

2013 NANFA CONVENTION SUMMARY

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The 2013 edition of the annual NANFA Convention was held at Cumberland Falls State Park in Kentucky, and was hosted by Kentucky and Ohio Regional Representatives Josh Blaylock and Matt De La Vega. From May 2nd through the 5th, NANFA members were treated to some of the best that Kentucky has to offer. Cumberland Falls is one of the most beautiful places in the state of Kentucky. Geologists estimate that the rock over which the Cumberland River plunges is about 250 million years old. Often called the Niagara of the South, Cumberland Falls is the only place in the Northern Hemisphere where a Moonbow (a rainbow by moonlight) can be seen. The only other location on Earth is Victoria Falls in Africa. The State Park and Dupont Lodge gave NANFA members a great location and wonderful facilities, offering everything they needed, a rustic feel, and, of course, the delicious southern food provided by Riverview Restaurant.

The convention kicked off on Thursday, May 2nd, as guests arrived. Between their arrival and the first planned events, many people relaxed and explored Cumberland Falls and the surrounding area. That evening, Uland Thomas led a photo tank building workshop. Those who attended learned how to build photo tanks by actually building tanks that were auctioned off on Friday, with proceeds going to support NANFA.

On Friday, May 3rd, NANFA was treated to a variety of wonderful speakers. We were honored to have such a fine lineup of guests, including Kathlina Alford (Tennessee Aquarium Conservation Institute), Matt Thomas (Kentucky Department of Fish and Wildlife Resources), Brooke Washburn, (Morehead State University), J.R. Shute, (Conservation Fisheries, Inc.) Michael Hensley (The Nature Conservancy), David Cravens (Kentucky Center for Mollusk Conservation), Brian Zimmerman (NANFA), and a park ranger from Cumberland Falls. See below for a summary of each talk.

That evening we enjoyed a wonderful southern dinner from Riverview Restaurant, followed by the annual auction. This was likely the largest auction to date for a NANFA convention. Donations poured in from large

corporations, small companies, and many NANFA members. Books, live fish, fishy folk art, and aquariums were just a few of the many items sold. Some of the more notable items were custom aquarium backgrounds donated by Designs by Nature, the NANFA-built photo tanks, Mike Lucas's handmade fish ornaments, and even a few cases of the 2013 convention's unofficial drink, Kentucky's original Ale-8-One. This year's auction was record breaking in both size and income.

Saturday, May 4th, was a big day in Kentucky as it marked the 139th running of the Kentucky Derby. It was also a big day for NANFA. Despite the weather—it was, I'm told, the first time it has rained on the field collection day of a NANFA convention—NANFA members came together to explore one of the most diverse areas in the United States. We arranged for three separate trips. Trip 1, led by host Matt DeLaVega, went to the Kentucky River drainage. Heading east, they had dry conditions for most of the day. As an added bonus, Matt Thomas from the KDFWR took them to a location where they could find Kentucky Arrow Darters. This site is frequently used by CFI for their work with the Arrow Darter. Though the group was limited to one river drainage, they caught an impressive number of species.

Trip 2 headed west and was led by Uland Thomas. Though they encountered rain at their first location, that didn't stop them. They headed back east and sampled some locations in the Middle Cumberland River drainage.

Trip 3, led by host Josh Blaylock, sampled locations in the Middle Cumberland River and upper Green River. This was a unique trip as there were multiple locations within the area that allowed us to sample very different habitats. This group also witnessed some spawning action of Longnose Gar. One member even got in on the action with a Golden Redhorse, but we'll leave it at that. Due to the drainages and locations, this trip yielded the highest number of species.

The heavy rain continued on Sunday, May 5th. Three trips were planned but had to be cancelled due

ACTION SHOTS FROM THE 2013 NANFA CONVENTION, KENTUCKY



Photos by Jenny Kruckenberg (*) and Fritz Rohde.

to the weather. Though most people began their trips home, one group stayed behind to brave the rain and find more species. We traveled north to locations in the Rockcastle River and Dix River. In the Rockcastle drainage we sampled Crooked Creek, which yielded plenty of the Kentucky endemic Striped Darter. We also seined in a unique cave-fed creek that holds an unusual looking Orangethroat Darter. We ended our day in the Dix River, where we caught the Shelton Darter.

