



This is a reproduction of a previous Gopher Tortoise Council newsletter. This document has been altered from its original presentation so that information, news, and notable content can be preserved. Formatting, spelling, and grammar have been maintained to the extent possible. If possible, original images from the document have been included in these reproductions. The current and recent newsletters of the Gopher Tortoise Council, *The Tortoise Burrow*, can be found on the Council's website [here](#). Personal information, such as addresses and phone numbers have been redacted from this document.

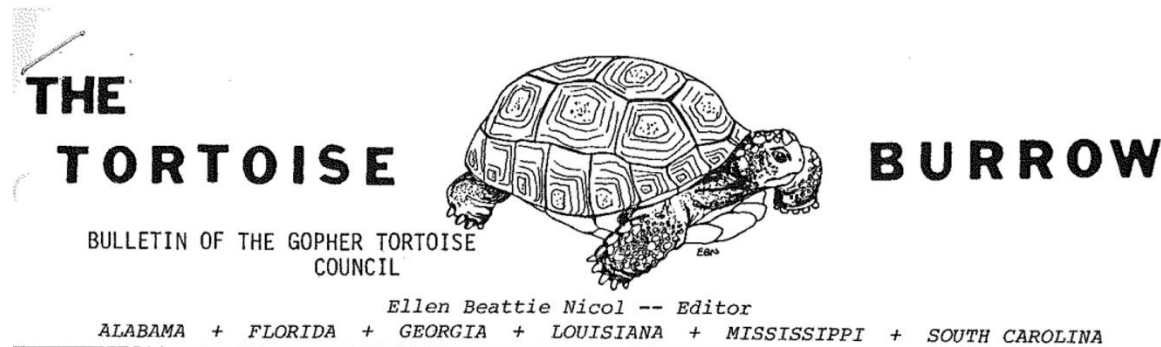


Image: Original artwork and letterhead for the newsletter of the Gopher Tortoise Council

REVIEW OF A DEVICE FOR VIEWING AND FILMING GOPHER TORTOISE BURROWS

As part of the 1983 GTC Annual Meeting, Dr. Dan Speake (GTC Alabama State Representative and Unit Leader of Alabama Cooperative Wildlife Research Unit) demonstrated his remarkable "hole-looker", a miniature TV camera system he has adapted for peering into gopher tortoise burrows and tree cavities. In response to requests from several members for specific details about his system, Dr. Speake provided GTC with the following information.

The closed circuit TV camera is enclosed in a stainless steel cylinder 32 mm in diameter and 340 mm long. This is connected to a camera control unit by a flexible underwater cable 38 mm long and 14.5 mm in diameter. The camera can operate with or without an integral light source. Lighting and focusing are remotely operated from the camera control unit, which also has a 10.2 cm diagonal TV monitor. An external video outlet allows the use of a larger external TV monitor as well as a video tape recorder. The camera can operate at temperatures of -25° to 60°C. For field work, a portable power supply is necessary; Speake uses a 1500 watt portable electric generator. An integrated switchbox allows instant review of recorded material in the field.

Camera and cable, control unit, generator and video equipment together weigh 72.6 kg. The equipment can be transported with a four-wheel-drive vehicle car, where that is not possible, with three-wheel all-terrain vehicles equipped with trailers.

According to Speake, “we are using the device to help us find indigo snakes on areas where we have restocked them. One of our research objectives is to determine the success of restocking efforts. Another immediate use is to improve the accuracy of gopher tortoise population surveys. We will be surveying the status and distribution of the gopher in south Alabama this year, and the camera should make it possible to measure the relationship of active burrows to population on an area. In tortoise burrows, we have been able to easily identify several species of snakes and the gopher frog. Frequently we clearly see various invertebrates that we usually cannot identify. In tree cavities we can identify birds and their eggs. Other inhabitants of tree cavities that we have seen are flying squirrels, wasps and rat snakes.”

For more details about Dr. Speake’s camera system, we refer the reader to Speake and Altieri, “A device for viewing and filming the contents of tree cavities,” Snag Habitat Management Symposium (Flagstaff, AZ June 7-9, 1983.**)(Material edited by Dr. Dale R. Jackson, Co-Chairman GTC)**

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CHANGES IN REGULATIONS OF FLORIDA GAME & FRESH WATER FISH
COMMISSION (Handbook)

“TURTLES -- Except for gopher tortoises, turtles may be taken throughout the year manually or by use of baited hooks, bows, dip nets, or traps so designed that any freshwater fish taken therein may escape, or by spearing from a boat or from shore, during daylight hours only. No license is required to take turtles. Gopher tortoises may not be taken July 1 through January 1.* The pouring or placing of gasoline or other potentially toxic substances into the burrows of the gopher is prohibited. The use of firearms, snares and bucket traps for taking turtles is prohibited. The sale or purchase of any gopher tortoise, Suwannee cooter or alligator snapping turtle is prohibited.

