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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.

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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 considerations 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 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, 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 state park or county, should be prepared in article rather than field note format. Articles will be refereed by the editor and at least one other qualified reviewer. All changes must be approved by the author before publication; therefore, manuscripts must be received by the editor before the first of March and September to be considered for publication in the spring or fall issue, respectively, of *Catesbeiana*. 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)

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Next Meeting
October 28, 2000
Trillium House, Wintergreen Resort
See page 93 for details

Spotted Salamander



Chris Chewning

2/15/00

Spotted Salamander (*Ambystoma maculatum*). Drawing by
Chris Chewning, 7th grade student at Pocahontas Middle School,
Powhatan, Virginia.

A Preliminary Survey of Amphibians and Reptiles of Savage Neck Dunes Natural Area Preserve, Northampton County, Virginia

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The Virginia Department of Conservation and Recreation (DCR) maintains a system of natural area preserves (NAP) that currently includes 29 preserves encompassing 15,841 acres (6,413 ha). Most (22) of the preserves are owned and managed by DCR, while the others are owned by local governments, universities, private conservation organizations, or private citizens, and managed cooperatively with DCR. Primary funding for the purchase of the state-owned preserves came from a bond referendum that was approved by the citizens of the Commonwealth in 1992. The primary purpose of the natural area preserves is to protect and perpetuate unique natural communities and rare species of plants and animals.

Baseline surveys for amphibians and reptiles on all of the NAPs are necessary to allow for the inclusion of these taxa in future natural resource management plans. This paper provides a summary of the amphibians and reptiles that we recorded during a preliminary faunal survey conducted at the Savage Neck Dunes NAP in Northampton County on the Eastern Shore of Virginia.

The herpetofauna of the Virginia portion of the Delmarva Peninsula, and the Virginia barrier islands, has been discussed by Conant (1945), Reed (1957), Conant et al. (1990), Mitchell and Anderson (1994), and Mitchell (1999). Distributional records for the Eastern Shore were also mapped by Tobey (1985), Mitchell (1994), and Mitchell and Reay (1999). However, none of these publications included records specifically from the Savage Neck area. The known herpetofauna of the Eastern Shore includes 19 amphibians (14 anurans [frogs and toads], 5 salamanders) and 28 reptiles (12 turtles, 4 lizards, and 12 snakes); all but eight of these species have been recorded from Northampton County (Mitchell, 1999). The overall species diversity of amphibians and reptiles on the Eastern Shore of Virginia is lower than in the Maryland and Delaware portions of the Delmarva Peninsula (Mitchell, 1999).

Study Area

Savage Neck Dunes NAP is on the bayside of Northampton County, 5-6 km N of Cape Charles and ca. 6 km SW of Eastville. It is located on a peninsula locally known as Savage Neck that lies between Cherrystone Inlet and the Chesapeake Bay (Figure 1). The NAP was established in April 1998 with the purchase of 148 acres (60 ha); an adjoining 151 acres (61 ha) were purchased in December 1999, increasing the total preserve size to 299 acres (121 ha).

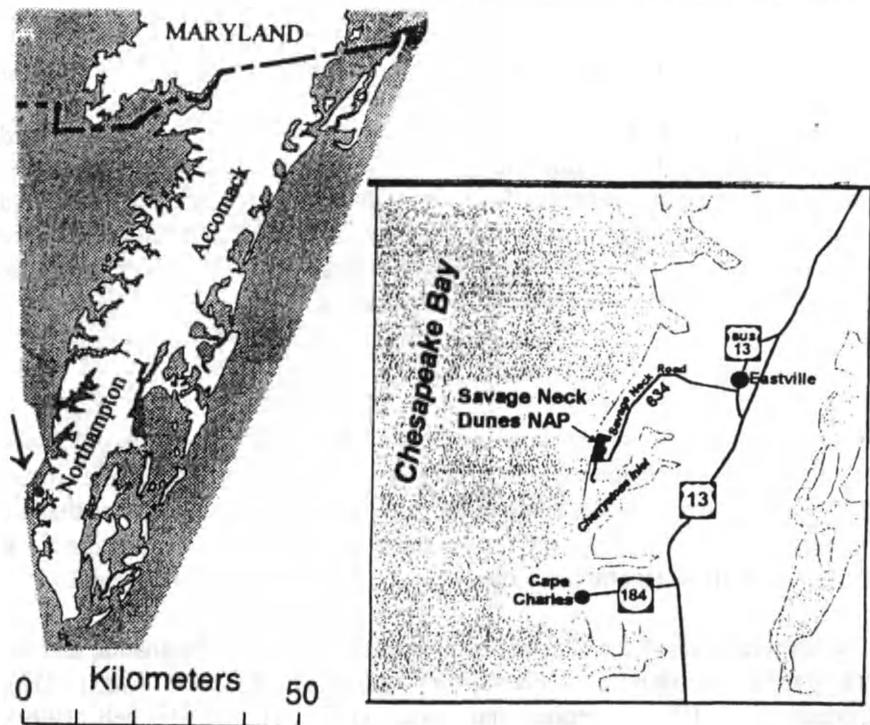


Figure 1. Left: location of Savage Neck Dunes Natural Area Preserve (arrow and dot) on the Eastern Shore of Virginia; right: closeup of Savage Neck area.

Savage Neck Dunes NAP includes nearly one mile (ca. 1.5 km) of unspoiled, sandy beach and primary dunes, as well as extensive Holocene age (2,000-5,000 years B.P.) back dunes that rise 30-50 feet (10-15 m) above sea level. There are no salt marshes, streams or springs on the preserve, but a complex of four, freshwater interdunal ponds (Odum and Harvey, 1988) ranging in size

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from about 0.3 to 7 acres (0.1-2.8 ha), is present in the northern portion of the preserve. These ponds represent a very rare natural community type in Virginia, and are thought to have been formed by shifting sands that blocked a former bay inlet. The ponds are behind the high dunes, 200-300 m inland from the Chesapeake Bay. Water levels of the three smallest ponds (ca. 0.3, 1.0, and 1.6 acres) vary considerably throughout the year, reflecting seasonal fluctuations in the groundwater table and precipitation. The size and level of all three ponds dropped considerably from April to August 1999, but heavy rainstorms associated with two hurricanes (Dennis and Floyd) later in the fall refilled the ponds. Vegetation in these ponds includes red maple (*Acer rubrum*), sweet gum (*Liquidambar styraciflua*), black willow (*Salix nigra*), black gum (*Nyssa sylvatica*), buttonbush (*Cephalanthus occidentalis*), swamp loosestrife (*Decodon verticillatus*), and swamp dock (*Rumex verticillatus*), as well as various sedges, rushes, and grasses. The pond surfaces are mostly covered by duckweed (Lemnaceae) and algae. The only fish known to inhabit these ponds are mosquitofish (*Gambusia holbrooki*).

The largest pond, which is known locally as Custis Pond, appears to be permanent and fluctuates relatively little. It has three long arms that extend out from a large central area. Custis Pond is about 200 m N of the nearest smaller pond. Man-made ditches traverse portions of the property and also have connections to several of the ponds. Presumably, the ditches were originally constructed to drain land for agricultural purposes. They may have also been used for irrigation. The age of the ditches is unknown to us, but may date back more than a century. Slightly more than half (84 acres) of the land added to the preserve in late 1999 consists of agricultural fields, which will eventually be restored to natural habitats.

Sandy soils dominate the entire preserve, which is characterized by xeric loblolly pine (*Pinus taeda*) and mixed pine-hardwood forests. Most of the preserve, particularly the extensive, vegetated dune system, is classified as maritime pine forest, a rare natural community type in Virginia. Besides loblolly pine, wax myrtle (*Myrica cerifera*) and sand-heather (*Hudsonia tomentosa*) are common in portions of the dunes. Lowlands extending from the inland edge of the dunes eastward to the agricultural fields are primarily mixed pine-hardwood forest. This appears to be a formerly disturbed habitat (probably abandoned agricultural fields); all of the ditches occur within this habitat. Typical trees in this forest include sweet gum, red maple, American

holly (*Ilex opaca*), and oaks (*Quercus* spp.). Sassafras (*Sassafras albidum*) and persimmon (*Diospyros virginiana*) are also present, especially near the dunes. Greenbrier (*Smilax* spp.) and poison ivy (*Toxicodendron radicans*) are common to abundant understory species in the lowland forest.

