

AN ANNOTATED LIST OF THE AMPHIBIANS AND REPTILES OF HARDIN COUNTY, OHIO.¹ ²

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ABSTRACT

The relative abundance of 10 species of amphibians and 15 species of reptiles in Hardin County, Ohio, is assessed on the basis of a five-year study. Six wide-ranging species are new county records. Industrial and agricultural activities have greatly disturbed the original habitat and have contributed to the disappearance of four previously recorded species: Spring Peeper (*Hyla crucifer*), Gray Tree Frog (*Hyla versicolor*), Northern Copperbelly (*Natrix erythrogaster*), and Eastern Smooth Green Snake (*Opheodrys vernalis*). The Pickeral Frog (*Rana palustris*), reported from this county, was probably misidentified and so is removed from the county list. Five additional species occur in adjacent counties and so may also be present in Hardin County, though they have not been observed there.

INTRODUCTION

The occurrence and relative abundance of the reptiles and amphibians of Hardin County, Ohio, and of the till plains in general are only incompletely known. The purpose of the present report is to record the presence and relative abundance of those reptile and amphibian species observed in Hardin County from 1963 to 1968, and to present information on changes in the status of several species. As agriculture and industrialism further alter the ecological communities of the county, the following report should be useful in giving insight into the overall changes in the herpetofauna of the area.

DESCRIPTION OF THE AREA

Hardin County comprises 467 square miles of the till plains of northwestern Ohio. The Wabash and St. Johns Moraines pass through the southern half of the county (Goldthwait, White, and Forsyth, 1961), whereas the remainder is relatively flat. The divide between the Lake Erie and Ohio River watersheds roughly bisects the county, with the headwaters of the Ottawa and Blanchard Rivers in the northern half of the county, and those of the Scioto River in the southern half.

Three large marshes totaling 40,000 acres were once present in the western half of the county (Winchell, 1876), but this marshland has since been drained, and much of the area is now being farmed. This area, especially the relatively dry organic-rich marshland soil, has undergone considerable wind erosion (Drum, 1940). Plants characteristic of marsh communities are occasionally found along ponds and drainage ditches. The relict prairies of nearby Wyandot and Marion Counties (Conant, Thomas, and Rausch, 1945) probably once extended into Hardin County (Transeau, 1935).

The eastern half of the county was once largely forested (Gordon, 1969). Remnants of forest remain in the form of widely scattered woodlots. Beech-maple stands are located on more mesic sites, while swamp forest occupies the wetter areas.

The soils of the region are derived from Wisconsin glacial drift, mostly till. Previously forested areas have gray-brown podzolic soils, while a rich, black muck-type soil is characteristic of what were the marshlands.

¹Part of a paper submitted in partial fulfillment of the requirements for graduation with honors in zoology at Ohio University, Athens, Ohio.

²Manuscript received June 29, 1970.

METHODS

From 1963 to 1968, a total of 228 days was spent at 162 widely distributed collecting sites. A few localities were visited only once, but others were searched up to thirty times. Most collecting was done during daylight hours from March through November. Of 1670 individuals captured during this time, 370 were deposited in the vertebrate collection of the Department of Zoology at Ohio University and the rest were examined and released.

All the data are presented in a summary Species List, which follows. The sight records, without specimen numbers, are included in this list. In addition, herpetological collections of The Ohio State University Museum (OSM), Toledo Zoological Society (TZS), and the Ohio University Department of Zoology (OUVC) were searched for material from Hardin County. These provided about 215 specimens collected from the study area before 1960. Walker (1946) and Conant (1951) cite the locality records for many of these. Other locality records taken from the literature are based upon specimens belonging to the American Museum of Natural History (AMNH); Stone Laboratory, Put-in-Bay, Ohio (SL); United States National Museum (USNM); and the personal collection of Mr. William E. Duellman (WED).

The relative abundance of each species of amphibian and reptile is given in parentheses after the name of the species. Such values are difficult to determine. An index of the relative frequency of encounters could provide a basis for comparisons, and was used to determine the values given here. This index was calculated from the percentage of collecting days on which a species was found, from the first to last observations of that species each year, and values averaged over the five-year period. The indices are arbitrarily delineated as follows: 81-100%, abundant (A); 61-80%, common (C); 41-60%, fairly common (FC); 21-40%, uncommon (U); 1-20%, rare (R). Species observed only three times or less during each of the five years were assumed to be very rare (VR), and previously recorded species not found during this study are designated (E). An asterisk indicates a new county record.

