

AFSC/ABL: Sockeye salmon genetics - 1986 mixed stock fishery

Theme keywords: Biota, 002, stock composition, allozyme, freshwater age, brain-tissue parasite, Sockeye Salmon, *Oncorhynchus nerka*

Abstract: The incidence of four discrete characters of individual sockeye salmon -two genetically inherited proteins (PGM-1* and PGM-2*) , freshwater age at migration, and the presence of the brain-tissue parasite *Myxobolus arcticus*-in weekly samples from two Alaskan fisheries (Noyes Island in 1986 and Sumner Strait in 1987) were used to infer stock composition of the catches based on corresponding character samples from 73 Alaskan and Canadian stocks. Estimated contributions of 13 stock groups, formed on the basis of character similarity of their members, were roughly consistent with expectations from tagging experiments, knowledge of stock magnitudes, and similar assessments from scales. Imprecision of the estimated contributions by the 13 stock groups limited their practical value; but variability was much reduced for combined estimated contributions by two inclusive categories, namely stock groups whose members had either high or low brainparasite prevalence. Noyes Island catches consisted predominantly of unparasitized fish, most of which were probably of Canadian origin. The majority of Sumner Strait catches consisted of parasitized fish, whose freshwater origins may have been in Alaska or Canada.

FGDC, ESRI, and Biological Profile Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
- [Distribution Information](#)
- [Metadata Reference Information](#)

Metadata elements shown with **blue** text are defined in the Federal Geographic Data Committee's (FGDC) [Content Standard for Digital Geospatial Metadata \(CSDGM\)](#). Elements shown with **green** text are defined in the [ESRI Profile of the CSDGM](#). Elements shown with **brown** text are defined in the [NBII Biological Profile of the CSDGM](#). Elements shown with a green asterisk (*) will be automatically updated by ArcCatalog. ArcCatalog adds hints indicating which FGDC elements are mandatory; these are shown with gray text.

Identification Information:

Citation:

Citation information:

Originators: Chuck Guthrie, AFSC, Jerome Pella, Michele Masuda, Christine Kondzela, Anthony Gharrett, Adam Moles, Gary Winans

Title:

AFSC/ABL: Sockeye salmon genetics - 1986 mixed stock fishery

Publication date: 199801

Geospatial data presentation form: maps and data

Series information:

Series name: NOAA technical report

Issue identification: NMFS 132

Online linkage: <http://spo.nwr.noaa.gov/tr132.pdf>

Description:**Abstract:**

The incidence of four discrete characters of individual sockeye salmon -two genetically inherited proteins (PGM-1* and PGM-2*) , freshwater age at migration, and the presence of the brain-tissue parasite *Myxobolus arcticus*-in weekly samples from two Alaskan fisheries (Noyes Island in 1986 and Sumner Strait in 1987) were used to infer stock composition of the catches based on corresponding character samples from 73 Alaskan and Canadian stocks. Estimated contributions of 13 stock groups, formed on the basis of character similarity of their members, were roughly consistent with expectations from tagging experiments, knowledge of stock magnitudes, and similar assessments from scales. Imprecision of the estimated contributions by the 13 stock groups limited their practical value; but variability was much reduced for combined estimated contributions by two inclusive categories, namely stock groups whose members had either high or low brainparasite prevalence. Noyes Island catches consisted predominantly of unparasitized fish, most of which were probably of Canadian origin. The majority of Sumner Strait catches consisted of parasitized fish, whose freshwater origins may have been in Alaska or Canada.

Purpose:

This report describes our assessment of stock composition of sockeye salmon based on four characters: PGM1 * , PGM-2* , freshwater age, and the presence of *Myxobolus arcticus*. The assessment was applied to catch samples from two Southeast Alaskan fisheries: the purse-seine fishery of area 104 (commonly known as the Noyes Island fishery) in 1986 and a gill-net test fishery in area 106-41 (commonly known as the Sumner Strait fishery) at the northern entrance to Clarence Strait in 1987.

