

NUMBER 40.

MAY 30, 1917.

OCCASIONAL PAPERS OF THE MUSEUM OF
ZOOLOGY

UNIVERSITY OF MICHIGAN

ANN ARBOR, MICHIGAN. PUBLISHED BY THE UNIVERSITY.

DESCRIPTION OF A NEW SALAMANDER FROM
WASHINGTON.

BY HELEN THOMPSON GAIGE.

Among a collection of amphibians which has recently been received at the Museum of Zoology from Lake Cushman, Washington, are a number of small salamanders which undoubtedly represent a new species of the genus *Ranodon*. The discovery of this form in North America is particularly noteworthy as the genus has hitherto been composed of a single species, *Ranodon sibiricus*, which has been recorded only from eastern Siberia and northeastern China.

The writer is indebted to Dr. Leonhard Stejneger for his assistance in diagnosing the form and to Dr. George A. Boulenger for its comparison with the specimens of *Ranodon sibiricus* in the British Museum (Natural History).

Ranodon olympicus, new species.

Diagnosis: Tongue oval, lateral borders slightly free. Vomerine teeth in two short, curved series between choanae, widely separated. Skin shining, closely pitted, without tubercles. Fourteen costal grooves. Toes five, tips rounded; limbs well developed, rather short, failing to meet when adpressed. Tail shorter than head and body.

Habitat: The Olympic Mountains, Washington.

Type Specimen: Cat. No. 48607, Museum of Zoology, University of Michigan; Lake Cushman, Washington; April 20, 1916; Philip Putnam, collector.

Description of Type Specimen: Vomerine teeth in two short, arched series beginning just behind internal nares, convex forward, separated by a wide interspace; internal nares small and closer together than external openings; tongue an elongate oval, lateral borders slightly free. Snout rounded; head depressed; nostrils nearer end of snout than eyes, distance between them equal to interocular space; eyes prominent, eyelids swollen, width of upper eyelid contained one and a half times in interocular space. A strong vertical fold at posterior corner of eye; gular fold strongly marked below, extending on sides of neck; a groove beginning at angle of mouth divides and sends one branch to the posterior corner of the eye, the other, which curves strongly upward and then slightly downward, to the gular fold. Parotids obscure. Distance from end of snout to gular fold contained three and a half times in distance from gular fold to anterior border of anus. Skin shining, closely pitted. A median dorsal and fourteen distinct costal grooves. Limbs well developed, fore and hind limbs not meeting by two intercostal spaces when adpressed; toes distinct, ends rounded; third toe longest, second and fourth equal, first and fifth equal.

Tail strongly compressed, keeled above, shorter than head and body, ending in an obtuse point. Vent a longitudinal slit with a distinct transverse groove at its posterior end.

Color in alcohol sepia with a few minute whitish specks and larger indistinct dusky mottlings, the latter more numerous and distinct on the sides of the head, body and tail, where they encroach irregularly on the yellowish, immaculate belly. The upper surfaces of the limbs a much lighter brown, mostly obscured by a dark mottling, immaculate beneath. The throat and chin with a few scattered spots of dark brown.

Total length, 74 mm.; snout to gular fold, 10 mm.; gular fold to vent, 35 mm.; vent to tip of tail, 30 mm.; width of head, 7 mm.; length of fore limb, 11 mm.; length of hind limb, 12 mm.

Notes on Paratypes: Among the six adult specimens examined there are few individual variations. The body proportions and color are remarkably constant, even the larvae exhibiting the adult coloration. The four immature specimens vary in body length from 50 to 70 mm.; the largest, collected April 30, 1916, still retains such larval characteristics as the gill rudiments, flattened head and finned tail.



