\*, S LaFrentz, & **SA Bullard.** *In vitro* and *in vivo* adhesion of *Flavobacterium columnare*. International *Flavobacterium* Workshop. Turku, Finland.
- 85. Larsen†, A\*, **SA Bullard**, & CR Arias. Effects of the Deepwater Horizon oil spill on the bacterial communities of the Gulf killifish. American Soc. Microbiology. Jun 16-19, 2012. San Francisco, CA.
- 84. Arias†, CR, S LaFrentz, **SA Bullard**, & P Johnson. Understanding bacterial communities and symbiotic relationships in freshwater mussels. American Soc. Microbiology. 16-19 Jun 2012. San Francisco, CA.
- 83. Arias†, CR, W Cai\*, E Peatman, & **SA Bullard.** Resistance to columnaris disease in channel catfish x blue catfish hybrid as compared to its parental species. World Aquaculture Society, Las Vegas, NV. 29 Feb-2 Mar 2012.
- 82. **Bullard†**, **SA** & S Cox\*\*. Another zebrafish case study: Unexpected trematode infection casts doubt on claim of laboratory-reared experimental zebrafish. World Aquaculture Soc, Las Vegas, NV. 29 Feb-2 Mar 2012.
- 81. **Bullard†**, **SA** & TN Truong\*. Do hybrid catfish resist parasite infections? Metazoan parasite biodiversity in channel catfish (*Ictalurus punctatus*), blue catfish (*Ictalurus furcatus*), and C×B hybrid catfish (female *Ictalurus punctatus* × male *Ictalurus furcatus*) in earthen-pond aquaculture. World Aquaculture Soc., Las Vegas, NV. 29 Feb-2 Mar 2012
- 80. Larsen, A\*, **SA Bullard**, & CR Arias. Effects of the Deepwater Horizon oil spill on the bacterial communities of the Gulf Killifish (*Fundulus grandis*). 89<sup>th</sup> Alabama Academy of Sciences. 24 Feb 2012. Tuskegee, AL.
- 79. Arias†, CR, Z Tao\*, & **SA Bullard.** Presence of the human pathogen *Vibrio vulnificus* in tar balls collected on beach areas following the 2010 BP Deepwater Horizon oil spill. 89th Alabama Academy of Sciences. 24 Feb 2012. Tuskegee, AL. **2011** (8)
- 78. Truong†\*, TN & **SA Bullard.** Comparative study on the parasite biodiversity of channel catfish (*Ictalurus punctatus*), blue catfish (*Ictalurus furcatus*), and hybrid catfish (female *Ictalurus punctatus* x male *Ictalurus furcatus*) in small pond aquaculture. SE Society of Parasitologists, Helen, GA. 6-9 Apr 2011.
- 77. McElwain†\*, A, S LaFrentz, CR Arias, & SA Bullard. A Unionid Histological Atlas. SE Society of Parasitologists, Helen, GA. 6-9
  Apr 2011
- 76. Cox†\*\*, SJ, CR Arias, & **SA Bullard.** An unexpected trematode infection casts doubt on claim of "laboratory-reared" experimental zebrafish. SE Soc. Parasitologists, Helen, GA. 6-9 Apr 2011.
- 75. Ruiz†\*, CF, ER Salmon, C Edds, GW Benz, & **SA Bullard.** Parasites as biosensors of the 2010 *BP Deepwater Horizon* Oil Spill. SE Society of Parasitologists, Helen, GA. 6-9 Apr 2011.
- 74. Bullard†, SA Coevolution of blood flukes in non-tetrapod craniates. SE Society for Parasitologists, Helen, GA. 6-9 Apr 2011.
- 73. Ruiz†\*, CR, ER Salmon, C Edds, GW Benz, & **SA Bullard.** Parasite biodiversity as an indicator of ecosystem health: Investigating acute and chronic perturbations after the 2010 BP *Deepwater Horizon* Oil Spill in the Northern Gulf of Mexico. SE Ecology & Evolution Conf., Auburn, AL. 25-27 Mar 2011.
- 72. Ruiz†\*, CR & **SA Bullard.** Elucidating host specificity among congeneric ectoparasitic flatworms infecting skin of requiem sharks (Carcharhiniformes) in the Northern Gulf of Mexico. SE Ecology & Evolution Conference, Auburn, AL. 25-27 Mar 2011.
- 71. Farmer, BD, AJ Mitchell, **SA Bullard**, & DL Straus. The effectiveness of multiple tank treatments of copper sulfate and formalin on gill flukes and ich in naturally infested white bass. World Aquaculture Society, New Orleans, LA, 28 Feb-3 Mar 2011. **2010** (9)
- 70. **Bullard†**, **SA** & GW Benz. Conceptual Framework for the Use of Ectoparasites and Endoparasites of Fishes as Bioindicators of Acute and Chronic Environmental Perturbation After the 2010 Deepwater Horizon Oil Spill (DHOS) in the Gulf of Mexico. 6th International Symposium on Aquatic Animal Health, Tampa, FL, 5-9 Sep 2010.
- 69. Olivares-Fuster, O\*, **SA Bullard**, A McElwain†\*, & CR Arias. Adhesion dynamics of *Flavobacterium columnare* to channel catfish (*Ictalurus punctatus*) and zebrafish (*Danio rerio*) after immersion challenge. 6th International Symposium on Aquatic Animal Health, Tampa, FL, 5-9 Sep 2010.
- 68. Truong†\*, TN & **SA Bullard.** Infection dynamics of ecto- and endoparasites of channel catfish (*Ictalurus punctatus*), blue catfish (*Ictalurus furcatus*), and C×B hybrid catfish (female *Ictalurus punctatus* × male *Ictalurus furcatus*) in earthen pond aquaculture. International Symposium Aquatic Animal Health, Tampa, FL, 5-9 Sep 2010.
- 67. McElwain†\*, A, O Olivares-Fuster\*, CR Arias, & **SA Bullard.** Ultrastructure of Skin Lesions on Channel Catfish, *Ictalurus punctatus* Exposed to *Flavobacterium columnare* Insights on Skin Discoloration and Epidermal Damage. 6th International Symposium on Aquatic Animal Health, Tampa, FL, 5-9 Sep 2010.

