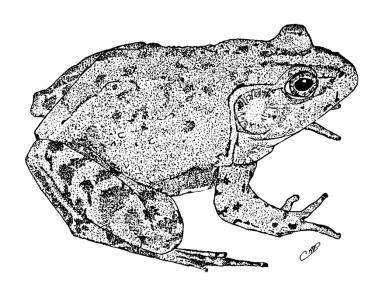
CATESBEIANA



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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. Payments received after September 1 of any given year will apply to membership for the following calendar year. See the Web Site (http://fwie.fw.vt. edu/VHS/) for a membership application/renewal form.

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(Editorial policy continued on inside back cover)

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Next Meeting October 22 Bridgewater College, Bridgewater, Virginia See Page 98 for details



Herpetofaunal Survey of Mason Neck State Park and Mason Neck National Wildlife Refuge

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Introduction

Mason Neck, a peninsula of approximately 3600 hectares (9,000 acres) on the Potomac River, is located less than thirty-two kilometers from Washington DC. In 1965, plans were made to develop the area. Concerned citizens and conservationists rallied to protect the last place near the nation's capital where the bald eagle nested. The local, state, and federal governments intervened with the help of the Nature Conservancy to purchase land on Mason Neck. In contrast to most of Northern Virginia today, Mason Neck remains largely undeveloped with approximately 2400 hectares (6,000 acres) of public land on the peninsula. This public land includes Mason Neck State Park, Mason Neck National Wildlife Refuge, Gunston Hall Plantation (George Mason's home), Pohick Bay Regional Park, and the Bureau of Land Management's Meadowood Recreation Area.

This survey took place within Mason Neck State Park and the adjacent Mason Neck National Wildlife Refuge which are both primarily mixed deciduous upland forest. American beech (*Fagus grandifolia*), sweet gum (*Liquidambar styraciflua*), black gum (*Nyssa sylvatica*), and red maple (*Acer rubrum*) are the main trees with a few older oaks

(*Quercus* sp.) and hickories (*Carya* sp.). Holly (*Ilex opaca*) is common in the understory. Wetlands habitat consists of shoreline along the Potomac River and Belmont Bay as well as the Great Marsh, the largest freshwater marsh in Northern Virginia. Kane's Creek, Raccoon Creek, smaller creeks, ponds, and vernal pools are within the survey area. The area also contains a few managed grasslands that are either mowed regularly or on a three-year mowing cycle. A few buildings, parking lots, and roads form the only other breaks in the forest canopy.

Klimkiewicz published the earliest reptile (1972a) and amphibian (1972b) surveys of Mason Neck, documenting twenty-four species of reptiles (six turtles, three lizards, fifteen snakes) and twenty-four species of amphibians (eleven salamanders and thirteen anurans). Dr. Carl Ernst and his students used the Mason Neck National Wildlife Refuge for field studies for more than twenty years starting in the early 1980s. Ernst et al. (1997) reported twenty-five reptiles (eight turtles, three lizards, fourteen snakes) and twenty-six amphibians (eleven salamanders and fifteen anurans) from the Mason Neck National Wildlife Refuge. Reptiles have been common at Mason Neck since before European colonization. Excavation of a Native American site located within the state park revealed hundreds of reptile bones, principally from turtles (Norton & Baird, 1994).

Study Sites

The park was divided into five parts to accommodate six survey groups. Groups picked their destinations at random covering many different habitats and microhabitats. Five groups surveyed the state park while Group 6 surveyed the national wildlife refuge (Figure 2). The only restriction to each group was to avoid eagle-nesting areas. Within each site, groups decided to split their sections further in order to accommodate morning and afternoon surveys. The descriptions that follow give a glimpse of some of the attributes of each site. GPS coordinates represent a point taken at the center of each section for each site. GPS coordinates were obtained from GoogleTM Earth.

Mason Neck Survey

- Site 1: Eastern most section of the park overlooking part of the bay. It was split into three sections: 38°38'07.56"N, 77°12'27.91"W, 38°37'55.03"N, 77°12'27.16"W and 38°37'55.02"N, 77°12'39.35"W. It is comprised mostly of field edges, road side, tidal marshes, old buildings and some hardwood forest.
- Site 2: North-east of Site 1 also overlooking part of the bay, this was an easier trail and site to survey: 38°38'35.97"N, 77°11'57.01"W. This site was surveyed by two groups. This section contained two ponds near a boat landing as well as a beach and a small creek.
- Site 3: This site is further inland and followed one of the trails in the park. This site was split into three main sub sections: 38°38'38.32"N, 77°11'31.85"W, 38°38'52.76"N, 77°10'57.15"W and 38°38'41.47"N, 77°10'59.20"W. This site was surveyed by two groups in conjunction with Site 4 and encompassed mostly old growth forest along with tidal marshes and road side areas.
- Site 4: This site is located east of Site 3 and follows the border of Mason Neck National Wildlife refuge. This site was split into three main sub sections: 38°38'39.40"N, 77°10'17.05"W, 38°38'38.81"N, 77°10'26.48"W, 38°38'28.23"N, 77°10'07.80"W. This site comprises mostly old growth forest, road edges and areas surrounding a house.
- Site 5: This site was comprised mostly of the Mason Neck National Wildlife Refuge along with areas within the southern part of the state park. This site was split into multiple parts including the following: 38°38′06.24″N, 77°10′18.14″W, 38°37′37.68″N, 77°10′20.76″W, 38°37′23.01″N, 77°11′16.76″W, and 38°37′34.15″N, 77°11′23.84″W. This site was comprised of various habitats including vernal pools, roadside edges, hardwood forest, marshes and field edges.

