ANADROMUS AND CATADROMUS FISH COMMITTEE

Report of Activities

ICELAND

(Árni Ísaksson)

1988

International Council for
the Exploration of the Sea

CM 1988/M:1
Report of Activities

Anadromous and Catadromous Fish Committee

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Iceland

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Atlantic salmon(Salmo salar)

The salmon fishery

Preliminary statistics indicate that the total catch in 1987 was approximately 60.000 salmon, whereof 45000 were from rod or riverine net fisheries but 15000 from salmon ranching.

The runs of two-sea winter salmon were reasonably good but the salmon migrated unusually early and over a short period. The grilse runs, on the other hand, were releatively poor and characterized by small average weight. This was apparent both in rivers and ranching stations.

The summer of 1987 was the second in a row of unusually dry summers in south-western Iceland, which affected the catchability in the rod fisheries during better part of the season.

Investigations

1. Tagging and marking

A total of 119.000 salmon smolts were microtagged in Iceland in 1987 as seen in table 1. Over 116.000 were hatchery reared, whereof 91000 were released on the south and west coasts, but 25000 on the north and east coasts. These release locations may have a bearing on where these smolts show up in high seas fisheries, since the west coast stocks are suspected to migrate more towards West Greenland, whereas the north coast stocks might migrate more into the Greenland and Norwegian seas. Information on this, however, is scanty, but could be clarified through tag scanning programs which are being carried out in the Faroes and at West Greenland.

Wild smolts were microtagged in the Miðfjarðará river system in 1987. Of those 2000 were caught in a trap during migration in late June but over 1000 presmolts were electrofished and microtagged in early May.

2. Juvenile studies

Numerous Icelandic streams are surveyed each year by electric fishing to determine the strength of various yearclasses of juveniles. The benefits of fry releases above impassable waterfalls are determined by the same method. Many of these studies are part of a service contract with the stream owners, but others are planned as basic research.

In the Miðfjarðará river the returns from fry releases in 1981 and 1983 have been determined as 0.8 and 0.9 percent respectively, as indicated by scale reading from adults. These return figures are low compared with earlier findings. Scale readings also showed that about 20% of the run into Miðfjarðará in 1987 resulted from fry releases, primarily above impassable waterfalls. The contribution in the various tributaries varied from 3 to 34 percent. Returns of smolts released in the river system were lower than previously(0-1.4%).

The Ölfusá-Hvítá system has been studied extensively in recent years. It has been confirmed that the system fosters considerable quantities of salmon smolts in spite of a sizeable glacial component, which may explain why the salmon catch has occasionally dropped several years after abnormal rise in glacial contribution. The Blanda river system, which also has a considerable glacial component is producing salmon smolts at higher levels than anticipated. Juvenile studies in that river system will be increased in 1988.

3. Stock assessment

The extensive studies of the Blanda river system were continued in 1988 and will extend at least through 1988, before the hydroelectric project will start operation. Salmon runs were considerably down compared to 1986, especially in the grilse

component. It is expected that the Elliðaár river will be monitored annually, starting in 1988, with respect to outmigrants and resulting adult returns.

4. Estuarine feeding

In 1987 a project was initiated which aims at determining the behaviour and early feeding of salmon smolts in estuaries and fjords. Early findings indicate that smolts migrate very fast through the estuaries, but sea-char linger in these areas throughout the summer. This project will be expanded in 1988 to include several salmon ranching stations in south-western Iceland.

5. Fecundity of wild salmon

In the fall of 1987 a project was initiated to study the quantity and size of ova in various north and south coast salmon stocks. This study could reveal differences between stocks depending on their life history strategy and the environmental conditions during maturation.

6. Rearing and ranching

Because of the high economic value of Atlantic salmon , work on salmon smolt production forms the bulk of the research programme. This includes studies on rearing and growth rates of zero-age, one-year smolts and 400 grams smolts using geothermal resources. These experiments have shown that one-year smolts of 400-600 grams can be produced for subsequent rearing in sea-pens or land-units. Many physiological studies are focused on the mechanisms which control the potentially competitive prosesses of smolting and maturation.

