

PROPAGATION OF COMMERCIAL FISH FOR FOOD

ANNUAL REPORT ON FISH CULTURE IS PREPARED

Story of Increased Propagation on Atlantic and Pacific Oceans and for Inland Fisheries -- Important work done despite War Handicap.

The annual report to the Department of Naval Service in the matter of fish culture for 1917 has just been issued. It contains full details of hatching and other breeding operations throughout Canada, from which it is learned that in that year there were in round numbers 1,500,000,000 fry of different species distributed in various waters of the Dominion.

"These operations," the report states, "were conducted almost entirely in the propagation of the commercial food fishes, such as Atlantic salmon and lobsters in the Maritime Provinces and Quebec; whitefish, lake herring, salmon trout, and pickerel in Ontario and the Prairie Provinces; and Pacific salmon in British Columbia. The commercial species are practically all distributed as fry on the spawning areas, and largely where the eggs are collected, but a small percentage is reared to fingerlings. The purely sporting fishes, such as speckled trout in the Maritime Provinces, and rainbow and cut-throat trout in Alberta and British Columbia, are hatched in small numbers. Most of the fry are fed for several months, and after adequate return is made to the waters in which the eggs are collected, the greater part of the remainder is distributed in publicly controlled waters in response to applications. A small quantity is, however, supplied to privately controlled or leased waters on the payment of set prices and all transportation charges."

PRESENT FROM U.S.

It is stated that "the department is indebted to the United States Bureau of Fisheries for a present of 10,000,000 sockeye eggs from Alaska." These eggs were placed in the Harrison Lake hatchery and were distributed in the Fraser for the benefit of the fisheries of both countries.

As a war measure, the service was not extended by the erection of new hatcheries, but operations were carried on most energetically in the existing establishments. Owing to changed conditions the southern portion of Lake Winnipeg has ceased to be a whitefish area, and that portion of the lake has been regarded as a pickerel and coarse fish area. The Selkirk hatchery was closed, as it required extensive repairs, and the whitefish operations were transferred to the Dauphin River hatchery, Lake Winnipeg, which, however, was enlarged greater than the previous capacity of both the Selkirk and Dauphin river establishments, saving as well a considerable amount of expense in operating.

The department has found an awakened interest in the fishermen and a desire to co-operate with the hatchery officers, which was "previously conspicuous by its absence in some districts during the past year." The Lake Erie fishermen, for instance, at the annual meeting of their association passed a unanimous resolution urging the provincial Government to make it compulsory on the fishermen to collect, fertilize and save for the hatchery the eggs of all fish that are ripe when taken by them, and they appointed two of their experienced members to personally interview the individual fishermen, arouse their interest, and instruct them in taking, fertilizing and handling fish eggs for hatching.

Detailed notes are made in respect of several of the hatcheries and breeding grounds and of several of the species propagated. Interesting experiments were made in the marking of young salmon before being released, of which a number were recaptured at various ages, to determine the frequency of spawning, in which there was noted a great difference.

