NOTES ON SOME OHIO LIZARDS

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Four species of lizards occur in Ohio. They are *Eumeces fasciatus*, *E. laticeps*, *Sceloporus undulatus hyacinthinus*, and *Lygosoma laterale*. Aside from the copious work of Conant (1938), his revisionary addenda (1951), and a number of scattered county records summarized by Adler (1961), little has been published concerning Ohio saurians. Records obtained from 1955 through 1958 for three of the species help to clarify the distributional patterns and add to our knowledge of their natural history. All specimens mentioned herein are deposited in the collections of the Dayton (Ohio) Museum of Natural History (D.M.N.H.).

NORTHERN FENCE LIZARD *Sceloporus undulatus hyacinthinus* (GREEN)

This lizard has previously been found mainly in the unglaciated sections of the state. Three specimens from glaciated Ohio have come to my attention. These indicate a 50-mile northward range extension for the species.

The first individual was brought to the D.M.N.H. September 16, 1959. It was captured on the side of a house in a somewhat populated suburb of Dayton, Montgomery County. Because of the possibility of introduction as a pet, the single individual was not at the time considered native to the Dayton area.

A second specimen was captured in a wooded area of Northridge, Montgomery County, and received by me June 3, 1957. This locality is approximately 5 miles north of the first record. Although there is still the possibility of an introduction, this second locality has some herpetological uniqueness. Wood and Duellman (1947) record the Central Worm Snake, *Carphophis amoenus helenae* (Kennicott) from Northridge. This specimen, one mentioned by Morse (1904) from nearby Greene County, and the possibility of a natural colony in Erie County discussed by Conant (1951) and Smith (1957), constitute the only records of *Carphophis* from deep into glaciated sections of Ohio. When the composite range of three forms of *Carphophis* (fig. 1) and the range of *Sceloporus undulatus hyacinthinus* (fig. 2) are compared for the eastern United States, a stricking degree of sympatry is evident. Both forms are forest dwellers and may often be found together. This is particularly true in southern Ohio.

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These sympatric distributions strengthen the possibility of a natural population of *Sceloporus* in an area already known to yield *Carphophis*.

A third specimen of *Sceloporus* was collected by E. J. Koestner, Director of the D.M.N.H., on June 16, 1957, adjacent to the Wright-Patterson Air Force Reservation, near Greene-Montgomery County line, Greene County. This locality is about 5 miles from the other two Dayton area records. The Air Force Reservation is a protected area where the effects of human influx are slight. Evidence of this is the occurence on the reservation of the Spotted Turtle, *Clemmys guttata* (Schneider) (authors unpublished data based on specimens deposited D.M.N.H.) and the Massasauga, *Sistrurus catenatus* (Rafinesque); both reptiles are becoming rare elsewhere in Ohio because of habitat destruction.

The second and third specimens of *Sceloporus* mentioned above and the interesting nature of the areas in which they were found suggest strongly that the Northern Fence Lizard does occur naturally in the Dayton area. It is felt that these records indicate a relict group and not the northern limit of a continuous distribution centered farther south.

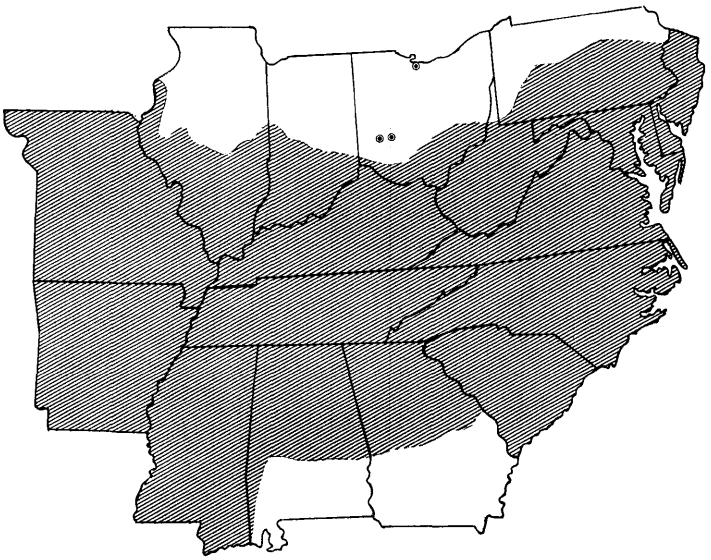

FIGURE 1. Eastern distribution of the Worm Snakes, *Carphophis*.

In view of the extensive amount of previous herpetological reconnaissance in the Dayton area (Wood and Duellman, 1947), and (Duellman, 1951), the natural occurrence of *Sceloporus* may seem suspect. In rebuttal it may be said that at least four moderately common species were overlooked in these surveys. These include the Marbled Salamander *Ambystoma opacum* (Gravenhorst), Tiger Salamander *Ambystoma tigrinum* (Green), Spring Peeper *Hyla crucifer* (Wied), and Five-lined Skink, *Eumeces fasciatus* (Linnaeus) (Based on my unpublished records in the D.M.N.H.).

