

# TERN TRACKS

Newsletter of The Environmental Resources Network, Inc. (TERN) ~ [www.tern.homestead.com](http://www.tern.homestead.com)

Summer 2018

## Seventeen Nongame Conservation Section Projects Funded by TERN at Annual Meeting

*Bob Sargent, NCS program manager*

The annual TERN membership and board meeting was held at the Persons' Farm in Forsyth, Georgia on Saturday, May 5th. The membership voted to fund 15 projects totaling **\$72,000**. In addition, new TERN President Joey Slaughter offered support from Georgia Power to fund a project, and Patty and Todd Deveau offered to personally fund another project, bringing the total projects funded to 17 and the total funds provided to **\$77,280**. Thank you, TERN, Joey, Georgia Power, and Patty and Todd, for your generosity and dedication to nongame wildlife conservation in Georgia. TERN has paid or obligated a remarkable **\$1,372,000** to the nongame program since these grants were first provided in 1992. A summary of the funded projects is found below.

**Visiting the Butterfly Skyway (\$5,960)** - It is estimated that migrating monarch butterfly numbers have plunged 90% in the past two decades. Despite the species' high visibility and the research devoted to it, there is much that we still don't know about it, especially in the Southeast. It is thought that the Southeast may be a source of approximately 8-10% of all the monarchs that reach Mexico. Management efforts on behalf of Georgia's monarchs include plantings of milkweed and nectar flowers on state lands, as well as a prescribed fire regime to maintain early successional habitats. For this project, established educational gardens and plantings will be utilized as locations to find gravid female monarchs or caterpillars. Caterpillars will be raised at State Parks by NCS staff, Monarchs Across Georgia volunteers, and State Park volunteers, and then released when they are mature butterflies. A butterfly enclosure will remain at park visitor offices so that the public will be able to view the progression of the caterpillars to chrysalis to butterfly. Funding will be used to buy equipment and milkweed plants to set up five locations for service as caterpillar source and butterfly release sites. The locations are: 1) Social Circle Wildlife Resources Conservation Center Office; 2) Hard Labor Creek State Park; 3) Panola Mountain State Park; 4) Sweetwater Creek State Park; and 5) Charlie Elliott Wildlife Center. All caterpillars that reach adulthood in late July, August, September, or October will be tagged, thereby providing opportunities to acquire data concerning habitat use, movements, and survival for recaptured adult butterflies. For more information, contact Anna Yellin at [anna.yellin@dnr.ga.gov](mailto:anna.yellin@dnr.ga.gov).



Tagged monarch butterfly. Photo credit: <http://chattanooga.events/event/flying-flowers-monarch-tagging-day/>

**TERN Outstanding Teacher Award (\$1,250)** - According to the Georgia Performance Standards (GPS), the third grade life science curriculum focuses on: 1) Habitat differentiation and dependence of organisms on their habitat; and 2) Conservation of these organisms and other forms of natural resources. This award seeks to assist teachers of projects that fulfill these objectives with a focus on nongame animals and Georgia plant species and their habitats. There are many teachers who may need some financial assistance to start a special project that conveys knowledge using unconventional methods and outside activities. Such projects can have a significant academic benefit to their students and awaken an appreciation of nongame species. It is hoped that this award will facilitate networking with these teachers and help others to learn from their approaches through presentations at the annual Environmental Educational Alliance (EEA) conference. These funds will be used to pay the registration cost for one outstanding teacher to attend the EEA conference, as well as to pay for a plaque to be presented to the teacher. One thousand dollars from the grant will be presented to the selected teacher for use in supporting purchases for her/his educational project. For more information, contact Anna Yellin at [anna.yellin@dnr.ga.gov](mailto:anna.yellin@dnr.ga.gov).

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Friends of Georgia's Nongame Conservation Section

The Environmental Resources Network, Inc. (TERN) is the official friends group of the Georgia Department of Natural Resources' Nongame Conservation Section. Contributions made to TERN go directly to help fund important nongame plant and animal projects conducted in Georgia.