- 66. McElwain†\*, A, CR Arias, & **SA Bullard.** Histology of the Alabama Rainbow, *Villosa nebulosa* (Bivalvia: Unionidae) Towards a Histological Atlas for the Freshwater Mussels.(Unionoidea). 6<sup>th</sup> International Symposium on Aquatic Animal Health, Tampa, FL, 5-9 Sep 2010.
- 65. Ferrell†\*\*, MB, RR Wood\*, CR Arias, & **SA Bullard.** Making life simple: a species of *Phyllodistomum* (Digenea: Gorgoderidae) with a truncated life cycle. 24<sup>th</sup> National Conference for Undergraduate Research, U. of Montana, Missoula, 15-17 Apr 2010.
- 64. Ferrell†\*\*, MB, RR Wood\*, CR Arias, & **SA Bullard.** A species of *Phyllodistomum* (Digenea: Gorgoderidae) with a truncated, 2-host life cycle. 7<sup>th</sup> Annual AU Undergraduate Research & Creative Scholarship Forum, Auburn, 6-7 Apr 2010.
- 63. Ferrell†\*\*, MB & **SA Bullard.** Do trematodes always castrate mollusks?: Pathological changes associated with cercarial infections of *Phyllodistomum* sp. in the visceral mass of wild-caught yellow sandshells, *Lampsilis teres* (Unionidae) from Line Creek, AlabamA International Triennial Meeting of the National Shellfisheries Association, American Fisheries Society Fish Culture Section, & World Aquaculture Society, San Diego, CA, 1-5 Mar 2010.
- 62. McElwain†\*, A, O Olivares-Fuster\*, CR Arias, & **SA Bullard.** Scanning electron microscopy of skin of channel catfish, *Ictalurus punctatus* exposed to *Flavobacterium columnare*. International Triennial Meeting of the National Shellfisheries Association, American Fisheries Society Fish Culture Section, & World Aquaculture Society, San Diego, CA, 1-5 Mar 2010. **2009** (10)
- 61. McElwain\*, A, O Oliveras-Fuster\*, CR Arias, & **SA Bullard†.** Pathological changes to skin and gill of channel catfish (*Ictalurus punctatus*) and zerbafish (*Danio rerio*) associated with *Flavobacterium columnare*, the causative agent of columnaris disease. 2<sup>nd</sup> International *Flavobacterium* Workshop. Paris, France, 21-23 Sep 2009.
- 60. **Bullard†**, **SA** Pathology and phylogeny suggest fish blood flukes (Digenea: Aporocotylidae) and fish share a long evolutionary history. 14<sup>th</sup> European Assoc of Fish Pathologists. Prague, Czech Republic. 14-19 Sep 2009.
- 59. Ferrell\*\*, MB, JA Stoeckle, & **SA Bullard†.** Pathological effects of gorgoderid infections (Platyhelminthes: Digenea) in North American freshwater mussels (Unionidae). 14<sup>th</sup> European Assoc Fish Pathologists. Prague, Czech Republic. 14-19 Sep 2009.
- 58. Carreras†, M, M Carrassó, **SA Bullard**, A Pérez-del Olmo, & FE Montero. *Cyclocotyla bellones:* Hyperparasite, Parasite, or Epibiont? 6<sup>th</sup> International Symposium on Monogenea, Cape Town, South Africa. August 2009.
- 57. **Bullard†**, **SA**, SS Curran, & M Henry Sabaj Perez. Biodiversity and systematic interrelationships of fish blood flukes (Digenea: Aporocotylidae) infecting the body cavity and heart of South American freshwater catfishes (Siluriformes). American Society of Parasitologists. Knoxville, TN. 14-17 Aug 2009.
- 56. Ferrell\*\*, MB & **SA Bullard†**. Life history and histopathology of *Phyllodistomum* sp. (Digenea: Gorgoderidae) in the yellow sandshell, *Lampsilis teres* (Bivalvia: Unionidae) in Line Creek, AL, USA. American Society of Parasitologists. Knoxville, TN. 14-17 Aug 2009.
- 55. Olivares-Fuster, O\*, **SA Bullard**, & CR Arias. Zebrafish as a model host for *Flavobacterium columnare* pathogenesis. 3<sup>rd</sup>
  Congress of European Microbiologists, Microbial Infections of Aquatic Animals, Gottenburg, Sweden. 26 Jun-3 Jul 2009.
- 54. McVay†\*\*, MJ, M Bakenhaster, & SA Bullard. Cardicola laruei Short, 1953 (Digenea: Aporocotylidae): Taxonomic redescription, geographic distribution, & potential use as a biological tag in Gulf of Mexico spotted seatrout, Cynoscion nebulosus (Sciaendiae) off Mississippi & Florida. SE Society of Parasitologists, Murray State University, KY. 15-17 Apr 2009.
- 53. Ferrell†\*\*, MB, JA Stoeckle, & **SA Bullard.** Taxonomy and histopathology of cercarial infections (Platyhelminthes: Digenea) in yellow sandshells, *Lampsilis teres* (Rafinesque, 1820) (Bivalvia: Unionidae) from Line Creek, Alabama, USA. SE Society of Parasitologists, Murray State University, KY. 15-17 Apr 2009.
- 52. Ruiz†\*\*, CF, AM Landry, & **SA Bullard.** Host specificity among congeneric monogeneans infecting congeneric, sympatric sharks: Prevalence of *Dermophthirius penneri* and *Dermophthirius maccallumi* (Monogenea: Microbothriidae) on the skin of blacktip sharks (*Carcharhinus limbatus*) and bull sharks (*Carcharhinus leucas*) in the Northern Gulf of Mexico. SE Society of Parasitologists, Murray State University, KY. 15-17 Apr 2009.

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- 51. Ruiz†\*\*, CF, AM Landry, & **SA Bullard.** Can shark parasites distinguish between phylogenetically and ecologically related hosts? The distribution of *Dermophthirius penneri* and *Dermophthirius maccallumi* (Monogenea: Microbothriidae) on the skin of blacktip sharks (*Carcharhinus limbatus*) and bull sharks (*Carcharhinus leucas*) off the Texas Coast. Texas A&M, Dept. of Marine Biology, Galveston, TX. June 2008. Poster presentation.
- 50. Schumacher†, VL, **SA Bullard**, & S Frasca, Jr. Gill arch mineralization in a bluntnose stingray, *Dasyatis say*. 33<sup>rd</sup> Eastern Fish Health Workshop, Atlantic Beach, NC, Mar 2008.

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- 49. **Bullard†**, **SA** Morphology shows concordance between the fish blood flukes (Digenea: Aporocotylidae) and the primary lineages of non-tetrapod gnathostomes. The First North American Parasitology Congress, American Society of Parasitologists, Merida, Mexico. 21-24 Jun 2007.
- 48. Bullard†, SA Are fish blood flukes (Digenea: Aporocotylidae) and fishes coevolving? Southwestern Association of Parasitologists. U Oklahoma Biological Station (UOBS), Kingston, OK. 19-20 Apr 2007. 2006 (2)
- 47. Call†\*, G, K Jensen, & **SA Bullard.** Tapeworms of the cownose ray, *Rhinoptera bonasus*, from the northern Gulf of Mexico, with comments on intermediate hosts. Int. Congress of Parasitology. Glasgow, Scotland. 6-14 Aug 2006.
- 46. **Bullard†**, **SA**, K Jensen, & SD Snyder. Blood flukes (Sanguinicolidae) of basal actinopterygiians. International Congress of Parasitology. Glasgow, Scotland. 6-14 Aug 2006.

# 2005 (6)

- 45. Overstreet, RM, **SA Bullard†**, RW Heard, Jr, & JO Cook. Using local marine parasites as teaching tools. American Society of Parasitologists. Mobile, AL. 8-12 Jul 2005.
- 44. Fouasnon†\*\*, H & **SA Bullard.** Skin lesions associated with *Dendromonocotyle octodiscus* (Monogenea: Monocotylidae) on bluntnose stingrays (*Dasyatis say*) and yellow stingrays (*Urobatis jamaicensis*) in the Gulf of Mexico. American Society of Parasitologists. Mobile, AL. 8-12 Jul 2005.

- 43. **Bullard†**, **SA** & RM Overstreet. An epizootic of *Neobenedenia melleni* (Monogenea: Capsalidae) on the external body surfaces of red snapper (*Lutjanus campechanus*) in recirculating aquaculture. Mississippi Academy of Sciences. 16-18 Feb 2005.
- 42. Cook†, JO, **SA Bullard,** & RM Overstreet. *Kudoa* sp. from brain of Gulf killifish (*Fundulus grandis*) in MS Sound and adjacent waters. MS Academy of Sciences. 16-18 Feb 2005.
- 41. Fouasnon†\*\*, H & **SA Bullard.** Skin lesions associated with *Dendromonocotyle octodiscus* (Monogenea: Monocotylidae) on bluntnose stingrays (*Dasyatis say*) and yellow stingrays (*Urobatis jamaicensis*) in the Gulf of Mexico. MS Academy of Sciences. 16-18 Feb 2005.
- 40. **Bullard†**, **SA** & RM Overstreet. Pathological effects of *Neobenedenia melleni* (Monogenea) on red snapper *Lutjanus campechanus* in recirculating aquaculture. Aquaculture America. 17-20 Jan 2005.