Materials and Methods

The 2010 VHS spring survey began the morning of 22 May, starting at 0800h for a briefing at which point six groups were formed and spread throughout the state park with one group surveying the National Wildlife Refuge in addition to areas within the state park (Figure 2). The number of persons per group varied (Table 1). Additionally, four turtle traps and three crayfish traps were also placed in two ponds near the park information center. The two larger turtle traps were placed in the larger pond next to the boat ramp, and two smaller ones in the small pond next to the road on the way to the ramp. One crayfish trap was placed in the small pond and two in the larger pond. These were placed and checked by Group 5 and Group 2. Table 1 summarizes the amount of survey effort per group. At each site surveyors implemented standard collecting techniques including hand capture, visual observation, flipping surface debris, dip netting, and listening for calling anurans. Figure 1 and Table 2 summarize the total number of each species and the number of animals observed at each site, respectively.

Table 1: The amount of survey effort per research site.

	Site 1	Site 2	Site 3 & 4	Site 5	Site 6
Number of turtle traps	-	-	-	4	-
No. of crayfish traps	-	-	-	3	-
Number of surveyors	9	7	7	6	12
Hours surveyed	7	7	7	7	7
Person hrs survey effort	63	49	49	42	84

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Table 2: Summary of the number of animals observed at each site.

Site	1	2	3 \4	5	6	Other
						Sites
Species						
Amphibians						
Anurans						
Acris crepitans	8		1	7	3	
Anaxyrus americanus	1	2	1	1	1	1
Anaxyrus fowleri		3	1			
Hyla cinerea		4		4		
Hyla chrysoscelis	1			2	1	~20
Lithobates catesbeianus		4	1	1	1	3
Lithobates clamitans melanota	1	4	1	2	4	2
Pseudacris crucifer crucifer	1				1	
Scaphiopus holbrookii						DOR*
Salamanders						
Ambystoma maculatum	6		1		4	
Ambystoma opacum				3		
Hemidactylium scutatum		1				
Notophthalmus v. viridescens	1		2			
Plethodon cinereus			1			
Plethodon cylindraceus			3	3		
Reptiles						
Snakes						
Carphophis amoenus amoenus	10	18	6	9	17	
Coluber c. constrictor	6		2	1	2	
Diadophis punctatus edwardsii			1	3	1	
Heterodon platyrhinos						1 DOR
Nerodia sipedon sipedon		9	7	1	3	
Pantherophis alleghaniensis	4	2	2			

Site	1	2	3/4	5	6	Other Sties
Regina septemvittata		1				Stres
Storeria dekayi dekayi					1	
Thamnophis sauritus sauritus					3	
Lizards						
Plestiodon fasciatus	4	20	3	4	4	
Plestiodon laticeps		1				
Scincella lateralis		2			1	
Turtles						
Chelydra serpentina	1	1*		1	1	1
Chrysemys picta	4			4	1	
Kinosternon s. subrubrum		2		3		
Terrapene carolina carolina	9		2	1	7	
Total Number of animals/site	58	75	35	50	56	~29

^{* =} Pohick Bay Regional Park Area

Annotated Checklist

Anurans

- 1. Acris crepitans crepitans (Northern Cricket Frog) (1, 3/4, 5, 6) This was the most numerous amphibian found in the survey. It breeds from April 10 to July 25 at Mason Neck National Wildlife Refuge (Ernst et al., 1997). Northern Cricket Frogs were found in a variety of microhabitats including in leaf litter at site 1, on land near the river in leaf litter at site 3/4, on gravel and in grass in sites and forest floor near fallen trees at sites 5 and 6.
- 2. *Anaxyrus americanus americanus* (Eastern American Toad) (1, 2, 3/4, 5, 6)

This toad is one of the most abundant amphibians in Northern Virginia (Ernst et al., 1997). During the survey, Eastern American Toads

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were found among leaf litter near fallen logs at site 1, underneath a boardwalk at site 2, near fallen trees on the forest floor at site 3/4, on a tree stump at site 5 and on a dirt road at site 6.

- 3. *Anaxyrus fowleri* (Fowler's Toad) (2, 3/4) Fowler's Toads were found underneath logs at sites 3/4 and 2 and on the forest floor at site 2.
- 4. *Hyla cinerea* (Green Treefrog) (2, 5)

The Green Treefrog was listed as common at several sites within the Mason Neck National Wildlife Refuge (Ernst et al., 1997). During the survey, 2 Green Treefrogs were spotted in the men's bathroom at site 2 as well as on a log near a the maintenance building at site 5.

- 5. *Hyla chrysoscelis* (Cope's Gray Treefrog) (1, 5, 6) Mitchell and Reay (1999) listed only *Hyla chrysoscelis* from Fairfax County but Ernst et al. (1997) stated that Hyla versicolor is also common at Mason Neck National Wildlife Refuge. Gope's Gray Treefrogs were found in woods calling at sites 1 and 5 and in a dry ravine at site 6.
- 6. Lithobates catesbeianus (Bullfrog) (2, 3/4, 5, 6) The Bullfrogs were also common and were found calling from a bog at site 2 and 6, at the water's edge of a creek at site 3/4 and caught in a trap at site 5.
- 7. Lithobates clamitans melanotus (Green Frog) (1, 2, 3/4, 5, 6) The Green Frog is very abundant almost anywhere near shallow water (Ernst et al. 1999). The Green Frog was also a very common amphibian during the survey. The microhabitats of the Green Frog elucidated from the survey include a swamp at site 1, sitting on a log in a bog at site 2, sitting in the water in a marshy swamp at site 3/4, sitting on a log in the hardwoods near maintenance building at site 5, and in vernal pools at site 6.

