

A Survey of the Amphibians and Reptiles of Old Colchester Park in Fairfax County, Virginia

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Introduction

Old Colchester Park is located on the Mason Neck peninsula in Fairfax County, Virginia. The Mason Neck peninsula is one of the last largely undeveloped areas in northern Virginia with about two-thirds of the peninsula (2400 hectares) in public hands. At approximately 55 hectares, Old Colchester Park is smaller than many of the other public parcels. It became the most recent public land acquisition on the peninsula when it was acquired by the Fairfax County Park Authority in March 2007. The park contains sites of archaeological interest, including the colonial port town of Colchester, Native American sites and an old cemetery possibly dating to the 1600s.

The boundaries of Old Colchester Park are formed by the Occoquan River, an unnamed creek, Old Colchester Road, residences along Old Colchester Road and the Fairfax Yacht Club. A second, smaller parcel of land between Old Colchester Road, Furnace Road, and the railroad tracks is also part of the park. Though it was logged during the 1980s, most of the site is forested today. The well-drained, floodplain forest shows signs of selective logging followed by secondary succession. A few large, old trees remain surrounded by younger trees, primarily American beech (*Fagus grandifolia*), sweet gum (*Liquidambar styraciflua*), black gum (*Nyssa sylvatica*), and red maple (*Acer rubrum*). Mature beech, oaks (*Quercus* spp.) and hickories (*Carya* spp.) occur on slopes particularly on the eastern

and northern portion of the park, and mature oaks, black gum, sweet gum and red maples occur in several wetland forest communities. In addition, the southern and eastern portions of the park contain a freshwater tidal marsh, a rare and declining wetland type in northern Virginia.

Study Sites

Site 1—Upland Forest (38.665935, -77.231956)

Like most of the park Site 1 consists of upland forest traversed by a former logging road and some unnamed trails.

Site 2—Pond (38.665525, -77.229499)

This site is a seasonal pond possibly created during logging, for silt control. Only the center of the pond retained water at the time of the survey but the pond basin remained wet and muddy.

Site 3—Creek (38.665315, -77.22614)

The creek, an unnamed tributary of the Occoquan River, forms the eastern border of the park. It runs roughly parallel to Anita Drive from which it receives rainwater runoff. Residences along Anita Drive back up to the other side of the creek.

Site 4—Tidal Marsh (38.662919, -77.229112)

Before emptying into the Occoquan River, the creek widens and forms a tidal marsh. The marsh soil is waterlogged and difficult to traverse. Most survey effort took place along the forest/marsh ecotone.

Materials and Methods

The survey took place on the morning of Saturday, 4 June 2011. Twenty volunteers participated. Surveying consisted of a loose group of surveyors following a route through the park while performing visual searches, turning cover objects and listening for calling amphibians. Capture by hand and dipnet were used to secure

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specimens for examination. The survey route proceeded along the old logging road to the pond. After searching around the pond, the surveyors continued to the creek, following it to the marsh. The survey route continued through the woods paralleling the Occoquan River, taking an unnamed trail back to the logging road. Lastly, the smaller parcel of park was surveyed.

Results

Table 1. Summary of the number of animals observed at each site.

Sites	1	2	3	4
Species				
Amphibians				
<i>Acris crepitans</i>	1			1
<i>Anaxyrus americanus</i>	6	11+		
<i>Hyla chrysocephala</i>		3		
<i>Lithobates clamitans melanota</i>	1	1		
<i>Lithobates palustris</i>				1
<i>Pseudacris crucifer</i>		3		
<i>Ambystoma maculatum</i>	1	4		
Reptiles				
<i>Plestiodon fasciatus</i>	4			
<i>Carphophis amoenus amoenus</i>	13			
<i>Coluber constrictor constrictor</i>				1
<i>Pantherophis alleghaniensis</i>	1			
<i>Thamnophis sirtalis sirtalis</i>	1			
<i>Kinosternon subrubrum</i>			1	
<i>Terrapene carolina carolina</i>	4	2		
<i>Trachemys scripta elegans</i>				1
Total Number of animals by site	32	24+	1	4

Annotated Checklist

Anurans

- Acris crepitans* (Northern Cricket Frog) – (1,4)
A Northern Cricket Frog was found in the upland forest. Another was heard calling from the marsh.
- Anaxyrus americanus* (American Toad) – (1,2)
The American Toad was the most recorded animal in the survey.

