
LIST OF FISHES COLLECTED IN BOULDER COUNTY,
COLORADO, WITH DESCRIPTION OF A
NEW SPECIES OF LEUCISCUS.

By CHANCEY JUDAY,
University of Colorado.

LIST OF FISHES COLLECTED IN BOULDER COUNTY, COLORADO, WITH DESCRIPTION OF A NEW SPECIES OF LEUCISCUS.

By CHANCEY JUDAY.

University of Colorado.

Boulder County lies in the basin of South Platte River and is drained chiefly by two streams, St. Vrain Creek and Boulder Creek, the latter becoming a tributary of St. Vrain Creek before their waters reach South Platte River. The southern part of the county is drained by Boulder Creek, which receives South, Middle, and North forks in its upper course, these branches having their beginnings in the Arapahoe and James Peak region; and the northern part by St. Vrain Creek, which has three main branches in its upper course, North and South forks and Left Hand Creek, all of which have their sources on the eastern slope of the high mountain country in the western part of the county, on the south side of Longs Peak and in the region south toward Arapahoe Peak.

In September and October, 1903, some fishes were collected from these two streams in their lower courses—that is, some distance below the foothill region in Boulder Creek. The collections were made a few miles east of the city of Boulder; in St. Vrain Creek, in the vicinity of Longmont; also, two species (*Pomoxis sparoides* and *Micropterus salmoides*) were obtained from Culbertson's Lake, a small private lake about 5 miles east of Boulder, into which they have been introduced.

Trout are found in the mountain courses of these streams, but no specimens were obtained. So far as the writer has been able to determine, but a single species, besides a mention of the trout, has been reported from the county before. Jordan states that he found young *Catostomus griseus* in Boulder Creek in the canyon above Boulder.^a Twenty-five species of fishes are represented in these collections. The trout, of course, are still to be added to the list, and there is no doubt that more extensive collections would result in the addition of still other species.

The writer wishes to acknowledge his indebtedness to Judge Junius Henderson, of Boulder, and Prof. D. W. Spangler, of Longmont, for their valuable assistance in making the collections.

In the following list the letter "B" indicates the species found in Boulder Creek and "V" those found in St. Vrain Creek.

^a Bull. U. S. Fish Com., Vol. IX, pp. 1-36, 1889.

Carpiodes velifer (Rafinesque). V.

Only a few specimens were obtained, from a deep pool which was connected with the creek only during flood season.

Catostomus griseus (Girard). B, V.**Catostomus commersonii** (Lacépède). B, V.**Campostoma anomalum** (Rafinesque). B, V.**Chrosomus erythrogaster** Rafinesque. B, V.

This species had not previously been noted so far west. Jordan and Evermann (Bull. 47, U. S. Nat. Mus., p. 209) give Iowa as the western limit of its range.

Hybognathus nuchalis Agassiz. B, V.

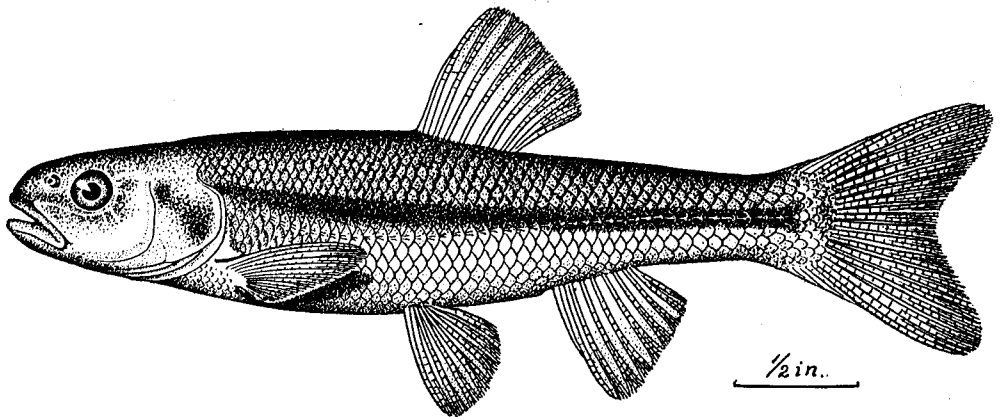
These specimens have a dark lateral band.

Pimephales promelas Rafinesque. V.

Only one specimen obtained.

Semotilus atromaculatus (Mitchill). B, V.**Leuciscus evermanni** Juday, new species.

