



The TORTOISE BURROW

Newsletter of the
Gopher Tortoise Council

www.gophertortoiseCouncil.org

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ALABAMA FLORIDA GEORGIA LOUISIANA MISSISSIPPI SOUTH CAROLINA

Notes from a Co-chair

There were 130 attendees at the annual meeting, which was held at the University of Florida in Gainesville on October 26-28, 2001. Twenty-eight speakers presented on topics ranging from the effects of habitat fragmentation on wildlife to a description of the movement patterns in gopher frogs, to the feeding ecology and movements of gopher tortoises. Dr. Bill Boarman of the U.S. Geological Survey in San Diego was the keynote speaker at the banquet. Bill gave a very entertaining talk on the best and worst aspects of roads and how they affect our daily lives. He also shared the lessons learned from a desert tortoise underpass project.

The icebreaker social was held at the Florida Museum of Natural History at Powell Hall on the University of Florida campus. Guests had the opportunity to peruse the natural history exhibits while socializing with old friends. Two corporate sponsors helped fund the social: Water and Air Research, Inc. (Gainesville, FL) and Environmental Services, Inc. (Jacksonville, FL).

I'd like to extend my thanks to the many volunteers who made the meeting run smoothly. George Heinrich, Deborah Epperson, Tracey Tuberville, and Joan Berish served as session moderators. Steve DeCresie handled the AV flawlessly (not a simple task these days with both electronic and slide presentations!). Laura Wewerka and George Heinrich, with help from Lori Wendland, Kate Caldwell, Chuck Schaffer, Boyd Blihovde and Audrey Owens, ran the silent auction and t-shirt sale. The auction raised more than \$1,800 (plus \$500 in matching funds from the Council) toward our effort to sponsor the training of a Southeast Asian turtle researcher (see George Heinrich's article on page 7). We also had a great team handling registration, thanks to Judy Demersman, Brian Mitchell, Jeff Kamiski, and Alexandra Collazos.

The following outstanding GTC volunteers were recognized at the meeting:

Lifetime Service Awards:
Joan Berish, George L. Heinrich

Service Awards:
Karl Studenroth, Matt Dinkins

Special Project Awards:
Laura Wewerka- "Gopher Tracks" Reprinting and Distribution
Mark Bailey- Website Development

Last, but not least, it is time for the changing of the "GTC guard". Tracey Tuberville has completed her two year term as co-chair. Fortunately for us, she plans to stay active in the Council; she will serve on the Board of Directors for the next year and also will be a co-chair of the Upland Snake Conservation Initiative along with Karl Studenroth (see more about this initiative on page 6).

I'd like to welcome our incoming co-chair, Dr. Sharon Hermann. Sharon is a longtime member of the Council and was associated with Tall Timbers Research Station for many years. She has recently relocated to Auburn, Alabama and is an adjunct faculty member at Auburn University. Sharon has a background in upland fire ecology and has mentored several graduate students conducting gopher tortoise research. Her experience as an ecologist will add depth to our programs and I'm looking forward to working with her.

We also have a new volunteer, Bill Knox, who has stepped forward to act as the Merchandise/Publications sales coordinator. Bill is working with Mark Bailey to advertise merchandise on the website. Thanks Bill!

State Reports

Presented at the GTC Annual Meeting, October 26, 2001, Gainesville, Florida

Alabama --ED WESTER

The gopher tortoise is federally protected as a threatened species in Mobile, Washington, and Choctaw Counties in southwestern Alabama. Gopher tortoises are protected by state nongame regulations throughout the remainder of southern Alabama.

As in the past, gopher tortoise conservation efforts in Alabama are most intensive in the federally protected range. This is particularly true in Mobile County, which is experiencing rapid growth and urban sprawl. Residential development alone has almost doubled in the last eight years. Unfortunately, much of this new development is moving further into rural areas of the county and often onto sites that support gopher tortoises. In many instances, it is small-scale development involving single home construction or clearing of a lot for a mobile home. A couple of years ago the U.S. Fish and Wildlife Service (USFWS) recognized the impracticality of denying what would be an ever-increasing number of small landowners the right to build on their land. It was also recognized that efforts to protect gopher tortoises onsite, at what might ultimately be hundreds of small tracts, would be impractical and unmanageable.

To address this problem, the USFWS, the Mobile Area Water and Sewer System (MAWSS), and Environmental Defense (ED) have developed a Habitat Conservation Plan (HCP) for the gopher tortoise in Mobile County. The HCP has set up a Conservation Bank and allows for the relocation of gopher tortoises from private lands to a 222-acre tract that is within a 7,000 acre area around Converse Reservoir owned and managed by MAWSS. It is estimated that this tract can support up to 125 gopher tortoises. Individuals seeking permits to have tortoises relocated from their property will pay a per tortoise mitigation fee which will be used to manage the area in perpetuity.

