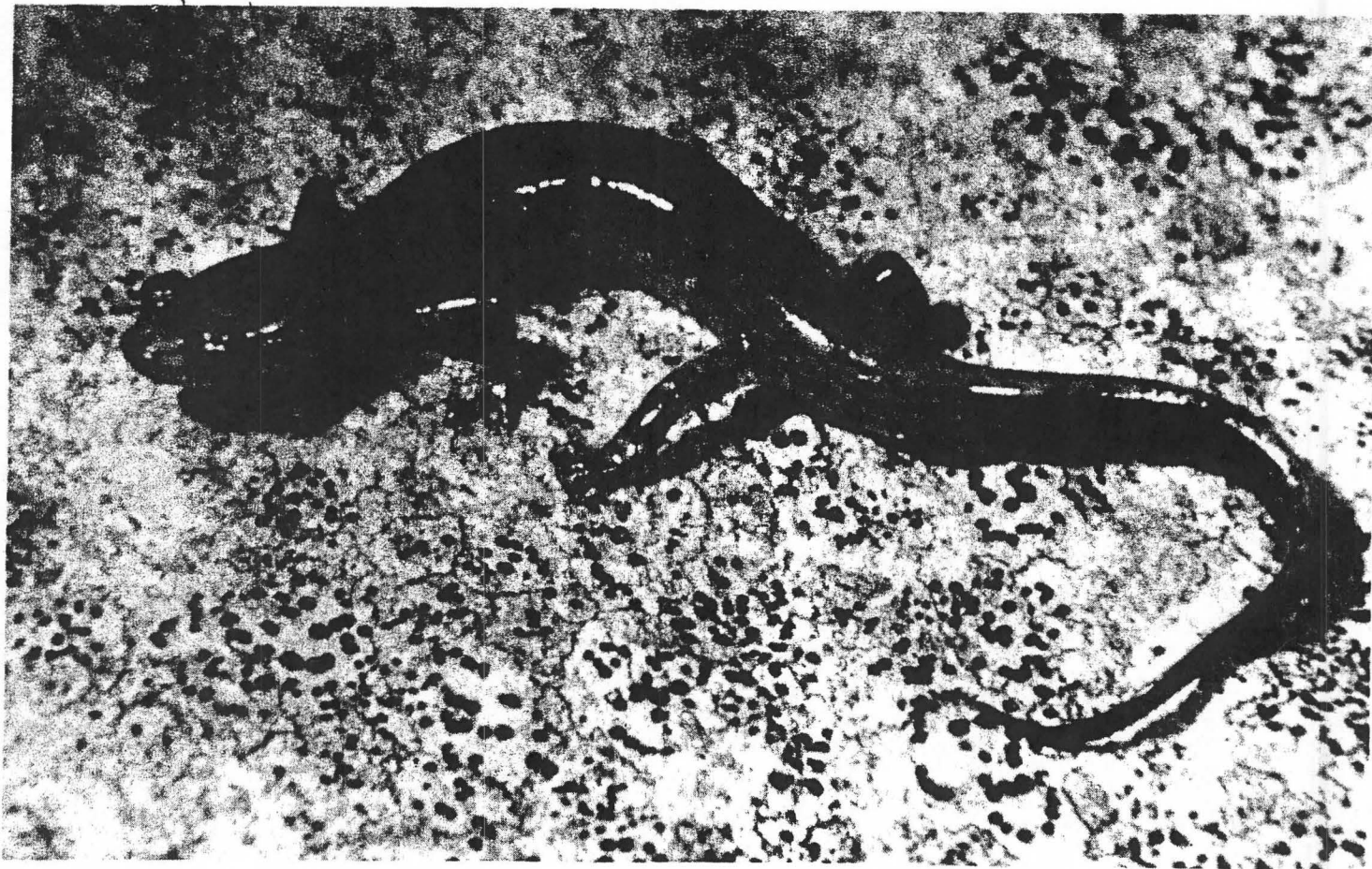


DON SCHWAB  
GAME BIOLOGIST  
760



**BULLETIN OF THE CHICAGO  
HERPETOLOGICAL SOCIETY**

**VOLUME 19 (3)**

**1984**



## ERRATA

The following species description should have been included in, NOTES' ON THE AMPHIBIANS AND REPTILES OF THE GREAT DISMAL SWAMP OF VIRGINIA AND NORTH CAROLINA. Bull. Chi. Herp. Soc., 19 (3):85-93. The description should appear between the accounts for *Amphiuma means* and *Desmognathus auriculatus*.

