



AFA NEWS

Newsletter of the Alabama Fisheries Association

August, 2009

FROM THE PRESIDENT

**Ken Weathers (Alabama Wildlife and
Freshwater Fisheries)**



Thursday, February 26, 2009

It is the day after our 25th Annual AFA Meeting in Auburn. I can procrastinate with the best of them, but this time I just had to sit down and type this message while it was still fresh on my mind, even if it would not be published for another 6 months. I attended my first AFA meeting in Guntersville in 1987 as an undergrad in fisheries. Most of the talking I did was with the other

students who rode on the van to the meeting. It was a little overwhelming, but it opened my eyes to the world of aquatic resource professionals. I found that if I actually listened to the talks I could learn something new, and I thought that was what AFA was all about, professionals and students exchanging ideas and information. Then in 1990 at the AFA in Auburn I gave a presentation as a student on internal anchor tags in largemouth bass. A skinny, nervous student standing in front of a crowd of professionals talking about tagging bass probably did not leave much of an impression on any of you, but it sure made a heck of an impression on me. I realized that AFA was also an excellent venue for students like me to learn to get over our nerves and make a pre-sentation in a manner worthy of a professional. With experience like that, addressing a group of prospective employers at a job interview was a piece of cake. It also looked good on the resume.

Speed forward to February 2009. I feel very mellow as I listened to the Oak Bowery Bluegrass Pickers Band entertain the crowd at the AFA banquet, and I find myself looking around at how many people in that livestock arena I

ABOUT THE AFA

The Alabama Fisheries Association (AFA) is an organization of professionals dedicated to the development, conservation, management, and wise utilization of commercial and recreational fisheries in Alabama. The AFA promotes all branches of fishery science and related technology, with emphasis on the exchange and dissemination of knowledge about fish and other aquatic life. Annual membership fees are \$5.00; three-year memberships are \$15.00. Members are encouraged to purchase three-year memberships. This helps our financial stability and you will avoid any increases in dues that may occur during that time. Dues may be sent to Hugh Hammer, AFA Treasurer, Gadsden State Community College PO Box 227 Gadsden, AL 35903.

AFA web page – for information about AFA (and recent newsletters) point your web browser to:
<http://www.alabamafisheriesassociation.org/>

know and how many I still need to get to know. About that time I think I realize the most important function of AFA. When I need information about water quality for a lake in my district, I don't just call ADEM, I talk to someone I know at ADEM that I met through AFA. When I need advise on the best way to analyze my sampling data, I don't just call the Fisheries Department at Auburn, I talk to somebody I know at Auburn that I got to know through AFA. The list of examples that apply to my job goes on and on. I guess the trendy label for this is "networking", but I like to think of it as relationship building. I may have to disagreement with you on an issue if our jobs force us to be on opposite sides of the table, but I can understand your position better and work towards the best solution to the problem if I already have a social relationship with you. In my opinion, this is probably the most important service that AFA provides to the membership. The idea of one day registrations and one session registrations was talked about before this meeting and will be discussed at the Board meetings this spring and fall. Whatever policies are approved by the Board, I would like to just say that when you only zero in on your field of interest at the AFA Meetings, you are missing out on a lot this organization has to offer. Let me encourage everyone to take an active role in AFA and get to know as many other members as possible. You never know when you will need someone else's expertise to help you do your job a little bit better.

I cannot say enough about how much Dave, Gina, and Hugh helped make this another successful meeting. I appreciate everyone on the Board for their service and also all the volunteers that jumped in whenever I needed a hand. Thanks to the moderators. Each of you did a wonderful job and I appreciate your help. Dr. Rouse and Karen, thanks for all the help in securing the facilities and the tables and chairs. Thanks to Barry, Graves, Ashley, Damon, and Rob for the music (I knew you guys could play when everybody was sober), and to Randell, Renee and

all the fisheries crew for great food and good memories. And Barry, I owe you big time. The fisheries family of Alabama is the best at pitching in to help each other out. Let's keep it that way. See you on the water.

Ken

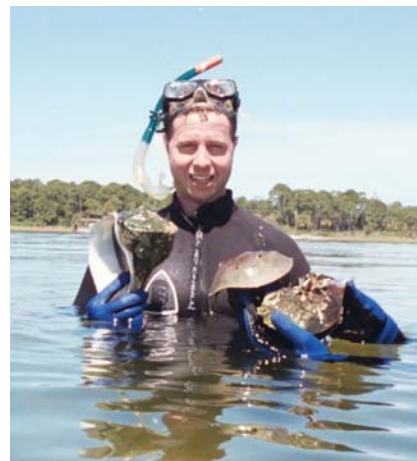
PS. Sting ray is delicious. A little chewy, with the consistency of steak, but off the grill it has a great flavor. Just watch out for the tail.

STEERING COMMITTEE

The 2009-2010 AFA Steering Committee consists of: Ken Weathers (Chair, W&FF), Dave Cline (Auburn), Gina LoGiudice (ADEM), Hugh Hammer (Gadsden State), Andrew Rypel (UMiss), Dennis DeVries (Auburn), and Justin Mitchell (AL Power). We are grateful to these folks for their willingness to help steer our organization in the right direction.

