

Key to the Identification of Streamside Salamanders

***Ambystoma* spp., mole salamanders**
(Family Ambystomatidae)

Appearance: Medium to large stocky salamanders.

Large round heads with bulging eyes. Larvae are also stocky and have elaborate gills.

Size: 3-8" (Total length).

Habitat: Burrowers that spend much of their life below ground in terrestrial habitats. Some species, (e.g. marbled salamander) may be found under logs or other debris in riparian areas. All species breed in fishless isolated ponds or wetlands.

Range: Statewide.

Other: Five species in Georgia. This group includes some of the largest and most dramatically patterned terrestrial species.



Spotted salamander, *Ambystoma maculatum*



Marbled salamander, *Ambystoma opacum*

***Amphiuma* spp., amphiuma**
(Family Amphiumidae)

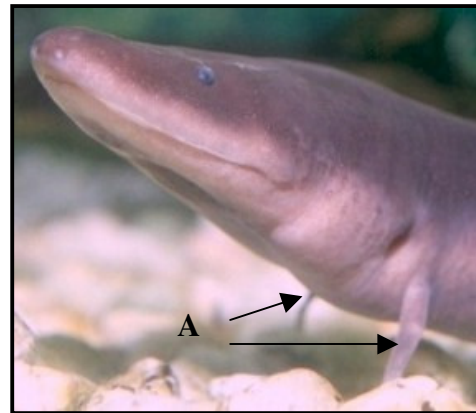
Appearance: Gray to black, eel-like bodies with four greatly reduced, non-functional legs (A).

Size: up to 46" (Total length)

Habitat: Lakes, ponds, ditches and canals, one species is found in deep pockets of mud along the Apalachicola River floodplains.

Range: Southern half of the state.

Other: One species, the two-toed amphiuma (*A. means*), shown on the right, is known to occur in southern Georgia; a second species, *A. pholete* may occur in extreme southwest Georgia, but is yet to be confirmed. The two-toed amphiuma (shown in photo) has two diminutive toes on each of the front limbs.



Two-toed amphiuma, *Amphiuma means*

***Cryptobranchus alleganiensis*, hellbender**
(Family Cryptobranchidae)

Appearance: Very large, wrinkled salamander with eyes positioned laterally (A). Brown-gray in color with darker splotches

Size: 12-29" (Total length)

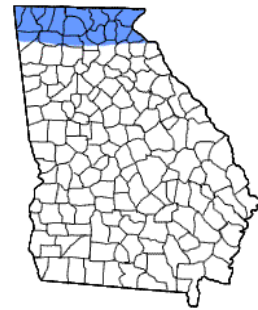
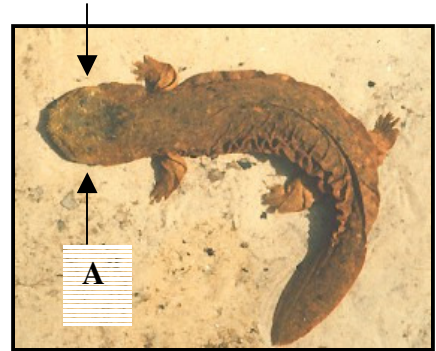
Habitat: Large, rocky, fast-flowing streams. Often

found beneath large rocks in shallow rapids.

Range: Extreme northern Georgia only. See map.

Other: Only one species in North America.

Closest relatives occur in China and Japan and can reach 5' in length. This large, but cryptic species is entirely aquatic.



***Notophthalmus* spp., newts**
(Family Salamandridae)

Appearance: Small salamanders with rough skin.

Dorsal color ranges from black to tan or even red, often with light spots. Belly usually cream colored with dark speckles.

Size: 2-4" (Total length)

Habitat: Ponds, lakes, forests.

Range: Statewide.

Other: Two species in Georgia, the eastern newt (above right) and striped newt (below right). Newts have three distinct phases in their life cycle, an aquatic larval phase, an immature terrestrial "eft" phase, and an aquatic adult stage (below right).



Eastern newt, *Notophthalmus viridescens*



Striped newt, *Notophthalmus perstriatus*

***Desmognathus* spp., Dusky salamanders**
(Family Plethodontidae)

Appearance: Small to medium-sized salamanders, many with somewhat stout bodies, smooth skin and pointed snouts. Dorsal color may be black or dark brown with varying degrees of patterns. Rear limbs conspicuously larger than front limbs. Most have a light line extending from corner of eye to angle of jaw.

Size: 2.5-8" (Total length)

Habitat: Bottomland hardwoods, stream sides or seeps.

Range: Statewide.

Other: Nine species in Georgia.



Apalachicola dusky salamander, *D. apalachicola*



Blackbelly salamander, *D. quadramaculatus*

***Eurycea* spp., Brook salamanders**
(Family Plethodontidae)

Appearance: Small to medium-sized salamanders, with slender bodies, smooth skin and long tails.

Size: 2-8" (Total length)

Habitat: Forests and stream sides, one species found in caves.

Range: Statewide.

Other: Five species in Georgia. Ranging from the tiny dwarf salamander, *E. quadridigitata* to the robust long-tailed salamander, *E. longicauda*.



Long-tailed salamander, *E. longicauda*



Dwarf salamander, *E. quadridigitata*

***Gyrinophilus porphyriticus*, Spring salamander**

(Family Plethodontidae)

Appearance: Large, stout-bodied salamander with a salmon to pink-orange background color. Light line, bordered by a dark line extends from eye to the tip of snout along a raised ridge called the canthus rostralis (A).