- 8. Pseudacris crucifer crucifer (Spring Peeper) (1, 6) This frog is declining in Northern Virginia. Choruses of 1000 males or more were heard in Fairfax County during the 1970s but today the choruses are smaller (Ernst et al., 1999). Spring peepers were not as common during this survey but were found around fallen logs at the edge of swamps at site 1 and at the roadside at site 6.
- 9. *Scaphiopus holbrookii* (Eastern Spadefoot) (Pohick Bay Regional Park)

Prior to the current survey, this species had been documented only three times in Fairfax County, always at Mason Neck (Norton & Baird, 1994, Ernst et al., 1997). Mason Neck is the only verified locality for this species in Northern Virginia (Mitchell & Reay, 1999). No Eastern Spadefoot Toads were found on the designated sites, however, members of group two were driving on the road and found a dead spadefoot toad within the confines of Pohick Bay Regional Park, which is adjacent to Mason Neck Park.

Salamanders

- 10. Ambystoma maculatum (Spotted Salamander) (1, 3/4, 6) This is the most common large, lunged salamander in Northern Virginia (Ernst et al., 1999). Microhabitats for the Spotted Salamander included under logs near swamps at site 1, under bark near a fallen tree at site 3/4, and under stumps at site 6.
- 11. *Ambytoma opacum* (Marbled Salamander) (5) Marbled Salamanders were not as common as the Spotted Salamanders and were found at site 5 under logs in hardwood forest.
- 12. *Hemidactylium scutatum* (Four-toed Salamander) (2) The Four-toed Salamander was also rare and was found at site 2 under some bark in a ravine bog.
- 13. *Notophthalmus viridescens viridescens* (Red-spotted Newt) (1, 3/4)

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The red eft form of the Red-spotted Newt was found at sites 1 and 3/4 under a log near a field and under rotting logs in hardwood forest.

- 14. *Plethodon cinereus* (Northern Redback Salamander) (3/4) This species is abundant in all Northern Virginia jurisdictions and was listed as the most abundant amphibian or reptile at Mason Neck National Wildlife Refuge (Ernst et al., 1997). The red back salamander was found at site 3/4 under a rotting log.
- 15. *Plethodon cylindraceus* (White-spotted Slimy Salamander) (3/4, 5)

White Spotted Slimy Salamanders were found at sites 3/4 and 5 under rotting logs in hardwood forest.

Reptiles Snakes

16. *Carphophis amoenus amoenus* (Eastern Worm Snake) (1, 2, 3/4, 5, 6)

This was the most numerous reptile found in the survey. It is the most abundant snake in the Northern Virginia area (Ernst et al., 1997) with an estimated density of 9.7 individuals per hectare on the Mason Neck National Wildlife Refuge (Creque, 2001). It was found in every site under logs and rocks, near swamps and in hardwood forests.

17. *Coluber constrictor constrictor* (Northern Black Racer) (1, 3/4, 5, 6)

This snake has the largest biomass of any snake on the Mason Neck National Wildlife Refuge and is second in density only to *Carphophis amoenus* (Creque, 2001). Northern Black Racers were also fairly common and were found in almost all sites with the exception of site 2. Habitats included in fields, trash piles, basking on the ground in hardwood forest near fallen trees, on gravel service roads and in grass.

18. *Diadophis punctatus edwardsii* (Northern Ringneck Snake) (3/4, 5, 6)

Creque (2001) listed this snake as uncommon in the refuge but added

that it is present in larger numbers than thought. Northern Ringneck Snakes were found under rotting logs at sites 3/4, 5 and 6.

- 19. Heterodon platyrhinos (Eastern Hognose Snake)
 (DOR in Pohick Bay Regional Park)
 Ernst et al. (1997) noted that some are killed by cars each year. The dead Eastern Hognose Snake was found DOR outside of Mason Neck Park but was found in the adjacent Pohick Bay Regional Park.
- 20. Nerodia sipedon sipedon (Northern Water Snake) (2, 3/4, 5, 6) This is the third most numerous snake species on the refuge with the second largest biomass (Creque, 2001). Northern water snakes seemed to be abundant during the survey and were found at almost every site with the exception of site one. Most water snakes were found in the water on the bay or basking on logs near the water's edge.
- 21. Pantherophis alleghaniensis (Eastern Rat Snake) (1, 2, 3/4) This snake is listed as common by Creque (2001). Eastern Rat Snakes were also fairly common. The microhabitats for the Eastern Rat Snakes included basking on fallen tree branches as the one found at site 1, moving along trails as in site 2, and waiting to shed while sunning on fallen rotten logs in hardwood forests.
- 22. Regina septemvittata (Queen Snake) (2) The Queen Snake seems to be declining in Northern Virginia (Ernst et al., 1997). It was not found by Klimkiewicz (1972a) or Creque (2001) though Creque notes that it was formerly not uncommon in the Great Marsh. Only one Queen Snake was found at site 2 near the water's edge of a swamp.
- 23. Storeria dekayi dekayi (Northern Brown Snake) (6) Klimkiewicz (1972a) listed this snake as common but Creque (2001) listed it as uncommon. This snake's population may be declining at Mason Neck as succession takes place. One Northern Brown Snake was found at site 6 underneath the bark of a rotting log.

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24. *Thamnophis sauritus sauritus* (Eastern Ribbon Snake) (6) This snake was listed as uncommon by both Klimkiewicz (1972a) and Creque (2001). Three Ribbon Snakes were found at site 6 at the bottom of a rayine.