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- 39. **Bullard†, SA** & RM Overstreet. Skin lesions associated with *Neobenedenia melleni* (Monogenea: Capsalidae) on red snapper *Lutjanus campechanus* in recirculating aquaculture. Joint meeting of the American Society of Parasitologists & the American Association of Veterinary Parasitologists. 24 Jul 2004. Presenting senior author.
- 38. Benz†, GW & **SA Bullard.** Infectious Agents and the Liberation of Captive Elasmobranchs: A Perspective. Joint meeting of Ichthyologists & Herpetologists, 20<sup>th</sup> American Elasmobranch Society. 26 May 2004.
- 37. **Bullard†, SA** & RM Overstreet. Pathological effects of *Neobenedenia melleni* (Monogenea: Capsalidae) on red snapper *Lutjanus campechanus* in recirculating aquaculture. SE Society of Parasitologists. 14 Apr 2004.
- 36. **Bullard†, SA,** SF Frasca Jr, VL Kirsipuu, S Russell, & GW Benz. Opercular lesions associated with infections of the sea louse, *Sciaenophilus tenuis* (Copepoda: Caligidae), in black drum, *Pogonias cromis*, from Mississippi Sound. Marine & Estuarine Graduate Student Symposium, Ocean Springs, MS. 30 Jan 2004.

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- 35. Frasca†, S, Jr, VL Kirsipuu, S Russell, **SA Bullard**, & GW Benz. Opercular lesions associated with infections of the sea louse, *Sciaenophilus tenuis* (Copepoda: Caligidae), in black drum, *Pogonias cromis*, from Mississippi Sound. American Soc. Parasitologists, Halifax, Nova Scotia. 4-9 Aug 2003.
- 34. Frasca, S, Jr., VL Kirsipuu, S Russell, **SA Bullard†**, & GW Benz. Opercular lesions associated with infections of the sea louse, *Sciaenophilus tenuis* (Caligidae), in black drum, *Pogonias cromis*, from Mississippi Sound. SE Soc. Parasitologists, University of South Alabama, Mobile, AL. 16-18 Apr 2003.
- 33. **Bullard†**, **SA**, SS Curran, F Pezold, & RM Overstreet. Biodiversity and evolution of marine and freshwater fish parasites from the Americas and Western Africa. Graduate Student Symposium, sponsored by University of Southern Mississippi, University of South Alabama, & Louisiana State University, Dauphin Island Sea Lab, Dauphin Island, AL. 14-15 Feb 2003.

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- 32. **Bullard†**, **SA** Metazoan parasites as potential pathogens, bioindicators, and biological tags of Acipenseriformes. University of Southern Mississippi & the Mississippi Museum of Natural History Gulf Sturgeon Workshop, 2002.
- 31. **Bullard†**, **SA** & RM Overstreet. Pathological effects of blood flukes (Sanguinicolidae) on marine fishes relative to aquaculture. Fourth International Symposium on Aquatic Animal Health. New Orleans, LA. 1-5 Sep 2002.
- 30. Blaylock, RB, **SA Bullard†**, & CM Whipps. Patterns in pathology of *Kudoa* spp. from pericardium of fishes in the Northern Gulf of Mexico. 4th International Symposium on Aquatic Animal Health. New Orleans, LA. 1-5 Sep 2002.
- 29. **Bullard†, SA** & RM Overstreet. Pathological effects of blood flukes (Sanguinicolidae). International Congress of Parasitology, Vancouver, BC, Canada, page 114. 9 Aug 2002.
- 28. Blaylock, RB, **SA Bullard**, & CM Whipps. *Kudoa* spp. from the pericardium of fishes in the Northern Gulf of Mexico: Emerging pattern or anomalous finding? Conference on the Myxozoa, International Congress of Parasitology, Vancouver, British Columbia, Canada. 5 Aug 2002.
- 27. Soto†, MA, SS Curran, & **SA Bullard.** Using parasites to assess the impact of hypersalinities on fish and crustacean populations. TX Chapter American Fisheries Society. 2002.
- 26. **Bullard†, SA,** RM Overstreet, T Rainwater, S Platt, & SM McMurry. Taxonomy and zoogeography of ascaridoid nematodes from the stomach of Morelet's and American crocodiles from Belize. Joint meeting of the SE Society of Biologists & SE Soc. Parasitologists, Boone, NC, page 14, 12 Apr 2002.
- 25. **Bullard†**, SA & RM Overstreet. Pathology, ecology, and taxonomy of blood flukes (Sanguinicolidae) from hearts of fishes in the Gulf of Mexico, Mississippi Acad. Sci., Biloxi, MS, page 56, 20 Feb 2002.
- 24. Bakenhaster, M & **SA Bullard†.** Observations on *Cyclocotyla louisianensis* (Diclidophoridae) on *Livoneca ovalis* and *Menticirrhus saxatilis*. Marine & Estuarine Graduate Student Symposium, Ocean Springs, MS. 26 Jan 2002.
- 23. **Bullard†, SA**, S Frasca, Jr, & GW Benz. Skin and gill lesions elucidate monogenean-shark relationships. Marine & Estuarine Graduate Student Symposium, Ocean Springs, MS. 26 Jan 2002.
- 22. **Bullard†, SA**, RM Overstreet, T Rainwater, & S Platt. Taxonomy and zoogeography of ascaridoid nematodes from the stomach of Morelet's and American crocodiles from Belize. Marine & Estuarine Graduate Student Symposium, Ocean Springs, MS. 26 Jan 2002.

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- 21. **Bullard†, SA** & RM Overstreet. Blood flukes (Sanguinicolidae) of fishes in the Gulf of Mexico. Marine & Estuarine Graduate Student Symposium, Ocean Springs, MS. 26 Jan 2001.
- 20. Benz†, GW & **SA Bullard.** Metazoan parasites of Elasmobranchs. First International Symposium on Elasmobranch Husbandry, Orlando, FL. 2001.
- 19. Frasca†, S, Jr, **SA Bullard,** & GW Benz. Lesions provide clues to the life histories of two monogeneans that infect sharks. International Association of Aquatic Animals & Medicine, Tampa, FL. 2001.
- 18. **Bullard†**, **SA**, RM Overstreet, SD Snyder, & RM Bruch. Potential pathological effects of blood flukes (Digenea: Sanguinicolidae) on captive sturgeons. Extended Abstracts: Aquaculture & General Biology of the 4th International Symposium on Sturgeon, Oshkosh, WI page GB-13. 12 Jul 2001.

- 17. **Bullard†, SA** & RM Overstreet. Blood flukes from fishes of the Northern Gulf of Mexico. American Society of Parasitologists, Albuquerque, NM p 84. 2 Jul 2001.
- 16. **Bullard†, SA** & RM Overstreet. Blood flukes (Sanguinicolidae) from hearts of Gulf of Mexico fishes. SE Society of Parasitologists, Berry College, Rome, GA, 16 May 2001.
- 15. **Bullard†, SA,** S Frasca, Jr, & GW Benz. Lesions associated with the monogenean *Erpocotyle tiburonis* on gills of wild and captive bonnethead sharks (*Sphyrna tiburo*). Mississippi Academy of Science, Tupelo, MS page 55. 7 Feb 2001.

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- 14. **Bullard†, SA** & RM Overstreet. Potential pathological effects of blood flukes (Sanguinicolidae) on pen-reared marine fishes. 53<sup>rd</sup> Gulf & Caribbean Fisheries Institute, Biloxi, MS. 6 Nov 2000.
- 13. **Bullard†, SA,** A Soto, & RM Overstreet. What the heck is going on: observations of *Cyclocotyla louisianensis* on *Livoneca ovalis* and *Menticirrhus saxatilis*. Late breaker, American Society of Parasitologists & the Society of Nematodologists, Monterey, CA. 28 Jun 2000.
- 12. **Bullard†**, **SA**, RM Overstreet, & JS Braswell. Tegumental spines of blood flukes (Digenea: Sanguinicolidae) from the heart of requiem sharks (Carcharhinidae) and drums (Sciaenidae) in the northern Gulf of Mexico. American Society of Parasitologists & Society of Protozoologists, San Juan, Puerto Rico p 54. 25 Jun 2000.
- 11. **Bullard†, SA**, RM Overstreet, & JS Braswell. Tegumental spines of blood flukes (Digenea: Sanguinicolidae) from the heart of requiem sharks (Carcharhinidae) and drums (Sciaenidae) in the northern Gulf of Mexico. SE Society of Parasitologists, Association of SE Biologists, Chattanooga, TN p 13. 9 Apr 2000.