“Possession limits: gopher tortoises, five; Suwannee cooter, two; alligator snapping turtle, one. All other turtles may be taken or possessed in any number at any time except those classified as threatened or endangered or as species of special concern.”

* Changed from closed season of April 1 to June 30 formerly. Months of January, February and March now closed.
(Data supplied by Joan Diemer, Florida)

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EXECUTIVE BOARD MEETING – HELD June 9 at FSM, GAINESVILLE

In attendance: Peter Pritchard, Dale Jackson, Dick Franz, Robert Taylor, Wally and Susanne Wahlquist, Russell Burke, Ellen Nicol. General GTC policies were discussed as well as potential sites and dates for the Annual Meeting, to be decided before the next issue of TTB.

U.S.F.W.S/GTC MEETING – HELD May 3 in GAINESVILLE

As noted by Dr. Kenneth Dodd (USFWS/Office of Endangered Species) in a recent issue of TTB, the gopher tortoise has been placed in Category 2 (species for which more data are needed before they can be considered for federal endangered or threatened status) by the U.S. Fish and Wildlife Service. Although federal funds for status surveys have been exhausted for this year, FWS/OES personnel hope that more will become available next year. With that in mind, the FWS' Drs. John Pulliam and Steve Christman (both frequent attendees of GTC meetings) met May 3 in Gainesville, FL, with GEC members from five states to discuss goals and methodologies that should be incorporated into a future FWS gopher tortoise status survey proposal. Attendees agreed that survey work in GA and FL was especially needed, and that Dr. Dan Speake's "hole-looker" (see article, this issue) would be most useful. Participants included Joan Diemer, Dick Franz and Dale Jackson (FL), Bette Bechtel (GA), Jim Sorrow (SC), Dan Speake (AL), and Ren Lohofener (MS).

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NOTICE OF STUDENT AWARD – 1985

The Gopher Tortoise Council annually presents a cash award to an undergraduate, graduate, or exceptional high school student who is planning or actively conducting research involving the gopher tortoise (*Gopherus polyphemus*). The amount of the award varies from year to year depending on the Council's finances; approximately \$200. is available (per award, if more than one is selected) for the 1984-1985 award.

The only obligation of the recipient, other than conducting the proposed research, is to submit to the Council a copy of his/her final report within six (6) months of the project completion date and copies of any scientific papers resulting from the research. The recipient is invited to present his/her results at the Council's next annual meeting.

Proposals should be short, not more than three or four pages (typed, double space), and should include a brief biographical section (or resume), a description and justification of the research, and a budget indicating how the money will be spent. If the project is research leading toward a degree, please state degree sought and research advisor.

Proposals should be sent to Dr. Harold Wahlquist, 756 Martin Road, Stone Mountain, GA. 30088, who is the Chairman of the Review Committee to study the proposals for the scholarship award no later than September 15, 1984. The Council will announce the recipient of the award at its annual meeting.

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“FOURTY YEARS WITH TORTOISES”

That is the title of a book that is available from the author, Kay Arneberg Booth, for \$17.50 (hardcover) and \$12.50 (paperback), which includes tax and postage. Order directly from K. A. Booth, 30 Shasta St., Orland, CA 95963. It is a well put-together book of 110 pages, with some photographs. Mrs. Booth deals mainly with the California desert tortoise (*Gopherus agassizii*) but much of the information can be applied to the gopher tortoise. Mrs. Booth is clearly fond of the animals in her charge, and some of her experiences are very enlightening for anyone harboring tortoises. The book is highly readable, although scientist/biologist types won't be impressed. Kay Booth is a GTC member.

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Please remember that the editor is always more than willing to send sample TORTOISE BURROWS to any interested party. Just send name and address to Mrs. Ellen Nichol, Rt. # Box #####, Anthony, Florida 32617 (Editor and Secretary, GTC).