SPECIES LIST
AMPHIBIA

**Necturus maculosus maculosus* Rafinesque, Mudpuppy (VR). Jackson Twp. nw Sec 11; sw Sec. 14.

Local fishermen stated that salamanders resembling this species are occasionally caught in the Blanchard River. Although I twice observed mudpuppies, attempts to collect them failed.

**Ambystoma texanum* (Matthes), Small-mouthed Salamander (R). Blanchard Twp. sw Sec. 7 (OUVC 5060.1-3). Liberty Twp. Ada (OSM 1070.1). Taylor Creek Twp. 1 mile south of Yelverton (OUVC 5058, 5059.1-4).

Adults of this species were collected from only two localities in Hardin County. Larvae having some of the characteristics of *A. texanum* as given by Brandon (1961) were collected at a third site (Taylor Creek Twp.). Among these characters are 14 costal grooves, a pigmented chin and throat, and a series of lateral, light spots. A group of four such larvae collected June 5, 1964, averaged 52 mm in length. A transformed individual collected at the same locality on August 10 was 54 mm long.

**Notophthalmus viridescens viridescens* (Rafinesque), Red-spotted Newt (VR). Taylor Creek Twp. 1 mile south of Yelverton (OUVC 4866).

A single specimen was obtained from a woodland pond. To my knowledge, this species has not been collected from any county adjacent to Hardin County.

**Bufo americanus americanus* Holbrook, American Toad (C). Blanchard Twp. ne Sec. 18 (OUVC 5027, 5033); nw Sec. 19 (OUVC 5036). Cessna Twp. ne Sec. 14 (OUVC 5037). Dudley Twp. ne Sec. 2. Goshen Twp. ne Sec. 35 (OUVC 5026). Pleasant Twp. nw Sec. 8; nw Sec. 5. Roundhead Twp. ne Sec. 28. Washington Twp. sw Sec. 19 (OUVC 5038); se Sec. 25 (OUVC 5034).

American Toads were found in a variety of moist habitats, but tended to be found in drier situations than Fowler's Toads. Male *B. americanus* called as early as April 6, and as late as June 2 during the study period.

**Bufo woodhousei fowleri* (Hinckley). Fowler's Toad (C). Blanchard Twp. ne Sec. 18 (OUVC 4615-21, 4923-24, 5028-31). Buck Twp. 2 miles west of Kenton (OUVC 5035). Dudley Twp. 2 miles west of Hepburn (OUVC 5032). Goshen Twp. nw Sec. 15. Washington Twp. sw Sec. 19 (OUVC 5039).

The Fowler's Toad occurs almost entirely around permanent bodies of water and was found with *B. americanus* at only two sites, both of which are ponds. Male *B. woodhousei* were recorded calling from April 16 through June 24.

Acris crepitans blanchardi Baird, Blanchard's Cricket-frog (A). Blanchard Twp. ne Sec. 18 (OUVC 4634-38, 4643); nw Sec. 19; nw Sec. 27 (OUVC 4957-58). Buck Twp. Allen's Lake; 2 miles west of Kenton (OUVC 4930). Cessna Twp. ne Sec. 12 (OUVC 4927-28). Dudley Twp. near Hepburn; 5 miles west of Hepburn (OUVC 5020-21). Goshen Twp. sw Sec. 18 (OUVC 4953); ne Sec. 35 (OUVC 4954). Hale Twp. 3 miles east of Mt. Victory (OSM 786.1); 2 miles east of Mt. Victory. Jackson Twp. 2 miles west of Forest (OUVC 1883.1-8); sw Sec. 1; ne Sec. 11 (OUVC 4639); sw Sec. 23 (OUVC 4926); nw Sec. 23 (OUVC 4933-34). Liberty Twp. sw Sec. 12 (OUVC 4955). Marion Twp. se Sec. 26 (OUVC 4959). McDonald Twp. (OSM 2050.2), 4 miles southeast of Roundhead (OUVC 4929, 4961), 2 miles south of McGuffey (OUVC 4875), 5 miles north of Roundhead (OUVC 4874). Pleasant Twp. se Sec. 4 (OUVC 4951), nw Sec. 5 (OUVC 4956), sw Sec. 7 (OUVC 4640-42), se Sec. 7 (OUVC 4644-46), se Sec. 13 (OUVC 4952), nw Sec. 19 (OUVC 4931), se Sec. 25 (OUVC 460).

