

TABLE 6.—Average annual catch by species and gear, 1927 to 1934, inclusive

| Gear | Blueback, average annual catch | | Chinook, average annual catch | | Chum, average annual catch | | Silver, average annual catch | | Steelhead, average annual catch | | Average annual total catch | |
|---------------------------|--------------------------------|----------|-------------------------------|----------|----------------------------|----------|------------------------------|----------|---------------------------------|----------|----------------------------|----------|
| | Pounds | Per cent | Pounds | Per cent | Pounds | Per cent | Pounds | Per cent | Pounds | Per cent | Pounds | Per cent |
| Traps..... | 68,819 | 10.0 | 2,084,190 | 15.2 | 544,650 | 26.4 | 886,450 | 67.6 | 976,677 | 34.9 | 5,160,801 | 21.1 |
| Selnes..... | 62,937 | 15.2 | 2,842,829 | 10.1 | 65,944 | 3.2 | 80,324 | 5.2 | 607,895 | 24.0 | 3,740,929 | 15.3 |
| Drift gill nets..... | 182,173 | 44.1 | 11,293,326 | 64.0 | 1,420,736 | 68.8 | 559,522 | 36.3 | 908,048 | 32.5 | 14,363,805 | 58.7 |
| Set gill nets..... | 14,331 | 3.5 | 157,008 | .9 | 25,880 | 1.3 | 9,812 | .6 | 110,983 | 4.0 | 318,014 | 1.3 |
| Wheels ¹ | 64,932 | 15.7 | 324,473 | 1.8 | 790 | 0 | 392 | 0 | 34,064 | 1.2 | 424,651 | 1.7 |
| Dip nets..... | 20,116 | 4.9 | 358,973 | 2.0 | 6,515 | .3 | 4,461 | .3 | 70,105 | 2.5 | 460,170 | 1.9 |
| Total..... | 413,308 | 100.0 | 17,660,805 | 100.0 | 2,084,515 | 100.0 | 1,540,970 | 100.0 | 2,767,772 | 100.0 | 24,477,370 | 100.0 |

¹ Fish wheels were outlawed in Oregon during the fishing season of 1927.

TRAPS

During the development of the fisheries of the Columbia there have been two different varieties of gear commonly designated as traps. The first of these to appear on the river was the slat, or wooden trap, and the second the modern pile-and-webbing trap, or pound net. Although the wooden trap was the first of these two types of gear on the river, it was entirely supplanted by the pile-and-webbing trap at an early date. Since these two varieties of gear are very similar in plan of construction and theory of fishing, and the pile-and-web trap superseded the wooden structure in the Columbia River fisheries, it appears advantageous to discuss these two varieties of gear in close relation to each other.

WOODEN TRAPS

The typical wooden trap consisted of a lead constructed of piling and slats or pickets, resembling a fence, which was usually built from the river bank to a point some 200 to 600 feet from the shore. On the offshore end of the lead the portion of the trap which actually caught the fish was also made entirely of wooden slats and piling and was built with the wall of the trap farthest from shore projecting downstream from the lead and hooking in toward the shore in order to intercept fish which might follow the lead to the end and endeavor to go around it. The remainder of this part of the trap consisted of two arrow-shaped "hearts" which finally led, by means of a funnel-shaped passage, into the "crib" or enclosure where the fish were impounded. These traps were built to catch fish which approached from a downstream direction only and their efficiency depended on the fact that salmon, when making their upstream migration, will persevere in attempts to continue in that direction even when confronted by apparently impassable obstacles. The hearts and pot of such a trap were built on shore and floated out to the proper position at the end of the lead where they were ballasted with stone and sunk to the bottom.

This type of gear was considered by early observers to be a modification of the pole-and-brush weirs which were used by the Indians before the arrival of the white men. The first two traps constructed in 1853 by Hodgkins and Sanders, near Oak Point, were quickly destroyed by freshets but a successful one was built in 1854. Wooden traps were in use in significant numbers soon after the beginning of the salmon-canning industry, about 1868 or 1870, and for a time they were of some importance in the fishery. But their place was soon taken by the modern pile-and-web structures so that by 1889 all of the wooden traps were concentrated in an area

between a point 15 miles above Astoria, Oreg. and the lower end of Sauvies Island, a distance of some 40 or 50 miles, and by about 1894 the wooden traps had disappeared entirely from the river.

MODERN TRAPS

The general plan or layout of a modern trap,⁴ which is shown in figure 11, is very similar to that of the wooden traps. This gear consists of a lead which may be from 300 to 600 feet in length and which terminates in a heart from which the fish are lead into the pot and then into the spiller, a small enclosure, from which the salmon

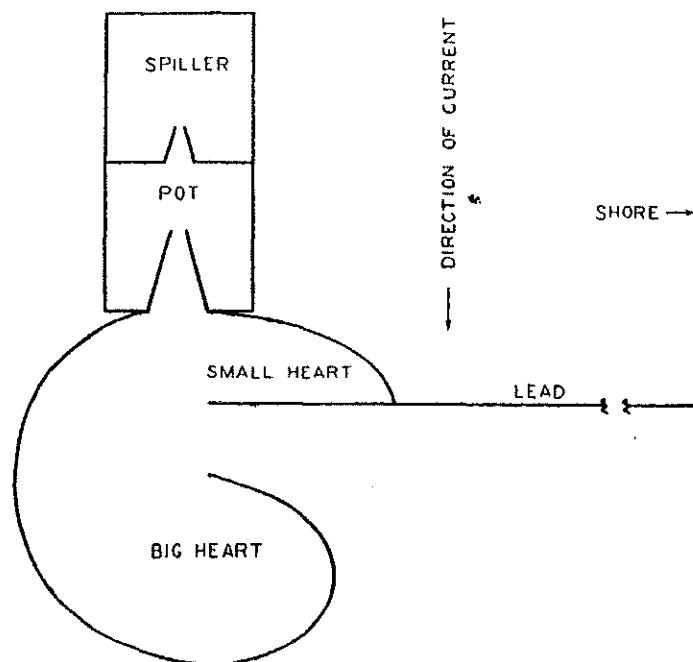


FIGURE 11.—Columbia River fish trap. This style of trap is typical of the middle river. Some traps used on the lower river have a heart, pot, and spiller on both sides of the lead.

are brailed or gaffed into the boats receiving them. The pot is merely a small compartment connected with the heart from which the fish can pass through a tunnel into the spiller. A few traps have two spillers, one at either end of the pot. The lead is constructed of tarred cotton webbing supported by piling driven into the river bottom. The heart and spiller are constructed in the same manner and of the same materials.

In the early days of the fishery, from about 1885 to 1890, galvanized wire netting was sometimes used instead of the tarred net webbing. The wire netting, however, is used very little in the Columbia at present because it corrodes in the brackish water in the lower river and the fishermen believe that the salmon do not lead or follow it as well as tarred webbing. Also, in about 1890, some of the traps above Baker Bay had leads made of wooden slats. This type of construction is no longer found in the present traps. At the beginning of the trap fishery most of the piling was hand driven and much of it was removed for the winter after the end of the fishing season.

⁴ Although the modern Columbia River traps were originally designed as direct copies of the pound nets of the Great Lakes and are technically a form of pound net at the present time, they are designated as traps in this publication because that is the term commonly used for this type of gear on the Pacific coast from Oregon to Alaska.