Marble Salamander, *Ambystoma opacum* (Gravenhorst)

Delzell (in Kirk, 1979) states that this species, "...is apparently a peripheral form." The author has found this species at the foot of the scarpment on Jericho Ditch Lane. A lone specimen was found at Dismal Town on Washington Ditch Road.

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NOTES ON THE AMPHIBIANS AND REPTILES OF  
THE GREAT DISMAL SWAMP OF  
VIRGINIA AND NORTH CAROLINA

Don Schwab

The Great Dismal Swamp encompasses approximately 200,000 acres in southeastern Virginia and northeastern North Carolina. The plant communities of the Dismal Swamp are a mixture of northern and southern species (Meanley, 1973; Carter, in Kirk, 1979). The swamp is predominately a mixed hardwood forest, made up of red maple, *Acer rubrum*, and black gum, *Nyssa sylvatica*. Several other vegetation communities exist and include evergreen shrub, Atlantic white cedar, *Chamaecyparis thyoides*, and loblolly pine, *Pinus taeda*, stands.

Over 200 km of roads and adjacent ditches traverse the swamp, allowing fairly easy access for observation (Fig. 1). The ditches are important habitats for many of the reptiles and amphibians. The 3,000 acre Lake Drummond is located in the center of the Great Dismal Swamp and is one of only two natural lakes occurring in the state of Virginia.

As with this paper, most of the published works dealing with amphibians and reptiles in the Great Dismal Swamp are lists or recollections of trips to the area. This paper will focus on my knowledge of these groups of animals and over 15 years of visiting, collecting, observing and working in one of the most interesting habitats in the United States.

Class Amphibia  
Order Anura

Eastern Spadefoot, *Scaphiopus holbrooki holbrooki* (Harlan)

I have never found this species within the interior of the swamp. As stated by Delzell (in Kirk, 1979) this species is restricted to the periphery of the swamp.

American Toad, *Bufo americanus americanus* Holbrook

No "pure" toads identifiable as this species have been observed by the author. Specimens examined usually appear to be hybrids with *Bufo woodhousii fowleri* Hinckley or *Bufo terrestris* (Bonnaterre).

Southern Toad, *Bufo terrestris* (Bonnaterre)

This is the only *Bufo* found deep in the swamp's interior, only occasionally found near the periphery.

