

**BIRTH OF A BROOD OF *CROTALUS BASILISCUS*.**—On May 3, 1944, Barrett Park Zoo, on Staten Island, New York, received a large female Mexican West Coast rattlesnake, *Crotalus basiliscus* Cope. Her length was approximately 1550 mm. At 9:00 A.M. on July 7, 1944, 29 offspring were discovered in her cage, two still in their membranes. One soon freed itself but the other died while only part way out of its membrane.

At 9:00 A.M., when the young were first noticed, the mother had begun to shed, and was about one-fourth out of her old skin. By 2:00 P.M. she had completed shedding, and soon after gave birth to the thirtieth and last offspring. Four atrophied eggs with a rubbery covering and filled with yellow, viscous fluid were also discharged.

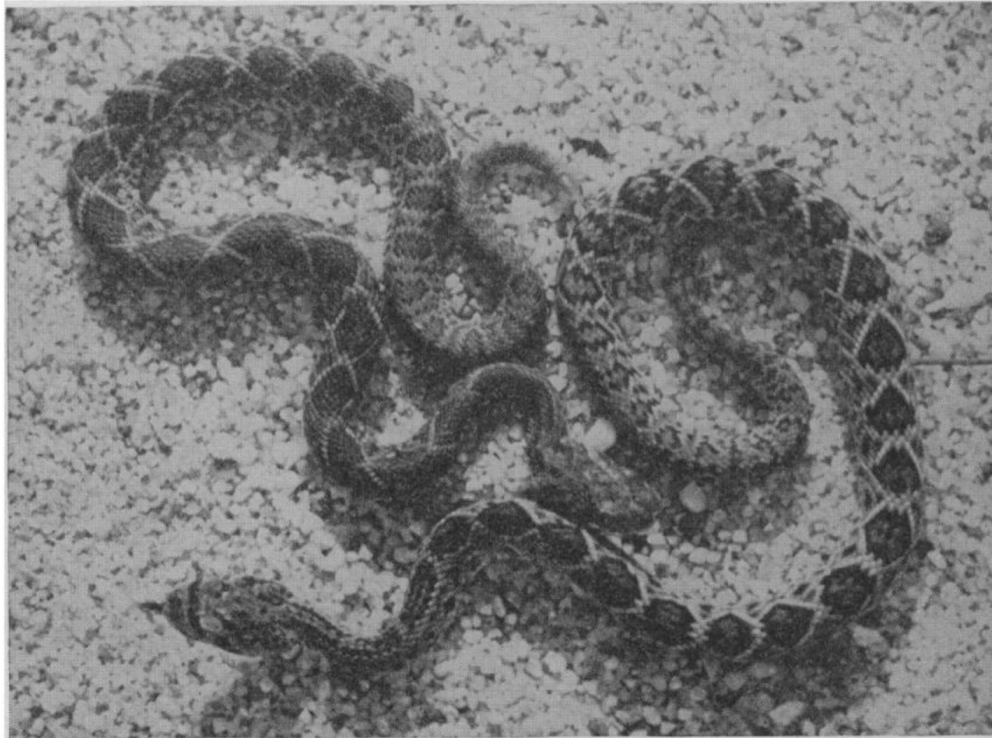


Fig. 1. Two juvenile *Crotalus basiliscus*. The upper one has not yet shed, while the lower one has recently completed shedding.

Three of the juvenile snakes were approximately 317 mm., 322 mm., and 330 mm. long, the dead ones measured 300 mm. and 310 mm., and the average length for the five was 315 mm. The pattern resembled the mother's, although in some the diamonds on the back tended to unite in the neck region to form a median dorsal longitudinal band. In several there were paired dorso-lateral bands on the neck, somewhat like those of *Crotalus durissus*. The ground color was gray and the diamonds were dark gray, almost black.

The young were quiet throughout the first day and moved about very little. They were not nervous and made no attempt to strike when annoyed, although they tried to turn and bite when held by the neck.

On the second day, after removal of the mother, there was more activity among the young snakes. Several vibrated their tails when annoyed, though only one could be induced to strike. One died at 5:00 P.M. on the second day.

