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A NEW SPECIES OF PLETHODON FROM NORTHERN IDAHO

James R. Slater and John W. Slipp

On September 13, 1939, while collecting on the south shore of Wolf Lodge Bay, Coeur d'Alene Lake, Idaho, two adult and three very small juvenile specimens of an undescribed species of Plethodon were taken by the authors. On the basis of this collection the following new species is hereby described and named.

PLETHODON IDAHOENSIS sp. nov.

Coeur d'Alene Salamander

Figures 1 and 2

Type Locality: Northeast corner of Coeur d'Alene Lake, Kootenai County, Idaho; elevation about 2150 feet; zone, Semi-arid Transition.

Description of Holotype: College of Puget Sound No. 2710, adult male, collected by the senior author. General form moderate for a Plethodon, with broad head, well-developed limbs and a slender tail; depth nearly uniform from behind eyes to posterior edge of anus; width greatest across head (behind eyes) at gap, noticeably reduced in neck region; tail slender; metameric grooves evident on lateral and ventral surfaces from forelimbs to tip of tail; a median dorsal groove extends from occipital region onto base of tail; a median ventral groove on base of tail, becomes obscure on belly. Head broad, much flattened, widest across rictal bulges, greatest depth posteriorly, cranial and rostral dorsal in a plane sloping forward between eyes to interorbital ridge; orbits prominent in the dorsal outline, moderately so in lateral outline; muzzle angular, abruptly truncate; canthus rostralis prominent; end of snout overhanging mouth; naso-labial grooves descend vertically from the postero-ventral edges of the nostrils along the anterolateral corners of the muzzle to the upper lip, the edge of which is drawn down strongly at these two points in tab-like points extending across end of lower jaw at either side of snout; nostrils slightly oval, oblique, gape ovoid, slanting upturned at the corners; eyes large, prominent, orbital slit about equal to length of canthus rostralis, less than interorbital width; a prominent parotoid gland extends backward from between the postero-ventral rim of the orbit and the corner of the mouth onto the side of the neck, terminated posteriorly by a groove running up, and to a lesser extent back, from end of gular fold; a definite parotoid groove extends back from the eye through the upper part of the parotoid gland, turning down posteriorly to meet the end of the gular fold, and producing one fairly definite branch descending vertically behind, the end turn-
ing forward and ending under, the rictus. Mouth cavity large, extending well back of gape; choanae small, slightly elliptical, the long axis approximately postero-lateral; denti-
ticles narrow, moderate, extensive; vomerine teeth in two nearly straight, widely divergent, series almost united on median line between anterior edges of orbital depressions, and extending to points of choanal diameter behind and slightly external to the choanae; paracaudi teeth in two patches fused along the median line but showing a tendency to separate into two lobes at the posterior end, the whole being rounded at either end, broadest posteriorly, much longer than wide, and extending forward to a point between the orbital depressions 2-3 choanal diameters from the vom-
erine series; tongue large, flat, thin-edged, ovate, broad-
est posterior to the middle, the posterior end obtusely rounded, attached along the median line, the lateral por-
tions and posterior quarter free. Body somewhat depressed, broadest just posterior to middle, tapering evenly into neck and tail regions except for minor swellings at the inser-
tions of the limbs; costal grooves 13, the 12th and 13th joined at the groin, ventrally less distinct, nos. 3-11 con-
tinuous across belly; closes a narrow slit, nearly flush with adjoinning surfaces, the edges at the posterior end bearing slightly raised, flattened fleshly lips with poste-
rior ends not reaching quite to slightly and of slightly less angular; axilla to groin measurement and lengths of fore and hind limbs less in pro-
toportion to total length; closes a simple slit. Dorsal bend on body without "evenly rounded" projections of the borders; fawn colored area of underchin largely replaced by a patch of yellow surrounded and invaded heavily by the surrounding darker pigments; greyish-white streaking much less extensive, aggregations occurring only locally in areas behind the hind limbs and on the ventral and lateral surfaces of the neck, being more widely scattered but fairly numerous on the vent-
ral and post-rectal areas of the head, and on the limbs.