FROM THE TREASURER

Hugh Hammer



Hey all, I hope you are all having a great summer. My wife and I are preparing for the arrival of a new baby girl, Samantha Jane, who is due to arrive very soon (early Sept). I also had a great time teaching the marine aquaculture course at Dauphin Island Sea Lab during the month of July and I am now once again settling in for the fall at GSCC. At GSCC we have been very busy with new research projects, pond

repairs, and preparing for the largest freshman class in the program's history.

The AFA remains in good standing financially:

Regions Checking	\$773.18
Regions Money Market	\$4,581.73
Regions CD	\$14,459.38
Total	\$19,814.29

We have already made a \$2700.00 deposit to the Marriott Shoals Resort in Florence, AL to reserve our place for the 2010 meeting and we will look forward to seeing all of you there. Gina has got a great meeting planned in a wonderful new location that is also very reasonably priced for this association. As always we are very grateful for the support of the membership, sustaining, and corporate members. I hope to see you all soon.

Hugh

Hugh Hammer

hhammer@gadsdenstate.edu

FROM THE EDITOR
Rob Angus



Thanks to all of you who contributed to this issue. It is your contributions that make the newsletter interesting and informative to our members. AFA's primary means of communicating with our members is via email. We can't contact you if we don't have your current address. Please notify me if your email address changes.

Rob Angus raangus@uab.edu

AFA DRAFT RESOLUTION

The following resolution is currently under consideration by the AFA Steering Committee. Comments on this resolution can be sent to Ken Weathers at Ken.Weathers@dnr.alabama.gov.

Resolution for creation of an Alabama Fisheries Association

Distinguished Biologist / Undergraduate Student Travel Award (Draft 1)

Whereas the Alabama Fisheries Association (AFA) is an organization created to promote fisheries and aquatic science in Alabama for the betterment of its aquatic resources and citizens, and

Whereas the AFA was founded in 1984 and whose membership spans all ages and includes active and retired fishery and aquatic science professionals from private commerce, government, university faculties, and students, and

Whereas the membership of AFA encourages student participation in the organization by providing a yearly scholarship award to promising graduate students actively engaged in fishery and aquatic science research, and

Whereas the AFA membership desires to recognize the scientific and service contributions of distinguished members by contributing funds to support student involvement in the association,

Be it resolved that the AFA membership wishes to establish an AFA Contributing Biologist Award. The purpose of this award is two fold—

first, to recognize the scientific contributions of distinguished members and second, to assist undergraduate student participation in the annual meeting. The distinguished member would be recognized during the annual meeting and in the annual AFA newsletter. Donated funds to the AFA Contributing Biologist Award would be accumulated in an interest bearing account and the AFA Board of Directors would decide an appropriate amount to be awarded each year. To receive funds to participate in the annual meeting the undergraduate student would complete an application form, with the approval and signature of a faculty advisor, and send the completed form to the Scholarship Committee Chair.

Proposed procedures for Handling and Dispersing Funds for the AFA Distinguished Biologist Award

1. Donations to the AFA Contributing Biologist Award will be accumulated in an interest bearing account and the AFA Board of Directors would be at liberty to decide an appropriate amount to be awarded. It is proposed that the Award be given annually, but the Board of Directors may choose not to grant the Award in any given year based on the funds investment performance or until such time as the fund becomes large enough to support granting an annual Award.

2. It is proposed that the intent of the Award be to provide assistance to undergraduate students to attend and participate in the AFA annual meeting. The student is also encouraged to present research results in either a poster or platform format. How the Award is administered is intended to be flexible for the Board of Directors but could be used to cover the cost of lodging, travel, etc. A student receiving the Award is expected to attend the AFA annual meeting. The Award intent can be changed by the Board of Directors so long as it is directed to building, or maintaining, participation in the annual meeting.

3. To be eligible for assistance funds the student would complete an application form, with the approval and signature of a faculty advisor, and

send the completed form to the Scholarship Committee Chair. Applications will be vetted by the Scholarship Committee Chair using the following minimum criteria:

- a. GPA of 2.5 or better.
- b. Enrolled in a Biological Sciences, Fisheries, Environmental Sciences, or Environmental/BioSystems Engineering curriculum.
- c. Major field of study in some aspect of aquatic science.
- d. Involvement in aquatic science research is encouraged for undergraduates.

4. Only undergraduate students currently enrolled in an Alabama College or University will be eligible to apply for the AFA Distinguished Biologist Award. Number of awards will be determined by the amount of funds available after the application deadline. The selection process will be kept flexible to allow the Board of Directors and the Scholarship Committee Chair to adapt the process to meet the desires and needs of the annual meeting.

5. A plaque will be presented for display at the annual meeting to recognize the "Distinguished Biologist" chosen for each year.

