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NEWSLETTER

March 2008

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We would appreciate your comments on this electronic version of the NC Chapter Newsletter. Please send all responses to Jerry Finke ([jerry.finke@ncwildlife.org](mailto:jerry.finke@ncwildlife.org)).

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### President's Message

First and foremost, I would like to thank you for the opportunity to serve the chapter as President over the coming year. It was truly humbling to stand before you at the chapter meeting and accept the responsibility and challenges of being chapter President.

The chapter has a long tradition and history of success, and this is due completely to the dedication of its members. I would like to take this opportunity to personally thank all of the members that have served the chapter in any capacity; chapter officer, committee chair, committee member, meeting presenter, moderator, paper judge, etc. In particular, I would like to thank Lawrence Dorsey for his service during his 3-year presidential rotation and Brian McRae for serving the past 4 years as Secretary-Treasurer.

Success breeds bigger and better opportunities. However, to use a cliché "this is a good problem to have". The chapter has and will continue to do a good job of providing for its members and taking a leadership role at the division and parent society levels. This is no more evident than our commitment to host the Southern Division Spring Meeting in 2010. Preparations have already begun and will ramp up significantly in the coming months. Additional meeting information and opportunities to contribute will be available in the very near future.

One area of focus that I would like the chapter to explore more in the coming year is aquatic stewardship. The Environmental Concerns Committee has taken the lead and prepared position statements and resolutions on a variety of issues. In addition, the Education and Outreach Committee has also been very active by producing a poster on invasive species and a brochure on sustainable waterfront development. But are there other opportunities where the chapter could take a more active, visible role in the management and conservation of aquatic resources? Can the chapter apply its many talents, time, and money to be a more effective advocate for aquatic resources across the state? This is where it is critical that we get input from chapter members. This process has already started with the survey administered by Bob Barwick at the chapter meeting, but I encourage you to contact me if you have additional thoughts and ideas. Over the next year, I would like the chapter to develop a protocol for identifying, prioritizing, and

coordinating aquatic stewardship activities statewide. I will also be working with incoming Secretary-Treasurer Kevin Hining to develop an annual working budget and an estimate of the funds the chapter has to devote to these activities. Ultimately, my goal is to establish an approach by which the chapter is more visible and relevant and is widely identified as an authority in the conservation of the state's aquatic resources.

Taking an active role in the chapter is very rewarding, and the chapter's success and scope of work is shaped completely by the interests and contribution of its members. I would like to close by encouraging each of you to get more involved in chapter activities. If you have a specific interest, please feel free to contact me, one of the other chapter officers, or a committee chair to learn more.

*Christian Waters*

## Secretary-Treasurer's Report

[Minutes of the 2008 Annual Business Meeting.](#)  
*Submitted by Brian McRae, Secretary-Treasurer*

### Awards Committee

Several awards were presented during the annual NCAFS meeting held on February 18-20, 2008, in Greenville, North Carolina. The meeting was well attended and the host facility and program were outstanding. Thanks to Christian Waters for a successful meeting. The awards were presented to chapter and non-chapter members for their contributions to the chapter and fisheries and environmental conservation in North Carolina.

Student papers were judged for the Richard L. Noble Best Student Paper Award and the professional papers were judged for the W. Don Baker Memorial Best Professional Paper Award. There were 4 presentations by students and 18 presentations by professionals. Thanks to all who presented papers.

William Smith won the 2008 Richard L. Noble Best Student Paper Award for his presentation titled "Fishery Management and tag-return estimates of fishing mortality: an example in the NC southern flounder fishery". The paper was coauthored by Dr. Fred Scharf, UNC-Wilmington, and Dr. Joe Hightower, NCSU. In addition to a Chapter award plaque, William will receive a monetary award of \$600 from the Chapter's Ichthus fund for travel to present the paper at the 2008 parent society meeting in Ottawa, Canada.



*William Smith, recipient of the 2008 Richard L. Noble Best Student Paper Award conducting southern flounder research along the North Carolina coast.*

Dave Coughlan won the 2008 W. Don Baker Memorial Best Professional Paper Award for his presentation entitled "Timing, size, and movement of upstream migrating American eels in the Santee-Cooper basin". The paper was coauthored by Messrs. Bill Post and Allan Hazel, South Carolina Department of Natural Resources.