Also, please note that all membership envelopes and subscriptions are to go to Ellen Nichol (that address is now printed on envelopes instead of Florida State Museum in Gainesville

as formerly.) Florida State Museum remains the official headquarters of the GTC, but for practical purposes, all correspondence and dues should go to Ellen Nicol. Records are kept at this office, and dues checks sent to Treasurer Robert Taylor, in Ft. Myers, after crediting. The mailing permit for postage-free envelopes has expired, so please destroy any old postage-free envelopes, as they will not be honored and end up in some postal limbo, often never to be heard from again.

For new members, past issues of THE TORTOISE BURROW are available (four, other than this issue) for 50 cents each. Copies of Proceedings of past Annual meetings are available for \$8.00 each, plus \$1.00 shipping. They cover 1980, 1981 and 1982 meetings. Proceedings of the 1983 meeting in Valdosta will be available following the 1984 Annual Meeting. Paid members get copies of the Proceedings free as part of the membership each year.

As a reminder, dues are: \$100.+ Sustaining Member; \$25. Contributor; \$25 Societies, Clubs, Groups; \$10. Regular; and \$5. Student. The membership year runs from January 1 to December 31, not from the time you join to a year from that. Dues are tax-deductible, of course. Any contributions for specific purposes are welcomed. If you wish to sponsor a student award, or contribute to that cause, indicate so on your contribution and you will be given public recognition (if you wish).

The editor welcomes (and needs) input from membership. Keep watching for newspaper clippings about gopher tortoises, and send them along --you will be given credit. Write me your personal experiences with tortoises and, if suitable, I'll print your story in the TTB. This is YOUR NEWSLETTER. Do get involved!

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YOUR STATE REPRESENTATIVES TO THE GOPHER TORTOISE COUNCIL ARE:

Joan Diemer, Florida

Noel Mills, Louisiana

Dan Speake, Alabama

Ren Lohofener, Mississippi

Wally Wahlquist, Georgia

James Sorrow, South Carolina

(If this is incorrect, representatives please advise the editor)

Don't forget to make plans to attend the annual meeting, which will be in late October or early November. Tentative sites include the Tampa area of Gainesville, Florida, but it has not been decided at press time for this issue.

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GOPHER TORTOISE HAS HAD FEW FRIENDS UNTIL NOW

By Darrell Hartman
Staff Writer, Gainesville SUN 7/11/82

"The gopher tortoise has little economic value. It is edible, but not delectable...The flesh of the gopher tortoise is reputed to have aphrodisiac qualities, but no scientific evidence supports this contention. I have not noticed that keeping a gopher tortoise in the home improves television reception. We have therefore dispensed with money, food, sex and TV, the values on which our culture at times seems to be based. The gopher tortoise is important to none of them."
(George Folkerts, Auburn University)

He couldn't possibly have known. The elderly Michigan professor looked at the tall blond who was seeking graduate work in wildlife studies, and told her, "Honey, why don't you go back to your stove." Joan Diemer didn't say anything -- she just found a different school. But what the Michigan professor didn't know was that Joan Diemer since and before then has taken a lot more heat than any kitchen can produce.

She worked as a forest service firefighter in New Mexico, spent three years roaming the "hellhole" sandhills of South Georgia studying indigo snakes, and for the last 1 ½ years has been working in the blazing hot sandhill areas of North Florida. The focus of her recent attentions has been the gopher tortoise -- one of the largest land tortoises in the country, reaching a size of 18 inches long. Despite its inhospitable habitat, and its evolutionary success, not to mention its longevity -- which is reported to be up to 60 years -- the gopher tortoise is in deep trouble.

Richard Franz, an associate in natural sciences at Florida State Museum, estimates that the gopher tortoise may reach the point of no return by the year 2,000 unless something is done to reverse its drastic decline. And that puts the heat back on Joan Diemer, who was hired by the Florida Game and Freshwater Fish Commission to research the gopher tortoise, gather the needed biological data, and give the state the information it needs to know if the gopher tortoise should be fully protected or not.

The gopher tortoise is being attacked on several fronts. Habitat loss and "pulling" by rural Floridians for food are apparently the two main threats. "Until recently," said Diemer, "not

much was done with sandhills. Nobody wanted to live on them. But in a lot of areas (of Florida) that's the only place left to build that's not wet."