VARIETY OF FRY SPECIES HATCHED AND DISTRIBUTED

Hatchery.	Species.	Total distribution.
Bedford, N.S.	Atlantic salmon	810,000
	Speckled trout	71,000
Margaree, N.S.	Atlantic salmon	2,875,000
	Speckled trout	41,900
Windsor, N.S.	Atlantic salmon	1,632,050
Middleton, N.S.	Atlantic salmon	1,095,000
	Speckled trout	90,500
Lindloff, N.S.	Atlantic salmon	675,600
Bay View, N.S.	Lobsters	53,600,000
Canso, N.S.	Lobsters	42,389,956
Isaac's Harbour, N.S.	Lobsters	26,100,000
Inverness, N.S.	Lobsters	74,000,000
Arichat, N.S.	Lobsters	30,000,000
Antigonish, N.S.	Lobsters	41,000,000
Little Bras d'Or, N.S.	Lobsters	37,500,000
Long Beach Pond, N.S.	Lobsters	33
Restigouche, N.B.	Atlantic salmon	1,969,000
	Speckled trout	56,000
Miramichi, N.B.	Atlantic salmon	2,590,900
Grand Falls, N.B.	Atlantic salmon	1,561,595
	Speckled trout	40,000
St. John, N.B.	Atlantic salmon	1,573,300
	Speckled trout	10,400
	Ouaniche salmon	580
	Rainbow trout	8,000
Nipisquit, N.B.	Atlantic salmon	703,000
Tobique, N.B.	Atlantic salmon	974,000
Sparkle, N.B.	Atlantic salmon	866,500
Shad St. John R., N.B.	Shad	400,000
Shippigan, N.B.	Lobsters	49,000,000
Shemogue, N.B.	Lobsters	37,937,000
Buctouche, N.B.	Lobsters	52,050,000
Kelly's Pond, P.E.I.	Atlantic salmon	1,000,000
	Speckled trout	241,400
Charlottetown, P.E.I.	Lobsters	98,000,000
Georgetown, P.E.I.	Lobsters	10,000,000
Tadoussac, Que.	Atlantic salmon	990,000
	Speckled trout	132,000
Gaspé, Que.	Atlantic salmon	3,011,825
	Speckled trout	32,690
Ste. Marguerite, Que.	Atlantic salmon	690,000
	Speckled trout	10,000
Bergeronnes, Que.	Atlantic salmon	1,500,000
Dartmouth, Que.	Atlantic salmon	664,000
Port Daniel, Que.	Lobsters	14,020,000
House Harbour, Que.	Lobsters	49,200,000
Sarnia, Ont.	Herring	48,600,000
	Pickerel	75,000,000
	Whitefish	21,300,000
Collingwood, Ont.	Pickerel	26,200,000
	Whitefish	44,920,000
Warton, Ont.	Salmon trout	11,526,000
Port Arthur, Ont.	Herring	7,250,000
	Salmon trout	6,755,470
	Whitefish	1,575,500
Southampton, Ont.	Salmon trout	7,934,300
Thurlow, Ont.	Salmon trout	6,139,000
	Whitefish	66,600,000
Kenora, Ont.	Pickerel	67,860,000
	Whitefish	43,140,000
Selkirk, Man.	Whitefish	32,600,000
Gull Harbour, Man.	Pickerel	15,824,000
	Whitefish	69,500,000
Dauphin River, Man.	Whitefish	85,000,000
Winnipegosis, Man.	Whitefish	90,000,000
Fort Qu'Appelle, Sask.	Whitefish	42,497,000
Banff, Alta.	Atlantic salmon	103,849
	Cut-throat trout	199,527
	Herring	2,189,000
	Salmon trout	281,114
Spray Lake, Alta.	Cut-throat trout	175,000
Harrison Lake, B.C.	Cohoe salmon	224,000
	Dog salmon	1,979,000
	Sockeye salmon	5,514,000
	Spring salmon	2,544,000
Pemberton, B.C.	Sockeye salmon	21,650,000
New Westminster, B.C.	Atlantic salmon	40,000
	Coho	887,000
	Sockeyes	250,000
Skeena River, B.C.	Sockeyes	4,216,350
Babine Lake, B.C.	Coho	64,700
	Sockeyes	5,483,000
Rivers Inlet, B.C.	Sockeyes	13,143,400
Anderson Lake, B.C.	Dog salmon	308,600
	Sockeyes	6,995,075
Cowichan Lake, B.C., V.I.	Atlantic salmon	205,050
	Coho	581,510
	Cut-throat trout	493,201
	Rainbow trout	4,470
	Spring salmon	705,540
	Steel head salmon	26,304
Kennedy Lake, B.C. V.I.	Sockeyes	3,250,995
Gerrard, B.C.	Kamloops trout	653,453
	Rainbow trout	11,730
	Speckled trout	137,965
Cultus Lake, B.C.	Coho	585,000
	Dog salmon	3,610,000
	Sockeyes	5,540,000
Pitt Lake, B.C.	Coho	200,000
	Sockeyes	2,150,000
Nimkish, B.C.	Sockeyes	4,950,000

1,499,482,669

TOTAL OF SPECIES DISTRIBUTED

Of the total fry distributed the following are the numbers of species distributed:—

Atlantic salmon (<i>Salmo salar</i>)	25,244,629
Ouaniche (<i>Salmo salar ouaniche</i>)	10,580
Rainbow trout (<i>Salmo irideus</i>)	24,200
Cut-throat trout (<i>Salmo clarkii</i>)	867,728
Steelhead salmon (<i>Salmo rivularis</i>)	26,304
Kamloops trout (<i>Salmo rivularis kamloops</i>)	653,453
Sockeye salmon (<i>Oncorhynchus nerka</i>)	73,142,820
Spring salmon (<i>Oncorhynchus tshawytscha</i>)	3,249,540
Cohoe salmon (<i>Oncorhynchus kisutch</i>)	2,542,210
Dog salmon (<i>Oncorhynchus keta</i>)	4,988,600
Speckled trout (<i>Salvelinus fontinalis</i>)	854,356
Whitefish (<i>Coregonus clupeiformis</i>)	497,132,000
Salmon trout (<i>Cr. vivomer namaycush</i>)	32,686,284
Herring (<i>Argyrosomus artemis</i>)	58,039,000
Shad (<i>Alosa sapidissima</i>)	400,000
Pickerel (<i>Stizostedion vitreum</i>)	184,824,000
Lobster (<i>Homarus americanus</i>)	614,796,956

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