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September 2008



U.S. Fish & Wildlife Service

Great Swamp

*National
Wildlife Refuge*

*Reptiles, Amphibians
and Fishes*



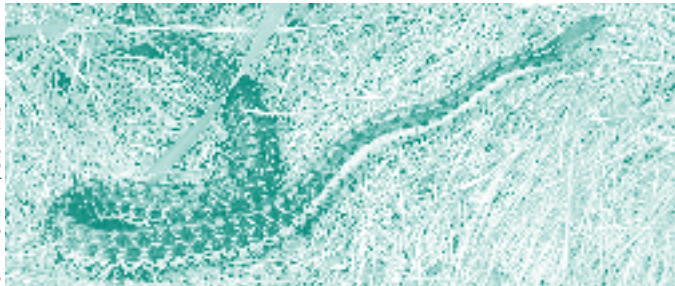
This goose, designed by J.N. "Ding" Darling, has become the symbol of the National Wildlife Refuge System.

The species of reptiles and amphibians on this list are known to be present on the refuge. Many are permanent residents of the Great Swamp, and during the warmer months of the year visitors can view some of these animals from the boardwalks of the wildlife observation center, along the wildlife tour route and in the wilderness area of the refuge.

The list order of the reptiles and amphibians follows National Audubon Society's *Field Guide to North American Reptiles and Amphibians*, 2002. The common and scientific names have been updated using www.natureserve.org.

- *SE = State endangered: listed as endangered by the New Jersey State Department of Environmental Protection
- *ST = State Threatened: listed as Threatened by the New Jersey State Department of Environmental Protection
- *FT = Federally threatened

Eastern Garter Snake



Colin Osborn/USFWS

Reptiles

Common Snapping Turtle —
Chelydra serpentina serpentina

- • Common. Can be found in habitats such as ponds, lakes, streams, rivers, swamps and freshwater marshes. Adults can weigh up to 45 pounds.



Colin Osborn/USFWS

Common Snapping Turtle

Common Musk Turtle (Stinkpot) —
Sternotherus odoratus

- • Uncommon. Inhabits streams and ponds that have a slow current and soft bottom. Produces a strong musky odor when disturbed.

Eastern Mud Turtle —
Kinosternon subrubrum subrubrum

- • Rare. Inhabits still, shallow areas of swamps, marshes, ponds, lakes, creeks and bogs. They crawl along the bottom of their aquatic habitats searching for food.

Spotted Turtle — *Clemmys guttata*

- • Common. Inhabits shallow water that includes muddy-bottomed streams, marshy meadows, vernal pools, forested wetlands, bogs and ponds. Emerges from hibernation during the early spring and can be seen most frequently basking on logs.



Colin Osborn/USFWS

Spotted Turtle

Bog Turtle (*SE and *FT) —
Glyptemys muhlenbergii

- • Very rare. One of the rarest and smallest turtles in the eastern United States. Favors open habitats including sphagnum bogs, swamps and slow-moving streams with muddy bottoms. Typically active from April to mid-October, but are extremely secretive.



Sharon Marino/USFWS

Bog Turtle

Wood Turtle (*ST) —
Glyptemys insculpta

- • Very rare. Inhabits streams and small rivers bordered by woodlands and meadows. During the spring and summer this species is highly terrestrial but returns to water during the fall to mate and then hibernate.

Eastern Box Turtle —
Terrapene carolina carolina

- Common. This highly terrestrial species inhabits fields, meadows and open woodlands, but is occasionally found in ponds and marshes. Has the ability to close its shell tightly when danger threatens.



Helen Johnson/USFWS

Eastern
Box Turtle

Eastern Painted Turtle —
Chrysemys picta picta

- Very common. This species has the widest range of any turtle in North America. Can be seen basking on logs and rocks in both permanent and temporary bodies of water.



Colin Osborn/USFWS

Eastern
Painted Turtle

Red-eared Slider —
Trachemys scripta elegans

- Uncommon. Introduced species that is commonly sold in pet stores across the country. They most likely became established after unwanted individuals were carelessly released onto the refuge. Fond of basking and similar to Painted Turtle but slightly larger and distinguished by red markings on sides of head. Please report any Red-eared Slider sightings to Great Swamp staff (office address and phone number on back of brochure).



Colin Osborn/USFWS

Red-eared Slider

Redbelly Turtle —
Pseudemys rubriventris

- Very rare. Discovered here by refuge biologists in 2006, only a few have been observed. Formerly noted in south and central NJ, it is uncertain whether individuals here are the result of range expansion or were released pets. Can be seen basking often with Painted Turtles but is easily

distinguished from them by its large size and reddish-orange belly. Please report any Redbelly Turtle sightings to Great Swamp staff.

