



International Atlantic Salmon Research Board

SAG(17)3

*Metadatabase of Salmon Survey Data and Sample Collections
of Relevance to Mortality of Salmon at Sea*

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1. In 2011, the Board had recognized that international initiatives under the SALSEA Programme had generated some extremely valuable databases, including biological and genetic databases generated under the SALSEA Merge project, and time-series of data and historical tagging information compiled by ICES workshops supported by the Board. Similarly, the Board had also noted the existence of some historical marine survey samples, such as those generated by the international sampling programme at West Greenland, that represent an invaluable resource dating back some 40 years or more. The Board had decided that it could play an important role with regard to marine salmon survey data and sample coordination by establishing a metadatabase of existing datasets and sample collections. This metadatabase is not intended to be a vehicle to provide raw data to researchers and other interested Parties, but rather it serves to advertise the availability of the valuable and unique datasets related to the marine phase of Atlantic salmon. A one page information sheet had been developed and agreed by the SAG that explained the purpose of the metadatabase and how it may contribute to increased collaboration and understanding of the marine phase of salmon in the North Atlantic.
2. In 2013, a list of candidate datasets for inclusion in the metadatabase was developed, specific points of contact were identified and the Parties/jurisdictions concerned were requested to provide information for inclusion in the metadatabase. Prior to last year's SAG meeting, the following eleven entries had been included in the metadatabase:
 - External tag recoveries from tagging programmes in Canada, USA, EU, Norway and Russia and International adult salmon tagging at Faroes and Greenland;
 - Faroes CWT recoveries;
 - Greenland catch data;
 - Greenland tag recaptures;
 - North American Run Reconstruction Data;
 - North-East Atlantic run reconstruction data;
 - SALSEA - Merge biological samples;
 - SALSEA Greenland;
 - SALSEA North America biological samples;
 - SALSEA - Merge Marine Feeding; and
 - SALSEA - Merge Genetics Database: Genetically-based Regional Assignment of Atlantic Salmon Protocol (GRAASP)
3. The SAG had previously discussed the high value of archival scale collections which, because of advances in analytical methods, can now be used for genetic, stable isotope and further growth studies. Additional information may be obtained in the future in response to further advances in analytical methods. It had been noted that these collections may be lost when individual scientists retire unless appropriate

arrangements are in place to archive them and ensure their safe storage so that they may be available for analysis in the future. Even if the scales themselves are not lost, the information accompanying them could be or they could be damaged while in storage. Three main issues regarding scale collections were identified as follows:

- describing the scale archive (metadatabase);
- ensuring the security and safe storage of such archives; and
- determining the best use of these scales for analyses including the potential requirement for destructive sampling for chemical analyses.

4. Last year, it was recognised that the Board could play a role in identifying such scale collections, raising their profile with a view to safeguarding them for future use. The IASRB agreed that information on these scale collections should, as a first step, be included in the IASRB metadatabase. Accordingly, Parties/jurisdictions were requested to provide details to the Secretariat of any archival scale collections. To date, we have received information relating to scale samples from Russia (PINRO scale samples and the Kolarctic project scale samples) and the United States. The Board had also agreed that information on the West Greenland Sampling Programme Biological Characteristics database should be included in the metadatabase. Tim Sheehan (United States) agreed to provide this information and has done so. The following new datasets have been included in the metadatabase since last year:

- Kolarctic Coastal samples
- PINRO Atlantic salmon scales collection
- USA origin juvenile and adult scale samples
- West Greenland Sampling Database

5. Details of these four new entries to the metadatabase are shown below.

Secretary
Edinburgh
23 May 2017



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Name of Data Sample Collection **Kolarctic Coastal samples**

Information Description (e.g. including location of data/sample collection, # of samples) Scale samples collected from coastal fisheries for Atlantic salmon in Nordland, Troms and Finnmark counties, Norway. In total over 26,000 samples were collected, analysed for origin (wild/farmed), smolt and sea age. Scales were also used for genetic analysis, and individual fish were assigned to region and river origin by comparison to a comprehensive genetic baseline of 185 rivers.

Information Type **Biological Samples**

Data Type

- Assessment Data
- Tag Release/Recovery
- Freshwater Surveys
- Marine Surveys
- Index River Monitoring
- Genetic Baselines
- Other

Biological Sample Type

- Scales
- Otoliths
- Tissue
- Stomach Contents
- Parasites
- Plankton
- Other

Start Year of Information **2008**

End Year of Information **2012**

Information Source **International**

Jurisdictions included in Data/Samples:

- Canada
- Denmark
- Faroe Islands
- Finland
- France
- Germany
- Greenland
- Ireland
- Norway
- Portugal
- Russia
- Spain
- Sweden
- UK - England & Wales
- UK - N. Ireland
- UK - Scotland
- USA
- Iceland
- St. Pierre et Miquelon
- Unknown
- Potentially All

Information Location, i.e. Institute or Laboratory

Institute of Marine Research, Bergen, Norway

Information Manager's Name **Vidar Wennevik**

Information Manager Email **Vidar.Wennevik@imr.no**

Accessibility of Information **On Request**



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Additional Information

Kolarctic Coastal samples

http://prosjekt.fylkesmannen.no/Documents/Kolarctic%20salmon/Dokument/Scientific%20reports/KO197_Kolarctic%20salmon_summary%202011-2012%20-%20Report%20III_12.3%20Web.pdf



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Name of Data Sample Collection **PINRO Atlantic salmon scales collection**

Information Description (e.g. including location of data/sample collection, # of samples) Atlantic salmon scales collected in rivers within the Kola Peninsula, Russia during annual surveys. Over 160,000 samples were collected and read for smolt and sea age.

