

FIELD and FACILITY

STORY BY
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Inspiring wonder, protecting water—The Tennessee Aquarium Conservation Institute looks for new partners and pathways.

AS A NONPROFIT ORGANIZATION WITH A CONSERVATION MISSION, THE TENNESSEE AQUARIUM STRIVES TO INSPIRE WONDER, APPRECIATION AND PROTECTION OF WATER AND ALL THE LIFE IT SUSTAINS. FULFILLING THIS MISSION OFTEN INVOLVES AN EXCITING NEW EXHIBIT OR A CONSERVATION PROGRAM THROUGH THE TENNESSEE AQUARIUM CONSERVATION INSTITUTE (TNACI).



THE CONASAUGA RIVER IS HOME TO MORE THAN 90 SPECIES OF FISH INCLUDING THIS RARE DARTER.

PHOTOGRAPHY COURTESY OF THE TENNESSEE AQUARIUM

Field and Facility



REPURPOSED WASTE MATERIALS ARE USED TO TRAP SILT PUMPED FROM THE SPRING BOTTOM.

One of the Aquarium's conservation programs recently demonstrated there is always a new sustainable path to find—and new partners willing to help our efforts.

For two years, our staff has been working with the Conasauga River Alliance and the Georgia Department of Natural Resources to restore wetland habitat in Colvard Spring. This north Georgia spring is one of the headwaters to the Conasauga River, a globally important river that is home to more than 90 species of fish and many endangered animals. It is also one of only a dozen springs that supports a population of rare coldwater darters.

THE HABITAT RESTORATION PROJECT

During Fall 2009, the Aquarium field staff began a habitat restoration project to improve the amount of vegetation and exposed gravel in the spring. Years of erosion and run-off

into Colvard Spring had resulted in a spring bottom that was choked with sediment. The environment had to be cleaned.

Once collected, the animals were held in the off-site conservation facility while silt was pumped out of the spring and was trapped in an adjacent pasture by strategically placed straw barriers. Because this project was the first of its kind in the Southeast, the staff learned a lot, but still had plenty of work left over to do the next year.

A new form of help arrived the next year when a company called **GeoHay** offered a donation of silt traps constructed of recycled carpet. The carpet barriers repurpose waste material, work more effectively than the straw and can be reused at other sites. Over a one-month period, Aquarium field scientists removed almost 25 cubic yards of silt from the spring—far more than we were able to accomplish in our first attempt. This time, patches of gravel were visible on the bottom of the spring as the darters were returned to their much cleaner home.

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Currently those same recycled carpet barriers are being used on the banks of the Conasauga River to prevent erosion while a new canoe ramp is constructed to increase public access to the river. Everyone is excited about this project because it means that more people will have access to this beautiful river, just over an hour to the east of Chattanooga. Along with canoeing, a person can also strap on a snorkel mask and go "fish watching" in its cool waters, a favorite method for fieldwork in the summer.

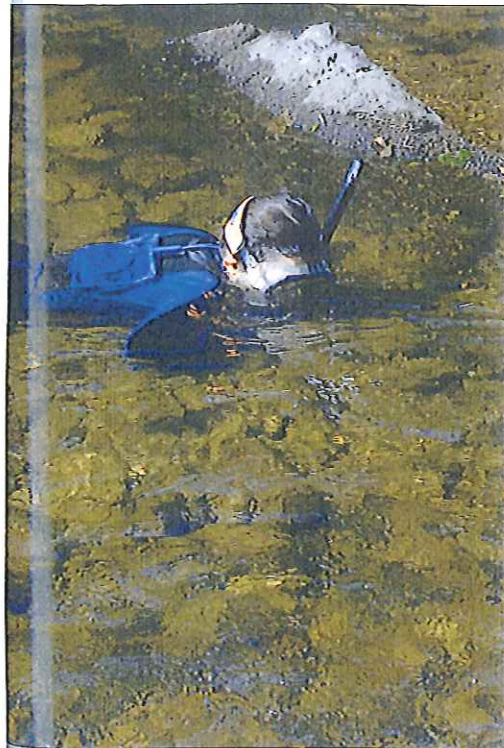
Last August, we had a great day of fieldwork, snorkeling in this river with the goal of finding Conasauga logperch. This fish, a five-inch long tiger-striped darter, is only known within a 27-mile stretch of the main stem river in Georgia and Tennessee. With its partners, Conservation Fisheries, Inc. and biologists from the U.S.

Forest Service, the staff captured 11 Conasauga logperch in a single day—a huge boost for the new conservation program for these fish!

Eight of these logperch made a quick journey from the river to Knoxville, where Conservation Fisheries is located. There, they joined three other logperch that were already in naturalized tanks as part of a breeding program. When I visited a week later, the fish were already settling into their new home, behaving like logperch should in their natural habitat. They were flipping the small stones on the bottom of their tanks, trying to feed on the aquatic insects that would be hiding beneath them in the wild. They also darted away from us as we peeked into the tanks, avoiding these strange "predators." Most importantly, they were swimming together in a social group similar to what is seen in the river. Hopefully,



SNORKELERS LOOK FOR THE CONASAUGA LOGPERCH.



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baby logperch will make an appearance this spring.