6. Nominations for "Distinguished Biologist" of the year can be made by any AFA Member prior to the Fall Steering Committee Meeting. The Board of Directors will choose the "Distinguished Biologist" from the nominations at this meeting. Student applications for the award must be submitted to the Scholarship Committee by December 15th. Student winners will be notified by the Scholarship Committee by January 15th.

26TH ANNUAL MEETING
MARRIOTT SHOALS HOTEL & SPA
FLORENCE, AL
FEB. 17 – 19, 2010

The program chairwoman for this year's meeting is our President-Elect, Gina LoGiudice (ADEM).



Plans are underway for the 26th Annual Meeting.

I wanted to change things up a bit this year and try something new. I looked all over the state to find locations, available for a Wed-Fri meeting, that we have never visited before. I presented all the viable options to our steering committee and they narrowed it down to 2 locations. Ultimately, I decided on the Marriot Shoals Hotel & Spa in Florence, AL. The Marriott Shoals is part of the Robert Trent Jones Golf Trail. It is a beautiful facility with river view balconies in all the rooms. Bring your significant other to take advantage of the spa facilities. Check out their website for photos and more

<http://www.marriott.com/hotels/hotel-photos/mslmc-marriott-shoals-hotel-and-spa>



- **Poster Session during the Social**-if you are unable to give a presentation, Submit a Poster! Posters will need to be self-sup-ported (on foamcore or posterboard) since they will be displayed on easels. Posters cannot be tacked to the wall. If we can get at least 10 posters, there will be a best poster award. We would love to have a big turnout!



- **Full Breakfast Buffet**-Get up early each morning and enjoy a complimentary breakfast buffet with all the fixin's. Eggs, bacon or sausage, potatoes or grits, juice, coffee...is your mouth watering yet? Have more time to socialize with colleagues and friends or re-energize from the night before.

The meeting will begin on Wednesday, February 17th and end around noon on Friday, February 19th. Room rates for this year's meeting are \$99 plus tax. This is a significant saving compared to their normal rate! Please make your reservations by calling **1-800-593-6450** and identify yourself as a participant of the Alabama Fisheries Association meeting in order to get this special rate. The Marriot Shoals will accept reservations until **Monday, January 18, 2010**, at which time any unreserved rooms will be released into general availability. Group reservation requests made after the cutoff date will be honored on a space available basis.

The program will follow the standard format.

Wednesday, February 17, 2010

Registration opens 10:00 AM

Presentations 1-5pm

Social & Poster Session 6 PM

Thursday, February 18, 2010

Presentations 8 AM to 5 PM

Banquet

Friday, February 19, 2010

Presentations 8 AM – 11 AM

Business meeting

SESSIONS

Thank you to those of you that have volunteered to be our session moderators and recruit speakers.

Aquaculture

Gregory Whitis (AU-Fish Farming Center)
(334) 624-4016
whitign@auburn.edu

Alabama's Biodiversity

To be determined

Aquatic Plants

To be determined

Marine and Coastal

Ben Ricks (AWFF)
(251) 626-5153
Ben.Ricks@dnr.alabama.gov

Reservoirs and Impoundments

Brook Fluker
(205) 348-5828
blfluker@crimson.ua.edu

Contributed papers and posters

Tonya Mayberry (ADEM)
(334) 260-2759
TMayberry@adem.state.al.us

Please make it easy on these folks and contact them if you are interested in making a presentation. Presenters should have their name, title, and abstracts submitted to the session moderator or Gina LoGiudice (glogiudice@adem.state.al.us) by **no later than January 15, 2010**.

Presenters have traditionally been allotted 20 minutes (15 minute presentation and 5 minutes for questions). An award will be presented for best student presentation. All presentations should be in power point. We cannot guarantee that the computer will support video files. Bring the presentations with you. Please plan to arrive early and load your presentation during the break BEFORE your session begins.

We are looking forward to a great time and encourage all members to consider giving a presentation or submitting a poster. More specific information and online registration details will be available in the winter newsletter. If you have any questions please do not hesitate to contact me:

Gina LoGiudice (334)
260-2783
glogiudice@adem.state.al.us

AFA SCHOLARSHIP

The AFA offers the annual AFA David Bayne Scholarship (\$500, minimum) to a deserving graduate student who is currently enrolled in an Alabama university and has an approved research proposal related to fisheries science. The scholarship award can be used in any way to support the recipient's graduate education. The application deadline is 1 November. The application procedure can be found on the AFA web page at

<http://www.alabamafisheriesassociation.org/newsletters/Application%20Procedures%20DeVries.pdf>.

For additional information, contact Dennis DeVries (334) 844-9322 devridr@auburn.edu.

The current scholarship recipient is Danyelle Dehner (see p. 7)

AFA SCHOLARSHIP WINNER

Danyelle Dehner



Danyelle Dehner was presented the David Bayne Graduate Student Research Scholarship at the 2009 Alabama Fisheries Association annual meeting held in Auburn, Alabama. Dehner is a master's student majoring in Biology at the University of Alabama at Birmingham. This grant is awarded each year to the deserving graduate student who is currently enrolled in an Alabama university and has the best submitted research proposal in the fisheries science field.

