

## A Preliminary Survey of the Surviving Species of Caudata of Vigo County and Vicinity

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This report on the surviving species of Caudata in Vigo County and vicinity is based upon a rather extensive survey made over a period of some six years. The specimens were identified by descriptions in Pratt's *Manual of the Land and Freshwater Vertebrates of North America*. Specimens about which there was doubt of correct identity were sent to Dr. Karl P. Schmidt of the Field Museum, Chicago, for confirmation.

Some three or four thousand specimens have been collected, representing 12 species. Observations have been made at some length on the life habits of these species both in their native habitats and under controlled conditions in the laboratory.

Certain definite changes appear to have occurred in the fauna of this region since a report was made by W. S. Blatchley, 1899. Some species reported common in this area at that time now appear to be quite rare; other species seem to be increasing noticeably in numbers.

This survey should not be considered either complete or final. Further research may disclose additional facts about this group, and it is hoped that new species will be added to the list already compiled.

**Necturus maculosus**, Mud-puppy or Water Dog. (Fig. 1.) This comparatively large salamander is rather common in the Wabash River and occurs sparingly in some of the smaller streams of Vigo County. Its fondness for earthworms, crawfish, and minnows has earned notoriety for the species as an inveterate bait-stealer. It also feeds on insects and their larvae, mollusks, and occasionally on smaller salamanders.

Frequenting the deeper portions of the stream as it does, the Mud-puppy is seldom taken except on fish-lines. It is interesting that the species is seldom or never taken during the warmer months of the year, but it is often caught during the cool seasons of late fall and early spring. The bodies of specimens taken in the fall appear gaunt and lean, but in the spring they often appear plump and well laden with meat. This body condition may indicate a period of fast during the hot summer months followed by heavy feeding during the winter. Also it may help to explain why the Mud-puppy is so seldom taken by fishermen during the hot weather.

The largest specimen taken measured 16½ inches in length, although the average size is about 12 inches.

**Ambystoma texanum**, Small-mouth Salamander. (Fig. 2.) The Small-mouth Salamander abounds in the Wabash River lowlands but is seldom found elsewhere in the county. In a series of approximately two thousand specimens collected, wide color variations were noted: light

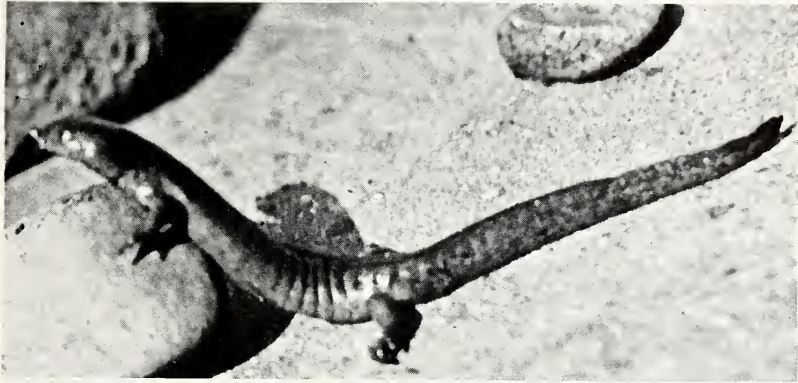
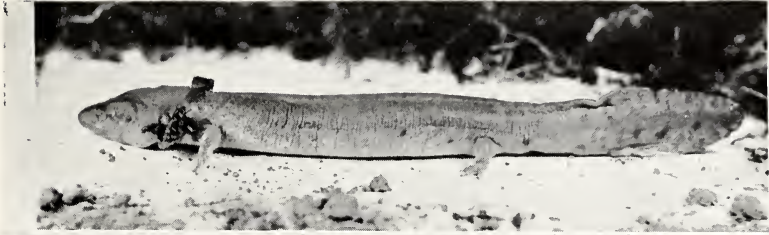


Fig. 1. *Necturus maculosus*, Mud-puppy, Water Dog.  
Fig. 2. *Ambystoma texanum*, Small-mouth Salamander.  
Fig. 3. *Ambystoma tigrinum*, Tiger Salamander.  
Fig. 4. *Ambystoma maculatum*, Spotted Salamander.

silvery gray, greenish slate, brownish, lead colored, and almost jet black in some instances. Some were mottled; others were immaculate. An albino was collected April 17, 1937.