Even with the poor weather on the collecting days, the convention was a great success. In the end, everyone had a great time. This convention didn't happen just through the efforts of Matt and I. I would like to take a few lines to thank a few deserving people. Casper Cox and his son, Cobalt, did an amazing job on the artwork for the convention logo and t-shirts. Dave Neely's illustration of the Kentucky Arrow Darter was spot on. I'm still blown away when I look at the overall work of the shirts and logos. Thanks to Michael Wolfe for all his work on the website and making sure it all worked; he really made us look good. Thanks to Tom Watson for handling the registration. Both Tom and Michael did a ton of work on the auction and without them it would not have been as successful as it was. Thanks also to Phil Nixon for once again stirring up the auction bids. Speaking of the auction, a HUGE thank you to all the NANFA members who donated and participated. Many people helped in some way, and I want to thank each of you, even if not by name. Finally, another big thank you to our speakers and to Cumberland Falls State Park. This year's convention was, in my opinion, a success. It brought in a record income for NANFA. Moving forward, I hope to have another convention in Kentucky soon, perhaps in the western part of the Commonwealth for a totally new experience.

PRESENTATIONS

Kathlina Alford: *Southern Brook Trout Propagation Program at the Tennessee Aquarium Conservation Institute*

The ever-humorous Kathlina spoke about her work at the Tennessee Aquarium. The Brook Trout (a char, not a trout) is the only native trout in the eastern United States and is a fall spawner. Northern and southern strains are genetically distinct. Northern fish reach 28 inches; southern fish are generally less than 8 inches. In 2011/12, 2,482 eggs were stripped, but as the males weren't up to the task and little milt was recovered, only 189 fry hatched. Of these, 101 juveniles were marked

with visible elassomer tags and released into the stream; 8 of these were found in 2013 sampling. In 2012/13 the broodstock was kept in a recirculating system where the fry were raised up to 3–4 inches before release in August. The fertilization rate was 46% and the hatching rate was 88%. Some 1,098 eggs were obtained, of which 451 hatched and 320 were still alive. The fry grew too fast at 55° so the temperature was lowered to 47°. Some of the lessons learned so far: cold water cycles slowly; issues with ammonia; water changes in a cold system are difficult; spawning condition turns off with increased temperatures; juveniles are picky eaters; and they are growing too fast for an August release!

Matt Thomas: *Diversity and Distribution of Fishes in Kentucky*

Matt is the state ichthyologist. Kentucky has three regional watersheds: the Ohio River, the Tennessee River, and the lower Mississippi River. There are 12 major basins with 248 native fishes and 18 introduced species. The Cumberland basin has 171 species and the Green possesses 154. Some 68 species are in need of some action. Habitat and historical events shape distributions as does human activity. Several species display glacial vicariance with species in the Ozarks: the two arrow darters with the Niangua Darter, and the Frecklebelly Darter with the Bluestripe Darter. After this overview, Matt narrowed his presentation to discuss a recent survey of the Buck Creek system in the Cumberland drainage. Five species of concern are present in the lower reach, which is impounded. In earlier surveys, 73 species in 13 families were documented within the system. A recent re-survey at 47 localities caught 68 species in 16 families. New records were Mountain Brook Lamprey, Lake Sturgeon, Southern Cavefish and Redlips Darter. Combined with the earlier surveys, 81 species (9 introduced) have been documented in the Buck Creek system.

Cumberland Falls Park Ranger

The ranger provided an informative history of the park, the second established in Kentucky. The falls are unique in having a moonbow when a full moon's light is refracted through the mist.