Four adults were captured in the upland forest, one under a rotten log. Numerous recent metamorphs were seen around the pond and along the logging road near the pond.

3. *Hyla chrysoscelis* (Cope's Gray Treefrog) – (2)
Three recent metamorphs were found on vegetation near the pond.
4. *Lithobates clamitans melanota* (Northern Green Frog) – (1,2)
A Northern Green Frog was heard calling from the woods. A tadpole was found in the pond.
5. *Lithobates palustris* (Pickerel Frog) – (4)
A Pickerel Frog was seen in the marsh.
6. *Pseudacris crucifer* (Spring Peeper) – (2)
Two adults and a recent metamorph were found near the pond.

Salamanders

7. *Ambystoma maculatum* (Spotted Salamander) – (1,2)
A Spotted Salamander was found under a log along the old logging road. Another was found under a rock next to the pond. Three spotted salamander larvae were found in the pond.

Reptiles

Lizards

8. *Plestiodon fasciatus* (Common Five-lined Skink) – (1)
One skink was found on a log, another in a log and a third was found under the bark of a log. One of the skinks was a juvenile.

Snakes

9. *Carphophis amoenus amoenus* (Eastern Wormsnake) – (1)
The Eastern Wormsnake was the most frequently encountered reptile in the study. One was found inside a log, another under a board. All other wormsnakes were found under logs with three under a single log.

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10. *Coluber constrictor constrictor* (Northern Black Racer) – (4)
A Northern Black Racer was spotted along the forest/marsh ecotone.
11. *Pantherophis alleghaniensis* (Eastern Ratsnake) – (1)
An Eastern Ratsnake was captured along the side of Furnace Road.
12. *Thamnophis sirtalis sirtalis* (Eastern Gartersnake) – (1)
A partial shed skin from an Eastern Gartersnake was found. This species has also been encountered by archaeologists working on the site.

Turtles

13. *Kinosternon subrubrum subrubrum* (Eastern Mud Turtle) – (3)
An Eastern Mud Turtle found along the creek by a water monitoring station.
14. *Terrapene carolina carolina* (Eastern Box Turtle) – (1,2)
Four Eastern Box Turtles were encountered in the upland forest. One, a young female, was found in a drying creek bed. Another was found on the northern parcel by the railroad tracks. Two Box Turtles were found in the mud next to the pond.
15. *Trachemys scripta elegans* (Red-eared Slider) – (4)
A Red-Eared Slider plastron was found in the marsh.

Discussion

This was the first survey of amphibians and reptiles in Old Colchester Park. The results will be used to develop a species checklist. Seven species of amphibians (six anurans and one salamander) and eight species of reptiles (one lizard, four snakes and three turtles) were found during the survey. None were new records for Fairfax County. A single day survey gives only a partial picture of which species occur at a given location. Rare and out-of-season species are not likely to

be detected. Many more species are likely to occur at Old Colchester Park than the fifteen that were found during this survey.

In all, fifty-four amphibian and reptile species have been documented from the Mason Neck peninsula (Klimkiewicz 1972a, Klimkiewicz 1972b, Ernst et al. 1997, Creque 2001, Orr & Mendoza 2011) though some of these species have been encountered only a few times over years of field work. Old Colchester Park's proximity to other natural areas and the mostly undeveloped condition of the Mason Neck peninsula allow movement of wildlife between refuges. Further survey effort, particularly using traps for aquatic turtles and a more concentrated effort in and along the creek for aquatic salamanders, could increase the species count for this park.

Only one introduced species, the Red-Eared Slider, was found during the survey. This turtle, common in the pet trade prior to 1972, has become established in many parts of Virginia (Mitchell 1994). It has been previously documented from Mason Neck and other parts of northern Virginia (Ernst et al. 1997). In other parts of its introduced range, this turtle has been found to have a negative impact on native turtles (Ernst & Lovich 2009). The Red-Eared Slider is now considered naturalized in Virginia and has the same legal protection as native turtles.

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