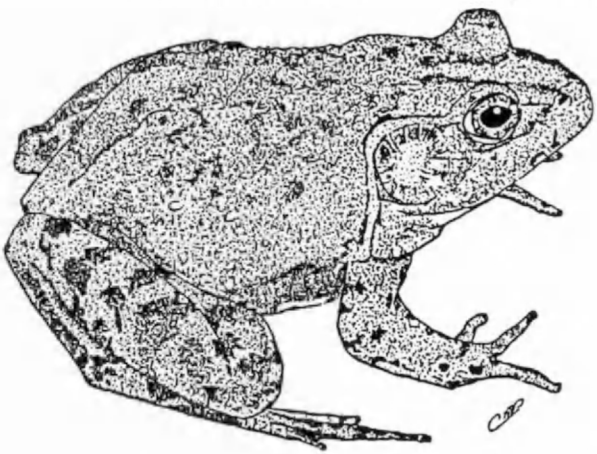
CATESBEIANA



BULLETIN OF THE VIRGINIA HERPETOLOGICAL SOCIETY

ISSN 0892-0761

Volume 11 1991 Number 1

BULLETIN INFORMATION

Catesbeiana is issued twice a year by the Virginia Herpetological Society. Membership is open to all individuals interested in the study of amphibians and reptiles and includes a subscription to *Catesbeiana* and admission to all meetings.

Dues are $5.00 per year and include a subscription to *Catesbeiana* numbers 1 and 2 for that year. Dues are payable to: Ronald Southwick, Secretary-Treasurer, 5608 Parkland Ct., Virginia Beach, VA 23464.

EDITORIAL POLICY

The principle function of *Catesbeiana* is to publish observations and original research about Virginia herpetology. Rarely will articles be reprinted in *Catesbeiana* after they have been published elsewhere. All correspondence relative to suitability of manuscripts or other editorial considerations should be directed to Co-editors, *Catesbeiana*, Department of Biology, Liberty University, Box 20,000, Lynchburg, VA 24506.

Major Papers

Manuscripts being submitted for publication should be typewritten (double spaced) on good quality 8½ by 11 inch paper, with adequate margins. Consult the style of articles in this issue for additional information. Articles will be refereed by at least one officer (past or present) of the Virginia Herpetological Society in addition to the editor. All changes must be approved by the author before publication; therefore manuscripts must be submitted well in advance of the March or September mailing dates.

Reprints of articles are not available to authors; however, authors may reprint articles themselves to meet professional needs.

(Editorial policy continued on inside back cover.)

CATESBEIANA

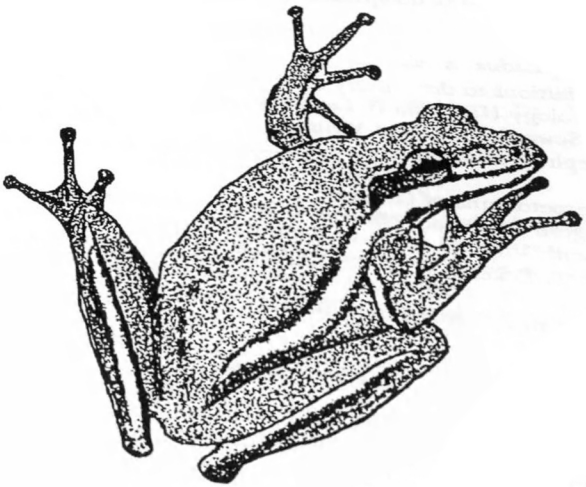
Bulletin of the Virginia Herpetological Society

Volume 11 Spring 1991 No. 1

Contents

MEETING NOTICE

The Spring 1991 VHS meeting will be held on 27-28 April at Chippokes Park in Surry County, VA. See page 30 for details.



Hyla cinerea
Feb. 1979
CAP

Contributions to the History of Virginia Herpetology III: John B. Lewis' "Amphibia of the Seward Forest and Vicinity"

Joseph C. Mitchell
Department of Biology
University of Richmond
Richmond, Virginia 23173

Two of the three unpublished manuscripts on amphibians and reptiles written by John B. Lewis (1868-1957) have appeared in earlier issues of this journal (Mitchell, 1990a, 1990b). Both of these were compilations of information accumulated over several years while Lewis was employed by the Wildlife Research Unit of Virginia Polytechnic Institute (now VPI & SU). After his retirement, Lewis was hired at the age of 72 as the naturalist of the Seward Experimental Forest, owned by the University of Virginia. The largest tract was in Brunswick County between its eastern border and the town of Triplett. Lewis worked there between 1940 and 1946 where he concentrated his efforts on botanical surveys, although he accumulated records on all of the vertebrates.

Three unnamed Lewis manuscripts were mentioned in a report on the Seward Forest to the University of Virginia as being "ready for the printer and only awaited lifting of the wartime ban on the use of paper" (Anonymous, 1971). Perhaps the three manuscripts published as a series in *Catesbeiana* are those to which this line referred. If so, economic and wartime conditions precluded their publication in the 1940s. The Seward Forest amphibian manuscript by John B. Lewis is reproduced in its entirety here. Only misspellings have been corrected and current scientific names have been added in brackets.

"Very little effort has been made at collecting and studying amphibians. Most of the species treated here were picked up while collecting plants. The classification and nomenclature are from Jordan's Manual of the Vertebrate Animals, edition of 1929. Specimens of most of the species treated here have been preserved in alcohol and are now in the Seward Forest collection.

Family Pleurodelidae [Salamandridae] The Newts

Triturus viridescens (Rafinesque) [*Notophthalmus viridescens*]. Newt.

A small lizard-like creature about 3 1/2 inches long, usually found in water, but comes out often in wet

weather to wander about in woods and weedy places.

Family Ambystomatidae The Mole Salamanders

Ambystoma maculatum Shaw. Spotted Salamander

Occasional under rotten logs or damp leaf mold in woods, and in swampy places under decaying vegetation.

Ambystoma texanum (Matthes). No common name.

One specimen collected to date, from the branch below the Seward Forest spring, March 12, 1942.

Family Plethodontidae The Lungless Salamanders.

Plethodon glutinosus (Green). No common name.

One specimen known to date, caught near a small pool in woods near Seward Forest headquarters, June 13, 1940.

Aneides aeneus (Cope & Packard). No common name.

One specimen caught in a mouse trap in mixed woods, on the slope of a steep bluff south side of Rattlesnake Creek a half mile above Wrights Bridge on November 22, 1940. Specimen preserved in formaldehyde.

Family Amphiumidae The Congo Snakes.

Amphiuma means Garden. Congo Snake.

