

CATESBEIANA



Rana catesbeiana
Jan 1879
T. C. C.

BULLETIN OF THE VIRGINIA HERPETOLOGICAL SOCIETY

ISSN 0892-0761

Volume 24

2004

Number 1

BULLETIN INFORMATION

Catesbeiana is published 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*, two newsletters, and admission to all meetings. Annual dues for regular membership are \$15.00 (see application form on last page for other membership categories). Payments received after September 1 of any given year will apply to membership for the following calendar year. Dues are payable to: Dr. Paul Sattler, VHS Secretary/Treasurer, Department of Biology, Liberty University, 1971 University Blvd., Lynchburg, VA 24502.

HERPETOLOGICAL ARTWORK

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

EDITORIAL POLICY

The principal 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 the suitability of manuscripts or other editorial matters should be directed to Dr. Steven M. Roble, Editor, *Catesbeiana*, Virginia Department of Conservation and Recreation, Division of Natural Heritage, 217 Governor Street, Richmond, VA 23219.

Major Papers

Manuscripts 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, including the appropriate format for literature citations. The metric system should be used for reporting all types of measurement data. Computer diskettes (Word or WordPerfect format) are desired for longer papers. Submissions concerning the herpetofauna of selected areas, such as a park, city or county, should be prepared in article rather than field note format. Articles will be refereed by the editor and one or more qualified reviewers. All changes must be approved by the author before publication; therefore, manuscripts must be received by the editor before **March 1** and **September 1** to be considered for publication in the spring and fall issue, respectively, of *Catesbeiana*. Reprints of articles are not available, but authors may reprint their own articles to meet professional needs.

(Editorial policy continued on inside back cover)

CATESBEIANA

Bulletin of the Virginia Herpetological Society

Volume 24

Spring 2004

No. 1

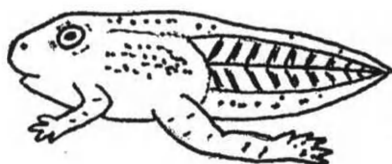
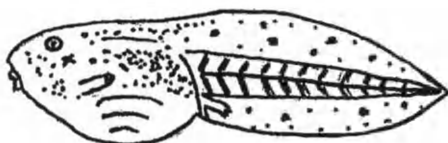
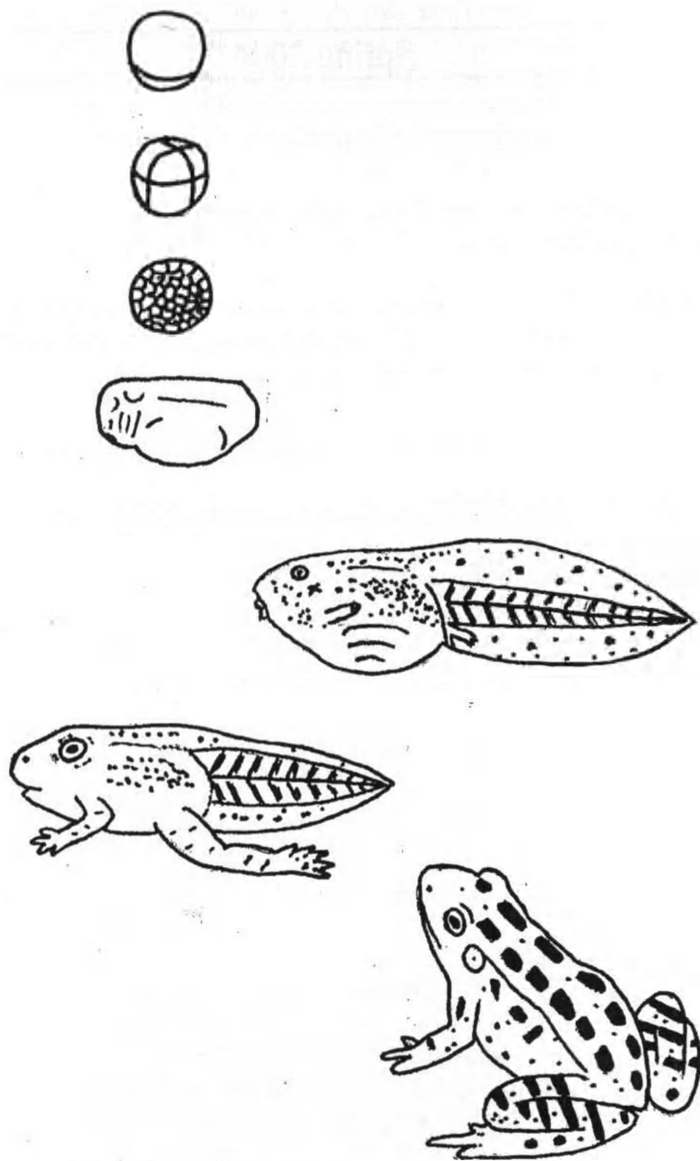
Contents

Survey of Reptiles and Amphibians in Greensville County, Virginia Jason Daniel Gibson and John White.....	3
Is the Red-backed Salamander (<i>Plethodon cinereus</i>) Encroaching upon Populations of the Peaks of Otter Salamander (<i>P. hubrichti</i>)? Garth Aasen and Norman Reichenbach	17
Field Notes	21
Virginia BioBlitz 2004 Notice	27
Obituary: Roger Conant (1909-2003) Joseph C. Mitchell	28
President's Corner.....	35
Treasurer's Report	36
Minutes of the Fall 2003 VHS Meeting.....	37
Spring 2004 Meeting Notice	40

Next Meeting

Staunton River State Park and
Ward Burton Wildlife Foundation property
May 21-23, 2004

See page 40 for details



Life Cycle of Pickerel Frog (*Rana palustris*)
Drawing by Jason Gibson

Survey of Reptiles and Amphibians in Greensville County, Virginia

Jason Daniel Gibson
Division of Arts and Sciences
Danville Community College
Danville, Virginia 24541

John White
2815 Van Buren Street
Arlington, Virginia 22213-1517

Introduction

Greensville County is located to the south of Richmond and the east of South Hill in Southside Virginia along the North Carolina border (Fig. 1). The county contains a total land area of 769 km² (297 mi²) (<0.4% is water) and lies in two physiographic provinces (Coastal Plain in the east and Piedmont in the west). Interstate 95 and U.S. Route 301 bisect the county in a north-south direction and U.S. Route 58 bisects it in an east-west orientation. According to 2000 census data, 11,560 people inhabited this county, making it very rural in comparison to other counties in Virginia. Agriculture and silviculture comprise a large percentage of the occupations and land use in the county. The 2003 VHS spring survey focused on the southeastern portion of the county, which is drained by the Meherrin River and Fontaine Creek (swamp). The Meherrin River is part of the Chowan Basin, which flows to Albemarle Sound. The survey area was entirely within the Coastal Plain portion of the county. The soils in the area are composed of Coastal Plain sediments deposited during higher sea levels of the Pliocene (Frye, 1986). A diversity of habitats are found in this area including upland hardwood forests, pine plantations, streams, vernal pools, road ruts and ditches, man-made ponds, swamps, springs, and riverine floodplain. The geology and hydrology of the county contribute to potentially high biodiversity.

Surveys by Hoffman and Mitchell (1996) have well documented the diversity of the anuran fauna of Greensville County. However, limited previous surveys of the county's salamanders and reptiles have left gaps in our knowledge of these groups. Greensville County was selected as the sampling site for the 2003 VHS spring survey due to the limited surveys



Fig. 1. Location of Greenville County, Virginia.

conducted in this region of the state and because of the high potential for county records and range extensions for many species.

Study Sites (See Fig. 2)

Site 1: End of County Route 666

This site was mostly flooded during the survey period. This property has some logged upland areas but most of the area lies in the Meherrin River floodplain. Due to recent heavy rains, the river was out of its banks. Large permanent swamps and vernal pools can also be found on this land. Many hundreds of hectares of farmland and planted forests are also present.

Site 2: Gibson farm and cabin

Agricultural land, pine plantations, swamps, ponds, a stream, roadside ditches, and riverine floodplain would best characterize this site. Access to much of this site was limited due to flooding. This site is along County Route 730, 4.2 km (2.6 mi) east of its intersection with U.S. Route 301.

Site 3: International Paper swamp and pine woods

This site, located at the intersection of County Routes 622 and 730, is largely a loblolly pine (*Pinus taeda*) plantation that surrounds a large swamp. Many side ditches and ruts were found on the roads within the property.

Site 4: Fontaine Creek

Surveyors entered Fontaine Creek (Fountains Creek) near the U.S. Route 301 bridge. This slow-moving creek flows due east into the Meherrin River. This creek/swamp is characterized by black gum (*Nyssa sylvatica*). Navigation of this body of water is difficult due to the many snags. During low water, travel from U.S. Route 301 downstream to the Meherrin River confluence would be nearly impossible.

Greensville County Survey

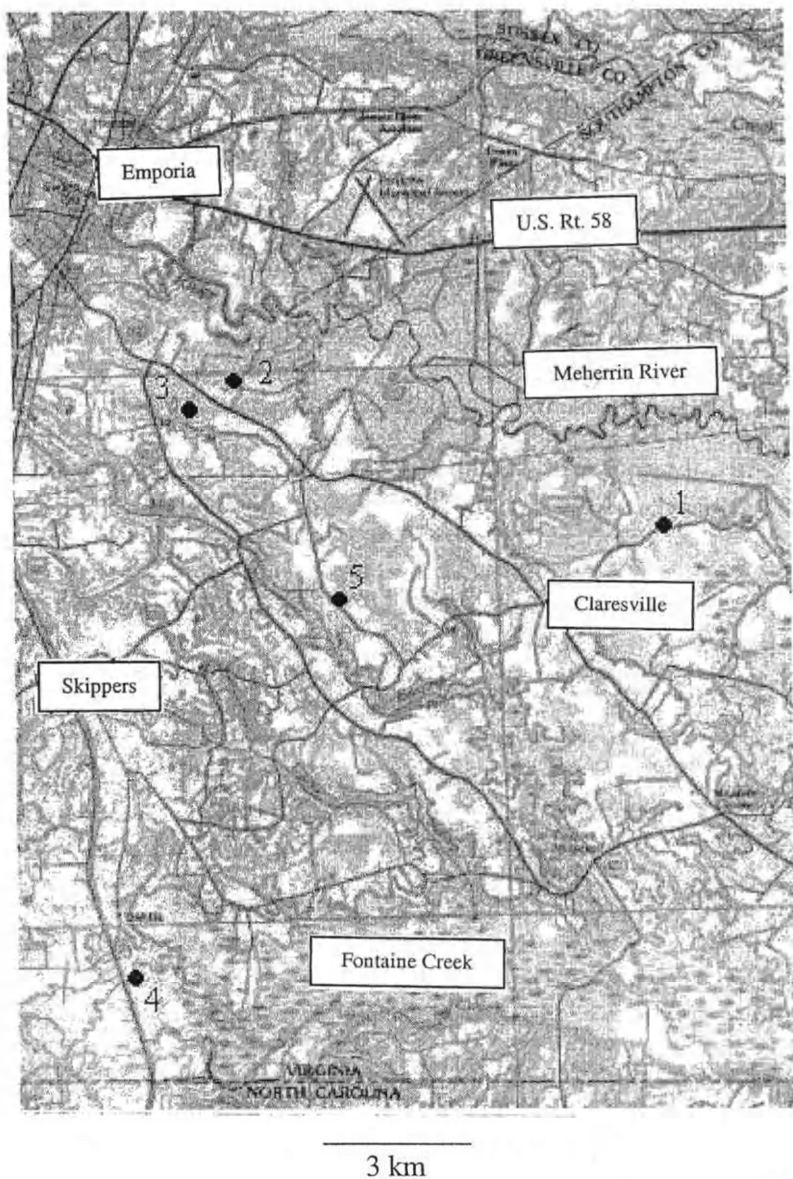


Fig. 2. Location of survey sites in Greensville County, Virginia.