*President Kent Nelson presenting the 2008 W. Don Baker Memorial Best Professional Paper to Dave Coughlan.*

The Distinguished Service Award recognizes Chapter members who have distinguished

themselves by service to the Chapter, the American Fisheries Society, or the fisheries profession. The 2007 award was presented to Scott Van Horn in recognition of his outstanding dedication, leadership efforts, and service to the Chapter. Scott has been an invaluable member of the Chapter since its inception in 1990 and was instrumental in its formation. He served as the Chapter's first President from 1990-1991 and helped to get the Chapter chartered with the Parent Society. Scott helped draft the Chapter's by-laws and procedures which today help guide the Chapter activities and conduct. In addition, Scott helped form and then chaired the Chapter's Awards Committee for a number of years. Scott's numerous contributions and his tireless dedicated efforts helped make the North Carolina Chapter a reality and those contributions are what distinguish his efforts.



*President Kent Nelson presenting the Distinguished Service Award to Scott Van Horn.*

The Fisheries Conservation Award recognizes non-Chapter members who have distinguished themselves by service or commitment to the Chapter or to the fisheries resources of North Carolina. The 2007 award was presented to Mr. Joe Albea for his dedicated efforts to educate the general public on fisheries and wildlife conservation issues in North Carolina. Mr. Albea has certainly met this objective and has gone much further in identifying and championing the traditional heritage values of fishing and hunting to the citizens of the state. In addition, Mr. Albea was instrumental in organizing grassroots opposition against the Navy's planned outlying landing field (OLF) in Washington County near the environmentally sensitive, Pocosin National Wildlife Refuge. The development of the OLF is a major environmental issue in North Carolina and the Washington County site would have put millions of migratory birds into jeopardy if constructed. His efforts helped to successfully

convince political leaders to drop this OLF site from consideration.



*President Kent Nelson presenting the Fisheries Conservation Award to Joe Albea.*

Finally, the Chapter recognized outgoing President, Kent Nelson, and Secretary-Treasurer, Brian McRae for their hard work, dedicated efforts, and outstanding leadership to the Chapter.



*President Kent Nelson presenting the Certificate of Appreciation to outgoing Secretary-Treasurer Brian McRae.*



*President Christian Waters presenting the Certificate of Appreciation to outgoing President Kent Nelson.*

Congratulations to all of these award recipients for a job well done!

*Submitted by John Crutchfield, Awards Committee Chair*

## **Education Committee**

During the business meeting of the 2008 NCAFS Chapter Meeting the chapter membership was surveyed by the Education and Outreach Committee to determine their interests in future outreach projects. A total of 45 members offered their opinions on the importance of nine outreach topics and suggested other topics for consideration. Opinions were variable and reflected the diverse interests of the group. Some topics received polarized responses and were scored by some as “most important” and by others as “not very important.” Other topics received only a low or moderate level of interest and will probably be eliminated from further consideration. As a likely result of the ongoing drought in North Carolina, some members noted an interest in water resource planning and suggested that water conservation outreach be promoted by the Committee. All comments and feedback are currently being evaluated. So far, all scores have been tabulated, but no topic was a clear winner. Committee staff will further evaluate chapter member responses, determine the amount of information available to address each topic, and attempt to identify target audiences. Thanks to all those who took the time to tell us what topics you think are important. For those who volunteered to help, start screening your calls now – we’ll be calling to request your assistance soon!

*Submitted by Bob Barwick and Greg Cope, Co-Chairs*

## **Environmental Concerns Committee**

If you have not done so recently, please take the opportunity to visit the Environmental Concerns Committee (ECC) page on the NCAFS website. You will see that Bryan Kalb with Duke Energy and Rob Nichols with the NC Wildlife Resources Commission joined the committee. We are pleased to have them aboard and look forward to their insights, advice, and efforts. The ECC expresses many thanks to Jerry Finke for updating and adding new information on the page. And, more information is coming so the membership can

actively learn about “hot” fishery-related environmental topics in North Carolina.

The ECC last formally met on December 3, 2007 at the Baker Engineering office in Asheville and the NC Wildlife Resources Commission office in Raleigh to discuss fishery habitat issues and topics to monitor or possibly address in the near future. They included, in part: the proposal to deepen the Cape Fear River at Southport, implications of amenity lakes on stream habitats, beach renourishment, possible changes in compensatory stream and wetland mitigation approaches, reclassification of brook trout supporting streams, and arising drought issues in the Broad River and other basins.