One specimen known to date. It was caught in a 1 1/2 inch iron pipe that is used as a special outlet for a recently made pond near the Seward Forest headquarters. This pipe had been partly covered at the outlet end, and the creature had evidently entered it at the intake end and was too large to pass through the restricted outlet. It was dead when taken out. Its length was 25 inches. It was caught August 8, 1944. It is now in the Seward Forest Collection.

Family Pelobatidae The Burrowing Toads, Spadefoot Toads. [*Scaphiopus holbrookii*]

These rarely seen and most interesting creatures have held one carnival in hearing distance of Seward Forest headquarters in the five years of my residence here.

On June 13, 1941 as very heavy rain fell early in the afternoon. About 4 PM I heard the loud screaming of these toads and following the sounds, soon located them in a shallow rain pool near where the Seward Forest road east from the Saw Mill joins the "Hells Island" public road about one third of a mile east of headquarters. The water was alive with them, most of

them screaming. Three specimens, a female and two males, were collected and preserved in alcohol. No. 13. I had previously witnessed one such event in Amelia County.

The night of July 30, 1937, I had a fine opportunity to observe these interesting toads in a rain pool near my home in central Amelia County. The screaming started just after dark, in a pool about 6 inches deep. With the aid of a strong flashlight I watched the males as they floated on the water. When the impulse to sing seized them they puffed their throats out to such an extent that it floated them above the water so that the white undersurface of the front end of the body was distinctly visible. In my sixty years of observing wild creatures I have had only three experiences with these camp meetings of the spadefoot toads.

Family Bufonidae The Toads.

Bufo americanus Holbrook. Common Toad.

Fairly common and well distributed, though it seems to prefer the farm yard and door yard, especially through the summer, after it leaves the ponds and swamps where it goes to breed.

Bufo fowleri Garman [*Bufo woodhousii fowleri*]. Fowler's Toad.

Probably more numerous than *B. americanus*, and comes out of hibernation a little earlier in the spring. Its song is much shorter than that of *americanus* and gives the impression that its utterance puts the singer under a great strain.

Family Hylidae The Tree Frogs.

Acris gryllus (Le Conte). Cricket Frog.

This tiny frog is fairly common and becomes quite noisy in early spring, when it resorts to swamps and ponds to breed. Dr. Jordan describes its notes as "resembling the rattling of pebbles."

Pseudacris feriarum (Baird). Swamp Tree Frog

One of our most abundant frogs and one of the earliest to begin to sing in spring, usually turning up in the first warm days in February. It is also one of the smallest of our frogs, it and the spring peeper tying for that honor. The total length of the head and body is one inch. Its song is a series of rather slow notes following each other in a rising scale.

Hyla versicolor Le Conte. Tree Toad.

Common in deciduous trees, singing in warm, damp weather by day or night alike. A most interesting species, changing its color to some extent to match its surroundings. Its life is spent in trees except for a few days in spring when it goes to ponds and swamps to breed.

Hyla crucifer Weid. Spring Peeper.

Abundant and very noisy in early spring, when it congregates in swamps and about ponds to breed in large numbers. At such times its chorus of ear-splitting peeps may be heard at a long distance.

Family Ranidae The Frogs.

Rana catesbeiana Shaw. Bullfrog.

Occasional about the larger swamps and ponds. Also sometimes along the larger streams, mostly in woods. On August 25, 1941 I found a partly eaten specimen on the bank of Triplett Pond, with a head and body length of 5 3/4 inches. Its deep bass notes are quite pleasing when heard at some distance.

Rana clamitans Latreille. Green Frog.

A specimen collected at the new pond near Seward Forest headquarters on August 24, 1944. Probably not common.

Rana pipiens Schreber. Leopard Frog.

Common about ponds and stream banks. Quite noisy in early spring.

Rana sphenocephala Cope. Southern Leopard Frog.

On November 3, 1943, a specimen of this frog was caught in a mouse trap set in tall grasses and sedges in the old mill pond bed of what is known locally as the old Clipper Mill, on Rattlesnake Creek about 3 miles southwest of Triplett. No other specimens have been seen."

Discussion

Lewis apparently misidentified two species of salamanders represented by single specimens and one frog which was apparently common. Jordan (1929) describes *Ambystoma texanum* as "blackish, usually plumbeous shades and specks; head small, short, broad; body

slender; skin very smooth and slippery; snout very short, the lower jaw projecting beyond it. Costal grooves 14." I do not think this description would have caused Lewis to mistake what he saw for the mole salamander, *A. talpoideum*, because Jordan (1929) included another description for that species and noted that it has 10 costal grooves. The above description more likely allows interpretation as *A. mabeei*; it has 13 costal grooves (Pague and Mitchell, 1991). It was not included in Jordan (1929) because the original description had been published only the year before (Bishop, 1928) and was probably unknown to Jordan. Mabee's salamander occurs approximately 60 km to the east in Southampton County (Mitchell and Hedges, 1980). Its occurrence in Brunswick County would not be zoogeographically improbable.

It is difficult to determine what Lewis identified as *Aneides aeneus*, the green salamander. Jordan (1929) described it as "black, with large blotches of greenish or coppery; costal grooves 14; toes dilated at tip. Teeth enlarged, confined to front part of mouth; hind part of maxilla knife-edged" and noted that it occurred in the Cumberland Mts. of Virginia and Tennessee. Lewis noted that the salamander was caught on the slope of a steep bluff on the south side of Rattlesnake Creek. This suggests that a north-facing slope may have provided a cool microhabitat on a cliff face, appropriate conditions for green salamanders. However, the presence of a population of *Aneides* at this site on the eastern margin of the Virginia Piedmont seems improbable, given the known distribution of this species (Conant, 1975; Tobey, 1985; Mitchell and Pague, unpublished). Could an isolated population have existed several hundred kilometers east of its known range? Or what did Lewis really see?

Lewis may have been confused on the identification of pickerel (*Rana palustris*) and southern leopard frogs (*Rana utricularia* = *R. sphenocephala*). The northern leopard frog (*Rana pipiens*) is not known to occur in Virginia (Conant, 1975; Mitchell and Pague, in preparation). Jordan (1929) described *Rana pipiens* as "Green, usually bright, with irregular black blotches edged with whitish, these mostly in 2 irregular rows on back; usually 2 spots between the eyes; legs barred above; belly pale; head rather elongate." This description could have been interpreted wrongly, especially since the dorsal patterns of pickerel frogs and southern leopard frogs are quite variable. It may be that he only saw southern leopard frogs. In any case, *Rana pipiens* should not be listed as part of the Seward Forest frog fauna, although *Rana palustris* should be included.

Lewis noted that Fowler's toads emerged from hibernation earlier than American toads. This observation is reversed as the American toad is the first to be encountered in the early spring (Mitchell, 1986).

Jordan (1929) did not list the northern cricket frog, *Acris crepitans*, because at that time *A. gryllus* included what we now know as two species. Both should have occurred in the Seward Forest.