Although their eyes had been cloudy since the first day, no shedding took place until the afternoon of the fourth day. All had completed their first shedding by July 14. Shedding the skin changed the ground color from gray to greenish-yellow and brought out the pattern with brilliance. The diamonds became a dark lustrous brown. Each diamond contained smaller paired diamonds in its center, pale greenish-yellow in color, which were not present before shedding. After shedding the snakes became more active and were more inclined to vibrate their tails and to strike when annoyed.

When shedding was completed, mice and hairless baby rats were placed in the cage. The mice were readily killed and eaten but only one of the ten baby rats was taken. The snakes struck vigorously at the mice, sometimes clinging long enough for a mouse to make several jumps. Death from these "good bites" followed in about 30 seconds. All mice that were observed being eaten were taken head first. All but three of the baby rattlers ate, although eight subsequently regurgitated this food. The mother refused to eat from the time of her arrival until July 31, 24 days after the birth, when she ate a guinea pig.

On August 4, all but one of the young rattlesnakes ate mice; none ate baby rats, which were also offered.

On August 1 the 28 remaining babies were measured. The longest was 396 mm., the shortest 340 mm., and the average length 366 mm. On August 30 they were again measured. The longest was 450 mm., the shortest 375 mm., and the average 404 mm. Comparing this figure to the average length of the five measured at birth shows roughly an average growth of 89 mm. in 55 days.—DONALD MARCY, *Staten Island Zoological Society, Staten Island, New York.*

#### NESTING OF THE TWO-LINED SALAMANDER ON THE COASTAL PLAIN.—

There is a scarcity of records of the two-lined salamander, *Eurycea bislineata bislineata* (Green), from the Atlantic coastal plain, and most observations of its behavior have been made either in the north or in upland situations. The following notes were made at Shackelford Farms, near Lanexa, New Kent County, Virginia. New Kent County lies well within the coastal plain, about 30 miles east of Richmond, between the Pamunkey and the Chickahominy rivers. Most of the county is under 100 feet in altitude. The upper coastal plain terraces are deeply eroded into steep-sided ravines that are covered with mixed pine and hardwood forests. Since the slopes are of heavy clay with marl outcrops, the small streams draining them are mud bottomed and rich in lime. There was no gravel or rock in the streams examined, only sticks, leaves and other organic debris.

Two nests were found April 21, 1944. Laying presumably started sometime during that week as this same stream had been examined a week earlier, with negative results. Both nests were in a small stream that varied from 1 to 2 feet in width and from 1 to 3 inches in depth, with but a slight current. One nest was in a submerged tangle of roots on the under side of a clump of mosses and plants growing on the edge of the stream. A small irregular cavity, free of mud and soil, had been formed in the tangle of roots. The eggs were attached singly to the fine roots that formed the sides and top of the nest. When the nest was exposed the salamander was seen with the eggs, but she escaped by retreating farther under the bank. Forty-two eggs were counted without destroying the nest and in the roots there may have been a few more that were not seen. The clump of weeds and moss was turned back in place, and the site left undisturbed for about an hour. I then revisited it and found the salamander returned to the nest.

The second nest was in a submerged drift of leaves in the center of the brook, in water about 3 inches deep. The nest cavity was destroyed in exposing the nest, and all that could be seen were the eggs and the salamander with them. The eggs were attached singly to portions of several leaves and small twigs. Forty-five eggs were counted.

Each egg is enclosed in an ovoid envelope, which is attached to the leaf or twig by its smaller end. The point of attachment is relatively wide, approximately 2 mm. in diameter. While the capsules are sufficiently flexible to allow each egg some individual movement in the current, they will not stretch and even when washed in a strong current, they never took the form of a stalk or thread.

Only two nests were seen although a number of similar places were examined. There are numerous logs, sticks, and pieces of wood of various sizes in the stream, but no eggs were found under them. Two males were found in a small dam formed by two pieces of wood.

Other salamanders associated with *Eurycea* in the stream were *Desmognathus fuscus fuscus* and larval specimens of *Eurycea*, *Desmognathus* and *Pseudotriton*.

Four adult *Eurycea* (CM 22724-7), two males and two females, were collected and deposited in the Carnegie Museum, Pittsburgh, Pa.—NEIL D. RICHMOND, *Shackelford Farms, Lanexa, Virginia.*