Several rare plant species, as well as the federally threatened northeastern beach tiger beetle (*Cicindela dorsalis dorsalis*) have been documented on the preserve. Savage Neck Dunes NAP is not currently open to the public except for guided tours during the annual (early October) Eastern Shore of Virginia Birding Festival or by special arrangement with the Chesapeake Bay regional stewardship biologist for DCR.

Materials and Methods

We made observations on the herpetofauna inhabiting Savage Neck Dunes NAP while conducting general zoological surveys of the property. Our surveys were primarily focused on attempting to document rare animal species (both vertebrates and invertebrates) on the preserve, rather than amphibians and reptiles in particular. Sampling was conducted during October 1998 and at monthly intervals from April 1999 to October 1999. All visits consisted of 2-day trips for a total of 16 sampling dates. Our surveys encompassed only the original 60 ha tract, including the three smaller interdunal ponds, except for brief visual surveys of Custis Pond in late September 1999, when permission was first obtained to access this pond. An effort was made to sample all available habitat types at least once.

Male vocalizations and visual observations were used to document frogs and toads. Tadpoles and aquatic salamanders were sampled with minnow traps, bottle traps, and dipnets. Aquatic salamanders were also sought by examining debris and substrates in shallow ditches. Terrestrial salamanders were found by overturning cover objects. Survey techniques for turtles were limited to visual observations and dipnetting. Future surveys for turtles, particularly at Custis Pond, will include traps and hoop nets. Snakes and lizards were documented only by incidental visual observation; they were not actively sought. Photographs were taken of most species; a few voucher specimens were also collected. Several short drift fences (5-10 m) with pitfall traps (Gibbons and Semlitsch, 1982) were erected in maritime pine forest, primary dunes, and near the interdunal ponds.

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Results

We recorded ten species of amphibians (3 salamanders, 7 anurans) and seven species of reptiles (3 turtles, 1 lizard, and 3 snakes) on Savage Neck Dunes NAP. No rare species of herps were documented, but one notable range extension, constituting a new county record, was obtained. Several other species were recorded in Northampton County for only the second or third time. The following annotated checklist briefly summarizes our findings.

Amphibians

1. *Ambystoma opacum* (Marbled salamander)

Marbled salamanders are rare on the Eastern Shore of Virginia, where they have been recorded only from one site in northeastern Accomack County (Tobey, 1985; Mitchell and Reay, 1999). This species is widespread and common further north on the Delmarva Peninsula (Conant, 1945). We dipnetted several mature larvae in a heavily vegetated, open canopy, one acre interdunal pond on 21-22 April 1999; one of these larvae was retained and transformed on 2 May. Three recent metamorphs were also captured between 20 May and 23 June at drift fences placed near the ponds.

Our discovery of a population of marbled salamanders at Savage Neck Dunes NAP is the first record for Northampton County and represents a significant southern range extension for this species on the Delmarva Peninsula. The lone Accomack County record is based on a specimen (Los Angeles County Museum of Natural History # 288) collected by H. D. Hoese on 6 June 1961 from a site 1.5 mi (2.4 km) S of Mappsville (J. C. Mitchell, pers. comm.), which is approximately 70 km NNE of Savage Neck.

2. *Notophthalmus viridescens viridescens* (Red-spotted newt)

Tobey (1985) plotted three sites for newts in Northampton County, all along the byside. Mitchell and Reay (1999) mapped two sites in this county, only one of which appears to coincide with Tobey's sites. We found adult newts at Savage Neck Dunes NAP in and near the three interdunal ponds, but in low abundance. Six efts (all recent metamorphs) were captured between 28 July and 23 September at the drift fences placed near the ponds.

3. *Plethodon cinereus* (Red-backed salamander)

This species is widely distributed on the Eastern Shore of Virginia (Tobey, 1985; Mitchell and Reay, 1999), and is the only salamander recorded from a barrier island in the state (Conant et al., 1990; Mitchell and Anderson, 1994). We found several specimens under logs on the natural area preserve.

4. *Bufo fowleri* (Fowler's toad)

Fowler's toad is widely distributed on the Eastern Shore of Virginia, including the barrier islands (Tobey, 1985; Conant et al., 1990; Mitchell and Anderson, 1994; Mitchell and Reay, 1999). This species is the most widespread amphibian on Savage Neck Dunes NAP, where we found adults and juveniles in a variety of habitat types, including sand dunes, xeric pine forests, mixed pine-hardwood forests, and interdunal ponds. Four specimens were captured at drift fences placed in the maritime pine forest, several hundred meters from the interdunal ponds.

5. *Acris crepitans crepitans* (Eastern cricket frog)

Mitchell and Reay (1999) plotted only two Northampton County records for cricket frogs. We found this species commonly in and near ditches in the lowland portion of the preserve, as well as at the interdunal ponds. Adults and juveniles were particularly abundant in late summer and early fall around the margins of the drawn-down ponds.

6. *Pseudacris crucifer crucifer* (Northern spring peeper)

Tobey (1985) and Mitchell and Reay (1999) plotted four and two sites, respectively, for this species in Northampton County. We heard spring peepers calling from ditches and interdunal ponds at Savage Neck Dunes NAP. A chorus of 30-50 males was heard on 21 April 1999 at the ponds; a few scattered males were also calling from ditches on that date. Tadpoles were abundant on 22 April at a heavily vegetated, open canopy, one acre pond.

7. *Gastrophryne carolinensis* (Eastern narrow-mouthed toad)

We did not detect this species during our visual or auditory surveys of the

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preserve. However, one specimen was captured at a drift fence placed near the interdunal ponds. Tobey (1985) and Mitchell and Reay (1999) plotted one site for this species in Northampton County near Savage Neck. The species is unreported from Accomack County, and was unknown from the entire Delmarva Peninsula until the last half-century (Conant, 1945).

8. *Rana catesbeiana* (American bullfrog)

Mitchell (1999) listed this species as confirmed for Northampton County, but there are no mapped records in Tobey (1985) or Mitchell and Reay (1999). Apparently, Savage Neck Dunes NAP is the first reported locality for bullfrogs in the county. We found this species to be relatively common in and near ditches and interdunal ponds on the natural area preserve. Tadpoles were dipnetted at one pond. Future surveys at Custis Pond may reveal that this species is more common there. One subadult was found on 26 August in maritime pine forest, several hundred meters from the nearest wetland.

9. *Rana clamitans melanota* (Northern green frog)

Mitchell and Reay (1999) plotted six sites for this species in Northampton County. We observed adults, juveniles, and tadpoles at Savage Neck Dunes NAP, primarily at the interdunal ponds. Our observations indicate that green frogs and bullfrogs are more common than leopard frogs on the preserve.

10. *Rana sphenocephala* (Southern leopard frog)

We recorded leopard frogs only at the interdunal ponds, and primarily at the heavily vegetated, open canopy pond. Only three males were calling at this pond on the night of 21 April 1999. Three specimens were captured at drift fences near the ponds. Tobey (1985) and Mitchell and Reay (1999) plotted three and five sites, respectively, for this species in Northampton County.

Reptiles

11. *Chrysemys picta picta* (Eastern painted turtle)

Mitchell and Reay (1999) plotted two sites for painted turtles in Northampton County, whereas Mitchell (1994) reported three records. We observed a few

basking individuals at each of the three smaller ponds (up to 5 per pond) and also dipnetted several specimens, including subadults. SMR observed at least 25 painted turtles basking at Custis Pond on 23 September 1999; future trapping at this pond will likely document a large population of this species. Custis Pond is undoubtedly the source population for the smaller numbers of painted turtles observed at the three, nearby smaller ponds.

