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UNIVERSITY OF CALIFORNIA PUBLICATIONS

IN

# ZOOLOGY

WILLIAM EMERSON RITTER

AND

CHARLES ATWOOD KOFOID

EDITORS

VOLUME XVII

WITH 29 PLATES

UNIVERSITY OF CALIFORNIA PRESS

BERKELEY

1916-1918

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(RECAP)

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*SPELERPES PLATYCEPHALUS*, A NEW ALPINE  
SALAMANDER FROM THE YOSEMITE  
NATIONAL PARK, CALIFORNIA

BY

CHARLES LEWIS CAMP

(Contribution from the Museum of Vertebrate Zoology of the University of California)

One of the results of the Yosemite Natural History Survey recently carried on under the auspices of the California Museum of Vertebrate Zoology is the discovery of a new salamander from the high Sierra Nevada. This alpine species is apparently most nearly related to some of the forms of *Spelerpes* inhabiting the central Mexican plateau and Mount Orizaba, and constitutes an interesting addition to the Pacific fauna, inasmuch as this genus has not hitherto been recorded from west of New Mexico. The present species appears to be one of a number of forms far removed geographically from the center of abundance of the genus, and its locality of occurrence makes it seem likely that the boreal salamanders of this group had a much wider range during glacial times than at present. One is led to expect that other species of *Spelerpes* may yet be found in western America, particularly in the higher regions of northern Mexico.

***Spelerpes platycephalus*, new species**

Mount Lyell Salamander

*Type*.—Female, adult, no. 5693, Mus. Vert. Zool.; head of Lyell Cañon, 10,800 feet altitude, Yosemite National Park, California; July 18, 1915; collected by C. L. Camp; orig. no. 2215.

*Diagnosis*.—Body elongate; tail shorter than head and body; palatine teeth in two slightly arched series, separated from the parasphenoid patches and extending beyond the choanae; head broad and

depressed; tongue attached to central pedicel only, free in front; digits half-webbed, 4-5; costal folds 12; color dark chocolate, mottled on back, sides, limbs, feet, tail and chin with gray.

*Material*.—Two adults from the type locality, as above: nos. 5693 female, and 5694 male, Mus. Vert. Zool.

*Comparisons*.—The free tongue, consolidated premaxillaries, ossified parietals, and digits 4-5 place the present species within the genus *Spelerpes*. The half-webbed toes and character of the palatine teeth relate it more closely to the Mexican alpine forms of that genus than to those of the tropical and austroriparian regions of North America. In number of costal folds and style of coloration (see Brocchi, 1882, pl. 19), it resembles *S. leprosus* Cope (1869, pp. 105-106), described from the "Alpine region, in Vera Cruz, Mexico." But it is distinct from *leprosus* because of its wider and longer head and shorter tail (see table of measurements).

#### MEASUREMENTS IN MILLIMETERS OF *SPELERPES*

	<i>S. platycephalus</i>			<i>S. leprosus</i>		
	no. 5693 ♀		no. 5694 ♂			
	alive	in alcohol		♂ <sup>1</sup>	♀ <sup>1</sup>	sex? <sup>2</sup>
Total length .....	106.5	99.4	86.9	91	105	87
Tail from posterior angle of vent .....	35.5	33.6	30.2	45	52	37
Head width .....	11.9	10.3	10.2	8	9	8
Snout to gular fold.....	15.3	14.2	12.6	....	....	....
Snout to axilla .....	.....	20.7	18.4	....	....	15
Snout to groin .....	.....	54.2	47.8	....	....	46
Fore limb .....	16	15.5	15.5	12	14	15
Hind limb .....	18	17.0	16.9	15	17	18

<sup>1</sup> Boulenger, 1882, p. 68.

<sup>2</sup> Cope, 1869, p. 106.