At TNACI, a lot of the fieldwork involves capturing rare animals for breeding programs and releasing their offspring to reestablish populations. Last April, we celebrated a conservation milestone in downtown Chattanooga. With help from 5th-grade students at Calvin Donaldson Environmental Science Academy, we released 25 lake sturgeon into the Tennessee River in Chattanooga. Not only was this the first release in sight of the Aquarium, it also marked the 10th anniversary of lake sturgeon releases in Tennessee. Now our staff is one step closer to returning this important fish to part of its historic range.

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Conducting fieldwork to learn more about rare aquatic animals will help protect them. For some of the projects, we estimate how many individuals are in a population, study what types of habitats are necessary for certain species of fishes and determine if the restoration projects are working. The work our field scientists do outside the Aquarium's walls is part of our commitment to environmental stewardship.

BEING GREEN IS A JOURNEY

Clearly, the Tennessee Aquarium's commitment to conservation means that its staff constantly works to incorporate more sustainable practices. Because being "green" is always a journey; it is never a finished product.

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Each person at the Aquarium has been “deputized” as a member of our Green Team, inspiring each other to reduce our carbon footprint both at work and at home. Collectively, strides toward being as green as possible have led to green certifications for both the Aquarium and the River Gorge Explorer.

The Aquarium is one of the first institutions in the state to earn the Tennessee Green Hospitality Certification for Attractions. This independently audited program began within the hotel industry, quickly growing to become the state standard for sustainable practices and a model that is being used on a national level.

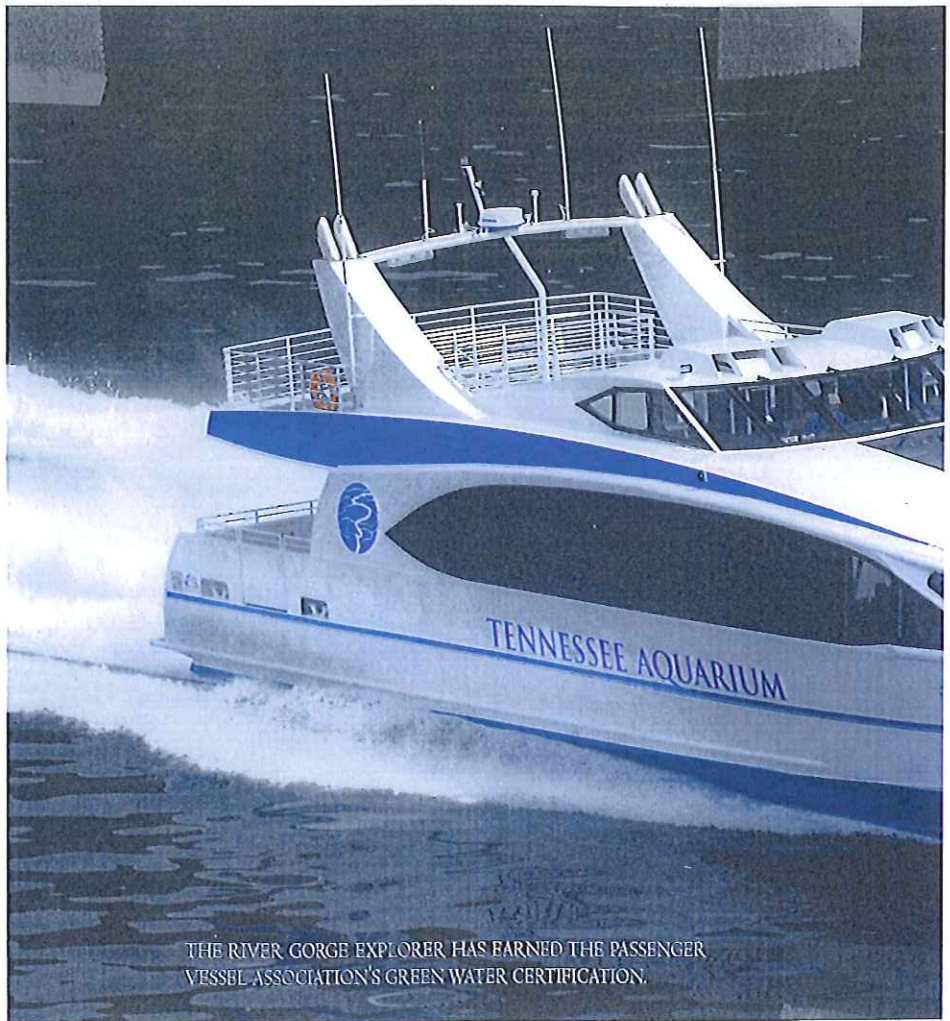
The River Gorge Explorer has earned the Passenger Vessel Association’s Green Waters Certification. This voluntary, self-audited program establishes standards to extend environmentally friendly practices onto the nation’s waterways. The Explorer is compliant in every sustainability category that is applicable, and has served as a test platform for Caterpillar Inc.’s C-18 diesel engines, which were designed to meet EPA Tier-II standards for emissions.

Going Green isn’t complete when certifications are attained. Indeed, each evaluation pointed out areas for improvement. But just as a journey of a thousand miles begins with a single step, so too must our quest to be the best environmental stewards possible.

The Aquarium invites visitors to join its sustainability journey. From replacing and recycling carpet in the home or adding a rain barrel for Earth Day, everyone can make changes to be a little “greener” each day. We all live downstream!



EL25



THE RIVER GORGE EXPLORER HAS EARNED THE PASSENGER VESSEL ASSOCIATION'S GREEN WATER CERTIFICATION.