

many scientific problems affecting the commercial fisheries of the west coast which could here be studied to great advantage.

On June 13 I left San Francisco for Portland, Oreg., where I arrived June 15, and where the three following days were passed in interviewing persons interested in the salmon industry.

While at Portland a day (June 16) was occupied in a visit to the U. S. Fish Commission station on the Clackamas River and to the falls of Willamette River at Oregon City. Both streams were high and muddy. A close personal inspection of the falls disclosed the presence of a large number of salmon immediately below the cascades, although no fish were observed in the act of ascending the falls. The rocks over which the water was breaking and at the sides of the falls were literally covered with lampreys (*Entosphenus tridentatus*) endeavoring to reach the headwaters of the river.

From Portland it was my intention to visit the Cascades and The Dalles, but this had to be abandoned, owing to the high floods, which had caused a discontinuance of fishing, had entirely suspended railroad communication with the upper Columbia, and had rendered water transportation uncertain. This state of affairs made it possible to study the fisheries of only the lower river, which were but little affected by the high water.

Portland was left on June 19 and Astoria was reached on the next day. The three following days were occupied in examination of the canneries and fisheries of that place and vicinity.

My inspection of the important fisheries of the lower Columbia River was greatly aided by Mr. M. J. Kinney, of Astoria, who, in addition to other courtesies, extended the use of his steam launch for a visit to the pound-net and seining grounds at Sand Island and in Baker Bay, thus permitting a closer and more satisfactory study of the conditions than would have otherwise been possible.

I returned to Portland on June 24 and left the next day for Washington, D. C., where I arrived July 2.

GENERAL REMARKS ON THE WEST COAST FISHERIES.

The general commercial fisheries of the Pacific States are of more recent origin than those of any other coast section of the country, and, with the exception of the salmon fishery, they are less developed than those of any other region. It is true that some branches of the fisheries were established before the acquisition of the territory by the United States, but it was only at a comparatively recent date that the taking of the salmon for commercial purposes began, while the utilization of most other fishery resources has had a much later origin. Nevertheless, in the period of thirty years, during which it may be said the fisheries of the west coast have existed, the industry has attained great importance and now ranks next to that of the New England and Middle Atlantic States in extent and value. There seems no reason to doubt that the business will assume vastly greater proportions in the near future, although there is cause to apprehend a decline in several important branches, as, for instance, the salmon, the whale, the fur-seal, and the sea-otter fisheries.

The various phases of the fishing industry of the west coast, including Alaska, give employment to about 17,000 persons, the capital invested amounts to about \$8,000,000, and the annual value to the fishermen of the products taken is approximately \$7,300,000.