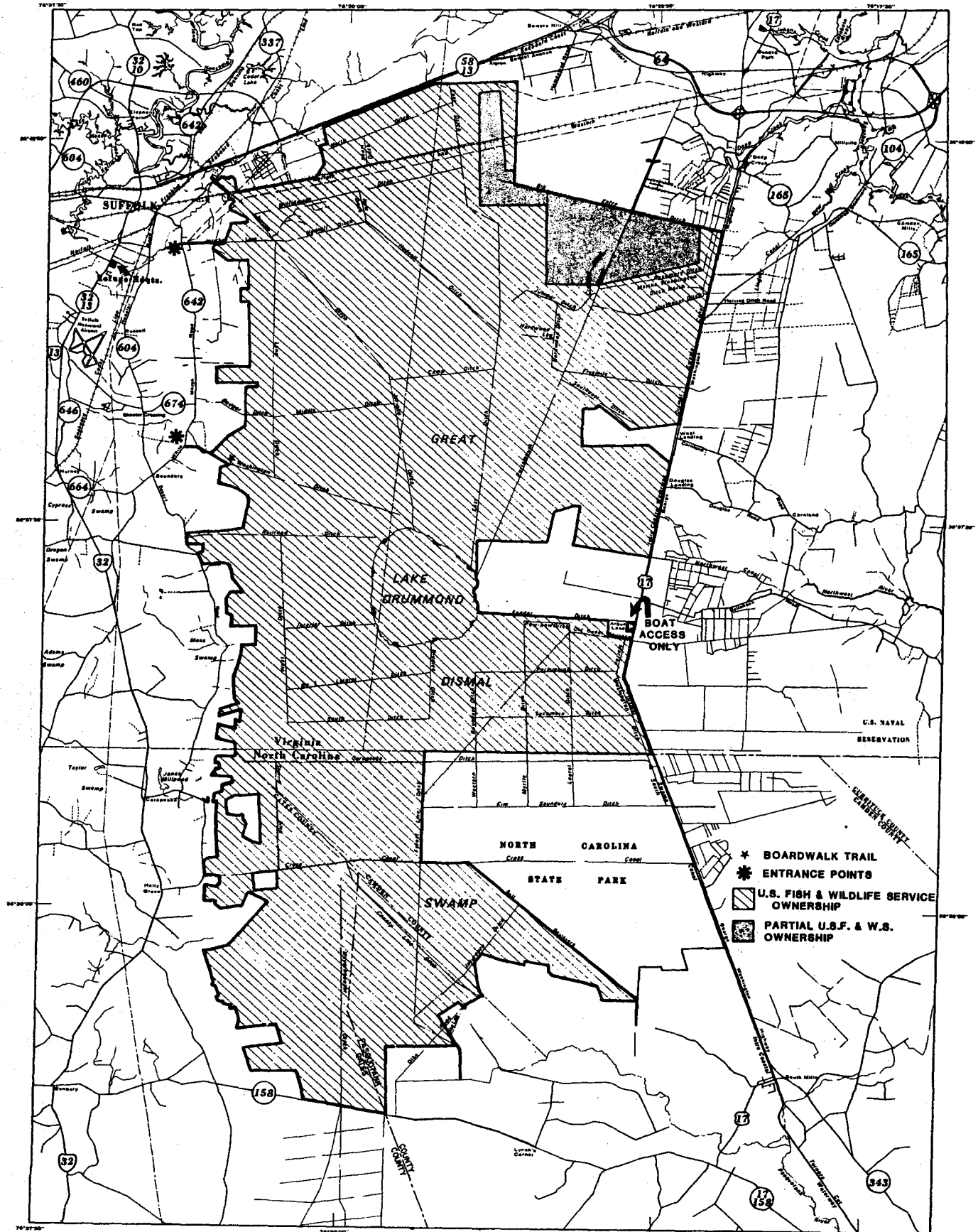
# GREAT DISMAL SWAMP NATIONAL WILDLIFE REFUGE

86

UNITED STATES  
DEPARTMENT OF THE INTERIOR

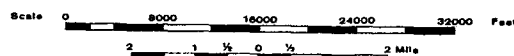
VIRGINIA AND NORTH CAROLINA

UNITED STATES  
FISH AND WILDLIFE SERVICE



COMPILED IN THE OFFICE OF REALTY  
FROM SURVEYS BY THE U.S.G.S.

Figure 1



MN 9  
71 0'53"  
MEAN  
DECLINATION  
1973

Fowler's Toad, *Bufo woodhousii fowleri* Hinckley

This is the most commonly found toad in the swamp, although I have never found this species near the lake.

Oak Toad, *Bufo quercius* Holbrook

I have found this toad only once near the entrance to Railroad Ditch in the Virginia portion of the swamp.

Spring Peeper, *Hyla crucifer* Wied

Among the treefrogs, this species, is common and one of the easiest to find.

Green Treefrog, *Hyla cinerea* (Schneider)

This frog is found throughout the swamp.

Pinewoods Treefrog, *Hyla femoralis* Sonnini and Latreille

I have only encountered this frog once in the North Carolina portion of the swamp along Forest Lane Ditch. Meanley (1973) states that the pinewoods treefrog occurs mainly in the shrub community and cut-over white cedar stands, which is where I found my specimen. Brady (1927) found the frog along the Feeder Ditch in Virginia.

Squirrel Treefrog, *Hyla squirella* Bosc

This frog is more commonly heard than seen. Specimens have been collected from corn fields on the western edge of the swamp.

Gray Treefrog, *Hyla versicolor* LeConte

This frog is found and heard throughout the swamp.

Little Grass Frog, *Limnaeodius ocularis* (Bosc and Daudin)

The shrub community southeast of Lake Drummond seems to be preferred habitat for this species. Meanley (per. comm.) states that there are large numbers of this frog found near Railroad Ditch entrance during breeding periods.

Upland Chorus Frog, *Pseudacris triseriata ferirum* (Baird)

I have never seen or herd this species in the swamp. Delzell (in Kirk, 1979) reports it from the swamp (Virginia Herpetological League, VHL, records), however, he has not encountered the frog in the swamp.

Brimley's Chorus Frog, *Pseudacris brimleyi* Brandt and Walker

This frog is often heard. I have collected it from many vegetation communities throughout the swamp.

Southern Cricket Frog, *Acris gryllus gryllus* (LeConte)

This frog is common along roads in the swamp.

Bullfrog, *Rana catesbeiana* Shaw

It is seen and heard throughout the swamp.