The average length of adults appears to be about five or six inches; but one giant specimen, which was taken from a cellar in Terre Haute, measured nine and one-half inches. It probably reached this unusual size because of exclusion of certain natural enemies, notably the garter snakes.

When attacked, this salamander has a faculty, which it holds in common with many other species, of exuding an irritating, distasteful secretion from pores in the skin. The garter snakes and water snakes do not seem to be the least bit offended by this material, but a Copperhead in the laboratories showed signs of distress after biting one of these specimens and refused to engulf it until it had been washed free of the odious secretion.

**Ambystoma tigrinum**, Tiger Salamander. (Fig. 3.) The Tiger Salamander is the species most often seen in Terre Haute, probably because of its predilection for wells, cellars, open vaults, and other such places in the city. It also frequents the river lowlands but is much less common there than the Small-mouth Salamander. The coloration consists of irregularly arranged yellowish or tan spots superimposed upon a dark brown or blackish body. Some specimens collected measure as much as nine inches in length. The Tiger Salamander feeds voraciously on earthworms, insects, and mollusks, as well as frogs and smaller salamanders.

**Ambystoma maculatum**, Spotted Salamander. (Fig. 4.) The Spotted Salamander seems to be rare in this area; only two specimens have been collected to date. To the contrary, this species was formerly reported rather common in Vigo County by W. S. Blatchley in 1899.

The Spotted Salamander may be easily distinguished from the Tiger Salamander by the two dorsal longitudinal rows of bright canary yellow spots and the uniform bluish-slate colored sides.

**Ambystoma opacum**, Marbled Salamander. (Fig. 5.) This strikingly marked salamander is rare in Vigo County and vicinity. Only two specimens have been collected during the survey. One was taken from near North Terre Haute during 1935, and the other specimen was found in a damp woodland near Youngstown in September, 1937. The Marbled Salamander can be distinguished unmistakably from any other species in our area by means of color alone. The body color is jet black with about 14 transverse silvery white bands on the back. The species is small and seldom exceeds four and one-half inches.

**Plethodon glutinosus**, Slimy Salamander. (Fig. 6.) The Slimy Salamander is common in moist woodlands throughout Vigo County but is not found in the annually flooded river bottoms. It seems to be almost entirely insectivorous and feeds readily on termites, caterpillars, and beetles. Coloration consists of a shiny, anthracite-black body, more or less sprinkled with small white dots.

This is probably the largest of the Plethodontidae in Indiana. Specimens have been found which measured seven inches in length.