The official signing ceremony for the HCP was held in June and was attended by numerous local, state, and federal dignitaries. The event was covered by the local media and included a trip to bank lands. Since that time, several tortoises have already been relocated to the tract. Relocated tortoises will be closely monitored using radio-telemetry, video inspection of burrows, and a lot of good old-fashioned field biology. The results of these initial efforts will be evaluated by the USFWS, MAWSS, and a scientific advisory panel (which includes GTC members). If successful, the bank may be expanded to include additional MAWSS lands with increased gopher tortoise capacity.

The Mobile County HCP has the potential to save many gopher tortoises as well as increase public perception and acceptance of endangered species conservation. Barbara Allen (USFWS), Robert Bonnie (ED), MAWSS, and Dr. David Nelson (University of South Alabama) all surely deserve a big pat on the back for their efforts on this project. However, we should also not forget that this HCP addresses only a small segment of the gopher tortoise population in a small portion of the species' range. Upland habitat loss continues in Mobile County, the threatened range, and across the Southeast.

Florida --JOAN BERISH

A preliminary biological status review under the state's new listing criteria clearly supports the gopher tortoise's legal status as a species of special concern. Further review will indicate whether it warrants a higher listing. The new criteria are based on those used by the IUCN World Conservation Union.

Copies of the precursor to the official gopher tortoise management plan are now available from the Florida Fish and Wildlife Conservation Commission's (FWC) Tallahassee office for a small fee (contact Stuart Cumberbatch, cumbers@fwc.state.fl.us). This tome covers numerous aspects of tortoise biology and conservation. A team of biologists is currently working on the management plan. As part of the planning process, FWC is undertaking a population viability analysis (PVA) with experts from the Conservation Breeding Specialist Group of the IUCN. The PVA is basically a process of evaluating the interacting factors affecting population extinction (e.g., life history attributes, habitat quality, disease).

In March 2001, FWC implemented guidelines regarding testing for exposure to upper respiratory tract disease (URTD) prior to off-site relocations. Depending on the number of tortoises to be relocated, 5-25 tortoises would generally need to be tested. Special blood collection permits are required to sample tortoises, and negative test results are necessary before off-site relocation permits are issued. No symptomatic, seropositive (tortoises exposed to the bacterium) or serologically suspect tortoises may be moved off-site. If seropositive animals are found, two options exist: relocate on-site at a maximum density of 3 tortoises/acre or obtain an incidental take permit (and protect habitat off-site through mitigation banking).

FWC is currently completing a multi-year study to evaluate the effects of URTD on tortoise populations inhabiting selected public lands. Three different mycoplasmas (bacteria lacking a cell wall) have been found on the four

State Reports Continued

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study sites. Mortality possibly associated with URTD has been documented on two of the sites; of 15 tortoises radioed on each site in 1998, at least 20% are dead on one site and 40% are dead on the second site. As we analyze data collected over four sampling seasons, we will also be looking at changes in serology (i.e., blood test results).

Henry Mushinsky and Earl McCoy at the University of South Florida (USF) have resurveyed ten public lands to assess changes in burrow densities over time. Preliminary results indicate that tortoise populations have declined at 80% of the sites. The USF research team is also testing tortoises for URTD exposure.

In addition to tortoise die-offs previously documented at the Oldenburg Mitigation Park and Green Swamp West Wildlife Management Area, both north of Tampa, a recent report by Department of Environmental Protection biologist Boyd Blihovde indicates at least 60 dead tortoises (and possibly twice that number) on Rock Springs Run State Preserve near Orlando. URTD has been found in a tortoise near the die-off site, but it is premature to speculate on the cause of this mortality event.

Ray and Pat Ashton (Ashton Biodiversity Research and Preservation Institute, Inc.; Newberry, FL) have recently implemented a Gopher Tortoise Conservation Initiative (GTCI). This multi-faceted project includes working with private landowners to establish and manage tortoise reserves, conducting training workshops on tortoise field methods for environmental consultants and land managers, and distributing fact sheets regarding tortoises and development.

Georgia --BILL BIRKHEAD

Jonathan Neufeldt (student of Bill Birkhead, Columbus State University) is finishing his master's work on the terrestrial movements and habitat use of gopher frogs at Fort Benning.

Erin Clark (Savannah River Ecology Laboratory) is involved in a relocation of approximately 100 tortoises from McIntosh County to the Savannah River Site that took place from late August to late September. Tortoises were released into a site with mature longleaf and loblolly pine on deep Lakeland sand where some wiregrass restoration has occurred.

Craig Guyer (Auburn University) is employing the pressure pad system he designed to monitor tortoise social interactions (especially female mating opportunities) at Fort Benning and the Wade Tract (Leon Co., FL). Dr. Guyer also took blood samples from 16 tortoises on the Wade Tract and nasal washes from nine in order to determine the status of URTD there.

Mitch Lockhart (Valdosta State University) is PIT-tagging tortoises on Moody Air Force Base to complement scute marking (30 so far). He is also testing tortoises for URTD: 38 tested negative in 2000, 31 tested negative so far in 2001. He has obtained plasma chemistry values and protein electrophoresis data for about 25 of the above tortoises with more pending.

Natalie Hyslop (student of Michael Meyers, University of Georgia) will soon begin research on the spatial ecology and habitat use of the eastern indigo snake in Georgia.