Regarding amenity lakes, proposals to impound streams in residential developments have markedly increased in the last few years, particularly in the mountains. These impoundments can provide productive, albeit regionally unnatural, fishery habitats. But, downstream they can cause declines in water quality and quantity, reductions in sediment and organic material transport, increased erosion and stream bank instability, and fragmentation and isolation of stream habitats. They also can become sources of exotic and invasive aquatic species in a watershed when homeowner associations and others attempt to establish or improve the fisheries. The ECC is therefore tracking how regulatory agencies are handling requests for these impoundments and may offer comments as opportunities arise.



*Amenity lake in new residential development in the mountains.*

In January 2005, the ECC drafted a letter, signed by then NCAFS President Mallory Martin, which encouraged the North Carolina Department of Environment and Natural Resources, Division of Water Quality (DWQ) to reclassify streams that have higher water quality and fishery resources



than reflected by their current classification. The “higher” classifications like Outstanding Resource Water (ORW) and the Trout (Tr) sub classification carry more stringent regulatory requirements for point and non-point source pollution prevention. As follow-up to the letter and in recognition that historical native brook trout habitat in the mountains has been appreciably reduced and that much that remains, particularly through private lands, is vulnerable to further declines (see the conservation effort called the Eastern Brook Trout Venture <http://www.easternbrooktrout.org/>), the ECC decided to gather available data regarding brook trout distribution and formally petition the Division of Water Quality to reclassify those streams, as appropriate. The goal is to identify and help conserve streams like Hunter Jim Creek in Jackson County, which supports wild brook trout but is not subject to the Tr or higher classification.



*Brook trout supporting Hunter Jim Creek in Jackson County.*

Another issue of particular importance to brook trout is the spread of the exotic hemlock woolly adelgid (HWA). This exotic forest pest has been killing hemlocks in the eastern U.S. and has spread to the North Carolina Mountains in the last few years. Hemlocks in riparian areas help maintain the cold water temperatures of trout streams by providing shade and reducing convective warming. The ECC is currently investigating the status of the HWA problem and the efficacy of some preventive measures, including releases of predatory beetles that show promise in controlling the spread of HWA. Upon further consideration, the ECC may recommend that the NCAFS contribute to established control efforts.



*Here is a low elevation (1200 feet MSL) stream in Rutherford County that may not support rainbow trout if the hemlocks disappear.*

A final ECC newsworthy item to note is the ongoing drought that now affects most of North Carolina and that is expected to continue, at least in the short term. The ECC is drafting a letter of concern to the Governor of North Carolina that highlights the implications of low stream flows on fishery resources and that emphasizes the need for municipalities, industry, and other users to implement tangible water conservation efforts. The draft will be finalized and reviewed by the Chapter President before dissemination.

Thank you for your interest in the goings-on of the ECC. As always, we welcome any suggestions from the membership regarding key issues to investigate and address. Those suggestions can be made any time on the website. Have a good spring and remember that North Carolina’s fisheries can only be as good as the home we provide.

*Submitted by Dave McHenry, Environmental Concerns Committee Chair*

## **News from around North Carolina**

### ***North Carolina Division of Water Quality News from Bryn Tracy, NCDWQ -- What are Piedmont and Coastal Plain Species Doing in the French Broad River Basin?***

When one thinks of the fish fauna of the French Broad River Basin, what comes to mind? Brilliantly colored shiners and darters, horneyheads, molly crawl bottoms, and bronzebacks? How about the piscivorous Chain Pickerel, *Esox niger*, the omnivorous Bluehead Chub, *Nocomis leptocephalus*, and the diminutive insectivorous Swamp Darter, *Etheostoma fusiforme*? These are not some of the first species I would think of when contemplating the fauna

inhabiting the streams in Haywood, Madison, Buncombe, Henderson, and Transylvania counties. Yet, these three species and 18 other nonindigenous species have been collected on more than one occasion from this river basin. According to my records, the list of wayward species currently includes: Threadfin Shad, Goldfish, Rosyside Dace, Grass Carp, Common Carp, Bluehead Chub, Fathead Minnow, Creek Chubsucker, White Catfish, Flat Bullhead, Chain Pickerel, Rainbow Trout, Brown Trout, Eastern Mosquitofish, White Bass, Redbreast Sunfish, Green Sunfish, Pumpkinseed, Redear Sunfish, Swamp Darter, and Yellow Perch. Not included in this list are some tropical fish that now call the basin home -- the Blue Tilapia and the Amazon Sailfin Catfish which are found in Lake Julian and a species of Pacu which was caught in the Pigeon River in August 2007.

