

A RARE SPECIES OF *BASCANION* (*B. ORNATUM*). BY HENRY L. BRUNER.

*Masticophis ornatum*, a snake of Western Texas, was described by Baird and Girard in 1853. Later these authors placed the type under the genus *Bascanion* and reduced it to a variety of *B. taeniatum*. Cope accepted this classification in his check list of the Batrachians and Reptiles of North America (1875), but in his later work on the snakes of North America (Proceedings of the National Museum, Vol. 14, 1891), he restores *B. ornatum* to the dignity of a species. This change, which was made in spite of resemblance in the coloration and scale formula of *B. taeniatum* and *B. ornatum*, was based on a great difference in the proportions of the head and in the breadth of the frontal in the two forms.

The available material for the study of *B. ornatum* has consisted, until recently, of two specimens belonging to the Smithsonian collections. Both of these were taken in West Texas, one near Howard Springs, the other between El Paso and San Antonio. A third specimen, which was recently found by the writer in the Franklin Mountains about twelve miles north of El Paso, Texas, has suggested the reflections contained in the present paper.

Through the kindness of Dr. Stejneger, who made the comparisons for me, I am able to state that the proportions of the head in the new specimen agree exactly with those of the specimen in the National Museum. Thus additional proof is furnished of the specific value of the characters attributed to *B. ornatum*. Similar evidence on this point is also to be obtained from a study of the coloration.

Cope has divided the genus *Bascanion* into two series of species, which are distinguished by the coloration of the young. In one group the young show a tendency to become cross-banded or spotted, as in *B. constrictor*, *B. flagelliforme*; in the other series the coloration is characterized by longitudinal stripes, as in *B. laterale*, *B. taeniatum*, *B. schotti*, *B. semilineatum*. In the latter series the stripes persist up to maturity, except in *B. semilineatum*, in which a trace only of stripes remains on the anterior half of the body of the adult. The cross-banded forms, on the other hand, all lose their bands at maturity, excepting *B. flagelliforme*, in which in the full-grown animal the bands are observable only toward the anterior part of the body.

*Bascanion ornatum* occupies a peculiar place in the genus because it combines the characters of the two series above described. All of the specimens of *B. ornatum* show both cross-bands and longitudinal stripes. However, here both the stripes and the bands persist in the adult. Of the two Smithsonian specimens, which are both a little more than five feet long, the cross-bands are more distinct in one specimen than in the other. In the new specimen, which is a young animal, only thirty-eight inches long, the cross-bands are also not strongly marked. It is clear then that in *B. ornatum* immaturity of the specimen is not associated with greater distinctness of cross-bands, as is the case in the *B. constrictor* and *B. flagelliforme*. In other words, the cross-bands are a fixed character of both adult and young of the species *ornatum*. These facts indicate that this species represents, with respect to coloration, the most generalized type in the genus; it is, therefore, the most primitive species, from which, on the one hand, the purely cross-banded series has descended on account of the obliteration of longitudinal stripes. The longitudinally striped series, on the other hand, has arisen because of the disappearance of the cross-bands.

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ON THE HEART OF LUNGLESS SALAMANDERS. BY HENRY L. BRUNER.

[Abstract.]

In the *American Naturalist* for 1896 Hopkins announced the discovery of a septum atriorum in the heart of certain lungless salamanders; he omitted, however, in his description, the valve which, both in lungless forms and in those with lungs, guards the sinus-atrium opening.

A study of the heart of lungless salamanders had already been made by the writer before the paper of Hopkins came into my hands. Investigation of the same species used by Hopkins shows that the latter has described the sinus-atrium valve as a septum atriorum. I conclude, further, that no trace of a septum atriorum exists in the adult lungless salamanders studied by me (*Plethodon cinereus*, *P. erythronotus*, *Desmognathus fusca*, *Salamandrina perspicillata*, *Spelerpes fuscus*).

The conus arteriosus of certain lungless salamanders shows a spiral fold (e. g., *Plethodon*), but it seems to be absent in *Desmognathus*.