12. *Pseudemys rubriventris* (Red-bellied turtle)

Only one previous locality in Northampton County (southeast of Savage Neck) has been documented for this species (Mitchell, 1994; Mitchell and Reay, 1999). We observed 1-3 basking adults at the largest of the three small interdunal ponds on several dates, plus at least 10 at Custis Pond on 23 September 1999. Trapping at Custis Pond may reveal that it is inhabited by a substantial population of red-bellied turtles, and that some individuals move overland from this wetland to the next largest pond (ca. 200 m distant).

13. *Terrapene carolina carolina* (Eastern box turtle)

Box turtles are common on the Eastern Shore of Virginia (Conant, 1945; Tobey, 1985; Mitchell, 1994; Mitchell and Reay, 1999). We observed several live adults plus a number of shells at Savage Neck Dunes NAP. All individuals were found in mixed pine-hardwood forest or near the ponds.

14. *Eumeces fasciatus* (Five-lined skink)

Tobey (1985) and Mitchell (1994) reported two (unvouchered) sites for this species in Northampton County, whereas Mitchell (1999) and Mitchell and Reay (1999) indicated that it was unrecorded for this county. There are several vouchered records for Accomack County (Mitchell, 1994). We captured a juvenile at Savage Neck Dunes NAP on 28 July 1999 (specimen not retained); another possible sighting was made by AKF on 20 May.

15. *Coluber constrictor constrictor* (Northern black racer)

We did not encounter this species during our surveys, but Jennifer Allen observed a racer (ca. 1 m total length) during late afternoon on 22 April 1999 on a sunny, dry, exposed site adjacent to a log on a high sand dune. This

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species has been recorded more often in Accomack than Northampton County (Tobey, 1985; Mitchell, 1994; Mitchell and Reay, 1999).

16. *Elaphe obsoleta obsoleta* (Black ratsnake)

This species is common on the Eastern Shore of Virginia (Tobey, 1985; Mitchell, 1994; Mitchell and Reay, 1999). Our only record was obtained on 10 October 1998, when SMR observed an adult (ca. 1.3 m total length) moving out of the agricultural fields across Co. Rte. 634.

17. *Heterodon platirhinos* (Eastern hognose snake)

Tobey (1985) and Mitchell and Reay (1999) each plotted one (different) locality for this species in Northampton County (one site is just north of Savage Neck), whereas Mitchell (1994) plotted both records, the second of which is on Hog Island (Conant et al., 1990). We observed juvenile hognose snakes at Savage Neck Dunes NAP on 11 October 1998 and 27 August 1999; both were in semi-open areas of the maritime pine forest. The former individual exhibited the death feigning display to a captivated audience of participants of the Eastern Shore of Virginia Birding Festival. The latter specimen was photographed. ACC has also observed this species at Kiptopeke State Park, ca. 17 km S of Savage Neck Dunes NAP along the bayside.

Discussion

The herpetofauna of Savage Neck Dunes NAP appears to be rather depauperate, and not unlike that found on the Virginia barrier islands (Conant et al., 1990; Mitchell and Anderson, 1994). We believe the amphibian fauna of the preserve is rather well documented, whereas the reptile fauna may be substantially more diverse than is currently known. In particular, our methods undersampled the lizards and snakes, and more focused surveys are likely to yield records of several additional species. Mitchell (1999) reported a number of amphibians and reptiles from the Eastern Shore of Virginia that may occur on Savage Neck Dunes NAP but were not found during our preliminary survey (Table 1). These species include *Chelydra serpentina* (snapping turtle), *Clemmys guttata* (spotted turtle), and *Kinosternon subrubrum* (eastern mud turtle); at least the former probably inhabits the interdunal ponds. Several anurans that we failed to find on the preserve have been

recorded from sites near Savage Neck, including *Hyla chrysoscelis* (Cope's gray treefrog), *Hyla cinerea* (green treefrog), and *Scaphiopus holbrookii* (eastern spadefoot).

The interdunal ponds are the most important habitat on the natural area preserve for the majority of the herpetofauna (11 of 17 species), including 9 of 10 amphibians. In particular, the heavily vegetated, open canopy, one acre pond appears to provide critical habitat for many species. The smallest pond is shaded and cold and inhabited by few species, whereas the 1.6 acre pond has little emergent vegetation, thus apparently reducing its attractiveness to amphibians in comparison with the intermediate-sized pond. Future surveys should evaluate the importance of Custis Pond, which is by far the largest interdunal pond on the preserve, to the local herpetofauna, particularly turtles. The ditches in the lowland portion of the preserve have transported fertilizers and other chemicals directly into the interdunal ponds (presumably for decades), resulting in noticeable eutrophication of these rare natural communities. With the recent cessation of agricultural practices in the immediate vicinity of the ponds, resource managers should consider whether and how to restore the natural hydrology and chemistry of the ponds.

Acknowledgments

Jennifer Allen provided assistance in the field and contributed the *Coluber* sighting. Joe Mitchell provided detailed collection data for the Accomack County record of *Ambystoma opacum*.

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Table 1. Confirmed and possible herpetofauna of Savage Neck Dunes NAP.

Species	Confirmed	Possible
Anurans		
<i>Bufo fowleri</i>	x	
<i>Acris crepitans</i>	x	
<i>Hyla chrysoscelis</i>		x
<i>Hyla cinerea</i>		x
<i>Pseudacris crucifer</i>	x	
<i>Pseudacris feriarum (kalmi)</i>		x
<i>Scaphiopus holbrookii</i>		x
<i>Rana catesbeiana</i>	x	
<i>Rana clamitans</i>	x	
<i>Rana sphenocephala</i>	x	
<i>Gastrophryne carolinensis</i>	x	

Table 1. (continued)

Species	Confirmed	Possible
Salamanders		
<i>Ambystoma opacum</i>	x	
<i>Hemidactylium scutatum</i>		x
<i>Plethodon cinereus</i>	x	
<i>Notophthalmus viridescens</i>	x	
Turtles		
<i>Chelydra serpentina</i>		x
<i>Chrysemys picta</i>	x	
<i>Clemmys guttata</i>		x
<i>Malaclemys terrapin</i>		x
<i>Pseudemys rubriventris</i>	x	
<i>Terrapene carolina</i>	x	
<i>Kinosternon subrubrum</i>		x
Lizards		
<i>Sceloporus undulatus</i>		x
<i>Eumeces fasciatus</i>	x	
<i>Eumeces laticeps</i>		x
<i>Scincella lateralis</i>		x
Snakes		
<i>Carphophis amoenus</i>		x
<i>Coluber constrictor</i>	x	
<i>Elaphe obsoleta</i>	x	
<i>Heterodon platirhinos</i>	x	
<i>Lampropeltis getula</i>		x
<i>Nerodia sipedon</i>		x
<i>Opheodrys aestivus</i>		x
<i>Storeria dekayi</i>		x
<i>Thamnophis sauritus</i>		x
<i>Thamnophis sirtalis</i>		x
Amphibians	10	5
Reptiles	7	14
Total herps	17	19

New Records for *Gastrophryne carolinensis* in Pittsylvania County

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The eastern narrow-mouthed toad, *Gastrophryne carolinensis* (Holbrook), is known to be generally distributed and often very abundant in the Virginia Coastal Plain (Tobey, 1985: 62; Mitchell and Reay, 1999: 30). There are also a number of records of the species scattered across the Piedmont south of the James River, but the inland limits of the range in this physiographic province remain undefined to date because of the paucity of local data. The present account contributes an element of precision in this context for a small segment of the western periphery of the Piedmont.

For the past decade I have conducted fairly extensive field work in Pittsylvania County, usually in search of arthropods and mollusks, but always alert for vocalizing or road-killed frogs. One result of this attention has been the discovery of *Gastrophryne* populations in two widely separated areas of Virginia's largest county (Figure 1). The lack of any indication of this animal's presence in the northwestern half of the county during the same time period is taken to be valid data for deducing distributional limits at this inlandmost presence of the species in the Virginia Piedmont.