Dehner's masters program, in evolutionary biology/stream ecology under the supervision of UAB biology professor and chairman Dr. Robert Fischer, is investigating the effects of agricultural disturbance on stream ecosystems in Illinois. She is specifically focusing her research on the effects of agricultural activity on stream habitat quality, stream fish community structure and possible changes in central stoneroller life history traits such as egg number, egg size, age at first reproduction, longevity, and growth rate in response to environmental disturbance.

Danyelle is a native of Olney Illinois. She received her BS in Biology from the University of Illinois. She is scheduled to finish her degree summer 2009 and has already accepted a teaching position at North Georgia College and State University in Dahlonega Georgia.

BEST STUDENT PAPER

The "Best Student Paper Awarded" was not given at last year's Annual Meeting, but next year the "Best Student Paper" Committee will be sure to judge the presenters and make the award. This committee consists of Claude Reeves, Gregg Whitis, and Pat O'Neal.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Fish Tissue Monitoring Program (FTMP)

Fish tissue data collected by the department during FY2009 was used by the Alabama Department of Public Health to issue new consumption advisories for six waterbodies in the state. Those waterbodies included Cowikee, Uchee, and Patsaliga Creeks, Lay, Point A and Gantt Reservoirs, and the Sipsey River embayment of Gainesville Reservoir. Five existing advisories were also modified for waterbodies including Burnt Corn Creek, Fish River, Escatawpa River, and Smith Reservoir. All new advisories and modifications were due to mercury levels in fish.

Locations that were sampled during FY2009 where no contaminants were found at levels requiring consumption advisories included: Chattahoochee River (Houston County), W. F. George Reservoir (Henry and Barbour counties) and Barbour Creek embayment of W. F. George Reservoir (Barbour County); Harding Reservoir and Osanippa and Halawakee Creek embayments of Harding Reservoir (Lee County); West Point Reservoir (Troup County, Ga.); Perdido Bay (Baldwin County); Sipsey River (Tuscaloosa County); Flint Creek (Morgan County); Wheeler Reservoir (Morgan and Lawrence counties), and Bakers Creek embayment of Wheeler Reservoir in Morgan County.

The focus basin for FY2010 is the Tennessee River. Station selection for the FY2010 FTMP is currently ongoing.

For further information on the FTMP contact Michael Len at (334) 260-2787 or mlem@adem.state.al.us

GEOLOGICAL SURVEY OF ALABAMA

Scott Mettee Retires

This past May Scott Mettee retired after 34 years of dedicated service to the State. He still maintains an office at GSA, and has the same phone number and email address. He is putting the finishing touches on some publications and occasionally volunteers with field efforts. He is also spending a good bit of time at his home away from home in Destin, Florida and come deer season will likely spend considerably more time in the woods than he has in the recent past!



Scott Mettee

GSA is conducting status surveys for fish species of conservation concern in the Bear Creek system (Tennessee Drainage) and for freshwater mussels in the Black Warrior River system with Section 6 funding from the Alabama Department of Conservation and Natural Resources (ADCNR). Thus far, the Bear Creek project has produced new records of several conservation priority species, the Brindled Madtom, *Noturus miurus*, the Bandfin Darter, *Etheostoma zonistium*, the undescribed 'Blueface' Darter, *Etheostoma* sp. cf. *zonistium*, the Gilt Darter, *Percina evides*, the American Brook Lamprey, *Lampetra appendix*, and the Highland Shiner, *Notropis micropteryx*. Dedicated efforts to collect other conservation priority species in that system have as yet been unsuccessful.

To date 19 species of mussels have been collected in the Black Warrior system. Along with the assistance of Jeff Garner of the Division of Wildlife and Freshwater Fisheries (ADWFF) of ADCNR, 16 main channel stations were sampled in July. The federally threatened Inflated Heelsplitter, *Potamilus inflatus*, was collected live at stations in the Oliver Lock and Dam tailwater and Oliver Pool near Tuscaloosa and an upstream record of the fast-invading Flat Floater, *Anodonta suborbiculata*, was secured in the upper reach of Holt Reservoir. Sampling will continue in selected tributaries upstream of the Fall Line until the end of September.

GSA also continues to monitor the Alabama Cave Shrimp, *Palaemonias alabamae*, population and water quality in caves on Redstone Arsenal (RSA) and the Tuscumbia Darter, *Etheostoma tuscumbia*, in Williams Spring on RSA. This year we have included sampling for mussels, snails and crayfish in streams on and near RSA as well. Those projects are funded by the Department of Defense.