The Cricket-frog is the most frequently encountered amphibian in Hardin County, and is found around most permanent aquatic habitats. Breeding activities of this species occur throughout the summer, as amplexus was observed as late as July 5 and some males were heard calling until August 15.

Pseudacris triseriata triseriata (Wied), Western Chorus Frog (U). Blanchard Twp. ne Sec. 18, nw Sec. 19. Hale Twp. 3 miles east of Mt. Victory (OSM 786.14). Jackson Twp. sw Sec. 23. Taylor Creek Twp. 1 mile south of Yelverton (OUVC 5013).

Breeding choruses were noted from March 18 through March 30. A female collected while in amplexus on March 30, 1964, produced a mass of eggs overnight. All individuals were observed in or around woodland pools.

Hyla crucifer crucifer Wied, Spring Peeper (E). Hale Twp. 3 miles east of Mt. Victory (OSM 786.1). McDonald Twp. (OSM 2051.1).

The apparent disappearance of the Spring Peeper from Hardin County may be attributable to destruction of the limited amount of moist forest in which it was once found.

Hyla versicolor versicolor LeConte, Gray Tree Frog (E). Hale Twp. 3 miles east of Mt. Victory (OSM 1029.1).

The Gray Tree Frog was neither observed nor collected during the present study, and may be absent from the country, as the single locality record is based upon a specimen collected more than 25 years ago.

Rana pipiens pipiens Schreber, Northern Leopard Frog (C). Blanchard Twp. ne Sec. 18; nw Sec. 19 (OUVC 4944.1-2); se Sec. 22 (OUVC 4622); nw Sec. 27 (OUVC 4943, 4946); nw Sec. 34. Buck Twp. 4 miles south of Kenton (OUVC 4623). Goshen Twp. nw Sec. 18. Hale Twp. 3 miles east of Mt. Victory (OSM 740.1, 935.4-18, 1047.1, 1048.1-2, TZS 218); state rt. 292, 3 miles north of Ridgeway; 1 mile north of Ridgeway. Jackson Twp. 2 miles northwest of Forest (OUVC 1882); sw Sec. 23. Liberty Twp. sw Sec. 9 (OUVC 4979). McDonald Twp. 4 miles east of Roundhead; 5 miles north of Roundhead (OUVC 4977). Pleasant Twp. ne Sec. 13 (OUVC 4945). Roundhead Twp. 1½ miles west of Roundhead (OUVC 4970-71); 2 miles west of Roundhead (OUVC 4992-93); 3 miles south of Roundhead on country line. Taylor Creek Twp. 1 mile south of Yelverton (OUVC 4978, 4988, 4996); state rt. 68, ¼ mile north of the county line; 3 miles east of Yelverton. Washington Twp. ne Sec. 10 (OUVC 4624); se Sec. 10 (OUVC 4987); sw Sec. 18 (OUVC 4973); sw Sec. 19 (OUVC 4972), nw Sec. 19 (OUVC 4968-69).

Leopard Frogs were collected at a wide variety of moist sites throughout the country. Egg masses of the this species were found from March 26 to April 5, and newly metamorphosed individuals appeared as early as July 5.

Rana clamitans melanota Latreille, Green Frog (FC). Buck Twp. 4 miles south of Kenton (OUVC 4632). Cessna Twp. ne Sec. 12 (OUVC 4984). Dudley Twp. 2 miles west of Hepburn (OUVC 4949). Jackson Twp. sw Sec. 23 (OUVC 4980). Pleasant Twp. sw Sec. 7 (OUVC 4626, 4630-31). Roundhead Twp. Roundhead (OSM 703.1).

Green Frogs are generally found near small streams in Hardin County. As their larvae usually overwinter before metamorphosis, the instability of this environment and the competitive influence of other species of *Rana* may account for the relative scarcity of this species.

