

127.—SALMON CANNING IN OREGON.

By EMMA H. ADAMS.

[Abstract.]

I have just made an inspection of the salmon-canning establishment of Mr. William Hume, the pioneer of that industry on the Pacific coast. He has spent his life among the salmon, having fished for them with his father in the Kennebec River in Maine, when but a lad seven years old. He introduced the business of canning on both the Sacramento and the Columbia Rivers.

In 1853 he exchanged the banks of the Kennebec for the borders of the Sacramento. In 1864 he began the new business of canning; himself; his brother, Mr. George W. Hume, now resident in Oakland, Cal.; and a Mr. A. S. Hapgood, also a New Englander, and acquainted with the process of canning lobsters and oysters on the Atlantic coast, forming a partnership for the purpose in the city of Sacramento.

At first the firm had to urge its goods on the market amidst discouragements. Canned salmon was a new article of food, and the Pacific coast families were afraid of it. "To introduce our goods," said Mr. Hume, "I used to fill a basket with cans, take it on my arm, and starting out among families of my acquaintance, give to each a can, explaining how the fish was put up, insisting that it was a valuable article of food, and inviting them to try it. That was twenty years ago. Now, canned salmon can be obtained in every market of the world. But that was the beginning of it."

Previously the shipping of fresh salmon to the gold mines in express wagons had been an important branch of Mr. Hume's trade. The miners were a class of men who would not be denied any article of food they desired, however extravagant the price. And for the tempting denizens of the Sacramento, round sums in gold were freely laid down. San Francisco also furnished a lively market for the fresh salmon.

In 1865, leaving his partners totally in the dark as to his intentions, Mr. Hume went to Oregon. The sight of the beautiful fish crowding Chinook Bay convinced him that the Columbia was the prince of salmon streams. In other words, he saw "millions in it," both of fish and dollars, and discovered that in flavor and quality the former excelled those of the American frontiers. He had formed acquaintance with men from every salmon fishery of the world, and from them had obtained a general idea of the value and extent of each; and 1868 found the brothers actively canning salmon on Oregon's splendid waterway. Mr. William Hume established himself at Eagle Cliff, on the Washington Territory side, several hours' sail above Astoria. There he has ever since resided.

Mr. George Hume's cannery in Astoria stands beside that of his brother. In former years, when operating with little or no competition in the field, a single case of their salmon, containing 48 one-pound cans each, sold for \$16 in gold. Last year the estimated price was \$1.15 per dozen, or \$4.60 per case. For the past five years Mr. William Hume's annual pack has ranged from 26,000 to 36,000 cases. He estimates it for the present year at about 15,000, the run of fish being, for some inexplicable reason, very light. England, Australia, and the great Atlantic sea-board cities are his markets.

To day there are about forty firms and single parties taking salmon from the Columbia. Twenty-two of them operate at Astoria, all their establishments being located along the 5 miles of river brink embraced by the sprightly little city, while none of them exist above Eagle Cliff. One or two of them market no goods in this country, but send their entire pack abroad. Between Astoria and the bar of the Columbia, a distance of 15 miles, the river expands into Chinook Bay, which averages about 5 miles in width. This bay is pre-eminently salmon territory. Here, especially close within the bar, are caught a large proportion of the handsome fish, as they come in from the ocean on their way up to the freshwater tributaries of the Columbia, where their spawning takes place. The Chinook salmon is the salmon *par excellence*, and constitutes the prime brand of every prominent firm.

Chinook Bay is the place where are lost the lives of many men engaged in salmon fishing. I find great difference of opinion as to the number annually drowned. Mr. Hume puts it at fifty or more, while Mr. M. J. Kinney, of the Astoria Packing Company, places it much below that. Mr. Tallant, of the Cutting Packing Company, states that during a business term of nine years his firm has lost only one man and not a single boat.

Habits of drinking and inexperience in handling the boats and nets have been observed to be the leading causes of drowning. If, with a strong river-current running to sea and gigantic breakers rolling in, the fishermen approach too near the bar, when intoxicated, their doom is almost certain. The surf sweeps them into the deep. As a class the salmon fishers are a low order of men. They represent nearly every nationality on the globe. Having neither fixed abode nor regular employment, they migrate from place to place as hunger or impulse drives them or work offers. The worthier among them are Finns, Swedes, Russians, and Norwegians. Fishers by profession, many of them have their families here, own land, and send their children to the public schools. Some of them are estimable citizens of Astoria and the vicinity. On the other hand, the Italians and Portuguese are the rovers, the longshoremen of the calling. Since they were born they have lived on some water's edge. Not a picayune have they invested in boats or nets, and the loss of either or both is nothing to them. It is money in the pockets of the packers if their fishermen own their own

nets, as many do, having paid the firms for them in fish; as the nets are not then so liable to be stolen or damaged.

