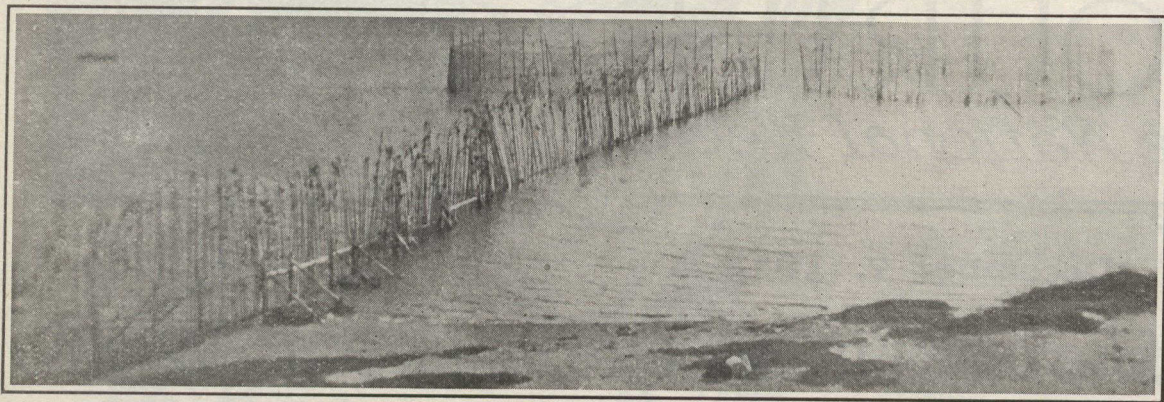


Capturing the Sardine

How This Gamy Fish is Caught in the Bay of Fundy

By A. B. KLUGH



A Sardine Weir in Passamaquoddy Bay, N.B., at About Half Tide.

THE sardine is a frequent article of diet upon Canadian tables, and however much its flavour and handiness are appreciated but little is generally known of the processes through which it passes before its appearance in the grocery.

The true sardine (*Clupea sardina*) is a small fish of the Mediterranean and derives its name from the island of Sardinia. This is the sardine put up in France. The sardine packed in Canada, the United States and Norway are the young of the herring (*Clupea harengus*), from five to seven inches in length.

These young herring come in on the coast of the Bay of Fundy in immense schools from June to October. They are caught in weirs (pronounced "ware" among the fishermen of New Brunswick). The weir is a large, hoop-shaped enclosure of stakes, brush and net, far enough out from shore so that at low tide (and the tide in the Bay of Fundy rises and falls some twenty-eight feet) there will be from four to ten feet of water in it. A fence of stakes and brush known as the "lead" runs out from the shore to the gate of the weir.

In the construction of a weir, stakes are first driven in with a pile-driver on a scow. Cross-pieces are nailed from stake to stake, and long spruce and birch poles with the top-most branches still attached, known as weir-brush, are bent in and out, with the top end down, between the cross-pieces. Long poles are next nailed to the stakes, and from these a net is stretched. Over the gate of the weir a weighted net is suspended so that it can be dropped and thus close the weir. Some weirs have but one gate, but most of those built now-a-days

have two—one on each side of the lead.

Weirs cost from \$300 to \$1,700 each to build. They may not be built closer than a thousand feet from one another, and a license of \$5 is collected by the Government.

The young herring coming in from the sea keep close to the shore. Striking the lead they will not swim between the brush, of which it is composed, but swim along it into the mouth of the weir. The man who is running a weir lives close to it during the season, and as the fish fill into a weir on the



Man in the Foreground is Shovelling Salt on the Sardines as they Come from the Weir to the Sardine Boat.



Sardines are Middling Close in a Can, but they also Come up Pretty Thick when they are Hauled up in a Weir.

high tide he inspects his weir each high tide, and if he finds fish in it he drops the net over the gate. Usually the fish come in on a night high tide. At low tide the weir is seined. A sein is a long net deep enough to reach the bottom of the weir, with weights at the bottom and floats at the top. This net is stretched round the circumference of the inside of the weir by a man in a boat, then gradually drawn in until the fish are gathered into a practically solid mass.

Then the fish are dipped out by a huge dip-net with a long bag. The hoop of the net is placed in the boat and the bag pulled in hand over hand, loading the fish into the boat. Some idea of the immense numbers of sardine which sometimes run into a weir may be obtained from the fact that as high as three hundred hogsheads, each holding four barrels, have been taken out at one time. From fifteen to thirty hogsheads is considered a fair catch, and anything over two hogsheads as worth seining for. The price paid to the owner of the weir varies from \$3 to \$30 per hogshead, according to the abundance or scarcity of sardine.

As soon as a boat is filled with sardine, and the weir-boats hold about four hogsheads, it is rowed outside the weir and the fish are loaded with scoops into the hold of a vessel known as a sardine-boat. The sardine boats are usually from forty-five to fifty feet long and about thirteen feet beam. Until a few years ago they were sailing-vessels only. Now, in addition to sails, they are equipped with gasoline engines, usually of about fifteen horsepower. Some of these boats are eighty feet long and carry more power. Some are owned by the sardine factories, while many of them are owned by private individuals who are paid \$1.50 per hogshead for short runs of five to twenty miles, and \$3 per hogshead for longer runs.

ON arrival at the factory the fish are hoisted from the hold to the dock and are sent down a sluice. Here they are deposited in brine tanks. From these tanks they go through the flaking machine, which raises them to the next floor and arranges them in a layer over large trays known as "flakes." These flakes are placed in a large rack on wheels, which is wheeled into the steam-chest, where they are steamed for ten minutes. From the steam-chest they are wheeled into the drying-room, where they are dried in a hot air blast. When dry they are removed from the rack and the flakes are carried to the packing tables, at which girls are at work packing the fish into tins. The tins and covers are stamped out of sheet tin by machines on the premises. In some factories scissors are used to cut off the heads; in others they are pulled off by hand. So expert do the girls become at packing that the fish seem to fall naturally into their proper position in the tins. The tins are on trays which hold each twenty-five tins, and from the packing table they are taken to the oiling machine. The tray is placed in the machine and the pressure of a lever drops the right quantity of oil into all of the tins at once.

The low-priced sardines, those which retail at 5 cents per tin, are packed in cotton-seed oil, the 10 cent sardines are put up in olive-oil. Many are put up in mustard sauce, in which case they go to the mustard machine, instead of to the "oiler."

The tins are next fed into a machine which holds a supply of covers, and as each tin passes through the machine a cover is clamped upon it. The covers used to be soldered on, but now these machines clamp the covers on hermetically at the rate of thirty-five per minute. Next the tins are placed in a huge vat and boiled for two hours. Then the tins are dipped out of the vat with chain dip-nets, dried in saw-dust, and shot down into the shipping room, where the cases are made, and the tins packed for shipment. Considering the immense number of young herring which are caught in the weirs it is no wonder that many have predicted that the supply of herring would soon give out, but the fact remains that the season of 1911 was one of the best, if not the very best, in the history of the sardine industry in Canada, the owner of one weir making \$5,000 in two weeks.

The turning down of reciprocity has had a marked effect upon the Canadian sardine industry. In the past most of the New Brunswick fish has gone to the United States factories at Eastport and Lubec, Maine, where the Sea Coast Canning Company has a series of large factories. These factories are dependent upon Canadian fish, as there are not enough good weirs on the American side to keep them going. Now Sir William Van Horne has organized a Canadian company and a huge factory is in process of construction at Chamcook Harbour, on the C. P. R. line, some three miles from St. Andrews, N.B. Here a town is being laid out for the employees of the factory. All the equip-