

NOTES ON THE NATURAL HISTORY OF THE LIZARD *EUMECES LATICEPS*, IN NORTHERN FLORIDA

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The following notes have accumulated over several years from nearly daily observations of a small population of *Eumeces laticeps* (Schneider) in our back yard near Gainesville, Alachua County, Florida.

The study area is a plot about a quarter of an acre in extent on the border of a typical North Florida hammock. The most conspicuous and abundant trees are water oaks (*Quercus niger*). In addition there are several small black gums, sweet gums, hickories, blue beeches (*Carpinus*), and a few other hammock trees such as one holly and two small magnolias. Much of the underbrush has been cleared out but the leaf mold has for the most part been left undisturbed.

In this restricted area, at least, large holes in the bases of the water oaks are the sites occupied by *laticeps*, as places not only of nocturnal abode but also for hibernation. This is somewhat at variance with the observations of other authors who have reported mainly dead pine stumps as the modal niche for hibernating *laticeps* (Carr, 1940: 76; Neill, 1948: 110). In the period of activity during the day, the lizards sometimes range away from the trees in which their hollows are located, but our observations indicate that when they do so they return to them to retire for the day.

There seems to be a quite definite period of hibernation. The earliest records of emergence for 1948, 1949, and 1950 are respectively April 7, March 26, and March 27. Appearance in the spring seems to be correlated with temperature, the first emergence occurring only after the air temperature has reached a maximum of 80° or above for several consecutive days. In 1948 there were six such days, three in 1949, and three in 1950. The minimum temperatures of the nights prior to emergence were 67° in 1949 and 61° in 1950. Once they have become active in the spring, however, the lizards tend to appear on any warm day, since in 1950 one was seen on April 17 although there had been

frost, with a minimum temperature reading of 34° , on the morning of the 16th. Also, once they have emerged from hibernation, they may appear at temperatures below 80° . Thus, the one seen on April 17, 1950, was out at 3:00 in the afternoon when the temperature was 76° although it had been 78° earlier in the day. The highest temperature at which a *Eumeces* has been seen is 98° . (All temperature readings were made on a maximum-minimum thermometer fastened out of the direct sunlight on the north side of one of the hollow oaks known to be inhabited by *Eumeces*.)

Adult *Eumeces* hibernate earlier in the fall than the young do. In 1949 the last adult of the year was seen on September 29 while the juveniles remained active until October 10. The following year the last adult was recorded on September 22 and the last juvenile again on October 10. There does not seem to be any correlation between air temperature and the onset of hibernation. In 1949 the temperature was 80° or above during the day for three weeks, and did not drop below 60° at night for ten days, following the disappearance of the skinks. In 1950 no *Eumeces* were seen during a warm rainy spell between October 3 and 9, but one was seen the following day although there had been a drop in temperature from a low of 70° on the morning of the 9th to a low of 57° on the morning of the 10th.

When the lizards first emerge from hibernation in the spring they are most frequently seen around noon or in the afternoon. For over a month after their appearance in 1950 none were seen before 10:30 in the morning and only two before 11:00. On April 30 one was recorded at 9:55 and on May 7 at 9:15. For the first month or six weeks the *Eumeces* are apparently actively feeding and individuals may remain out for periods of several hours. One seen on March 27, 1950, was out most of the afternoon from 2:45 until 5:00. Later in the season they come out only briefly and usually not more than one or two are seen on any one day, frequently none, whereas earlier three or four may be out at one time. Most of our records during June, July, and August are for the late morning or early afternoon.

Hibernation is preceded by another period of increased activity, beginning about the middle of September. The lizards come out earlier and earlier in the morning, at lower and lower temperatures. For the first week of this active period in 1949, 78° seemed

to be the critical temperature, but on September 19 two young were seen at 8:05 when the temperature was 75° and two days later an adult was out at 7:55, temperature 74° . In 1950 one was seen at 8:30 on the morning of September 21 when the temperature was 72° . They also remain out for longer periods of time. The adult seen at 7:55 on the morning of September 21, 1949, was there continually until 3:15. They have been recorded at this time of year on overcast days when there was little sun and even when a light drizzling rain was beginning to fall.

A curious thing was noted in August, 1950. The month had been unusually warm and dry, weather like that ordinarily expected in early September, and no *Eumeces* were seen between the 12th and the 24th. Then for a few days there was a period of activity on the part of the lizards such as normally occurs in the last half of September. The last few days of the month the weather was more like that usually occurring early in August, with rain in the afternoons, and the *Eumeces* returned to the pattern of activity normal for the summer and did not become markedly active again until the last third of September.

The lizards seem to be much less active during periods of drought, but no direct correlation between activity and humidity has been noted. Relative humidities recorded at times when the lizards were out range from approximately 40, which is as low a reading as has been made by us for the hammock during the summer months, to 100 when, as noted above, a drizzling rain was falling.

The population was at a very high level during the late summer of 1949. One adult and one young were living on each of four hollow water oaks in an area of about an eighth of an acre in the back yard and others inhabited trees at the side and front of the house. During the period of activity in late September two large ones or two small ones were never seen together on any of these four trees, but frequently an adult and a young were seen at the same time on the same tree. There was never any sign of aggressive activity by the larger *Eumeces* towards the smaller ones. A sharp reduction in the population of adults was noted in 1950, although during the spring the yearlings seemed to be more numerous than they had been the year before. In the pre-hibernation period of activity in September, 1950, only one of the four

trees mentioned above was inhabited by an adult although each tree again had one young living in it.

In this region hatching apparently takes place late in June or early in July. In 1950 the first young of the year, a very small one, was seen on July 2. A number of other young were seen in the next few weeks. One which was measured on July 13 had a head and body length of 35 mm and a total length of 85 mm.

Most of the feeding activity which has been observed by us took place in April and the first part of May. *Eumeces* have been seen eating cockroaches, spiders, and ants. Once a young one was seen to be carrying a small green caterpillar in its mouth, but this was later abandoned.

On several different occasions it was noticed that the lizards did not gulp their prey down immediately but spent some time toying with it first. A young *Eumeces* was once seen on the woodpile under one of the hollow water oaks with a spider about one inch long which it was holding in its mouth by the cephalothorax. It played with the spider rather as a cat plays with a mouse, shook it and threw it, then grasped it again. Once the spider fell from the woodpile and the lizard ran down to the ground, picked it up and carried it back up to the top of the woodpile.

Another time a young *Eumeces* on the woodpile had a large cockroach. As the lizard shook it, part of it fell to the ground. The *Eumeces* ran down the woodpile to the ground, retrieved the piece, and climbed back on the woodpile. This segment was part of the thorax and abdomen with one leg still attached. When it was all in the mouth except the leg, the lizard shook its head and seemed to be trying to scrape the leg off against the wood but was unable to do so and finally swallowed it. The wings and at least one leg were not eaten.

While the yard was being watered on May 6, 1950, during a very dry spell when there had been no rain in the daytime for about a month, spray from the hose fell on one of the hollow trees in the front yard and a *Eumeces* immediately came out and started lapping up the drops of water on the bark. Several other trees were then sprayed and on three of them *Eumeces* came out and lapped up water within just a few moments' time. On May 21, with conditions of drought still prevailing, a *Eumeces* was

seen at the edge of the small pool in the back yard, apparently drinking from the pool.

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