While nonindigenous trouts are found in the high gradient, cool-coldwater streams, many of the cool-warmwater streams flowing through the Broad Basin Level IV Ecoregion, between Brevard and Asheville, are now home to the Flat Bullhead, *Ameiurus platycephalus*, Chain Pickerel, Green Sunfish, *Lepomis cyanellus*, and Redbreast Sunfish, *Lepomis auritus* -- species more associated with Atlantic Slope streams, than the Mississippi River drainage. Even the Swamp Darter, a species rarely found west of the Fall Line and typically associated with Coastal Plain streams in the eastern part of the state, is now turning up. Why is this? Perhaps, the answer(s) may lie in the local topography.

The French Broad River originates at the confluence of its three forks – the West Fork, North Fork, and East Fork near the Town of Rosman in western Transylvania County. The river and its tributaries are high elevation and high gradient, having a cobble and boulder substrate, and generally supporting many indigenous species and naturalized populations of Brown Trout and Rainbow Trout. However, between Brevard and Asheville the gradient decreases to < 3 ft/mile.

The Broad Basin, through which the French Broad River flows basically east, then from south to north, and then northwest, is a relatively low elevation, flat agricultural area with many municipalities, such as Brevard, Henderson, and Asheville. Compared to the headwaters, the streams are lower gradient and have a cobble, gravel, and sandy bottom. In their lower reaches, many of them have been channelized to quickly convey water away from the

flatter lands suitable for row crop agriculture and development.



*Bat Fork at SR 1779, Henderson County.*

On the west side of the French Broad River, near the confluence of Bent Creek in Buncombe County, is an area known as the “Sandy Bottom”, a bottomland forest with some floodplain and oxbow ponds. Here in 1947, 50 specimens of what was thought at that time to be a new subspecies of the Swamp Darter, were collected. Since then and from the same pond or general area, 11 specimens were collected in 1949, 6 specimens on two occasions in 1975, and 1 specimen in 1991. In 2007, one specimen was also netted from Avery Creek, a small creek adjacent to the Bent Creek watershed. Not far from this area, but across the river, 12 specimens were collected in 1952 from an oxbow pond off Cane Creek, and one specimen was collected in 2002 from Bat Fork, a channelized agricultural ditch, often blocked by beaverdams. The species is even known from the mainstem river itself. In June and July 1977, two specimens were found almost 66 miles apart! One specimen was from Transylvania County and the other specimen was from the river, below the dam at the Town of Marshall in Madison County. And last year, one specimen was electroshocked from Fines Creek in Haywood County, just upstream from Walters Lake.



*Avery Creek off SR 3498, Buncombe County.*

What can possibly account for such a scattered distribution? As postulated years ago for the rapid dispersal of the Asiatic Clam, are they hitching a ride on a duck's feet? Are they inadvertently being scooped up with bait fish such as Golden Shiners from bait ponds within their native range and then discarded into French Broad River basin waters after the end of the fishing trip? Steve Fraley, NCWRC, hypothesizes that perhaps they are mixed in with aquatic plants that are being sold by plant nurseries for decorative ponds which then overflow into the receiving streams during floods.

The floodplain pond in Sandy Bottom is also the only known locality in the entire river basin from which one specimen of the Creek Chubsucker, *Erimyzon oblongus*, has ever been found. Alvin Braswell (NCSMNS) and colleagues netted one on March 01, 1975. Apparently, this species did not successfully expand further.

