before dorsal obliquely downward and backward to lateral line, and 5 or 6 between base of ventrals and lateral line. One specimen has the formula 12–56–7, but is entirely exceptional. Ten specimens examined have 20 to 23 oblique series crossing median line in front of dorsal fin. The front of dorsal is slightly behind insertion of ventrals in adults, hardly noticeably so in young, always nearer base of caudal than tip of snout. Both dorsal and anal have straight margins when the fins are spread.

The following table records the fin rays in 25 specimens. The single specimen noted with 10 ventral rays had 9 rays in the ventral of the other side.

Fins.	No. of specimens.	No. of rays.
Dorsal	4	8
	19	9
	2	10
Anal	1	7
	24	8
Ventral	2	8
	22	9
	1	10

The pectorals fall far short of the ventrals, and the ventrals reach to or nearly to the vent.

As in other related species, the color is dark steel-gray above with greenish luster, growing lighter on lower half of sides. Belly white. Lower half of sides coarsely specked with black. Fins all dusky. No dark stripe along sides of head or body, and no orange on head or in axil of fins.

The following table gives proportionate measurements of parts in four specimens from Upper Klamath Lake, the unit of measurement being hundredths of the standard length from tip of snout to base of caudal:

Measurements.	No. 1.	No. 2.	No. 3.	No. 4.
Total length in millimeters	206	155	130	100
Length of head	30	27	27½	26
Length of snout	8½	8	7½	6½
Diameter of eye	5½	5½	6	7
Interorbital width	9½	10	9½	9½
Length of maxillary	8½	7½	7½	7½
Depth of body	26½	29	27½	25
Depth of caudal peduncle	12	12	11½	11½
Length of caudal peduncle	20	21	21	21
Distance, snout to front of dorsal	55½	53½	53	52½
Distance, snout to front of ventrals	51	52	52	52
Length of base of dorsal	13½	13½	13½	13½
Length of base of anal	9	9½	9½	9
Height of dorsal	19	17	19½	19½
Height of anal	15½	13	16	14
Length of pectorals	18	17	17½	18
Length of ventrals	17	16	15½	16

Numerous specimens were collected in Upper Klamath Lake and in Lost River, where it is the most abundant species. Others have been examined from Scott River, Siskiyou County, California (tributary to the Klamath River), collected by Mr. R. C. McGregor. It seems very improbable that this species should be identical with *R. parovanus* Cope, from the Utah Basin, a species which has not appeared in any recent collection. The representatives of this Great Basin type of *Rutilus* are so very similar that the status of *R. parovanus* can not be determined from current descriptions. Material from the other lakes in southern Oregon must also be carefully compared with the Klamath form. *R. thalassinus* from Goose Lake seems to agree in all the details assigned, but other specimens from Silver, Chewaucan, and Warner lakes, identified by Cope with *Rutilus formosus* (Girard), have smaller scales below the lateral line than we have found in any specimen of *R. bicolor*.

10. **Agosia klamathensis** Evermann & Meek.

Agosia klamathensis Evermann & Meek, Bull. U. S. Fish Comm. 1897. Pelican Bay, Upper Klamath Lake.

The *Agosia* of the Klamath Basin has its closest allies in *A. yarrowi* and *A. conesii* of the Upper Colorado River. These seem to have the fins strongly falcate, at least in adults, while the Klamath form has the outlines of dorsal, anal, and caudal lobes broadly rounded, even in adult breeding males. The dorsal also averages farther forward in the Klamath species, being usually located midway between base of median caudal rays and middle of snout.