Carpenter Frog, *Rana virgatipes* Cope

Delzell (in Kirk, 1979) said that this frog, "...has been collected in the swamp in grassy as well as swampy areas." The only specimens that I have encountered were found in a sphagnum area on the northern end of the swamp.

Green Frog, *Rana clamitans melanota* (Rafinesque)

This frog is usually found in ditches, but it is also evident in other habitats.

Southern Leopard Frog, *Rana sphenoccephala* Cope

It is probably the most commonly found true frog in the swamp.

Eastern Narrowmouth Toad, *Gastrophyrne carolinensis* (Holbrook)

This frog is found in drier areas of the swamp, usually areas where oaks and other hardwoods predominate.

Order Caudata

Greater Siren, *Siren lacertina* Linnaeus

I have never encountered this species in the swamp. The habitat in portions of North Carolina, however, may produce this animal with more searching.

Dwarf Waterdog, *Necturus punctatus punctatus* (Gibbs)

This species has never been reported from the swamp. Delzell (in Kirk, 1979) believes that it will eventually be found in the Dismal Swamp.

Two-toed Amphiuma, *Amphiuma means* Garden

This animal is seldom seen or trapped, but may be one of the more abundant salamanders in the swamp. During the winter of 1976 the swamp "froze over", and the ice was thick enough to allow easy travel. Several dozen of these salamanders were seen under the ice moving in the leaf litter. One salamander was brought up through a hole in the ice and died when exposed to the air temperature. Several other specimens have been collected at various sites throughout the swamp.

Southern Dusky Salamander, *Desmognathus auriculatus* Holbrook

This salamander has never been recorded from the interior of the swamp; however, several individuals have been found along the scarp on the west side of the swamp.

Redback Salamander, *Plethodon cinereus* (Green)

This species can be found in most habitats, but prefers the "drier" portions of the swamp.

Slimy Salamander, *Plethodon glutinosus* (Green)

This salamander does not appear to be as commonly found as it once was. It is often found in company with *P. cinereus* when one is turning logs.

Many-lined Salamander, *Stereochilus marginatus* (Hallowell)

Although efforts were made to locate this species, it was never found by the author. Wood and Rageot (1963) reported finding 43 nests of this species in 1954 and 1955. The nests have been found both in Virginia and North Carolina portions of the swamp.

Southern Two-lined Salamander, *Eurycea bislinneata cirrigera* (Green) Delzell (in Kirk, 1979), reports that one specimen was taken from a spring along the Suffolk Scarp in North Carolina. The author has not found this species in the swamp.

Class Reptilia  
Order Testudines

Snapping Turtle, *Chelydra serpentina* (Linnaeus)

This turtle has been seen mating in March (Schwab, 1977 unpub.). Eggs have been found during the months of May through August. The snapping turtle is found in all ditches within the swamp, however, I have never seen it in Lake Drummond.

Stinkpot, *Sternotherus odoratus* (Latreille)

The stinkpot has been found only on East Ditch by the author, approximately 100 meters north of Lake Drummond.

Eastern Mud Turtle, *Kinosternon subrubrum* (Lacepede)

It is easily found in late spring and early summer when females are on land in search of nest sites. Four of these turtles were captured, marked and released (Schwab, unpub. field notes).

Spotted Turtle, *Clemmys guttata* (Schneider)

It is one of the more abundant turtles in the swamp and, like the box turtle, *Terrapene carolina*, can be found anywhere in the swamp miles from water. Eight specimens have been captured, marked and released.

Eastern Box Turtle, *Terrapene carolina carolina* Linnaeus

I have found this turtle throughout the swamp. From June, 1976 to July, 1978, 251 box turtles were marked; however, only one female was recaptured a year after being marked. The turtle had traveled a straight line distance of 2.2 km.

Eastern Painted Turtle, *Chrysemys picta picta* (Schneider)

This turtle is commonly seen basking on debris in the ditches. Two specimens have been marked and released.

Yellowbelly Slider, *Pseudemys scripta scripta* (Schoepff)

This is easily the most common "slider" found in the swamp. Six specimens have been marked and released, and all were captured in June while digging nest cavities.

Eastern River Cooter, *Pseudemys concinna concinna* (LeConte)

No specimens that could be referable to *P. c. concinna* have been

found by the author. Several specimens that showed some characteristics of the river cooter and the redbelly turtle, *P. r. rubriventris*, have been seen, although no specimens were collected. Since this species is usually associated with moving waters, the Pasquotank River on the southeastern edge of the swamp may produce the turtle with further study of the area.