Lewis' observations of three species (*Ambystoma maculatum*, *Notophthalmus viridescens*, *Pseudacris feriarum*) constitute new literature records for Brunswick County (Tobey, 1985; Mitchell and Pague, unpublished). The gray treefrogs (formerly all listed as *Hyla versicolor*) heard in the trees was most likely Cope's gray treefrog (*Hyla chrysoscelis*). The eastern gray treefrog (*H. versicolor*) is known from Brunswick County only along the western margin, whereas records exist for Cope's gray treefrog in the Seward Forest area (Mitchell and Pague, unpublished). The slimy salamander Lewis caught was probably the redescribed Atlantic coastal slimy salamander, *Plethodon chlorobryonis* (Highton et al., 1989).

In several places in the manuscript, Lewis noted that he placed preserved specimens in the Seward Forest collection. That collection was salvaged around 1970 by Robert D. Ross, who maintained fish, amphibian, and reptile collections at Virginia Polytechnic Institute and State University (VPI&SU). Unfortunately, many of the specimens that Lewis preserved had dried up and were discarded. The VPI&SU fish and herpetology collections were later (1985) donated to the American Museum of Natural History (AMNH). Unfortunately, none of Lewis' specimens have survived, as the AMNH amphibian catalogue contains no entries from the original Seward Forest collection for the years 1940-1946.

The Seward Experimental Forest was sold to timber companies in 1975 and all of the old growth forest remaining on the original 3571 acres has been logged (James R. Batman, personal communication, August 1989). The herpetology of the area was surveyed in more detail by W. Leslie Burger in the late 1950s and early 1960s. Unfortunately his manuscript on the amphibians and reptiles of the Seward Forest area, containing a more accurate list of these animals, cannot be located. We are left wondering how much Lewis contributed to the herpetology of the area and how the biodiversity of the Seward Forest may have been changed by the alteration of the forest.

Acknowledgments

I am grateful to Christina Bolgiano for introducing me to the University of Virginia Archives where Lewis' manuscripts are housed (Seward Forest Archives, #10,026). Permission to reproduce this manuscript was given by the Curator of Manuscripts/University Archivist of the Alderman Library. Kurt A. Buhlmann criticized the original manuscript.

Literature Cited

Anonymous. 1971. The Seward Forest. Unpublished report submitted to the President of the University of Virginia by the Arboretum Committee. 24 pages + VII appendices.

Bishop, S.C. 1928. Notes on some amphibians and reptiles from the southeastern states, with a description of a new salamander from North Carolina. J. Elisha Mitchell Sci. Soc. 43:153-170.

Conant, R. 1975. A Field Guide to Reptiles and Amphibians of Eastern and Central North America. Houghton Mifflin Co., Boston, MA. 429 pp.

Highton, R., G.C. Maha, and L.R. Maxson. 1989. Biochemical evolution in the slimy salamanders of the *Plethodon glutinosus* complex in eastern United States. Illinois Biol. Monogr. 57:1-153.

Jordan, D.S. 1929. A Manual of the Vertebrates of the Northern United States Inclusive of the Marine Species. 13th edition, Yonkers on the Hudson, World Book Co., New York.

Mitchell, J.C. 1986. Life history patterns in a central Virginia frog community. Virginia J. Sci. 37:262-271.

___. 1990a. Contributions to the history of Virginia herpetology I: John B. Lewis' "List of amphibians observed in Amelia, Brunswick, and Norfolk Counties." Catesbeiana 10:3-9.

___. 1990b. Contributions to the history of Virginia herpetology II: John B. Lewis' "List of reptiles observed in Amelia, Brunswick, and Norfolk Counties." Catesbeiana 10:36-42.

___. and S.B. Hedges. 1980. *Ambystoma mabeei* Bishop (Caudata: Ambystomatidae): An addition to the salamander fauna of Virginia. Brimleyana 3:119-121.

Pague, C.A. and J.C. Mitchell. 1991. *Ambystoma mabeei* Bishop, Mabee's salamander. In K. Terwilliger (Coordinator), Virginia's Endangered Species. McDonald and Woodward Publ. Co., Blacksburg, VA. (in press)

Tobey, J.F. 1985. Virginia's Amphibians and Reptiles, A Distributional Survey. Privately Printed, VA Herpetol. Soc., Purcellville, VA. 114 pp.

The Herpetofauna of George Washington Birthplace National Monument, Virginia

Ralph P. Eckerlin
Natural Sciences Division
Northern Virginia Community College
Annandale, Virginia 22003

ABSTRACT: A survey of the amphibians and reptiles of the George Washington Birthplace National Monument, Westmoreland County, Virginia was conducted from March 1986-April 1989. Twelve amphibian and 18 reptile species were observed. New locality records for Westmoreland County include: *Ambystoma opacum, Hyla crucifer, Hyla cinerea, Hyla chrysoscelis, Rana catesbeiana, Rana utricularia, Kinosternon subrubrum, Chrysemys picta, Pseudemys rubriventris, Scincella lateralis, Eumeces inexpectatus, Nerodia sipedon, Thamnophis sauritus, Opheodrys aestivus,* and *Lampropeltis getula.*

The George Washington Birthplace National Monument (GWBNM) property includes about 218 hectares on the Potomac River in Westmoreland County, Virginia, about 130 km southeast of the Capital Beltway. The property is in the Coastal Plain physiographic province and is very flat. In addition to the historic site and interpretive buildings, which are surrounded by lawns and shrub plantings, there are a number of different habitat types on the property. These include about 80 hectares of loblolly pine woodlands of mixed ages, meadows, about 60 hectares of farmland used for hay, about 20 hectares of freshwater marsh mostly adjacent to Popes Creek, two freshwater ponds, and a riverfront beach on the Potomac River which is tidal and slightly brackish.

My purpose in this report is to list the amphibians and reptiles observed at GWBNM and to note the new locality records for Westmoreland County. These data are compared to those from a study at Caledon State Park in adjacent King George County (Hill and Pierson, 1986).

Materials and Methods

Amphibians and reptiles were sampled primarily by intensive ground searches by daylight. Logs, stumps, brush piles, and debris were overturned and a search made for resting herptiles. Searches after dark were conducted by driving along roadways. During the spring breeding

period vernal ponds were sampled with dipnets to collect eggs, tadpoles, and adult amphibians. Some species were only observed by voice while calling at night. The use of turtle traps was attempted initially but did not prove to be productive. Many herptiles were observed in chance encounters while checking mammal traps or mist nets.

Most specimens were captured, identified, and released. A few species were photographed and released. Some salamander larvae were taken back to the laboratory to be keyed, and were fixed in formalin and preserved in alcohol. Salamander larvae and some reptiles found dead are in the collections of George Mason University. Identifications were based on field characters as given in Conant (1975).

