



Virginia Herpetological Society

NEWSLETTER

Vol. III, No. 1

2206 S. Main St., Suite C, Blacksburg, VA 24060

Jan. 1993

Society Column

The BLUE RIDGE HERP. SOCIETY has been a busy group since we last reported. They participated in numerous exhibits and educational programs throughout the Summer and Fall. Their "Dedicated to Education" theme has even extended to a new BRHS T-shirt design.

As a regional Society, the BRHS has been answering the call for their exhibits and educational programs in Roanoke, Appomattox, Lynchburg, Temperence, and Martinsville. Working with such groups as the Blue Ridge Zoological Society's Mill Mountain Zoo for a "Reptile Day" to the VHS for its Fall Meeting at the VA Natural History Museum to sponsor the exhibits and educational programs for the public. Large festivals with thousands in attendance to small elementary school fairs have been the backdrops for the special programs offered by the BRHS in 1992.

Pres. Brian Drewry has made the focus of his term to be that of Education and growth for the Society. In both areas, he and those active as officers and committee chairs have succeeded.

Virginia Herpetological Society

Joseph C. Mitchell-Pres.
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Newsletter Editor
Paul W. Sattler, *Catesbeiana*
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R. Terry Spohn, *Catesbeiana*
Co-Editor

The BRHS closed out 1992 with their annual Holiday meeting in December. This is their "let's just have fun!" pizza buffet meeting. A brief business meeting took place to discuss the need to nominate people for the upcoming elections and then changed to a time for eating and fellowship. Two raffles were held to benefit the Educational/Grant/Fund. The first was of herp-related items donated by members and local pet shops. Items ranging from books to novelty were raffled. The second was a "Blind Raffle", which was for non-herp related items that were all wrapped. No one knew what they were bidding on as they placed their tickets down. Gifts ranging from a socket wrench set to some field glasses were donated and won. The combined raffles raised \$56.00 for the Society.

As mentioned, a new BRHS T-shirt was produced in 1992. This shirt has a pocket size BRHS logo on the front and the "Dedicated to Education" logo on the back. The T-shirt is gray and is printed in three colors. Shirts sell for \$10.00 to members and \$12.00 to non-members (Add \$1.00 for XXL size). All profits benefit the Educational/Grant Fund account.

For more information on the BRHS write: BRHS, P.O. Box 727, Brookneal, VA 24528. ✉

✉ Editor's ✉ Note

My interest in herps probably started with the first snake

I can remember seeing in my neighborhood as a kid. It didn't take long before a crowd had assembled around the creature and someone was telling everyone how dangerous and nasty snakes were. This proceeded the ritual sacrifice of this animal in the name of pest species reduction.

It wasn't until I was well into my adult years that I found my fascination with herps took over. For the past seven to eight years, I have practically lived and breathed herps. First, in the retail pet arena and now, leaning more toward educating those crowds that like to gather around a snake (or other herp).

As I am now trying to structure my hobby business as a herpetoculturist and my lecture/presentation and writing projects, I find my time very valuable. Research for and the composition of my magazine articles takes time. Working with my livestock to meet their needs takes time. Planning, packing, traveling and presenting my lectures all take time. The work I do on behalf of the various Herp. Societies takes time.

My clock only shows 24 hours for each day. My calendar has more scribbled in dates than blank spaces. I have had to make a decision to resign as the editor of the VHS Newsletter to afford more time for my other of duties.

Members attending the Fall VHS meeting were informed of my resignation. There was some discussion of the merits for continuing to publish two issues of

this Newsletter and a new Editor has been appointed by Pres. Joseph Mitchell. Sue Bruenderman, the Aquatic Nongame Biologist with the Department of Game and Inland Fisheries will become active editor after this issue.

The response I received from the VHS membership left a bit to be desired. I had to scramble to put together information for each issue. I learned to beg, borrow and plead for articles or other items to get this publication out. Believe me folks, putting together a newsletter is not as easy as it might seem. I hope that the membership will be more cooperative with Sue as she takes over this job.

Please submit your articles or any other printable materials for future issues to: Sue Bruenderman, 2206 S. Main St., Suite C, Blacksburg, VA 24060.

My thanks to all that did assist me with the VHS Newsletter over the past two years. I couldn't have done it without you! Best of luck to Sue for years to come. Happy 1993 and of course . . . Happy Herping! 🐸



Captive Corner

by Bruce W. Grant
HUMIDITY HINTS

Humidity is an important factor in reptile husbandry. Many times the animal needs a different humidity level than that provided in the keeper's home. Proper humidity helps keep the animal's skin, (scales), in good health, aids in shedding and triggers reproductive behavior in some species. A good herpetologist will monitor and attempt to maintain the animal's preferred humidity range. This range may vary during the year.