**Rana catesbiana* Shaw, Bullfrog (C). Blanchard Twp. new Sec. 18 (OUVC 4986); sw Sec. 18. Buck Twp. 2 miles west of Kenton (OUVC 4629); 4 miles south of Kenton; 5 miles west of Hepburn; ¼ mile west of Kenton. Cessna Twp. sw Sec. 11 (OUVC 4966); ne Sec. 12. Dudley Twp. 2 miles west of Hepburn (OUVC 4948). Goshen Twp. new Sec. 18. Hale Twp. 2 miles east of Mt. Victory. Jackson Twp. sw Sec. 1 (OUVC 4997); nw Sec. 1; nw Sec. 12 (OUVC 4627); nw

Sec. 14 (OUVC 4614); ne Sec. 14 (OUVC 4981); nw Sec. 23 (OUVC 4985, 4999). Lynn Twp. 4 miles west of Kenton (OUVC 4963). Pleasant Twp. ne Sec. 2-south (OUVC 4628); nw Sec. 5 (OUVC 5011); sw Sec. 7 (OUVC 4625); ne Sec. 13; ne Sec. 17 (OUVC 5012). Taylor Creek Twp. 6 miles south of Kenton. Washington Twp. sw Sec. 9; se Sec. 25 (OUVC 5010).

Bullfrogs are most often found around ponds and the deeper sections of rivers, but also were collected at four of the six Green Frog localities. They are absent from the portion of the county which was formerly marshland, possibly because of the lack of deep water.

REPTILIA

Eumeces fasciatus (Linnaeus), Five-lined Skink (VR). Dudley Twp. (TZS 1300-2). Goshen Twp. ne Sec. 36. Hale Twp. 3 miles east of Mt. Victory (OSM 380.2, 583, TZS 63-72, 1158-62, 1313-16, 1385-93, 1428-38, 1447). Taylor Creek Twp. 1 mile south of Yelverton (OUVC 4976).

Although 44 of 140 *Eumeces fasciatus* examined by Conant (1951) came from Hardin County, this species was encountered only three times during the present study. The swamp forest near Mt. Victory, from which 41 of Conant's specimens were collected, has been destroyed, and similar habitat is now nearly nonexistent.

Chrysemys picta marginata Agassiz, Midland Painted Turtle (FC). Blanchard Twp. sw Sec. 18 (OUVC 4742, 4919, 4942); ne Sec. 18 (OUVC 4758, 4950); ne Sec. 33. Cessna Twp. ne Sec. 12 (OUVC 4965). Goshen Twp. nw Sec. 18. Hale Twp. 2 miles east of Mt. Victory; 3 miles east of Mt. Victory (TZS 1736); near Mt. Victory (OSM 829). Jackson Twp. nw Sec. 14. Liberty Twp. nw Sec. 9 (OUVC 4918). McDonald Twp. 4 miles southeast of Roundhead. Pleasant Twp. se Sec. 7 (OUVC 4873). Roundhead Twp. 3 miles south of Roundhead. Taylor Creek Twp. 1 mile south of Yelverton (OUVC 4947, 4947). Washington Twp. se Sec. 8 (OUVC 4916); sw Sec. 9 (OUVC 4941, 4983); se Sec. 25 (OUVC 4982).

This turtle is found in almost any permanent body of water, and is present throughout the county. A captive female collected June 27, 1964, in Pleasant Township, deposited four eggs between July 15 and July 21.

Graptemys geographica (LeSueur), Common Map Turtle (R). Blanchard Twp. ne Sec. 27. Jackson Twp. Blanchard (USNM 21626); ne Sec. 11 (OUVC 4675). Pleasant Twp. Sec. 28 (OUVC 4652, 4674).

The Common Map Turtle seems to be restricted to the Blanchard River and its tributaries. No *Graptemys geographica* was found in the southern half of the country and none was taken from the Scioto River, although it has been recorded downstream (Conant, 1951).

Trionyx ferox spinifera Schneider, Eastern Spiny Soft-shelled Turtle (R). Blanchard Twp. ne Sec. 18 (OUVC 4648). Dudley Twp. near Hepburn (TZS 1730). Jackson Twp. sw Sec. 1 (OUVC 5047); se Sec. 2 (OUVC 4649); sw Sec. 14; nw Sec. 23.