*Description of type*.—Parasphenoid teeth in two elongate patches, separated by a narrow interval from the palatine teeth which extend in two slightly arched series beyond the choanae; head depressed, wider than body at any point; no trace of canthus rostralis, subnarial protuberances or parotoid glands; naso-labial grooves barely distinguishable; nostrils minute; premaxillaries united, containing a fontanel; maxillary and mandibular teeth small and numerous, jaws not edentulous posteriorly; body elongate, containing distance from snout to gular fold four and one-half times; limbs fail to meet by two costal interspaces, when appressed to sides; fore limb forward to middle of eye; hind limb forward over five costal folds; fingers and toes slightly

enlarged at ends, webbed about half way to tips, inner digit rudimentary, smaller than outer on both front and hind foot; tail much shorter than body, cylindrical; eyes small and far apart; extended tongue 30–40 millimeters long; gular fold continuous with a line running to eye; costal folds 12.

Color in life dark chocolate, marked evenly and thickly on back and sides of head and body, on limbs, feet and tail, and below chin with lichen-like gray markings, yellowish in tinge down middle of back, where less distinct, and bluish on sides; underparts posterior to gular fold uniform dark chocolate. Iris bright yellow. In alcohol the yellowish tints have disappeared.

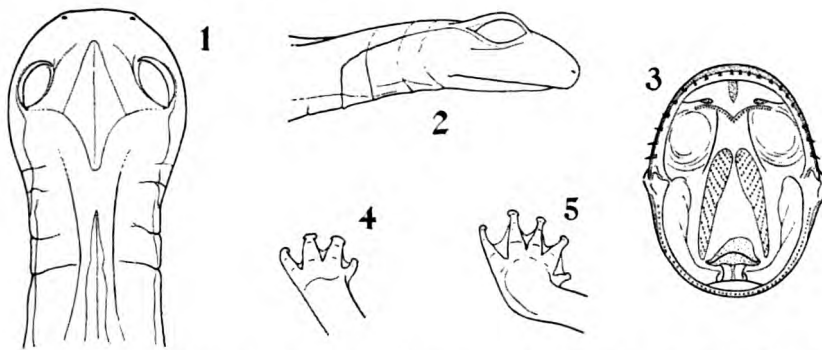


Fig. 1.—Top of head, ♀ no. 5693, Mus. Vert. Zool.; note great breadth of head, and distance between eyes.

Fig. 2.—Side of head, ♀ no. 5693, Mus. Vert. Zool.; note small nostril, relative size of eye, position of gular fold, and lines on side of neck.

Fig. 3.—Open mouth of ♂ no. 5694, Mus. Vert. Zool.; note tongue, unattached in front, character of palatine and parasphenoid teeth, and long maxillary teeth.

Fig. 4.—Left fore foot, ♂ no. 5694, Mus. Vert. Zool.; note extent of webbing.

Fig. 5.—Left hind foot, ♂ no. 5694, Mus. Vert. Zool.; note extent of webbing, and enlarged ends of toes. All  $\times 2\frac{1}{2}$ .

**Variations.**—The only other specimen, a male, differs somewhat from the type. The teeth on the sides of the upper jaw (see fig. 3) are abnormally long, protruding below the closed lips beneath the eyes, and are few in number (ten on each side); the body is shorter, the appressed limbs being separated by only one costal fold, and the light markings are smaller and more scattered.

**Remarks.**—The two Mount Lyell salamanders were taken on the rocky, snow-covered north slope of Mount Lyell, in the Yosemite National Park, about a mile from the glacier and a little below timber line, here marked by a few stunted white-bark pines on the tops of

the ridges. The exact spot was at the 10,800-foot contour, on a steep, east-facing hillside above the Donohue Pass trail in a small patch of heather. A stream close by issued directly from the snow banks and disappeared beneath rock-slides below. The two specimens were found to have been captured simultaneously in a spring-clip mouse-trap set in front of a small hole running into the moist soil beneath some rocks.

*Transmitted August 25, 1916.*

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