

PRELIMINARY DESCRIPTION OF A NEW GENUS AND SPECIES OF  
BLIND CAVE SALAMANDER FROM NORTH AMERICA.

BY  
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(With plate IX.)

The discovery of a blind cave salamander on our continent is one of the most important and interesting herpetological events of recent years. A new genus and species of salamander may not be such a startling novelty even at this late date, but the interest is considerably heightened when we have to do with the first and only blind form among the true salamanders.

The discovery is primarily due to Mr. F. A. Sampson who, in July last year, found the adult animal as well as a larva in the Rock House Cave, Missouri, and kindly forwarded both to our museum. I have also to thank Mr. George E. Harris, who afterwards went to great trouble in order to procure me additional specimens. Unfortunately, he has only succeeded so far in obtaining larvæ, but we hope to be able during the present year to secure more adults.

A more detailed anatomical description of this interesting animal will have to be postponed until then, as I have not felt justified in mutilating the type specimen beyond what was necessary in order to ascertain the character of the vertebræ. The present preliminary description is, therefore, only prepared in order to call attention to the discovery and to supply the diagnosis by which the animal may be identified.

**TYPHLOTRITON**, gen. nov.

(τυφλός, blind; τρίτων, ó, salamander.)

Of the family *Desmognathidæ*: Vertebræ opisthocæalous; parasphenoid teeth; vomerine teeth. Eyes concealed under the continuous skin of the head; tongue attached in front and along median line, free laterally and posteriorly; maxillar and mandibular teeth small and numerous; vomerine teeth in two strongly curved series; parasphenoid patches separate; nostrils very small; toes five.

Type: *Typhlotriton spelæus* STEJN.

*Typhlotriton spelæus*, sp. nov.

DIAGNOSIS: Sixteen costal grooves; tail slightly compressed, not finned; toes nearly half webbed; vomerine teeth in two *v*-shaped series with the curvatures directed forward; gular fold strong, very concave anteriorly; color uniform pale.

HABITAT: Rock House Cave, Missouri.

Type: U. S. National Museum, No. 17903, July 24, 1891, F. A. Sampson coll.

*Description of type specimen.*—(♀ ad).—Head wide, much wider than neck, very depressed and flat on top, with no canthus rostralis; snout rather swollen, truncate; nostrils very small; eyes small, only slightly raised, and covered by the continuous skin of the head with only a shallow groove to indicate the opening between the lids, the underlying eyes only visible as two ill-defined dusky spots; body somewhat depressed, measuring thrice and a third the distance from snout to gular fold; limbs short, about five costal interspaces apart when laid against the body; fingers rather short, especially the first, nearly free; length, beginning with the shortest, 1-4-2-3; number of phalanges 1-2-3-2; toes rather short, first almost rudimentary, nearly half-webbed; length, beginning with the shortest, 1-2-5-4-3, second and fifth, and fourth and third being nearly equal; number of phalanges 1-2-3-3-2; tail considerably shorter than head and body, subcylindrical at base and somewhat squarish, more compressed toward the tip, rounded above, faintly keeled below; skin minutely granulate; gular fold strong, very concave anteriorly and uniting on the sides of neck with a horizontal groove running from eye backwards; sixteen costal grooves, or eighteen, if counting the axillar and groin grooves, crossed on the sides by a strong horizontal groove between axilla and groin.

Maxillar and mandibular teeth small, numerous, normal; vomerine teeth not extending outside of the choane, forming two *v*-shaped, strongly curved series with the points directed forward, the external branches straight, the internal ones curved inward and well separated; parasphenoid patches, long, rather narrow, well separated, their distance being nearly equal to their width, and well separated from the vomerines; teeth small, in numerous rows.

Tongue rather large, attached anteriorly and along the median line for a trifle more than the anterior half, extensively free laterally and posteriorly.

Color (in alcohol) uniform creamy yellow; in life, "pale."

*Dimensions.*

|                               | Millimeters. |
|-------------------------------|--------------|
| Total length.....             | 93.0         |
| From snout to gular fold..... | 12.0         |
| From snout to anus.....       | 52.0         |
| Width of head.....            | 8.5          |
| Fore limb.....                | 11.0         |
| Hind limb.....                | 13.0         |
| Tail.....                     | 41.0         |

Mr. Sampson informs me that the animal was caught on the rocky walls of the cave about 600 feet from the entrance. The Rock House Cave is "an erosion of rocks of the Chouteau and Burlington formations, in places not more than 2 feet wide, and in others several times that, and extending into the hill about a quarter of a mile."

Although many of our salamanders are known to inhabit caves, this seems to be the only one, so far discovered, which, like some of the other animals exclusively living in caves, has become blind, or nearly so.

I am at present unable to indicate the forms with functional eyes to which the present genus is most nearly allied, or from which it may have descended. The unique character of the vomerine teeth at once removes it from all the species with which I am acquainted, and this, combined with several other characters, gives this genus quite an isolated position. But a further discussion of this may safely be postponed until the arrival of additional material shall enable us to study the anatomical structure of this remarkable animal.