Small individuals of this turtle species are sometimes found in shallow creeks, but it was most often collected on baited lines in the deepest parts of rivers.

Chelydra serpentina serpentina Linnaeus, Common Snapping Turtle (U). Blanchard Twp. se Sec. 7 (OUVC 4939); ne Sec. 18 (OUVC 4651); nw Sec. 27 (OUVC 4936). Hale Twp. 2 miles east of Mt. Victory; 3 miles east of Mt. Victory (Conant, 1951). Jackson Twp. ne Sec. 18; sw Sec. 23 (OUVC 4975); nw Sec. 23. Pleasant Twp. ne Sec. 5 (OUVC 4938); se Sec. 13 (OUVC 4937). Washington Twp. sw Sec. 9 (OUVC 5052); se Sec. 25 (OUVC 4964).

This Snapping Turtle subspecies is widely distributed throughout the county, and was collected several times from creeks that are literally open sewers. Eggs were laid by captive individuals between July 4 and July 15, 1964. One snapping turtle was observed feeding on a Northern Water Snake, while scraps produced by this feeding were being eaten by several Painted Turtles.

Thamnophis sirtalis sirtalis (Linnaeus), Eastern Garter Snake (FC). Blanchard Twp. se Sec. 7 (OUVC 4871); ne Sec. 18 (OUVC 4864, 4868, 4995, 5003); nw Sec. 18 (OUVC 4886); nw Sec. 30; nw Sec. 32. Buck Twp. $\frac{1}{4}$ mile west of Kenton. Dudley Twp. near Hepburn (TZS 1089). Goshen Twp. se Sec. 18 (OUVC 4990). Hale Twp. 2 miles east of Mt. Victory (OUVC 4870, 4872.1-16); 3 miles east of Mt. Victory (TZS 280). Jackson Twp. nw Sec. 1. Liberty Twp. ne Sec. 10. Marion Twp. sw Sec. 17. McDonald Twp. 1 mile west of jct. of state rt. 67 and co. rd. 85; jct. of state rt. 67 and co. rd. 85; jact. of state rt. 67 and co. rd. 39; 3 miles west of Jumbo. Pleasant Twp. Kenton (OSM 360); nw Sec. 5; nw Sec. 6. Roundhead Twp. 1 mile south of Roundhead. Taylor Creek Twp. 1 mile south of Yelverton (OUVC 4950, 4991, 5049, 5056); $\frac{1}{4}$ mile from county line on state rt. 273. Washington Twp. sw Sec. 9 (OUVC 4920); se Sec. 14; sw Sec. 21; se Sec. 25 (OUVC 5050); nw Sec. 27.

Individual Eastern Garter Snakes containing 12, 15, and 17 embryos were collected on July 8, June 5, and June 7, 1964, respectively. One captive individual bore 16 live young on July 29, 1963.

Thamnophis sauritus sauritus (Linnaeus), Eastern Ribbon Snake (VR). Hale Twp. 3 miles east of Mt. Victory (OSM 636, 757, TZS 76, 817). Taylor Creek Twp. 1 mile south of Yelverton.

Only two ribbon snakes were collected during the present study. Both were found in a woodland pool in Taylor Creek Twp.

Thamnophis butleri (Cope), Butler's Garter Snake (VR). Blanchard Twp. sw Sec. 7 (OUVC 4878). Hale Twp. 3 miles east of Mt. Victory (TZS 774). Liberty Twp. sw Sec. 12 (OUVC 4856.1-19).

Butler's Garter Snake is usually found in isolated colonies in Ohio and may be "a relict of a former climate" (Conant, Thomas, and Rausch, 1945). In Hardin County it has been collected at three widely separated localities. A female captured July 22, 1964, in Liberty Twp. bore 18 young July 27.

Regina septemvittata (Say), Queen Snake (C). Buck Twp. 4 miles south of Kenton (OUVC 4777, 4785, 4787-88, 4861, 4962). Hale Twp. Panther Creek, 1 mile north of Mt. Victory (WED 71); Wildcat Creek (OSM 544); Wildcat Creek, near Mt. Victory (OSM 610). Jackson Twp. sw Sec. 1 (OUVC 4778, 4786, 5055); se Sec. 1 (OUVC 4784, 4860); se Sec. 2 (OUVC 4776, 4839, 4858-59, 4862); nw Sec. 23 (OUVC 4774).