Sampling began in March 1986 and continued at irregular intervals through April 1989. Observations were made during 11 months of the year; no sampling was done in December. During this period, sampling was conducted for a total of 24 days with one to as many as 13 observers. Approximately 480 man hours were spent in the field.

Results

A list of all reptiles and amphibians encountered at GWBNM by month of collection is presented in Table 1. Thirty species of amphibians and reptiles were observed. A complete list of reptiles and amphibians observed and expected at the GWBNM is given in Table 2. New locality records for Westmoreland County were established for 16 species (Table 1).

Discussion

The most commonly encountered amphibians were the bullfrog, green frog, and southern leopard frog, each of which was observed virtually every month from March through October. Salamanders were rarely encountered. Among 12 species expected only 3 (25%) were collected. By contrast, of 14 frogs and toads expected 9 (64%) were observed. In all, 12 amphibian species were verified.

The most commonly observed reptiles were the common snapping turtle, eastern box turtle, red-bellied turtle, eastern painted turtle, and the black rat snake, all of which were observed during 4 or more months. Most of the other species were seen only sporadically. Six of 10 turtle species expected (60%) were observed. Five of 6 lizard species expected (82%) were observed. Snakes were the least successfully

collected; 7 of 20 species expected (35%) were observed. Many snakes are fossorial, others are nocturnally active, and most require optimum temperature and humidity conditions to come to the surface and become active. For these reasons an adequate snake survey is difficult to perform. In all, 18 species of reptiles were encountered.

In the study done at Caledon State Park, also along the Potomac River, in adjacent King George County, Virginia, Hill and Pierson (1986) observed 20 species of amphibians and 18 species of reptiles. The Caledon study involved more days of observation ("more than 80") than the 24 in the present study. The Caledon site was larger (about 1000 hectares) than the GWBNM site (218 hectares). From the description of the Caledon site (Hill and Pierson, 1986) it appears as if the habitat diversity of the two areas is very similar.

Five of the reptile species we observed were not observed at Caledon State Park: common snapping turtle, diamondback terrapin, six-lined racerunner, ribbon snake, and eastern kingsnake. On the other hand, all of the amphibians we observed were also observed at Caledon State Park. Perhaps this can be attributed to the cryptic appearance, burrowing habit, and limited optimum temperature range of the reptiles, all of which make it difficult to survey, snakes especially, in a short time.

The diamondback terrapin, *Malaclemys terrapin*, was only observed from a shell. No living terrapins were seen. Although it is possible that tides may have carried the shell to the observation site I believe that this is a good record. The tidal marsh habitat was available and another record of the species exists for Westmoreland County (Tobey, 1985).

No copperheads, *Agkistrodon contortrix*, were seen on the GWBNM site but two were collected as roadkill specimens within 2 km of the property. Anecdotal accounts of copperhead sightings were relayed by two of the Park Service employees.

Among amphibians, streamside salamanders were noticeably absent because no stream with rocks for cover exists on the property. The frog, *Rana sylvatica*, was also conspicuously absent. In fact, no records of the wood frog are known for the Northern Neck (Tobey, 1985; Martof et. al., 1980). Whether this is real or an artifact of inadequate collecting is unknown.

The amphibian and reptile populations on the GWBNM property appeared to be healthy in terms of individual appearance and stable in terms of population size. Diversity was remarkably high, especially in view of the fact that this site has been disturbed by the agricultural

activity of man since the late 1600's. No specific management program is recommended regarding amphibians and reptiles. Additional collecting will undoubtedly add additional species to the list of those known to occur here.

Acknowledgments

I thank Dwight Storke, Jr., John Frye and Dave Shockley, all of the National Park Service, who provided collecting permits, lodging facilities, aerial photographs and encouragement. Walter Bulmer, Harry Painter, and Gerel Vaughan all colleagues at NVCC, spent many hours in the field. Carl Ernst twice visited the study site and contributed observations. The following students at NVCC helped in this survey: Doricella Edgar, Sheila Frye, Kim Haase, Dorilyn Kooy, John McBreen, Gerald Meier, Steve Schwegmann, and Cathy Vaughan.

Literature Cited

Conant, Roger, 1975. A Field Guide to Reptiles and Amphibians of Eastern and Central North America. Houghton-Mifflin, Boston. 429 pp.

Hill, James M. and T.A. Pierson, 1986. The herpetofauna of Caledon State Park, Virginia. *Catesbeiana* 6:11-17.

Martof, B.S., W.M. Palmer, J.R. Bailey, and J.R. Harrison III, 1980. Amphibians and Reptiles of the Carolinas and Virginia. The University of North Carolina Press, Chapel Hill. 264 pp.

Tobey, F.J., 1985. Virginia's Amphibians and Reptiles: A Distributional Survey. Privately Published, Virginia Herpetological Society, Purcellville. 114 pp.

Table 1. List of amphibians and reptiles observed at George Washington Birthplace National Monument, Westmoreland County, Virginia by month of observation.

	M	A	M	J	J	A	S	O	N
Amphibians									
Spotted salamander	X	X							
Marbled salamander*	X							X	
Red-backed salamander	X	X						X	
American toad		X							
Fowler's toad				X					
Northern cricket frog	X	X						X	
Northern spring peeper*	X	X							
Green treefrog*				X				X	
Gray treefrog*			X						
Bullfrog*	X	X	X	X		X	X		
Green frog	X	X	X	X		X	X	X	
Southern leopard frog*		X	X	X		X	X	X	
Reptiles									
Common snapping turtle	X	X	X	X		X	X		
Eastern mud turtle*	X	X	X						
Eastern box turtle*		X	X					X	
Northern diamondback terrapin				X					
Red-bellied turtle*	X	X				X		X	
Eastern painted turtle*	X	X	X	X		X	X	X	X
Northern fence lizard		X							
Ground skink*		X							
Northern 5-lined skink		X	X						
Southeastern 5-lined skink		X							
Six-lined racerunner					X				
Northern water snake*	X	X				X			
Eastern ribbon snake*		X	X						
Eastern garter snake*			X						
Eastern worm snake		X							
Rough Green snake*		X							
Black rat snake		X	X				X	X	
Eastern kingsnake*		X							

*New locality record for Westmoreland Co. (based on Tobey, 1985).

Table 2. List of amphibians and reptiles observed (O) or expected but not found (E) on George Washington Birthplace National Monument, Westmoreland County, Virginia.