Site 5: County Route 676

This route was never viewed during the day so an accurate description is not possible. Roadside ditches and a small pond were seen during stops while road cruising at night. The anuran diversity along this route was impressive.

Materials and Methods

The survey was conducted from 31 May to 1 June 2003. Four teams of 6-10 people sampled the above-listed sites. Permission to survey sites 1-4 was granted by local landowners and International Paper Company. Terrestrial amphibians and reptiles were sampled by overturning rocks, cobble, logs, leaf litter, bark, and trash piles. Male anurans were detected by listening for vocalizations. Road cruising was conducted each night to collect animals crossing the road and to listen for calling anurans. Aquatic species were found by dipnetting, trapping (turtles), and canoeing. Visual identifications were made in all habitats. Each specimen that was found was recorded, photographed (if needed), observed for unusual behavior, and inspected for abnormalities. Microhabitat was documented for each encounter.

Results

During the survey 19 species of amphibians (5 salamanders, 14 anurans) and 17 species of reptiles (6 turtles, 3 lizards, 8 snakes) were observed. Of these, *Notophthalmus viridescens viridescens* (red-spotted newt) was the only species not previously recorded for Greenville County. Slight western range extensions were documented for *Nerodia erythrogaster erythrogaster* (Red-bellied water snake) and *Hyla cinerea* (Green treefrog). An annotated checklist of the species found during the survey follows. Numbers in parentheses refer to sampling locations listed above and shown on the map (Fig. 2). Table 1 summarizes the species found at each location.

Annotated Checklist

Amphibians

1. *Ambystoma maculatum* (Spotted salamander) – (5)

One metamorph was found crossing County Route 676 during night road cruising.

Greensville County Survey

2. *Ambystoma opacum* (Marbled salamander) – (1)

One adult and one larva were found. The adult was found under a sheet of plywood in a barn and the larva was dipnetted in a vernal pool.

3. *Desmognathus fuscus* (Northern dusky salamander) – (2)

One adult was found under a log adjacent to a spring-fed stream.

4. *Eurycea cirrigera* (Southern two-lined salamander) – (2)

Like the previous species, one adult was found under a log adjacent to a spring-fed stream.

5. *Notophthalmus viridescens viridescens* (Red-spotted newt) – (1)

A red eft was found under a log in a cutover adjacent to a series of small vernal pools. No adults were dipnetted in the vernal pools. This species was not previously recorded for Greensville County by Tobey (1985), Mitchell and Reay (1999), or the Virginia Department of Game and Inland Fisheries wildlife database (2004). A voucher photograph of the eft will be deposited in the VHS archives.

6. *Acris crepitans crepitans* (Eastern cricket frog) – (1, 2, 3, 4, 5)

This frog was abundant and found at every site. It was discovered in vernal pools, roadside ditches, ponds, Fontaine Creek, and along the margins of swamps, grassy pools, and walking trails. Males were heard vocalizing during the day and at night.

7. *Bufo americanus* (American toad) – (1, 2)

At site 1 during a night survey for calling anurans, one male was found in a flooded agricultural field. Three adults were found under cover objects (cardboard and between a piece of bark and tree) at site 2.

8. *Bufo fowleri* (Fowler's toad) – (1, 5)

Fowler's toads were found along the road at site 5 and heard vocalizing at night at site 1, where three adults were hand-captured.

9. *Gastrophryne carolinensis* (Eastern narrow-mouthed toad) – (1, 2)

The eastern narrow-mouthed toad was encountered in a flooded field calling at night (site 1) and sitting by an ant trail (site 2).

10. *Hyla chrysoscelis* (Cope's gray treefrog) – (1, 2, 3, 5)

Only calling males of this species were found. They called from trees and at the margin of ponds and pools during the day and at night.

11. *Hyla cinerea* (Green treefrog) – (1, 3, 5)

Many males were heard calling during the night at sites 1 (swamp), 3 (pond), and 5 (pond). Mitchell and Reay (1999) plotted only one record for this species in Greensville County, although Hoffman and Mitchell (1996) had reported it from at least four sites in the southeastern portion of the county, including areas east of Claresville (near site 1 in Fig. 2) and two sites near Fontaine Creek along Route 624. The westernmost record in Virginia prior to this survey was near Taylors Millpond, southwest of Bryants Corner (VDGIF, 2004; ca. 5.5 km SSE of site 5 in Fig. 2). Site 3 thus represents a slight western range extension for *H. cinerea* in the state.

12. *Hyla femoralis* (Pinewoods treefrog) – (1, 5)

Males were heard vocalizing at night at sites 1 (one male) and 5 (several males). Site 1 is east of Route 730 in the Meherrin River floodplain, an area where Hoffman and Mitchell (1996) failed to detect this species.

13. *Hyla squirella* (Squirrel treefrog) – (2)

Male squirrel treefrogs were heard calling from flooded agricultural fields at night. Three adult males were collected in the plastic tubing around planted trees.

14. *Pseudacris crucifer* (Spring peeper) – (1, 2, 3)

No calling males were heard during this survey but one adult and many metamorphs were found. The adult was foraging in mature woods (site 1) and the metamorphs found at sites 2 and 3 were in woods surrounding a swamp and in ditches.

Greensville County Survey

15. *Pseudacris feriarum* (Southeastern chorus frog) – (2, 3)

Only metamorphs of this very secretive species were collected. They were found in small wet depressions beside dirt roads at sites 2 and 3.

16. *Rana catesbeiana* (American bullfrog) - (2, 3)

Three tadpoles were dipnetted in a wooded swamp at site 2. One juvenile was captured in a roadside puddle and many males were heard calling from a swamp at site 3.

17. *Rana clamitans melanota* (Northern green frog) – (1, 2, 3, 5)

Many males were heard calling from ponds and swamps (day and night). Three juveniles were captured at the edge of a swamp at site 3.

18. *Rana sphenoccephala* (Southern leopard frog) – (1, 3, 4)

Leopard frogs were heard calling from swamps and Fontaine Creek.

19. *Scaphiopus holbrookii* (Eastern spadefoot toad) – (2, 5)

One juvenile eastern spadefoot toad was found in leaf litter beside a pond at site 2 and an adult was found on the road at night at site 5.

Reptiles

20. *Chelydra serpentina serpentina* (Eastern snapping turtle) – (2, 3)

A female snapping turtle was discovered laying eggs beside a dirt road adjacent to a swamp at site 2. Egg-laying was completed at 1211 h. One juvenile snapping turtle was found in a roadside ditch at this same site. Two adult turtles were caught in a trap set in a swamp at site 3.

21. *Chrysemys picta picta* (Eastern painted turtle) – (1, 2)

A total of four eastern painted turtles were found during this survey. One was observed laying eggs beside a dirt road. Upon finishing she immediately sought refuge in the swamp adjacent to the nest site. The other turtles were found by a pond, a stream, and on a dirt road.

CATESBEIANA 2004, 24(1)

22. *Kinosternon subrubrum subrubrum* (Eastern mud turtle) – (2)

Only one adult eastern mud turtle was found (on County Route 730).

23. *Sternotherus odoratus* (Eastern musk turtle) – (3, 4)

One adult eastern musk turtle was found in Fontaine Creek (site 4) and another was observed walking on a trail (site 3).

24. *Terrapene carolina carolina* (Eastern box turtle) – (1, 2, 3, 4)

Eight box turtles were found during the survey. Habitats included a clearcut, dirt roads, edge of Fontaine Creek, grassy trails, and near agricultural fields. One gravid female (CL = 140 mm, PL = 135 mm, weight = 538 g) was captured at site 2.

25. *Trachemys scripta scripta* (Yellow-bellied slider) – (2, 3)

Ten sliders were captured in traps set at sites 2 and 3. The trap at site 2 was set in a small woodland pond and yielded one adult female. Seven adults and two subadults were caught in the trap set in the middle of a swamp at site 3.

26. *Eumeces fasciatus* (Five-lined skink) – (1, 2, 3)

Eight five-lined skinks (five adults, three juveniles) were found in log piles, under bark, and basking at the base of trees. One female (SVL = 7.8 cm and TL = 16.5 cm) was gravid.

27. *Sceloporus undulatus hyacinthinus* (Northern fence lizard) – (1, 2)

Seven fence lizards were found in log piles and along the edge of woods. One male was seen chasing and biting a female.

28. *Scincella lateralis* (Little brown skink) – (2)

One adult little brown skink was found scurrying in leaf litter at site 2.

Greensville County Survey

29. *Agkistrodon contortrix mokasen* (Northern copperhead) – (2)

A copperhead was found under a piece of metal beside a pond at site 2.

30. *Carphophis amoenus amoenus* (Eastern wormsnake) – (1, 2)

Six adult worm snakes were found under bark and piles of shingles at site 1. Another wormsnake was found under a log at site 2.

31. *Coluber constrictor constrictor* (Northern black racer) – (1, 2)

Six adult racers were found under cover objects (plyboard and a sheet of metal) and basking beside a road.