In the late 1960s and 1970s, the known distribution of the Flat Bullhead was confined to Atlantic Slope streams in Virginia, the Carolinas, and Georgia (Yerger and Relyea 1968, Lee, *et al.* 1980). The NCWRC's surveys in the early 1960s (Richardson, *et al.* 1963, Messer, 1964, and Crowell, 1965) did not find the species at any sites in the French Broad River Basin. Harned (1979) did collect the Yellow Bullhead, *Ameiurus natalis*, from many of the mainstem river sites. However, several of the specimens were identified by Dr. Ed Menhinick in the early 1980s as Flat Bullheads. The distributional map in Menhinick (1991) shows the species confined primarily to the mainstem of the French Broad River.

Today, it is widely distributed in many of the tributaries, such as the Little River, Swannanoa River, Hominy Creek, Newfound Creek, and Flat Creek, and is distributed along 81 miles of the

mainstem from Transylvania to Madison counties. In 2000, 12 specimens were collected by consultants working for Blue Ridge Paper Products from two sites on the Pigeon River in the vicinity of Canton in Haywood County. And in 2007 another specimen was collected by the Progress Energy fisheries staff from the river upstream of Canton.



*Flat Bullhead, courtesy of the VA Tech Virtual Aquarium.*

The Chain Pickerel, originally with an Atlantic Slope, Gulf Slope, and lower Mississippi River distribution, was first found in the early to mid-1990s in the French Broad River. Currently, it is found in small to medium size tributaries such as Bat Fork, Mud Creek, Cane Creek, Clear Creek, Bent Creek below Lake Powhatan, the lower Little River and the lower Swannanoa River. In the mainstem it is now known from the Davidson River (Transylvania County) downstream to river mile 145 near the Pearson Bridge (Buncombe County)."



*Chain Pickerel, courtesy of the VA Tech Virtual Aquarium.*

How the Chain Pickerel became established in the basin has been the fodder of many an e-mail. According to David Yow, NCWRC, Chain Pickerel were not mistakenly introduced when Musky, *E. masquinongy*, were being stocked in the same reach of the river. Broodstock were obtained from Lake Adger (Broad River Basin), from the French Broad River, and from Lake James (Catawba River Basin) and reared in the Table Rock Hatchery (Burke County) -- all waterbodies where Chain Pickerel is not found. Since 1996 all stocked Musky have been microtagged and no Chain Pickerel collected from the river have ever been detected with a cheek tag. David's records and those of DWQ provide compelling evidence that the Chain Pickerel was first introduced into the Coastal Plain-like large wetlands, near US 64 in Hendersonville in the early 1990s.





*Muskellunge, courtesy of the VA Tech Virtual Aquarium.*

Although species such as the Swamp Darter, Chain Pickerel, and Flat Bullhead do not seem to have negatively impacted the native fish fauna, the case may not be so clear with the Bluehead Chub. It seems to have displaced the native River Chub, *Nocomis micropogon*, in several streams. Since 1997, I along with other DWQ staff have collected this Piedmont species (the Bluehead Chub) from seven sites in five streams: Mud Creek and two of its tributaries, Bat Fork and Clear Creek in Henderson County, Price Creek, a tributary to the Cane River in Yancey County, and Cane Creek, a tributary to the North Toe River in Mitchell County. In Cane Creek, the species constituted almost 25% of the fauna in 1997 and more than 50% of the fauna in 2007, the River Chub was absent in both years. The River Chub may also be extirpated from Bat Fork and Mud Creek. In Price Creek, the River Chub is declining; in 1997 the ratio of River Chub to Bluehead Chub was 65:1, by 2002 the ratio was 5.6:1.



*Bluehead Chub (Cape Fear River Basin).*

Coincidentally, the River Chub is the only species of *Nocomis* that is not sympatric with any other *Nocomis* species in North Carolina, except for an introduced population of River Chub in the upper Linville River and an introduced population of Bluehead Chub in the upper Cullasja River. The River Chub is sympatric with the Hornyhead Chub, *N. biguttatus* in the Midwest. The Bluehead Chub and the Bull Chub, *N. raneyi*, are sympatric in the Neuse, Tar, and Roanoke River Basin, although Bull Chub tends to inhabit larger streams than Bluehead Chub. The Bluehead Chub and Bigmouth Chub, *N. platyrhynchus* (a species very closely related to the River Chub) are sympatric in the New River Basin. In the French Broad River Basin where it has been introduced, the Bluehead Chub

may have a competitive advantage over the River Chub.