J.R. Shute: *Propagation and Monitoring of the Rare Kentucky Arrow Darter and the Cumberland Darter*

J.R. spoke about the work that Conservation Fisheries Inc. has done for the past 20 years. At their facility, which houses 600 tanks holding 25,000 gallons, they have bred over 50 species and successfully re-introduced a number of protected species back into their historic streams. The Kentucky Arrow Darter (*Etheostoma sa-*

gitta) lives in small streams which can be easily impacted by coal mining, gas extraction, and siltation. CFI's goal is to develop propagation protocols so this species can be restored to its native streams. This species burns out more quickly in warmer water so CFI uses a chiller. Two lighting systems are used: one simulating daylight and the other to represent dawn and dusk. These fish are intolerant of one another when not spawning. During spawning, the female dives into the substrate and the male mounts her; they vibrate and bury themselves further in the sand. The eggs develop in the sand, and the fry hatch, swim up, and become pelagic. CFI captures larvae and places them in rearing tubs where they are fed rotifers, daphnia, and other small creatures. At about six months, visible elastomer tags are inserted. At 8 months females are gravid and males are colored up. CFI has re-captured 50 released fish, which is quite good considering the species' solitary nature. The Cumberland Darter (*E. susanae*) lays its eggs on the undersides of slab rocks and sticks. The male guards the eggs, which may have come from four or five females. CFI uses ceramic tiles and incubates eggs in shoe boxes. The larvae are not pelagic and grow quickly.

Brook Washburn: *Dispersal Ability of the Frecklebelly Darter (Percina stictogaster)*

Brook, a sophomore at Morehead State College, gave an impressive presentation. She and colleagues studied movements of this intolerant species—which has a pelagic lifestyle—and compared it to semi-pelagic darters and two benthic darters. Some 748 fish were tagged with visible elastomer implants; 10 died. Thirty-six individuals were recaptured (4.8%). No movement was observed in the benthic species. One *Percina sciera* (semi-pelagic)

moved 767 meters. Two *P. stictogaster* were observed to travel 206 meters; one accomplished this overnight. Areas of concern included tagging mortality, tag retention and visibility, large rivers with obstructions to seining, increased predation (unlikely), and migration out of the study area.

Michael Hensley: *The Tennessee Nature Conservancy Green River Project*

Michael discussed the high diversity in the Green River drainage (which includes Mammoth Cave): 71 species of mussels, 152 fishes (7 endemic), and 42 troglodytes. Many are imperiled. The river is experiencing a lot of high bank erosion and TNC is partnering with Natural Resources Conservation Service to conduct a high bank erosion study. The Green River Lake Dam is one of four Army Corps of Engineers (ACOE) dams built in the Green River basin for flood control and recreation. The ACOE has agreed to change their method of draw down in the fall which will allow for increased mussel reproduction.

David Cravens: *Kentucky Center for Mollusk Conservation*

At one time Kentucky was home to 104 species of mussels. The number is now down to 84 and 27 of these are federally endangered. The Center is a flow-through facility and 54 species have been cultured with a number being released back into the wild. David showed some cool photos and videos of mussel lures, including a snuffbox snaring a Logperch.

Brian Zimmerman: *Captive Propagation*

Brian provided a very interesting and informative overview of his propagation of a number of different species in his outside ponds.

NANFA 2013 Financial Summary

SUBMITTED BY TOM WATSON, TREASURER

Beginning Balance:	36,693.39	(as published in the October, 2013, AC)	
Membership Dues	8,185.32	Debits and Disbursements	
T-shirt/hat sales	1,827.12	AC Printing, Shipping	-9,983.60
AC CD Sales	156.26	Conservation Research Grants	-1,000.00
Card Sales	93.63	Corcoran Grant	-640.00
Convention	6,584.95	Website	-474.86
Donations	225.00	Miscellaneous Expense	-628.17
Misc. Income	73.82	Convention Expense	-1,239.78
Tate's Hell	2,099.72	Tate's Hell	-1,299.72
Total Income	19,245.82	Total Debits	-15,266.13
		Year End Balance	40,673.08