32. *Elaphe obsoleta obsoleta* (Black rat snake) – (3)

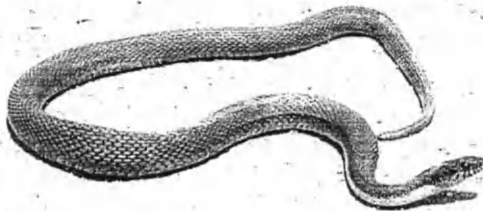
One adult black rat snake was found basking in woods.

33. *Lampropeltis getula getula* (Eastern kingsnake) – (2)

An adult male eastern kingsnake was captured on County Route 730.

34. *Nerodia erythrogaster erythrogaster* (Red-bellied water snake) – (1, 2, 3)

Red-bellied water snakes were the most commonly observed snake species during the survey. A total of eight were observed swimming in vernal pools, swamps, ditches, and one was found DOR on Route 730. Mitchell (1994) and Mitchell and Reay (1999) plotted one record for this species in southeastern Greensville County (ca. 1.5 km SSW Claesville fide VDGIF, 2004) at the western periphery of its range in Virginia. The population at site 3 represents a slight western range extension.



Red-bellied water snake captured at site 2 (photograph by Jason Gibson).

35. *Nerodia sipedon sipedon* (Northern watersnake) – (4)

Four adult northern watersnakes were observed at Fontaine Creek, the only documented location during the survey.

36. *Ophiodrys aestivus aestivus* (Rough green snake) – (3)

A DOR green snake was recorded on County Route 622.

Discussion

This survey recorded most of the known anuran fauna for Greenville County, but collections for all other groups of reptiles and amphibians were generally lacking. Weather and sampling techniques may have been responsible for this disparity in records for salamanders, turtles, lizards, and snakes. Prior to the survey, Southside Virginia experienced heavy rains and flooding. Much of the area selected for this survey was under water, being located in the floodplain of the Meherrin River. The day of the survey was also rainy and cool.

Many of the most common salamanders (*Plethodon* spp. *Pseudotriton* spp. *Eurycea guttolineata*, and *Desmognathus auriculatus*) might have been discovered with more intensive efforts in overturning cover objects. *Necturus punctatus* was probably not encountered due to its preference for cooler environmental conditions (Roble et al., 1999). Baited minnow traps, if used, may have allowed for the capture of *Amphiuma means* and dipnetting more leaf packs may have allowed for the capture of *Stereochilus marginatus*. *Ambystoma mabeei* has been found one county to the east and possibly exists in Greenville County. More intensive efforts may expand its range to this area. Anurans known for the county but not encountered include *Acris gryllus*, *Bufo quercicus*, and *Rana palustris*. Sampling for calling males during their respective breeding seasons might have resulted in documentation of these species. *Acris gryllus* might have been encountered but overlooked if surveyors did not use all morphological characteristics to accurately distinguish between *A. crepitans*. Two species, *Pseudacris brimleyi* (found in a northern adjoining county; Mitchell and Reay, 1999) and *Pseudacris nigrita* (a new state record; Hobson and Moriarity, 2003) may soon be added to the known fauna of Greenville County with future calling anuran surveys. It is curious to note that Mitchell and Reay (1999) did

Greensville County Survey

not cite or use Hoffman and Mitchell's (1996) research on the anurans of Greensville County for the Virginia herp atlas.

With regard to not finding turtles known from the county, insufficient trapping and inadequate sampling of a variety of habitats probably explain why *Clemmys guttata* and *Pseudemys concinna* were missed. Lizard diversity was very underrepresented in this survey. Possibly the rain and low temperatures were to blame. *Aspidoscelis* (= *Cnemidophorus*) *sexlineatus* was not found even though good habitat was sampled. This lizard is known to have the highest temperature preferences of any reptile in Virginia and the temperatures during this weekend, in all likelihood, were not suitable for activity by this species (Mitchell, 1994). *Eumeces inexpectatus* and *Eumeces laticeps* should have been found but were not. *Ophisaurus attenuatus longicaudus* has been found in surrounding counties and may occur in Greensville County. Many common snakes known for the county (e.g., *Diadophis punctatus*, *Farancia abacura*, *Heterodon platirhinos*, *Lampropeltis calligaster rhombomaculata*, *Thamnophis* sp. and *Virginia striatula*) were not found, again possibly due to weather or lack of sampling in appropriate microhabitats. *Agkistrodon piscivorus* is found in North Carolina counties adjoining the southern boundary of Greensville County (Palmer and Braswell, 1995) and may eventually be added to the known herpetofauna of this county.

Greensville County is a very important region of Virginia due to its geology and hydrology. Lying in both the Piedmont and Coastal Plain allows for many varied microhabitats. Since the drainage of this county empties into North Carolina, organisms from this region have dispersal routes into this part of Virginia. Migration of organisms from the east and south in the geologic past give Greensville County a unique fauna that needs to be researched and explored further. Regrettably, there are many threats to the continued existence of organisms of this area. Agriculture and silviculture, if not managed properly, threaten to reduce the biodiversity of this region. Unfortunately, the reptiles and amphibians of the region are very sensitive to fluctuations in the local economy. As the economy collapses, landowners are forced to timber and otherwise alter the landscape to generate income. Greensville County has very limited public land set aside for the conservation of its biodiversity. Efforts by wildlife managers in the future should focus on acquiring land and working with existing landowners to put land in trust. Education of the landowners and farmers would go a long way in preserving the many species of reptiles and amphibians in this unique area.

CATESBEIANA 2004, 24(1)

Table 1. Summary of the herpetofauna observed during the 2003 VHS Spring Survey. Numbers in the first row refer to the site locations described in the text and shown in Fig. 2; M&R = Mitchell and Reay (1999), and H&M = Hoffman and Mitchell (1996). The asterisk denotes a new county record.

Species	1	2	3	4	5	M&R	H&M
Amphibians							
<i>Ambystoma maculatum</i>					x	x	
<i>Ambystoma opacum</i>	x					x	
<i>Desmognathus fuscus</i>		x				x	
<i>Eurycea cirrigera</i>		x				x	
<i>Notophthalmus viridescens</i> *	x						
<i>Acris crepitans</i>	x	x	x	x	x	x	x
<i>Bufo americanus</i>	x	x				x	x
<i>Bufo fowleri</i>	x				x	x	x
<i>Gastrophryne carolinensis</i>	x	x				x	x
<i>Hyla chrysoscelis</i>	x	x	x		x	x	x
<i>Hyla cinerea</i>	x				x	x	x
<i>Hyla femoralis</i>	x				x	x	x
<i>Hyla squirella</i>		x				x	x
<i>Pseudacris crucifer</i>	x	x	x			x	x
<i>Pseudacris feriarum</i>		x	x				x
<i>Rana catesbeiana</i>		x	x			x	x
<i>Rana clamitans</i>	x	x	x		x	x	x
<i>Rana sphenocephala</i>			x	x		x	x
<i>Scaphiopus holbrookii</i>		x			x	x	x
Reptiles							
<i>Chelydra serpentina</i>		x	x			x	
<i>Chrysemys picta</i>	x	x				x	
<i>Kinosternon subrubrum</i>		x				x	
<i>Sternotherus odoratus</i>			x	x		x	
<i>Terrapene carolina</i>	x	x	x	x			
<i>Trachemys scripta</i>		x	x			x	
<i>Eumeces fasciatus</i>	x	x	x			x	
<i>Sceloporus undulatus</i>	x	x				x	
<i>Scincella lateralis</i>		x				x	
<i>Agkistrodon contortrix</i>		x				x	
<i>Carphophis amoenus</i>	x	x				x	
<i>Coluber constrictor</i>	x	x				x	
<i>Elaphe obsoleta</i>			x			x	
<i>Lampropeltis getula</i>		x				x	
<i>Nerodia erythrogaster</i>	x	x				x	
<i>Nerodia sipedon</i>				x		x	
<i>Ophedrys aestivus</i>			x			x	

Greensville County Survey

Acknowledgments

The following VHS members and volunteers participated in this survey: Paul Sattler, Mitch Bowling, Jason Gibson, The White Family, Don Mackler, Chris d'Orgeix, Jonathan Jeffreys, Steve and Ben Roble, Tim Christensen, Susan Watson, Jim Fitzgerald, Greg Woodie, Gordon Wilson, Dain Wilson, Eric Wright, Norm Reichenbach, Dave Pettit, Alex Pettit, Dean Bohon, Tim Fletcher, David L. Dawson, David A. Dawson, Noah Dawson, Dean Walton, Shelly Miller, Wes Vangeleer, and Dave Vangeleer. We apologize for any names omitted. The VHS would like to thank all of the local landowners, International Paper Company, and Jim Gibson for allowing us to survey their land and use their facilities. We thank Steve Roble for editing and improving this paper.

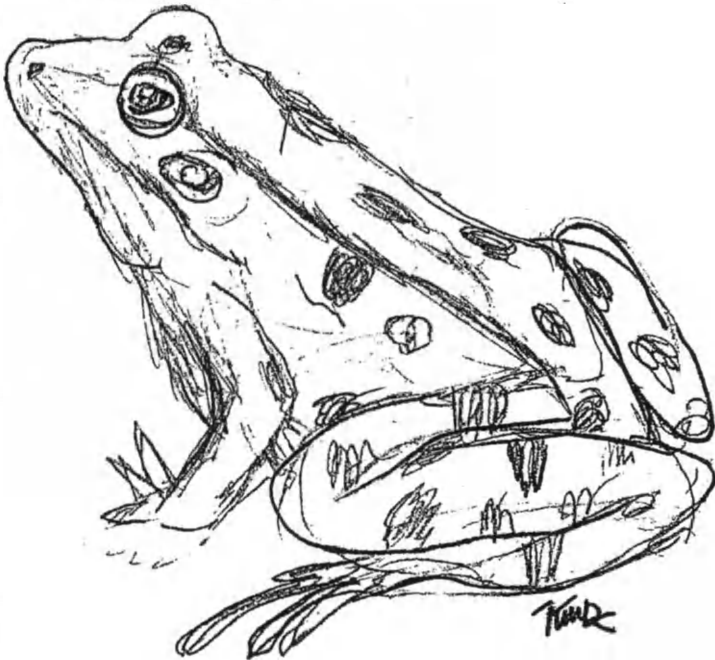
Literature Cited

- Frye, K. 1986 (1991 printing). *Roadside Geology of Virginia*. Mountain Press Publishing Company, Missoula, MT. 278 pp.
- Hobson, C. S., and E. C. Moriarity. 2003. Geographic distribution: *Pseudacris nigrita nigrita* (Southern Chorus Frog). *Herpetological Review* 34: 259-260.
- Hoffman, R. L., and J. C. Mitchell. 1996. Records of anurans from Greensville County, Virginia. *Banisteria* 8: 29-36.
- Linzey, D. W., and M. J. Clifford. 1981 (1995 printing). *Snakes of Virginia*. University of Virginia Press, Charlottesville. 173 pp.
- Mitchell, J.C. 1994. *Reptiles of Virginia*. Smithsonian Institution Press, Washington, DC. 352 pp.
- Mitchell, J. C., and K. K. Reay. 1999. *Atlas of Amphibians and Reptiles in Virginia*. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.
- Palmer, W. M., and A. L. Braswell. 1995. *Reptiles of North Carolina*. The University of North Carolina Press, Chapel Hill. 412 pp.

