

**97.—CONDITION OF THE UNITED STATES TROUT PONDS.****By LOREN W. GREEN.**

[Letter to Prof. S. F. Baird.]

Our weather still continues very hot and dry. California has never known just such a winter before. We have had no rain since the fore part of winter, and consequently our traps have been useless. I thought there would surely be 100,000 more eggs to ship, but I fear there will not. The trout in the ponds are nearly all done spawning, and the weather is so hot that it is almost impossible to handle them without great loss. The temperature to-day is 96° in the shade. Years before we have always taken eggs until the last of April, and should we have rains we may get the late run yet, but the creeks and river are very low. The water has been warm in the river and the trout have mostly spawned in the river instead of using the small creeks, as they usually do, but our trout are looking nicely. I received an answer from Mr. Gordon Land, Denver, Colorado, saying the 10,000 eggs arrived in good condition. I received the telegram this morning ordering eggs shipped to different points. I have one lot more now on hand, which will be ready for shipment soon, of about 10,000. At present the temperature of the air is 96° in the shade; temperature of water, 56°.

BAIRD, SHASTA COUNTY, CAL., *March 15, 1885.***98.—LOCATION OF A SALMON HATCHERY IN OREGON.****By C. H. WALKER.**

As to the plan for renewing operations at the Olackamas River salmon hatchery, it has been said that it did not seem to be at the right point to be of any benefit to the Upper Columbia. I wish to call the attention of those who are interested in the matter of propagating salmon to what seems to me one of the best streams east of the Catskill Mountains, namely, the Des Chutes River, especially in the vicinity of the Warm Springs Agency. This river runs within a few miles of the agency, and for some distance above and below where the Agency River empties into it there are numerous coarse gravel or cobble-stone bars, where the salmon deposit their spawn, so the Indians say; and as salmon can often be seen on these bars during August and September, I have no doubt the Indians are correct. Des Chutes is the largest stream that enters the Columbia below the mouth of the Snake River and east of the Cascades. The temperature of the water is quite uniform the year round, always cool enough to be good drinking-water during the hottest days of summer and never cold enough in winter to freeze. Dur-

ing a period of eight years I have never seen a particle of ice floating down the stream, or forming, save on its banks, and then only after there had been a rise in the river and then freezing weather, which formed ice as the river fell. During these eight years I have known the river but once to rise as high as 7 feet above low water. Some winters it does not rise 2 feet, and for a majority of the eight winters it did not rise over 3 feet. All these points seem to me to make it a very desirable stream for the propagation of salmon. As the river enters the Columbia above all the principal salmon-fisheries, it would be an equal benefit to all.

WARM SPRINGS, CROOK COUNTY, OREGON, *July 27, 1885.*

**99.—THE MOUNTAIN OR SALMON TROUT OF OREGON.**

**By Prof. DAVID S. JORDAN.**

The trout from Portland\* is the common Rocky Mountain trout or Clarke's trout, or Red-throated trout—*Salmo purpuratus* Pallas.

In Washington Territory it is known as mountain trout when taken in the rivers and brooks, and as salmon trout when taken in the sea or river mouths. Sea-run specimens are more silvery, with finer spots and less red than those taken in the small streams, and larger individuals are sometimes taken in the sea than are often seen in the rivers.

There is not the slightest doubt that the so-called salmon trout of the fish-dealers and the mountain trout of the sportsmen are one and the same fish, the only differences being temporary, dependent on the water and possibly on the food. I have myself caught hundreds of these same trout with the seine about Tacoma, in the sea, the locality from which this specimen was obtained. This species may always be known when fresh by a deep scarlet or crimson blotch on the membranes of the lower side of the lower jaw. This fish is, therefore, both a mountain trout and a salmon trout, as the names are understood in Washington Territory and Oregon. If the laws permit the killing of one and prohibit the killing of the other, the only test is whether caught in fresh or salt water.

INDIANA UNIVERSITY,

*Bloomington, Ind., February 17, 1885.*

\* Mr. J. C. Mendenhall, dealer in Columbia River salmon, at Portland, Oreg., forwarded a specimen, January 30, 1885, for identification, and wrote as follows: "Today the Multnomah Rod and Gun Club of this city will send you a salmon trout for classification. This fish was taken from a net containing flounders, porgies, and smelt, off Tacoma Harbor, in Puget Sound, and it is called by all fishermen a salmon trout. They are caught in the waters of the Puget Sound and in the Columbia and in the tributaries near their mouths, but never near their sources or above falls or rapids. In this case the club claims it to be a mountain trout or a brook trout."