Until very recently most of the improvement effort in salmon ranching has been directed towards the development of optimum husbandry and release techniques. At the Kollafjördur Experimental State Farm in SW-Iceland selective breeding program is being started which aims at improving performance in sea ranching. This program is based on fundamental research on 200 families of salmon reared under controlled conditions. The factors of greatest economic importance in ranching that could be improved through selection are seawater growth, age at maturity and percent return (sea survival and homing).

Salmon farming and ranching

1. Production

The number of fish-farms in Iceland has steadily increased in the past few years and by the end of 1987 there were 113 registered fish farms compared to 92 in late 1986. The major statistics, as compiled by the Institute of Freshwater Fisheries are shown in the following table:

Type of production	Number of sites in December 1987	Production in 1987	Increase in production from 1986
SALMON			
Smolt production	60	3 million	140%
Land-or cage rearing	40	490 tonnes	200%
Ocean ranching	15	40 tonnes	0%
TROUT AND CHAR			
Rainbow trout	4	139 tonnes	
Char		3 tonnes	
Brown trout		11 tonnes	

2. Fish diseases

Kidney disease(Renibacterium salmoninarum) continues to be the disease that mostly shows up in routine sampling, especially in mature brood fish, both in cages and salmon ranching operations. No major disease outbreaks were, however, observed in 1987. All salmon broodstock in Iceland continue to be screened for BKD using bacterial culture and immunofluorescense observation. Eggs from all females showing infection within an incubation period of 12 weeks are

discarded(S.Helgason pers.comm.). The disease was especially frequent in brood fish from ranching stations in south-western Iceland but rarely seen in wild stocks. Infection of brood fish in crowded conditions after freshwater entry is suspected. Major research into the transmission and behaviour of this disease is being conducted at the Kollafjörður Ranching Station in cooperation with the University Fish disease laboratory. A relatively disease free brood stock is expected to return to the station in 1988.

Other diseases were of minor concern in Icelandic Fish farming and ocean ranching operations in 1987.

OTHER SPECIES

Investigations

1. Arctic char(Salvelinus alpinus)

The sea char investigations in the Blanda river and the studies of the char populations and the limnology of lake Mývatn were continued in 1987. Investigations of Brown trout /char interactions were continued in the Veiðivötn lake complex, where introduced char are still threatening brown trout populations. The Lake Thorisvatn project was maintained at a reduced level in 1987.

2. Sea-run brown trout(Salmo trutta)

There has been increased emphasis on the study of sea-run brown trout in southern Iceland, where they are most abundant. Numerous trout have been caught and tagged during migration to study growth and homing ability. Fresh and sea-water age has been determined by scale analysis.

Preliminary results indicate that brown trout in that area migrate to sea 3-4 years old at the size of 20-30 cm. Each fall they return to freshwater but the first spawning migration takes place only after 2-3 seasons in the sea at a length of 50-60cm. They subsequently spawn each fall up to 5 seasons. Immature brown trout may wander between river systems but as a rule they return to their home stream once they are mature.

CONTRIBUTING INSTITUTION:

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1987 ANACAT Finclip/Microtag Report