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- Bullard†, SA, S Frasca, Jr, & GW Benz. Skin lesions caused by *Dermophthirius penneri* (Monogenea: Microbothriidae) on wild-caught blacktip sharks (*Carcharhinus limbatus*). SE Society of Parasitologists, Columbiana, AL abstract #20. 7 Apr 1999.
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- 8. **Bullard†**, **SA**, SS Curran, & RM Overstreet. Metazoan parasites from the Gulf of California: The monogenean genus *Calicotyle*. Symposium on the metazoan parasites of elasmobranchs from the Gulf of California. American Society of Parasitologists, Kona, HI page 59. 18 Aug 1998.
- 7. **Bullard†, SA,** SS Curran, & RM Overstreet. Two species of *Calicotyle* (Monogenea) from the Gulf of California. SE Society of Parasitologists, Clemson, SC. 23 Apr 1998.

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- 6. **Bullard†, SA** & GW Benz. Growth of *Dermophthirius nigrellii* (Monogenea: Microbothriidae). TN Academy of Sciences, University of the South, Sewanee, TN. 22 Nov 1997.
- 5. **Bullard†, SA.** Phylogenetic study of siphonostomes (Copepoda: Siphonostomatoidea). University of South Carolina Dept. of Biological Sciences-Howard Hughes Undergraduate Research Symposium, Columbia, SC. 8 May 1997. Abstract, Symposium.
- 4. **Bullard†**, **SA**, GW Benz, & JS Braswell. *Dionchus*-like immatures from the external surface of a blacktip shark (*Carcharhinus limbatus*). SE Soc.Parasitologists, Furman University, Greenville, SC. 16 Apr 1997.

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- 3. **Bullard†, SA,** GW Benz, & JS Braswell. *Dionchus*-like immatures from the external surface of a blacktip shark (*Carcharhinus limbatus*). American Soc. Parasitologists, Nashville, TN page 10. 24 Jun 1996.
- 2. **Bullard†, SA** & GW Benz. Postlarval growth and development of *Dermophthirius nigrellii*, an ectoparasite of lemon sharks. TN Academy of Sciences, Hancock Biological Station Murray State University, Kentucky Lake, KY. 1996.

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1. **Bullard†, SA** & GW Benz. Postlarval growth of *Dermophthirius nigrellii*, (Monogenea: Microbothriidae), an ectoparasite of lemon sharks. Late breaker session of the Joint meeting of the American Society of Parasitologists & the American Association of Veterinary Parasitologists, Pittsburgh, PA. 9 Jul 1995.

### Agency/management conferences (\*presenter[s])

- 13. **Bullard, SA**, CR Arias, CF Ruiz, R Orélis-Ribeiro, W Cai, JR Roberts. 2016. First detection of *Myxobolus cerebralis* (causative agent of whirling disease) in the Southeastern United States. Annual Alabama Department of Conservation and Natural Resources project review meeting. 29 Jan 2016.
- 12. Arias, CR, **SA Bullard**, CF Ruiz, R Orélis-Ribeiro, C Ray, W Cai, JR Roberts. 2016. Activities of the Southeastern Cooperative Fish Parasite and Disease Project 2015. Annual Alabama Department of Conservation and Natural Resources project review meeting. 29 Jan 2016.
- 11. **Bullard\***, **SA** CR Arias\*. Alabama Department of Conservation and Natural Resources, Inland Fisheries, Fish Kill Workshop. Guest Co-instructors. This 5 day course trained state and federal fisheries agency personnel to assess and quantify fish kills. SAB lectured on fish diseases, parasitology, pathology, and necropsy techniques. Lakepoint State Park, Alabama. 16-20 November 2015.
- 10. Womble\*, MR, **SA Bullard,** D DeVries, R Wright, E Peatman, S Gowan, L Grove. Documenting *Alosa aestivalis* in Alabama. ADCNR Annual Project Review, Auburn, AL 6 Feb 2015.
- 9. **Bullard\***, **SA.** 2013. Relevant research in 60 seconds, "Columnaris disease and biosecurity." AU-SFAAS Catfish Industry and Research Update Meeting, Demopolis, AL, 16 Dec 2013.
- 8. McElwain\*, A & SA Bullard. 2013. "New insights on the biology of freshwater mussels through a unionid histological atlas." ADCNR Annual Project Review, Auburn, AL. 1 Feb 2013.
- 7. Arias\*, CR, S LaFrentz, **SA Bullard.** Using microbial communities as biomarkers for animal health. Annual Project Review, ADCNR Project Review, Auburn, AL. 3 Feb 2012.

- 6. McElwain\*, A & **SA Bullard.** Histological Atlas for Freshwater Mussels. Annual Project Review, Alabama Dept of Conservation & Natural Resources, Auburn, AL. 3 Feb 2012.
- 5. Arias, CR\*, **SA Bullard**, S LaFrentz, & A McElwain. "How do bacteria matter to culturing endangered mussels?" ADCNR Annual Project Review, Auburn, AL. 28 Jan 2011.
- 4. **Bullard\*, SA,** CR Arias, A McElwain, and S LaFrentz. "Histological atlas of freshwater mussels: a tool for conservation, culture, and management of freshwater mussels in Alabama." ADCNR Annual Project Review, Auburn, AL 28 Jan 2011.
- 3. **Bullard\***, **SA.** "Do hybrid catfish resist parasitic infections?" Catfish Industry Update 2011, Demopolis, Alabama. Dept of Fisheries and Allied Aquacultures and Alabama Farmers Federation. 14 Dec 2011.
- 2. **Bullard\***, **SA.** "Auburn Parasitology: Current and Future Research in the North-Central Gulf of Mexico." Auburn University Coastal Roundup, Auburn, AL. 9 Mar 2009.
- 1. **Bullard\*, SA.** "Host-parasite relationships across short- & long-term scales." Fish & Wildlife Health Group, FL Fish & Wildlife Conservation Comm., St. Petersburg, FL, 3 Dec 2008.