Eastern River Cooter —
Chrysemys concinna concinna

- Very rare. Discovered here by refuge biologists in 2008. Like the Red-eared Slider, this introduced species is sold in pet stores and likely became established after unwanted individuals were thoughtlessly released onto the refuge. This large basking turtle is comparable in size to the Redbelly Turtle but has a yellow belly and yellow accent markings on its upper shell. Please report any Eastern River Cooter sightings to Great Swamp staff.

Five-lined Skink —
Eumeces fasciatus

- Very rare. The only lizard species found here, it inhabits open woodlands and favors damp spots under leaf litter, rotted logs and stones. Will readily lose all or part of its tail when grasped by a predator.

Northern Water Snake —
Nerodia sipedon sipedon

- Very common. Found in most aquatic habitats, but favors still or slow-moving water. Frequently seen swimming or basking on rocks during the spring and summer.

Northern
Water Snake



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Northern
Brown Snake

Northern Brown Snake —
Storeria dekayi dekayi

- Common. Rarely found in the open and very secretive, they like to hide under surface objects such as boards, logs and rocks. Normally active during the day but become nocturnal in warm weather.

Eastern Garter Snake —
Thamnophis sirtalis sirtalis

- Very common. Widespread species inhabiting moist fields, forests, meadows and marshes. Active from early spring to late fall, in winter it hibernates in great numbers in community dens.

Eastern
Ribbon Snake

Eastern Ribbon Snake
—*Thamnophis sauritus sauritus*

- Common. Semi-aquatic species that inhabits streams, marshes, bogs, swamps and ponds. Swims at the surface often skirting the shoreline and likes to bask in bushes near the water's edge. When startled it takes to water.

Eastern Smooth Earth Snake —
Virginia valeriae valeriae

- Rare. Highly secretive snake that inhabits wooded areas where it spends most of its time under logs and rocks. Emerges only after cool, heavy rains.

Eastern Hognose Snake —
Heterodon platyrhinos

- Very rare. Prefers open, wooded areas with sandy soils located near water, as it feeds mostly on

amphibians. Fans its head and neck, hisses and will even “play dead” when alarmed.

Northern Ringneck Snake —
Diadophis punctatus edwardsii

- Uncommon. Secretive snake often found in moist wooded areas, cutover lands and field edges, where there are plenty of hiding places under logs, rocks and loose bark.

Eastern Worm Snake —

Carphophis amoenus amoenus

- Rare. Inhabits wooded areas with moist soil that allows for burrowing. Is secretive and hides under surface objects such as logs, tree bark, boards and rocks.

Northern Black Racer —

Coluber constrictor constrictor

- Common. Terrestrial fast-moving snake that inhabits open forests and overgrown fields, but can also be found in wet areas such as bogs and marshes. Does not constrict prey, but loops body around it to hold prey down while feeding.

Smooth Green Snake —

Opheodrys vernalis

(a.k.a. *Liochlorophis vernalis*)

- Rare. Inhabits meadows, grassy marshes, stream borders and bogs. This gentle serpent is also known as the “green grass snake.”

Black Rat Snake —

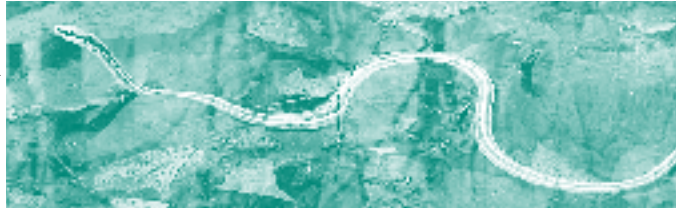
Elaphe obsoleta obsoleta

- Rare. Inhabits wooded areas, old fields and farmland, usually located near water. These constrictors are excellent climbers that can be found in trees searching for birds and eggs and in the rafters of abandoned buildings looking for mice.

Helen Johnson/USFWS

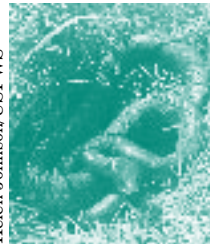


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Northern
Black Racer



Amphibians

Eastern Milk Snake — *Lampropeltis angulum triangulum*

- Common. Lives in most terrestrial habitats, including woods and fields, but can be found near marshes as well. These constrictors are secretive and use boards, logs and rocks as cover. Their name comes from the absurd myth that they milk cows.