Dave Rostal (Georgia Southern University) is still doing quite a bit of work with tortoise reproductive biology, including temperature-dependent sex determination (TSD). He has begun a large demographic study of tortoises on Fort Stewart, looking at habitat quality, reproduction and genetics. He has several hundred marked tortoises on Ft. Stewart on which long-term monitoring is being done.

Donna Wear (Armstrong State University) is monitoring four waif tortoises which have been released on the McDuffie Public Fishing Area using telemetry and a video camera.

Mississippi --COLLEEN HEISE

Development continues to affect gopher tortoise habitat in Mississippi. A number of pipeline projects underway in the near future will necessitate relocation of tortoises. Relocations of tortoises at pipeline construction sites is typically temporary; the animals are generally moved back to the site at the conclusion of work or are simply moved to immediately adjoining suitable habitat at the outset. The Mississippi Department of Wildlife, Fisheries, and Parks (MDWF&P) and the Jackson, MS Field Office of the U.S. Fish and Wildlife Service (FWS) are re-examining relocation protocols used in previous Biological Opinions (BO), and are considering adoption of a new set of guidelines. In recent years BOs have typically restricted relocations to the months between 1 April and 15 October, although the relocation window specified in the Gopher Tortoise Recovery Plan, based upon Mount, Wester, and Swing (1988), is 15 April - 31 August, with a preference for the 15 April - 15 May period, and a caveat that relocations not be undertaken when temperatures are likely to exceed 95 °F. In recent years increasing numbers of projects have requested extensions of the fall movement window into late October, November, or even later. Florida permits relocations into abandoned burrows (not starter burrows) when forecasts predict no temperatures lower than 50 °F over a three day period. Some of us considering relocation protocols are of the opinion that the

State Reports Continued

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relocation window should be narrowed in Mississippi, particularly in the fall, to permit animals to adjust to their new surroundings well prior to the onset of cold weather. We wish to solicit comments from GTC members with experience in relocations and/or tortoise seasonal behavior, particularly in the northern edge of the range.

Subdivisions and other developments in Hattiesburg and coastal areas are increasingly usurping tortoise habitat. More tortoises have turned up in suburban backyards in Petal, Hattiesburg, Ocean Springs, Gautier, etc., and an increasing number of tortoises are brought to veterinary clinics and rehabilitation centers after being bitten by dogs. Numerous road projects also consume habitat in southern Mississippi, both at the road sites themselves and in the borrow pit areas where fill is obtained. In addition, roads fragment the landscape into hard to manage or unmanageable shards, and road mortality of animals moving among these shards is elevated.

The Chickasawhay and DeSoto Ranger Districts of the DeSoto National Forest (together containing the best large blocks of tortoise habitat remaining in the range of listing) were able to conduct more prescribed burns this year than in previous years, therefore improving habitat for tortoises. There are now more personnel available to conduct burns. We are still behind on what needs to be burned, but definitely gained ground this year.

The FWS is attempting to find suitable sites to assess how to increase the likelihood of successfully relocating tortoises to augment populations. One of the factors to be investigated will be the size (acres) of the site. We hope to implement the study on a site of at least 200 acres of good habitat. Funding for the study will be provided by FWS and the National Council for Air and Stream Improvement.

FWS continues to partially fund research by Craig Guyer on the minimum density of functional, breeding gopher tortoise populations. This data is important to spatially identify populations, assess their viability, and implement appropriate conservation and management.

The USFS, MDWF&P, Dr. Richard Seigel, FWS, and other cooperators continued their planning to relocate and repopulate tortoises in an area surrounding the breeding pond of the gopher frog on USFS property. The tortoises will be relocated from the areas within and immediately adjoining construction right-of-way of a rerouted and four-laned segment of Hwy 67 that will cross USFS property.

International Paper Company has withdrawn their proposed Habitat Conservation Plan and request for an incidental take permit for the gopher tortoise. With recently changing market conditions and the closure of their mills in south Mississippi, IP will be divesting much of the land

that would have been included in the plan. Based on their most recent survey on over 17,000 acres, the plan would have restored and maintained habitat with prescribed fire and other measures for "colony" tortoises, which comprise 91 percent of all tortoises in the IP HCP area. Non-colony (isolated) tortoises potentially would have been harmed by unmodified silvicultural practices.

With assistance from Environmental Defense, the first gopher tortoise plan with a private landowner under the new Safe Harbor provisions under the Endangered Species Act is nearly completed. The Safe Harbor Program provides incentives to private landowners who provide voluntary, beneficial management to listed wildlife that otherwise is not a required management action under the Act. The incentive removes any future regulatory restriction on any additional tortoises that accrue due to voluntary management. After a minimum time during which there is a net conservation benefit, a landowner may choose to convert the property back to the baseline population and habitat condition that existed when the Safe Harbor Agreement was initiated. This program is designed for private landowners that are reluctant to restore and manage longleaf pine due to a fear that the tortoise population will increase. The current landowner completing this first Agreement actually would choose to manage for tortoises without a Safe Harbor Agreement, but he wants to educate hesitant landowners about Safe Harbor Initiatives.