The first step is to identify the animals' preferred humidity range. This can be obtained from books at the local library. If this fails, many libraries' travel guides contain information on the humidity of the country where the animal originates. Again, humidity may vary by season and it is important to mimic this. If several herps from different areas are being kept together, a compromise must be made by selecting a humidity level which best suits the animals.

The next step is to measure the humidity in the animals terrarium or room. Inexpensive combination temperature/humidity gauges are available at hardware stores. I paid \$10.00. Measure the humidity level under normal conditions several times a day and night. Many heating and air conditioning systems affect humidity, so be sure to check the gauges regularly.

In cases where the humidity is too low for the animal, there are many possible solutions:

- * "Misting" the terrarium with warm water using a plant mister.

- * Covering the terrarium top with plastic or tin foil to hold in the moisture while leaving air holes for ventilation.

- * Placing an incandescent reflector spot light beam directly over a large water dish, (insuring no animal gets to the hot bulb).

- * Placing a clean wet sponge in the terrarium in a shallow water dish.

- * Filling a large "pickle" jar or similar container with water, inserting an aquarium heater, covering the jars mouth with wire to prevent drownings and placing the plugged-in contraption securely in the terrarium.

- * Use of a miniature pond and splashing waterfall using a garden-pond pump or aquarium powerhead to move water from the pond back up to the waterfall.

- * Humidifiers and vaporizers for large areas. Vaporizers that emit hot steam should be placed so that animals can avoid injuring themselves.

Misting is probably the

easiest method, but may require multiple daily mistings. Some lizards lick moisture off leaves, etc., so misting also helps here. I've used a vaporizer and misting with Green iguanas and Soloman Island skinks with excellent success.

Successful reptile husbandry involves trying to simulate the animals natural environment. Humidity is an area that is often overlooked, sometimes with tragic results. The proper humidity will help your herps stay healthy and strong. 🐸

Spring in the Swampland

by Roger de Rageot

In the last days of February the sleigh bell notes of spring peepers scattered through the swampland. At first these notes were intermittent and timid, but as more peepers came out of their long winter sleep, the notes gradually increased in number and intensity until they reached the peak of a voluminous and rhythmic tempo.

The wages of spring advanced steadily and the spotted salamanders began to lay their eggs in masses of jelly which they attached to submerged leaves and sticks. The males had come to the pond before the females and deposited hundreds of sperm in little sacs which the females took into the cloacal chamber where the sperm fertilized the eggs. From the eggs in two or three weeks would emerge the half-inch-long greenish gill-breathing larvae, which in summer will transform into the black-and-yellow spotted adult that will leave their pond and take to land.

At night chorus frogs, little one-inch-long fellows, chocolate brown with three parallel black lines on their back, had left their burrows in thousands as soon as the ice had thawed from the pond, and their shrill calls raised an infernal din.

On the fifteenth of March long interminable rains fell that

lasted until April, and the swamp's water level rose several feet; the fine droplets, the last of the rains of March, fell gently and rhythmically upon the great swamp, ricocheting off the leaves that shot from their buds and grew rapidly.

But the forest was not becoming green as was expected, instead there was a mixture of soft yellow and light green which began to cover the trees and reflected into the somber-colored water. As a result, the great swamp was taking on a color that was strangely yellow, finely mottled with green. Early one afternoon the rain stopped, the clouds dissipated, the sun shone radiant and pleasantly warm, and gave to the scenery the aspect of a fantastic and abstract painting. April painted the land.

The redwings and blackbirds did not band anymore, as they had done throughout winter, coming in thundering clouds of fluttering wings to their favorite roosting posts. They paired and dispersed, losing their conspicuousness from other creatures of the forest. Winter had gently turned into Spring.

As the frogs and toads left their hibernating spots and invaded the ponds to breed, the Dismal Swamp resounded with a chorus that was made by a multitude of varied voices. At night this chorus intensified to deafening proportions; to it was then added the eight hooting notes of the barred owl. The frogs and toads, so inconspicuous during most of the year, turned into mass excitement: they were everywhere.

The male cricket frog's chirps went relentlessly on night and day while the females deposited their eggs, which were laid single and attached to the stems of aquatic plants.

One night a large red moon lingered above the trees and the sweet musical thrill of the male American toad, came suddenly out of the breathing darkness. Its soft tremulousness echoed and reechoed along the edges of the still water.

During the time the eggs of the frogs hatched and swarms of black tadpoles popped from the eggs. In no time, the waters were filled

with them and they began their amazing metamorphosis.