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The gopher tortoise is not just a strange looking reptile that roams the sandhills on his own time. The gopher tortoise is, in fact, the lifeblood of the sandhills. And if it were to disappear, the sandhills as they are known today, would also disappear, along with numerous other creatures. The sandhills, said Diemer, are called "hellholes" in South Georgia because their near desert-like conditions. It is a harsh, near-desert environment, and the plants and animals there have learned to cope with extreme heat and drought. Although the sandhills and scrub areas get plenty of rain, it all drains quickly through the sand without giving too much help to the plants and animals. Plants have waxy or curled leaves to reduce water loss. Turkey oak leaves turn upward, reducing the leaf area exposed to the sun's rays. Animals avoid the heat by going underground -- and that usually means burrowing a gopher tortoise hole. Most sandhill and scrub areas also burn frequently, and the gopher hole -- which can be up to 28 feet in length and nine feet deep - provides a place to hide during the fires.

Several insects, including the gopher cricket, which are found nowhere else in the world except in gopher burrows, inhabit the tunnels. The burrows provide protection for the threatened indigo snake, the threatened Florida gopher frog, and the rare Florida mouse. Other visitors include skinks, rattlesnakes, opossums, rats, mice, rabbits, foxes, quail, armadillos, burrowing owls, snakes, lizards, frogs, toads and many invertebrates.

The tortoise used to live along both coasts of Florida. Now they are mostly gone there. North Florida and South Georgia have the greatest remaining populations left, although some live in Louisiana, Alabama, Mississippi, and South Carolina.

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It is the habitat loss that researchers shake their heads about. There are very few proposed solutions. Although the Game and Fish Commission has rules that limit the number of gophers people can catch for food, there is no law preventing a bulldozer from leveling entire colonies of gophers. But Franz suggests that developments, whether they be housing developments, golf course or industrial plants, can leave a lot more natural buffer areas that would allow animals, including the gopher tortoise, to survive. "Whatever you do, it's a start," he said.

The second major threat is “pulling,” a tradition among many rural people, especially in the Panhandle, of using a long hook to pull gophers four of their holes and take them home for dinner. In fact, it was the pullers -- not the bunny-huggers (game management slang for environmentalists or protectionists) -- who are responsible for the research Diemer is conducting. Franz, essentially a bunny-hugger, said the gopher was recommended for protection in the late 1970s by the Florida Committee on Rare and Endangered Plants and Animals, but the recommendation was ignored. “We’ve been arm-waving a lot on gophers for some time and we haven’t gotten any response from Tallahassee,” said Franz, who in 1973 and 1974, along with Dr. Walter Affenberg did a survey of southeastern states to determine that only about 1.3 million gophers now exist, about 30 percent of their pre-European numbers.

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Every day Diemer puts 90 milers on her car, making her rounds. At one site she has to walk the last half mile, carrying her calipers or shovel, and a backpack full of research gear. She has the get over a swollen stream by climbing across some fallen trees, then walk uphill into the sandhills. She has dug buckets underneath the openings to the gopher holes, camouflaging them. If a tortoise falls in, she marks it, measures it, records its approximate age, sex and other characteristics, and lets it go. On this morning, she had to bail the mud and water out of the buckets. She then drilled holes in the bottom to make sure they wouldn’t fill up again. She didn’t want the gophers to drown.

As she bailed, and hiked to all the burrows in her research plot, Diemer talked about her earlier research. She said the people who eat gophers in the Panhandle complained about swindling numbers, and suddenly her position opened up. “From what I understand,” she said, most people eat chicken and dumplings, and these people (in the Panhandle) eat gopher and dumplings.” Also, pockets of rural people all over the state eat gophers, and a population of Minorcans out of St. Augustine also eat them. Part of her research has been to interview and get to know pullers, learn how they butcher and eat the gopher. And then, she is trying to address what she calls “that wonderfully nebulous question, what does harvesting do to populations.”

“My job is to find out what is biologically necessary for the species, not what is emotionally necessary,” Diemer said. She has three research plots -- one in Suwannee County, one in the Lochloosa Wildlife Management area and the main one in western Putnam County on private property. “I want to get the biological data that’s necessary to make the decisions for Florida.”

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The gopher tortoise was first protected in 1972 in Florida, and the law now limits a daily bag to five per person, and has a closed season April 1 through June 30.* Franz believes the gopher should be protected from all harvesting -- as the game commission calls it. During the Great Depression, the gopher tortoise helped many Florida families survive those years, but now, he and Diemer point out, a pound of hamburger is cheaper and easier to get. Gopher pulling now is more of a tradition than a necessity. "I think if tradition gets in the way of protecting an animal from extinction, the tradition has to give way," he said. Although selling of gopher is illegal, pickup trucks full of gophers are still occasionally seen, and the meat is now being sold as a delicacy in Miami, Franz said.