#### **Grants & contracts**

- Alabama Department of Conservation and Natural Resources: "Interdisciplinary research to identify and eliminate propagation bottlenecks for unionids. PI: SA Bullard; Co-PI: CR Arias. \$163,058, 3 years.
- Alabama Marine Resources Division, Alabama Department of Conservation & Natural Resources: Fish Disease Surveillance for hatchery and Feral Populations of Targeted Marine Finfish Species in Alabama and North Central Gulf of Mexico. Pls: SA Bullard, CR Arias. \$24,960, 1 year.
- York International Scholars Program: "Auburn University & Peruvian Museum of Natural History: Surveying potential pathogens of aquacultured and wild-caught fishes, bush meat, and other wildlife sold in the artisanal street markets of the Upper Amazonian Basin (Iquitos, Peru)." PI: SA Bullard. \$2,800, 1 year.
- Virginia Department of Conservation and Recreation, Inland Fisheries Division: Hatchery checks supporting recreational trout fisheries in Virginia. PI: CR Arias; CoPI: SA Bullard. \$37,230, 1 year.
- Alabama Department of Conservation and Natural Resources, Freshwater Fisheries Division: "Southeastern Cooperative Fish Disease Project." PI: CR Arias. Co-PI: SA Bullard. \$60,000 (5 yrs). 7/1/2014-6/30/2019.
- North Carolina Wildlife Resources Commission: "Southeastern Cooperative Fish Disease Project." PI: CR Arias. Co-PI: SA Bullard. \$60,000 (5 yrs). 7/1/2014-6/30/2019.
- South Carolina Department of Conservation and Natural Resources: "Southeastern Cooperative Fish Disease Project." PI: CR Arias. Co-PI: SA Bullard. \$60,000 (5 yrs). 7/1/2014-6/30/2019.
- Virginia Department of Conservation and Recreation, Inland Fisheries Division: "Southeastern Cooperative Fish Disease Project." PI: CR Arias. Co-PI: SA Bullard. \$60,000 (5 yrs). 7/1/2014-6/30/2019.
- Georgia Department of Conservation: "Southeastern Cooperative Fish Disease Project." PI: CR Arias. Co-PI: SA Bullard. \$60,000 (5 yrs). 7/1/2014-6/30/2019.
- Alabama Department of Conservation and Natural Resources, Freshwater Fisheries Division: "Fish Kill Investigation Workshop" PI: CR Arias; Co-PI: SA Bullard. \$33,000. 17-18 Nov 2015.
- Alabama Agriculture Experiment Station: "Knocking down barriers to marine finfish culture: investigations on *Amyloodinium ocellatum*". AAES HATCH. PI: E Peatman. Co-PI: SA Bullard. \$40,000. 10/1/14-9/30-16.
- National Science Foundation: "REVSYS: Species discovery and parasitological pedagogy towards the first phylogenetic hypothesis for "fish blood flukes" (Digenea: Aporocotylidae) (DEB-1051106)." PI: SA Bullard. Co-PI: K Halanych. \$406,495. 2/15/11-01/31/16.
- National Science Foundation: US-Vietnam Lower Mekong River Workshop, travel funds for participation in workshop in Can Tho, Vietnam \$2,000. PI: SA Bullard. 11/2015.
- National Science Foundation: US-Vietnam Lower Mekong River Workshop, travel funds for participation in workshop in Laurel, Maryland. \$800. PI: SA Bullard. 10/2015.
- National Science Foundation: "Research Experiences for Undergraduates (REU Supplement)- RAPID: Ectoparasites and endoparasites of fishes as bioindicators of acute and chronic environmental perturbation after the 2010 Deepwater Horizon Oil Spill in the Gulf of Mexico (DEB-1112729)." PI: SA Bullard. Co-PI: GW Benz. \$7,500. 02/01/11-10/31/13.
- National Science Foundation: "Ectoparasites and endoparasites of fishes as bioindicators of acute and chronic environmental perturbation in the wake of the 2010 Gulf of Mexico oil spill (DEB-1048523)." PI: SA Bullard. Co-PI: GW Benz. \$144,185. 08/01/10-10/31/13.
- United States Department of Agriculture: "AM-SPAN: Sharpening AU's global aquaculture competitiveness via American-Spanish Research Education and Extension Partnerships in Marine Aquaculture." PI: CR Arias. Co-PIs: SA Bullard, L Swann. \$149,987. 09/01/10-08/31/13.
- Gulf of Mexico Research Initiative: "GRI RFP-III: Emergency funds to continue monitoring DHOS effects within a heavily-oiled Gulf of Mexico salt marsh- Barataria Bay, Louisiana" PI: SA Bullard. Co-PIs: CR Arias; MA Unger. \$132,000. 7/01/11-2/29/12.
- Alabama Agriculture Experiment Station: "Differential interference contrast microscopy for aquatic disease surveillance: strengthening research capacity & capability of AU's Center for Aquatic Surveillance & Health." Small equipment grants program. PI: SA Bullard. \$5,661 (with 1:1 match from Bullard and SFAAS).
- York International Scholars Program: "AU-Vietnam collaborative research and knowledge exchange: Surveying potential pathogens of aquacultured food fishes in freshwater and marine aquaculture systems in Vietnam." PI: SA Bullard. \$7,500, 1 year.
- Auburn University Provost Office (Undergrad Studies), Special Lectures Committee, Jeffrey Beall Lecture, 19 Sept 2014, \$1,170.
- Alabama Agriculture Experiment Station, College of Agriculture. "Coordination/planning meeting support for RFP-IV Gulf of Mexico Research Initiative Grant. \$3,000 17-18 April 2014.
- Alabama Agriculture Experiment Station: "The next best step: In-pond raceway technology promotes lean manufacturing and biosecurity for Alabama's US Farm-Raised catfish industry." AAES HATCH. PI: SA Bullard. Co-PIs: E Peatman, CR Arias, T. Hanson, J. Chappell. 10/1/13-9/30/15. \$50,000, 2 yrs.

- Alabama Agriculture Experiment Station: "Health & resilience of Gulf of Mexico deep-water fish communities after the 2010 BP Deepwater Horizon Oil Spill." Small equipment grants program. PI: SA Bullard. \$11,408. Oct 2012.
- Alabama Agriculture Experiment Station: "Host-pathogen adhesive interactions of *Flavobacterium columnare* and catfishes (Ictalurus spp.). PI: E. Peatman. Co-PIs: SA Bullard, CR Arias. \$90,048, 2 yrs.
- Alabama Agriculture Experiment Station: "Elucidating adhesion & pathogenesis of *Flavobacterium columnare* genomovars among CxB hybrid, channel, and blue catfishes towards optimizing vaccine efficacy." United States Dept. of Agriculture. Young Investigator HATCH. PI: SA Bullard. Co-PIs: E Peatman, CR Arias. \$50,000, 2 yrs.
- AU Faculty International Travel Grant: PI: SA Bullard. \$4,800. (funds returned due to teaching conflict).
- Gulf of Mexico Research Initiative: "Biomarker prospecting: Detection of impacts of DHOS-related hydrocarbons and dispersant discharge in north-central Gulf of Mexico estuaries using Gulf killifish, *Fundulus grandis*, as a marsh-dwelling environmental sentinel for detecting acute effects of the 2010 BP Deepwater Horizon Oil Spill (DHOS)." (MESC Block Grant, Year 1). PI: SA Bullard. Co-PIs: C Johnston, J Newton, and K Crowe. \$153,977. 11/01/10-3/31/12.
- Mississippi-Alabama Sea Grant: "Pathobiological studies in support of the Gulf of Mexico Marine Hatchery Consortium." PI: SA Bullard. \$50,000. 10/01/10-09/30/12.
- Alabama Department of Wildlife & Freshwater Fisheries: "Towards the first histological atlas for freshwater mussels." PI: SA Bullard. CO-PI: CR Arias. \$21,783. 01/01/10-09/30/10.
- National Oceanic & Atmospheric Administration: "Phase 0: Improving mariculture of fish larvae through improved larval feeds." PI: JT Lemus. Co-PI: SA Bullard. \$2,500. 01/01/09-06/01/09.
- National Science Foundation: "Molecular markers and evolution of fish blood flukes (Digenea)." PI: RM Overstreet. Co-PI: SA Bullard. \$11,677. 06/01/05-05/31/07.
- Mississippi-Alabama SeaGrant: "Blood flukes of commercially and recreationally valued fishes of Mississippi and Alabama: Potential threats to the aquaculture industry of the Gulf States." PI: RM Overstreet. Co-PI: SA Bullard. \$6,000. 04/15/00-04/14/01.
- American Society of Parasitologists. Student Travel Award. "Blood flukes (Sanguinicolidae) from fishes of the Northern Gulf of Mexico." \$400. 07/09/01.
- American Society of Parasitologists. Student Travel Award. "Tegumental spines of blood flukes (Digenea: Sanguinicolidae) from the heart of requiem sharks (Carcharhinidae) and drums (Sciaenidae) in the northern Gulf of Mexico." \$400. 06/09/00.
- Howard Hughes Foundation: "Molecular phylogenetics of siphonostomes." PI: J Quattro. Co-PI: SA Bullard. \$1,000. 09/15/96-05/14/97.
- Academy of Natural Sciences Philadelphia, Jessup Fellowship: "Survey of ratfish parasites." D Didier-Dagit (sponsor). Travel to ANSP and systematically examine specimens of all ratfish (Chimaeridae) species in the collection for the presence of fish blood flukes. \$850. 10/5/04-10/15/04.

### Public engagement & popular articles detailing research

Washington Post: https://www.washingtonpost.com/local/yes-theres-really-a-national-parasite-collection-and-its-getting-a-new-life-at-the-smithsonian/2016/03/19/136541da-e16b-11e5-846c-10191d1fc4ec\_story.html

Washington Post: National Parasite Collection piece showcasing some parasites we described (#3, #5):

https://www.washingtonpost.com/apps/g/page/local/meet-the-national-parasite-collections-most-fascinating-creepy-crawlies/1993/Whirling Disease, NC Wildlife Commission: http://www.ncwildlife.org/Fishing/WhirlingDisease.aspx (this webpage was created subsequent to the discovery of myxospores of Myxobolus cerebralis at the AU-Center for Aquatic Surveillance and Health).

