

## AFSC/ABL: Chum salmon bycatch genetic stock identification 1994-1995 Bering Sea

**Theme keywords:** Biota, 002

**Abstract:** In some years, the Bering Sea trawl fishery incidentally harvests (bycatch) large numbers of chum salmon. Because chum salmon were declining in some western Alaska areas, the origins of the chum salmon bycatch were important. Tagging studies have shown that chum salmon originating in Asia and North America migrate through the eastern Bering Sea. Genetic stock identification (GSI), a method of estimating stock composition in mixed-stock fisheries, has helped in evaluating stock contributions to salmon fisheries on the western coast of North America. Through cooperative efforts between state and federal agencies, a comprehensive genetic baseline for Pacific Rim chum salmon stocks has been developed, which enables GSI in fisheries such as the Bering Sea trawl fishery. In 1994, the National Marine Fisheries Service, Auke Bay Laboratory, initiated a feasibility study of GSI in determining the origins of the chum salmon bycatch in the Bering Sea trawl fishery. Sampling in 1995 was intensified and resulted in samples covering the entire fishing season, representing nearly 11% of the total chum salmon bycatch. Estimates for our 1994 fishery samples over three period were 39-55% Asian stocks, 20-35% western Alaska stocks, and 21-29% southeastern Alaska, British Columbia, or Washington stocks. One small sample (N=47) of maturing fish showed a surprisingly large contribution of British Columbia stocks (53%). Estimates for our 1995 samples over seven time periods were 13-51% Asian stocks, 33-53% western Alaska stocks, and 9-46% southeastern Alaska, British Columbia, or Washington stocks. As in 1994, the sample of maturing fish (N=277) showed a large contribution of British Columbia stocks (49%) and Washington stocks (25%).

### FGDC, ESRI, and Biological Profile Metadata:

- [Identification Information](#)
- [Data Quality Information](#)
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- [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.

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### Identification Information:

**Citation:**

**Citation information:**

**Originators:** Chris Kondzela, Richard Wilmot, AFSC

**Title:**

AFSC/ABL: Chum salmon bycatch genetic stock identification 1994-1995 Bering Sea

**Publication date:** 1998

**Geospatial data presentation form:** maps and data

**Other citation details:**

Wilmot, R.L., C.M. Kondzela, C.M. Guthrie, and M.M. Masuda. 1998. Genetic stock identification of chum salmon harvested incidentally in the 1994 and 1995 Bering Sea trawl fishery. N. Pac. Anadr. Fish Comm. Bull. No. 1: 285-299.

**Online linkage:** [http://www.npafc.org/new/publications/Bulletin/Bulletin%20No.%201/page%20285-299\(Wilmot\).PDF](http://www.npafc.org/new/publications/Bulletin/Bulletin%20No.%201/page%20285-299(Wilmot).PDF)

**Description:**

**Abstract:**

In some years, the Bering Sea trawl fishery incidentally harvests (bycatch) large numbers of chum salmon. Because chum salmon were declining in some western Alaska areas, the origins of the chum salmon bycatch were important. Tagging studies have shown that chum salmon originating in Asia and North America migrate through the eastern Bering Sea. Genetic stock identification (GSI), a method of estimating stock composition in mixed-stock fisheries, has helped in evaluating stock contributions to salmon fisheries on the western coast of North America. Through cooperative efforts between state and federal agencies, a comprehensive genetic baseline for Pacific Rim chum salmon stocks has been developed, which enables GSI in fisheries such as the Bering Sea trawl fishery.

In 1994, the National Marine Fisheries Service, Auke Bay Laboratory, initiated a feasibility study of GSI in determining the origins of the chum salmon bycatch in the Bering Sea trawl fishery. Sampling in 1995 was intensified and resulted in samples covering the entire fishing season, representing nearly 11% of the total chum salmon bycatch.

Estimates for our 1994 fishery samples over three period were 39-55% Asian stocks, 20-35% western Alaska stocks, and 21-29% southeastern Alaska, British Columbia, or Washington stocks. One small sample (N=47) of maturing fish showed a surprisingly large contribution of British Columbia stocks (53%). Estimates for our 1995 samples over seven time periods were 13-51% Asian stocks, 33-53% western Alaska stocks, and 9-46% southeastern Alaska, British Columbia, or Washington stocks. As in 1994, the sample of maturing fish (N=277) showed a large contribution of British Columbia stocks (49%) and Washington stocks (25%).

**Purpose:**

This data set contains the genetic bycatch data.

**Time period of content:**

**Time period information:**

**Multiple dates/times:****Single date/time:****Calendar date:** 1994**Single date/time:****Calendar date:** 1995**Currentness reference:**

ground condition

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

Alaska, Bering Sea

**Bounding coordinates:****West bounding coordinate:** -179.3**East bounding coordinate:** -163**North bounding coordinate:** 60**South bounding coordinate:** 52**Keywords:****Theme:****Theme keywords:** Biota, 002**Theme keyword thesaurus:** ISO 19115 Topic Categories**Place:****Place keywords:** Alaska, Bering Sea**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:** keta**Applicable common names:** chum  
salmon

**Access constraints:** Contact the Point of Contact for access constraints if none are provided.

**Use constraints:**

User must read and fully comprehend the metadata prior to use. User must acknowledge the Originator when using the data set as a source. User must share data products developed using the source data set with the Originator. Data should not be used beyond the limits of the source scale.

**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)**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:** [chris.kondzela@noaa.gov](mailto: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)

**Contact address:**

**Address type:** mailing and physical

**Address:**

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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](mailto: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 distributor denies liability if the data are incorrect, incomplete, or misused. Third party distribution of the data set is prohibited without written authorization by distributor.

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**Metadata Reference Information:****Metadata date:** 20081208**Metadata review date:** 20100122**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:** Metadata coordinator**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:** Use e-mail to contact the metadata coordinator.

**Contact facsimile telephone:** 907-789-6094

**Contact electronic mail address:** AFSC.metadata@noaa.gov

**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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