And Diemer pointed out that current rules probably aren't much good anyway. "Most of them are not taken seriously by pullers, if they even are aware of them." She said very few of the pullers she talked with were aware of the closed season on gophers. And the pullers don't see themselves as the problem. "The pullers blame the forestry people, and everybody blames the developers," she said.

Franz criticized the Game and Fish Commission for not protecting the gopher more. "Florida's regulations are such that they really don't afford the animal any protection," he said, noting that most of the other states have surpassed Florida in regulations. One factor in the gopher's favor, Diemer said, is that land managed for quail and deer generally is favorable to the gopher tortoise. Another factor favoring the gopher is the formation of the Gainesville-based Gopher Tortoise Council in 1978 to work for wiser management and perpetuation of the tortoise.

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One rural resident was astonished to find out that Joan Diemer was studying the gopher tortoise. "They're paying you to work on them ol' gophers?" he asked. And Diemer says, "I've heard people say, 'You ain't got much to do if all you got to do is work on them gophers.'" But Diemer knows she's got lots to do. In fact, there is a sense of urgency about it. If Franz is anywhere near right about the drastic decline of gophers, they are going to need protection soon. But the state is waiting for Diemer's study so it can have some facts to move on.

And yet, Diemer warns against haste. The studies, like gophers, move slowly. The tortoise has a lifespan of 40 to 60 years, and takes more than a decade to reach sexual maturity. "What you have to realize," she said, "is that things happen very slowly with the gopher

*1982 law; now closed season January THRU June 30 -- see item page 1 this issue.

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A favorite food of the gopher tortoises that call our ten acres home is corn on the cob. In summer I make friends with the local vendors who set up their stands or operate from the back of their pickup trucks on corners, selling produce in season. This enables me to get some good buys on fruits and vegetables too old or spoiled for sale, but which the tortoises relish. A gopher with its face covered with red tomato mush, slurping away happily, is a sight to see. The same goes for peaches, apples, melons or squashes. But corn on the cob is the big winner. Tortoises will eat husks and even the cobs when they are tender enough.

E.B.N.

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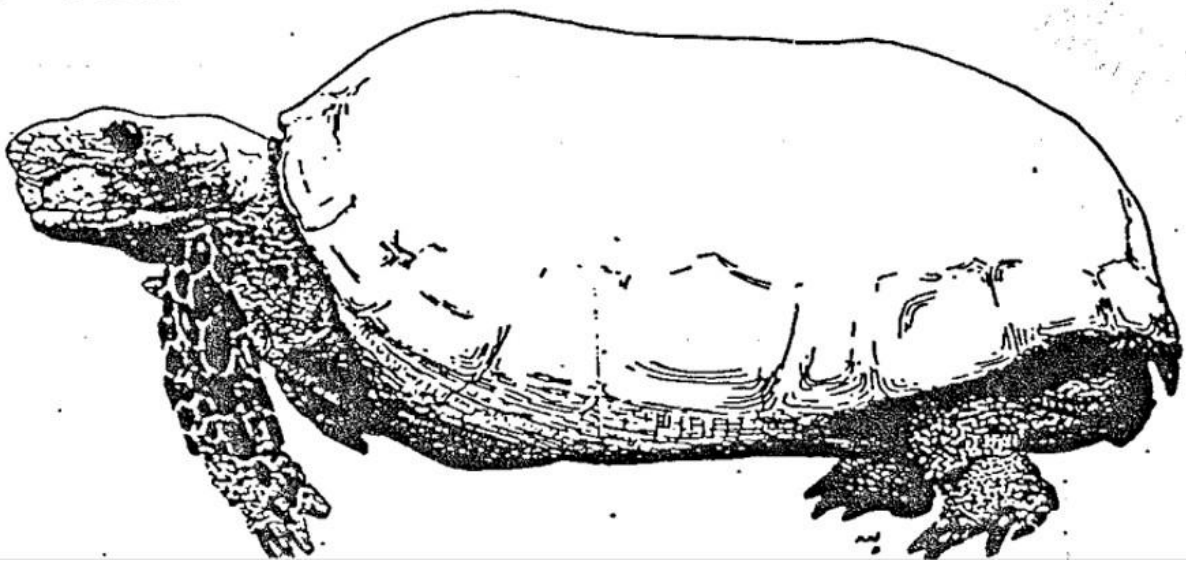


Image: Original artwork for the newsletter of the Gopher Tortoise Council.

This document was created and transcribed by Bradley O'Hanlon
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