Species: Salmon

COUNTRY	STOCK	AGE	STAGE	FINCLIPS NUMBER	MICROTAGS NUMBER TAGGED	MICROTAGS CODES USED	MICROTAGS AUX FINCKLIPS	RELEASE DATE	PLACE OF REL EASE	MIGRATION AREA SUSPECTED	COMMENTS
ICELAND	ANDAKILSA	1	SMOLT		2309	130715	ADIPOSE	JUNE-JULY	ANDAKILSA		HATCHERY STOCK
ICELAND	BLANDA	1	SMOLT		677	000615	ADIPOSE	JUNE-JULY	HÖFÐAVATN SKAGAF.		HATCHERY STOCK
ICELAND	BLANDA	1	SMOLT		1327	091115	ADIPOSE	JUNE-JULY	HÖFÐAVATN SKAGAF.		HATCHERY STOCK
ICELAND	BLANDA	1	SMOLT		2583	031515	ADIPOSE	JUNE-JULY	SVARTA		HATCHERY STOCK
ICELAND	BLANDA	1	SMOLT		2424	130615	ADIPOSE	JUNE-JULY	SVARTA		HATCHERY STOCK
ICELAND	BLANDA	1	SMOLT		504	020363	ADIPOSE	JUNE-JULY	FOSSA		HATCHERY STOCK
ICELAND	DALSA	1	SMOLT		2005	120915	ADIPOSE	JUNE-JULY	HRAUNSFJÖRÐUR		HATCHERY STOCK
ICELAND	ELDI GRINDAVIK (KOLL?)	1	SMOLT		1003	032963	ADIPOSE	JUNE-JULY	HRAUNSFJÖRÐUR		HATCHERY STOCK
ICELAND	ELDI GRINDAVIK (KOLL?)	1	SMOLT		1006	033463	ADIPOSE	JUNE-JULY	KALMAKSVIK-REYKJANESI		HATCHERY STOCK
ICELAND	HAFNARDALSA	1	SMOLT		1002	042060	ADIPOSE	JUNE-JULY	ISAFJÖRÐUR C/O BLÆLAX		HATCHERY STOCK
ICELAND	HAFNARDALSA	1	SMOLT		2016	044960	ADIPOSE	JUNE-JULY	ISLAX		HATCHERY STOCK
ICELAND	HAFNARDALSA	1	SMOLT		2000	044560	ADIPOSE	JUNE-JULY	BLÆVARDALSA		HATCHERY STOCK
ICELAND	HAUKADALSA	1	SMOLT		3009	000915	ADIPOSE	JUNE-JULY	FLEKKUDALSA		HATCHERY STOCK
ICELAND	HITARA	1	SMOLT		3000	060715	ADIPOSE	JUNE-JULY	HITARA		HATCHERY STOCK
ICELAND	HITARA	1	SMOLT		375	010463	ADIPOSE	JUNE-JULY	HITARA		HATCHERY STOCK
ICELAND	HITARA	1	SMOLT		600	010563	ADIPOSE	JUNE-JULY	HITARA		HATCHERY STOCK
ICELAND	HITARA	1	SMOLT		511	011863	ADIPOSE	JUNE-JULY	HITARA		HATCHERY STOCK
ICELAND	HITARA	1	SMOLT		708	010963	ADIPOSE	JUNE-JULY	HITARA		HATCHERY STOCK
ICELAND	HITARA	1	SMOLT		2158	110215	ADIPOSE	JUNE-JULY	HAFNARA		HATCHERY STOCK
ICELAND	HÖLAKOTSKVISL VATNSDAL	1	SMOLT		263	021863	ADIPOSE	JUNE-JULY	HÖLAKOTSKVISL VATNSDAL		NATURAL STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		746	024763	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		841	025263	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		717	024663	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		250	015263	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		954	020163	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		901	012863	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		1784	011063	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		480	012663	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		368	016063	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		442	015763	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		775	022563	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		983	016363	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		1029	015463	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		235	061415	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		929	014963	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		227	010515	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK