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## 2018 TERN Funded Projects continued

**Camp TALON 2016 (\$1,000)** - These funds will help to reduce registration costs for students to attend Camp TALON (Teen Adventures Learning Ornithology and Nature), a six-day camp for teens designed to educate them about birds, conservation, and the coastal ecology of Georgia. Camp TALON includes advanced ornithology and ecology classes -- in the field and in the



Camp TALON class of 2018 and wood storks at Harris Neck NWR on June 5th. Photos by Julie Duncan.



classroom. The camp is based at Epworth by the Sea on St. Simons Island and travels to Little St. Simons Island, Okefenokee NWR, Andrews Island, Harris Neck NWR, Sapelo Island, Altamaha WMA, and Ft. Stewart. Classes are taught by biologists, retired professors, island naturalists, and ornithologists from GDNR, the Georgia Ornithological Society, The Nature Conservancy, the USFWS, the staff of Little St. Simons Island, and two of Georgia's universities. Up to 16 participants learn about specific bird habitats, bird species and management practices, avian biology, bird songs and flight, migration, beach ecology, census techniques, conservation issues, island history, career opportunities, journaling, and nature photography. The goal of the camp goes beyond teaching teenagers how to birdwatch; instead, the camp is designed to teach young people about research, how science and management are performed, and about how they can contribute to conservation. For more information, contact Bob Sargent at [bob.sargent@dnr.ga.gov](mailto:bob.sargent@dnr.ga.gov).

### **Summer 2017 Camp ACE (Adventures in Conservation Education) (\$5,500)**

- These funds will help reduce registration costs for middle school students to attend an advanced wildlife conservation camp about nongame species of Georgia. Twenty participants will be accepted based on submitted applications reviewed by DNR staff. Students spend five days immersed in Georgia wildlife education via hands-on activities and day trips. Students will experience outdoor activities such as hiking, fishing, and birding as well as learn basic conservation biology techniques used by nongame DNR biologists. They will also participate in activities based on Project WILD and WILD Aquatic curriculum that will enhance their understanding of ecological systems. Students will be required to maintain a written journal of data collected and terms learned while on day trips. Students will have an introduction to numerous field biology careers, develop practical skills for future biology courses in high school and college, and enhance their understanding of Georgia wildlife conservation. For more information, contact Kim Morris-Zarneke at [kim.morris-zarneke@dnr.ga.gov](mailto:kim.morris-zarneke@dnr.ga.gov).

## 2018 TERN Funded Projects continued

**Taxonomic Status of a New Genus of Freshwater Fish in Georgia (\$4,990)** - The purpose of this project is to complete additional genetic analysis to confirm the taxonomic identity of specimens of *Ammocrypta*, the sand darter genus, recently collected from the Flint River system near Newton, Georgia. No members of this genus have ever been documented in the state. A preliminary analysis carried out by Dr. Greg Moyer (then at Warm Springs National Fish Hatchery) indicated that the specimens did not



Specimen of *Ammocrypta* collected from the Flint River. Photo by Brett Albanese.

match any known species of *Ammocrypta*. This raised the exciting possibility that we had discovered a new species of darter. Such an exciting discovery would help TERN and NCS highlight the importance of the Flint River system to biological diversity. In addition, this discovery would have important conservation implications because our survey efforts have documented a very restricted distribution within the mainstem Flint River system. Alternatively, we may conclude that our specimens represent a new population of the Florida Sand Darter. This finding would necessitate reconsideration of the native status

and range of this species within the Apalachicola River system. For more information, contact Brett Albanese at [brett.albanese@dnr.ga.gov](mailto:brett.albanese@dnr.ga.gov).

**Mammal Camera Trapping Citizen Science (\$7,800)** - Distribution and abundance data are often scarce and hard to collect for small mammal species. New methods of data collection, such as trail cameras, are opening up opportunities for citizen scientists, hunters, and schools to get involved and help fill knowledge gaps. DNR has been partnering with Paulding County Government, Paulding County School System, Kennesaw State University, The Nature Conservancy and the U.S. Fish and Wildlife Service on conservation, restoration and education projects in the Raccoon Creek Watershed of Paulding and Sheffield WMAs. Additionally, Glade Farms, a parcel of private land in northeast Hall County adjacent to Don Carter State Park, has recently agreed to allow Project Pine Snake access to their property to monitor for pine snakes using a combination of both live and camera trapping efforts. Providing cameras, training, and assistance to local schools and residents is one way to begin to get some basic information about mammals using these properties, including high-priority SWAP species like spotted skunks. Through this project, DNR will provide this training and the cameras to achieve these goals: 1) To utilize citizen scientists to run camera trapping stations in and around Paulding Forest WMA and Glade Forest to support ongoing work; 2) To better understand the distribution and abundance of mammals in Glade Farm and the Paulding Forest/Raccoon Creek Area; and 3) To monitor for pine snakes on the Glade Farm property. For more information, contact Trina Morris at [katrina.morris@dnr.ga.gov](mailto:katrina.morris@dnr.ga.gov).