Size: 4-8" (Total length)

Habitat: Springs, seeps, caves, and small streams.

Range: Northern Georgia.

Other: Juveniles may be more brightly colored.



Spring salamander, *G. porphyriticus*

***Haideotriton wallacei*, Georgia blind salamander**

(Family Plethodontidae)

Appearance: Small, pinkish-white salamander with permanent, red bushy gills. Slender legs and greatly reduced eyes.

Size: 2-3" (Total length)

Habitat: Subterranean caves, streams, and aquifers.

Range: Dougherty plain region of southwest Georgia

Other: Extremely unlikely that this species would be encountered during surveys.



Georgia blind salamander, *H. wallacei*

***Hemidactylium scutatum*, Four-toed salamander**

(Family Plethodontidae)

Appearance: Small salamander with only 4 toes on hind foot and a constriction at the base of the tail.

Dorsum rusty brown and ventral surface white with black spots or blotches.

Size: 2-4" (Total length)

Habitat: Swamps, bogs, marshes, and fishless ponds.

Range: North-central Georgia.

Other: Females of this species frequently lay their eggs in joint nests with other females.



Four-toed salamander, *Hemidactylium scutatum*

***Pseudotriton* spp., Mud salamanders**
(Family Plethodontidae)

Appearance: Medium-sized stocky salamanders, with short tails. Orange-brown to bright salmon dorsal coloration, with dark spots.

Size: 3-6.5" (Total length)

Habitat: Forests and stream sides often in mud or leaf beds.

Range: Statewide.

Other: Two species in Georgia, the red salamander, *P. ruber* (above right) and mud salamander, *P. montanus* (below right).



Red salamander, *Pseudotriton ruber*



Mud salamander, *Pseudotriton montanus*

***Stereochilus marginatus*, many-lined salamander**

(Family Plethodontidae)

Appearance: Small, slender, nondescript salamander with short tail and fine parallel dark lines or streaks along the sides of the body. However, these lines may be reduced to a series of dark spots. Ventral surface yellow with scattered dark specks.

Size: 2.5–3.25" (Total length)

Habitat: Swamps, woodland ponds, borrow pits, ditches, canals and other permanent water bodies.

Range: Atlantic coastal plain.

Other: Often found by seining through thick floating aquatic vegetation.



Many-lined salamander, *Stereochilus marginatus*

***Aneides aeneus*, green salamander**

(Family Plethodontidae)

Appearance: Small to medium-sized salamander, Dorsal color black with greenish splotches, flattened body, squared toe tips.

Size: 3-5.5" (Total length)

Habitat: Rock crevices.

Range: Extreme northwest and northeast Georgia.

Other: Squared toe tips and flattened body are an adaptation for maneuvering in crevices.



Green salamander, *Aneides aeneus*

***Plethodon* spp., Woodland salamanders**

(Family Plethodontidae)

Appearance: Small to medium-sized salamanders, ground color dark gray to black, often with a dorsal stripe or light spotting or flecking. Tail rounded or oval in cross section along entire length.

Size: 2.5-8" (Total length)

Habitat: Forests and stream sides.

Range: Statewide.

Other: Thirteen species in Georgia.



Slimy salamander, *Plethodon grobmani*

***Necturus* spp., waterdogs and mudpuppies**
(Family Proteidae)

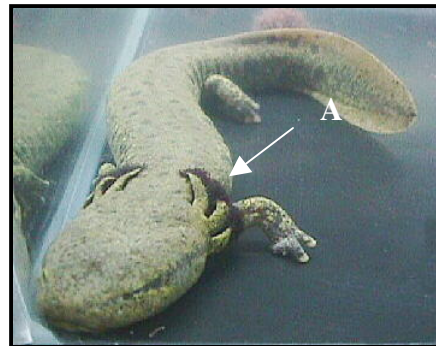
Appearance: Large aquatic salamanders with bushy external gills (A) and four stocky well-developed legs.

Size: 7.4-19" (Total length)

Habitat: Lakes and large streams, often found in leaf beds.

Range: One species in the extreme north part of the state (*N. maculosus*), one in the west (*N. alabamensis*) and one in the east-central part of the state (*N. punctatus*).

Other: Three species in Georgia.



Siren spp., sirens
(Family Sirenidae)

Appearance: Large aquatic salamanders with external gills (A), small front legs and no hind legs (B). Dark gray to black in color. May have gold or black flecks dorsally.

Size: up to 38" (Total length)

Habitat: Lakes and ponds

Range: The southern half of the state.

Other: Three species in Georgia. These salamanders are rarely observed because they spend much of their time burrowing in muck and leaf litter. They are very slimy and hard to hold on to.



Pseudobranchius striatus, dwarf siren
(Family Sirenidae)

Appearance: Medium-sized aquatic salamander with external gills, small front legs and no hind legs. Prominent longitudinal stripes along the length of the body.

Size: 4-7" (Total length)

Habitat: Lakes and ponds.

Range: The southern half of the state.

Other: One species in Georgia. These salamanders are rarely observed because they spend much of their time burrowing in thick vegetation mats.



Dwarf siren, *Pseudobranchius striatus*

References:

Conant, R. and J.T. Collins. 2002. Reptiles and Amphibians of Eastern and Central North America. Houghton Mifflin Company, Boston.

Georgia Wildlife Website, amphibians: Caudata.
<http://naturalhistory.uga.edu/gawildlife/amphibians/caudata/caudata.html>

Petranka, J.W. 1998. Salamanders of the United States and Canada. Smithsonian Institution Press.

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