

AFSC/ABL: Immature chum salmon allozyme ID of mixed stocks

Theme keywords: Biota, 002, genetic stock identification, otolith thermal marks, Chum salmon, *Oncorhynchus keta*

Abstract: Immature chum salmon were collected by the F/V Northwest Explorer between September 5 and October 8, during the 2002 BASIS survey across the eastern Bering Sea shelf and Aleutian Islands (for details, see Murphy et al. 2003). Approximately 1,600 fish were aged, checked for the presence of hatchery thermal marks, and genotyped for allozyme loci. Scale aging and otolith mark identification were done by the Alaska Department of Fish and Game's Mark, Tag, and Age Laboratory in Juneau, Alaska. Otoliths with thermal marks were compared with voucher specimens to verify hatchery of origin. Heart, liver, and muscle tissues were extracted and then analyzed with protein electrophoresis to identify genotypes for the 20 allozyme loci in the chum salmon coastwide genetic baseline (Kondzela et al. 2002). Genetic data were pooled into one of four geographic areas—western Aleutian Islands, eastern Aleutian Islands, southeastern Bering Sea shelf, and northeastern Bering Sea shelf. In the eastern and western Aleutian Islands, the catches were large enough to further stratify the data by ocean age. Regional origin estimates were made for each mixture collection using a conditional maximum likelihood method (Pella and Masuda model in SPAM v. 3.7, ADF&G 2001) and the full 356-population genetic baseline. The 95% nonsymmetric confidence intervals were determined from 1000 bootstrap estimates in which the baseline and mixture were re-sampled.

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: Kondzela, Chris, AFSC

Title:

AFSC/ABL: Immature chum salmon allozyme ID of mixed stocks

Publication date: 2004

Geospatial data presentation form: maps and data

Other citation details:

Kondzela, C. M., J. M. Murphy, and R. L. Wilmot. 2004. Origin of Immature Chum Salmon Collected in the Eastern Bering Sea and Aleutian Islands during the F/V Northwest Explorer BASIS Survey, Fall 2002. NPAFC Technical Report No. 6:62-64.

Online linkage: http://www.npafc.org/new/pub_technical6.html

Description:**Abstract:**

Immature chum salmon were collected by the F/V Northwest Explorer between September 5 and October 8, during the 2002 BASIS survey across the eastern Bering Sea shelf and Aleutian Islands (for details, see Murphy et al. 2003). Approximately 1,600 fish were aged, checked for the presence of hatchery thermal marks, and genotyped for allozyme loci. Scale aging and otolith mark identification were done by the Alaska Department of Fish and Game's Mark, Tag, and Age Laboratory in Juneau, Alaska. Otoliths with thermal marks were compared with voucher specimens to verify hatchery of origin. Heart, liver, and muscle tissues were extracted and then analyzed with protein electrophoresis to identify genotypes for the 20 allozyme loci in the chum salmon coastwide genetic baseline (Kondzela et al. 2002). Genetic data were pooled into one of four geographic areas—western Aleutian Islands, eastern Aleutian Islands, southeastern Bering Sea shelf, and northeastern Bering Sea shelf. In the eastern and western Aleutian Islands, the catches were large enough to further stratify the data by ocean age. Regional origin estimates were made for each mixture collection using a conditional maximum likelihood method (Pella and Masuda model in SPAM v. 3.7, ADF&G 2001) and the full 356-population genetic baseline. The 95% nonsymmetric confidence intervals were determined from 1000 bootstrap estimates in which the baseline and mixture were re-sampled.

Purpose:

This dataset contains the data used to identify the origin of immature chum salmon collected in the Eastern Bering Sea in 2002.

Time period of content:**Time period information:****Single date/time:**

Calendar date: 2002

Currentness reference:

ground condition

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

Alaska, Bering Sea and Aleutian Islands

Bounding coordinates:**West bounding coordinate:** 172.51**East bounding coordinate:** -164.99**North bounding coordinate:** 60.19**South bounding coordinate:** 51.86**Keywords:****Theme:****Theme keywords:** Biota, 002**Theme keyword thesaurus:** ISO 19115 Topic Categories**Theme:****Theme keywords:** genetic stock identification, otolith thermal marks**Theme keyword thesaurus:** None**Theme:****Theme keywords:** Chum salmon, Oncorhynchus keta**Theme keyword thesaurus:** ITIS**Place:****Place keywords:** Alaska, Bering Sea, Aleutian Islands**Place keyword thesaurus:** Geographic Names Information System**Taxonomy:****Keywords/taxon:****Taxonomic keywords:** collection, single 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: Oncorhynchus keta
Applicable common names: chum
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: Chris Kondzela

Contact organization: National Oceanic and Atmospheric Administration (NOAA) Alaska Fisheries Science Center (AFSC) Auke Bay Laboratories (ABL)

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Address type: mailing and physical

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State or province: AK

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Country: USA

Contact voice telephone: 907-789-6000

Contact facsimile telephone: 907-789-6094

Contact electronic mail address: chris.kondzela@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:****Contact information:****Contact person primary:**

Contact person: Chris Kondzela

Contact organization: National Oceanic and Atmospheric Administration (NOAA) Alaska Fisheries Science Center (AFSC) Auke Bay Laboratories (ABL)

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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:** chris.kondzela@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.

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:** 20081208**Metadata contact:****Contact information:****Contact person primary:****Contact person:** Emily Fergusson**Contact organization:** National Oceanic and Atmospheric Administration (NOAA) Alaska Fisheries Science Center (AFSC) Auke Bay Laboratories (ABL)**Contact position:** Fishery Research Biologist/Metadata coordinator**Contact address:****Address type:** mailing and physical**Address:**

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Hours of service: 8:00 a.m. - 4:30 p.m. AK time Monday-Friday

Contact instructions:

Contact during business hours only.

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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