FWS has begun to develop mitigation bank guidelines and to stimulate interest among landowners in the establishment of appropriate gopher tortoise mitigation banks in Mississippi. FWS met with state agencies and conservation organizations that previously have expressed an interest in such banks. Current work concerns the economics of perpetually funding and operating a mitigation bank, and the costs required by landowners to pay for such services.

Research on gopher tortoises, funded by the Mississippi Army National Guard, continues at Camp Shelby Training Site. This spring a final report on a five-year study of the life history of gopher tortoises on Camp Shelby was completed. Included in this report are discussions of the distribution of tortoises across soil, habitat, and management types, population trends, and nesting and hatchling success. Population trends showed a decline in gopher tortoises and that populations are heavily skewed toward adult tortoises. It was also found that hatching success, even when the eggs were protected, was very low (less than 30% overall). This report is available if anyone would like a copy. This past summer, research focused on the prevalence and distribution of Upper Respiratory Tract Disease (URTD). Blood samples were obtained from 110 tortoises; no tortoises tested positive and only two tortois-

State Reports Continued

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es tested suspect for URTD. Additional testing will be done next summer with funding from the Department of Defense Legacy Program. Biologists at Camp Shelby are currently working on analyzing data from a relocation project that occurred two years ago. Tortoises were radio tracked for at least one year after release. Tortoises were trapped in the relocation areas this fall to determine site fidelity two years after release. Next summer, biologists at Camp Shelby will be working on two new research projects. One project will focus on how gopher tortoises that are located in ruderal areas (cleared, mowed areas) will respond when the forested habitat nearby is improved by prescribed fire. This project will be partially funded by the U.S. Army's Construction Engineering Research Laboratory (CERL). The second project will focus on determining possible factors for the low hatching success that occurs at Camp Shelby.

South Carolina --DEBORAH EPPERSON

The gopher tortoise remains state protected as an endangered reptile and there are three major issues regarding gopher tortoises in the state:

1) The Aiken County Gopher Tortoise Preserve, Aiken County: Efforts are underway to supplement the existing gopher tortoise population on the Preserve with isolated individuals on the same ridge system (from private property). A complete burrow survey has been conducted on the Preserve and the current focus is on identifying private landowners in the area with isolated individuals on their property who would be willing to have the tortoises translocated to the Preserve. Translocation of tortoises could occur as early as Spring 2002. In May of 2001, a hatchling was found in the Preserve approximately 120 km north of the most northern range locality for the tortoises in the state (Tillman Sand Ridge, Jasper County). This represents a significant range extension for gopher tortoises, as they were not thought to occur between the Savannah River Site and Columbia, SC.

2) Repatriation of gopher tortoises on the Savannah River Site (SRS), Aiken County. During the Fall of 2001, a population from a development site in southeast Georgia was relocated to a site with no resident tortoises. The relocated population consists of approximately 100 individuals ranging from hatchlings to sexually mature adults. Tortoises were historically known from the area surrounding SRS as late as 1900 but were extirpated prior to the site's establishment in the 1950's. The gopher tortoise repatriation is part of a larger ecosystem restoration that

also includes monitoring of upland snakes, and the re-establishment of wiregrass to a 120-year rotation pine forest. This is a long-term collaborative project between the Savannah River Ecology Laboratory (SREL), the United States Forest Service, and Conservation International. A graduate student, working with Whit Gibbons at SREL, is studying the effects of relocation on stress hormone levels as well as movement patterns of these relocated tortoises.

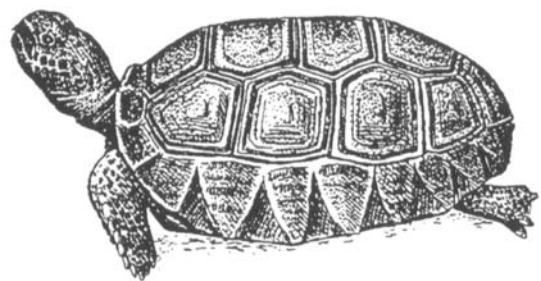
3) The South Carolina Department of Natural Resources (SCDNR) is purchasing 475 acres for 1.5 million dollars to expand the Tillman Sand Ridge Heritage Preserve. The land is located in northwestern Jasper County and will provide a sizeable addition to the 953-acre existing preserve. For more information about the preserve, visit the SCDNR website (www.dnr.state.sc.us).

Other issues concerning upland species in the state include:

1) The gopher frog is currently listed by the state as a species of "special concern", however it is being considered for listing as a state endangered species. South Carolina Department of Natural Resources (SCDNR) will initiate the official listing process in the near future. There are 21 documented sites for gopher frogs in the state, although there is not recent survey data for all sites. The most viable populations appear to be those occurring in large protected areas.

2) A graduate student working with Dr. Drew Lanham of Clemson University, in cooperation with SCDNR, will begin working on a project to determine niche partitioning between Diamondback and Canebrake rattlesnakes.