Species of *Nocomis* are key components of stream fish communities because of their nest building reproductive behavior. These nests are also used by several other species of cyprinids such as the Central Stoneroller, Warpaint Shiner, Striped Shiner, and Saffron Shiner. The ecological ramifications of the replacement of the River Chub by the Bluehead Chub are unknown.

In conclusion, fish are introduced into new waters outside of their native range for many reasons – for the management of nuisance aquatic plants, or as a new or replacement sport fish, or as a new forage fish. Well-intentioned stockings of sunfish may inadvertently introduce more than one sunfish species, especially if the stocked fish are small. Other introductions may be unintentional by fisherman who do not know any better (e.g., discarding live bait at the end of the day into the stream). But you have to wonder, how and why are some of the lesser known species moving from one river basin to another? And for nonindigenous species, maybe all you need is a very small founder population to establish a viable population outside its native range.

#### **Suggested Readings**

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Collette, B. B. 1962. The swamp darters of the subgenus *Hololepis* (Pisces, Percidae). *Tulane Studies in Zoology*. 9: 115-211.

Crowell, T. E. 1965. Survey and classification of the Toe River and tributaries, North Carolina. Final Report. Federal Aid in Fish Restoration. Job I-U, Project F-14-R. North Carolina Wildlife Resources Commission. Raleigh, NC.

Harned, W. D. 1979. A qualitative survey of fish and macroinvertebrates of the French Broad River and selected tributaries, June – August 1977. Division of Water Resources, Office of Natural Resources, Tennessee Valley Authority, Norris, TN.

Lee, D. S., Gilbert, C. R., Hocutt, C. H., Jenkins, R. E., McAllister, D. E., and J. R. Stauffer, Jr. 1980. Atlas of North American freshwater fishes. North Carolina State Museum of Natural History, Raleigh, NC.



Menhinick, E. F. 1991. The freshwater fishes of North Carolina. North Carolina Wildlife Resources Commission. Raleigh, NC.

Messer, J. B. 1964. Survey and classification of the Pigeon River and tributaries, North Carolina. Final Report. Federal Aid in Fish Restoration. Job I-N, Project F-14-R. North Carolina Wildlife Resources Commission. Raleigh, NC.

Richardson, F. R., Ratledge, H. M., and J. B. Messer. 1963. Survey and classification of the French Broad River and tributaries, North Carolina. Final Report. Federal Aid in Fish Restoration. Job I-I, Project F-14-R. North Carolina Wildlife Resources Commission. Raleigh, NC.

Yerger, R. W. and K. Relyea. 1968. The flat-headed bullheads (Pisces: Ictaluridae) of the southeastern United State, and a new species of *Ictalurus* from the Gulf Coast. *Copeia*. (2) 361-384.

**Thanks to:** Steve Fraley (NCWRC), Gabriela Hogue (NCSMNS), Charlie Saylor (TVA), Wayne Starnes (NCSMNS), and David Yow (NCWRC) who exchanged many thoughtful ideas in e-mails and in the development of this article.

#### New Distributional Records for 2007

Based upon an examination of the 2007 data, unusual or new DWQ distributional records (i.e., those not shown in Menhinick (1991) and collected for the first time by DWQ staff from a particular county in the river basin of interest) have been recorded for the:

- Tar River Basin
  - *Umbra pygmaea*, Little Fishing Creek, Warren County
  - *Ameiurus platycephalus*, Red Bud Creek, Nash County
  - *Lepomis cyanellus*, Parker and Tyson creeks, Pitt County



*Eastern Mudminnow, courtesy of the VA Tech Virtual Aquarium.*

- Yadkin River Basin

- *Campostoma anomalum*, Forbush Creek, Yadkin County
- Catawba River Basin
  - *Cyprinella pyrrhomelas*, Glade Creek, Alexander County
  - *Notropis petersoni*, Waxhaw Creek, Union County
  - *Pimephales promelas*, Duck Creek, Alexander County
  - *Phoxinus oreas*, Mulberry Creek, Caldwell County
  - *Lepomis cyanellus*, Curtis and North Muddy creeks, McDowell County



*Mountain Redbelly Dace, courtesy of the VA Tech Virtual Aquarium.*

- French Broad River Basin
  - *Clinostomus funduloides*, Crab Creek, Transylvania County
  - *Lepomis cyanellus*, North Toe River, Avery County
  - *Etheostoma fusiforme*, Fines Creek, Haywood County



*Glade Creek, SR 1609, Alexander County.*

If you are aware of additional distributional records of the North Carolina fauna or introduced species, please share this information and voucher your specimens with Wayne Starnes at NCSMNS ([wayne.starnes@ncmail.net](mailto:wayne.starnes@ncmail.net)). Also, please share any of your locality records with Bryn Tracy ([bryn.tracy@ncmail.net](mailto:bryn.tracy@ncmail.net)).