**Feral Hog Exclusion and Eradication: Protecting Sensitive Habitat/Mountain Bogs (\$4,140)** - An essential mission of the rare plant conservation work carried out by WRD and our partners is the cultivation and safeguarding of rare plants from known, threatened wild populations and the reintroduction of these threatened species back into suitable, protected habitat. Coordination of mountain bog restoration and safeguarding efforts require tremendous effort and expense in the form of conservation horticulture, field work, site- and landscape-level management, volunteer coordination, information sharing, and prioritization and planning. In the rare and fragile ecosystems of remote mountain bogs, damage from invasive feral hogs has become the most severely problematic invasive species threat in the last five years. Hogs are capable of episodic destructive rooting and wallowing that in a matter of hours or days can destroy rare plant outplantings that have taken months or years of time and expense to achieve. We have developed a project plan for excluding and trapping feral hogs to protect, manage, and improve mountain bog habitat



Feral hog damage at Rock Creek Bog. Photo by Alan Cressler.

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## 2018 TERN Funded Projects continued

and outplanting microsites. These grant funds will help to pay for monitoring equipment and exclusion and trapping structures. For more information, contact Mincy Moffett at [mincy.moffett@dnr.ga.gov](mailto:mincy.moffett@dnr.ga.gov) or Tom Patrick at [tom.patrick@dnr.ga.gov](mailto:tom.patrick@dnr.ga.gov).

**Youth Birding Competition (\$6,220)** - This is a 24-hour birding event in which 90-130 students compete against others their age to identify as many bird species as they can in Georgia. DNR helps teams to find mentors to prepare for the event, and provides birds walks and other opportunities for students to learn bird identification. DNR puts students in touch with local bird clubs and Audubon chapters. The YBC culminates in a banquet, live animal program, and awards ceremony. DNR, thanks to various contributors, gives away binoculars, field guides, bird feeders and other prizes designed to encourage each student's interest in birds, wildlife, and the outdoors. Many participants have returned for five or more years. Funds from TERN allow students to participate free of charge. This has allowed a truly diverse group of kids to participate, including some from several inner city Atlanta schools. For more information, contact Tim Keyes at [tim.keyes@dnr.ga.gov](mailto:tim.keyes@dnr.ga.gov).



YBC creator Tim Keyes and the team he mentored at the 2018 competition. Photo by Joanna Pritchard.

**Integrating the YBC into the Breeding Bird Survey (\$600)** - This project will provide funding for up to five Youth Birding Competition participants, or past participants, to gain experience running BBS routes. This will hopefully lead some of these young birders to continue to run routes on their own in the future. This is a wonderful way for TERN to come "full circle" by helping the young birders achieve one of the main goals of the Youth Birding Competition. Each young birder will be accompanied by a parent or adult who will assist with recording data, navigation, driving, and other duties. This will assure that the correct procedures and methodology are followed and that the young birder has the support and direction that he or she needs to complete the route. Actual bird ID/counting will be done only by the young birder with no assistance from the parent/adult. The data gathered on these routes will be incorporated into the national database and used along with all the other data gathered from across the country to develop population trends. The benefits from this project will include recruiting new BBS observers to replace retiring observers, more bird conservation awareness, training more citizen scientists and perhaps more ornithologists, and helping DNR to survey more routes. For more information, contact Todd Schneider at [todd.schneider@dnr.ga.gov](mailto:todd.schneider@dnr.ga.gov).

**OWLS (Outdoor Wildlife Leadership School) 2017 (\$6,500)** - Funds will be used to reduce registration costs for educators to attend the Outdoor Wildlife Leadership School (OWLS). Twenty-four educators will spend five days immersed in Georgia wildlife education via hands-on activities and day trips. They will experience outdoor activities such as hiking, fishing, birding, and canoeing while learning basic conservation biology concepts and field techniques that can be used with their students. Classes will be taught by staff and biologists from CEWC, Fisheries Section, Game Management Section and Nongame Conservation Section, as well as biologists and educators from UGA and other agencies. Participants will also become Project WILD, Flying WILD, and WILD Aquatic facilitators and be given curriculum guides to use in their classrooms. Educators will obtain an in-depth understanding of conservation biology and its role in environmental education. They will enhance their ability to teach environmental education in their classrooms as well as outdoors. Not only will educators benefit from OWLS, but the hundreds of students that these educators reach will also benefit from improved environmental education classes. For more information, contact Kim Morris-Zarneke: [kim.morris-zarneke@dnr.ga.gov](mailto:kim.morris-zarneke@dnr.ga.gov).