The initial discovery of *Gastrophryne* in this area of Virginia was made by J. C. Mitchell and C. A. Pague during field surveys for breeding choruses of the *Hyla versicolor* complex. On 11 July 1980, males of *G. carolinensis* were detected vocalizing along with the hylids at a site bordering Co. Rte. 610, 1.3 mi (2.1 km) north of Aiken Summit, Henry County, Virginia, (J. C. Mitchell, pers. comm.). This locality is mapped on page 30 of the recent distribution atlas by Mitchell and Reay (1999) and labeled as site 1 on the accompanying figure.

Since the early 1990s, I have encountered *Gastrophryne* at a number of localities (sites 2-5 on map) within a 2-3 km radius of the Cascade Post Office (= jct. Pittsylvania Co. Rtes. 622 x 859), particularly along Co. Rtes. 856 and 859 leading south into North Carolina. On warm summer nights, calling

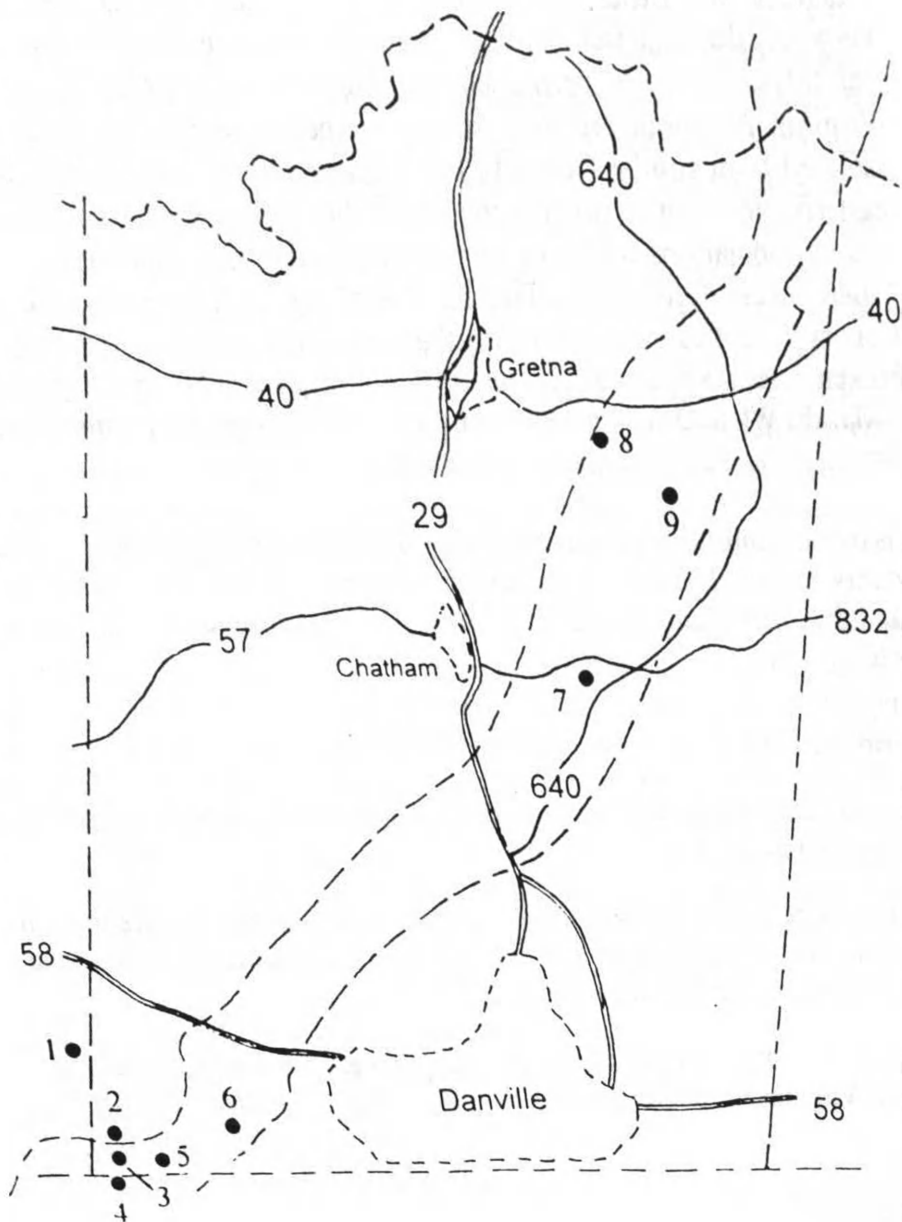
males are frequently heard in this flat, often marshy region, and a distressing number of crushed bodies occur on these two roads following rains. One of the latter, found on the unnumbered North Carolina continuation of Rte. 856 about 30 m south of the state line (thus northern suburbs of Draper; site 4) is deposited in the North Carolina State Museum of Natural Sciences. Another specimen that was found alive on Rte. 859, 1 km south of the Cascade Post Office, on 25 May 1990 is preserved as VMNH 159 (site 5). An additional voice record was made for a small roadside pond on Co. Rte. 863, 3 mi /5 km SW jct. U.S. Rte. 58 (site 6).

A second, more recently discovered region of occurrence for *Gastrophryne* is in the north-central part of the county, east of Chatham and Gretna, in the Banister River basin. Single calling males have been noted for sites 7 (Co. Rte. 649, 1 km SE jct. with Co. Rte. 832) and 8 (Co. Rte. 685 at Chalk Level, 1 km S jct. Va. Rte. 40). A very substantial population of *Gastrophryne* exists in the Banister River floodplain where it is traversed by Co. Rte. 686 (site 9; "Markham" on the DeLorme map, p.28). On 14 July 2000, on a rainy night following a day of afternoon thunderstorms, I heard what is surely the largest chorus in my experience, giving the impression of scores of calling males. Arrangements have been made with the property owner to install pitfalls during the 2001 season, a proven way to obtain voucher specimens.

 Fig. 1. Distribution records for *Gastrophryne carolinensis* in Pittsylvania and adjacent Henry counties. The extent of Triassic outcrops is indicated by the two subparallel, NE-SW broken lines. Numbers refer to the following local sites:

- 1.) Co. Rte. 610, 2.1 km N of Aiken Summit;
- 2.) off Co. Rte. 856, 3.5 km SE of Aiken Summit;
- 3.) Co. Rte. 856, 1 km S jct. Co. Rte. 622;
- 4.) northern section of Draper, NC, 30 m S of Virginia state line;
- 5.) Co. Rte. 859, 1-2 km S of Cascade P.O.;
- 6.) pond beside Co. Rte. 863, 5 km SW jct. U.S. Rte. 58;
- 7.) marshy field along Co. Rte. 649, 1 km SE jct. Co. Rte. 832;
- 8.) pond beside Co. Rte. 685 at Chalk Level, 1 km S jct. Va. Rte. 40;
- 9.) Banisteria River floodplain at Co. Rte. 686 ("Markham").

Gastrophryne in Pittsylvania County



Since at least some of the Piedmont localities are on the floodplains of the James (e.g., Wingina in Nelson County) and Roanoke rivers, it is tempting to attribute them to recent upstream (inland) migration from eastern sources, but I believe that other possibilities may be considered as well. An obvious common denominator in most of the localities is the presence of suitable habitat: lowland with permanent standing water. The Triassic lowlands of the Virginia Piedmont are well known to include extensive wetland habitats isolated from similar Coastal Plain biotopes by many miles of well-drained eastern Piedmont. I suggest the possibility that many, if not most, of our inland populations of *Gastrophryne* may be Hypsithermal relicts surviving (often successfully) in the Triassic Basin. At least the known Pittsylvania County localities are confined to that geomorphic unit, as indicated by the broken lines on the map. To be sure, not all of the Triassic exposures are lowlands: White Oak Mountain, southeast of Chatham, is a prominent surface feature composed of deposits of that age.

It is by no means implied that the distribution of *Gastrophryne* in Pittsylvania County is now defined. In particular, more records may be obtained in the Dan River floodplain east of Danville as well as elsewhere in the Triassic belt itself.