This snake was found almost exclusively along rocky streams. A captive female gave birth to 16 young on August 23, 1963.

Natrix sipedon sipedon (Linnaeus), Northern Water Snake (A). Blanchard Twp. ne Sec. 18 (OUVC 4989, 5043, 5044, 5054); nw Sec. 27 (OUVC 4935); ne Sec. 27 (OUVC 4848); sw Sec. 27 (OUVC 4876); ne Sec. 33 (OUVC 4795). Buck Twp. 4 miles south of Kenton (OUVC 4752-54, 4756, 4792-94, 4800-1, 4805, 4851). Cessna Twp. se Sec. 1 (OUVC 5041); ne Sec. 12 (OUVC 4967, 5051). Dudley Twp. near Hepburn (TZS 1090); 3 miles west of Hepburn (OUVC 5042). Goshen Twp. sw Sec. 18 (OUVC 4994); ne Sec. 36 (OUVC 5000). Hale Twp. 2 miles east of Mt. Victory; 3 miles east of Mt. Victory (OSM 869, TZS 1097, 1518-30A, 1999, WED 101, 113). Jackson Twp. sw Sec. 1 (OUVC 4796, 4802, 4804, 5045); se Sec. 2 (OUVC 4757, 4797-99, 4850, 4852-53); nw Sec. 14 (OUVC 4847); nw Sec. 23 (OUVC 4755). Liberty Twp. nw Sec. 12. Marion Twp. nw Sec. 35. McDonald Twp. 4 miles east of Roundhead; 5 miles east of Roundhead on co. rd. 75. Pleasant Twp. se Sec. 4 (OUVC 5046); sw Sec. 7 (OUVC 5053); sw Sec. 8 (OUVC 5040). Washington Twp. sw Sec. 8; se Sec. 25 (OUVC 4791, 4849).

Of 43 individuals obtained during this study, 29 were females. The average length (\pm SE) of these females was 529.8 ± 24.4 mm, while the average length of the 14 males was 427.3 ± 16.8 mm. Four females collected between June 13 and June 30 contained 19, 25, 24, and 15 ova and/or embryos. Conant (1951) reports a female captured July 28, 1946, at Mt. Victory gave birth to 20 young on September 3.

Natrix erythrogaster neglecta Conant, Northern Copperbelly (E). Hale Twp. 3 miles east of Mt. Victory (AMNH 68695- the type specimen, 68696-68698, OSM 505, 605, 674, TZS 137, 386, 1662-1689, 1690-91, 1748).

This subspecies of the Red-bellied Water Snake is one of the most noteworthy reptiles reported from Hardin County, because the type specimen was collected here, and because of the restricted occurrence of this species in Ohio. Conant (1949) describes the type specimen as follows: "Type-no. 68695, American Museum of Natural History, now an adult female but collected 'in dam' July 23, 1932, and it and three paratypes (AMNH 68696-8) were raised to maturity in captivity.". No individual of this subspecies has been collected from Hardin County since 1945. This snake was once fairly common at Mt. Victory, but Conant (1955) found this locality so altered by draining and agricultural activities that in all likelihood this serpent no longer inhabits the area.

Coluber constrictor foxi Baird and Girard, Blue Racer (U). Blanchard Twp. se Sec. 10 (OUVC 4838); se Sec. 17; ne Sec. 18 (OUVC 5048); nw Sec. 19. Buck Twp. 4 miles south of Kenton. Cessna Twp. sw Sec. 1 (OUVC 5057). Hale Twp. 1 mile east of Mt. Victory (OSM 753); 3 miles east of Mt. Victory (OSM 559); state rt. 292, 4 miles north of Ridgeway. Hardin County (TZS 2467, 2468). McDonald Twp. Jct. of state rt. 67 and co. rd. 39. Roundhead Twp. ne Sec. 28. Taylor Creek Twp. 7 miles south of Kenton; jct. of state rt. 68 and co. rd. 210.

Blue Racers were collected or observed in a variety of habitats, including open fields, thickets, and dry woodlots.