The Trispot Darter, *Etheostoma trisella*, was recently rediscovered in Alabama after an absence of more than 50 years from fish collections in the state. The species was originally described from one individual

collected in Cowan Creek, a small Coosa River tributary in Cherokee County, Alabama, in 1947 (Bailey and Richards, 1963). The type locality and surrounding habitat were permanently inundated by the completion of Weiss Reservoir in 1960. An additional specimen was subsequently collected in the state in 1958 in the main channel of the Coosa River in Etowah County (Ramsey, 1976). That locality was inundated by Neely Henry Reservoir in 1965. Attempts to collect the species in appropriate habitat throughout the upper Coosa River system in Alabama since the discovery of the first two individuals, including an intensive survey for the species, failed to produce additional specimens. Due to the perceived elimination of habitat by impoundments, effects of polluted runoff in rural areas of the upper Coosa Valley in Alabama, and the lengthy absence of collection records in the state, the species was presumed to be extirpated in Alabama (Warren, 2004). While conducting a biological assessment of selected sites in the Big Canoe Creek system, biologists with the GSA and U.S. Fish and Wildlife Service (USFWS) collected three individuals in Little Canoe Creek near Springville, St. Clair County, on October 30, 2008. Over a 5-month period of sampling in 2008-09, 228 trispot darters (92 males, 116 females, and 20 sex undetermined) were found at 13 out of 22 sites sampled. Two active breeding sites were discovered and sampling data suggested that the distribution of *E. trisella* in the Little Canoe Creek system is likely more widespread. Two distinct habitat types were noted, breeding and nonbreeding. The non-breeding habitat occurs in the deeper and larger portions of Little Canoe Creek while breeding habitats are shallow, ephemeral tributaries with direct connection to Little Canoe Creek. Trispot darters were surmised to be in migration from nonbreeding to breeding habitat from October through January and were observed in breeding habitat from February through March. By early April, breeding sites were uninhabited and only a few spent individuals were collected.

Field collection of crayfishes continues during the second year of a three-year State Wildlife Grant (SWG) project to document distributions of crayfish species in Alabama. Collection methods include use of baited traps, instream collections with seines and hand nets, digging burrows, and occasional hand collections while snorkeling for mussels. About 650 collections have been made over the past year and a half, effectively closing vast gaps in species distributions in the state. The final year of field sampling will emphasize under-represented habitats such as large rivers and primary burrows. Specimens collected are being identified by Guenter Schuster and Chris Taylor. Locations of collections are entered into a database and mapped using GIS software.

The GSA is working in cooperation with the USFWS, AABC, and the Alabama Clean Water Partnership (ACWP) to create new opportunities for imperiled aquatic species recovery and restoration through a concept called Strategic Habitat Units (SHU). Designated SHUs currently encompass designated critical habitat for listed mussel species in Alabama and also include much of the critical habitat for listed fish species as well. This initiative will be facilitated through the following activities. (1) Strategic habitat units (SHU) were established for the 26 critical habitat units for mussels designated by USFWS by determining the encompassing watershed boundary at the downstream point of each critical habitat reach and then mapping this watershed unit in a Geographic Information System (GIS). This initial step creates the spatial boundary within which recovery activities can be implemented. (2) Development of SHU-specific watershed information. For species recovery to proceed systematically and with some reasonable expectation of success, watersheds must be understood from a biological, water quality, and land use perspective. The type of watershed information developed for each SHU is unique and depends on the type and intensity of threats that listed species face. This information can include, but is not limited to: additional

biological surveys to refine species distributions; surveys to determine water-quality threats that may affect listed species; GIS landscape analysis to determine land cover and land use patterns, SHU watershed characteristics, and land cover changes through time; studies to elucidate poorly understood biological phenomena (reproduction periods, migration routes, breeding habitats, etc.) that are important for managing and recovering species; hydrogeologic studies to determine groundwater characteristics and recharge areas for spring and cave-dwelling species; and biomonitoring studies using multi-metric procedures like the Index of Biotic Integrity (IBI) to assess stream biological conditions throughout a SHU for identifying impaired stream reaches. (3) Use the threats and watershed assessment data to identify stream reaches that need protection, management, or restoration. Linking the location of critically imperiled species with threats is a critical part of this process. Linking can only be done by conducting SHU-specific studies. (4) Once threats are linked with species and an action plan for recovery has been developed then species restoration can begin. This takes place through a cooperative partnership of local landowners, organizations, and agencies including watershed partnerships, local and county governments, local businesses and farmers, state and federal agencies, and other interested parties using a variety of means including: protecting stream habitat through land purchase or landowner conservation agreements; management of habitat and water quality by eliminating polluted runoff sources and by reducing pollutant loads through more restrictive water-quality permitting and more aggressive best management practice (BMP) implementation; conducting riparian improvement or physically restoring a substantially degraded stream reach; restoration of biodiversity through culture-raised species; etc.