Literature Cited

DeLorme Mapping Company. 1989. Virginia Atlas & Gazetteer. Freeport, Maine. 80 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, Virginia. 122 pp.

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

FIELD NOTES

Bufo americanus (American Toad). VA: Isle of Wight Co., Blackwater Ecological Preserve, 6 km S Zuni. 11 May 2000. Steven M. Roble.

Published records indicate that the American toad does not occur in extreme southeastern Virginia, where it is replaced by the southern toad (*Bufo terrestris*) (Tobey, F. J. 1985. Virginia's Amphibians and Reptiles: A Distributional Study. Virginia Herpetological Survey, Purcellville, Virginia. 114 pp.; Mitchell, J. C. and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication 1, Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). The currently known southeastern range limits for the American toad in Virginia (south of the James River) are in Prince George County (Roble, S. M. and C. S. Hobson. 1998. Records of amphibians and reptiles from Fort Lee, Prince George County, Virginia. *Catesbeiana* 18: 35-42) and at one site in southwestern Southampton County (Mitchell and Reay, op. cit.). The species is unrecorded from Isle of Wight, Surry, and Sussex counties, and the cities of Chesapeake, Suffolk, and Virginia Beach (Mitchell and Reay, op. cit.).

On the evening of 11 May 2000, I heard several dozen American toads calling at the Zuni pine barrens in Isle of Wight County; this site is within several hundred meters of the Blackwater River which forms the Isle of Wight-Southampton county line. One voucher specimen was collected and has been deposited in the Virginia Museum of Natural History (VMNH 10335). The identity of the specimen was verified by Richard L. Hoffman. This locality is ca. 50 km NE of the Southampton County site plotted by Mitchell and Reay (op. cit.). *Bufo fowleri* is the common toad of the Zuni pine barrens and was the only species of *Bufo* that I had recorded in this area during several previous visits as well as on a subsequent visit on 8-9 June 2000.

STEVEN M. ROBLE

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***Scaphiopus holbrookii* (Eastern Spadefoot).** VA: Cumberland Co., Cumberland State Forest. 4 April 2000. Jason Gibson.

At 1200 h on 4 April 2000, an adult eastern spadefoot toad was found under a log. It was in an inactive state and never exhibited any movement or other behavior. Strong thunderstorms visited this area three days earlier. The surrounding habitat includes a mixed hardwood forest (*Carpinus caroliniana*., *Carya* sp., *Cornus florida*, *Fagus grandifolia*, *Juniperus virginiana*, *Liquidambar styraciflua*, *Liriodendron tulipifera*, *Oxydendron arboreum*, *Quercus* sp. and peat moss [*Sphagnum* sp.]) and a large vernal pool. A survey of the area for other amphibians and reptiles yielded marbled and spotted salamander (*Ambystoma opacum* and *A. maculatum*) larvae, white-spotted slimy salamanders (*Plethodon cylindraceus*), and one ring-necked snake (*Diadophis punctatus*).

Cumberland County lies in the Piedmont physiographic province and has soil composed of clay. Spadefoots are typically associated with sandy soils, so observations of this species away from the Coastal Plain are important. Only one other observation of a spadefoot toad has been vouchered for Cumberland County (Tobey, F. J. 1985. Virginia's Amphibians and Reptiles: A Distributional Study. Virginia Herpetological Survey, Purcellville, Virginia. 114 pp.; Mitchell, J. C. and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication 1, Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). A slide has been sent to the Virginia Museum of Natural History.

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***Gastrophryne carolinensis* (Eastern Narrow-mouthed Toad).** VA: Lee Co., off Co. Rte. 661, ca. 10 km W Jonesville. 9 August 1995. Steven M. Roble and Christopher S. Hobson.

During the afternoon of 9 August 1995, we discovered a small breeding population of narrow-mouthed toads at a farm pond (possibly an excavated

Field Notes

sinkhole depression) in "The Cedars" region of Lee County, the westernmost county in Virginia. Freshly laid eggs were observed in the shallows of the pond. One specimen was collected from under a rock near the pond margin and has been deposited in the Virginia Museum of Natural History.

Fowler and Hoffman (1951. *Gastrophryne carolinensis carolinensis* (Holbrook) in southwestern Virginia. Virginia Journal of Science 2: 101) first found this species in Lee County nearly a half-century ago. They discovered a breeding chorus at a sinkhole pond 4.5 mi (7.2 km) west of Jonesville on 21 June 1950. However, the series of 15 specimens they collected (all found under slabs of limestone near the breeding pond) and deposited in the Academy of Natural Sciences in Philadelphia is now apparently lost (R. L. Hoffman, pers. comm.). Burger (1974. Herpetological specimens collected in Lee County, Virginia: (I) amphibians. Virginia Herpetological Society Bulletin 75: 1-2) reported that he found *G. carolinensis* in July 1958 (his voucher specimens are presumed lost, J. C. Mitchell, pers. comm.) at two sites in Lee County: pond near the Powell River close to the intersection of Co. Rte. 642 and U.S. Rte. 58, ca. 4 mi E Jonesville, and Willis Hollow, 1.5 mi NE Cumberland Gap in Cumberland Gap National Historical Park. Mitchell and Pague (1984. Reptiles and amphibians of far southwestern Virginia: report on a biogeographical and ecological survey. Catesbeiana 4(2): 12-17) noted that they failed to document *Gastrophryne* in Lee County and were unsuccessful in relocating the Powell River site because of errors in Burger's directions. This locality has not been reconfirmed to date.

Tobey (1985. Virginia's Amphibians and Reptiles: A Distributional Study. Virginia Herpetological Survey, Purcellville, Virginia. 114 pp.) plotted Burger's two sites in Lee County, but he omitted the 1950 record (per draft atlas maps in VHS archives, R. L. Hoffman, pers. comm.). None of these three records appears on the range map in the recent atlas (Mitchell, J. C. and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication 1, Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). These authors only plotted our record, noting that it is the only vouchered record for *Gastrophryne* in the upper Tennessee River drainage in Virginia, but they erroneously attributed it to a previous, unrelated report (Roble, S. M. and C. S. Hobson. 1995. Records of amphibians and reptiles from the Clinch Ranger District, Jefferson National Forest. Catesbeiana 15: 3-14). Redmond and Scott (1996. Atlas of Amphibians in

Tennessee. Miscellaneous Publication 12, The Center for Field Biology, Austin Peay University, Clarksville, TN. 94 pp.) mapped two records for this species in Sullivan County, Tennessee (borders Scott and Washington counties, Virginia, where *Gastrophryne* has not been documented), also within the upper Tennessee River drainage.

The breeding pond discovered by Fowler and Hoffman has since been destroyed and is now part of an agricultural field (R. L. Hoffman, pers. comm.). Likewise, the breeding pond that we found will likely be destroyed or severely degraded during the imminent construction of a new municipal airport for Lee County.

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***Heterodon platirhinos* (Eastern Hognose Snake).** VA: Caroline County, Route 1218 (Tinder Drive), Bowling Green. 7 May 1995. Dale L. and Gilbert Brittle.

At approximately noon on 7 May 1995, we observed four American Crows (*Corvus brachyrhynchos*) land a few feet from our car as we descended Tinder Drive. They all began watching and pecking at an unidentified object on the ground. Upon closer inspection, the object proved to be a live, melanistic phase (light gray with little evidence of any pattern) hognose snake (total length ca. 0.5 m) that was lying beside the road. After much prodding by one of us (Dale), the snake reared up, flattened its head, hissed and struck at her hand several times, before rolling over to show its light cream-gray underbelly, then rolled up in a ball and played dead. The crows watched from a distance and did not leave the area. The snake seemed unharmed by the entire affair, uncoiled itself and moved off into the woods.

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Field Notes

Clemmys insculpta (Wood Turtle). VA: Clarke-Frederick Co. line, Opequon Creek (exact location withheld due to state threatened status), 6 November 1996. Steven M. Roble, Christopher S. Hobson, and Henry A. Latimer III.