3) Tracey Tuberville and Travis Glen of SREL are conducting an investigation into the level of genetic exchange among local populations of southern hognose snakes on the SRS. Results from this study and earlier telemetry work will be used to estimate the likelihood that southern hognose snakes will colonize new sites or recolonize sites from which they have been extirpated.



Final RCC Update: Announcing the Upland Snake Conservation Initiative

KARL STUDENROTH

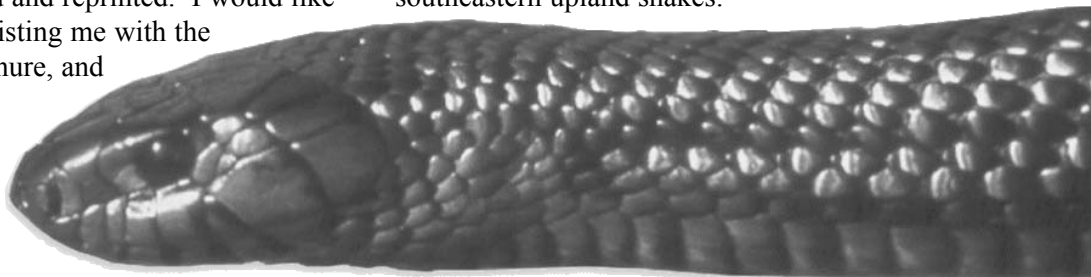
After serving as Rattlesnake Conservation Committee (RCC) co-chair over the past three years, I believe it is time to broaden the scope of the committee's efforts. During the last two GTC business meetings, Tracey Tuberville and I have agreed to change the focus and direction of the RCC to a much broader perspective, which includes all upland southeastern snakes, especially rare and endangered species. After many years of success and achievements, it is time to retire the RCC. Tracey Tuberville and I will now serve as co-chairs of the "Upland Snake Conservation Initiative" (USCI).

I sincerely thank Bruce Means and all the RCC committee members for their help and assistance over the past three years. During my tenure as RCC co-chair, we were able to complete a number of projects and efforts. Our major accomplishments include: Martha Canady compiling a list of eastern diamondback rattlesnake roundups; John Jensen and Phil Spivey's success within the Georgia Department of Natural Resources in persuading the Fitzgerald Jaycees to convert their event into one in which no rattlesnakes are collected from the wild or killed; GTC's financial support which enabled William Martin and Bruce Means to publish their important paper, "Distribution and Habitat Relationships of the Eastern Diamondback Rattlesnake;" and finally the revised EDR brochure has been completed and reprinted. I would like to thank Mark Bailey for assisting me with the completion of the EDR brochure, and

for his technical expertise. The new and improved EDR brochure (see page 10) has many updates and graphic improvements. Individuals interested in obtaining copies of the brochure can contact me.

Within the new USCI, Tracey and I hope to address many issues and research needs concerning southeastern upland snakes. I will concentrate more on educational and conservation needs of upland snakes while Tracey focuses primarily on the research needs of upland snakes. Along with the eastern diamondback rattlesnake, many other unique upland snakes are in peril in the southeastern United States. While our efforts will include all upland snakes, emphasis will be placed on the following rare and endangered southeastern species: eastern indigo snake; southern hognose snake; eastern coachwhip; short-tailed snake; northern, Florida, black, and Louisiana pine snakes.

I encourage anyone interested in the conservation, education or research needs of southeastern upland snakes to contact Tracey Tuberville or myself. The USCI will not function as a committee *per se*, but we will be looking for help with specific projects in the future. Over the next several months, Tracey and I will be developing and working on various projects and goals of the USCI. I look forward to working with Tracey, and other interested parties, concerning the fascinating and diverse array of unique southeastern upland snakes.



Eastern indigo snake

Longleaf Pine Natural Community Featured in New USPS Stamps

MARK BAILEY

The gopher tortoise shares a stamp with a gray fox and is but one of 31 species portrayed by artist John D. Dawson in a new composite pane of 10 stamps illustrating the diversity of species found in longleaf pine forests. The Longleaf Pine Forest set of stamps is the fourth in the *Nature of America* series, which is an educational series promoting the appreciation of North America's major plant and animal communities. Except for the inclusion of a couple of species more typical of southern mixed hardwood forest (broad-headed skink and southern magnolia), and the notable absence (as far as we can see from the image) of the eastern diamondback rattlesnake, species

selection is representative of the longleaf pine forest community. A numbered key to the artwork appears on the back of the pane, along with a corresponding list of common and scientific names for 27 selected species, including gopher tortoise, bobwhite quail, hooded pitcher plant, and Bachman's sparrow. The First Day of Issue ceremony will likely be held at a location within the range of longleaf pine, but as of this writing the location has not been announced. The image may be viewed on the GTC website. When available in April 2002, the stamps may be purchased from the U.S. Postal Service online store at <http://shop.usps.com/>.

I was hoping that with this newsletter I could report that all of the copies of "Gopher Tracks" were distributed and I was finally able to move on to concentrating on the slide show! What I've learned is that 6,700 books are a lot to distribute!