**CMAST Undergraduate Summer Fellows Program forwarded by Jim Rice, NCSU** – NC State University enthusiastically supports undergraduate research – providing students with

opportunities to design science projects and gain rewarding research experiences that may positively influence their choice of careers in science or fisheries.

For more information about the CMAST Undergraduate Fellows Program and the application form go to <http://www.cmast.ncsu.edu/education/documents/2008SummerFellowsProgram.doc>

The application deadline is April 23, 2008.

***Sea Grant, DMF Sponsor Marine Fisheries Fellowship, forwarded by Dave Coughlan, Duke Energy***

North Carolina Sea Grant is accepting applications for a fellowship opportunity for students nearing the completion of an advanced degree program in natural resources or marine sciences. The one-year Marine Fisheries Fellowship provides a \$30,000 stipend. It is open to graduate or post-graduate students at southeastern universities.

The selected fellow will be placed with the North Carolina Division of Marine Fisheries (DMF) and North Carolina State University's Center for Marine Sciences and Technology beginning summer 2008. Both facilities are in Morehead City, which is centrally located on North Carolina's "Crystal Coast", overlooking Bogue Sound.

The fellow will focus on research questions related to summer flounder (*Paralichthys dentatus*). Specifically, the fellow will conduct a comparative analysis of two methods of aging summer flounder utilizing an existing database of age structures. Results and recommendations from the fellow's research will help DMF assess and manage North Carolina's summer flounder fishery.

Applications must be received no later than **April 7, 2008**. Please send: a personal and academic resume; a statement giving reasons for applying and educational/career goals, no longer than two pages; copies of undergraduate and graduate transcripts; and two letters of recommendation from professors with knowledge of the applicant's academic performance. Travel for interviews will be at the applicant's expense. Mail application packet to: Jeffrey Buckel, Sea Grant Marine Fisheries Fellowship Program, Center for Marine Sciences and Technology, 303 College Circle, Morehead City, NC 28557. Packets must be received by **5 p.m. Monday, April 7, 2008**.

For more information, contact Buckel at 252/222-6341, [jeffrey\\_buckel@ncsu.edu](mailto:jeffrey_buckel@ncsu.edu) or DMF's Chris Batsavage at 252/808-8088, [chris.batsavage@ncmail.net](mailto:chris.batsavage@ncmail.net).

## Spotlight on Students and Young Professionals

***Michael Abney, Fisheries Biologist, Duke Energy*** -- Meet Michael Abney. Michael is currently a Fisheries Biologist with Duke Energy and joined the company in June of 2007. Born in Virginia Beach, Virginia, Michael and his family moved to Atlanta, Georgia when he was 2 years of age and after high school Michael attended the University of Georgia, graduating in 1992 with a B.S. in Biology. While attending UGA, Michael had an illustrious career as an offensive lineman for the Bulldogs football team, but unfortunately was not drafted by the NFL due to an undisclosed injury. Due to this, Michael turned to furthering his academic career by attending the University of Southern Mississippi at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi. Here Michael graduated in 1998 with a Masters in Marine Biology. Not finished with his academic career, Michael then entered the University of Kentucky and graduated in 2001 with a Masters in Freshwater Biology.



With his academic career behind him, Michael was hired by the U.S. Fish and Wildlife Service in Vero Beach, Florida as a Fish and Wildlife Biologist. During his two years here, Michael worked on the Everglades Restoration Project. Michael was then hired by Georgia Power Company where he worked in Atlanta as a Fisheries Biologist for three years, before moving to his present position with Duke Energy.

Among his accomplishments, Michael has been a member of the Executive Committee of the Robust Redhorse Conservation Committee, and is currently active in its efforts. Michael is an AFS Certified Fisheries Professional and the current Secretary-Treasurer of the SDAFS Reservoir Committee. The highlight of Michael's career, however, was hosting the 2008 Reservoir Symposium at the Georgia Aquarium in Atlanta.