## 2018 TERN Funded Projects continued

**Monitoring Remnant and Introduced Gopher Frog Populations in Georgia (\$7,950)** - Despite management of the uplands, the gopher frog population at Sandhills WMA appears to have declined. Evidence of successful reproduction at the site suggests the wetland conditions are suitable for reproduction. One hypothesis for the apparent decline is that emigrating juveniles and adults are impacted by the recent expansion of industrial solar farms around the site. There is an immediate need to estimate the status of gopher frogs at Sandhills WMA and to determine what proportion of individuals, particularly juveniles, may be emigrating into the solar fields. There is also a pressing need to estimate the status of the introduced gopher frog population at the Williams Bluff Preserve. Recent advances in Active Infrared triggers now allow the detection of small vertebrates, including amphibians with wildlife cameras, creating a novel opportunity to remotely assess the status of gopher frog populations at managed sites. With funding from TERN and support from partners at UGA, captive-reared, juvenile, and adult gopher frogs will be used to modify and tune the systems to maximize detection of these animals. Once the systems are tuned, one unit each will be deployed at Sandhills and Williams Bluff to monitor immigrating and emigrating amphibians to assess the status of the adult breeding population and whether there is successful juvenile recruitment. For more information, contact John Jensen at [john.jensen@dnr.ga.gov](mailto:john.jensen@dnr.ga.gov).



Gopher frog metamorph at Warm Springs Hatchery. Photo by Steve Friedman.

### 29th Annual Give Wildlife a Chance Poster Contest (\$2,500)

- The annual Give Wildlife a Chance Poster Contest (GWAC) is a conservation art competition that is open to all kindergarten through 5th grade students in public schools, private schools and homeschool groups in Georgia. The participants enter the contest at the local school level (December-February) with artistic drawings and paintings that depict their observations of Georgia's native nongame animals and plants. The top first-place, school-wide

winning posters in each of four divisions (kindergarten, 1st/2nd grade, 3rd/4th grade, and 5th grade) proceed to the state-level contest at the State Botanical Garden of Georgia in Athens (March-April). The state winners will be picked based on close correlation to the theme, quality of art, originality and visual impact. Their artwork will be on display at the State Botanical Garden. One parent and the sponsoring teacher of each winner will be offered a free wildlife license plate courtesy of TERN. Each student winner will receive a front "GO WILD" tag and an "Exploring Georgia Wildlife" coloring book. These funds will be used to pay for award certificates, ribbons, and GWAC calendars or other promo/recognition items (e.g., tote bags) that feature the winners' art work and wildlife conservation messages. For more information, contact Linda May at [linda.may@dnr.ga.gov](mailto:linda.may@dnr.ga.gov).



**Bat Garden Project (\$3,500)** - Because of the declines in bat populations resulting from white-nose syndrome, there has been an increased interest in constructing bat houses. There is also a general increase in interest in viewing bats emerging in the evenings. There are very few places in Georgia where members of the public have opportunities to safely view bats, and there are few examples of properly constructed and installed bat houses in public areas. One goal of this project is to install bat houses in several areas where the public has the opportunity to see an example of a properly built and installed house and hopefully an opportunity to view bats once the houses are occupied. In addition to installing the bat houses, funding for this project will be used to install sample bat and pollinator gardens near the bat houses. DNR has worked with the State Botanical Garden

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## 2018 TERN Funded Projects continued

of Georgia to come up with a list of bat-friendly native plants. These plants are either those with light-colored flowers that may attract insects at night or those that serve as moth host plants. These plants will be combined with plants currently used in the “Connect to Protect” gardens program. Once the bat houses become occupied, we will recruit citizen scientists to monitor the roosts each summer through our existing Bat Roost Monitoring program. For more information, contact Trina Morris at [katrina.morris@dnr.ga.gov](mailto:katrina.morris@dnr.ga.gov).

**Developing a State-wide Monitoring Program for the Terrapin Population in Georgia (\$6,530)** - This project will design and test a state-wide monitoring program for diamondback terrapins. A major challenge to creating a monitoring program has been the relatively labor-intensive nature of the process. The best approach for estimating terrapin abundance is by conducting capture-recapture studies of individuals captured manually in seines during low tide, or by hourly monitoring of nesting habitats during the three-month-long nesting season. Recent advances in unmanned aircraft [“drone”] technology offer new promise for time and cost efficient monitoring of terrapin populations. Drones can be piloted over tidal creeks during low tide, when terrapins are maximally detected in the water, and high definition (HD) cameras on drones are sufficient to detect adult terrapins in the water and basking on mud flats. We aim to test the capacity for drone surveys to collect rigorous estimates of terrapin abundance sufficient for a state-wide monitoring program. For more information, contact Mark Dodd at [mark.dodd@dnr.ga.gov](mailto:mark.dodd@dnr.ga.gov).