Lizards

- 25. *Plestiodon fasciatus* (Five-lined Skink) (1, 2, 3/4, 5, 6) Five-lined Skinks were very common and found at every site. Microhabitats include under the bark of fallen trees, on live trees and near or on trails.
- 26. *Plestiodon laticeps* (Broadhead Skink) (3/4) Ernst et al. (1997) noted that the Broadhead Skink was common at the Mason Neck National Wildlife Refuge. One Broadhead Skink was found at site 3/4 on a fallen rotten tree
- 27. Scincella lateralis (Ground Skink) (2, 6) Ground skinks were found at site 2 and 6 in leaf litter and under rotting logs.

Turtles

- 28. Chelydra serpentina (Common Snapping Turtle) (1, 2, 5, 6) Common Snapping Turtles were noted at all of the sites with the exception of site 3/4. One snapping turtle was found dead on the road at Site 2. Other microhabitats include: a creek at site 6, on top of a hill near a swamp nesting at site 1, and in a mulch pile at site 5.
- 29. *Chrysemys picta* (Northern Painted Turtle) (5, 6) This is the most common basking turtle in Northern Virginia (Ernst et al., 2001) and in this survey. They are known to nest from 27 May to 4 July in Fairfax County. The Northern Painted Turtle was found in a pond at site 6 and in a trap at Pond 1 and Pond 2.
- 30. *Kinosternon subrubrum subrubrum* (Eastern Mud Turtle) (2, 5)

An Eastern Mud Turtle was also caught in a trap at Pond 1 as well as

one walking along a marsh at site 2.

31. Terrapene carolina carolina (Eastern Box Turtle) (1, 3/4, 5, 6) This turtle is abundant at Mason Neck but has been declining across the region due to the development of habitat and increased traffic on rural roads (Ernst et al., 1997). Eastern Box Turtles were very common during the survey and were found at almost every site, with the exception of site 2. Microhabitats include: a field and field edges, under a dead cedar bush at site 1, by a marsh and near dead trees at site 3/4, in leaf litter in hardwood forests at site 5 and under logs at site 6.

Discussion

During this survey no new species were documented for Fairfax County. The county's proximity to the Smithsonian and several research universities means it has been extensively surveyed. A large amount of fieldwork has been done at Mason Neck in the past, which allows us to draw comparisons to past surveys.

Many of the species that were present before European colonization can still be found at Mason Neck. *Scaphiophis holbrooki, Rana catesbeiana, Coluber constrictor, Terrepene carolina, Kinosternon subrubrum, Sternotherus odoratus, Chrysemys picta,* and *Chelydra serpentina* have been identified from bones at a Native American site in Mason Neck State Park (Norton & Baird, 1994) and still occur at Mason Neck (Ernst, 1997). Other species excavated from the site including *Malaclemys terrapin, Graptemys geographica*, and *Apalone* sp., are not found in Northern Virginia today (Mitchel & Reay, 1999). *Malaclemys terrapin* may have occurred at Mason Neck in the past when drier conditions pushed the salt wedge up the Potomac. *Graptemys geographica* and *Apalone* are currently known in Virginia only from the Tennessee River drainage (Mitchel & Reay, 1999).

The survey was notable for which species were not found as much as those that were found. The absence of a normally common species, the Eastern Garter Snake *Thamnophis sirtalis*, from the present

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study seems unusual. Klimkiewicz (1972a) recorded it as abundant at Mason Neck but Creque (2001) listed it as uncommon less than thirty years later. Reductions in garter snake populations, if real, could be a result of forest succession and reductions in their amphibian prey among other causes. Klimkiewicz (1972a) recorded the Northern Red-bellied Snake, *Storeria occipitomaculata*, from Mason Neck. Extensive surveying has not revealed any additional records of this species (Ernst et al., 1997; Creque 2001). *Plethodon cinereus*, the Northern Redback Salamander, was listed as abundant by Ernst et al. (1997) but was represented by only a single individual in the current survey. The Brown Water Snake and Northern Leopard Frog have not been recorded from Mason Neck since Klimkiewicz (1972a, 1972b) and were likely cases of mistaken identity. Neither species is found in northern Virginia (Mitchell & Reay, 1999).

The presence of an invasive fish species at Mason Neck is a concern. Three Northern Snakeheads, *Channa argus*, were captured in a turtle trap placed in a pond. The impact of this species on native wildlife is a concern. One Northern Snakehead from the Potomac River contained a frog in its stomach (Odenkirk & Owens, 2007). Snakeheads are known to eat frogs and smaller reptiles in their native range (Courtenay & Williams, 2004). The excellent amphibian and reptile records for Mason Neck and its proximity to Dogue Creek, the epicenter of the Potomac snakehead population (Owenkirk & Owens, 2007) would make it an excellent study site for the impact of the snakehead on native populations.

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Field Notes

Snake) VA: Scott Co.: Cty Rt. 617, ca 2 km south of junction with US Rt. 58 at "Shelleys". 6 August 2009. R. L. Hoffman.

County Record: Existing records for this species (e.g. J. C. Mitchell & K. K. Reay, 1999. Atlas of Amphibians and Reptiles in Virginia, Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, Virginia) are largely for the Piedmont and Coastal Plain, with a few scattered records for the Blue Ridge and Ridge & Valley provinces. Only a single site in Giles County documented the species west of the New River, possibly contributing to the apparent distributional lacuna shown in the inset range map (op. cit., p. 97). That vacancy is now largely closed, confirming the opinion of Mitchell & Reay (op. cit., p. 97) that the species "may be statewide".