The long watchspring intestine of the algae-eating tadpoles shortened, transforming into the short intestine of carnivorous adult forms. Meanwhile the hind legs appeared, then the front ones. Their tiny mouth expanded into a cavernous gap that extended from ear to ear and the tail was absorbed. Their fishlike existence was over. The gill had disappeared and the newly transformed frogs were equipped with lungs. An important change in respiration had taken place, and the newly transformed frogs went on a foraging excursion ashore, some of them with a nubbin of a tail still trailing behind.

The musk turtle, and mud turtle, foragers of the muddy bottoms, had taken their toll of young tadpoles. A group of white egrets, migrated from the salt marsh and feasted for several weeks. The egret stood white and very still, the dark, stagnant water reflected their white shadows, and suddenly with a swift serpentine movement of their long neck, dropped down their beak and came up with the wiggling form of a tadpole. Despite the great number of enemies which they had to face, the numbers of tadpoles did not seem to diminish, and the swarms of tiny frogs continued to invade the woodland.

The leaves on trees widened and took on darker green. The wild irises, which had erected their green bayonets, cast forth their delicate blue flowers. May came, bringing longer twilight and the blooming of the coral honeysuckle. The frogs hastened to breed and to complete their life cycles. The female Fowler's toad responded to the weird drone of their mates and hastily laid their eggs in tangled tubes of jelly.

Most frogs bred and transformed speedily, as their breeding spots were usually a temporary pond which would vanish with approaching dry weather. The transformation of tadpoles into adults was a race with time, and many of them would lose in this race.

The tadpoles of the green frogs took a year for their

transformation into adults, and those of the large bullfrogs two years, these two species could only breed in the larger permanent bodies of water.

What are these frogs, these strange creatures, that fill the darkness with their weird sounds, that burst into loud voices at the approach of spring? These creatures are tailless amphibians, which at once raises a question. What is an amphibian? An amphibian is a cold-blooded vertebrate, which possesses lungs but breathes partly through the moist skin, and therefore must always keep its skin moist, and to do so must remain in places of high humidity. Amphibians are also, with the exception of a few species which have developed devices which permit them to complete their life cycle entirely on land, animals which must invariably return to water to deposit their eggs, because the egg of the amphibian is not sufficiently well-developed to permit breeding on land.

In the trees were the tree frogs, invisible, since they were green as the leave to which they cling with their suction disks, or gray as the lichen, taking on colors according to the object upon which they happened to be, changing colors very rapidly if they happened to change surroundings. Certain cells of their body below the e p i d e r m i s , k n o w n a s chromatophores, are of two types, and which by receiving stimuli through their eyes, can expand and contract, are responsible for these changes in color. The tree frogs which probably are eight in number of species, counting the peeper, left their trees and bushes and came in the dark water to breed, to return later to their former habitat to continue their loud clamor and remain invisible for the rest of the year.

The chorus frogs are burrowers which spend a subterranean existence under logs and the matted debris of forest floors where they feed on worms and small insects. Once chorus frogs were tree frogs, but they have lost their climbing habits and their toe pads have become degenerated. What

caused them to lose their climbing habits and become burrowers is not known. Why they should first become specialized for an existence in trees, later to become burrowers, is a riddle hidden in the mysteries of evolution.

At one time, all frogs lived in the water, then they specialized in several directions. Some became tree frogs, some burrowers, other took to land and developed a skin more-or-less resistant to dryness and became toads. Chorus frogs underwent a secondary evolution: from pond frogs they became tree frogs, then burrowers. The green frog, the bullfrog and leopard frog remained in ponds.

An oddity among the frogs is a little amphibian with a short and rotund body known as the narrow-mouthed toad. The narrow-mouthed toad only leaves its underground hole after heavy rains to start its calls and in this respect, deserves the name of rain frog. This astounding creature's principal food is ants. Its skin possesses glands that secrete a substance which is extremely poisonous, and not infrequently it makes its abode within an ant's nest.

I shall never forget my first encounter with this peculiar little amphibian. One day there had been a big storm which was followed by heavy rain. As dusk the rain slackened, then stopped. Strange voices rose from the grass of a flooded pasture that bordered the Dismal Swamp. The voices could have been described as a sort of soft bleat. Despite their softness, the voices carried an amazing distance in the evening stillness. Since I had never heard these voices before, I got my flashlight and went in search of their progenitors. I entered a flooded pasture, and as soon as I came within a few feet of the first voice it stopped. I tried the next one and it also stopped when I got within a few feet of it; tried a third and a fourth with the same results. I continued my search, thinking that whatever animal made the sounds would soon get used to my presence. Presently those same voices which had stilled at my approach, commenced again. Then I was

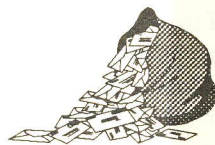
suddenly aware that from every tuft of grass around me came a voice, but still I found nothing.