Roble, S. M., D. J. Stevenson, and C. S. Hobson. 1999. Distribution of the dwarf waterdog (*Necturus punctatus*) in Virginia, with comments on collecting techniques. *Banisteria* 14: 39-44.

Tobey, F. J. 1985. Virginia's Amphibians and Reptiles, a Distributional Survey. Virginia Herpetological Society, Purcellville, VA. 114 pp.

Virginia Department of Game and Inland Fisheries (VDGIF). 2004. Collections Database. Fish and Wildlife Information System. Richmond, VA. <http://vafwis.org/perl/vafwis.pl/vafwis>



Southern leopard frog (*Rana sphenocephala*)
Drawing by Kimberly Dutton

**Is the Red-backed Salamander (*Plethodon cinereus*)
Encroaching upon Populations of the
Peaks of Otter Salamander (*P. hubrichti*) ?**

Garth Aasen and Norman Reichenbach
Biology Department
Liberty University
Lynchburg, Virginia 24502

The parapatric distributions of several species of *Plethodon* with the wide-ranging *P. cinereus* are believed to be due to competition (Highton, 1972; Jaeger, 1974). Several studies have been conducted to empirically determine if competition is occurring between *P. cinereus* and its sister species. For example, *P. shenandoah*, which inhabits talus areas of three mountains in Shenandoah National Park, may be competitively excluded by *P. cinereus* from the more moist and deep soil found in forested areas (Jaeger, 1970, 1971a, 1971b, 1972). *Plethodon hoffmani* occurs mostly allopatrically with *P. cinereus* in the western two thirds of the Ridge and Valley Province of the central Appalachian Mountains, the exception being a small sympatric area of *P. cinereus* and *P. hoffmani* in north-central Pennsylvania (Highton, 1972). After studying factors affecting interspecific competition, Jaeger et al. (2002) concluded that the contact zone between the two species was static, whereas Fraser (1976) felt that *P. cinereus* was slowly encroaching on *P. hoffmani*.

Plethodon hubrichti has a small geographic range of approximately 8 x 15 km in the Peaks of Otter area in the Blue Ridge Mountains of Virginia (Pague and Mitchell, 1990). Wicknick (1995) examined interspecific competition between *P. hubrichti* and *P. cinereus*. She found that although competition between the two species was likely, their competitive success was roughly equal, thus allowing the possibility of coexistence in contact zones. Due to the proposed similarity of competitive success, Jaeger et al. (2002) proposed that the boundary between *P. hubrichti* and *P. cinereus* might be static.

Ten years ago Wicknick (1995) examined a site sympatric for *P. hubrichti* and *P. cinereus* as well as an allopatric site for each species. We re-examined these sites in 2003 to determine if the proportion of *P. hubrichti* relative to *P. cinereus* had remained static.

Materials and Methods

Three field sites used by Wicknick (1995) in 1993 were relocated with the assistance of Dr. Wicknick. The three sites included two allopatric sites for *P. hubrichti* and *P. cinereus* as well as one sympatric site located between the two allopatric sites. All three locations are in the Blue Ridge Mountains of Virginia in the vicinity of Apple Orchard Mountain (Botetourt and Bedford counties; Arnold Valley, VA quadrangle).

On October 12, 18, and 19, 2003, daytime searches were conducted using Wicknick's (1995) method of turning cover objects. During the surveys, moisture was present under most cover objects. Captured *P. hubrichti* and *P. cinereus* adults were counted and then released in their capture location.

Results and Discussion

At the allopatric site for *P. hubrichti*, 36 *P. hubrichti* were found while no *P. cinereus* were captured. The allopatric *P. cinereus* site produced one *P. hubrichti* and 31 *P. cinereus*. The sympatric site produced 29 *P. hubrichti* (71%) and 12 *P. cinereus* (29%). Although an increased fraction of *P. hubrichti* was found when compared to the 1993 survey (61%; Wicknick, 1995), the change between the two time periods was not statistically significant ($\chi^2=1.37$, $df=1$, $p=0.24$, Table 1).

Table 1. Counts of *P. hubrichti* and *P. cinereus* found at each site.

Sites	Sept. 1993 ^a	Oct. 2003
Allopatric <i>P. hubrichti</i>		
<i>P. hubrichti</i>	68	36
<i>P. cinereus</i>	0	0
Allopatric <i>P. cinereus</i>		
<i>P. hubrichti</i>	0	1
<i>P. cinereus</i>	71	31
Sympatric		
<i>P. hubrichti</i>	93	29
<i>P. cinereus</i>	60	12

^a Data from Wicknick (1995)

Plethodon

The absence of a significant shift in the number of salamanders in these three sites over the ten-year period provides support to the proposal that because of the two species' similarity in competitive success, the boundary between *P. hubrichti* and *P. cinereus* may be static (Jaeger et al., 2002). Additional areas need to be examined to determine if our preliminary results are representative of the entire contact zone for the two species.

In the three areas examined, no significant environmental changes such as logging or damage of the canopy due to gypsy moth defoliation occurred. Such changes might result in one species being favored, most likely *P. cinereus*, due to its use of a wider variety of habitats relative to *P. hubrichti* (Petranka, 1998). Nevertheless, in our study area, which had relatively undisturbed forest, it is encouraging to see that *P. cinereus* has not encroached upon the distribution of *P. hubrichti*.

Acknowledgments

Special thanks to Dave Smallwood, Jeff Mason, and Kurt Schubert for their fieldwork assistance.

Literature Cited

- Fraser, D. 1976. Empirical evaluation of the hypothesis of food competition in salamanders of the genus *Plethodon*. *Ecology* 57: 459-471.
- Highton, R. 1972. Distributional interactions among eastern North American salamanders of the genus *Plethodon*. Pp. 139-188 In P. C. Holt (Ed.). *The Distributional History of the Biota of the Southern Appalachians. Part III: Vertebrates. Research Division Monograph 4, Virginia Polytechnic Institute, Blacksburg, VA.*
- Jaeger, R. 1970. Potential extinction through competition between two species of terrestrial salamanders. *Evolution* 24: 632-642.
- Jaeger, R. 1971a. Moisture as a factor influencing the distributions of two species of terrestrial salamanders. *Oecologia* 6: 191-207.
- Jaeger, R. 1971b. Competitive exclusion as a factor influencing the distributions of two species of terrestrial salamanders. *Ecology* 52: 632-

637.

Jaeger, R. 1972. Food as a limited resource in competition between two species of terrestrial salamanders. *Ecology* 53: 535-546.

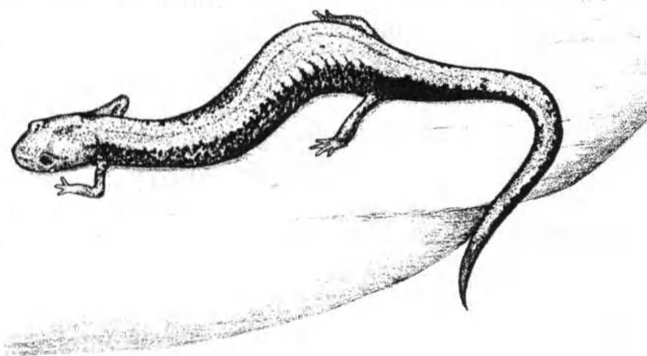
Jaeger, R. 1974. Competitive exclusion: comments on survival and extinction of species. *BioScience* 24: 33-39.

Jaeger, R., E. Prosen and D. Adams. 2002. Character displacement and aggression in two species of terrestrial salamanders. *Copeia* 2002: 391-401.

Pague, C. and J. Mitchell. 1990. The distribution of the Peaks of Otter salamander (*Plethodon hubrichti*). Unpublished report submitted to the Jefferson National Forest by the Virginia Department of Conservation and Recreation, Division of Natural Heritage. Richmond, VA. 16 pp.

Petranka, J. W. 1998. Salamanders of the United States and Canada. Smithsonian Institution Press, Washington, DC. 587 pp.

Wicknick, J. 1995. Interspecific competition and territoriality between a widespread species of salamander and a species with a limited range. Unpublished Ph.D. dissertation, University of Louisiana, Lafayette. 152 pp.



GORDON WILSON
June, 2002

Field Notes

Thamnophis sirtalis sirtalis (Eastern Gartersnake). VA: Fairfax Co., Town of Clifton, 12718 Chestnut Street (ca. 1.6 km (1 mi) W of Southern Railroad bridge over Bull Run). 2-4 November 2003. Nate Simpson, Mark Khosravi, and others.

At approximately 1500 h on 2 November 2003, my 11-year old neighbor Nate Simpson called and asked me to come observe a bundle of gartersnakes he had spied in a bush in his backyard. Immediately upon my arrival I realized that we were witnessing a mating ball. Beside a house and shed I observed 4 or 5 slim male eastern gartersnakes (*T. sirtalis sirtalis*) approximately 35+ cm long wrapped around an equally long female that appeared to be about twice the diameter of the males. I checked on the snakes periodically during the next three days (2-4 November), during which time they remained engaged in the mating ritual and were photographed multiple times. Several neighbors also witnessed this event. The weather during this 3-day period was sunny and unseasonably warm, with daytime high temperatures in the mid 70s to low 80s (°F) and overnight lows in the mid 40s to mid 60s (°F).



Mating ball of *Thamnophis sirtalis*. Photo by Mark Khosravi.

On 5 November, a cloudy day with a high temperature of about 78 °F (25.5 °C), the snakes were gone.

Mitchell (1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, DC. 352 pp.) reported that *T. sirtalis* is known to form mating balls, but noted that this behavior had not been documented in Virginia. Therefore, the above report is apparently the first confirmation of mating ball behavior by this species in the state.