The present record is based on a very flattened (but otherwise in fair condition) specimen found by the most extreme serendipity, at one of the very few "pull off" sites along Rt. 617 that provide the opportunity to search for soil and litter fauna. Restoration in hot water-detergent allowed measurements of 247 mm total length, 47 mm tail length, and ventral scale count of 124 (subcaudals could not be counted) The specimen, a male with extruded hemipenes, is housed at the Virginia Museum of Natural History (Cat. No. 000150001.000).

In my experience, *S. occipitomaculata* can only be found while one is looking for something else, and virtually all of my few collections have been of roadkill individuals.

RICHARD L. HOFFMAN

Virginia Museum of Natural History Martinsville, Virginia 24112

Pseudemys concinna floridana (Coastal Plain Cooter). VA: Southampton County., Nottoway River 1.5 linear kilometers upstream from the Rt. 258 bridge. (N36.57761, W076.96696). 22 April 2011. J.D. Kleopfer.

County Record: On 22 April 2011, a female Coastal Plain Cooter (*Pseudemys concinna floridana*) was captured during a 5-day turtle survey of the lower Nottoway River. This observation is a new county record and fills in a hiatus in the distribution of this species in Virginia (Mitchell J.C. and K.K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication No. 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.). This individual had a maximum straight-line length of 284 mm and a plastron length of 172 mm. Measurements were taken with a 40 cm Haglof tree caliper. A digital image has been deposited in the VHS archives (Digital voucher #177).

John (J.D.) Kleopfer

Virginia Department of Game Inland Fisheries 3801 John Tyler Memorial Highway Charles City, Virginia 23030

Sceloporus undulatus (Eastern Fence Lizard) VA: Fluvanna County, 316 Taylor Ridge Way, Palmyra. 01 May 2011. David Perry.

An adult female eastern fence lizard was found at 11:10 h on 1 May 2011 on the back lawn of the private property of 316 Taylor Ridge Way, emerging from a burning brush pile. The brush pile was about 25 meters from a nearby wood line. Skies were overcast with the morning temperature about 15.5C (60F). The lizard was hand captured and observed overnight.

This specimen had a total body length of 16.5 CM (6.5 inches), appeared physically healthy with no apparent fire related injuries. The lizard was released in the woods near the brush pile on 2 May.

Field Notes

This is the first recorded sighting of an eastern fence lizard in Fluvanna County. According to Mitchell and Reay (1999, Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, VA 82pp.) *Sceloporus undulatus* has not been previously recorded from Fluvanna County, although it has been found in all of the neighboring counties. A digital picture of the specimen was submitted to the VHS archives (Digital Voucher #176).

David A. Perry 316 Taylor Ridge Way Palmyra, VA 22963

Plestiodon laticeps (Broad-headed Skink) VA: Prince George County, 7122 Old Town Road Prince George Virginia (N 37° 12' 54.31" W 77° 10' 45.18"). 22 May 2011. Rick Denny.

New County Record: On 22 May 2011 we returned home and found our cat had a large lizard, which was identified from digital photos as a large male Broad-headed Skink. According to Mitchell and Reay (1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, VA 122 pp.), Tobey (1985. Virginia's Amphibians and Reptiles: A Distributional Survey. Virginia Herpetological Society, Purcellville, VA. 114 pp.), and the Virginia Department of Game and Inland Fisheries wildlife database, this observation documents the first reported sighting of the Broad-headed Skink in Prince George county, although they are documented in the three counties to the north, east and west. The lizard apparently lived in the deciduous forest surrounding our home. Digital photos were deposited in the VHS archive (Digital photo #179).

Rick Denny 7122 Old Town Rd. Prince George, VA

Opheodrys aestivus (Rough Greensnake) VA: Amelia Co., 0.8 km SSE of intersection of SR 642 and 616, (17 S 754699 4140293 UTM WGS 84). 03 June 2011, Mike Clifford.

New County Record: On the morning of 03 June 2011 while walking along a hayfield, I noticed a dead Rough Greensnake. The snake had evidently been killed by haying operations in the field. A deciduous forest dominated by hickory and locust, with a redbud understory and a blackberry and honeysuckle thicket were nearby.

According to Mitchell and Reay (1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, VA 122 pp.), Tobey (1985. Virginia's Amphibians and Reptiles: A Distributional Survey. Virginia Herpetological Society, Purcellville, VA. 114 pp.), and the Virginia Department of Game and Inland Fisheries wildlife database, this observation documents the first reported sighting of Rough Greensnakes in Amelia County, although they have been documented in all surrounding counties. Digital images have been deposited in the VHS archives (Digital voucher # 178).

Mike Clifford

11131 Amelia Springs Road Jetersville, VA 23083

Virginia valeriae (Smooth Earthsnake) VA: City of Luray, 122 Mockingbird Lane, Page County. 8 June 2011. Cliff Thomas.

County Record: On 8 June 2011 I found a small snake under a rock next to my driveway at 122 Mockingbird Lane in Luray, Page County. Digital photos were taken of the snake, from which an identification of a Smooth Earthsnake were made. According to Mitchell and Reay (1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, VA 122 pp.), Tobey (1985. Virginia's Amphibians and Reptiles: A Distributional Survey. Virginia

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Herpetological Society, Purcellville, VA. 114 pp.), and the Virginia Department of Game and Inland Fisheries wildlife database, this observation documents the first reported sighting of the Smooth Earthsnake in Page county. They have a spotty distribution in the northernmost counties in Virginia, being reported in Shenandoah, Clarke and Fauquier counties. Workers in northern Virginia would do well to keep an eye out for this species as the distribution is probably more extensive than previously reported, being underreported due to its secretive nature. Digital photos of this specimen have been deposited in the VHS archive (Digital photo #180).