Blue-spotted Salamander (*SE) — *Ambystoma laterale*

- Common but secretive. Adults are nocturnal, they spend the day underground and emerge at night to feed. Breeds in temporary forest pools during early spring. Occurs only in Essex, Morris and Somerset Counties in New Jersey.

Red-spotted Newt — *Notophthalmus viridescens viridescens*

- Uncommon. Adults and larvae favor ponds with abundant aquatic vegetation. Terrestrial juveniles, called red eft, are found in moist woodlands, typically under damp leaf litter and logs and are often seen on the forest floor after it rains.



Red-spotted Newt (Red Eft)

Northern Dusky Salamander — *Desmognathus fuscus fuscus*

- Rare. Found in forest brooks, seepage areas and near springs. Favor large, flat rocks and logs, which provide both shelter and food.

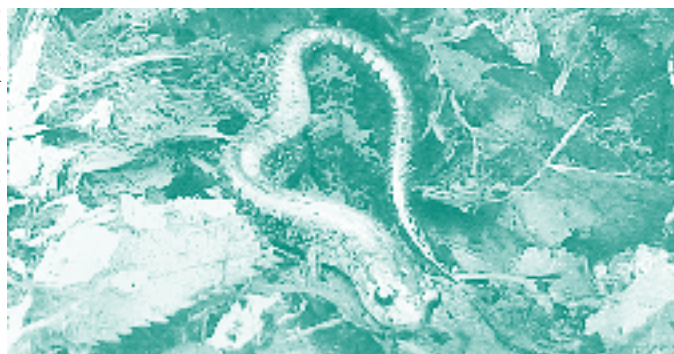
Redback Salamander — *Plethodon cinereus*

- Very common. Found under logs, bark or rocks in moist, wooded areas. Two different color phases: “redback” phase has a red stripe down its back and “leadback” phase is

Redback Salamander

uniformly gray to black, lacking the red stripe.

Colin Osborn/USFWS



Colin Osborn/USFWS

Northern Slimy Salamander

Northern Slimy Salamander — *Plethodon glutinosus*

- Uncommon. Inhabits wooded areas and alongside streams, where it lives under logs and rocks. Its skin secretes a slimy, glue-like substance.



Four-toed Salamander — *Hemidactylium scutatum*

- Uncommon. Found under logs, rocks and leaf litter in moist woodlands, bogs and swamps, usually associated with sphagnum moss. Their hind feet have only 4 toes each, most salamanders have 5.

Four-toed Salamander



Helen Johnson/USFWS

Eastern American Toad

Eastern American Toad — *Bufo americanus americanus*

- Uncommon. Adults are typically found in moist, shady woods. Breeds on the edges of shallow ponds and pools from mid-spring to early summer. Its call is a long, musical trill, lasting up to 30 seconds, usually heard April through June.

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Fowler's Toad — *Bufo fowleri*
(formerly *Bufo woodhousii fowleri*)

- • Rare. Adults are found in a variety of habitats, but favor dry woodlands and floodplains. Burrows underground or hides under rocks, plants and other cover when inactive. Breeds in meadows, shallow ponds and swamp margins from late spring to early summer. Its call is a short, high-pitched, nasal trill — “w-a-a-a-h,” usually heard in May and June.



Helen Johnson/USFWS

Northern
Cricket Frog

Northern Cricket Frog —
Acris crepitans crepitans

- • Common. Adults prefer ponds, ditches and marshy areas with vegetation and full sun. Breeds from late spring to mid-summer in the shallow margins of any standing water. Its call is a fast, repeated clicking like 2 pebbles being struck together and usually heard from May through July.

Northern Gray Treefrog —
Hyla versicolor

- • Common. Adults live in trees of wooded swamps. Breeds from late spring to early summer in pools of standing water in moist woodlands. Its call is a musical, slow, bird-like trill and can usually be heard in May and June.

Northern
Spring Peeper

Colin Osborn/USFWS



Northern Spring Peeper —
Pseudacris crucifer crucifer

- • Very common. Adults are abundant in moist woodlands, brushlands, meadows and fields. Peepers breed early to late spring in any standing water. Its call is a short, loud, high-pitched “peep, peep, peep, peep” and can be heard from March through May.

New Jersey Chorus Frog —
Pseudacris triseriata kalmi

- • Uncommon. Adults are secretive and can be found in a wide variety of habitats from wet to dry. Breeds during early spring in grassy areas of any standing water. Its call is a repeated “crrreek” like a thumb drawn over the teeth of a comb and can be heard in March and April.