MARK KHOSRAVI

7155 Main Street
Clifton, Virginia 20124

Heterodon platirhinos (Eastern Hognose Snake). VA: Amherst Co., Co. Rt. 636 (Wares Gap Road). 12 April 2003. Jimmy Kirshberger.

On 12 April 2003, a male eastern hognose snake was found DOR on Wares Gap Road (Co. Rt. 636) about 1.2 km north of Hicks' Store (jct. Co. Rt. 643 and 636). The snout-vent length was 52.5 cm and the tail length was 14 cm. This species is widely distributed throughout all physiographic provinces in the state but records are sparse for many areas including central Virginia. This specimen is the first record for Amherst County according to Mitchell (1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, DC. 352 pp.) and Mitchell and Reay (1999. *Atlas of Amphibians and Reptiles in Virginia*. Virginia Department of Game and Inland Fisheries, Special Publication No. 1, Richmond, Virginia. 122 pp.). However, Linzey and Clifford (1981 [1995 printing]. *Snakes of Virginia*. The University Press of Virginia, Charlottesville, VA. 173 pp.) recorded the eastern hognose snake from Amherst County. Norman Reichenbach and Paul Sattler verified the identity of the voucher specimen (LUNHM, Accession number 575).

JIMMY KIRSHBERGER

Biology Department
Liberty University
1971 University Blvd.
Lynchburg, Virginia 24502

Field Notes

Trachemys scripta elegans (Red-eared Slider). VA: Henrico Co., jct. Flat Branch and U.S. Rt. 6 (Patterson Avenue), 1.0 km E Henrico-Goochland county line. 13 June 2001. Joseph C. Mitchell.

A road-killed female red-eared slider (184.2 mm plastron length) was found with its carapace smashed on Patterson Avenue in late morning on 13 June 2001. The female had typical markings of the introduced subspecies with a red temporal stripe on each side of the head and neck, light, thin lines on the pleural scutes, black smudges on each of the plastral scutes, and vertical bars on the thighs (Ernst et al. 1994. *Turtles of the United States and Canada*. Smithsonian Institution Press, Washington, DC. 578 pp.). One intact shelled egg (37.1 mm length, 21.1 mm width, 9.5 g) was found on the road and another one was observed crushed. The female was apparently seeking a nesting site when killed. Flat Branch is a tributary of Tuckahoe Creek, which drains a large part of western Henrico County and eastern Goochland County into the James River. Most observations of red-eared sliders in Virginia are in lakes and ponds in urban areas (Mitchell. 1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, DC. 352 pp.), although Ernst et al. (1997. *Bulletin of the Maryland Herpetological Society* 33: 1-62) have found them in a variety of habitats in northern Virginia, including Bull Run and Occoquan creeks and at Great Marsh in the Mason Neck National Wildlife Refuge. I observed a male in the Potomac River at Balls Bluff, Loudoun County, on 27 September 2001. The observation of a gravid female in the Tuckahoe Creek system suggests that a reproductively-viable population occurs there and that this introduced turtle has invaded natural wetlands in addition to those in more human-disturbed areas.

JOSEPH C. MITCHELL

Department of Biology
University of Richmond
Richmond, Virginia 23173

***Eumeces fasciatus* (Five-lined Skink)**. VA: City of Alexandria, Winkler Botanical Preserve. 1 June 2003 and 28 September 2003. William D. Robertson.

Skinks of the genus *Eumeces* are frequently seen at the Winkler Botanical Preserve in Alexandria, VA. On 28 September 2003 a juvenile skink found on the stone foundation of the Preserve's main building was captured, examined, photographed, and released. The individual was identified as *Eumeces fasciatus* on the basis of scale characteristics, specifically a central row of scales on the underside of the tail wider than the other scale rows, and the presence of two postlabial and four labial scales (Conant, R. and J. T. Collins. 1991. A Field Guide to Reptiles and Amphibians: Eastern and Central North America. Houghton Mifflin Company, Boston, MA. 450 pp.). This specimen represents a new record for the City of Alexandria (Mitchell, J. C. and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Virginia Department of Game and Inland Fisheries, Special Publication No. 1, Richmond, VA. 122 pp.) Color prints will be deposited in the VHS archives at the Virginia Museum of Natural History.

On 1 June 2003 courtship behavior had been observed between two skinks in this population. Mating behavior for the Five-lined Skink has not been previously recorded in Virginia (Mitchell, J. C. 1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, DC. 352 pp.). At 1540 h a male with red facial coloration and a female with an autotomized tail were observed on the foundation of the same building where the above-mentioned juvenile specimen was later captured. The male had positioned itself next to the female and was placing his head across her neck and back. At one point the skinks became disturbed and fled under the wooden porch of the building. A few minutes later they returned to their original location and resumed courtship behavior, which was continuing at 1605 h when observations ceased. Color prints documenting this behavior will be deposited in the VHS archives at the Virginia Museum of Natural History.

WILLIAM D. ROBERTSON

2912 Bryan Street
Alexandria, Virginia 22302

Field Notes

***Pseudacris crucifer* (Spring Peeper).** VA: Cumberland Co., Co. Rt. 600, 1.6 km (1 mi) E jct. VA Rt. 45. 10 December 2003. Don Merkle.

Between 1930 and 2000 h on 10 December 2003 several *Pseudacris crucifer* (males and gravid females) were captured crossing Co. Rt. 600 in Cumberland County east of its intersection with VA Rt. 45. Air temperature was unseasonably warm (58 °F; 14.5 °C) and the frogs were encountered during a drizzling rain, following a day of torrential rain. This was the day immediately following seismic activity of 4.5 in the region. No calling was heard in the area. Several male and female *Ambystoma opacum* (Marbled Salamanders) and a *Rana clamitans* (Green Frog) were also captured crossing the road. I have observed a breeding pond at this site for the last 27 years. It is on the opposite side of the road from where the spring peepers were heading. The frogs were immigrating into the pond and the salamanders were emigrating from their fall breeding sites. This represents a record for unusually early breeding migration activity for *P. crucifer* in this area.

DON MERKLE

Department of Natural Sciences
Longwood University
Farmville, Virginia 23909

***Gastrophryne carolinensis* (Eastern Narrow-Mouthed Toad).** VA: Essex Co., Co. Rt. 607 (Upright Road), 3.5 km SW jct. VA Rt. 17 (Site 3 Essex County Frog Call Survey); Gibson's Road, 1.0 km S Co. Rt. 719 (ca. 0.5 km W jct. Rt. 719 with Co. Rt. 602 and VA Rt. 17) (Site 9 Essex County Frog Call Survey). 2 July 2003. Connie Grimm and Erin Martin.

At 2142 h on 2 July 2003 I arrived with a student of mine at Site 3 of the Essex County Frog Call Survey route. We immediately noted the bleating calls of *Gastrophryne carolinensis* (Eastern Narrow-Mouthed Toad). I had not heard these frogs on my survey route before, possibly due to the lack of rain the previous 2 years. The weather was cloudy and overcast, the air temperature was 22 °C, and there was no wind. An intermittent drizzle was falling before and during the survey. Concurrently calling were *Hyla chrysoscelis* (Cope's gray treefrog) and *Bufo fowleri* (Fowler's

Toad). I was delighted to have both Fowler's and narrow-mouthed toads calling as it provided an excellent mentoring opportunity for these similar calls. By the end of the survey that night, I had Erin reliably identifying all of the summer-calling frogs found on my route.

When we reached site 9 of the survey route, we again heard *G. carolinensis* and *H. chrysoscelis*. We obtained an excellent digital recording of this chorus. The narrow-mouthed toads were calling vigorously from grassy puddles on the edge of an agricultural field, and did not stop despite our close approach and movements. I reside in Gloucester County but had not heard *G. carolinensis* around my house for several years. However, in 2003 they were taking advantage of frequent rain, calling day or night. Just prior to Hurricane Isabel, I unearthed two narrow-mouthed toads while digging a shallow trench in my yard.

Mitchell and Reay (1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication No. 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.) did not report *G. carolinensis* from Essex County, however they recorded it from two sites in neighboring King and Queen County. The above observations are the first reports for Essex County. A digital recording of the chorus at Site 9 will be deposited in the VHS archives to document that population.

CONNIE GRIMM

4303 Cappahosic Road
Gloucester, Virginia 23061

Elaphe guttata (Corn Snake). VA: Fluvanna Co., near jct. Co. Rt. 637 and 669, 4.9 km NE Scottsville. 22 May 1970. Joseph J. May, Jr.

A road-killed female corn snake (900 mm SVL, 155 mm tail length) was salvaged for the Virginia Department of Agriculture and Consumer Services (VDACS) Plant Pest Division snake identification collection on 22 May 1970. The female had 36 dorsal blotches and 12 tail blotches, phenotypic characters well within the range reported for Virginia by Mitchell (1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, DC. 352 pp.). She contained 11 oviductal eggs, also within the clutch size range reported by Mitchell (*op. cit.*). The snakes in the

Field Notes

VDACS collection were discarded in 2003, as most were not well preserved and, except for this one snake, had no collection data. The Fluvanna County corn snake is a new county distribution record (Mitchell, *op. cit.*; Mitchell and Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication No. 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.).

JOSEPH C. MITCHELL

Department of Biology
University of Richmond
Richmond, Virginia 23173

Virginia BioBlitz 2004

The third annual Virginia BioBlitz survey will be held at Virginia Commonwealth University's Rice Center for Environmental Life Sciences from 9 AM Saturday, June 12 to 3 PM Sunday, June 13. The purpose of this annual survey is to bring together people from around the state who are interested in documenting the diversity of animal and plant species that exist in the Commonwealth. Teams of amateurs and experts in the fields of botany, ichthyology, herpetology, mammalogy, ornithology, and entomology will be gathered together for the 30-hour survey. Many members of the VHS have already signed up to be on the herpetology team. The Rice Center is located in Charles City County just southeast of Richmond, Virginia. The survey location consists of approximately 270 acres of varied woodland habitat and a 70-acre freshwater lake. The southern portion of the land is bordered by the tidal James River. Information about the Rice Center and updated information about BioBlitz 2004 can be found on the VHS website, just click on the regional events link after entering the website. If you are interested in volunteering to help with the survey or if you have any questions, please email Jason Gibson (frogman31@earthlink.net) or call 1-434-724-9034. We hope that you will come out and support this effort to document and conserve our natural resources.