The hours of the night accumulated and passed away. Once in a while a splash in the water could be heard, followed by a scream, as a water snake captured a leopard frog. I looked at my watch, two o'clock, and the mysterious call kept on through the blinding darkness.

Then at three in the morning, under the luminescent ring that my flashlight made, stood partly hidden by the grass and hardly visible, a narrow-mouthed toad. It kept calling as I held my flashlight on it, and other narrow-mouthed toads answered with their soft bleats. After that I located a few more narrow-mouthed toads, but they were hard to find because they always stayed under cover of grass, were shy, and would dive into the water at the slightest alert. It was almost impossible to tell exactly from where they called because their voice had a ventriloquical quality.

Soon a new day came. At last I had found the answer to the puzzle of the mysterious voices of the night. At the great stagnant pond where the water lilies expanded in leather green pads, and the misty vapors of morning dew hung over the cat-tails, the incessant cackling of the leopard frogs had subsided. Bango-like notes of the green frogs began, with the thrill of the swamp sparrow in the background. 🐸

Address Changes



Please make a note of these new addresses:

Ron Southwick, 408 Franklin Dr., Blacksburg, VA 24060. VHS mailing address for all dues and correspondences.

Sue Bruenderman, 2206 S. Main St., Suite C, Blacksburg, VA 24060. New VHS Newsletter address.

ESA Endangered ?

The Endangered Species Act (ESA) enacted in 1973 is approaching its 20th Anniversary...and possible its final days.

The ESA has been the major tool our Nation has used for the protection of our global environment and all that live within it. It does not simply keep the loggers out of ancient forests and protect a small population of owls. It provides specific guidelines by which the impact of economical interests are weighed against the ecological good for all plants and animals.

The ESA is now under attack by the business and development interests that are looking at the short-term financial benefits they will receive. These interests are not concerned with the long-term interests of our children and grandchildren. They want to see Congress repeal the ESA and give them greater access to our National Heritage! Our ancient forests, wetlands, grasslands in our National Parks and the creatures that depend on these habitats are the pawns.

Each of us as herpetologists and conservationists must weigh the benefits of the ESA and contact our individual Congress persons to voice our concerns and views. If we remain silent, only the concerns and voices of the timber, mining and farming interests will be heard. They have strong lobbies in the halls of Congress. It's time that we exercise our rights as citizens and let our representatives know how we feel.

Rep. Gerry Studds (D-MA), Chairman of the Subcommittee on Fisheries and Wildlife Conservation and the Environment, introduced H.R. 4045, "The Endangered Species

Act Amendments of 1992", a bill to reauthorize and strengthen the Endangered Species Act (ESA). A total of 107 cosponsors were garnered to support this bill. Being an election year, and this being a "hot" topic, the bill did not pass the last session of Congress. On Sept. 20, 1992 the rules were waived to allow for the continued funding of the ESA until the new Congress begins session.

We urge you to contact your Congress person in early 1993 and ask them to support and strengthen the ESA. A new bill should be introduced in the early days of the 1993 Congress.

We wish to thank the National Wildlife Federation and Suzanne Jones for their information and assistance.

For general information on the ESA or its status, contact Robert Irvin, Counsel, Fisheries and Wildlife Division: (202) 797-6879 or Suzanne Jones, Legislative Representative: (202) 797-6666. ✉

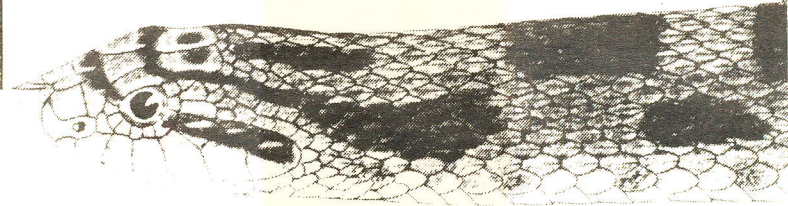
ANNOUNCING A NEW BOOK . . .

An Introduction to Snakes of the Dismal Swamp Region of North Carolina and Virginia by Donald R. Brothers. 1992. Softbound. \$10.00 (plus \$2.50 for postage and handling).

This exciting book is the only field guide necessary for anyone with an interest in or curiosity about snakes of the Dismal Swamp region. It contains factual information about each of the 27 species found in the area, as well as valuable discussions on the general biology of snakes, overcoming the fear of snakes, false popular beliefs, conservation, snakebite, and more.

The book contains 139 pages, 32 color illustrations, 108 halftone illustrations, 39 line drawings, 28 maps, pictorial identification keys, selected bibliography, and index.

Send order and payment to: **Edgewood PROBES, Inc., HC 33, Box 1176, Boise, Idaho 83706.**



"Destruction of the Tropical Rainforest" by Justin Mitchell (age 7)