Diamondback terrapins and the seining crew. Photos by Mark Dodd.

**Bat House Building Workshop (\$7,560)** - Funds for this project would be used by Habitat for Bats to conduct 12 bat house building workshops throughout Georgia. Habitat for Bats bat house building workshops are designed to educate participants about bats by dispelling myths, discussing current threats to bats, and helping to create a positive attitude toward bats. After a brief presentation, they discuss the components of what makes a good bat house. Then, they demonstrate the way each bat house kit fits together and assist participants in assembling their kits. DNR is also working with the State Botanical Garden to develop seed packets to pass out with bat houses. These seed packets will include native plants that may attract insects that would benefit bats and well as plants that will benefit pollinators. Each participant of the workshop will also be given a seed packet so they can plant a native plant garden near their bat house. Workshop participants will leave with a completed bat house, a native seed packet, and information about how to install them on their property. They will also learn more information about bats including the benefits of bats to the ecosystem. For more information, contact Trina Morris at [katrina.morris@dnr.ga.gov](mailto:katrina.morris@dnr.ga.gov).



A future biologist models a newly-constructed bat box. Photo courtesy of Habitat for Bats.

## 30th Annual Weekend for Wildlife Benefit

### Another Successful Year for TERN and Nongame Wildlife Conservation

It is with great pleasure that TERN would like to share our gratitude and enduring thanks to these three generous donors to the 30th annual Weekend for Wildlife benefit. With their contribution of an all inclusive weekend getaway at Greyfield Inn on Cumberland Island which included private painting lessons with acclaimed artist Peggy Everett, handcrafted jewelry instruction with world renowned jewelry designer Gogo Ferguson, and intimate wildlife excursions with wildlife naturalist (and TERN board member) Stacia Hendricks, TERN was able to raise more money for nongame conservation than any other TERN donation at the 2018 Weekend for Wildlife—\$20,000! Because of their generosity and many others who donated their skills, time and gifts to this year’s benefit, TERN was able to help fund the seventeen vital nongame conservation projects described in this newsletter. Thank you!



Longtime Weekend for Wildlife donors Peggy Everett, Gogo Ferguson and Stacia Hendricks at the 30th anniversary benefit on Sea Island, Georgia.



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## TERN Sponsored Blog Reaches New Milestone!

A recent weekend in June, the Backyard Wildlife Connection blog, hosted by TERN and written by Executive Director Terry Johnson, reached an impressive milestone when it logged its 10,000th hit. This vows its true success when readers have visited the site more than 10,000 times in search of information regarding Georgia's backyard wildlife.

One of the unique features of the site is the 200+ blogs that have been posted to date are all archived into 18 categories. This enables readers to easily search for topics that have been previously posted. Users just type in the subject (e.g. nectar plants, birds, etc.) and all of the blogs dealing that subject will pop up.

Although the amount of information now available is already impressive, this mountain of information continues to grow larger with each post.

**Be sure to visit TERN's  
Backyard Wildlife  
Connection blog today!**

[backyardwildlifeconnection.com](http://backyardwildlifeconnection.com)



The screenshot shows a web browser window with the URL <https://backyardwildlifeconnection.com>. The page features a header with the site name 'BACKYARDWILDLIFECONNECTION' and a navigation menu with links for 'Home', 'About Me', 'Goal of the Blog', and 'TERN (The Environmental Resources Network)'. A promotional banner reads '"A Journey of Discovery" on sale now'. The main content area displays a blog post dated 'Jul 12' with the title 'PROTECTING PETS FROM COYOTES IN BACKYARDS'. The post text begins with 'Regardless of whether you live in a large city, small town, subdivision or in the rural countryside you need to protect your small dogs and cats from coyotes.' and continues with 'Georgia's coyote population is rapidly expanding. This is truly remarkable when you consider the coyote is not native to the Peach State. However, since the 1850s the range of the coyote has increased threefold and now can be found in every state with the exception of Alaska.' On the right side of the page, there is a search bar, a 'FOLLOW BLOG VIA EMAIL' section with an input field and a 'Follow' button, and a social media 'follow' button at the bottom.