Information Type **Biological Samples**

- Data Type
- Assessment Data
 - Tag Release/Recovery
 - Freshwater Surveys
 - Marine Surveys
 - Index River Monitoring
 - Genetic Baselines
 - Other

- Biological Sample Type
- Scales
 - Otoliths
 - Tissue
 - Stomach Contents
 - Parasites
 - Plankton
 - Other

Start Year of Information **1960**

End Year of Information **Ongoing**

Information Source **National**

- Jurisdictions included in Data/Samples:
- Canada
 - Denmark
 - Faroe Islands
 - Finland
 - France
 - Germany
 - Greenland
 - Ireland
 - Norway
 - Portugal
 - Russia
 - Spain
 - Sweden
 - UK - England & Wales
 - UK - N. Ireland
 - UK – Scotland
 - USA
 - Iceland
 - St.Pierre et Miquelon
 - Unknown
 - Potentially All

Information Location, i.e. Institute or Laboratory

The Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO), Murmansk, Russia

Information Manager's Name **Sergey Prusov**

Information Manager Email **prusov@pinro.ru**

Accessibility of Information **Developing Protocols**



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Additional Information

PINRO Atlantic salmon scales collection

On Request



IASRB Metadatabase of Salmon Survey Data and Sample Collections of Relevance to Mortality of Salmon at Sea

Name of Data Sample Collection

USA origin juvenile and adult scale samples

Information Description (e.g. including location of data/sample collection, # of samples)

Scale samples collected from juvenile (parr and smolt) and adult USA origin Atlantic salmon from multiple rivers throughout the USA range of the species and across varying numbers of years

Information Type

Biological Samples

Data Type

- Assessment Data
- Tag Release/Recovery
- Freshwater Surveys
- Marine Surveys
- Index River Monitoring
- Genetic Baselines
- Other

Biological Sample Type

- Scales
- Otoliths
- Tissue
- Stomach Contents
- Parasites
- Plankton
- Other

Start Year of Information

1946

End Year of Information

Ongoing

Information Source

National

Jurisdictions included in Data/Samples:

- Canada
- Denmark
- Faroe Islands
- Finland
- France
- Germany
- Greenland
- Ireland
- Norway
- Portugal
- Russia
- Spain
- Sweden
- UK - England & Wales
- UK - N. Ireland
- UK - Scotland
- USA
- Iceland
- St. Pierre et Miquelon
- Unknown
- Potentially All

Information Location, i.e. Institute or Laboratory

NOAA Fisheries Service, Woods Hole MA 02540 USA

Information Manager's Name

Timothy Sheehan

Information Manager Email

Tim.Sheehan@noaa.gov

Accessibility of Information

On Request



IASRB Metadatabase of Salmon Survey Data and Sample Collections of Relevance to Mortality of Salmon at Sea

Additional Information

USA origin juvenile and adult scale samples

On Request



IASRB Metadatabase of Salmon Survey Data and Sample Collections of Relevance to Mortality of Salmon at Sea

Name of Data Sample Collection **West Greenland Sampling Database**

Information Description (e.g. including location of data/sample collection, # of samples) Annual sampling of the West Greenland Atlantic salmon fishery has occurred since 1968 with the exception of 1993 and 1994. As of 2017, there are ~60,000 individual records that provide information on the biological characteristics of the sampled fish.

Information Type **Data**

- Data Type
- Assessment Data
 - Tag Release/Recovery
 - Freshwater Surveys
 - Marine Surveys
 - Index River Monitoring
 - Genetic Baselines
 - Other

- Biological Sample Type
- Scales
 - Otoliths
 - Tissue
 - Stomach Contents
 - Parasites
 - Plankton
 - Other

Start Year of Information **1968**

End Year of Information **Ongoing**

Information Source **International**

- Jurisdictions included in Data/Samples:
- Canada
 - Denmark
 - Faroe Islands
 - Finland
 - France
 - Germany
 - Greenland
 - Ireland
 - Norway
 - Portugal
 - Russia
 - Spain
 - Sweden
 - UK - England & Wales
 - UK - N. Ireland
 - UK – Scotland
 - USA
 - Iceland
 - St.Pierre et Miquelon
 - Unknown
 - Potentially All

Information Location, i.e. Institute or Laboratory

Fisheries and Oceans Canada, St. John's, NL
Canada

Information Manager's Name **Martha Robertson**

Information Manager Email **martha.robertson@dfo-mpo.gc.ca**

Accessibility of Information **On Request**



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Additional Information

West Greenland Sampling Database

On Request