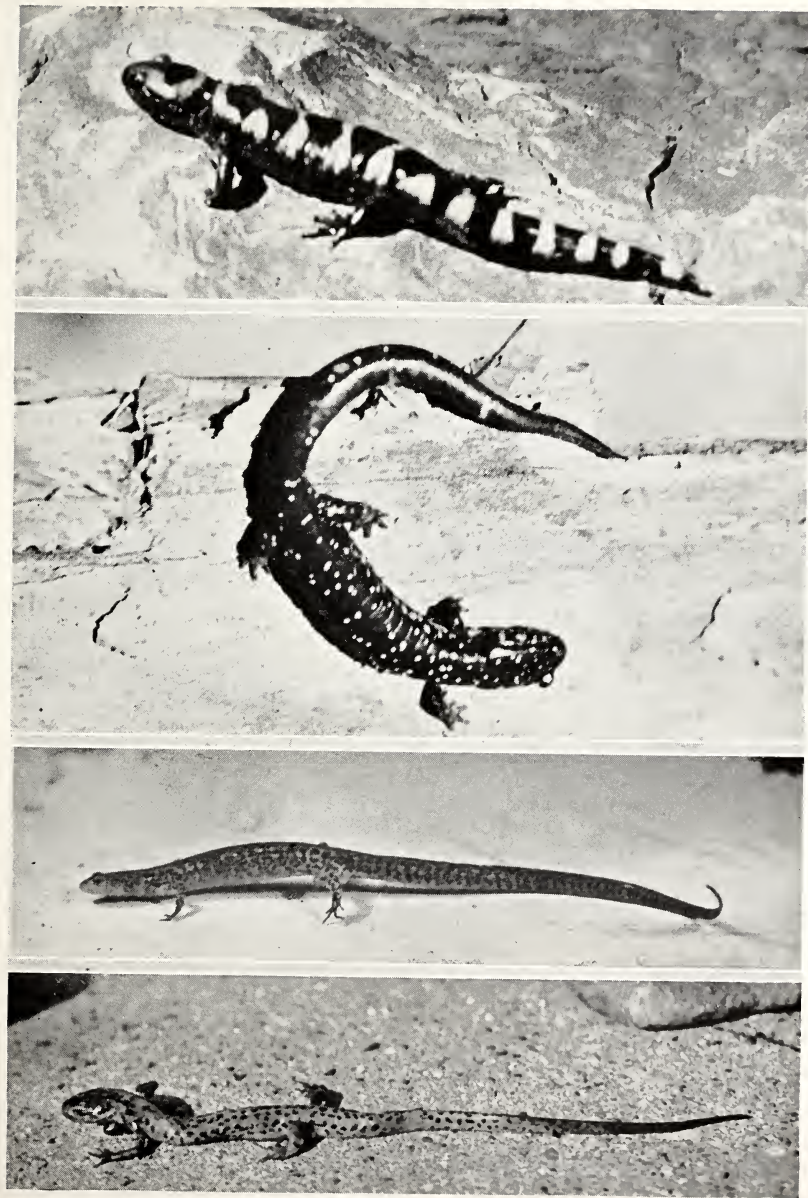


Fig. 5. *Ambystoma opacum*, Marbled Salamander.

Fig. 6. *Plethodon glutinosus*, Slimy Salamander.

Fig. 7. *Eurycea longicauda*, Long-tailed Salamander.

Fig. 8. *Eurycea lucifuga*, Cave Salamander.

**Plethodon cinereus**, Red-back Salamander, Gray Salamander. Both the red-backed and gray phases occur in Vigo County. The largest specimen examined was from North Terre Haute. It measured five inches in length and one-third of an inch in diameter. The food of this species, so far as it can be determined, consists of small insects.

**Plethodon dorsalis**. Although not yet recorded, it is very probable that this species does occur in Vigo County, since specimens have been collected from the neighboring counties, Parke, Clay, Owen, and Brown.

It may be distinguished from the Red-back Salamander by the dentate borders of the dorsal stripe, sometimes resembling a chain of rhombs. It feeds on small insects.

**Eurycea bislineata bislineata**, Two-lined Salamander. The Two-lined Salamander is common in most small woodland streams and spring overflows. Coloration consists of a yellowish tan body with two dorsal longitudinal stripes. This species seldom exceeds four inches in length and is insectivorous in feeding habits.

**Eurycea longicauda**, Long-tailed Salamander. (Fig. 7.) The Long-tailed Salamander is apparently rare in Vigo County, since only three specimens have been taken during the survey. One of these was a young specimen, which was taken in the river lowlands where it doubtless had been carried by the spring floods.

The Long-tailed Salamander may be recognized easily by the yellowish body color, definitely mottled with black, and by the vertical bars of black on the tail. It seems to prefer a limestone or shale habitat and exhibits a fondness for insects and other small aquatic life.

**Eurycea lucifuga**, Cave Salamander. (Fig. 8.) Although not yet recorded, future collecting may possibly show the Cave Salamander to be a resident of Vigo County. Many specimens have been collected in Owen County at McCormick's Creek State Park. The Cave Salamander seems to prefer the cool, dark, damp caves and sinkholes so frequently found in limestone formations; other species of the same genus are seldom found in these dismal locations.

The orange-red body, sprinkled with black dots, makes this salamander one of the prettiest of Indiana forms.

**Siren intermedia**, Mud-eel. Two specimens of this odd salamander were collected in the spring of 1938. One was found in a flooded field at North Terre Haute, and the other specimen was taken on a fish-line in the Greenfield Bayou in southern Vigo County.

The Mud-eel is distinct from all other salamanders in Indiana in that it possesses only the anterior pair of legs. The eel-like body and external gills are also strong points for identification. The food consists of earthworms, crustaceans, and mollusks.

Although *Cryptobranchus alleganiensis*, the Hellbender, is reported by Glenn Cowgill, Vigo County game warden, to be rather common in the Wabash River south of Terre Haute, as yet no specimens have been added to our collection.

Further investigation, it is hoped, may also disclose *Triturus viridescens*, the Newt, *Ambystoma jeffersonianum*, and *Hemidactylum scutum*, all of which were reported by W. S. Blatchley in 1899.

### References

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