Hopefully if you pre-ordered copies, you have already received them. One of the most common questions I was asked at the annual meeting was "Is it too late to get a copy or two?" Unfortunately, the answer is "yes," however, you can contact either GrayceSmth@aol.com or Naturesfocus@aol.com. These are both nature stores that have ordered a few copies for resale. Between the two stores they only have 66 copies, so I'd contact them soon before they run out.

I'm pretty positive that by the next edition of "The Tortoise Burrow," George Heinrich and I will be able to report that neither of us are storing huge piles of books, letterhead, envelopes or boxes and are gearing up for other projects! I really want to thank George for all his support with this project, from dealing with the printer, helping with donations and distribution, and organizing a great group of volunteers to give each book the quick look over for quality before stuffing them into envelopes.

A few others to thank are Matt Dinkins for putting up with receiving checks two and three at a time and sending me checks whenever I requested them, especially the blank ones for postage that must make a mess of his job. Thanks

to Steve Shively, Karen Moody, and Cyndi Marks for helping me track down many of the addresses that I couldn't find. Carol Stewart who designed the donor recognition on the inside of the cover of the book. I also am very fortunate to work at a nature center with wonderful front desk volunteers and even staff members who signed over half of the 3,000 + letters, stuck labels and stamps on all of the envelopes, and stuffed all the envelopes with the letters and GTC brochures.

Our display board is scheduled to be at a few upcoming events. George Heinrich plans on taking the display board to the annual joint meeting of the St. Petersburg Audubon Society/Florida Native Plant Society, Pinellas Chapter. Nadja Chaimberlain is going to take it for an Earth Day event on the east coast again this year. I also have agreed to take the display to "March for Parks" on March 2nd in New Port Richey. This was an event that I had to turn down last year, and hated to say no twice in a row. This evening I received an e-mail requesting our board on the same day for a nature festival in Punta Gorda. Punta Gorda is only about 30 minutes away and I would really like to find someone that could represent us at New Port Richey while I cover the Punta Gorda event. If anyone would be willing to help, please contact me at laura.w@mindspring.com or (941) 275-3435. It is a lot of fun going to these different festivals and it is an easy way to get a little more involved with GTC.

Update on the Visiting Southeast Asian Turtle Researcher Project

GEORGE L. HEINRICH

Plans for the Council's "Visiting Southeast Asian Turtle Researcher Project" have been further developed since we announced this exciting new venture in the last issue of the newsletter. This project will provide an opportunity for a Southeast Asian turtle researcher to visit the southeastern United States and learn about gopher tortoise field research techniques. It is hoped that this experience will benefit tortoise conservation efforts in Southeast Asia.

Staff members at Camp Shelby (Mississippi) will likely host the researcher during a four-six week visit in the summer of 2002. The coordinating committee (Colleen Heise, Deborah Epperson, Kurt Buhlmann, and myself) is currently addressing details such as lodging, meals and insurance. We will provide regular updates via the Council's newsletter and website.

Fundraising efforts were initiated at the recent annual meeting held at the University of Florida. Proceeds from the silent auction (over \$1,800) were dedicated to this project, in addition to \$500 in matching funds from the

GTC general account. Funds are also being raised through the sale of a new GTC t-shirt. With less than twenty shirts remaining and no plans to reprint them, now is the time to place an order (see advertisement on page 10).

A friend recently suggested that the Council could raise funds faster and with less work by securing grants or large donations. Although that is true, grassroots fundraising provides a feeling of empowerment for small organizations and has worked well for the Council in the past. The late anthropologist, Margaret Mead once said, "Never doubt that a small group of committed people can change the world - indeed, it is the only thing that ever has." You can assist with this conservation effort by making donations directly to the project. Checks made out to the VSATRP can be mailed directly to the Gopher Tortoise Council, c/o George L. Heinrich, 1213 Alhambra Way S., St. Petersburg, FL 33705-4620.

Other News

Rare Beetle Population Discovered

Two researchers recently confirmed the existence of yet another insect that is apparently directly dependent on gopher tortoise burrows. On a recent trip to the Field Museum in Chicago, Pete Kovarik of the Ohio State University Museum of Biological Diversity's Insect Collection borrowed a specimen of *Geomysaprinus floridae* (Horn) that had been compared with the type specimen, which was a single individual collected somewhere in Florida in the 1800's. Pete compared this specimen with the series of *Geomysaprinus* that Roy Morris, Field Development Representative of Bayer Corporation in Lakeland, had collected from gopher tortoise burrows at the Citrus Wildlife Management Area in Citrus County, Florida and determined that they are conspecific (the same species). This species had been recorded in the literature (under the name *Saprinus floridae*) as inhabiting tortoise burrows.