North Carolina Wildlife Resources Commission: http://www.ncwildlife.org/News/NewsArticle/tabid/416/IndexID/10195/Default.aspx

North Carolina Wildlife Resources Commission: https://www.facebook.com/ncwildliferesourcescommission

ABC News11: http://abc11.com/news/disorder-affecting-trout-found-in-watauga-river/897761/

Watauga Democrat.com: http://www.wataugademocrat.com/news/whirling-disease-gill-lice-found-in-watauga-trout/article\_331f7b9b-c02b-5ae7-9904-d55c6897010f.html

North Carolina Sportsman: http://www.northcarolinasportsman.com/details.php?id=5220

Outdoor News Daily: http://outdoornewsdaily.com/whirling-disease-impacts-on-trout-populations-in-north-carolina/

Citizen-Times: http://www.citizen-times.com/story/sports/outdoors/girls-gone-outdoors/2015/07/29/whirling-disease-found--watauga-river-rainbow-trout/30849515/

Greenville Online: http://www.greenvilleonline.com/story/news/local/2015/07/31/whirling-disease-north-carolina-trout/30945685/

AU Social Network: http://family.auburn.edu/profiles/blogs/auburn-professor-to-continue-s

GoMRI: http://gulfresearchinitiative.org/2012/killifish-the-white-mouse-of-marine-science-in-gulf-oil-studies/

AU Office of Communications & Marketing: http://ocm.auburn.edu/news/gulf\_oil\_spill.html

AU Wire Eagle: http://wireeagle.auburn.edu/news/3714

Blog Alabama.com: http://blog.al.com/spotnews/2010/07/auburn university scientist to.html

Fox19 News: http://www.fox19.com/story/12853615/auburn-university-gets-nsf-grant-to-study-oil-spill-effects?clienttype=printable 2015. Gulf Coast Research Laboratory, University of Southern Mississippi; featured spotlight in "Success Stories from GCRL": http://www.usm.edu/gcrl/coastal\_sciences/coastal.sciences.success.stories.php

- 2014. PBS/NOVA, Ari Daniel, interview and provided help in assembling information for online game teaching evolutionary theory. 9 Dec 2014.
- 2012. Gulf of Mexico Research Initiative: http://www.gulfresearchinitiative.org/2012/killifish-the-white-mouse-of-marine-science-in-gulf-oil-studies/ "Gulf Killifish: The white mouse of Marine Science in Gulf oil studies. 18 May.
- 2012. Mackiewcz, J. "Keeping an eye on the Gulf by watching its parasites." Allen Furr & Jay Lamar, eds. Auburn University, Office of the Vice President for Research. Article describing Bullard's research on 2010 BP Deepwater Horizon Oil Spill. Pages 82-84.
- 2012. Johnson, CM, J Newton, SA Bullard, C Foradori, and B Kaltenboeck. "Help from a common inhabitant: Identification of exposure biomarkers in an indigenous fish species." Allen Furr & Jay Lamar, eds. Auburn University, Office of the Vice President for Research. Article describing research on 2010 BP Deepwater Horizon Oil Spill. pages 86-89.

- 2011. Science Competition Judge (volunteer), Eighth Annual AU Undergraduate Research and Creative Scholarship Forum, Student Activity Center, AU on Apr 13-14.
- 2011. E-commons, AU, "Auburn professor to continue study of oil spill impact with Gulf of Mexico Research Initiative grant." 11 Aug.
- 2011. Auburn Plainsman. "Professor researches effects of oil spill." Interview regarding BP GRI-III award. 28 Jul.
- http://www.theplainsman.com/pages/full story/push?article-Professor+researches+effects+of+oil+spill%20&id=14871809
- 2011. Wire Eagle. "Auburn professor to continue study of oil spill impact with Gulf of Mexico Research Initiative grant." 25 Jul. http://family.auburn.edu/profiles/blogs/auburn-professor-to-continue-s
- 2010. Provided presentation materials on fish parasites to Tara Crow (Public Programs Manager, Heal the Bay's Santa Monica Pier Aquarium) for "Fish Fest- Celebrating Halloween and Dia de los Muertos." 11 Oct.
- 2010. Ledger-Enquirer.com. "Auburn University professor Stephen Ash Bullard to continue to study of oil spill effects." http://www.ledger-enquirer.com/2011/07/26/1671164/auburn-university-professor-stephen.html
- 2010. Auburn Plainsman, undergraduate photojournalism project/NSF RAPID (Maria Lampietro). 7 Dec.
- 2010. WTVM Channel 9 Columbus. Interview for NSF RAPID grant. 16 Aug 2010.
- 2010. AU eCommons. "Auburn Professor to study impact of oil spill with grant from NSF". 6 Aug.
- 2010. Reporting related to NSF RAPID oil spill grant (Auburn local paper).
- 2010. Wire Eagle. "Auburn University professor to study impact of oil spill with grant from National Science Foundation". 21 Jul.
- 2010. Opelika Auburn News. "AU scientist gets grant to study effects of oil spill damage." 23 Jul.
- 2010. Birmingham News. "Auburn University scientist to study Gulf fish parasites to understand oil damage." Coverage of NSF RAPID oil spill grant. 22 Jul.
- 2010. AU Daily. "Professor receives grant to study effects of oil spill." 21 Jul.
- 2009. Ag Hill Update. Marine Ichthyology field course, "Bullard makes the news." 24 Jun.
- 2009. MS Press. "Scientists make use of tournament; Tourney assists research." 8 Jun.
- 2008. ESPN Outdoors. Coverage of DOE Richton Salt Dome Project. 08/29/08.
- 2008. Sun Herald. "Long-term study needed: How will salt dome affect things?" 08/08/08.
- 2008. WLOX-TV News. The 4 O'Clock Show, "Richton Salt Dome Project." 08/07/08.
- 2008. Sun Herald. "Scientist boils down salt dome: Lecture will explain project to public." 08/04/08.
- 2008. WKRG News Mobile-Pensacola. Comment on ciguatera toxin in fishes. 02/06/08.
- 2008. Sun Herald. Comments and analyses of DOE Richton Salt Dome Project 2007-2009.
- 2006. Ocean Springs Record. "Focus on fishes." 09/21/06.
- 2006. Mississippi Press. "Scouts gather hands on learning about coast ecosystem." 09/17/06.
- 2006. Girl Scouts of America. "Crikey! Girl scouts study stingrays at GCRL." 09/16/06.
- 2005. Science News. "Katrina's fallout" 168(21):321-336.
- 2005. Ocean Springs Press. "Parasites Spell Adventure for Southern Miss Student at GCRL." 04/04/05.
- 2004. Sports Illustrated. Media Contact. "It's a 'reel' whopper." 06/28/04.