Florida Cooter, *Pseudemys floridana floridana* (LeConte)

The Florida cooter has not been reported from the swamp. Delzell (in Kirk, 1979) states that this turtle could be found with the swamp.

Red-bellied Turtle, *Pseudemys rubriventris rubriventris* (LeConte)

Although not found by Delzell (in Kirk, 1979), this turtle is fairly common in several ditches in the Virginia portion of the swamp. Several have been captured while attempting to construct nest cavities.

Order Squamata  
Suborder Sauria

Green Anole, *Anolis carolinensis* (Voigt)

This lizard has not been found by the author, but it has been recorded from the swamp by Delzell (in Kirk, 1979).

Northern Fence Lizard, *Sceloporus undulatus hyacinthinus* (Green)

This author has seen this lizard only once in the North Carolina portion of the swamp. The lizard was observed 1.6 km west of Sherrill Ditch on Cross Ditch Road (Schwab, 1982 unpub. field notes).

Ground Skink, *Scincella lateralis* (Say)

This lizard is commonly found in drier sandy areas of the swamp. I have found it most often on the northern end of Lynn Ditch Road.

Five-lined Skink, *Eumeces fasciatus* (Linnaeus)

This lizard is found frequently along the western boundary of the swamp, but seems less common in other portion of the swamp. As Delzell (in Kirk, 1979) states, "...probably occurs throughout drier portions of the Swamp."

Broadheaded Skink, *Eumeces laticeps* (Schneider)

This species has never been positively identified by the author. I have seen skinks that could have been this species in a large oak tree along an old railroad bed north of Washington Ditch Road 3 to 4 m above the ground.

Southeastern Five-lined Skink, *Eumeces inexpectatus* Taylor

This lizard has been collected near Lake Drummond around old hunting cabins. Compared with *E. fasciatus* and *E. inexpectatus* it is rarely encountered.

Eastern Slender Glass Lizard, *Ophisaurus attenuatus longicaudus* McConkey  
The only report of this species in the swamp was a tail portion found

by T. Gwynn, III (per. comm.) along North Ditch Road. Several specimens have been collected from the scarp along the western boundry of the swamp. Delzell (in Kirk, 1979) never encountered this species, but mentions that the VHL has recorded this species within the swamp.

#### Suborder Serpentes

##### Brown Water Snake, *Nerodia taxispilota* (Holbrook)

This species is found throughout the swamp, it is readily seen along Dismal Swamp Canal sunning on over-hanging limbs.

##### Redbelly Water Snake, *Nerodia erythrogaster erythrogaster* (Forester)

This snake has been observed quite commonly in Virginian portions of the swamp. Although the author has not found this species in the North Carolina portion of the swamp, it probably occurs there.

##### Northern Water Snake, *Nerodia sipedon sipedon* (Linnaeus)

This species has been found most frequently by the author. Delzell (in Kirk, 1979) reports hydridization with *N. fasciata* in the southern portion of the swamp. Brady (1927) reported the species to be abundant in the month of June.

##### Northern Brown Snake, *Storeria dekayi dekayi* (Holbrook)

This small snake is common and found in areas that remain dry for most of the year.

##### Eastern Ribbon Snake, *Thamnophis sauritus sauritus* (Linnaeus)

One of the more commonly found snakes within the interior of the swamp.

##### Eastern Garter Snake, *Thamnophis sirtalis sirtalis* (Linnaeus)

The garter snake is easily found along roads within the swamp.

##### Northern Black Racer, *Colouber constrictor constrictor* Linnaeus

A very common snake along roads and drier areas of the swamp. A specimen measuring 170 cm was recently measured (and released) along the western edge of the swamp (Schwab, 1984, unpub. notes).

##### Rough Green Snake, *Opheodrys aestivus* (Linnaeus)

This species is probably more common than sightings would indicate. When one takes the time to search shrubs and low vegetation the snake can usually be found.

##### Black Rat Snake, *Elaphe obsoleta obsoleta* (Say)

This snake is abunadant and found in all habitats. A specimen was seen 9-10 m above the ground, sunning near a cavity in a red maple, *Acer rubrum*. Several specimens have been observed and one collected (July, 1978) which showed very dominant lateral stripes. One specimen collected had an overall greenish coloration, with 4 lateral stripes, very similar to *E. o. quadrivittata*.

Eastern Kingsnake, *Lampropeltis getulus getulus* (Linnaeus)

This species is found irregularly throughout the swamp.