Paul Skelley (Florida Dept. Agriculture Bureau of Entomology, Nematology & Plant Pathology) and Pete

Kovarik have done a considerable amount of collecting from tortoise burrows and after reviewing their records, Paul reports that he collected the species from a tortoise burrow northeast of Florahome in Putnam County in 1994. Roy Morris' recent collection of *Geomysaprinus floridae* specimens not only confirms the association with tortoise burrows but also indicates that the species is likely restricted to Florida, where it may be a ridge system endemic. Pete hopes that Roy will be able to find more specimens, and notes that it would be interesting to find out where its limits are in terms of peninsular Florida. The range of this beetle is likely quite limited and should give added incentive to protect the tortoise populations in central Florida.

Thanks to Pete Kovarik for sharing this information with the Council. For more information on Pete and Paul Skelley's work on pocket gopher insect associates, see the Spring 2001 issue of the Tortoise Burrow.

Mississippi Gopher Frog Listed as Endangered

As we reported in the last issue, the Department of the Interior announced last summer an agreement in principle to issue a final listing decision for the "Mississippi gopher frog," which is treated as a distinct subpopulation (*Rana capito sevosa*), and has been proposed for listing for some time.

The final rule was published in the December 4, 2001 issue of the Federal Register and is available for viewing in Adobe PDF format on the GTC website at www.gopher-tortoise-council.org.

Historically, this population segment is believed to have occurred in at least nine counties or parishes across Louisiana, Mississippi, and Alabama, ranging from east of the Mississippi River in Louisiana to the Mobile River

delta in Alabama. Today, it is known from only one site in Harrison County, Mississippi. The greatest threat to this last population is the low number of adult frogs and their vulnerability to environmental stresses, both natural and human-induced. The area from which any other populations of the Mississippi gopher frog might be expected is essentially the same as the portion of the range of the gopher tortoise west of Mobile Bay.

The U.S. Fish and Wildlife Service has been working with the U.S. Forest Service since 1988 to protect the last known Mississippi gopher frog population. In addition, both agencies have joined forces to rehabilitate a nearby pond as a future breeding site for this rare frog.

Research Assistantship Available: Conservation Ecology of Gopher Tortoises

Dr. Richard A. Seigel (Towson University, Baltimore, Maryland) anticipates funding to support a combined research/teaching assistantship on the ecology of neonate gopher tortoises. An understanding of the survivorship and movement patterns of juvenile tortoises is essential for long-term management of this species. Studies at other sites have indicated alarmingly high rates of neonate mortality. In this study, newly emerged hatchlings will be monitored via radiotelemetry for up to two years. The project will begin in May 2002. Students would be expected to use data generated from their studies for a Master's thesis at Towson University. The stipend is currently \$11,000/year, plus a full tuition waiver, per diem, and travel costs. The starting date for graduate study is as early as the spring semester of 2002.

For more information, contact Dr. Seigel at Dept. of Biological Sciences, Towson University, Towson, MD 21252. telephone 410-704-3123, e-mail rseigel@towson.edu

Announcing the 2001 J. Larry Landers Student Research Awards

The Gopher Tortoise Council annually presents the J. Larry Landers Student Research Award to the best student research project concerning the biology of the gopher tortoise or any aspect of its sandhill community. In 2001, \$500 awards were presented to each of two recipients to partially support their projects:

Jamie C. Colson, University of South Florida

Determination of paternity patterns in the gopher tortoise using DNA microsatellites

Jayme L. Waldron, Clemson University

Ecology of the canebrake rattlesnake in areas of sympatry with the eastern diamondback rattlesnake

Recent awards have averaged \$500. Students interested in applying should submit a concise description of their project with a detailed budget and a brief curriculum vitae to Bob Herrington, Research Advisory Committee Head, Dept. of Biology, Georgia Southwestern State University, Americus, Georgia 31709. Deadline for receipt of proposals to be considered for the 2002 award(s) is August 21, 2002.

Thank You

Sandi Linn, the Director of Education at the Central Florida Zoo, has donated \$143.50 to the Gopher Tortoise Council on behalf of students in the Bright Futures Scholarship Program at Seminole County High School. The funds represent 10% of the profits raised by the students while operating a satellite gift station at the zoo. Sandi asked that the funds be used for a GTC project in Central Florida; therefore, we have dedicated the money toward one of the 2001 J. Larry Landers Student Research Awards. One of this year's award recipients, Jamie Colson, is a graduate student at the University of South Florida and will be studying paternity in gopher tortoises at the USF Ecological Research Area in Hillsborough County. Sandi Linn's donation will be dedicated toward this award.

Thanks to Sandi and the Seminole County High School Students for this generous donation!

Department of Defense Longleaf Pine Workshop Held

Longleaf pine's open stand structure and its fire tolerance make it an excellent fit for the military mission. Troop training exercises are much more efficient in forest that thrives from the frequent fires caused by munitions.

The Longleaf Alliance, in cooperation with the natural resource staffs at Fort Gordon (Georgia) and Fort Jackson (South Carolina), held a longleaf pine workshop in November, 2001. The 60 attendees represented 14 military bases including all service branches. Each base has common goals relating to longleaf ecosystem management, and the Longleaf Alliance is their primary mechanism for exchanging information.