Amphibia

Greater Siren	*Siren lacertina*	(E)
Red-spotted Newt	*Notophthalmus viridescens*	(E)
Spotted Salamander	*Ambystoma maculatum*	(O)
Marbled Salamander	*A. opacum*	(O)
Northern Red Salamander	*Pseudotriton ruber*	(E)
Eastern Mud Salamander	*P. montanus*	(E)
Four-toed Salamander	*Hemidactylium scutatum*	(E)
Red-backed Salamander	*Plethodon cinereus*	(O)
Slimy Salamander	*P. glutinosus*	(E)
Northern Dusky Salamander	*Desmognathus fuscus*	(E)
Northern Two-lined Salamander	*Eurycea bislineata*	(E)
Three-lined Salamander	*E. longicauda*	(E)
Eastern Narrow-mouthed Toad	*Gastrophryne carolinensis*	(E)
Eastern Spadefoot Toad	*Scaphiopus holbrookii*	(E)
American Toad	*Bufo americanus*	(O)
Fowler's Toad	*B. woodhousii*	(O)
Northern Cricket Frog	*Acris crepitans*	(O)
Northern Spring Peeper	*Hyla crucifer*	(O)
Green Treefrog	*H. cinerea*	(O)
Cope's Gray Treefrog	*H. chrysoscelis**	(O)
Upland Chorus Frog	*Pseudacris feriarum*	(E)
Bullfrog	*Rana catesbeiana*	(O)
Green Frog	*R. clamitans*	(O)
Wood Frog	*R. sylvatica*	(E)
Southern Leopard Frog	*R. utricularia*	(O)
Pickerel Frog	*R. palustris*	(E)

Reptilia

Atlantic Ridley	*Lepidochelys kempi*	(E)
Atlantic Loggerhead	*Caretta caretta*	(E)
Common Snapping Turtle	*Chelydra serpentina*	(O)
Eastern Mud Turtle	*Kinosternon subrubrum*	(O)
Eastern Musk Turtle	*Sternotherus odoratus*	(E)

Spotted Turtle	*Clemmys guttata*	(E)
Eastern Box Turtle	*Terrapene carolina*	(O)
Northern Diamondback Terrapin	*Malaclemys terrapin*	(O)
Red-bellied Turtle	*Pseudemys rubriventris*	(O)
Eastern Painted Turtle	*Chrysemys picta*	(O)
Northern Fence Lizard	*Sceloporus undulatus*	(O)
Ground Skink	*Scincella lateralis*	(O)
Northern Five-lined Skink	*Eumeces fasciatus*	(O)
Southeastern Five-lined Skink	*E. inexpectatus*	(O)
Broad-headed Skink	*E. laticeps*	(E)
Six-lined Racerunner	*Cnemidophorus sexlineatus*	(O)
Northern Water Snake	*Nerodia sipedon*	(O)
Queen Snake	*Regina septemvittata*	(E)
Northern Brown Snake	*Storeria dekayi*	(E)
Northern Red-bellied Snake	*S. occipitomaculata*	(E)
Eastern Ribbon Snake	*Thamnophis sauritus*	(O)
Eastern Garter Snake	*T. sirtalis*	(O)
Eastern Worm Snake	*Carphophis amoenus*	(O)
Eastern Smooth Earth Snake	*Virginia valeriae*	(E)
Eastern Hognose Snake	*Heterodon platirhinos*	(E)
Northern Black Racer	*Coluber constrictor*	(E)
Northern Ringneck Snake	*Diadophis punctatus*	(E)
Rough Green Snake	*Opheodrys aestivus*	(O)
Rainbow Snake	*Farancia erytrogramma*	(E)
Black Rat Snake	*Elaphe obsoleta*	(O)
Corn Snake	*E. guttata*	(E)
Northern Scarlet Snake	*Cemophora coccinea*	(E)
Eastern Milk Snake	*Lampropeltis triangulum*	(E)
Mole Kingsnake	*L. calligaster*	(E)
Eastern Kingsnake	*L. getula*	(O)
Copperhead	*Agkistrodon contortrix*	(E)

*Positive identification of the gray treefrog was not made. Based on range alone, it is probable that only *H. chrysoscelis* was present.

Announcing Special Pre-publication Prices on an important addition to the Literature on Virginia Wildlife!

Virginia's Endangered Species

Produced in cooperation with
Virginia Department of Game and Inland Fisheries
Virginia Department of Agriculture and Consumer Services
Virginia Department of Conservation and Recreation
Virginia Museum of Natural History

Virginia's Endangered Species identifies and describes the current status of endangered plants and animals in Virginia. This book is an outgrowth of the 1989 Symposium on Virginia's Endangered Species.

Virginia's Endangered Species discusses the status of each species and subspecies considered to be endangered in Virginia. More than 200 color plates make this an exceptionally attractive visual record of threatened wildlife. There is also a substantial chapter on Virginia's amphibians and reptiles.

Approximately xx + 500 pages, 229 color plates, 250 maps, 50 line drawings, 8.5 x 11. Special Pre-publication prices are available if you order before April.

Hardback copies are $59.95 plus $2.50 shipping and $2.70 sales tax for Virginia residents, or $65.15 total.

Paperback copies are $28.95 plus $2.50 shipping and $1.30 sales tax for Virginia residents, or $32.75 total.

Order your copy from:

The McDonald and Woodward
Publishing Company
P.O. Box 10308
Blacksburg, VA 24062-0308

FIELD NOTES

Carphophus amoenus (Worm Snake): VA: Prince George County, 4.8 km S of Petersburg. 12 May 1990. Robert A.S. Wright.

An adult worm snake was found dead on the fairway of the fifth hole at Lee Park Golf Course 1.12 km N of Richard Bland College and 0.25 km E of Co. Rt. 608. It had apparently been run over by a maintenance cart. The preserved specimen was donated to the Lynchburg College teaching collection. Although Joe Mitchell (personal communication) reports several museum records from Prince George Co., Tobey (1985. Virginia's Amphibians and Reptiles: A Distributional Survey, Privately Published, Purcellville, 114 pp.) does not.

Robert A.S. Wright
Central Virginia Biological Research Consortium
5204 Riverside Drive
Richmond, VA 23225

Chelydra serpentina serpentina (Common Snapping Turtle): VA: Sussex Co., Co. Rt. 735, 1.2 km N of Co. Rt. 631, on the north side of Raccoon Creek Bridge. 24 April 1990. Don Schwab.

The specimen was alive on the road. Snapping turtles have not been reported from Sussex Co. (Tobey, 1985. Virginia's Amphibians and Reptiles: A Distributional Survey, Privately Published, Purcellville, VA., 114 pp.). Norman (1989. *Catesbeiana* 9(1):9-14) reports snapping turtles from the Blackwater River, but does not state if those collected were from Sussex or Southampton County. The turtle, with a carapace length of 9.0 cm, will be maintained alive for educational purposes and a photograph deposited with the VHS file.

