

## Breeding Data Upon Crater Lake Fish

This data is for fish viscera examined between the 6 and 26 day of August 1933. 30 fish are involved.

NOTE: Little importance can be given the identification of catches made by sportsmen on fish taken from Crater Lake. The large German Brown Trout are identified by many as Rainbows in full breeding condition and this contention is upheld by the fact that the large cordovan brown fish listed below as German Browns are in full breeding condition, and by the fact that a 10 inch Rainbow examined had eggs within ready to lay, the outside color was deep steel blue all over. Further, many of the fishermen cannot distinguish between the Silversides and the light Rainbows. Light Rainbows are those which swim constantly over the white diatom covered portions of the lake bottom. Natural protective measures cause the somewhat highly colored Rainbows to approach the white color of the bottom and in so doing the Rainbows approach the color of Silversides. In so far as possible all identifications were personally made. Identifications of fishermen had to be accepted as right in cases where the catch was not actually seen.

Aug. 6, 1933	16 inch Rainbow Trout	Eggs pinhead size
	14 inch Rainbow Trout	Milt not ripe
	14 inch Rainbow Trout	Milt not ripe
	14 inch Rainbow Trout	Milt not ripe
	14 inch Rainbow Trout	Eggs pinhead size
	<u>12 inch Rainbow Trout</u>	<u>Eggs about ripe 4 pinhead</u>
	<u>28 inch German Brown</u>	<u>Eggs about ripe 4 pinhead</u>
	<u>18 inch Rainbow Trout</u>	<u>Eggs 2 pinhead size</u>
	14 inch Rainbow Trout	Eggs pinhead size
	7 inch Rainbow Trout	Eggs minute
Aug 10, 1933	<u>28 inch German Brown</u>	<u>Milt full breeding condition</u>
Aug. 13, 1933	14 inch Rainbow Trout	Eggs minute
	18 inch Rainbow Trout	Eggs minute
	10 inch Rainbow Trout	Eggs minute
	8 inch Rainbow Trout	Male, no sex development
	7 inch Rainbow Trout	Egg stalk minute
	8 inch Rainbow Trout	Male, no sex development
Aug. 14, 1933	<u>26 inch German Brown</u>	<u>Ripe milt pouring from vent</u>
Aug 20, 1933	<u>28 inch German Brown</u>	<u>Eggs 2 pinhead size</u>
	<u>14 inch Silverside</u>	<u>Egg stalk not developed</u>
	<u>18 inch Rainbow Trout</u>	<u>Eggs distinct, 1/16 in. dia</u>
Aug 21, 1933	<u>18 inch Rainbow Trout</u>	<u>Eggs distinct, 1/16in. dia</u>
Aug 22, 1933	17 inch Silverside	No trace sex organs
Aug 25, 1933	<u>2-18in. Rainbow Trout</u>	<u>Eggs 2 pinhead size</u>
	<u>2-10in. Rainbow Trout</u>	<u>Sex cells not well developed</u>
	16 inch Rainbow Trout	Sex organs not apparent
Aug 26, 1933	<u>16 inch Rainbow Trout</u>	<u>Eggs well developed</u>
	<u>10 inch Rainbow Trout</u>	<u>Spawner, eggs ready to lay</u>

\_\_\_\_\_ Possible breeding condition

Breeding possibilities in Crater Lake depend upon three very important factors. First do the fish spawn, second are there spawning beds and third, is there sufficient heat in the lake water to bring tiny fish through the yolk stage before winter comes on.

There is little doubt but that fish must spawn. The record on the preceding page show that perhaps there is a spawning season, at least for German Brown during late August and early September. The data for the Rainbows shows no constancy, there being apparently, a large number of fish that have recovered from a recent spawning, and a certain few that still must spawn in late August and early September. There is too little data on Silversides to consider the point.

In so far as no records are available of the samplings of the lake bottom, data is not available on the presence of gravelly bottom for fish spawning beds, but the presence of fair size grains of rock in Caddis Worm cases would suggest that there are shallow gravel beds upon which trout might spawn.

In so far as 1200 temperature units are required to bring a trout through the yolk stage, after which it must feed itself, there is some reason to believe that the season in the lake is too short and too cold to generate enough heat in the young fish to have it become matured enough to live through the first winter.

#### ITEMS ABOUT CRATER LAKE FISH

There is no truth to the often heard statement that Crater Lake trout are starved to death. The fish have plenty to eat in the lake and eat it.

Crater Lake do not fight when caught. This is true of most lake fish. The still water causes the fish to loose their pep.

All Crater Lake fish are parasitized by a small half inch white round worm. These probably do not cause the fish any inconvenience.

Due to the clearness of the water and the lack of shelter for the sportsman Crater Lake fish are hard to secure by the average fisherman.

Rainbow trout are a nice oval in cross section but the German Browns are compressed very much laterally, so they look very thin and run down in condition, where as a matter of fact the thinness is only their natural shape and it does not represent an undernourished condition.

German Browns in large numbers were noticed feeding upon the dead fingerlings, which were the normal mortality of the recent planting. A few of these were taken from the stomachs of German Browns during the next day or two. This action would suggest the German Browns as scavengers rather than carneverous feeders.