Among the specimens obtained from Boulder Creek, three were found which belong to the genus *Leuciscus*, but which apparently represent a new species, a description of which is given below. The specimens were not examined until after they had been in preserving fluid for some time, and later



Leuciscus evermanni Juday, new species.

efforts to obtain more were unsuccessful; consequently, life colors can not be given. Unfortunately, too, the largest specimen, which was intended for the type, was misplaced before the description was completed and has not since been found, so that the second in size is here described as the type. Some notes on the largest one had been made, however, and these are given in the table. It is a very great pleasure to me to name the species for Dr. Barton Warren Evermann, of the Bureau of Fisheries.

Head 3.66 in length; depth 4.6; eye 5 in head; snout 3.1; maxillary 3.1; mandible 2.92; interorbital 2.86; scales 9-47-5, 22 before dorsal; D. 8; longest ray of dorsal 1.33 in head; A. 8; longest anal ray 1.7 in head; pectoral 1.49 and ventral 1.81 in head; teeth 1, 5-5, 2.

Body rather elongate, moderately robust anteriorly, and little compressed; head moderate, subconical, its width just behind eyes 1.4 in its length; snout rather blunt; eye moderate, situated anteriorly and rather high in head; mouth moderate, terminal, oblique, the maxillary barely reaching front of orbit; jaws about equal; upper lip about on level with lower edge of pupil; scales rather large; lateral line decurved; all the fins except the caudal rather small; ventrals barely reaching vent; origin of dorsal midway between tip of snout and base of caudal, over ventrals; least depth of caudal peduncle 2.6 in head.

The general shape is much like that of *Semotilus corporalis* (Mitchill) (Jordan and Evermann, Bulletin 47, p. 221), but the snout is blunter than that of the latter of this size, and is without barbels.

Color in alcohol, back olive, made dusky by the dusky margins of the scales; a black streak along middle of back from occiput to dorsal fin splitting and passing each side, reuniting behind fin and continuing to top of base of caudal; top of head black and snout slate; side of head below level of eye, nearly all of side of body below lateral line, and belly pale; commencing on about the eighth scale behind the upper edge of the opercle and about the middle of the third above and including the lateral line, a narrow black line which becomes more distinct posteriorly, extending backward and curving downward gradually to the lateral line about the twenty-fifth scale, thence running to base of caudal along upper edge of lateral line; anteriorly a dusky shade between the black line and the lateral line, posteriorly this dusky shade more intense, about two scales wide with the black line extending through the middle of it; lower fins pale; dorsal and caudal a little dusky. Length 88 mm. (3.46 inches).

The following table shows the measurements and counts of all three specimens:

	Length of body.	Head in length.	Depth in length.	Eye in head.	Snout in head.	Maxillary in head.	Mandible in head.	Interorbital in head.	Dorsal fin.	Longest dorsal ray in head.	Anal fin.	Longest anal ray in head.	Pectoral in head.	Ventral in head.	Teeth.	Scales.
Type ...	mm. 88	3.66	4.6	5	3.1	3.1	2.92	2.86	8	1.33	8	1.7	1.49	1.81	1,5-5,2	9-47-5
Cotype No. 1..	67	3.67	4.4	4.67	3	3	3	3	8	1.3	8	1.66	1.46	1.81	1,5-5,1	9-45-5
Cotype No. 2..	99	3.77	4.61	5.5	3.14	3.14	2.75	3.14	8	1.31	8	1.69	1.57	1.83	1,5-5,1	9-47-5

Type, No. 51,841, U. S. National Museum; cotype, No. 1, Museum of University of Colorado.

Type locality, Boulder Creek, Boulder, Colo. Collectors, Juday and Henderson.

Notropis cayuga Meek. V.

Notropis scylla (Cope). B, V.

Notropis piptolepis (Cope). B.

Notropis lutrensis (Baird & Girard). V.

Notropis cornutus (Mitchill). B, V.

Phenacobius scopifer (Cope). V.

Rhinichthys cataractæ dulcis (Girard). B.

Hybopsis kentuckiensis (Rafinesque). B, V.

Couesius dissimilis (Girard). B.

Fundulus zebrinus Jordan & Gilbert. B, V.

Fundulus floripinnis (Cope). B, V.

Pomoxis sparoides (Lacépède). Culbertson's Lake.

Apomotis cyanellus (Rafinesque). V.

Micropterus salmoides (Lacépède). Culbertson's Lake.

Boleosoma nigrum (Rafinesque). B, V.

Etheostoma iowæ Jordan & Meek. V.

This species has not been previously noted west of Valentine, Nebr. (Jordan and Evermann Bulletin 47, p. 1084.)