Milk Snake, *Lampropeltis triangulum* (Lacepede)

The taxonomy of the species is confusing with apparent hybridization between subspecies. The scarlet kingsnake, *L. t. elapsoides*, is listed by Delzell (in Kirk, 1979) as being found in the swamp, however, I have not found this subspecies. Of the 4 known specimens of *L. triangulum* seen from the swamp (NMNH) all were *L. t. elapsoides* x *L. t. triangulum* intergrades (= the coastal plains milk snake) (Williams, 1978; Schmidt and Davis, 1941; Martof, et al., 1980; and Linzey and Clifford, 1981). The one specimen collected by the author was found on the northwest shore of Lake Drummond, south of Interior Ditch Road.

Southern Copperhead, *Agkistrodon contortrix contortrix* (Linnaeus)

Only one specimen of this subspecies has been seen by the author. The snake was encountered in North Carolina on Sherrill Ditch Road. Delzell (in Kirk, 1979) states, "This species is easily the most common poisonous snake..." This author is of the opinion that the species *A. contortrix* is the most common poisonous snake, however, not the subspecies, *A. c. contortrix*. Burger in 1958-1959 (Linzey and Clifford, 1981) recorded, "Some snakes with traces of characteristics of the southern copperhead identifiable as *A. c. contortrix* that are found in the Coastal Plain should be considered intergrades with *A. c. mokeson*."

Northern Copperhead, *Agkistrodon contortrix mokeson* (Daudin)

This pit viper is regularly encountered in all habitats throughout the swamp. Linzey and Clifford (1981) state that *A. c. mokeson* is the only subspecies of this snake found in Virginia.

Eastern Cottonmouth, *Agkistrodon piscivorus piscivorus* (Lacepede)

This snake is surprisingly rare within the swamp. I have seen the cottonmouth only three times and there are few reliable reports of this species by knowledgeable individuals.

Timber Rattlesnake, *Crotalus horridus* Linnaeus

The "canebreak" color phase is the only variety encountered in the swamp, but most sightings have been very near Lake Drummond.

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1476 White Marsh Rd., Suffolk, Virginia 23434



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ADDITIONAL NOTES ON THE REPTILES  
OF THE GREAT DISMAL SWAMP  
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Don Schwab

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This paper will add several species of snakes to the author's (Schwab, 1984) list of amphibians and reptiles found in the Great Dismal Swamp. The list of herps for the Swamp has increased due to additional collections, review of records (Schwab, unpub. field notes) and from the unpublished notes of Brooke Meanley who has written several works on the Dismal Swamp and its flora (Meanley, 1972;1973).

Order Squamata  
Suborder Serpentes

## Northern Red-bellied Snake

*Storeria occipitomaculata occipitomaculata* (Storer)

On 14 April 1985, while turning metal debris behind a barn, I found this species. This is the first sighting of this species in the Swamp by the author. The specimen was located on the scarp which forms the western boundary of the Great Dismal Swamp. Delzell (in Kirk, 1979) lists this species, but does not state if it was actually found, or only suspected to occur in the Swamp.

## Eastern Hognose Snake

*Heterodon platyrhinos* Latreille

Though not found within the Swamp, this snake is common in the sandy fields on the top of the scarp. All specimens seen or collected have been dark with very little pattern and several specimens have been black.

Southern Ringneck Snake *Diadophis punctatus punctatus* (Linnaeus)

Regularly found in drier areas of the swamp, this species has been found mostly in areas with American beech, *Fagus grandifolia*, (Schwab, unpub. field notes).

## Eastern Mud Snake

*Farancia abacura abacura* (Holbrook)

Meanley (personal comm.) states that he, "...found a dead mud snake (*Farancia abacura*) along Lynn Ditch Road in the 1960's." The snake is probably more common than sightings or specimens would indicate, with more than 150 km of ditches and the presence of its major food source, the amphiuma (Schwab, 1984), the habitat is prime for this snake. Meanley (1973) calls this a "southern" snake very near its northern limit.

## Scarlet Snake

*Cemophora coccinea* (Blumenbach)

Though not reported by Delzell (in Kirk, 1979) and never found by this author, Meanley (personal comm.) states that Francis M. Uhler (Fish & Wildlife Service biologist) found a scarlet snake in

Dismal Swamp "some years ago." No location is mentioned other than Dismal Swamp.

Scarlet Kingsnake *Lampropeltis triangulum elapsoides* (Holbrook)

Delzell (in Kirk, 1979) lists this species and B. Meanley (personal comm.) found a specimen on Jericho Rd on 18 April 1973.

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