**Notes on Allotype:** College of Puget Sound No. 2711, fe-
ma, collected by the senior author. Very similar to holo-
type with the following principal differences: head more elongated and of slightly less angular; axilla to groin measurement and lengths of fore and hind limbs less in pro-
toportion to total length; closes a simple slit. Dorsal bend on body without "evenly rounded" projections of the borders; fawn colored area of underchin largely replaced by a patch of yellow surrounded and invaded heavily by the surrounding darker pigments; greyish-white streaking much less extensive, aggregations occurring only locally in areas behind the hind limbs and on the ventral and lateral surfaces of the neck, being more widely scattered but fairly numerous on the vent-
ral and post-rectal areas of the head, and on the limbs.

**Comparisons:** Distinguished from comparable forms ex-
cept Plithodon vandykti by webbed toes, subterminal pads on digits, paracaudi in fuscd patches, 12 (-13) costal folds, and paracaudal glands.

Distinguished from *P. vandykti* to which it is closely rel-
ted, by more elongate form, greater width of head, more angular shape of head, broader and more truncate snout (the end much wider), the greater amount of black in the colora-
tion and blackish periteneum.

The darker colored specimens of *vandykti* are less black than *idaeensis*, both in tone and extent of color. All such black specimens of *vandykti* which the authors have examined have the upper surfaces of the legs and the under surface of the soem distinctly light-colored, a yellow similar to that of the dorsal bend.
Diagnosis: A broad-headed, slender-tailed Plectodon of moderate size with prominent eyes and well-developed parotid gland and limbs; toes moderately webbed, with prominent sub-terminal pads.

MEASUREMENTS OF THE HOLOTYPE, ALLOTYPE, AND PARATYPES in millimeters of five specimens of PLECTODON TANAGENSIS

<table>
<thead>
<tr>
<th>No.</th>
<th>OGS 2710</th>
<th>OGS 2711</th>
<th>JWS 39113c3</th>
<th>JWS 39113c4</th>
<th>JWS 39113c5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Length</td>
<td>101.6</td>
<td>78.0</td>
<td>40.8</td>
<td>39.2</td>
<td>34.3</td>
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<tr>
<td>Head Length</td>
<td>11.7</td>
<td>10.2</td>
<td>5.7</td>
<td>5.2</td>
<td>5.1</td>
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<tr>
<td>Tail Length</td>
<td>46.0</td>
<td>38.8</td>
<td>10.1</td>
<td>15.7</td>
<td>13.8</td>
</tr>
<tr>
<td>Head Width</td>
<td>8.0</td>
<td>6.4</td>
<td>4.1</td>
<td>4.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Orbital Slit</td>
<td>2.3</td>
<td>2.0</td>
<td>1.2</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Interorbital Space</td>
<td>2.7</td>
<td>2.3</td>
<td>1.5</td>
<td>1.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Foreleg and Hand</td>
<td>13.4</td>
<td>9.6</td>
<td>5.2</td>
<td>5.0</td>
<td>4.7</td>
</tr>
<tr>
<td>Hind</td>
<td>4.6</td>
<td>3.9</td>
<td>1.7</td>
<td>1.9</td>
<td>1.6</td>
</tr>
<tr>
<td>Axilla to Groin</td>
<td>30.6</td>
<td>22.4</td>
<td>18.9</td>
<td>11.4</td>
<td>10.7</td>
</tr>
<tr>
<td>Hind Leg and Foot</td>
<td>14.6</td>
<td>11.0</td>
<td>9.8</td>
<td>9.5</td>
<td>9.2</td>
</tr>
<tr>
<td>Hind Foot</td>
<td>5.5</td>
<td>5.0</td>
<td>2.8</td>
<td>3.0</td>
<td>2.7</td>
</tr>
<tr>
<td>Costal Grooves</td>
<td>13-13</td>
<td>14-13</td>
<td>13-13</td>
<td>14-14</td>
<td>13-13</td>
</tr>
<tr>
<td>1.5mm</td>
<td>2-2</td>
<td>2-2</td>
<td>2-2</td>
<td>2-2</td>
<td>2-2</td>
</tr>
</tbody>
</table>