At the workshop, numerous management issues were discussed, including restoration of longleaf pines and ground cover, wildlife management, hardwood management, and the reintroduction of fire after years of fire suppression. Economics was also a frequent topic, since timber sale receipts finance military forestry operations. The group also visited the northernmost gopher tortoise population at the Gopher Tortoise Preserve (South Carolina).

The group plans to meet next fall at the Solon Dixon Forestry Education Center in Alabama.

For more information on the Longleaf Alliance, visit their website at www.forestry.auburn.edu/la/



Long-leafed Pine
(*Pinus palustris*)

Adapted from the December 2001 Longleaf Alliance Newsletter. Used by permission.

Items Available

Educational Brochures

The recently revised gopher tortoise and eastern diamondback rattlesnake brochures are now available from the Gopher Tortoise Council.

Both brochures discuss the distribution, natural history, ecology, and conservation needs of these "flagship" species of southeastern upland natural communities.

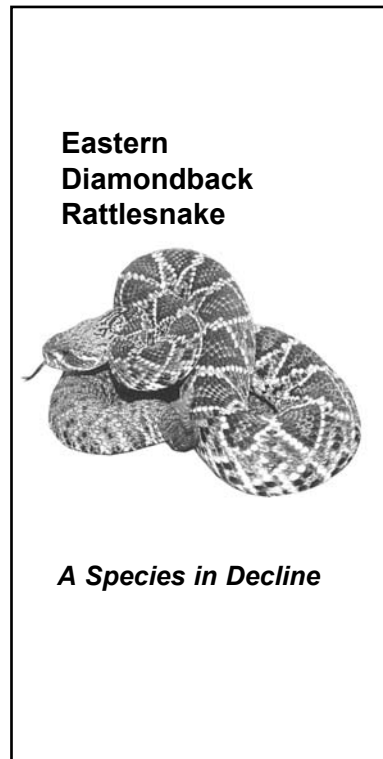
For information on how to obtain copies, or to volunteer to distribute copies, contact:

Tortoise Brochure

Laura Wewerka
941-275-3435, laura.w@mindspring.com

Rattlesnake Brochure

Karl Studenroth
850-482-8739, kstu@hotmail.com



GTC T-Shirts

Only a limited number remain from the annual meeting; remember, this is a one-time printing.

A small GTC logo with no words is on the left front. The logo with text (shown below) is on the back.

t-shirt design
(back)

Cost: \$18 (includes shipping).

Adult sizes: L (few), XL and XXL (few)

Black print on 100% cotton natural-colored Hanes Beefy-T's.

Please make checks payable to "VSATRP" (not "GTC") and write the size(s) you are ordering on the check in the "memo" spot.

Mail orders to William Knox:

P.O. Box 2265
Cross City, FL 32628-2265
Telephone: (352) 498-2481
e-mail: wknox@svic.net



Working to conserve the gopher tortoise
and the fascinating world in which it lives

Winter Business Meeting

The Gopher Tortoise Council winter business meeting will be held on Saturday, February 16, 2002 at 1:00 pm at the Boyd Hill Nature Park in St. Petersburg, FL.

This will be a working meeting, and we hope to make progress on developing an annual budget for the Council, finish the GTC Operations Manual, discuss the new Upland Snake Conservation Initiative, etc. For details about the meeting and directions to the site, contact Lora Smith at lora.smith@jonesctr.org or (229) 734-4706 x280.

New Publication by The Nature Conservancy

Managing the Forest and the Tree: A Private Landowner's Guide to Conservation of Longleaf Pine

Written by Julie Moore, this publication provides a historic and ecological context, original maps, photos, and management recommendations that promote economic return while maintaining ecological integrity. It also lists additional sources of contact and places to see longleaf areas.

Available from each Nature Conservancy Field Office in the Southeast (MS, GA, TX, AL, FL, LA), and from the Longleaf Alliance (334-222-7779), a partner in the project. For more information, contact Nelwyn McInnis at The Nature Conservancy of Louisiana at 985-809-1414. Costs may vary between states, but should be \$10 or less (shipping costs may be extra).

The Tortoise Burrow is published quarterly (March, June, September, December). Deadlines for submission of announcements and articles are the 15th of the preceeding month. Send materials to the editor: Mark Bailey, 2040 Old Federal Road, Shorter, AL 36075, telephone (334) 727-2040, fax (334) 727-1005, mbailey@conservationsoutheast.com. Decisions concerning publication of submitted material rest with the editor and co-chairs. Please send address changes to membership secretary Colleen Heise, Camp Shelby Field Office, CSTS-ENV, Bldg. 6678, Camp Shelby, MS 39407, or e-mail at cheise@tnc.org.

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position open

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Membership Dues Reminder

It is time once again to renew your membership (for those who did not do so at the October 2001 annual meeting). Membership categories and annual dues are as follows:

Student- \$10

Regular- \$15

Contributor- \$25

Corporation/Society- \$50

Sustaining- \$100

Life- \$250 (one time payment)

Please make checks payable to the Gopher Tortoise Council and send them to:

GOPHER TORTOISE COUNCIL

c/o Florida Museum of Natural History

University of Florida

P. O. Box 117800

Gainesville, FL 32611-7800



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