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ICELAND	KOLLAFJÖRÐUR	1	SMOLT		356	026163	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		1008	014863	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		1011	080615	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		262	025663	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		1034	081415	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		1014	080715	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		211	015863	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		1014	080415	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		946	015363	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		948	015163	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		1017	012963	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		47	023163	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		1019	081215	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		283	025363	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		1044	016163	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	KOLLAFJÖRÐUR	1	SMOLT		1447	081015	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	LANGA	1	SMOLT		1478	070201	ADIPOSE	JUNE-JULY	LANGA		HATCHERY STOCK
ICELAND	LANGA	1	SMOLT		2350	100015	ADIPOSE	JUNE-JULY	LANGA		HATCHERY STOCK
ICELAND	LANGA	1	SMOLT		1507	030015	ADIPOSE	JUNE-JULY	LANGA + 300->HAFNARÁ		HATCHERY STOCK
ICELAND	LANGA+REYKJAD.A+NORÐ.A	1	SMOLT		1940	050115	ADIPOSE	JUNE-JULY	LANGA		HATCHERY STOCK
ICELAND	LAXÁ I LEIRARSVEIT	1	SMOLT		2008	020815	ADIPOSE	JUNE-JULY	LAXÁ I LEIRARSVEIT		HATCHERY STOCK
ICELAND	LAXÁ I LEIRARSVEIT	1	SMOLT		2202	020115	ADIPOSE	JUNE-JULY	LAXÁ I LEIRARSVEIT		HATCHERY STOCK
ICELAND	LAXÁ I TING.	1	SMOLT		2106	021501	ADIPOSE	JUNE-JULY	LAXÁ I TING.		HATCHERY STOCK
ICELAND	LAXÁ I TING.	1	SMOLT		1901	021413	ADIPOSE	JUNE-JULY	LAXÁ I TING.		HATCHERY STOCK
ICELAND	LAXÁ I TING.	1	SMOLT		1658	090513	ADIPOSE	JUNE-JULY	LAXÁ I TING.		HATCHERY STOCK
ICELAND	LAXÁ I TING.	1	SMOLT		2347	100613	ADIPOSE	JUNE-JULY	LAXÁ I TING.		HATCHERY STOCK
ICELAND	LANGA+REYKJAD.A+NORÐ.A	1	SMOLT		1006	030715	ADIPOSE	JUNE-JULY	URRIÐAÁ		HATCHERY STOCK
ICELAND	LARÓS	1	SMOLT		407	020915	ADIPOSE	JUNE-JULY	LARÓS		HATCHERY STOCK
ICELAND	LARÓS	1	SMOLT		2027	020215	ADIPOSE	JUNE-JULY	LARÓS		HATCHERY STOCK
ICELAND	LARÓS	1	SMOLT		675	015563	ADIPOSE	JUNE-JULY	LARÓS		HATCHERY STOCK
ICELAND	MIÐFJARÐARÁ	1	SMOLT		1914	070701	ADIPOSE	JUNE-JULY	MIÐFJARÐARÁ		HATCHERY STOCK
ICELAND	MIÐFJARÐARÁ	1	SMOLT		2518	131501	ADIPOSE	JUNE-JULY	MIÐFJARÐARÁ		HATCHERY STOCK
ICELAND	MIÐFJARÐARÁ	1	SMOLT		593	070301	ADIPOSE	JUNE-JULY	MIÐFJARÐARÁ		HATCHERY STOCK
ICELAND	NÚPSÁ	1	SMOLT		324	014063	ADIPOSE	JUNE-JULY	NÚPSÁ		NATURAL STOCK
ICELAND	NÚPSÁ	1	SMOLT		575	010763	ADIPOSE	JUNE-JULY	NÚPSÁ		NATURAL STOCK
ICELAND	NÚPSÁ	1	SMOLT		105	014763	ADIPOSE	JUNE-JULY	NÚPSÁ		NATURAL STOCK