Michael is married and has one dog (black Labrador Retriever-“Amos”) and one poodle. His retirement goal is to have breakfast every morning at Chick-fil-A and tell fishing lies to his buddies.

## Meetings of Interest

### Workshop: **Assessment and Identification of Riparian Vegetation**

May 14, 2008 - Dan Politt Conference Center, RAFI, Pittsboro, NC

[http://www.ncsu.edu/srp/veg\\_workshop.html](http://www.ncsu.edu/srp/veg_workshop.html)

This one-day course will introduce students to vegetation assessment of riparian areas along streams that will potentially be restored. Existing riparian condition will be examined and discussed in both classroom and field settings. Topics will include stream bank stability from a vegetative perspective, evaluation of current plant inventory, invasive vegetation issues, and potential planting constraints. Identification of common riparian plants of North Carolina will also be discussed during field sessions. Students will be given handouts with information on how to identify individual riparian plants.

For more information and to register on-line, please visit our website at:

[http://www.ncsu.edu/srp/veg\\_workshop.html](http://www.ncsu.edu/srp/veg_workshop.html)

### Workshop: **Intro to Taxonomy and Pollution Ecology of Aquatic Insects**

May 14-16, 2008 - AB Tech, Asheville, NC

[http://www.ncsu.edu/srp/ept\\_workshop.html](http://www.ncsu.edu/srp/ept_workshop.html)

Benthic macroinvertebrate larvae (aquatic insects) play key roles in many regulatory water quality programs in North Carolina. Not only are these insects used to detect water pollution problems, but are also used to determine if streams are perennial features, and are proposed for use in stream restoration projects as success criteria. Despite the value of this group of organisms in North Carolina's regulatory programs, very little is known about these bugs. This workshop will introduce the participants to the basic ecology and taxonomy of

aquatic insects. We will spend most of the time learning family level identification of mayflies, stoneflies and caddisflies (or EPT); however, other groups also will be discussed.

For more information and to register on-line, please visit our website at:

[http://www.ncsu.edu/srp/ept\\_workshop.html](http://www.ncsu.edu/srp/ept_workshop.html)

For a listing of all workshops offered by NCSU Dept. of Biological & Agricultural Engineering, please go to:

[http://www.bae.ncsu.edu/training\\_and\\_credit/](http://www.bae.ncsu.edu/training_and_credit/)

## Employment Opportunities

### **Progress Energy, Environmental Health & Safety Services Section**

#### **Description of Job Duties for Biologist Contractor Position**

**(Employment through Commensura)**

#### **Brief Description of Job Duties:**

The incumbent will primarily perform fisheries, water quality, and other field sampling activities associated with the ongoing hydro relicensing of the Blewett and Tillery Hydroelectric Project and the new nuclear generation initiative at the Harris Nuclear Project. This study will require weekday and some scheduled weekend work, depending upon the project studies. The incumbent must be able to work independently in the field and interact with the plant staff and public in a professional manner. The incumbent will also assist in other identified field work and laboratory tasks associated with the two identified projects as well as ongoing monitoring programs at other Company power plant sites. Field sampling will include fish, mussels and other benthic invertebrates, terrestrial wildlife, and water quality studies. Laboratory duties may include chlorophyll *a* analysis, maintenance and calibration of water quality instrumentation, taxonomic identification of fish and benthic invertebrates, input and editing of data into computers, entry of data records into the QA/QC filing system, maintenance of field sampling equipment, and support of GPS/GIS habitat mapping studies. Job duties require overnight travel, work under a variety of field sampling conditions on rivers and lakes, and extended work hours during some studies. The incumbent must work effectively with other team members to achieve study objectives. Also, the incumbent must be knowledgeable of standard Company safety and other job practices to perform



tasks safely and effectively. Salary will dependent upon education level and experience. For more information on applying for this position, please contact John Crutchfield at [john.crutchfield@pgnmail.com](mailto:john.crutchfield@pgnmail.com).

**Valuable Links –**

The American Fisheries Society Home Page offers a wealth of links to assist you in your fishery endeavors. Information on ordering AFS books, public outreach, annual meetings, chapter links and joining the AFS can be found at <http://www.fisheries.org/>.