Upland Chorus Frog —
Pseudacris triseriata feriarum

- • Uncommon. Inhabits grassy swales, moist woodlands, swamps, ponds and bogs. Breeds during March and April and can be heard during this time with its call that is similar to the New Jersey Chorus Frog's but faster.

Bullfrog — *Rana catesbeiana*

- • Common. Adults prefer ponds, swamps and slow streams. Will eat almost anything that moves

and that it can swallow. Breeds from late spring to mid-summer near the shoreline of large bodies of permanent water that contain emergent vegetation. Its call is a deep bass “rr-uum” or “jug-orum” and can be heard from May to July.



Kurt Buhlmann

Green Frog

Green Frog —
Rana clamitans melanota

- Very common. Adults are abundant along the edges of streams, swamps, ponds and marshy areas. Seldom far from water. Breeds in any standing water from late spring to mid-summer. Its call is a throaty “boink” like the pluck of a banjo string and can be heard from May to July.

Wood Frog — *Rana sylvatica*

- Common. Adults typically found in leaf litter of wet woodlands, often a considerable distance

Wood Frog



Colin Osborn/USFWS

from water. Prefers wooded areas with small temporary pools for breeding during early spring. Its call is a duck-like quacking and can be heard in March and April.

Southern Leopard Frog —
Rana sphenoccephala
(a.k.a. *Rana utricularia*)

- Very common. Adults are common in any freshwater habitat, and in moist vegetation and wet forests during the summer months. Breeds from mid-spring to early summer in swamps, ponds and flooded meadows. Its call is a short, rattling snore followed by guttural chuckling, resembling wet hands rubbing a balloon and can be heard from April to June.



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*Southern
Leopard Frog*

Pickerel Frog — *Rana palustris*

- Uncommon. Adults are found in fields and woodlands, often at a distance from water during the summer. Breeds from mid-spring to early summer around vegetated margins of ponds and along streams. Its call is a low-pitched, drawn out snore, increasing in loudness over a couple of seconds and can be heard from April to June.

*Largemouth
Bass*



Duane Raver

Fishes

Great Swamp National Wildlife Refuge includes different aquatic habitats from ponds and swamps to streams and brooks. All of these habitats are freshwater with fluctuating water levels and varying amounts of vegetation and oxygen levels. The fishes list is comprised of 37 species that are known to occur in the Hackensack-Passaic watershed. The Great Swamp is included within this watershed and the refuge can provide the habitats that these fishes need.

The list order to the fishes follows Roger Tory Peterson's *A Field Guide to Freshwater Fishes: North America, North of Mexico*, 1991. The common and scientific names have been updated using www.natureserve.org.

American Brook Lamprey – *Lampetra appendix*
Brook Trout – *Salvelinus fontinalis*
Eastern Mudminnow – *Umbra pygmaea*
Grass Pickerel – *Esox americanus vermiculatus*
Redfin Pickerel – *Esox americanus americanus*
Chain Pickerel – *Esox niger*
Common Carp – *Cyprinus carpio*
Golden Shiner – *Notemigonus crysoleucas*
Creek Chub – *Semotilus atromaculatus*
Fallfish – *Semotilus corpoalis*
Blacknose Dace – *Rhinichthys atratulus*
Eastern Silvery Minnow – *Hybognathus regius*
Common Shiner – *Luxilus cornutus*
Spotfin Shiner – *Cyprinella spiloptera*
Satinfin Shiner – *Cyprinella analostana*
Bridle Shiner – *Notropis bifrenatus*
Spottail Shiner – *Notropis hudsonius*
White Sucker – *Catostomus commersoni*
Creek Chubsucker – *Erimyzon oblongus*
Yellow Bullhead – *Ameiurus natalis*
Brown Bullhead – *Ameiurus nebulosus*
Banded Killifish – *Fundulus diaphanus*
Inland Silverside – *Menidia beryllina*
Largemouth Bass – *Micropterus salmoides*
Smallmouth Bass – *Micropterus dolomieu*
Black Crappie – *Pomoxis nigromaculatus*
White Crappie – *Pomoxis annularis*
Mud Sunfish – *Acantharchus pomotis*
Banded Sunfish – *Enneacanthus obesus*
Bluespotted Sunfish – *Enneacanthus gloriosus*
Green Sunfish – *Lepomis cyanellus*
Bluegill – *Lepomis macrochirus*
Pumpkinseed – *Lepomis gibbosus*
Redbreast Sunfish – *Lepomis auritus*
Yellow Perch – *Perca flavescens*
Tessellated Darter – *Etheostoma olmstedi*
Johnny Darter – *Etheostoma nigrum*