Time period of content:**Time period information:****Range of dates/times:**

Beginning date: 1986

Ending date: 1987

Currentness reference:

ground condition

Status:**Progress:** Complete**Maintenance and update frequency:** None planned**Spatial domain:****Description of geographic extent:**

Southeast Alaska

Bounding coordinates:**West bounding coordinate:** -125.61667**East bounding coordinate:** -119.139638**North bounding coordinate:** 60.2984**South bounding coordinate:** 48.4100**Keywords:****Theme:****Theme keywords:** Biota, 002**Theme keyword thesaurus:** ISO 19115 Topic Categories**Theme:****Theme keywords:** stock composition, allozyme, freshwater age, brain-tissue parasite**Theme keyword thesaurus:** None**Theme:****Theme keywords:** Sockeye Salmon, Oncorhynchus nerka**Theme keyword thesaurus:** ITIS**Place:****Place keywords:** Alaska**Place keyword thesaurus:** Geographic Names Information System**Taxonomy:****Keywords/taxon:****Taxonomic keywords:** collection, multiple species, vertebrates**Taxonomic keyword thesaurus:** None**Taxonomic classification:****Taxon rank name:** Empire**Taxon rank value:** Biovitae**Applicable common names:** Carbon-based lifeforms

Taxonomic classification:Taxon rank name: [Kingdom](#)Taxon rank value: [Animalia](#)**Taxonomic classification:**Taxon rank name: [Phylum](#)Taxon rank value: [Chordata](#)**Taxonomic classification:**Taxon rank name: [Subphylum](#)Taxon rank value: [Vertebrata](#)**Taxonomic classification:**Taxon rank name: [Superclass](#)Taxon rank value: [Osteichthyes](#)**Taxonomic classification:**Taxon rank name: [Class](#)Taxon rank value: [Actinopterygii](#)**Taxonomic classification:**Taxon rank name: [Subclass](#)Taxon rank value: [Neopterygii](#)**Taxonomic classification:**Taxon rank name: [Infraclass](#)Taxon rank value: [Teleostei](#)**Taxonomic classification:**Taxon rank name: [Superorder](#)Taxon rank value: [Protacanthopterygii](#)**Taxonomic classification:**Taxon rank name: [Order](#)Taxon rank value: [Salmoniformes](#)**Taxonomic classification:**Taxon rank name: [Family](#)Taxon rank value: [Salmonidae](#)

Taxonomic classification:**Taxon rank name:** Subfamily**Taxon rank value:** Salmoninae**Taxonomic classification:****Taxon rank name:** Genus**Taxon rank value:** Oncorhynchus**Taxonomic classification:****Taxon rank name:** Species**Taxon rank value:** nerka**Applicable common names:** Sockeye salmon

Access constraints: There are no legal restrictions on access to the data. They reside in public domain and can be freely distributed.

Use constraints:

User must read and fully comprehend the metadata prior to use. Data should not be used beyond the limits of the source scale. Acknowledgement of NOAA, as the source from which these data were obtained, in any publications and/or other representations of these data is suggested.

Point of contact:**Contact information:****Contact person primary:****Contact person:** Chuck Guthrie**Contact organization:** National Oceanic and Atmospheric Administration (NOAA) Alaska Fisheries Science Center (AFSC) Auke Bay Laboratories (ABL)**Contact address:****Address type:** mailing and physical**Address:**

17109 Point Lena Loop Road

City: Juneau**State or province:** AK**Postal code:** 99801**Country:** USA**Contact voice telephone:** 907-789-6000**Contact facsimile telephone:** 907-789-6094

Contact electronic mail address: chuck.guthrie@noaa.gov

Contact instructions:

The e-mail address directs you to the person most knowledgeable about this data. If an alternative contact person becomes necessary, use the voice phone number for referral.

Native data set environment:

Microsoft Excel spreadsheet

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Data Quality Information:

Logical consistency report:

No logical consistency test were run.

Completeness report:

None

Lineage:

Process step:

Process description:

No process steps have been described for this data set

Process date: Unknown

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Distribution Information:

Distributor:

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Distribution liability:

The user is responsible for the results of any application of this data for other than its intended purpose.

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Metadata Reference Information:

Metadata date: 20081201

Metadata review date: 20100122

Metadata contact:

Contact information:

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Contact person: Emily Fergusson

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Metadata standard name: FGDC Biological Data Profile of the Content Standard for Digital Geospatial Metadata

Metadata standard version: FGDC-STD-001.1-1999

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