# Field Experiences (9 countries; 5 continents & 4 ocean basins, totaling ~400 expedition days)

- Vietnam, Mekong River Basin (Can Tho). Collections of parasites from freshwater fishes of the Mekong River. MR Womble and SA Bullard 27 Nov-7 Dec 2015 (with funds from NSF-Lower Mekong River Basin working group).
- Vietnam, South China Sea (Nha Trang City). Collections of parasites from South China Sea in collaboration with Dr. Binh Dang Thuy (Nha Trang University). M Womble, J Roberts, R Ribeiro, B Daniels, and SA Bullard. 1–18 June 2015 (with funds from the York International Scholars Program and National Science Foundation).
- Lake Winnebago, Oshkosh, Wisconsin. Collections of parasites & tissues from lake sturgeon (*Acipenser flavescens*) during the annual sturgeon ice spearing event held on Lake Winnebago. Ryan Koenigs (Wisconsin Department of Natural Resources, Oshkosh, WI, Local Contact). 9-10 Feb 2015.
- Mexico, Yucatán, Gulf of Mexico. Collections of parasites from marine & estuarine fishes from coastal habitats of Celestun Lagoon. Victor Vidal-Martinez & Leopoldina Vidal-Martinez (Centro de Investigación y de Estudios Avenzados, Merida); Robin M. Overstreet (U So. Mississippi, Principal Investigator, NSF-Partnerships for Enhancing Expertise in Taxonomy). 2-5 Jul 2007.
- Micronesia, (The Federated States of Micronesia) Central Pacific Ocean. Collections of parasites from fishes taken from fish markets & reef & estuarine localities in & around the island of Pohnpei, based in the town of Kolonia. Frank Pezold (Texas A&M University, Corpus Christi, Co-Principal Investigator, NSF-International Research Experiences for Undergraduates); Brian Lynch (College of Micronesia, Pohnpei, Micronesia, Collaborator); Robin M. Overstreet (U So Mississippi, PI, NSF-Partnerships for Enhancing Expertise in Taxonomy). 15 May-14 Jun 2007.
- South Africa, De Mond & De Hoop Nature Reserves, SE Atlantic Ocean. Collections of parasites from fishes & invertebrates from tide pool, rocky shore, estuarine, & freshwater sites throughout South Africa. Jo van As & Leisle van As (University of the Free State, Bloemfontein, South Africa, Collaborators); Stephen A. Bullard (U So Mississippi, Co-Principal Investigator, NSF-Doctoral Dissertation Improvement Grant); Robin M. Overstreet (U So Mississippi, Principal Investigator, NSF-Partnerships for Enhancing Expertise in Taxonomy). 20 Mar-11 Apr 2007.
- Vietnam, South China Sea. Collections of parasites from marine & estuarine fishes & invertebrates captured from Nha Trang or purchased at fish markets. Darwin Murrell (Royal Veterinary & Agricultural University, Denmark, Principal Investigator, FIBOZOPA-Fishborne Zoonotic Parasites in Vietnam); Jacob Fjall & (University of Copenhagen, Denmark, Co-Principal Investigator, FIBOZOPA-Fishborne Zoonotic Parasites in Vietnam); Robin M. Overstreet (U So Mississippi, Principal Investigator, NSF-Partnerships for Enhancing Expertise in Taxonomy). 19 Jan-1 Feb 2007.
- Peru, Amazon River. Parasite collections from freshwater fishes including stingrays, catfishes, higher teleosts, & lungfish from the Peruvian Amazon, Nanay River & Itaya River, Iquitos. Mark Sabaj (Academy of Natural Sciences, Philadelphia, Co-Principal Investigator, Field Party Chief, NSF-Planetary Biological Inventories); RM Overstreet & SA Bullard (Univ. Southern Mississippi, Principal & Co-Principal Investigators, NSF-Doctoral Dissertation Improvement Grant). 1-23 Aug 2005.

- Academy of Natural Sciences, Philadelphia. Survey & inventory of platyhelminth & crustacean parasites from holocephalans. Dominique Didier-Dagit (formerly Academy of Natural Sciences of Philadelphia, Sponsor); Stephen A. Bullard (Jessup Fellowship). 1-11 Feb 2005.
- Mississippi River, (main channel), Donaldson, Louisiana. Collections of parasites from sturgeons, paddlefishes, & various catfishes for the presence of fish blood flukes & related flukes. Steven George, Jan Hoover, & Jack Kilgore (Waterways Experimental Station, Vicksburg, Mississippi, Local Contacts). 2-4 Nov 2004.
- Yazoo Drainage, Mississippi Delta; Batesville (Sardis Lake), Vicksburg (Lake Chotard), & Greenwood (Six-Mile Lake), Mississippi. Collections of metazoan parasites from paddlefish. Ricky Campbell (Fish & Wildlife Service, Private John Allen Fish Hatchery, Tupelo), Dan O'keefe (Univ. of Mississippi, Oxford), 29 Jan 02; 1 Apr 02; 14 Apr 06.
- Northeastern Gulf of Mexico. Collections of parasites from pelagic fishes off Florida & Alabama by deep-water pelagic trawl aboard National Oceanic & Atmospheric Administration *R/V Gordon Gunter*. Alonzo Hamilton, Walter Ingram, & Mark Grace (SE Fisheries Science Center, NMFS, Pascagoula, Mississippi, Chief Scientists, Deep Water/Small Pelagics Survey), 13-27 Oct 2003.
- Guinea, Western Africa. Collections of parasites from marine & estuarine fishes of coastal Guinea, near Conakry, Eastern Atlantic Ocean, & from freshwater fishes in the headwaters of the Niger River, Fouta Djallon Region. Frank Pezold (University of Louisiana, Monroe, Principal Investigator, Critical Ecosystem Partnership Fund [Conservation International, Global Environmental Facility, World Bank, MacArthur Foundation, & the Government of Japan]); Samba Tenin Diallo (Centre National des Sciences Halieutiques de Boussoura, Conakry, Guinea, Local Contact). 29 Dec 2002-24 Jan 2003.
- Western North Atlantic Ocean & Gulf of Mexico. Collections of parasites from reef-dwelling teleost fishes & elasmobranchs captured by long-line during research cruises, each one lasting 10-21 days (during each listed year), aboard various research vessels of the National Oceanic & Atmospheric Administration, NMFS & Louisiana Universities Marine Consortium: NOAA R/V Oregon II, NOAA R/V Delaware II, NOAA R/V Carretta, LUMCON R/V Pelican. Mark Grace & Lisa Natanson (NMFS-Apex Predator Surveys). 1995, 1996, 1998, 1999, 2000, & 2001 for a total of >80 sea days.
- Northwestern & North-Central Gulf of Mexico. Collections of parasites from pelagic fishes off Texas, Louisiana, & Mississippi by deep-water pelagic trawl aboard National Oceanic & Atmospheric Administration *R/V Gordon Gunter*. Alonzo Hamilton, Walter Ingram, & Mark Grace (Southeast Fisheries Science Center, NMFS, Pascagoula, MS, Chief Scientists, Deep Water/Small Pelagics Survey). 13-24 Oct 2002 & 9-25 Oct 2007.
- Florida Keys. Parasites of reef teleosts & elasmobranchs. Keys Marine Laboratory. 3-11 Jun 2003.
- Columbia River, Washington. Collections of metazoan parasites from white sturgeons & other fishes in Columbia River. Brad Cady (WA Dept of Fish & Wildlife). 7-12 Sep 2002.
- Lake Winnebago, Oshkosh, Wisconsin. Collections of parasites & tissues from lake sturgeon (*Acipenser flavescens*) during the annual sturgeon ice spearing event held on Lake Winnebago. Ron Bruch (Wisconsin Dept of Natural Resources, Oshkosh, WI, Local Contact). 9-13 Feb 2001 & 9-12 Feb 2008.
- Puerto Rico, Caribbean Sea. Collections of parasites from marine fish parasites near Mayagüez. Bert Williams & Lucy Bunkley-Williams (University of Puerto Rico, Mayaguez, Puerto Rico, Collaborators). 29 Jun-7 Jul 2000.
- Cayman Islands, Caribbean Sea. Parasite collections from reef & pond-dwelling fishes on Gr& Cayman & Little Cayman Islands. Richard Heard (U So Mississippi & Gulf Coast Research Laboratory, Field Party Chief); Fred Burton (National Trust for the Cayman Islands, Grand Cayman, Local Contact & Collaborator). 5-15 Aug 1999.
- Bishop Museum, Honolulu, Hawaii. Dissection of representative shark & ray specimens for collection of parasitic copepods & monogeneans, including holotype of megamouth shark, *Megachasma pelagios*. Arnold Suzumoto (Collections Manager, Sponsor). 20 Aug 1998.
- Australia, Gulf of Carpenteria. Collections of monogeneans & parasitic copepods from the nose & gill of sharks & rays off Northern Australia (Darwin, Northern Territory). Janine Caira (University of Connecticut, Storrs, Principal Investigator, NSF-Partnerships for Enhancing Expertise in Taxonomy). 3-25 Aug 1997.
- Sea of Cortez, Baja California. Collections of metazoan parasites from elasmobranchs along the eastern shore of the Baja Peninsula (Puertecitos, Bahia de los Angeles, Isla San Esteban, Santa Rosalia, Loreto, Punta Rena, La Paz, San Jose del Cabo). Janine Caira (University of Connecticut, Storrs, Principal Investigator, NSF-Biodiversity Surveys & Inventories); George W. Benz (Tennessee Aquarium Research Institute, Chattanooga, Co-PI, NSF-Biodiversity Surveys & Inventories). 3 Jun-16 Jul 1996.
- Fishing tournaments. Collections of parasites from marine fishes in pelagic & coastal waters of the Gulf of Mexico (Isle of Capri Billfish Classic, Biloxi, MS, 2000-2005, 2008; Deep Sea Fishing Tournament, Dauphin Island, AL, 1998; Gulfport Deep Sea Fishing Rodeo, Gulfport, MS, 1998-2003; Monster Shark Tournament, Pensacola, FL, 2005; Blue Water Fish Tournament, Orange Beach, AL, 2007).