The Alabama Cooperative IBI (Index of Biotic Integrity) Project between GSA, ADCNR, and the Alabama Department of Environmental Management (ADEM) is completing its third

year of work calibrating the IBI to Alabama's unique physiography and biologically diverse fish communities. The purpose of this project is to create a statewide fish community biological assessment tool for use in screening streams for use attainment, evaluating water quality more completely and effectively, and providing a biological tool to assist in managing Alabama's water quantity resources in the future. To date, a standardized fish community sampling protocol has been established, the state has been regionalized into five ichthyoregions, and IBI metrics and criteria have been established for the Ridge and Valley/Piedmont and Southern Plains ichthyoregions and are currently under construction for the Tennessee Valley. Work the next two years will focus on establishing metrics and criteria for the Plateau and the Hills and Coastal Terraces ichthyoregions.

Publications are also being prepared by GSA personnel. These include an assessment of the mussel remains found at two archaeological sites in southern Clarke County along the Tombigbee River (S. McGregor and Ashley Dumas) and a summary of the results of a mussel survey of the headwaters of the Chipola River in SE Alabama (J. Garner, S. McGregor, T. Tarpley, and M. Buntin), both in *The Southeastern Naturalist*. Scott is working on two publications, one an AFS Special Publication on paddlefish movements in the lower Mobile Basin, along with Pat and Steve Rider, due to be published later this year, and he will serve as a coauthor on a paper with R.D. Suttkus describing the effects of discharge from Toledo Bend Dam on the minnow fauna of the lower Sabine River, Texas and Louisiana. That paper will be published in the *Proceedings of the Southeastern Fishes Council* later this year.

Stuart McGregor smcgregor@gsa.state.al.us

U.S. FISH & WILDLIFE SERVICE

Currently Dan Drennen is writing the proposed critical habitat for the vermilion darter (*Etheostoma chermocki*).



Vermilion darter (Photo: Geological Survey of Alabama)

The vermilion darter was federally listed as endangered on November 28, 2001 (66 FR 229) because of the ongoing threat on the species by the impacts of impoundment, urbanization and construction that have caused a decrease in water quality by an input of pollutants such as sediment, sewage, pesticide, fertilizer, industrial and stormwater effluent. Since the vermilion darter has such a restricted range, it was also threatened by potential catastrophic events like a toxic chemical spill.

The vermilion darter is narrowly endemic, occurring in sparse, fragmented and isolated populations due to natural or manmade barriers, such as a waterfall, obsolete strip mine alterations, road culverts, and impoundment. The species is known in only parts of the upper mainstem reach of Turkey Creek and four tributaries in Pinson, Jefferson County, Alabama. Vermilion darters are found in pools of moderate current alternating with riffles of moderately swift current, and low water turbidity.

The proposed listing of the Rush Darter (*Etheostoma phytophyllum*) as endangered is being reviewed at the Washington level.



Rush darter (Photo: Mike Howell)

He will begin the initiation of the 5 Year Review for the Cahaba Shiner and the Flattened Musk Turtle. Anyone with new information concerning these species' natural history, habitat, distribution or current or potential threats please contact Dan.

Dan Drennen Daniel.Drennen@fws.gov

Gulf Sturgeon Tagging

The Panama City Fisheries Resource Office is currently involved with collecting and tagging Gulf sturgeon in the Apalachicola river system for a capture/recapture population study to be conducted in the fall (mid October-mid November).



Gill nets of various mesh sizes (5-12" mesh stretch) are set in the lower river to intercept the fish as they migrate from the fresh to the marine waters to overwinter. We have collected and tagged 120 unique Gulf sturgeons weighing from .5 to 62.2 kg. Several of the fish have been previously tagged with one old-timer PIT tagged

in 1993, 16 years ago! The fish at that time weighed 3.7 kg and was 99 cm in total length. When collected in July 2009, the fish weighed 62.2 kg and measured 206 cm total length. Also, collected One Real Tough Sturgeon! The fish weighed 4 kg and was as healthy as a horse! (see photos).



Frank Parauka
Frank_Parauka@fws.gov

AUBURN UNIVERSITY Fish Biodiversity Lab

We are documenting the distribution of red shiners in the Coosa system, paying particular attention to potential areas of overlap with blue shiners. We are also investigating predation potential and habitat overlap of banded and pygmy sculpins in Coldwater Spring (yes, they do

eat them!). As part of a larger project documenting biodiversity of selected state lands, we have completed fish sampling in the Sipsey bottoms. Fifty-two species were collected in the surrounding swamps as well as in the river channel.

Graduate students Patty Speares, Dan Holt and Nicole Kierl continue to work on various projects related to sound production and sensory reception in fishes. With the addition of a set up for measuring auditory brainstem response

(ABR), we are integrating aspects of hearing into our projects. Dan is especially interested in how high levels of ambient noise (including noise pollution) affect fish reproductive behavior. He is using *Cyprinella venusta* as a model. Dan is also investigating propagation of *Cyprinella* signals in the field and lab. Patty is examining the effect of acoustic signals produced by male darters (*Etheostoma crossopterus*) on hormone levels in conspecific males and females. Patty has also completed a project investigating the potential for barcheck darters (*Catonotus*) to use UV perception. Nicole Kierl has completed her work documenting sound production in pygmy sculpin, and is finishing up a study investigating male color and reproductive success. Working with Dave Mann, we have initiated a pilot project on cavefish sound production, and have a remote recorder in an Alabama cave. So far the results are very promising.