At 1230 h on 6 November 1996, we encountered a mating pair of wood turtles in Opequon Creek. Water depth was ca. 1 m and the water temperature was 9.5 C (air temperature ca. 16 C). The pair was still together when relocated at 1500 h. Ernst and McBreen (1991. *Clemmys insculpta*. Pp. 455-457 in K. Terwilliger [coordinator], Virginia's Endangered Species. McDonald and Woodward Publishing Company, Blacksburg, Virginia) and Mitchell (1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, D.C. 352 pp.) reported that the mating season of wood turtles in Virginia extends from April through September, with more matings observed in the fall than spring. Subsequently, Ernst et al. (1994. Turtles of the United States and Canada. Smithsonian Institution Press, Washington, D.C. 578 pp.) noted that McBreen had observed mating wood turtles in Virginia during December (exact site and dates not reported). Mating in northern populations of wood turtles occurs primarily from late March through May (Ernst and McBreen, op. cit.). Our report is the first published record of mating wood turtles in Virginia during November.

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Coluber constrictor constrictor (Northern Black Racer). VA: Caroline Co., Fort A.P. Hill, 6 km N Bowling Green. 26 July 2000. C. Todd Georgel and Kyle D. Walters.

Coluber constrictor is usually considered a terrestrial, wide-ranging, diurnal predator (Mitchell, J. C. 1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, D.C. 352 pp.). It is known to occasionally climb trees but only to low branches when pursued (Conant, R. and J. T. Collins. 1998. A Field Guide to Reptiles and Amphibians of Eastern and Central North America. 3rd Expanded Edition, Houghton Mifflin Co.,

Boston, MA. 616 pp.). One of us (JCM) witnessed an adult of this species climb to about 3.5 m into the highest branches of a wax myrtle tree (*Myrica cerifera*) after pursuit on the ground in False Cape State Park, Virginia Beach, Virginia on 17 May 1981. He also observed numerous captives in clusters about 2-3 m above the ground in an artificial tree at the Edisto Island Serpentarium in South Carolina on 15 July 2000. All of the black racers we have observed on Fort A.P. Hill have been on the ground or under surface cover objects (e.g., boards). Here we report on an additional instance of tree climbing by *C. constrictor*.

An adult male (1,259 mm total length, 276 g) was observed at 2000 h in a red maple tree (*Acer rubrum*) about 3 m above the ground near the junction of Cattlett Creek and Jeff Davis Road on Fort A.P. Hill. He was motionless on a branch in the center of the tree. The tree was about 10 m from a beaver-maintained wetland and bordered a tract of mixed hardwood forest. Air temperature was 17.5 C and water temperature was 21 C under partly cloudy conditions. We did not see the snake before it was observed in the tree so it did not climb there while being chased. The male did not move during the hour that it was observed. Thus, black racers use trees under some circumstances for resting places. We do not know if this snake would have remained in the tree all night or if it was using the perch as a vantage point for hunting. Additional observations of tree climbing in black racers should be reported with additional details to determine why, in addition to escape from pursuit, they rest in trees at the end of the day.

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Ambystoma opacum (Marbled Salamander). VA: Charlotte Co., Va. Rte. 92 at Roanoke (Staunton) River. 14 September 2000. Steven M. Roble.

The marbled salamander is a widespread and abundant species in Virginia (Mitchell, J. C. and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication 1, Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). It is well-known to be a fall breeder, but few specific records of migration and courtship dates have been published for the state (e.g., Dunn, E. R. 1917. The breeding habits of *Ambystoma opacum* (Gravenhorst). Copeia (43): 41-43.). On the evening of 14 September 2000, I stopped at the above location shortly after dusk to sample the local moth and caddisfly fauna. It was warm (ca. 25 C) and humid; skies were overcast and the moon (full phase) had not yet risen. It may have rained in the previous 24 h, but, if so, this was not readily apparent. While setting up one of my blacklights directly below the elevated roadway leading to the bridge, I noticed an adult male *A. opacum* at 2025 h on bare ground beside a concrete support column ca. 50 m from the river's edge. I found a second male 5-10 min later beside a blacklight trap that I had set earlier at the top of the 5-6 m high riverbank. Thinking that I might be witnessing a migration event, I proceeded to survey a swath of bare ground (condition ranged from dry dirt to sticky mud) ca. 6 m wide by 50 m long directly below the elevated highway. Five more males were found within 10-15 min, including one that only appeared during my return walk through this area. Subsequently, while returning to my vehicle along the abandoned former roadbed (parallels the current highway but is not elevated), I found still more *A. opacum*. This segment of the roadbed was completely covered with tall, dense vegetation (mostly grasses), except for sparse, fine gravel in the tire tracks (both 0.3-0.4 m wide), for most of its length, and was flooded for a short portion ca. 100 m inland from the river. I counted 11 more adult male *A. opacum* along a ca. 50 m portion of this road during a 10-15 min survey. Three of these males were within a 0.3 m section of one tire track and two pairs of males were within a body length or two of one another. One of the male-male pairs briefly engaged in nudging behavior, with each male using his snout to aggressively push the other male on his side near the foreleg.

In total, I observed 18 male *A. opacum* during ca. 25 min of rather casual and very limited survey effort. Fifteen of the males were walking or heading to the west, with the other three facing east. I did not find any females nor did I

attempt to locate a nearby breeding site, but I presume there are vernal pools in the floodplain of the Roanoke River near the bridge. Males of this species are known to precede females to breeding sites (Petranka, J. W. 1998. Salamanders of the United States and Canada. Smithsonian Institution Press, Washington, D.C. 587 pp.), suggesting that I was witnessing the first stage of migration by this local population. Because few insects were being attracted to my lights, I shut them down by 2115 h and departed the area. Later that night it rained in the Richmond area, but I do not know if this was also true for southwestern Charlotte County.

I believe it is very likely that more intensive searching, or the presence of a drift fence-pitfall trap setup, would have revealed dozens, if not hundreds, of migrating *A. opacum* at this site on this evening. Curiously, no *A. opacum* were observed crossing Route 92 during my approach to the site nor were any seen upon my departure. Ironically, although construction of the elevated highway may have impacted the river floodplain and portions of the habitat used by this local population of *A. opacum*, vehicle-induced mortality may now be greatly reduced compared to that experienced under the previous highway alignment.

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Errata

The paper by Robert S. Greenlee and Michael J. Pinder entitled "Reptile and Amphibian Survey of Prince Edward-Gallion State Forest, Sailor's Creek Historical State Park, Twin Lakes State Park, and the Boswell Tracts" that appeared in *Catesbeiana* 20(1): 3-22 contains the following errors:

The measurements for carapace length (CL) and plastron length (PL) are reversed in all of the turtle species accounts, including Tables 1, 2, and 3. The snapping turtle weight listed as 350 g is erroneous. Also, note that TL was used as an abbreviation for total length in the reptile accounts, rather than tail length (as is more customary).

President's Corner

I intend for this to be a very short and to-the-point President's Corner. However, there are a few items I would like to address herein:

The VHS 2000 spring meeting (in spite of minor technicalities) and survey were fantastic successes. The torrential rains on that Friday night, while squelching any ideas of camping, brought out an unimaginable abundance of anurans. While Saturday's overcast, cool conditions limited the activity, and therefore observations, of snakes, the overall success of the survey goes without question. Judging from an initial review of the data sheets and a check of Mitchell and Reay (1999), it appears a number of county records are in the offing. I am hopeful that abundant, quality slides/photos were captured. As Jason Gibson and I prepare to publish the survey results we will be contacting those group leaders with potential county records listed on their survey data sheets to verify that slide/photo vouchers are available.

The fall meeting and Teachers' Workshop to be held at Wintergreen Nature Foundation are shaping up nicely. Be sure to set your schedule to join your fellow herpetologists at lovely Wintergreen Resort on Saturday October 28th. Particular thanks to VHS President-elect Jason Gibson and VHS member Carol Heiser for their work developing and organizing another quality workshop.