Obituary
Roger Conant (1909-2003)

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

Roger Conant was one of the most influential and widely-recognized herpetologists of the 20th century. He had a great influence on many people, including professional and amateur herpetologists, as well as me. In 1991, I had the privilege of assembling and binding a set of letters written by numerous friends, family, colleagues, and students. I presented them to him at a reception following a two-day symposium in his honor at the Society for the Study of Amphibians and Reptiles (SSAR) meeting at Pennsylvania State University. Reading these letters showed me just how much he was appreciated and loved for all the attention and mentoring he did with everyone he encountered throughout his life. This included people from the zoo world, herpetologists, and many others. He always gave freely of his time to those seeking his help and advice.

Roger was born on 6 May 1909 in Mamaroneck, New York and lived most of this youth in Philadelphia. An introduction to the Twin Brook Zoo in New Jersey led him to a career in the zoo field. He never finished college due to causes stemming from the Great Depression but got a lucky break with a job at the Toledo Zoo in 1928. There he served with distinction, rose to curator of the zoo, lost the use of his left thumb from a bite by a captive speckled rattlesnake (*Crotalus mitchelli*), and wrote the classic Reptiles of Ohio. He then got a job at the Philadelphia Zoo in 1935, became the head curator of the reptile house, and eventually rose to Zoo Director. He retired from that position in 1973 and moved to Albuquerque, New Mexico. While at the zoo he lived in the New Jersey Pine Barrens, wrote the first edition of the famous eastern Field Guide to Reptiles and Amphibians in the Peterson Field Guide series, and took many field trips in the United States and throughout the world, especially in Mexico. Roger published over 245 professional papers during his career at Toledo and Philadelphia, as well as afterwards. This included the first reptile merit badge booklet for the Boy Scouts. He wrote numerous articles, many on animals other than herps, for the Parks and Recreation Magazine and the Philadelphia Zoo's magazine, Fauna and its successor, America's First Zoo. He edited the first one for 20 years, the second one

Obituary: Roger Conant

for 10 years, and the last one for 18 years. He was the writer and voice of "Let's Visit the Zoo," a weekly program on radio station KYW for over a third of a century until 1969. His books include three editions of the field guide and the Snakes of the *Agkistrodon* Complex with Howard K. Gloyd (Gloyd and Conant, 1990). In the last year of his life he published a monograph on the systematics of Mexican gartersnakes in the American Museum of Natural History Novitates series (Conant, 2003). This publication was his way of honoring his loving memory of the late Isabelle Hunt Conant who accompanied him on all of his trips to Mexico. She had passed away in 1975; all of the snake photographs in the Mexican gartersnake paper were taken by her. He told me that he was especially happy to see that project completed and published before he passed on.

Roger was given many awards during his career. These include the Marlin Perkins Award of the American Association of Zoological Parks and Aquariums in 1989, the David S. Ingalls, Jr. Award for Excellence from the Cleveland Museum of Natural History in 1996 (other recipients include Stephen J. Gould, Edward O. Wilson, Roger T. Peterson, and Jane Goodall), and the William T. Hornaday Gold Metal from the Boy Scouts of America in 1998. He was awarded an honorary doctorate of science degree from the University of Colorado in 1971. Roger described 26 new taxa (mostly subspecies) in herpetology; 25 snakes and one turtle. Seven taxa have been named in his honor thus far: 3 snakes, 3 salamanders, and a watersnake parasite.

Roger died on 19 December 2003 in an Albuquerque hospital from cancer. His health was failing in the last months, although he was lucid on the phone when we last talked in mid-November. His son, Skip, told me that he remained that way until the last week. Roger was 94 and a half.

Roger Conant's autobiography (Conant, 1997) reads like a history of herpetology in the 20th century. He left no stone unturned in his stories of his youth, the multitude of experiences in the zoo world, and his adventures chasing amphibians and reptiles in 51 countries on several continents. It is complete to the smallest of details, as was Roger's nature. This book is a must read for anyone who wants an understanding of what it was like to be a herpetologist over the past 80+ years. The chapter on Delmarva illustrates the challenges of doing field work in the mid-Atlantic region during the late 1930s through the mid-1970s.

Roger did not visit Virginia as much as some of his other favorite places, like Mexico. Most of his work in the mid-Atlantic focused on the barrier islands, the Delmarva Peninsula, the area around Philadelphia, and southern New Jersey. He started collecting information on the herps of Delmarva in 1939 because he wanted to engage in a project much like the one he finished in Ohio in the late 1930s (Conant, 1938). Roger always kept impeccable notes and records. Everything was neat and meticulous. His locality data for each of the specimens he collected were typed on an old-style manual typewriter that he carried in the field with him. Most of these he assembled in three-ring binders organized by region. Roger gave the locality records for Eastern Shore herps that he had accumulated to Frank Tobey (co-founder and long-time secretary of the VHS) in the mid-1980s for the Virginia Herpetological Society geographic distribution atlas (Tobey, 1985). He worked with me on summarizing the herpetology of the Virginia barrier islands (Conant et al., 1990), and wrote the Foreword to my book on Virginia reptiles (Conant, 1994).

My first correspondence with Roger was in 1984, although I had met him first in 1982 at the Society for the Study of Amphibians and Reptiles meeting in Raleigh, North Carolina (Fig. 1). He autographed the copy of the eastern field guide that I had purchased as a young teenager.

I came to know Roger and his wife, Kathryn J. Gloyd (he had married Howard Gloyd's widow in 1979 after they both lost their spouses in the 1970s), in September 1989 at the First World Congress of Herpetology in Canterbury, England. Along with another 40 or so colleagues and spouses, my wife and I had booked the, as it turned out, infamous one-day bus trip to Paris. All of us were destined to spend a very long day on that bus. It left at about 0600, taking the ferry across the English Channel from Dover to Chalice, France, arriving in Paris after about five hours on the road in mostly hard rain. We had three hours more on the bus in Paris seeing the sights, stopping twice briefly, once at the Eiffel Tower and again at the Notre Dame Cathedral. Coming back required another ferry ride, but this time it was in rough seas. All of us well remember the large ferry boat rising up and down with the huge waves, and the smacking sound the huge propellers made when they broke free of the crest of each wave. Roger had a problem with his balance and I stayed with him most of the time, helping him move around when he needed to change locations. Kathryn got seasick and my wife stayed with her. We had long conversations on that bus trip and we were all fast friends when we finally got back to Canterbury close to midnight.

Obituary: Roger Conant



Fig. 1. Roger Conant with VHS members Joe Mitchell (center) and Don Merkle (right) at the 25th Anniversary Meeting of SSAR in Raleigh, North Carolina in 1982. Photo by David Grim.

I visited Roger in Albuquerque, NM on 31 December 1991 and rode with him in his Volkswagen bus to Tucson, AZ during 2-3 January 1992, stopping by my master's thesis field site south of Willcox along the way. He was 82 at the time and insisted on driving the entire way, although he had to make it a two-day trip so he could rest overnight at a hotel near Deming. I had volunteered to help pack up the Howard K. Gloyd personal library then housed at Kathryn Gloyd's residence. The library had been donated to the University of Texas at Arlington (UT-A), in part so that they could get a tax break from the contribution. Roger and Kathryn were doting hosts and kept me well-fed at local restaurants. Much of the time spent with Roger on this trip was devoted to discussions of the history of herpetology and focused particularly on biographical information of people he knew well. These included H.K. Gloyd and E.R. Dunn. After three days of packing books, correspondence, and other materials, I drove

the Gloyd library in a U-Haul truck to the Dallas-Fort Worth area on 6-7 January and then flew home. The collection is well curated at UT-A under the watchful eye of Dr. Jonathan Campbell.

I again visited Roger in Albuquerque in August 1999. We packed up all of his notebooks and other materials that he had amassed since 1939 on the herps of Delmarva and New Jersey. Roger had planned to write a book on the herps between the Hudson River and Chesapeake Bay but was unable to complete more than a few of the lead-in stories by the time he died. He had asked me to help him finish this project some years before. We packed up several boxes of notebooks, files, and other materials and shipped them via FedEx to Richmond where they remain with me on loan until the project is completed.

Roger had a huge impact on me as a budding herpetologist and naturalist in the early 1960s through his 1958 Field Guide and later as a professional through his editing of my papers and interactions with him over things herpetological. I was always awestruck at his editing and writing skills. He was certainly someone to emulate as a caring mentor of nearly everyone who crossed his path. He was especially helpful with young people and young colleagues. He was a true friend and colleague and encouraged me many times to be the best person I could be.

There will be many obituaries written on Roger Conant in the professional herpetology and zoo journals, as well as in amateur publications. Much will be said of his accomplishments but his greatest legacy may very well be his influence on generations of naturalists and herpetologists through the various editions of his field guide. I will always have fond memories of him and our discussions late in his life in Albuquerque and Tucson and on that VW bus trip between them.

Acknowledgments

Portions of this obituary were published in *Herpetological Review* (Volume 35, Number 2, 2004).

Literature Cited and Roger Conant Virginia Bibliography

Conant, R. 1938. *The Reptiles of Ohio*. *American Midland Naturalist* 20(1): 1-200. (second revised edition in 1951).

Obituary: Roger Conant

Conant, R. 1943a. The milk snakes of the Atlantic Coastal Plain. Proceedings of the New England Zoological Club 22: 3-24.

Conant, R. 1943b. *Natrix erythrogaster erythrogaster* in the northeastern part of its range. Herpetologica 2 (2): 83-92.

Conant, R. 1945. An annotated check list of the amphibians and reptiles of the Del-Mar-VA Peninsula. Delaware Society of Natural History, pp. 1-8.

Conant, R. 1946. Intergradation among ring-necked snakes from southern New Jersey and the Del-Mar-Va Peninsula. Bulletin of the Chicago Academy of Science 7 (10): 473-482.

Conant, R. 1948. Regeneration of clipped subcaudal scales in a pilot black snake. Natural History Miscellanea, Chicago Academy of Science 13: 1-2.

Conant, R. 1958a. A Field Guide to Reptiles and Amphibians of the United States and Canada East of the 100th Meridian. Houghton Mifflin Co., Boston. 366 pp.

Conant, R. 1958b. Notes on the herpetology of the Delmarva Peninsula. Copeia 1958 (1): 50-52.

Conant, R. 1960. The queen snake, *Natrix septemvittata*, in the Interior Highlands of Arkansas and Missouri, with comments upon similar disjunct distributions. Proceedings of the Academy of Natural Sciences, Philadelphia 112 (2): 25-40.