Description of Juvenile: (based on 3 paratypes collected by the junior author, especially 39113c3). Smout abruptly truncate, but narrow at end; suprailial tabs well developed. General form robust, neck not narrowed, sides of head parallel, eyes very prominent (broadest). Webs end pads developed fully, Costal grooves very evident, even to end of tail; not distinct on back, but slightly oblique. Close a simple slit. Mid-ventral groove evident in pelvic. Parotid prominent, post-ocular groove definite. No yellow chin patch; eye flacks noticeable on anterior surface of humerus and forward to gular fold and on ventral of head. Tees 3, 4, 2, 5, 1 right; left 4, 3, 2, 5, 1. Tongue slightly truncate. Protrusions of yellow numerous along back. Corners of mouth not turned up. Dentition evident; vomerines somewhat curved. Paresphenoid in one patch.

General Remarks: All five of the specimens were taken at the foot of a high out bench above the road which follows the edge of Cœur d'Alene Lake (Fig. 3), the two adults from a rock and dirt talus and the three juveniles from the gravel floor at the entrance of a very wet mine.6 of a mile distant. The letter were drowned and fixed in formalin the day of capture, while the former were kept in a jar with a

little sphagnum until December, 1939. The forest in this vicinity has a humid aspect, containing much douglas fir and dwarf maple, while a few miles westward the yellow pine and the open plains of the arid transition predominates.

While in captivity, a few notes were obtained on various phases of their behavior. When undisturbed they remained quiet for the most part, in or under the moss, but when taken in the hand for examination or posed for photographing, they were exasperatingly persistent, in their efforts to get away. Walking was accomplished by taking quite long and energetic strides which allowed a rapid advance ordinarily. They were, however, several times when apparently overcome by weariness, dryness and handling, did not recover quickly with moisture and a little rest. Both in good condition when finally anesthetized and preserved, the male eating a medium-sized, green-bodied "housefly" the day previous. The fly, which was already crippled, was seized and struck at 2 or 3 times before it was finally snapped up by the tongue at a distance of a quarter-inch from the mouth, held for a few seconds, and swallowed.

The discovery of this form is of particular interest as it seems to be the first record of a Plethodon taken in the Rocky Mt. system, certainly the first of a strictly terrestrial nature. No members of this family have been recorded even for the eastern slope of the Cascade range in Washington as yet, and except for a few Texas species the above statement appears to be true.

Two specimens (Holotype OGS 2710 and JWS 39113c3) are to be deposited in the United States National Museum.

COLLEGE OF FISHER SOUNDS TACOMA, WASHINGTON

SALAMANDER RECORDS FROM BRITISH COLUMBIA

James R. Slater

While on a sight-seeing trip in Capilano Creek canyon, north of North Vancouver, British Columbia, we visited a place called "salmon pool" about five or six miles up the canyon from the mouth of the stream on April 21, 1940. While climbing out of the canyon, I turned over some decaying bark and found an Ensatina eschscholtzii (OGS 2730) and a very few feet away, I found a Plectodon venulum (OGS 2731). The first specimen is 69 mm. in length, of typical coloration; the second 62 mm. in length, with a red dorsal stripe.

As far as I can discover from the literature, these species have not been reported from anywhere north of Burrard Inlet and Indian Arm before. Gertrude Smith Wetney (Cole 1936:89) last reported these species from the campus of the University of British Columbia and P. venulum from Burnaby but these stations are both south of Burrard Inlet. It is