Lastly, I would like to announce proposed changes to the VHS constitution. As discussed at the Spring 2000 meeting, I am proposing to change the structure of the VHS executive committee. The proposal includes a 2-year term for President, a 2-year term for Vice-President, and a 2-year term for Secretary/Treasurer. This replaces the office of President-elect with that of Vice-President. The Vice-President will be required to serve only 2 years, as opposed to the 6-year commitment of President-elect. The proposed wording of the constitutional change will be discussed at the fall 2000 meeting, the final draft of the proposed constitutional change will be published in the spring 2001 VHS Newsletter, and a vote on the change will be taken at the Spring 2001 meeting. This process will allow the changes to take effect prior to the fall 2001 VHS elections.

I hope you all have had many opportunities over the past few months to get out and observe the diverse abundance of herpetofauna found in Virginia, and I look forward to seeing you at Wintergreen on October 28.

Bob Greenlee, VHS President

Minutes from the VHS Spring Meeting

May 19, 2000, White Stone, Virginia

The meeting began with distribution of the meeting agenda and call to order by VHS President Bob Greenlee. Thirty-seven members were present. The minutes from the Fall 1999 meeting were approved as published in issue 20(1) of *Catesbeiana*. Steve Roble gave the *Catesbeiana* editor's report. There were 180 copies of issue 20(1) printed at a cost of \$478.30; 164 were mailed at a cost of \$125.15 and several others were hand delivered. At 60 pages, issue 20(1) was the largest *Catesbeiana* published to date. Steve asked members to continue sending in articles and artwork. Newsletter report: There were 175 Newsletters mailed at a cost of \$63 and 8 others hand-delivered for a total of 183 sent out.

Bumper stickers: Faye Ferrall is investigating the cost and redesign of a new VHS bumper sticker. The cost will be highly dependent upon the number printed. Faye is also looking into the feasibility of a window sticker.

Website: John White has now taken responsibility for the VHS website. John requests pictures of the following species for use on the website: *Desmognathus fuscus*, *Pseudotriton m. montanus*, *Pseudotriton r. ruber*, *Siren intermedia*, *Siren lacertina*, *Acris c. crepitans*, *Gastrophryne carolinensis*, *Hyla femoralis*, *Pseudacris brimleyi*, *Pseudacris feriarum*, *Rana sphenoccephala*, *Rana virgatipes*, *Kinosternon s. subrubrum*, *Malaclemys t. terrapin*, *Cnemidophorus s. sexlineatus*, *Eumeces fasciatus*, *Eumeces inexpectatus*, *Ophisaurus attenuatus longicaudus*, *Scincella lateralis*, *Cemophora coccinea copei*, *Farancia e. erytrogramma*, *Lampropeltis t. triangulum*, *Storeria o. occipitomaculata*, *Virginia v. valeriae*. If you have good quality pictures of any of the above, please email them to John at the Website (<http://vhsociety.home.mindspring.com/>). When asked about how many new members were attracted through the webpage, Shay Garriock estimated about 10 over the last two years.

New Business: Reorganization of VHS Officers: Bob Greenlee proposed that the term of office for all three elected officers be modified to two years each, with the President-Elect position being changed to a Vice President. The Vice President would help plan meetings, the teachers' workshop, and the survey for the spring meeting, so the duties would not change. However, the Vice President would not automatically assume the President's office after a two-year term, as is currently the practice for President-Elect. This would

Minutes

circumvent the necessity of a two-year commitment as President-Elect followed by another two years as President. Some members can commit to two but not four years. This would allow these members to serve as officers where they presently cannot. Bob will post the proposed change in the Summer Newsletter and bring it to the members at the Fall meeting for a vote. Please feel free to pass along any comments to Bob prior to the Fall meeting.

Nominating Committee: Presently, nominations for VHS Officers come only from the floor, at the meeting at which the final vote will be taken. Nominees must be present to confirm their willingness to serve, and minimal preparation is typically done to insure that a complete slate of nominees will be ready. Bob Greenlee suggested the idea of forming a Nominating Committee which would poll members and receive nominations so that a ballot could be brought to the Fall meeting. The merits of mail-in ballots, voting via the webpage, and voting only at the Fall meeting were discussed. If a committee fielded nominations prior to the Fall vote, then biographies of the candidates could be published in *Catesbeiana* or the Newsletter.

Membership Outreach: Ideas for new flyers to send to colleges or high schools were discussed. The possibility of putting something on the Webpage which could be downloaded and distributed by any member was discussed. Ideas should be passed along to Mike Pinder who will coordinate this activity.

Fall 2000 Meeting: The date has been set for October 28, 2000. The site for the meeting has not yet been established. The ability for the Teachers' Workshop to move from the classroom right out to the field with a minimum of time and distance was cited as a large advantage, and something to be considered in site selection for Fall meetings.

Snake Brochure: The text is finished and being reviewed. Pictures for use are currently being chosen. The final layout needs to be completed. The 30-page brochure on the snakes of Virginia should be ready soon.

Website Postings: John White requested that all official documents printed in the Newsletter and *Catesbeiana* be emailed to him for posting on the Webpage. The merits of publishing the current and complete text of all VHS documents were discussed. The possibility of abstracts or shorter forms of articles was discussed.

The meeting adjourned so that Jason Gibson could present a slide show of the herp species which might be encountered in the Northern Neck area. Some live animals were available for viewing during the following social.

Paul Sattler
Secretary/Treasurer

Guidelines for VHS Field-Study Grants

The purpose of Field-study Grants from the Virginia Herpetological Society is to stimulate and encourage herpetological research in Virginia. These Grants will be in variable amounts up to \$200.00 and are available to VHS members who do not have access to other sources of funding, such as institutions of higher learning and government grants.

Grant requests should include a description of the proposed research, or in the case of surveys the extent of the geographic area to be surveyed, and the methods which are to be used. A rough budget would be helpful. A brief justification of the importance of the work in contributing to the knowledge of Virginia's herpetofauna, citing standard works (e.g., Mitchell, J. C. 1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, D.C. 352 pp.; 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, Virginia. 122 pp.; and Tobey, F. J. 1985. *Virginia's Amphibians and Reptiles: A Distributional Survey*. Virginia Herpetological Society, Purcellville, Virginia. 114 pp.) should be included. The results of all funded surveys must be submitted in manuscript form for publication in *Catesbeiana*.

Grant requests will be received by the current President until March 15 of each year. The President will then send copies to Executive Committee members by the end of March, and a Committee vote will be scheduled sometime during the annual Spring meeting. The Executive Committee will first determine that funds are available, and then that the Grant request is worthy of funding. A majority ruling is required for both votes. When a grant is approved, the Secretary/Treasurer will so inform the recipient, send a check for the amount determined by the Committee, and inform the recipient of the requirement to publish the results in *Catesbeiana*.

Treasurer's Report

September 7, 2000

Previous Checking Balance \$3921.74

Disbursements:

T-Shirts	\$ 343.75
Summer Newsletter Postage	\$ 70.83
Postage	\$ 5.50
Bank Analysis Charge	\$ 6.00
Donation to Declining Amphibians	
Population Task Force	\$ 100.00
Catesbeiana 20(1) Printing	\$ 478.30
Catesbeiana 20(1) Postage	\$ 125.15

Receipts:

Memberships (May)	\$ 185.00
Memberships/T-Shirt Sales	\$ 350.00
Memberships (June)	\$ 35.00
Memberships (August)	\$ 270.00

September Balance \$3632.21

Previous Savings Balance \$1681.43

Disbursements \$ 0.00

Receipts:

Interest	\$ 24.53
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September Balance \$1705.96

The society has a current membership of 140

Paul Sattler
Secretary/Treasurer

BACK ISSUES OF *CATESBEIANA* AVAILABLE FOR SALE

The following back issues of *Catesbeiana* are available at a cost of \$5.00 each, plus postage (50 cents for one number, \$1.00 for 2-5 numbers and \$2.00 for 6 or more numbers). The supply of all other issues has been exhausted. Send orders to Dr. Paul Sattler, VHS Secretary/Treasurer, Department of Biology, Liberty University, 1971 University Blvd., Lynchburg, VA 24502. Specify which issues you desire by volume and number.