Conant, R. 1961. A new water snake from Mexico, with notes on anal plates and apical pits in *Natrix* and *Thamnophis*. American Museum Novitates (2060): 1-22.

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

Conant, R. 1978. Distributional patterns of North American snakes. Some examples of the effects of Pleistocene glaciation and subsequent climatic

changes. Bulletin of the Maryland Herpetological Society 14 (4): 241-259.

Conant, R. 1993. The Delmarva Peninsula. The Maryland Naturalist 37 (1-2): 7-21.

Conant, R. 1994. Foreword. Pp. ix-x In J.C. Mitchell, The Reptiles of Virginia. Smithsonian Institution Press, Washington, DC.

Conant, R. 1997. A Field Guide to the Life and Times of Roger Conant. Canyonlands Publishing Group, Provo, UT. 498 pp.

Conant, R. 2003. Observations on garter snakes of the *Thamnophis eques* complex in the lakes of Mexico's transvolcanic belt, with descriptions of new taxa. American Museum Novitates (3406): 1-64.

Conant, R., and J.T. Collins. 1991. A Field Guide to Reptiles and Amphibians Eastern and Central North America. Houghton Mifflin Co., Boston, MA. 450 pp.

Conant, R., and J.T. Collins. 1998. A Field Guide to Reptiles and Amphibians Eastern and Central North America. Third expanded edition. Houghton Mifflin Co., Boston, MA. 616 pp.

Conant, R., J.C. Mitchell, and C.A. Pague. 1990. Herpetofauna of the Virginia barrier islands. Virginia Journal of Science 41(4): 364-380.

Gloyd, H.K., and R. Conant 1990. Snakes of the *Agkistrodon* Complex, a Monographic Review. Society for the Study of Amphibians and Reptiles. Ithaca, NY. 614 pp.

Mitchell, J.C., and R. Conant. 2000. Field notes: *Eumeces laticeps*. Catesbeiana 20(1): 41.

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

President's Corner

We are very excited about the upcoming VHS Spring Meeting and Survey, May 21-23, in Halifax County. "The Cove" is among the most notable and unique natural areas in all of Virginia's long-settled southern Piedmont. Tucked inside a horseshoe bend of the Staunton (Roanoke) River, The Cove contains a mixture of pristine wetland, bottomland, and adjacent upland habitats. Who knows what hidden herpetological treasures await us!

I'd like to thank Mike Hayslett and Jerry Craig for their continuing work in organizing this survey. Preliminary scouting has been very encouraging. Current plans call for dividing into several teams, with sections of The Cove assigned to each for investigation. Each team will be provided with topographic maps (with printed UTM grid) and a GPS receiver (you are also welcome to bring your own). We'll be marking specific coordinates of captures, photos, and sightings and will transfer GPS data to electronic mapping programs.

Staunton River State Park, about a 30-minute drive from The Cove, will serve as our headquarters and rendezvous location. On Friday evening (at Picnic Shelter #1), we'll conduct our VHS spring business meeting, followed by a planning and organization session for the next day's activities. For those interested, I'll also conduct a brief "intro to GPS" to acquaint folks with the receivers we'll be using. Our survey work will run all day long on Saturday. Be sure to bring lunch, snacks, and drinks - The Cove is a long way from the nearest McDonalds! We'll continue the survey on Sunday morning for those who can stay over.

Well, those are the plans for now. Be sure to review the details listed in the Spring 2004 Meeting Announcement, posted elsewhere in this edition of *Catesbeiana*. For the latest updates, be sure to check the VHS website at: <http://fwie.fw.vt.edu/VHS/>. You may also want to visit the Ward Burton Wildlife Foundation website for more information about The Cove at: http://www.twbwf.org/land_mgmt.htm

I hope to see you May 21-23. If you have any questions or suggestions, please feel free to contact me at mjc4h@vt.edu.

Mike Clifford
VHS President

Treasurer's Report, April 2004

Previous Checking Balance October 2003 **\$4,924.71**

Receipts:

Fall Teacher's Workshop	\$ 200.00
Silent Auction	\$ 156.00
T-Shirt Sales	\$ 37.50
November Dues	\$ 281.00
December Dues	\$ 778.00
January Dues	\$ 153.00
February Dues	\$ 200.00
March Dues	\$ 148.00
April Dues	\$ 78.00

Total Receipts **\$2,031.50**

Disbursements:

Catesbeiana 23(2)	\$ 346.75
Fall Workshop Postage	\$ 30.34
Dues Reminder Postcards	\$ 42.71
February 2004 Newsletter	\$ 108.73

Total Disbursements **\$ 528.53**

Balance on Hand April, 2004

\$6,427.68

Paul Sattler
Secretary/Treasurer

Dues Reminder

Membership in the Virginia Herpetological Society is on a calendar year basis (expires annually on December 31). **Check the date on your mailing label to determine the year through which you have paid dues.** Please renew now if the date shown is 2003. See the last page of this bulletin for the membership application/renewal form. Save postage by paying your dues at the Spring Meeting.

Minutes

Minutes of the VHS Fall Meeting October 25, 2003 Lynchburg, Virginia

Jason Gibson opened the meeting with requests for nominations for the three elected offices of the VHS, President, Vice President, and Secretary/Treasurer. Mike Clifford was nominated for President, Kory Steele for Vice President, and Paul Sattler for Secretary/Treasurer. All were elected to office.

The location of the 2004 Spring Survey was discussed. Several sites were brought up for consideration. The Goshen area of Rockbridge County has a Boy Scout camp and a state Wildlife Management Area. The Big Survey Wildlife Management Area in Wythe County could be revisited because of the unusually cold weather during the last survey there. Richard Bland College in the Petersburg area has extended an invitation in the past. It might be used as a one-day survey because there is not as much acreage as many other sites. Gloucester County has the advantage of Mabee's salamander. After considerable discussion, it was decided to try Halifax County as a first choice and see if there are enough accessible areas available. If not, then Gloucester County might be used as a backup.

Jason Gibson proposed the creation of a Publications Committee to oversee the writing of the Spring Survey results, and to solicit Field Notes for *Catesbeiana*. Jason Gibson will serve as the first chair of the committee. It was suggested that the *Catesbeiana* editor should set dates on the inside cover [editor's note: already listed as March 1 and September 1] of the journal for submission of articles and Field Notes. It was further suggested that the committee develop a list of names and email addresses to notify prospective authors of the due dates of Field Notes.

Several issues related to *Catesbeiana* were discussed. It was decided that *Catesbeiana* will not be reduced to one issue per year. Regarding range records, the issue of new records for Cities was discussed. Cities are not normally included as separate localities. Steve Roble prefers not to publish a City record if the surrounding county already has a voucher, but would accept longer articles that summarize the amphibians and reptiles recorded from a particular city. Steve also mentioned the idea of not

publishing county records if all of the surrounding counties already have vouchers. Records would need to be range extensions for inclusion under this suggestion. Jason brought up the point that the editor (Steve) has long argued that there are not enough Field Notes being submitted, and so questioned the rationale of discouraging Field Notes. Shelly Miller pointed out that the Virginia Department of Game and Inland Fisheries sees the value of all species records, and not just range extensions. A consensus was reached that *Catesbeiana* would be more restrictive on accepting City records [editor's note: except those that were formerly counties such as Chesapeake, Hampton, Newport News, Suffolk, and Virginia Beach], but would continue to publish all County records.

The status of the herpetology collection at the Virginia Museum of Natural History in Martinsville was discussed. The museum has been without a herpetology curator for more than a decade and as a result the collection has not been actively managed in recent years. The museum is perhaps not the best repository for county records, as had previously been VHS policy. The goal had been to attempt to keep as many county records in Virginia as possible. Also, the VHS archives deposited at the museum receive essentially no curation, amounting to little more than pictures tossed into a file cabinet drawer. It was suggested that digital photographs might be submitted to Cal Photos (web address <http://elib.cs.berkeley.edu/photos/fauna/>). They require that locality data be submitted along with all photographs, which are displayed online. The problem of not having ownership of the photos was discussed, along with what might happen if the site ever ceases to exist. It was decided that the Publications Committee could take a look into this problem. The photograph submission policy for *Catesbeiana* will be examined and eventually published in the back cover. It was suggested that the Publications Committee research the standard practices of other organizations in this regard. The question was raised as to whether the VHS needs an Archivist. There are apparently many old records that were claimed to have been vouchered, but the voucher cannot now be located. It was questioned whether specimens or photographs were ever submitted for those records. The editor of *Catesbeiana* might have to require that museum numbers be submitted before county records could be published in the future.

Minutes

Jason Gibson offered several suggestions to the incoming President, Mike Clifford:

1. Form an Educational Committee to coordinate the Teachers' Workshop held in conjunction with each Fall meeting. Carol Heiser is a good resource but needs lots of lead time with her busy schedule. The committee would need to be aware of what recertification points are, and what the criteria are for earning them. Mike Hayslett will serve on the committee as will Mike Clifford. The possibility of extending the workshop beyond teachers, to others with similar interests in herpetological education in the community was discussed.
2. Form a Fall Symposium Committee to help pick topics and solicit papers for the Fall meeting. Don Church wants to present the results of his *Ambystoma tigrinum* research at a meeting. Have a facility host to coordinate the arrangements on-site. Past sites for Fall meetings have included Maymont Park in Richmond, Three Lakes Park in the Richmond area, and Wintergreen.

After lunch, the Silent Auction brought in \$156 and the paper session included presentations from Shelly Miller on the Virginia Comprehensive Wildlife Plan, Norman Reichenbach on the Peaks of Otter Salamander, Kory Steele on improvements to the frog logger, and Tim Brophy on pond-dwelling *Eurycea bislineata*. A social followed the paper session.

Paul Sattler
VHS Secretary/Treasurer

REMINDER

If you would like to receive the next issue of the VHS Newsletter via email rather than as a printed copy, please contact Shelly Miller at smiller@dgif.state.va.us. Also send any appropriate materials for inclusion in the newsletter to Shelly Miller, Virginia Herpetological Society, 1700 Blakemore Road, Richmond, VA 23225, or via email to the address listed previously.