On the systematic front, I am working with Alexis Janosik to describe species in the

Etheostoma rupestre complex. We also have a paper on the phylogeography of this complex in the works. I continue to work with Winston Baker on documenting his findings on bass systematics; this time with the *Micropterus coosae* complex.

Carol Johnston
johnsc5@auburn.edu

Collaboration brings exciting work to Lake Martin

Researchers involved in an ongoing multi-year study of the Tallapoosa River Basin, known as the Tallapoosa Watershed Project (or TWP), seized this opportunity to do some additional dollar-stretching and proposed to conduct an add-on remote sensing study of Lake Martin and its embayments. Through a series of additional meetings, discussions and ultimate collaboration, the remote sensing study came to fruition. The study involves remote sensing measurements concurrent with the Alabama Power water quality study.

This effort was the brainchild of Lake Watch of Lake Martin water monitor, John Glasier, who had collaborated in an earlier water quality study of the lake back in 2004-05 funded by USDA-CSREES (the original Tallapoosa Watershed Project, TWP-1). Along with ongoing water quality sampling, measurements of light reflecting off the water are taken with a handheld radiometer, digital photos of the water are taken through an Aqua-View viewing scope, and a visual measurements of water color are taken using a Forel-Ule color scale. Dr. Luke Marzen of the AU Geography Department and his graduate student, Chandler White, assist with the radiometric measurements, which are taken out on the lake, and back in the lab from filter pads that collect and concentrate lake phytoplankton from a known volume of filtered lake water. Dr. Marzen also obtains same-day Landsat satellite images.



Lake Watch of Lake Martin members John Glasier (far left) and Dick Bronson (left, LWLM President) discuss collaboration with Alabama Power, Kleinschmidt and Auburn University Fisheries representatives to extract additional information through remote-sensing sampling concurrent with the ongoing APCo Lake Martin water quality study. The meeting was held at the Central Alabama Community College in Alexander City in June 2009.

Come Join Us in the SWaMP

Eric Reutebuch and Wendy Seesock, SWaMP
Co-coordinators

The ‘Loveliest Village on the Plains’ has been tarnished in recent years by being home to polluted streams. Three local streams are on the Alabama Department of Environmental Management’s (ADEM’s) 303(d) list of impaired

streams – the Pepperell Branch in Opelika, the Saugahatchee Embayment (where Saugahatchee Creek joins Yates Lake in Tallapoosa County), and Moores Mill Creek in Auburn. Impairment of the first two is caused by too many nutrients (primarily phosphorus), and for the third, from too much sediment (dirt) entering the stream from the surrounding lands in their respective watersheds. Although a majority of these watersheds remain forested, the land around Auburn-Opelika is undergoing rapid transition to urban and suburban developments

An effort to clean up Saugahatchee Creek (which includes the Pepperell Branch as one of its tributaries) was formalized with the formation of the Saugahatchee Watershed Management Plan, or SWaMP. The SWaMP effort began in 2004 with a coalition of community groups, business/industry, local government and resource managers, who drafted a watershed management plan for the Saugahatchee Watershed. The main goal of the plan was to clean up the creek so that it will support its use classifications (including Swimming, Public Water Supply, and Fish and Wildlife) and be removed from ADEM’s 303(d) list.

The Phase 1 Implementation of SWaMP began in 2007 under a 3-year grant awarded to the Department of Fisheries and Allied Aquacultures at Auburn University. The project is directed by Bill Deutsch, Alabama Water Watch Program Manager, and partially funded by ADEM through a Clean Water Act Section 319(h) nonpoint source grant provided by the U.S. Environmental Protection Agency-Region 4.

Analysis of historical water quality data of the Saugahatchee Watershed indicates that urban nonpoint source pollution should be a priority of SWaMP, since runoff from urban sub-watersheds was about three times higher in phosphorus than rural (primarily forested) sub-watersheds (see **NUTRIENT AND SEDIMENT LOADING IN SOUGAHATCHEE CREEK AND THE IMPACTS ON AQUATIC BIOTA**, Bayne et al. 2004).

SWaMP efforts have included both community outreach and strategic installation of Best Management Practices (BMPs) to minimize pollution runoff and reduce phosphorus loading into Saugahatchee Creek. SWaMP coordinators have met with dozens of businesses, community groups and schools to discuss the multi-faceted value of our local water resources, the impacts that are compromising these resources, and what SWaMP and willing partners can do to mitigate pollution sources. Outreach efforts have included informal meetings, community presentations, outreach booths at civic events, presentations at professional conferences, and workshops on Low Impact Development, Lawn Care, Forest Best Management Practices, and Water Conservation & Rainwater Harvest.

Installation of on-the-ground BMPs was preceded by analysis of historic water quality data, which indicated that a disproportionately large amount of pollution was coming from the upper watershed in the form of nutrients (nitrogen and phosphorus) flushing from urban and suburban lawns. Completed BMP projects include stream riparian zone restorations, stream bank and channel restorations, runoff management through installation of wetlands and rain gardens, and water conservation and rainwater harvest projects.