Clifton Thomas

122 Mockingbird Lane Luray, VA 22835

Hyla cinerea (Green Treefrog) VA: Sussex Co., Co. Rt. 621 at Jenkin's Mill Stream and Co. Rt. 606; and Co. Rt. 606 0.4 km south of Co. Rt. 604; and just south of Co. Rt. 604 1.12 km. east of Co. Rt. 634. 8 July 2011. Brian Munford.

County Record: On 8 July 2011 Green Treefrog choruses were recorded at three localities in eastern Sussex County. These observations constitute a new county record for this species and fill a hiatus in the distribution in Virginia. Green Treefrogs have been recorded in counties to the north, south and east of Sussex, but never before vouchered in Sussex (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.; Tobey, F. 985. Virginia's Amphibians and Reptiles: A Distributional Survey. Virginia Herpetological Society, Purcellville, VA. 114 pp.; and the Virginia Department of Game and Inland Fisheries wildlife database). Digital recordings of Green Treefrog choruses have been deposited in the VHS archive (#189-191).

Brian Munford

3416 Lauderdale Dr. Richmond, VA 23233

Hyla cinerea (Green Treefrog). VA: Powhatan Co. Powhatan State Park on the Historic James (37° 68' 29.78" N, -77° 91' 09.24" W). 10 November 2009 and 24 October 2010. Michelle Whitehurst and Anne Wright.

County record confirmation: As part of a collaborative project between the VA Department of Conservation and Recreation, Powhatan County Public Schools, and Virginia Commonwealth University, students from Powhatan High School Ecology classes visited Powhatan State Park on the Historic James, a new state park in Powhatan County, throughout the 2009-2011 school years to collect baseline biological and ecological data for the park. The park is not yet open to the public, and the data gathered adds valuable information to the park database.

On 10 November 2009 at approximately 1230 h, high school Ecology students found and photographed a Green Treefrog in tall grass next to a planted pine stand within Powhatan State Park. The stand is adjacent to a wetland area connecting to the James River. One year later on 24 October 2010 at 0930 h, another specimen was noted at the base of a Loblolly pine approximately 3 m. into the pine stand from where the first frog was found. The second Green Treefrog was observed hopping from tree base to tree base. A digital image has been deposited in the VHS archive (Digital Voucher # 185).

Michelle Whitehurst

Anne Wright

Powhatan County High School Virginia Commonwealth University 1800 Judes Ferry Road 1000 West Cary Street Powhatan, VA 23139 Richmond, VA 23284-2012

Hyla femoralis (Pine Woods Treefrog) VA: Sussex Co., Co. Rt. 621 at Jenkin's Mill Stream and Co. Rt. 604 1.6 km. west of Co. Rt. 606. 8 July 2011. Brian Munford.

County Record: On 8 July 2011 Pine Woods Treefrog choruses were recorded at two separate locations in eastern Sussex County. These observations constitute a new county record for this species and fill

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a hiatus in the distribution in Virginia. Pine Woods Treefrogs have been recorded in many of the counties contiguous to Sussex, but never before vouchered in Sussex (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.; Tobey, F. 985. Virginia's Amphibians and Reptiles: A Distributional Survey. Virginia Herpetological Society, Purcellville, VA. 114 pp.; and the Virginia Department of Game and Inland Fisheries wildlife database). Digital recordings of Green Treefrog choruses have been deposited in the VHS archive (#192-193).

Brian Munford

3416 Lauderdale Dr. Richmond, VA 23233

Pantherophis alleghaniensis (Eastern Ratsnake). VA: King George Co., 4.7 km NE Port Royal (38° 11' 52.9" N, 77° 10' 26.9" W, WGS84), 27 May 2011. Joseph C. Mitchell.

Anophthalmia: Snakes with missing eyes are found occasionally in Virginia but the details of the condition are rarely reported. Anophthalmia may result from congenital malformations (Bellairs, 1965. Cleft palate, microphthalmia and other malformations in embryos of lizards and snakes. J. Zool., London 144:239-252), disease (Frye. 1991. Biomedical and Surgical Aspects of Reptile Husbandry. 2 vols., Keieger Publishing Co., Malabar, FL. 637 pp), or injuries from unsuccessful predation attempts. Gibson (2011. Fifth annual HerpBlitz: survey of Kiptopeke State Park. Catesbeiana 31:16-27) noted that a *P. alleghaniensis* captured at Kiptopeke State Park, Northampton Co., VA, during a VHS survey had one eye missing. No details were noted. Accumulation of details and photographs of anophthalmic snakes would provide documentation that could lead to questions about the prevalence of malformations and injuries in Virginia populations. The observation herein reported is a contribution to that effort.

At 2320 hr EDT on 27 May 2011, I found a DOR *P. alleghaniensis* (it had just been hit and died within 30 minutes) on U.S. Route 301, 4.7

km NE of Port Royal, Virginia, that was missing its left eye. The right eye was normal. This large, adult male measured 1320 mm snout-vent length and 1472 mm total length. The orbit was surrounded by normal scalation (Mitchell. 1994. The Reptiles of Virginia, Smithsonian Institution Press, Washington, DC. 352 pp.) but the orbit was covered by an evenly textured, bluish tissue with a small, closed indication of an aperture for optic vessels and nerves to the left of center (Figure 1). There is no indication of an indentation to accommodate an eyeball. Lack of tissue damage in or around the orbit and evenness of the orbital tissue wall suggest that this was a malformation and not an injury. Alternatively, this snake could have lost its eye early in life from a traumatic event and the healing process resulted in a well formed orbit without the eyeball. However, the symmetry and normalcy of the surrounding scales and tissue wall completely covering the orbital cavity indicate, in my opinion, a congenital malformation. If this is true, then this adult snake was able to obtain prey, presumably mate, and carry on other life functions for several years until it met its death on a Virginia highway.