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COUNTRY	STOCK	AGE	STAGE	FINCLIPS NUMBER	MICROTAGS NUMBER TAGGED	MICROTAGS CODES USED	MICROTAGS AUX FINCKLIPS	RELEASE DATE	PLACE OF REL EASE	MIGRATION AREA SUSPECTED	COMMENTS
ICELAND	NÚPSÁ	1	SMOLT		335	010363	ADIPOSE	JUNE-JULY	NÚPSÁ		NATURAL STOCK
ICELAND	NÚPSÁ	1	SMOLT		181	014363	ADIPOSE	JUNE-JULY	NÚPSÁ		NATURAL STOCK
ICELAND	NÚPSÁ	1	SMOLT		331	141315	ADIPOSE	JUNE-JULY	NÚPSÁ		NATURAL STOCK
ICELAND	NÚPSÁ	1	SMOLT		82	090113	ADIPOSE	JUNE-JULY	NÚPSÁ		NATURAL STOCK
ICELAND	NÚPSÁ	1	SMOLT		324	041315	ADIPOSE	JUNE-JULY	NÚPSÁ		NATURAL STOCK
ICELAND	NÚPSÁ	1	SMOLT		276	011515	ADIPOSE	JUNE-JULY	NÚPSÁ		NATURAL STOCK
ICELAND	PÓLARLAX	1	SMOLT		540	014563	ADIPOSE	JUNE-JULY	PÓLARLAX		HATCHERY STOCK
ICELAND	PÓLARLAX	1	SMOLT		519	013063	ADIPOSE	JUNE-JULY	PÓLARLAX		HATCHERY STOCK
ICELAND	SOGIÐ	1	SMOLT		2028	011313	ADIPOSE	JUNE-JULY	SOGIÐ		HATCHERY STOCK
ICELAND	SOGIÐ	1	SMOLT		1002	032863	ADIPOSE	JUNE-JULY	HRAUNSFJÖRÐUR		HATCHERY STOCK
ICELAND	SOGIÐ	1	SMOLT		1001	033563	ADIPOSE	JUNE-JULY	KALMAKSVIK-REYKJANESI		HATCHERY STOCK
ICELAND	STÓRA LAXÁ	1	SMOLT		2004	032763	ADIPOSE	JUNE-JULY	STÓRA LAXÁ		HATCHERY STOCK
ICELAND	STÓRA LAXÁ	1	SMOLT		384	015663	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	STÓRA LAXÁ	1	SMOLT		1502	131413	ADIPOSE	JUNE-JULY	TUNGUFLJÓT		HATCHERY STOCK
ICELAND	STÓRA LAXÁ	1	SMOLT		2013	020415	ADIPOSE	JUNE-JULY	BLÆVARDALSÁ		HATCHERY STOCK
ICELAND	STÓRA LAXÁ	1	SMOLT		1006	090515	ADIPOSE	JUNE-JULY	ISAFJARÐARDJÚP		HATCHERY STOCK
ICELAND	STÓRA LAXÁ	1	SMOLT		1511	030615	ADIPOSE	JUNE-JULY	FLÓAMANNAÁVEITA		HATCHERY STOCK
ICELAND	STÓRA LAXÁ	1	SMOLT		2010	120615	ADIPOSE	JUNE-JULY	HRAUNSFJÖRÐUR		HATCHERY STOCK
ICELAND	STÓRA LAXÁ	1	SMOLT		511	010663	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	STÓRA LAXÁ	1	SMOLT		515	026063	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	SVARTÁ	1	SMOLT		1982	001115	ADIPOSE	JUNE-JULY	FOSSÁ		HATCHERY STOCK
ICELAND	SVARTÁ	1	SMOLT		2511	100413	ADIPOSE	JUNE-JULY	FOSSÁ		HATCHERY STOCK
ICELAND	URRIÐAÁ	1	SMOLT		137	020963	ADIPOSE	JUNE-JULY	URRIÐAÁ		NATURAL STOCK
ICELAND	VOGAR	1	SMOLT		2509	033163	ADIPOSE	JUNE-JULY	VOGAR		HATCHERY STOCK
ICELAND	VOGAR	1	SMOLT		2025	033063	ADIPOSE	JUNE-JULY	VOGAR		HATCHERY STOCK
ICELAND	VOGAR	1	SMOLT		2987	032663	ADIPOSE	JUNE-JULY	VOGAR		HATCHERY STOCK
ICELAND	VOGAR	1	SMOLT		2512	032563	ADIPOSE	JUNE-JULY	VOGAR		HATCHERY STOCK
ICELAND	ÞVERÁ	1	SMOLT		303	026263	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	ÞVERÁ	1	SMOLT		525	025963	ADIPOSE	JUNE-JULY	KOLLAFJÖRÐUR		HATCHERY STOCK
ICELAND	ÁLFTÁ	1	SMOLT		564	031501	ADIPOSE	JUNE-JULY	HAFNARÁ		HATCHERY STOCK
ICELAND	ÁLFTÁ	1	SMOLT		588	021401	ADIPOSE	JUNE-JULY	LAXEYRI		HATCHERY STOCK
ICELAND	ÁLFTÁ	1	SMOLT		1005	121515	ADIPOSE	JUNE-JULY	ÁLFTÁ		HATCHERY STOCK

TOTAL NUMBER: HATCHERY SMOLTS; 116233, NATURAL SMOLTS; 2933

TOTAL NUMBER OF CODES: 104