Don Schwab
Virginia Wildlife Division
P.O. Box 847
Suffolk, VA 23434

Siren lacertina (Greater Siren): VA: City of Virginia Beach: 3.2 km E of Dam Neck Corner, Dam Neck Navy Base. 6 June 1990. Kurt Buhlmann.

Three individuals were captured in a shallow interdunal swale pond, adjacent to the southeast corner of Redwing Lake. These specimens

were preserved and are presently in the Division of Natural Heritage collection. Two more individuals were captured and released in a nearby interdunal marsh on the Base on 2 September 1990. *Siren lacertina* was last collected from this vicinity (Dam Neck Mills, Life Saving Station) on 24 February 1891 by W.C. Carrol (U.S. National Museum of Natural History, USNM 16683).

Kurt A. Buhlmann
Division of Natural Heritage
Virginia Dept. of Conservation and Recreation
203 Governor St., Suite 402
Richmond, VA 23219

Ambystoma mabeei (Mabee's salamander): VA: York Co.: Curtis Road 6.0 km NW of Lee Hall, Yorktown Naval Weapons Station. 5 June 1990. Kurt Buhlmann.

Several metamorphic individuals were captured in a hardwood forest/ephemeral sinkhole pond area along Curtis Road. Specimens were deposited in the Division of Natural Heritage collections. This site represents the western most locality known for this species on the Lower Peninsula.

Kurt A. Buhlmann
Division of Natural Heritage
Virginia Dept. of Conservation and Recreation
203 Governor St., Suite 402
Richmond, VA 23219

PRESIDENT'S CORNER

Times are changing in Virginia. We now have laws that control the number of amphibians and reptiles we can collect for personal study and laws that restrict the sale of native species. These, in addition to the endangered species laws, place restrictions on us and, yes, make us responsible for our actions. The full ramifications of these new laws are yet to be determined. In this column I briefly address the basis for these laws and provide some comments on their impact. I also describe a case history of a recent conviction of a pet store selling a state endangered species.

Current Virginia Department of Game and Inland Fisheries (VDGIF) regulations limit the number of live animals one can take from wild native populations to three per species. This says that you can have three black rat snakes, three eastern fence lizards, and so on. You as an individual or a business such as a pet store cannot sell any species that naturally occurs in Virginia.

Why did this come about? The mandate to this department is to protect and manage all native species of animals, except insects which are under control of the Virginia Department of Agriculture. The biologists and the administration take that charge very seriously. This has not always been the case, however. Before the Nongame Wildlife and Endangered Species Program check-off appeared on state tax forms, there was little active effort to deal with species other than those considered game, e.g., certain birds, mammals, and fish. Most of the money that runs the VDGIF comes from the sale of hunting, fishing, and boating licenses. Little was directed to what is called "nongame." With the growing public concern over endangered species and a change in public opinion about hunting (it's declining) the VDGIF began to feel some pressure to address the needs of the nongame species, hence the check-off.

Involvement with nongame species has grown considerably over the last eight years or so since the check-off started. The first state-level endangered species list was effective on 1 October 1987. VDGIF co-hosted the 1989 endangered species symposium in which numerous species were proposed for listing and they spearheaded the publication of the book that will result from it. A new division within VDGIF actively comments on Environmental Impact Statements and seeks massive input of data to be able to provide requestors with information about the impacts of concerned projects on habitats and species. It's not a case of

the tail wagging the dog yet, but nongame concerns have been playing bigger and bigger roles in the dynamics of the VDGIF.

One of the developments of the new thinking in the VDGIF was to revise the regulations that cover animal species under their jurisdiction. Hence the possession limit of three per species and the ban on the sale of native species.

I have heard a great deal from a number of people representing all sides of these issues. Breeders want to be able to sell their captive-reared stock and they want to be able to have enough parental stock to maintain their programs. People interested in education want to keep more than the three per species. Many herpetologists I know support the limit and regulations. I have not heard from the pet stores but I suspect that many of them are not pleased with the limit on the sale of native species.

Where will this all lead? My reading of the climate among those I know in the VDGIF is that the breeders will not have too much to worry about if they do not sell openly to pet stores or have someone complain about them. A game warden said that they will not go into someone's house and confiscate their snakes. If someone has a legitimate need to have more than three per species, then he or she can apply for a permit. Possession of a permit bears some responsibility, like reporting where you caught what and what you did with the animals you caught. Any responsible amateur or professional herpetologist should be willing to work with the agency that has authority over our herps in order to help reduce the loss of native populations. Game wardens will not come looking for a 6th grader who has caught several tadpoles or frogs, issue him a ticket, and confiscate his animals. The main emphasis is the protection of native populations. Their approach is to stop the sale of these animals, just like they try to stop the illegal sale of deer and bear products.

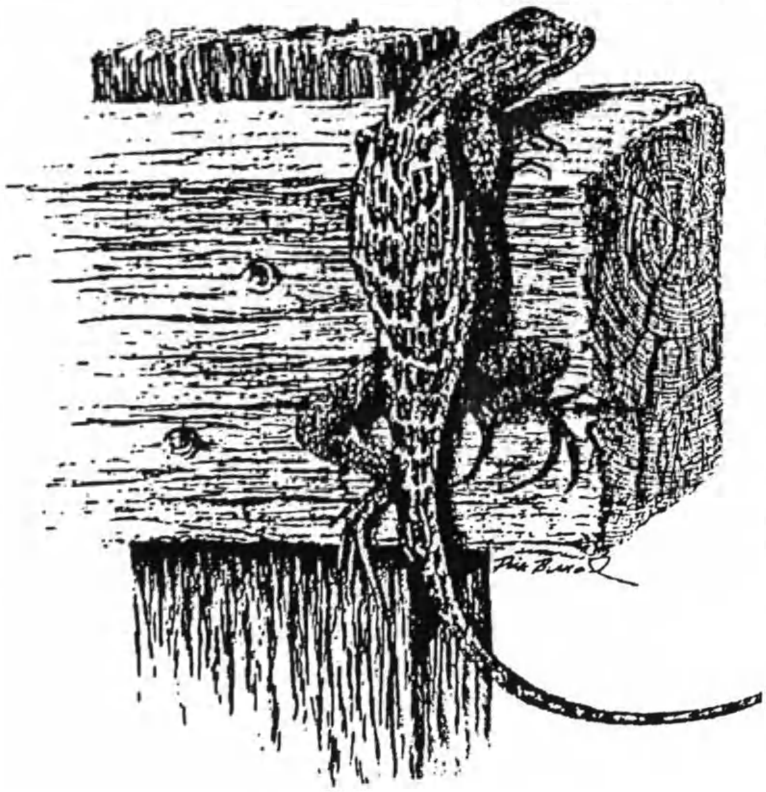
The VHS has had a history of supporting reasonable measures to conserve our native amphibians and reptiles. On the face of it the regulations seem overly strict, but based on all I have heard, the actual intent and enforcement will have little impact on most herpers who keep animals in captivity. The biggest change will be in what species you will see in pet stores. Any species not native to Virginia can still be legally sold.