Elaphe obsoleta obsoleta (Say), Black Rat Snake (VR). Cessna Twp. ne Sec. 12 (OUVC 4855). Pleasant Twp. sw Sec. 7 (OUVC 5008). Taylor Creek Twp. 6 miles south of Kenton (DOR-Conant, 1951).

All records of the Black Rat Snake are based upon road kills, and no live specimens were obtained during the present study.

Lampropeltis dolia triangularum Lacepède, Eastern Milk Snake (VR). Blanchard Twp. sw Sec. 6 (OUVC 4609). Hale Twp. Mt. Victory (OSM 502).

Although farmers occasionally report seeing snakes that may be of this species, I was able to collect only a single juvenile.

Storeria dekayi dekayi (Holbrook), Northern Brown Snake (VR). Hale Twp. 3 miles east of Mt. Victory (TZS 595, 636, 694, 695, 816). Taylor Creek Twp. 1 mile south of Yelverton.

Ohio constitutes an area of intergradation of the subspecies *S. d. dekayi* and the Midland Brown Snake, *S. d. wrightorum*. Two individuals examined during the present study have less than 175 ventrals (169 and 173) and distinct dorsal spots, and are therefore *S. d. dekayi*.

Conant (1951) describes Hardin County as an area in which the characteristics of *S. d. dekayi* are more commonly present than are those of *S. d. wrightorum*. Collecting localities for this species were always in moist forest.

Opheodrys vernalis vernalis Grobman, Eastern Smooth Green Snake (E). Jackson Twp. Patterson (TZS 1683).

Although Hardin County is in the vicinity of intergradation of *O. v. vernalis* and the Western Smooth Green Snake, *O. v. blanchardi*, Conant (1951) states "snakes from Hardin, Wyandot, Marion, and Franklin counties have the lower (ventral) counts of *vernalis*". No specimens of this species were observed in the present study.

Sistrurus catenatus catenatus (Rafinesque), Eastern Massasauga (VR). Dudley Twp. 4 miles southwest of Hepburn. Hale Twp. 2 miles east of Mt. Victory (OUVC 4857); 3 miles east of Mt. Victory (OSM 620, 621.1-3, 878, SL 486-7, TZS 121, 378, 397-8, 800-3, 1307).

I encountered only two Massasaugas during this study. The rest of the specimens cited above were collected before 1951. Thirty years ago, this species was especially abundant in the vicinity of Mt. Victory, but its numbers have declined because of destruction of the swamp forest in the area. All adult Massasaugas collected from Hardin County are melanistic and all juveniles are spotted.

SPECIES OF POTENTIAL OCCURRENCE

Additional species of amphibians and reptiles may be present in Hardin County, but were not observed during this study. Those for which information is available are discussed below.

Plethodon cinereus cinereus (Green), Red-backed Salamander. Two specimens collected from Hardin County in 1941 are catalogued in the Ohio University collection. However, these could not be located during a search of the entire collection and are presumed lost.

Ambystoma jeffersonianum (Green), Jefferson Salamander and *Ambystoma laterale* Hallowell, Blue-spotted Salamander. Uzzell (1964) found *A. platineum*, the triploid associated with *A. jeffersonianum*, and *A. tremblayi*, the triploid of *A. laterale*, in adjacent Hancock County.

Rana palustris Le Conte, Pickerel Frog. Seibert and Wood (1963) record this species from Hardin County. The specimen (OUVC 1882) upon which the record is based lacks yellow in the groin, has rounded dorsal spots with light borders, and is greater in size (88 mm snout-vent) than the largest *R. palustris* reported by Wright and Wright (1949). These characteristics suggest that the specimen is really *Rana pipiens pipiens*.

Natrix kirtlandi (Kennicott), Kirtland's Water Snake. This species has been found in five of the seven counties adjacent to Hardin County.

Thamnophis radix radix (Baird and Girard), Eastern Plains Garter Snake. Because of the proximity of some locality records in Wyandot and Marion Counties (see Conant, Thomas, and Rausch, 1956) and the former presence of the prairie peninsula throughout this area, this species could be present in Hardin County.

ACKNOWLEDGMENTS

I am greatly indebted to Dr. H. C. Seibert for his guidance throughout this study and to the Central Ohio Heart Association for an undergraduate research grant which supported much of the collecting.

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