<u>Year</u>	<u>Volume (number)</u>	<u>Number of remaining copies</u>
1999	19(2)	23
	19(1)	21
1998	18(2)	16
	18(1)	38
1997	17(2)	0
	17(1)	4
1996	16(2)	48
	16(1)	25
1995	15(2)	20
	15(1)	28
1994	14(2)	12
	14(1)	15
1993	13(2)	50
	13(1)	0
1992	12(2)	44
	12(1)	55
1991	11(2)	30
	11(1)	33
1990	10(2)	17
	10(1)	46
1989	9(2)	8
	9(1)	10
1988	8(2)	5
	8(1)	13
1987	7(2)	43
	7(1)	8
1982	2(2)	15

ANNOUNCEMENT
FALL 2000 MEETING OF THE
VIRGINIA HERPETOLOGICAL SOCIETY

The VHS will be having its fall meeting on Saturday October 28, 2000 at The Wintergreen Nature Foundation in Wintergreen, Virginia. The Wintergreen Nature Foundation is based at the Trillium House at Wintergreen Resort. This facility houses educational exhibits related to the region's flora and fauna and has access to more than 6,000 acres of preserved land with 30 miles of hiking trails. The meeting will include a raffle, silent auction, photo contest, and a paper session. Contact Bob Greenlee (rgreenlee@dgif.state.va.us) for additional information. An educational workshop will be led by Carole Heiser and Jason Gibson and will begin at 8:00 a.m. A registration fee of \$10.00 will be charged for this workshop. There is limited room for participants so sign up early. For more information on this workshop please contact Jason Gibson (jgibson28@aol.com)

MEETING AGENDA

- | | |
|------------|--|
| 8:00 a.m. | Educational workshop for teachers |
| 10:30 a.m. | Business meeting
Topics: Discuss changing constitution for shorter term offices. |
| 12:00 p.m. | Lunch (several restaurants are located near the Trillium House)

Photo Contest |
| 1:00 p.m. | Paper sessions

Silent auction

Photo contest winners |

If you would like to present a paper during the afternoon session, please e-mail Bob Greenlee (rgreenlee@dgif.state.va.us) or Jason Gibson (jgibson28@aol.com). Presentations should be about 15-20 minutes in length.

Accommodations:

Lodging is available at the following places:

The Inn at Afton	800-860-8559
Holiday Inn-Waynesboro	540-932-7170
Village Inn- Lovingsston	804-263-5068

Directions to The Wintergreen Nature Foundation:

From the north or east: Take I-64 west to 151 south (exit 107). Turn right onto 664 west. Turn into Wintergreen Resort and check in at Gatehouse. Turn right up Wintergreen Drive. Follow Wintergreen Drive past the Mountain Inn and continue up the mountain. Pass the Wintergarden Fitness Center on the right. Trillium House is on the left, past Trillium Place.

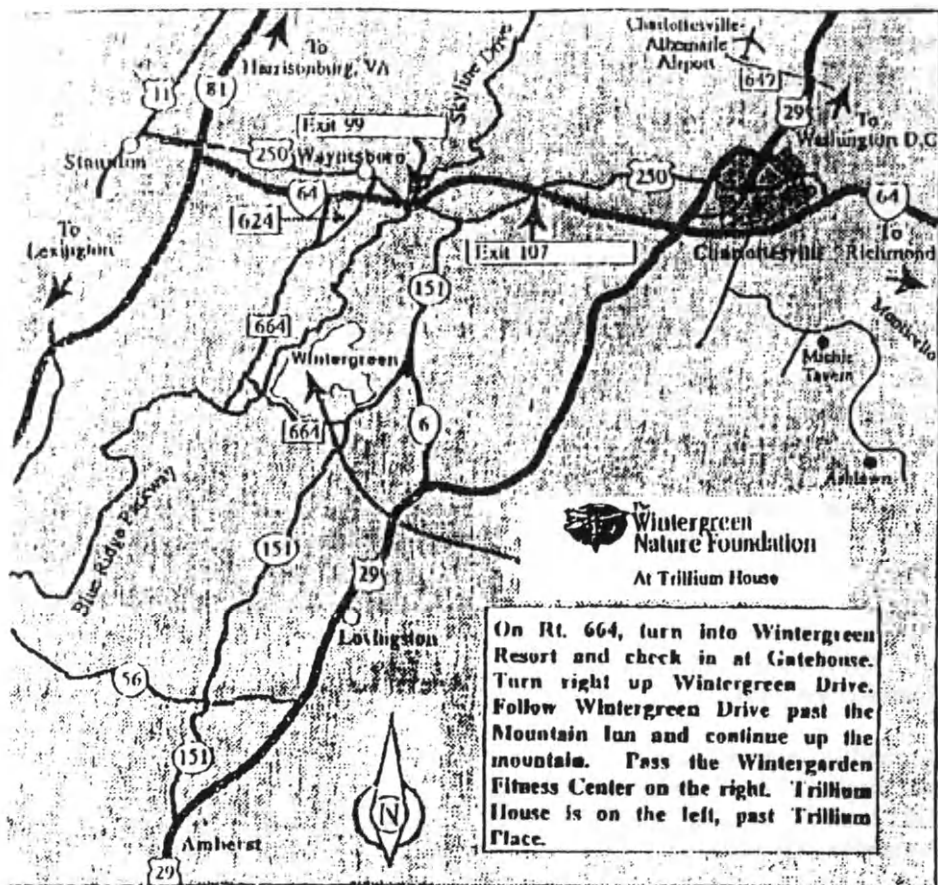
From the south: Take 29 north to 151 north. Turn left onto 664 west. Turn into Wintergreen Resort and check in at Gatehouse. Turn right up Wintergreen Drive. Follow Wintergreen Drive past the Mountain Inn and continue up the mountain. Pass the Wintergarden Fitness Center on the right. Trillium House is on the left, past Trillium Place.

From the north or west: Take I-64 east to the Blue Ridge Parkway/Skyline Drive exit (exit 99). Go south on the Blue Ridge Parkway to milepost 13, then east on 664. Turn left into Wintergreen Resort and check in at Gatehouse. Turn right up Wintergreen Drive. Follow Wintergreen Drive past the Mountain Inn and continue up the mountain. Pass the Wintergarden Fitness Center on the right. Trillium House is on the left, past Trillium Place.

Items for sale at meeting:

In addition to silent auction items, VHS t-shirts and books will be for sale at the meeting. The new copperhead (*Agkistrodon contortrix*) t-shirts are available in white (size small) and the large and XL sizes are available in white, gray and brown. The gray treefrog (*Hyla versicolor*) t-shirts are available in ash and blue green (small, medium, and large).

Fall Meeting Announcement



Dues Reminder

Membership in the Virginia Herpetological Society is on a calendar year basis (expires annually on December 31). Please consider renewing your membership for 2001 now (or at least before January 1) to save our treasurer the time and expense needed to mail you a renewal notice. Check the date on your mailing label to determine the year through which you have paid dues. See the last page of this bulletin for the membership application/renewal form. Save postage by paying your dues at the Fall Meeting if you are planning to attend this exciting event.

MEMBERSHIP APPLICATION

I wish to _____ initiate _____ renew membership in the Virginia
Herpetological Society for the year _____ 2000 _____ 2001 _____ 2002.

Name _____

Address _____

_____ Phone _____

email address: _____

Dues Category: _____ Regular - \$15.00

_____ Family - \$20.00

_____ Under 18 - \$8.00

_____ Life - \$225.00

Interests: _____ Reptiles _____ Amphibians

_____ 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://vhsociety.home.mindspring.com/>

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 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; all changes must be approved by the author(s) before publication.

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 color photograph (print or slide) deposited in the archives of the Virginia Herpetological Society. Photographs 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. Species identification for observational records (e.g., behavior) should be verified by a second person whenever possible.

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

Photographs

High contrast black-and-white photographs 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. Submissions should be no larger than 5 x 7 inches and printed on glossy paper. Published photographs will be deposited in the archives of the Virginia Herpetological Society.