The attempted sale of certain species will bring out the wrath of state officials. Anyone selling an individual animal representing one of the species on the endangered species list will be prosecuted. A recent case in Charlottesville attests to that fact.

One day in November a recent graduate of the College of William and Mary noticed that a tiger salamander was for sale in a pet store. She pointed this out to the people there and returned the next day to find it again for sale. She bought it and took it to the local game warden. He brought it to the Richmond office whereupon it was decided to prosecute. On 11 January the case was tried. The result was that the pet store was found guilty of violating the state endangered species law. The $1000 fine was dropped with the understanding that the owner would donate $200 to the Nongame fund and not be involved with any illegal activity with animals again. The conviction will not be contested.

This is the first clear case of a conviction of someone selling a Virginia endangered species. And it did not matter from where the actual specimen came. We learned later that the pet shop purchased it from a northern Virginia wholesale distributer. This conviction should send a clear signal that one should not sell any species considered endangered in Virginia, and as it stands now, any species on the Virginia list of native species.

Joseph C. Mitchell
President, VHS
January 30, 1991



NATURAL HERITAGE PROGRAM

The Department of Conservation and Recreation's Division of Natural Heritage (DNH) is responsible for the statewide inventory of rare, threatened, and endangered species. Many of the current inventories include areas with many rare amphibian and reptile species. For example, DNH is conducting county inventories in the City of Virginia Beach, James City County, the City of Williamsburg, York County, Loudoun County, and Northampton County. Members of the Virginia Herpetological Society are encouraged to report the locations of rare species to Chris Pague or Kurt Buhlmann [Division of Natural Heritage, 204 Governor St., Suite 402, Richmond, VA 23219--(804) 786-7951)]. In addition, we encourage VHS members to volunteer for participation in field efforts associated with these and other inventories. Several significant findings of this season's inventories will be detailed in future field notes in *Catesbeiana*.

In its first two years, DNH has established a system of 11 natural area preserves. These preserves were acquired largely in a highly effective partnership with The Nature Conservancy and protect some of the best examples of natural habitat remaining in Virginia. It is no accident that several rare species of amphibians and reptiles are protected in these preserves.

Bethel Beach Natural Area Preserve is a Chesapeake Bay barrier beach system that is a nesting area for the diamond-backed terrapin (*Malaclemys terrapin*). Sapling Ridge Natural Area Preserve in Highland County besides protecting high elevation red spruce forests also contains populations of coal skinks (*Eumeces anthracinus*) and smooth mountain earth snakes (*Virginia valeriae pulchra*). The Northwest River Natural Area Preserve in Chesapeake, Virginia is an important habitat corridor for the rare canebrake rattlesnake (*Crotalus horridus atricaudatus*). Far to the west in Russell County, the Pinnacle Natural Area Preserve provides habitat for the hellbender (*Cryptobranchus alleganiensis*). In addition to the rare species on each preserve, many common species are provided for in the management objectives for each area.

The DNH will be setting priorities for the Commonwealth's protection of natural diversity. We will inform VHS members of the projects we undertake and the progress we make. Your help will be needed and very much appreciated as we seek to protect habitat for all our native amphibians and reptiles and provide other state, federal and private organizations information that will assist in their contributions to that end.

Chris Pague and Kurt Buhlmann

SYMPOSIUM AND VOLUME TO HONOR ROGER CONANT

Symposium:

During the 1991 joint SSAR-HL meeting at Pennsylvania State University (6-10 August), a special two-day symposium, entitled "Captive Management and Conservation of Amphibians and Reptiles" will be held. This will include 45 of the leading international authorities and is being organized by James B. Murphy (Dallas Zoo) and Joseph T. Collins (University of Kansas). The results will be published as a book.

This event will be dedicated to Roger Conant, who will celebrate his 82nd birthday in May. Dr. Conant's *Field Guide*, the most widely-used herpetological book of all time, has been extremely influential in the development of North American herpetology and the third edition will be published next spring.

Appreciation Volume:

As part of the ceremony to honor Dr. Conant, a bound volume of letters from friends and colleagues will be presented to him. Ordinarily, these letters are solicited privately, but since Roger Conant's life's work has influenced so many persons far and wide - both professionals and amateurs alike - we issue this public solicitation so that all can contribute.

I you wish to include a letter in the volume, stating your own appreciation, simply write it on a piece of paper measuring 8½ by 11 inches, leaving a margin for binding. Mail these unfolded and flat to: Dr. Joseph C. Mitchell, Department of Biology, University of Richmond, Richmond, Virginia 23173.

The deadline for receipt of letters is: 1 June 1991.

MINUTES OF FALL 1990 VHS MEETING

Thirty two people attended the Fall meeting at Maymont Park in Richmond, October 20, 1990. Predident Joe Mitchell opened the meeting at 11:20 a.m. The minutes of the Spring meeting were accepted as written. Secretary/Treasurer Ron Southwick presented the Treasurer's report. Balance on hand as of October 19, 1990 was $2122.19. The 1990 VHS membership stood at 131.

Editor's Report

Paul Sattler reported that a total of 150 copies of *Catesbeiana*, Vol. 10, No. 2 were printed and mailed at a total cost of $236.03. He had already received several articles for publication in the Spring 1991 issue. Paul requested more artwork (original or non-copyright) for *Catesbeiana*. Joe appointed Terry Spohn of Liberty University to be Co-editor with Paul.

Doug Eggleston reported that the first issue of the Society's newsletter was sent to all members. The newsletter will be sent out quarterly. Several suggestions for the newsletter included:

- an education column for the younger herp lovers
- exchange with other herp organizations
- send to middle and high schools

Old Business

There was considerable discussion regarding newsletter/journal exchange with other societies, and the status of boxes of back issues of newsletters, etc. that the Society is now holding. Doug Eggleston will examine the old newsletters for material suitable for VHS newsletters, index the remainder, and prepare them for auction at the next meeting. John Keinath will sort through the old VHS bulletins and compile them into complete sets for the auction. One complete set will be held for the VHS archives file. Richard Hoffman will check with Radford University concerning the status of newsletter/journal exchanges. Paul and Doug will check on the possibility of exchanging newsletters and bulletins with bordering state societies.

Joe reported on the status of the VHS poster. A total of $925 has been donated for the project. Chris Pague suggested that we stress a "conservation" message in the poster proposals to help generate donations from corporations. Joe's committee will meet to rewrite the proposal for contributions.

There were no applicants for the VHS Research Grant for 1990.

Joe opened the floor for nomination of officers. A motion by Richard Hoffman to re-elect the current slate was seconded by Terry

Spohn.