FIVE-LINED SKINK *Eumeces fasciatus* (LINNAEUS)

Wood and Duellman (1947) list *E. fasciatus* for Montgomery County. Conant (1951), refer the same specimen to *E. laticeps* (Schneider). Duellman (1951) in his Greene County study mentions the earlier misidentification, and notes the absence

of *E. fasciatus* in Greene County. Since 1957, specimens of *E. fasciatus* have been collected in both Montgomery County (2 specimens—Brookville; 1 specimen—Vandalia) and Greene County (N.W. corner, 4 miles West of Greene-Montgomery County line). These fill in a small gap in the southwest Ohio distribution of this form.

Conant mentions the moist aspect of the *E. fasciatus* habitat but states that they do not occur in swamps or flooded areas. In his addenda (1951) he mentions a specimen collected by Dr. Ralph Dexter in a bog. In recent collecting *E. fasciatus* has been found in both extremes of habitat moisture. Animals collected at Cedar Swamp, Champaign County Ohio, June 10, 1957, were under the bark of upright dead trees, completely surrounded by a marsh area with standing water. Another colony exists a few miles to the northwest of the swamp at the edge of a wooded farm lot; animals may be found under sheets of tin where the ground is extremely dry most of the year. Undoubtedly, *E. fasciatus* is usually found, as Conant mentions, in moist areas. There is, however, the possibility of a wide tolerance toward various factors if local conditions so dictate.

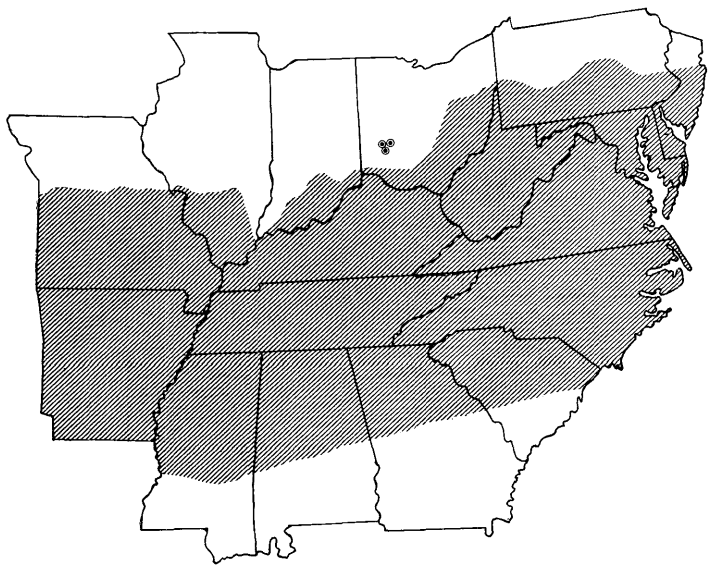

FIGURE 2. Eastern distribution of the Northern Fence Lizard *Sceloporus undulatus hyacinthinus* (Green).

A laboratory observation of July, 1957, is of interest. Oophagy by *Sceloporus u. undulatus* and *S. u. hyacinthinus* on *E. fasciatus* was observed minutes after the eggs were layed. The three forms were housed together in a large terrarium. The two *Sceloporus* took the freshly layed eggs of the skink in their mouths, carried them around the cage for a few minutes, and then swallowed them whole. The *Eumeces* was still in the process of laying her eggs, and made no special notice of the activities of the two *Sceloporus*. A check the following day failed to reveal any discarded egg or shell material in the cage. The occurrence of this type of feeding in nature has not been reported. However, in southern Ohio *Scelopurus u. hyacinthinus* has been observed on several occasions within a few feet of brooding female *Eumeces fasciatus* in sawdust piles. Whether or not *Sceloporus* could take eggs away from a brooding female in nature is open to question. Noble and Mason (1933) introduced mice, snakes and various lizard species into cages with brooding *E. fasciatus*,

E. laticeps and *Ophisaurus ventralis*. In the case of both *Eumeces* all invaders except a large racer *Coluber* were warded off when they approached the nest. It is suggested that only brooding invokes the defense behavior noted by Noble and Mason. This may explain why no such behavior was evident in the female described above.

BROAD-HEADED SKINK *Eumeces laticeps* (SCHNEIDER)

The range of the Broad-headed Skink in Ohio is not continuous as presented by Conant (1951). Adler (1958) helped to fill in some of the gaps. Aside from these records, specimens are now available from Camp Kern, Warren County and Pike Lake, Pike County. It now appears that this species occurs throughout the entire southern half of the state. Observations in the field indicate that in Ohio this species is usually limited to relatively dry, well established forest stands. There is at least one record to the contrary (Conant, 1951). The reason it has been overlooked by collectors in many Ohio localities may be the apparent sparsity of individuals in populations. In no place I have examined, including the seemingly favorable habitats of southern Ohio, is this form as common as *E. fasciatus*. Conant mentions that the two species of *Eumeces* usually do not occur together except in some man-made habitats such as slab-piles. This statement is in accord with field observations on recently acquired specimens, for in Pike and Scioto Counties, both species have been taken together in slab-piles on numerous occasions. These man-made habitats are of interest from an ecological standpoint in that they attract a large number of species which do not normally occur together.

Of some special interest is the previously mentioned specimen of *E. laticeps* from Warren County. This individual, collected by Terrance Marsh was 289 mm T.L. (before preservation), and exceeds Adler's (1958) record of 10.25 in. (262 mm). Other measurements are: snout-vent 119 mm, tail 170.5 mm (broken tip).

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