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ALABAMA DIVISION OF WILDLIFE AND FRESHWATER FISHERIES

Aquatic Resources Program

Stream Assessment Project

The Alabama Division of Wildlife and Freshwater Fisheries recently hired Andrew Henderson in January 2009 into the newly created Stream Fish Biologist position. Andrew completed his M.S. degree under Dr. Carol Johnston at Auburn University while working with the endangered Cape Fear shiner (*Notropis mekistocholas*) examining its early life habitat

requirements, spawning behavior, and movement. Andrew also worked on surveys for the threatened slackwater darter (*Etheostoma boschungii*) assessing factors contributing to the species decline. He is responsible for implementation of the statewide stream sampling program for the Division and assisting District personnel with stream sampling.

Alabama Sturgeon Collection Efforts and Tracking

After nearly 2 years tracking the sonic tagged Alabama sturgeon (*Scaphirhynchus suttkusi*) collected in April 2007, the tag battery has died. However, we were able together a wealth of information on movement and habitat, including additional areas to target for sampling. Due to high spring flows, little sampling was conducted in the Alabama and Cahaba rivers this past spring. However, there is some good news. While sampling for Alabama shad below the Robert F. Henry Lock and Dam on April 23, 2009, we electrofished an Alabama sturgeon, but were unable to net the fish. The USFWS was criticized for including the upper Alabama River in the critical habitat designation because it was argued Alabama sturgeon were extirpated from the upper reaches, nevertheless, our sighting confirms the USFWS was correct in its assessment.

Southern Walleye Recovery Efforts

Since 2005 we have been assessing the status of the southern walleye (*Sander* sp. cf. *vitreus*) and attempting to develop a broodstock for recovery efforts in Alabama. We have sampled all historic sites expending over 170 hours of electrofishing, 276 hours of gillnetting and 1,575 net/nights searching for southern walleye. Of the 52 specimens collected, only 39 have been southern walleye, the remaining specimens have either been northern x southern hybrids, northern walleye, or saugeye.

Alabama Shad Assessment

We have begun a 3-5 year project assessing the status of Alabama shad in Alabama. The Alabama River was the only river sampled in 2009. Sampling was conducted approximately every 2 weeks (or when flows allowed) below the 3 sets of locks and dams from February to May. Unfortunately no Alabama shad were collected. Sampling will be concentrated in the Conecuh River in 2010.

Saltmarsh Topminnow Distribution

We recently completed a 2 year project examining the distribution of the saltmarsh topminnow (*Fundulus jenkinsi*) in the Mobile Delta. Our data combined with sampling from Auburn University indicate saltmarsh topminnows are found in the mid Mobile Delta region and may be more numerous than once thought.

Alabama Aquatic Nuisance Species Plan

Comments from the public regarding the Plan are currently being addressed and we hope to have the plan ready for the Governor's review and signature by early fall.

Steve Rider

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AWFF's Creek Kids Program



The new "Creek Kids" program has started off with a big splash. Kids from central Alabama that have never been in a stream are enjoying learning

about watersheds, non-point source pollution and aquatic animals at Tannehill Historical State Park with Alabama Wildlife and Freshwater Fisheries Division personnel. Partnerships have been formed to host some student free of charge. School classes and groups from parks and recreation programs have become "Creek Kids."



Doug Darr, Aquatic Education Coordinator

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ALABAMA FISHERIES ASSOCIATION

TWENTY-SIXTH ANNUAL MEETING
FEBRUARY 17 – FEBRUARY 19, 2010
MARRIOT SHOALS HOTEL & SPA FLORENCE, ALABAMA

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Make checks payable to: Alabama Fisheries Association or AFA.

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AFA encourages the submission of high quality oral and poster presentations. Each oral presenter shall be entitled to 15 minutes for a presentation, plus 5 minutes for questions. Oral presentations should use Power Point. Slides, overhead projectors and video players will not be available or allowed.

All presenters are required to pay their own registration accommodation and travel expenses. AFA cannot subsidize registration fees, travel or hotel costs.

INSTRUCTIONS FOR THE PREPARATION OF ABTRACTS

1. TITLE OF PAPER: The abstract title is printed in CAPITAL LETTERS, with the exception of scientific names which should be Upper/lower case and italicized. Scientific names should not be preceded or followed by commas or parentheses or other markings.
2. AUTHOR(S): The first name should be the presenting author. Use * after the presenting author. Type in upper/lower case.
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4. MAXIMUM LENGTH: One Page
5. PAGE SIZE: Standard 8.5 x 11 inch paper (portrait)
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7. SPACING: Single spaced
8. PARAGRAPHS: Paragraphs should be separated by a blank line and should not be indented.
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Please submit your title to the Program Chair as soon as possible. Titles and abstracts should be sent by January 1 for inclusion in the program to:

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