# **SERVICE & COORDINATION**

### **Auburn University**

Year	Committee/ group/ program	Role
2015-16	Senate, Credentials Committee (Graduate Council subcommittee)	member
2015-18	Senate, Graduate Council	member
2015-18	Student Discipline Committee	member
2015	Search Committee, Director Water Resources Center	member
2015	Review Committee, Dean Bill Bachelor, College of Agriculture	member
2015	Search Committee, Associate Dean of Research, College of Agriculture	member
2014	Steering, School of Pharmacy & AU Research Instrumentation Facility	member
2014	Search Committee, Assoc. Dean Research, AU College of Agriculture	member
2013	Awards Committee College of Agriculture & AAES Annual Awards	assessor
2013	AU Coastal Resiliency & Restoration Initiative (ad hoc committee)	member

2013	AU Graduate School, Three Minute Thesis Competition	judge
2013	Auburn University Undergraduate Research Opportunities Directory	participant
2012-15	Admissions Appeals Committee	member
2012	NSF Grantsmanship Workshop	panelist
2011	AU Undergraduate Research & Creative Scholarship Forum	judge
2011	Gulf Assessment & Recovery Plan Committee	member

School of Fisheries, Aquaculture, & Aquatic Sciences

Year	Committee	Role
2015	Search Committee, Assistant Professor (Aquatic Toxicologist), SFAAS	member
2015	Curriculum Committee	member
2014	Hiring Committee, Hatchery Production/Physiologist	member
2014	Search Committee, Assistant Dir. SFAAS Research	member
2014	Search Committee, Assistant Dir. SFAAS Instruction	member
2014-16	Promotion & Tenure Committee	member
2013-2014	Facilities Working Group	member
2013-2014	Research Working Group	member
2012-2014	Planning Committee	member
2012-2014	Natural Resource Institute Committee	member
2010-14	Awards & Honors Committee	chair
2011-	Microscopy Committee	chair
2010-12	Departmental Seminar Committee	chair
2009-12	Research HATCH Projects Committee	member
2009-	Marine Committee	member
2008-	Marine Science Committee	member

#### Professional service

#### **Societies**

- 2016-17. Immediate Past President, Southeastern Society of Parasitologists.
- 2015-16. President. Southeastern Society of Parasitologists.
- 2015-16. ASP Awards Committee: Cuckler; Ward; Read Mentor Award; Distinguished Service Award.
- 2015. American Society of Parasitologists, Ashton Cuckler New Investigator Award Committee.
- 2015. American Society of Parasitologists, Student Awards Committee.
- 2015. Program Officer, Annual Meeting of the Southeastern Society of Parasitologists, Blacksburg, VA.
- 2014. Presentation of Eminent Parasitologist Awardee, ASP meeting, New Orleans, LA, 24-27 July 2014.
- 2014. Co-chair, Bays & Bayous Symposium, "Living Resources." 1-2 Oct 2014, Biloxi, MS.
- 2014. Local Committee (New Orleans, LA), American Society of Parasitologists.
- 2014-15. President-elect, Southeastern Society of Parasitologists.
- 2014. Chair, Student Awards Committee, Southeastern Society of Parasitologists.
- 2014. Student Awards Committee, American Society for Parasitologists.
- 2014. Co-nominator, RM Overstreet, Eminent Parasitologist Award, American Society of Parasitologists.
- 2013. Council Member-at-Large, American Society for Parasitologists.
- 2013. Vice President, Southeastern Society for Parasitologists.
- 2013. World Aquaculture Society, Session Co-chair, American-Spanish Aquaculture (23 Feb 2013).
- 2011. United States Aquaculture Society, Student Award Judge.
- 2011-13. CP Read Mentor Award Committee (chair), American Society of Parasitologists.
- 2009-present. Journal of Parasitology (an international journal), Associate Editor, Ectoparasites.
- 2009-10. CP Read Mentor Award Committee, American Society of Parasitologists.
- 2009-10. Nominating Committee, American Society of Parasitologists.
- 2008-09. Nominating Committee, American Society of Parasitologists.
- 2008-09. Student Awards Committee, American Society of Parasitologists.
- 2009. Co-chair, Student Paper Competition, American Society of Parasitologists.
- 2005. Local Committee (Mobile, AL), American Society of Parasitologists.
- 2004. Student Council Member-at-Large, American Society of Parasitologists.
- 2000. Committee on Awards, American Society of Parasitologists.
- 1999. Tellers Committee, American Society of Parasitologists.

Manuscript (\*international journal)

Journa	l	'16	'15	<b>'14</b>	<b>'13</b>	'12	'11	<b>'10</b>	<b>'09</b>	<b>'08</b>
1.	Acta Zoologica*					2				
2.	Acta Parasitologica*				4			1	1	
3.	African Zoology		1							
4.	Aqua-International Journal of Ichthyology					2				
5.	Arkansas Academy of Sciences		1							
6.	Bulletin of Marine Science (Miami)		1							
7.	Comparative Parasitology						1	2	1	1

8. Diseases of Aquatic Organisms*						2			
9. FEMS Microbiology Letters*					1				
10. Folia Parasitologica*	2	1	1	3		2			
11. Gulf Research Reports								1	
<ol> <li>International Journal for Parasitology*</li> </ol>							1		
13. Invertebrate Biology*						1			
<ol> <li>Journal of Aquatic Animal Health*</li> </ol>			2			3		1	
15. Journal of Fish Diseases*			1						
16. Journal of Helminthology*							1		
17. Journal of Marine Biology		1							
18. Journal of Parasitology*	4	3	6	4	6	3	4	4	4
<ol> <li>Journal of Parasitology Research*</li> </ol>				1					
20. Journal of Wildlife Diseases					1				
21. Journal of the World Aquaculture Society*				1			1		
22. Journal of Zoo & Wildlife Medicine			1			1	1		
23. Parasitology*				3					
24. Parasitology International*	1	2	1		1	1	3		
25. Southeast Naturalist			1						
26. Southwest Naturalist									1
27. Systematic Parasitology*						1			
28. Veterinary Parasitology	1								
29. Zoologia		1							
30. Zootaxa*						2	1		
Total, as Ad Hoc Reviewer	8	12	13	17	13	17	15	8	6
Total, as Associate Editor for Journal of Parasitology	2	1	8	2	10	11	12	2	_
Totals	10	13	21	19	23	28	27	10	6

### Reviewer

Acta Zoologica, Acta Parasitologica, African Zoology, Aqua-International Journal of Ichthyology, Arkansas Academy of Sciences, Bulletin of Marine Science, Comparative Parasitology, Diseases of Aquatic Organisms, FEMS Microbiology Letters, Folia Parasitologica, Gulf Research Reports, International Journal for Parasitology, Invertebrate Biology, Journal of Aquatic Animal Health, Journal of Fish Diseases, Journal of Helminthology, Journal of Marine Biology, Journal of Parasitology, Journal of P