Joseph C. Mitchell Mitchell Ecological Research Service, LLC P.O. Box 2520



Figure 1. Anopthalmia in *Pantherophis alleghaniensis* from King George County, Virginia. J.C. Mitchell photo.

President's Corner

After a term as vice president and four years as the newsletter editor, I was honored to be elected president of the VHS. I had no idea before then but I had so many ideas for changes and improvements to the society! Here are some of the achievements I am proud of from my term:

Membership benefits were increased for the first time in more than 20 years. Membership cards were issued so that VHS members could enjoy admission and membership discounts to Virginia's zoos and aquariums.

Implementing the use of static e-mail addresses and cloud-based document storage. When the VHS administration changes every two years, continuity should be paramount. This system allows future generations of VHS officers to have access to all of the important documents and e-mails that have been created before them.

I have been maintaining a log of VHS activities. Having the VHS go through a 50 year anniversary and attempting to retrace our history gave me perspective on properly documenting what the VHS does behind the scenes. Hundreds of e-mails bounced between the officers every year, but unless it is organized and documented, our decisions and reasoning behind those decisions get lost.

The Grants in Herpetology were expanded and updated, mostly to require higher standards of the applicants and the awardees of the grant.

The VHS had more field surveys than usual, especially in 2011. This included the first-ever survey conducted in a cave, and the first-ever statewide survey for diamondback terrapins. In addition, the 2011 annual survey at Pocahontas State Park was likely the most successful VHS survey in terms of attendance and species richness.

A dedicated e-mail was created for the public who needed help with identifying reptiles and amphibians they have encountered. This has been hugely successful, resulting in over 100 identification requests as of this writing, and eight of those requests resulted in new county records for even common species of herps!

We cataloged every known professor involved in herpetology in Virginia, and we have initiated contact with them in order to keep them abreast of VHS activities and hopefully for their students to become involved.

Created a five-member Advisory Committee whose sole obligation is to respond to e-mails between VHS officers.

Of course, the VHS obtained our 501(c)(3) status while I was in office, but the credit goes to past-president Susan Watson for filling out the IRS application. I only wish that I had done more to take advantage of the nonprofit status for fundraising and to elicit donations.

I also wish I had been more involved with the committees and helped to improve the online store with CafePress. There were many other things I had hoped to achieve.

Every one of the volunteers of the VHS deserve an award. The standouts to me are John White, the webmaster who has greatly expanded our content to be one of the best Herps society websites in the country. I e-mail him more than any other person in my contact list! The treasurer, Emily Steele, has done a fantastic job of better documenting the society's finances. I am confident we would survive an IRS audit unscathed. As the newsletter editor for four years, it is hard to let go of that task since I had changed so much of it and made it mine. Susan Watson has done an excellent job of stepping in and keeping the newsletter just as good.

Future administrations still have a lot of work to do, especially in the face of continued population declines of most reptiles and amphibians and greater competition with the

information available on the Internet. However, it appears that the general public is becoming better educated about the fundamentals of biology and wildlife and that the VHS may have a role in further educating the public on a very valuable natural resource: the reptiles and amphibians native to Virginia.

Kory Steele

Minutes of the Spring 2011 VHS Meeting Pocahontas State Park 20 June 2011

The meeting was called to order by Kory Steele at 6:10 pm. He provided a quick update on some of the major recent events of note since the last meeting. The president reported that he and the secretary/treasurer attended an IRS workshop in October and learned a great deal about our new tax-exempt status. The web page was reported to have started a snake identification service, where people send in digital photos of snakes they have seen and have them identified. The web page is also posting a "Snakes of Concern" page. Steve Roble provided the last few missing Bulletins, so the web page now has a complete set. The VHS logo has been added to the "Year of the Turtle" web page. John White produced a "Snakes of the Shenandoah Park" poster. He also contacted the current owner of the VHS.com web site, unsuccessfully in an attempt to secure that site for the Virginia Herpetological Society. There was a major revision of the VHS website. A smartphone application has been produced to identify frog photos and calls. There is a hope to expand this to other groups of amphibians and reptiles as well. The VHS funded two research grants this year. Mike Clifford made several herp presentations available for Master Naturalist groups.

Committee Reports were given:

Newsletter – The last newsletter was sent electronically in February and the next one has begun. Please send any appropriate materials to Susan Watson.

Website – The traffic on the VHS website has greatly increased recently, with 13 hits/minute.

Catesbeiana – The last issue was just printed with 210 copies at \$320 and \$247 in postage. With new software, the journal can be produced in PDF format and sent electronically. In the future, it could be possible to mail it electronically to those desiring a digital copy.

Secretary/Treasurer – There is about \$6700 in the bank with 210

members, although there are 50 2010 members who have not yet renewed and will shortly be dropped from the membership list.

Conservation Committee – Robert Harris and Ryan Dumas were added as new members to the committee. The committee is working on a "Threats to Herps" poster. They also have a training session available for Master Naturalists presentations.

Research Committee – No report.

Education Committee – There were a number of Master Naturalists presentations made recently. Please report and presentations you make to Mike Clifford who is logging them. There are a lot of Herp photos coming in for identification on the website. This has led to several new county records, and is an excellent interaction with the public.

HerpBlitz – The Hungry Mother State Park survey is coming up June 24-26. Please RSVP to Jason Gibson if you plan to attend.