New Business

Joe discussed the SSAR symposium to honor Roger Conant's 82th birthday to be held at Penn State University on August 10, 1991. The theme will be the "Captive Management and Conservaiton of Amphibians and Reptiles". Joe asked VHS to donate $100. A vote by the membership approved the donation.

Paul Sattler recommended that the VHS set standards for publishing county records in *Catesbeiana*. Joe and Paul will write a policy statement for donating the necessary voucher specimens to museums. It was recommended that for county records to be published in *Catesbeiana*, a specimen or photograph must be placed in a permanent repository.

Joe proposed that the VHS become active in monitoring amphibian populations in coordination with SSAR. Chris Pague suggested that a planning committee (consisting of representatives of agencies responsible for Virginia herps) determine which sites should be monitored. The committee members selected were Ron Southwick, (VDGIF), Chris Pague (VDCR), and Joe Mitchell (VHS). The committee will draft a proposal outlining the methods to be used and the coordination with the various state agencies involved.

The present slate of VHS officers was unanimously elected to another year of service. They include Joe Mitchell (President), Kurt Buhlmann (Vice-President), and Ron Southwick (Secretary and Treasurer).

Other Business

Dale Brittle discussed the "Herp Educational Handbook" she has been working on. To date she has received only three activities from the membership. She suggested putting "insert" activities in *Catesbeiana* or the newsletter, and continue working toward a "Booklet of Activities".

The business meeting adjourned at 1:05 p.m.

Respectfully submitted,

Ron Southwick,
Secretary and Treasurer

VIRGINIA HERPETOLOGICAL SOCIETY
TREASURER'S REPORT
Fall 1990 Meeting

The balance reported at the 1990 Spring Meeting was $1371.64.

Expenditures since that time were:

08/30/90 ck.#112	Newsletter printing & postage	67.76
10/15/90 ck.#113	*Catesbeiana* printing & postage	236.03
check charge		1.00
Total Expenditures		$304.79
Receipts from dues		$102.00
Donations for VHS poster:	Va. Non-Game Fund	500.00
	SSAR	300.00
	Anon. member	100.00
Bank interest		53.34
Total Receipts		$1055.34
Balance on hand as of 10/19/90		$2122.19

The Society has a current membership of 131 as of 10/19/90.

Respectfully submitted,

Ron Southwick
Secretary and Treasurer

ANNOUNCEMENT
SPRING 1991 MEETING OF THE
VIRGINIA HERPETOLOGICAL SOCIETY

The Virginia Herpetological Society will hold its annual Spring meeting at Chippokes Plantation State Park, Surry County, VA. The dates are 27-28 April 1991.

We have reserved use of the conference shelter at the Park from 12:00 noon - 9:00 p.m. on Saturday, April 27th. Plan on bringing your own lunch; we'll cook up a spaghetti dinner that evening. Wendy Mitchell will be bringing the spaghetti sauce and noodles. Everyone else is urged to contribute towards a salad, bread, dessert, soda, etc. Wendy is willing to coordinate the meal. Call her at (804) 740-7453 if you would like a suggestion of what to bring. If you plan to eat with us, bring something. No contribution - no food. We plan to have an afternoon herp foray on Park property and will provide a list of herps to the Park staff. In the evening we'll have a business meeting and talk herps. Anyone who would like to bring slides to show informally should do so. A projector will be provided. If weather permits, an evening road-cruise or amphibian foray will be planned.

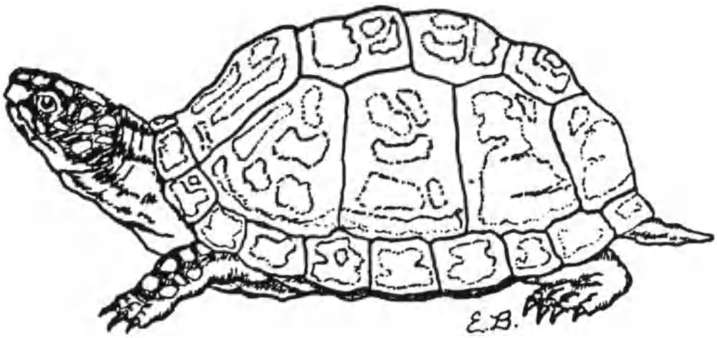
Overnight accommodations are available at the Surry Motel at $32.50/night/per 2 persons. There is a $3.00 charge per extra person. Phone: 804-294-3191.

For those who stay overnight, we can meet for breakfast at the Surry restaurant and then plan a morning and early afternoon foray through the Surry countryside.

Assuming warm weather (and hopefully a rainy night) the potential to see some interesting herps is good. We hope you all can make it.

Directions: Surry County is located halfway between Norfolk and Richmond on the south side of the James River. From the town of Surry, take Rt. 10 east approximately 1.5 miles, turn left on Rt. 634, follow signs to Chippokes Plantation State Park.

NOTE: In order to be fair to everyone, including the herps, no collecting will be allowed. All animals will be returned to points of capture. Bring your camera.


E.B.

MEMBERSHIP APPLICATION

I wish to ____ initiate ____ renew membership in the Virginia Herpetological Society for the year 19____.

__ I wish only to receive a membership list. Enclosed is $1.00 to cover the cost.

Name _____

Address _____

_____ Phone _____

Dues Category: __ Regular ___ Family __ Under 18 __ Life
($5.00) ($7.50) ($3.00) ($150)

Interests: __ Reptiles __ Amphibians __ Captive Husbandry
__ Distribution __ Research
__ Specifically _____

Make checks payable to the Virginia Herpetological Society and send to the treasurer: Ronald Southwick, 5608 Parkland Ct., Virginia Beach, VA 23464.

Field Notes

This section provides a means of publishing natural history information on Virginia's amphibians and reptiles that does not lend itself to full-length articles. Observations on geographic distribution, ecology, reproduction, phenology, behavior, and other areas are welcomed. Reports can be on single species or fauna from selected areas, such as a state park or county. The format of the reports is TITLE (species or area), COUNTY AND LOCATION, DATE OF OBSERVATION, OBSERVERS, DATA AND OBSERVATIONS. Names and addresses of authors should appear one line below the report. Consult published notes or the editor if your information does not readily fit this format.

If the note contains information on geographic distribution, a voucher specimen or color slide should be sent for verification and deposited in a permanent museum or sent to the Virginia Herpetological Society. Species identification for observational records should be verified by a second person.

The correct citation format: Tobey, F.J. 1989. Field notes: *Coluber constrictor constrictor. Catesbeiana* 9(2):35.

Herpetological Artwork

Herpetological artwork is welcomed. If the artwork has been published elsewhere, we will need to obtain copyright before we can use it in an issue. We need drawings and encourage members to send us anything appropriate, especially their own work.