Virginia Herpetological Society
2004 Spring Meeting
Halifax County
Staunton River State Park and "The Cove"
property of Ward Burton Wildlife Foundation

This year's field survey will focus on "The Cove" property of the Ward Burton Wildlife Foundation in Halifax County. The Cove is among the most notable and unique natural areas in all of Virginia's long-settled southern Piedmont. Tucked inside a horseshoe bend of the Staunton (Roanoke) River, The Cove contains a mixture of pristine wetland, bottomland, and adjacent upland habitats. Visit the Ward Burton Wildlife Foundation's website for more information about The Cove at: <http://www.twbwf.org/> . **Headquarters for the meeting will be at Staunton River State Park. Field trip participants must report to the park on Friday night or before 8:00 AM on Saturday for instructions.**

VHS 2004 Spring Meeting and Survey Schedule

Friday, May 21 *W.P.* **Picnic Shelter # 1, Staunton River State Park**

3:00-7:00 PM Arrival, check-in. Picnic grills available.

7:00 PM Business meeting.
Survey planning and coordination.
GPS / map session.

Saturday, May 22

8:00 AM Convoy from Picnic Shelter #1 parking lot
to survey locations at The Cove.
Lunch in the field.

4:30 PM Re-group at vehicles; photo session #1.

5:00 PM Depart from The Cove.

5:30 -7:00 PM Dinner on your own. "Free time".

7:00 PM Reconvene at Staunton River State Park.
Survey tabulation and analysis.
Plans for Sunday morning survey.
Photo session #2.
Night survey options.

419 888 - 3pm
4pm - 3pm

48.07

Spring Meeting Announcement

Sunday, May 23

- 8:00 AM ^{3pm} Convoy from Picnic Shelter #1 parking lot to survey locations at The Cove.
- 11:30 AM Final survey tabulation and analysis.
Photo session #3.
- 12 noon Depart from The Cove.

IMPORTANT NOTE: Participants planning to arrive on Saturday morning for the survey at "The Cove" (WBWF property) **must report to the Shelter #1 parking lot at Staunton River State Park no later than 8:00 AM** for departure to the survey site. The VHS convoy will enter and exit the gated WBWF property together.

ACCOMMODATIONS:

Staunton River State Park (Highway 344, Scottsburg, VA): **434-572-4623**
Contacts: Josh Ellington, Chief Ranger
Randy Wade, Park Ranger (rwade@dcr.state.va.us)

Park Information: For directions, park maps, and other details, see:
<http://www.dcr.state.va.us/parks/staunton.htm>

Please note: There is also a Staunton River **Battlefield** State Park in Halifax County - **don't go to the wrong park!**

- No cabins are presently available for reservation at Staunton River State Park (a cancellation could be possible).
- The Society has reserved one efficiency cabin at the park for selected uses. Picnic Shelter #1 (with electrical outlet) has been reserved from 3:00-10:00 PM on Friday, May 21 for evening activities (anyone grilling dinner, the pre-survey strategy session, etc.).
- Primitive campsites may be reserved for \$18.00 per night per site (6-person maximum on each site).
- Campsites with electric and water may be reserved for \$23.00 per night per site (also with a 6-person maximum on each site).

Members/participants planning to stay Friday (and Saturday) nights should **call the state park reservation system to reserve campsites** (see details above) at **1-800-933-PARK (7275)**.

Halifax County



Motels in South Boston (18 miles from Staunton River State Park):

Holiday Inn Express 434-575-4000
 Days Inn 434-572-4941
 Quality Inn 434-572-4311

DO NOT CALL THE WARD BURTON WILDLIFE FOUNDATION for details on this event. Camping will **NOT** be permitted on "The Cove" property. Access to "The Cove" will be restricted to the VHS convoys on Saturday and Sunday mornings.

CHECK THE VHS WEB SITE for updated information on this Spring Weekend meeting at: <http://fwie.fw.vt.edu/VHS/>

Species known from Halifax County

Amphibians

<i>Ambystoma maculatum</i>	Spotted salamander
<i>Ambystoma opacum</i>	Marbled salamander
<i>Desmognathus fuscus</i>	Northern dusky salamander
<i>Eurycea cirrigera</i>	Southern two-lined salamander
<i>Eurycea guttolineata</i>	Three-lined salamander
<i>Plethodon cinereus</i>	Red-backed salamander
<i>Plethodon cylindraceus</i>	White-spotted slimy salamander
<i>Pseudotriton ruber</i>	Red salamander
<i>Acris crepitans crepitans</i>	Eastern cricket frog
<i>Bufo americanus</i>	American toad
<i>Bufo fowleri</i>	Fowler's toad
<i>Gastrophryne carolinensis</i>	Eastern narrow-mouthed toad
<i>Hyla versicolor</i>	Gray treefrog
<i>Pseudacris crucifer</i>	Spring peeper
<i>Pseudacris feriarum feriarum</i>	Upland chorus frog
<i>Rana catesbeiana</i>	American bullfrog
<i>Rana clamitans melanota</i>	Northern green frog

Reptiles

<i>Kinosternon subrubrum</i>	Mud turtle
<i>Pseudemys concinna</i>	River cooter
<i>Sternotherus odoratus</i>	Eastern musk turtle (stinkpot)
<i>Terrapene carolina</i>	Box turtle

Spring Meeting Announcement

<i>Aspidoscelis</i> (= <i>Cnemidophorus</i>) <i>séxlineatus</i>	Six-lined racerunner
<i>Eumeces fasciatus</i>	Five-lined skink
<i>Eumeces laticeps</i>	Broad-headed skink
<i>Sceloporus undulatus hyacinthinus</i>	Northern fence-lizard
<i>Agkistrodon contortrix mokasen</i>	Northern copperhead
<i>Carphophis amoenus amoenus</i>	Eastern wormsnake
<i>Coluber constrictor constrictor</i>	Northern black racer
<i>Diadophis punctatus</i>	Ring-necked snake
<i>Elaphe guttata guttata</i>	Corn snake
<i>Elaphe obsoleta obsoleta</i>	Black ratsnake
<i>Heterodon platirhinos</i>	Eastern hog-nosed snake
<i>Lampropeltis calligaster rhombomaculata</i>	Mole kingsnake
<i>Opheodrys aestivus</i>	Rough greensnake
<i>Tantilla coronata</i>	Southeastern crowned snake
<i>Thamnophis sirtalis sirtalis</i>	Eastern gartersnake

Species known from adjacent counties that are likely or possible at "The Cove"

Amphibians

<i>Ambystoma talpoideum</i>	Mole salamander
<i>Hemidactylum scutatum</i>	Four-toed salamander
- <i>Notophthalmus viridescens</i>	Red-spotted newt
<i>Pseudotriton montanus</i>	Mud salamander
<i>Hyla chrysoscelis</i>	Cope's gray treefrog
- <i>Rana palustris</i>	Pickerel frog
- <i>Rana sphenoccephala</i>	Southern leopard frog
<i>Scaphiopus holbrookii</i>	Eastern spadefoot

Reptiles

<i>Chelydra serpentina</i>	Snapping turtle
- <i>Chrysemys picta</i>	Painted turtle
<i>Eumeces inexpectatus</i>	Southeastern five-lined skink
<i>Scincella lateralis</i> -	Little brown skink
<i>Cemophora coccinea copei</i>	Northern scarletsnake
<i>Lampropeltis getula getula</i>	Eastern kingsnake
<i>Lampropeltis triangulum triangulum</i>	Eastern milksnake
<i>Nerodia sipedon sipedon</i>	Northern watersnake
<i>Regina septemvittata</i>	Queen snake
<i>Storeria dekayi dekayi</i>	Northern brownsnake
<i>Storeria occipitomaculata occipitomaculata</i>	Northern red-bellied snake
<i>Thamnophis sauritus sauritus</i>	Eastern ribbonsnake
<i>Virginia valeriae valeriae</i>	Eastern smooth earthsnake

MEMBERSHIP APPLICATION

I wish to _____ initiate _____ renew membership in the Virginia Herpetological Society for the year _____ 2004 _____ 2005 _____ 2006.

Name _____

Address _____

_____ Phone _____

email address: _____

Dues Category: _____ Regular (\$15.00)

_____ Family (\$20.00)

_____ Under 18 (\$8.00)

_____ Life (\$225.00)

Interests: _____ Amphibians _____ Reptiles

_____ Distribution _____ Research

_____ Captive Husbandry

_____ Specifically _____

Make checks payable to the Virginia Herpetological Society and send to:
Dr. Paul Sattler, VHS Secretary/Treasurer, Department of Biology,
Liberty University, 1971 University Blvd., Lynchburg, VA 24502

Visit the VHS web site at: <http://fwie.fw.vt.edu/VHS/>

Field Notes

The field notes section of *Catesbeiana* provides a means for 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 topics are welcomed. Field Notes will usually concern a single species. The format of the reports is: scientific name (followed by common name in parentheses), state abbreviation (VA), county and location, date(s) of observation, observer(s), data, and observations. The name(s) and address(es) of the author(s) should appear one line below the report. Consult the editor if your information does not readily fit this format. **All field notes must include a brief statement explaining the significance of the record** (e.g., new county record) **or observation** (e.g., unusual or rarely observed behavior, extremely early or late seasonal record, abnormal coloration, etc.). Submissions that fail to include this information are subject to rejection. Relevant literature should be cited in the body of the text (see Field Notes in this issue for proper format). All submissions will be reviewed by the editor (and one other person if deemed necessary) and revised as needed pending consultation with the author(s).

If the field note contains information on a **new county (or state) record**, **verification is required in the form of a voucher specimen** deposited in a permanent museum (e.g., Virginia Museum of Natural History) or a **photograph** (print, slide, or digital image) **or recording** (cassette tape or digital recording of anuran calls) deposited in the archives of the Virginia Herpetological Society. Photographs and recordings should be sent to the editor for verification and archiving purposes; the identity of voucher specimens must be confirmed by a museum curator or other qualified person. Include the specimen number if it has been catalogued. Prospective authors of distribution reports should consult Mitchell and Reay (1999. *Atlas of Amphibians and Reptiles in Virginia*), Mitchell (1994. *The Reptiles of Virginia*), Tobey (1985. *Virginia's Amphibians and Reptiles: A Distributional Survey*) and other recent literature to determine if they may have a new county record. New distribution records from large cities that formerly constituted counties (Chesapeake, Hampton, Newport News, Suffolk, and Virginia Beach) are acceptable, but records from smaller cities located within the boundaries of an adjoining county will only be published if the species has not been recorded from that county. Species identification for observational records (e.g., behavior) should be verified by a second person whenever possible.

PHOTOGRAPHS

High contrast photographs (prints, slides, or digital images) of amphibians and reptiles will be considered for publication if they are of good quality and are relevant to an accompanying article or field note. Prints should be on glossy paper and no larger than 5 x 7 inches. Published photographs will be deposited in the archives of the Virginia Herpetological Society.