Web Store – The VHS received a check recently from Café Press for the profits from the Web Store. New graphic images are needed, please send any you have to Pattie Crane for use with items from the Store.

New Business:

Non-Profit status – The criteria for not-for-profit status is that the organization can be educational, scientific or charitable. The VHS qualified on several of these criteria. Donations are tax exempt but not membership dues. Tax-exempt organizations are required to provide the exemption application to anyone upon request. Board members cannot benefit monetarily from the Society. Tax-exempt organizations cannot lobby in political elections.

A number of new county records are appearing from the online herp

Minutes of the Spring 2011 Meeting

identification service recently added to the web site. Someone is needed to write up field notes from these identifications. Contact Kory if you are interested.

Frog Call Smartphone Application – Kory noticed the absence of such a service and had one produced. This is part of the VHS focus on education. It could be a fundraising project since there is a few dollars charge to all those downloading it. It could be updated to those species occurring in the southeastern states and have more utility.

Nominating Committee – The next set of VHS elections is due to be held this Fall. Jason Gibson was asked to head up a nominating committee. He accepted.

Surveys for Next Year – Susan Watson suggested a new Wildlife Management Area in Carroll County be surveyed. There was some discussion of having an earlier survey, perhaps in March to better catch the early-breeding amphibians. The problem of cold/snowy weather was brought up.

Location of the Fall 2011 Meeting – It was suggested that having the meeting at UVA or VT would help to attract more students to the meetings. No site was secured as of this meeting. If anyone has a good idea for a keynote speaker, send the idea to Kory.

Irene Frentz gave a presentation on Pocahontas State Park. Jason Gibson followed this with a slide presentation on the likely species to be encountered at the Park

Treasurer's Report Fall 2011

Balance on hand April 2011 \$7,043.35

Receipts:

Donation in Memory of Addie Crane	\$	50.00
New Memberships	\$	523.00
Membership Renewals	\$	193.00
August Cave Survey	\$	180.00
Total Receipts \$	946.00	

Disbursements

PayPal Transaction fees	\$	31.95
Catesbeiana 31(1) Printing and Postage	\$	601.08
August Cave Survey	\$	120.00
Total Disbursements \$	779.01	

Balance on hand August 2011 **\$7,210.34**

Memberships 197 Facebook Fans 588

Submitted by Emily Steele

2011 Fall Meeting of the Virginia Herpetological Society, October 22, 2011

The 2011 Annual VHS Fall Meeting will feature paper/poster sessions for students (with monetary prizes awarded), special presentations, and silent & live auctions of herp-related items. Our keynote speaker will be Dr. Edmund Brodie III, Director of Mountain Lake Biological Station with the University of Virginia. Dr. Brodie is known for his study on the predatory and antipredator adaptations of reptiles and amphibians, especially behavior and color pattern and the interaction between them. His presentation is titled: Time to change the channel: Predator-prey arms races and the evolution of toxin resistance in snakes.

Attendees will be able to pay for auction items and memberships electronically via PayPal with a provided computer at the meeting.

Keynote Speaker: Dr. Edmund Brodie http://faculty.virginia.edu/brodie/butch.html

Location: Bridgewater College, McKinney Hall

402 East College Street • Bridgewater, VA 22812 • (540) 828-8000 Building: http://www.bridgewater.edu/Admissions/VisitCampus/

CampusMap

Directions: see VHS webpage Date: Saturday, October 22, 2011

Time: 9am to 5pm (There is no obligation to attend the entire meet-

ing)

Parking: Parking is free and directly behind the meeting building

Cost: Free

Lunch: Food is available on site. Sandwich platters are \$10 and vegetarian is available.

Fall 2011 Meeting

Dinner: At the conclusion of the meeting, everyone is invited to a nearby restaurant for good food and socialization. See the Google maps link above.

Events: Research presentations, research poster displays, student presentation competition, silent auction, live auction, VHS items for sale, live animals, exposure to Virginia's herpetologists, and a VHS business meeting with the election of new officers.

Live Animals: Attendees are welcome to bring healthy reptiles and amphibians (especially native!) for display. Please contact the president for approval before the meeting.

Auction: Please feel free to donate herp / wildlife related items for the silent and live auctions. You never know what you'll see up for auction, so bring cash or your PayPal password!

Updates: Be sure to check here and <u>Facebookpage</u> frequently for any changes or updates

Questions: For more information, contact President Kory Steele, president@vaherpsociety.com

Current Presentations

Nicole Hamilton- "Loudoun Amphibian Monitoring Program: From Education to Action."

J.D. Kleopfer and Tom Akre- "Ecology and Status of the Wood Turtle in Virginia."

Edmond Brodie- "Time to Change the Channel: Predator-prey Arms Races and the Evolution of Toxin Resistance in Snakes."

Lunch

Onsite lunches are available for \$10 and will need to be purchased before 10 am.

VHS 2012 Dues Reminder

Please remember that VHS dues are paid on a calendar basis. Dues for 2012 may be paid in advance to eliminate the need for the Treasurer to contact members. Dues for individuals are \$15 per year (\$20 for family memberships). Cash, Checks or Money Orders (made out to the VHS) may be mailed to:

Emily Steele VHS Treasurer 174 Lori Circle Newport News, VA 23602

Dues may also be paid via Credit Card and Paypal through the VHS Web Site: http://www.virginiaherpetologicalsociety.com/

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), and Tobey (1985. Virginia's Amphibians and Reptiles: A Distributional Survey) [both atlases are available on-line on the VHS website] as well as 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. Digital images are preferred. Published photographs will be deposited in the VHS archives.