The salmon fleet of the Columbia numbers about 1,500 boats, with two men to each boat. Thus there are 3,000 men employed in a busy season. The best material for a salmon net is Barbour's twine, made at Paterson, N. J. Such is the strength of this twine that a single thread will sustain a strain of 160 pounds. The cord is made of Irish flax, imported dressed only, and therefore duty free. Brought over in the form of twine an impost of 40 per cent is levied. The cord must be exceedingly pliable, else the sensitive salmon will not enter the net. It is therefore made very slack-twisted, but a single turn of the spindle being given to an inch of the thread. Twelve subordinate threads compose the twine. Two hundred pounds of twine construct an ordinary net 45 meshes deep, each mesh 9 inches square. When in use a boiling solution of tan is poured over the nets every two weeks during the season. This cleanses them, and also imparts a color which in the daytime prevents the wary fish from perceiving the snare spread for them.

In the four large houses I visited, Chinamen were doing all the work of canning, under the direction of an American superintendent; and I believe every firm employs them. The process, consisting of not less than a dozen or fifteen different steps, requires at some stages great skill and celerity. For such work the lithe Celestial is well adapted. He is attentive, exact, prompt, faithful, and silent. Garrulous as a parrot with his countrymen usually, he is speechless if set to precise tasks, especially when his wages are to be proportioned to the amount of labor he performs. As witnessed in the establishment of the Cutting Packing Company, the work of canning exceeded in rapidity anything I have ever seen, outside the brush-making establishments in the East. All the steps were in progress in one vast room, from receiving the fish from the boats just in with their night catch, to carrying the filled cans from their cooling bath to the packing room.

The season begins in April and terminates with August. At its opening the work in some canneries is let out in departments by contract, to experienced and responsible Chinamen. These employ their own helpers, pay them by the piece, and then drive them as with the whip. Each subordinate supervises his squad of men and works himself like a Trojan, and is held responsible for faultless results. Twelve firms on the river are this year conducting their business on this plan.

Perfect cooking is the all-important step in the process of canning salmon. Failure in this respect insures fermentation and loss of the goods. The salmon is placed in the cans raw, with a teaspoonful of salt in the bottom of each. The cans are then covered, crimped, soldered, boiled in large tanks one hour by steam heat, then removed and placed for another hour in vast cylindrical iron retorts, kept heated to a temperature of 133°. This cooks the bones. Taken from the retorts, they are cooled off, cleansed from oil, lacquered, labeled, and packed.

Every step is intensely interesting. In some houses scrupulous cleanliness marks every stage of the work. Every implement, tank, and table used, as well as the floors and hands of the Chinamen, must frequently be washed. Mr. Hume even carries his notions of neatness so far as thoroughly to wash and wipe the cans before filling them. Yet, if possible, Mr. Kinney excels him in nicety. Not even the odor of fish could be detected in his establishment at the time of my call.

There were taken and canned along the Columbia last year 620,000 cases of salmon, containing 48 cans each. Complaints of a light run of fish this season are general, but the supply may be ample for all demands next year.

ASTORIA, OREG., July 13, 1885.

128.—SUMMARY OF FISH-CULTURAL WORK IN NORTH CAROLINA.

By S. G. WORTH.

Summary table of fish planted in North Carolina waters, 1877-'84.

Kinds of fish.	Number.
Shad planted from 1877 to 1884, inclusive	25,919,000
California salmon planted from 1877 to 1880, inclusive	748,000
Schoodic salmon planted in 1878	15,000
Brook trout planted in 1878 in North Fork of Swannanoa	50,000
German carp planted from 1870 to 1883, inclusive	39,216
Total.....	26,771,216

The details of the above are as follows :

Shad, 1877 to 1881, inclusive.

Tributary to—	Streams.	Total.	Plantings of the five years.					Total number in each.
			1877.	1878.	1879.	1880.	1881.	
Pamlico Sound.	Neuse	3,816,000	134,000	150,000	225,000	700,000	700,000	1,909,000
	Trent		125,000	200,000	200,000	.....	.....	325,000
	Tar		50,000	250,000	200,000	790,000	270,000	1,560,000
Cape Fear River.	Contentnea Creek	1,940,000	52,000	.....	.....	.....	.....	52,000
	Haw River		70,000	.....	.....	.....	470,000	540,000
	Deep River .....		.....	.....	.....	600,000	.....	600,000
	Six Runs .....		.....	100,000	200,000	150,000	.....	450,000
	N. E. Cape Fear .....		.....	.....	.....	150,000	.....	150,000
Albemarle Sound.	Goshen Creek	10,963,000	.....	100,000	100,000	.....	.....	200,000
	Roanoke River .....		.....	380,000	350,000	150,000	.....	880,000
	Meherrin .....		.....	150,000	230,000	.....	.....	380,000
	Nottoway .....		.....	111,000	275,000	.....	.....	386,000
	Chowan .....		.....	200,000	.....	.....	.....	200,000
South Carolina rivers.	Salmon Creek	680,000	.....	1,508,000	210,000	1,075,000	1,860,000	4,653,000
	Blackwater .....		.....	.....	220,000	550,000	675,000	1,445,000
	Albemarle Sound .....		.....	185,000	110,000	875,000	1,570,000	2,740,000
	Yadkin		73,000	50,000	240,000	100,000	.....	463,000
	Catawba	67,000	50,000	.....	100,000	.....	217,000	
Total			446,000	3,243,000	2,483,000	5,440,000	5,545,000	17,159,000