There is no doubt that the natural conditions in the Clackamas are extremely favorable for the breeding of salmon, and the foregoing statement of the catch in that stream in 1893 and 1894 clearly indicates that an enormous annual production of young salmon might be depended on if the fish were not subject to capture and obstruction. It is equally true that noninterference with the salmon which have escaped the traps, seines, and gill nets of the Columbia and reached the Clackamas would permit the hatching station there located to liberate enough young salmon each year to go far toward repairing the diminution in the supply caused by excessive fishing.

Mr. L. T. Barin, who has been fishing on the Columbia and its tributaries for more than thirty-four years, informed me that, as a result of his personal observations in every important branch of the Columbia, he has no hesitation in affirming that the Clackamas always was and still is the best tributary salmon stream in the whole basin.

The continuance of present conditions, however, can not fail to have a far-reaching effect on the abundance of salmon in the lower Columbia River, and an accelerated diminution of chinooks may be depended on as a direct result of the obliteration of the run into the headwaters of the Clackamas.

Notes on apparatus and the catch.—Under this head some general notes on the principal forms of apparatus and the catch in each may be presented, and some detailed statistics, showing the yield of certain nets in 1892 to 1894, may be introduced.

As is well known, gill nets take larger quantities of chinook salmon than all other nets combined. While the proportion of fish thus obtained naturally varies from year to year, the gill-net yield always so far overbalances the remaining catch that it affords an accurate basis for determining the abundance of the fish, while it is evident that any regulations intended to increase the supply of chinooks must have primary application to the gill-net fishery. The importance of the gill net as a factor in the taking of chinooks will be clearly seen from the following comparative statement of the number of these fish obtained on the Columbia River, with all forms of apparatus and with gill nets alone, during the period of five years beginning 1889:

Statement of the total number of chinook salmon taken on the Columbia River from 1889 to 1893, with the number and percentage of those caught with gill nets.

Year.	Total catch.	Gill-net catch.	
		Number.	Percentage.
1889	772,425	478,057	61.90
1890	942,884	580,871	61.61
1891	963,779	657,133	68.18
1892	916,833	578,912	63.14
1893	872,317	544,984	62.48
Total	4,468,238	2,839,997	63.56

The employment of small-meshed gill nets has of late been increasing, and in 1894 was more extensive than ever before. The regular mesh of salmon gill nets is $8\frac{1}{2}$ to $9\frac{1}{4}$ inches, while the smaller-meshed nets which have been coming into use have a 7-inch mesh.

The principal reason for the increase in the use of small-meshed nets has been the change in basis for selling the catch effected in 1893. Prior to that time the gill-net fishermen were paid so much per fish regardless of size, although two fish under a given weight (22 pounds) were required to count as one full-sized fish. The