

OILY FISH

Kleinhoscheid, 10/05/2018

Georges Mouton MD

www.gmouton.com



Oily Fish

- Salmon
- Trout
- Mackerel
- Herring
- Sprat
- Sardine
- Pilchard
- Anchovy
- Capelin
- Tuna (contaminated)
- Halibut (endangered)
- Cod (less oily)



World Wide Web Version, v. 01-07-98

Species: *Salmo salar* Linnaeus, 1758

Common Name: SL/AFS-Atlantic Salmon

RFE Code (this specimen): salmsala H94-001

Photographer: W. Savary (SAN-DO)

Date: 09-12-94

Image #: 185

RFE Team: Tenge, Dang, Barnett, Savary, Rogers, Gerrity

RFE Funding: OS/CFSAN and ORA

RFE E-mail Contacts: <http://vm.cfsan.fda.gov/~frf/rfecon.html>

Scanner:: DTS-103AI Drum

Filename atrd001.tif

Date: 11-25-94

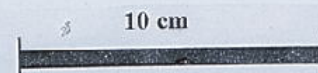
Original File: 11Mb, 400dpi

Orig. Image arch.: SEA-DO

Tissue arch.: SEA-DO/SAN-DO

Fish Provided by: Science Branch, SEA-DO

Authentication: 07-18-95, B. Lauth, NMFS



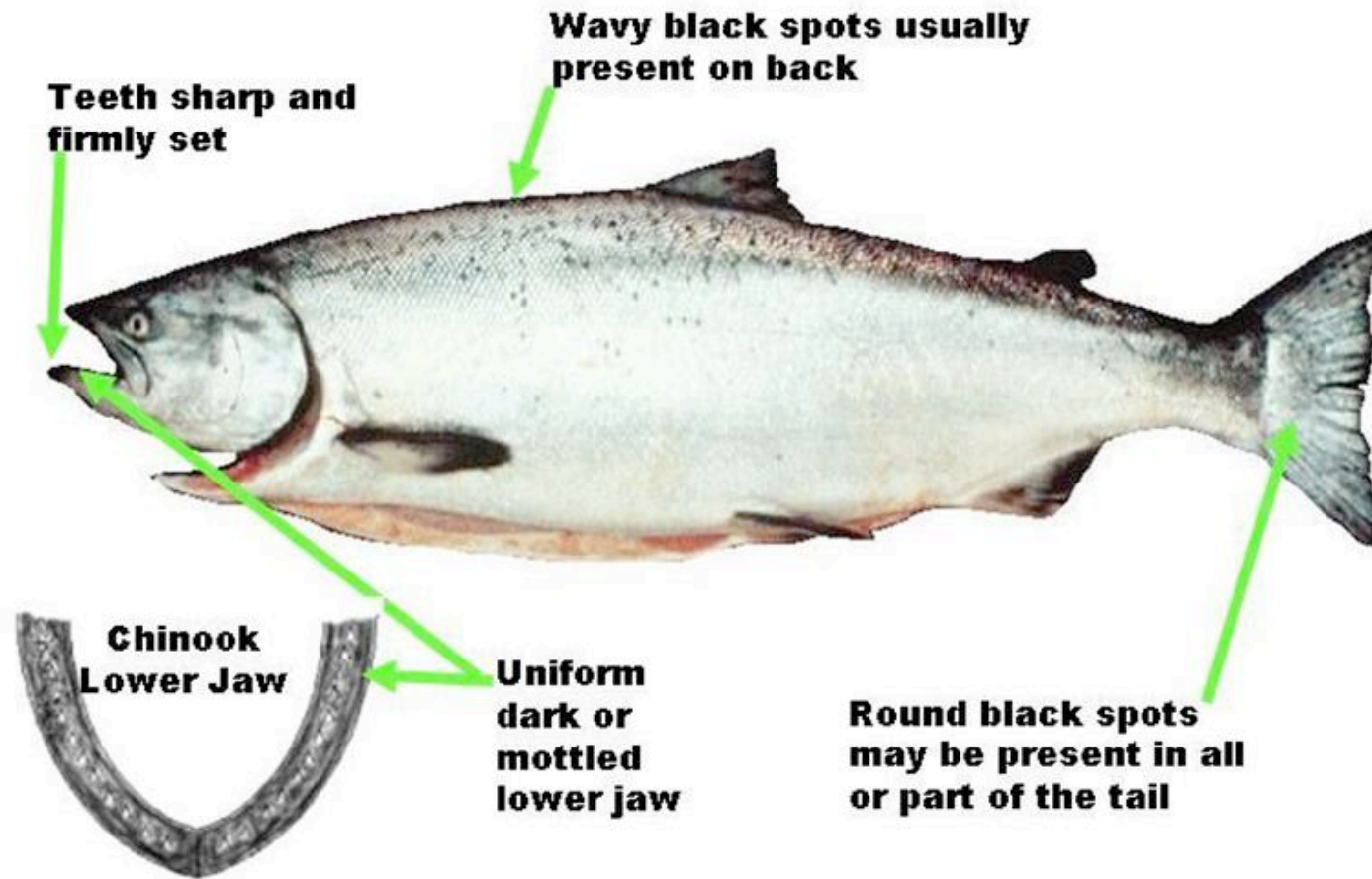
***Salmo salar*: Atlantic Salmon**



Salmo trutta Linnaeus, 1758

***Salmo trutta*: Lake Trout**

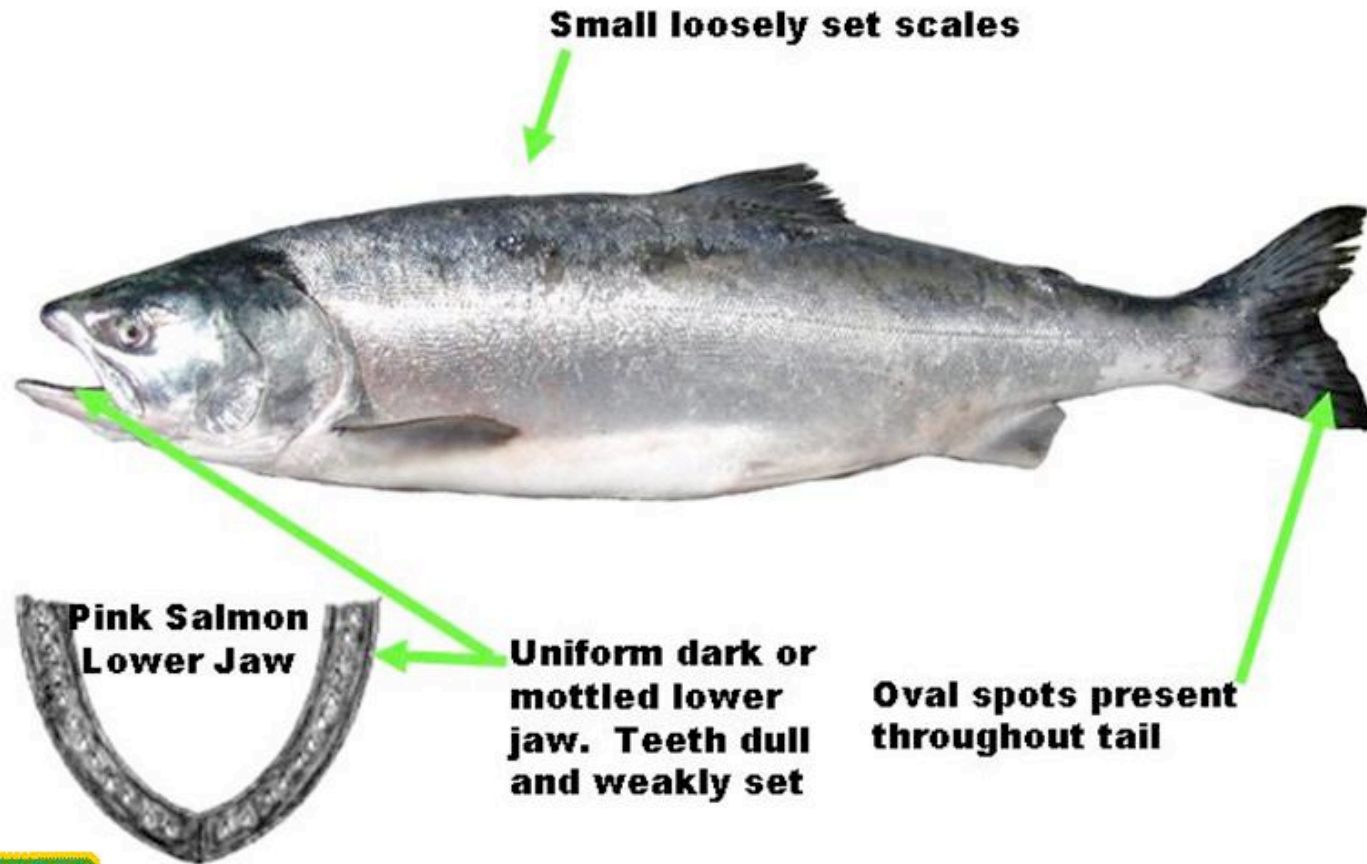
Chinook Salmon (*Oncorhynchus tshawytscha*)



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***Oncorhynchus tshawytscha*: Pacific Chinook Salmon**

Pink Salmon (*Oncorhynchus gorbuscha*)



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***Oncorhynchus gorbuscha*: Pacific Pink Salmon**

Coho Salmon (*Oncorhynchus kisutch*)

May have small round spots on tail (usually only in the upper tail lobe) and on the back.



Banding pattern on lower jaw (dark outside of the gums to light on the gums to dark inside of the gums). Teeth are sharp and firmly set.

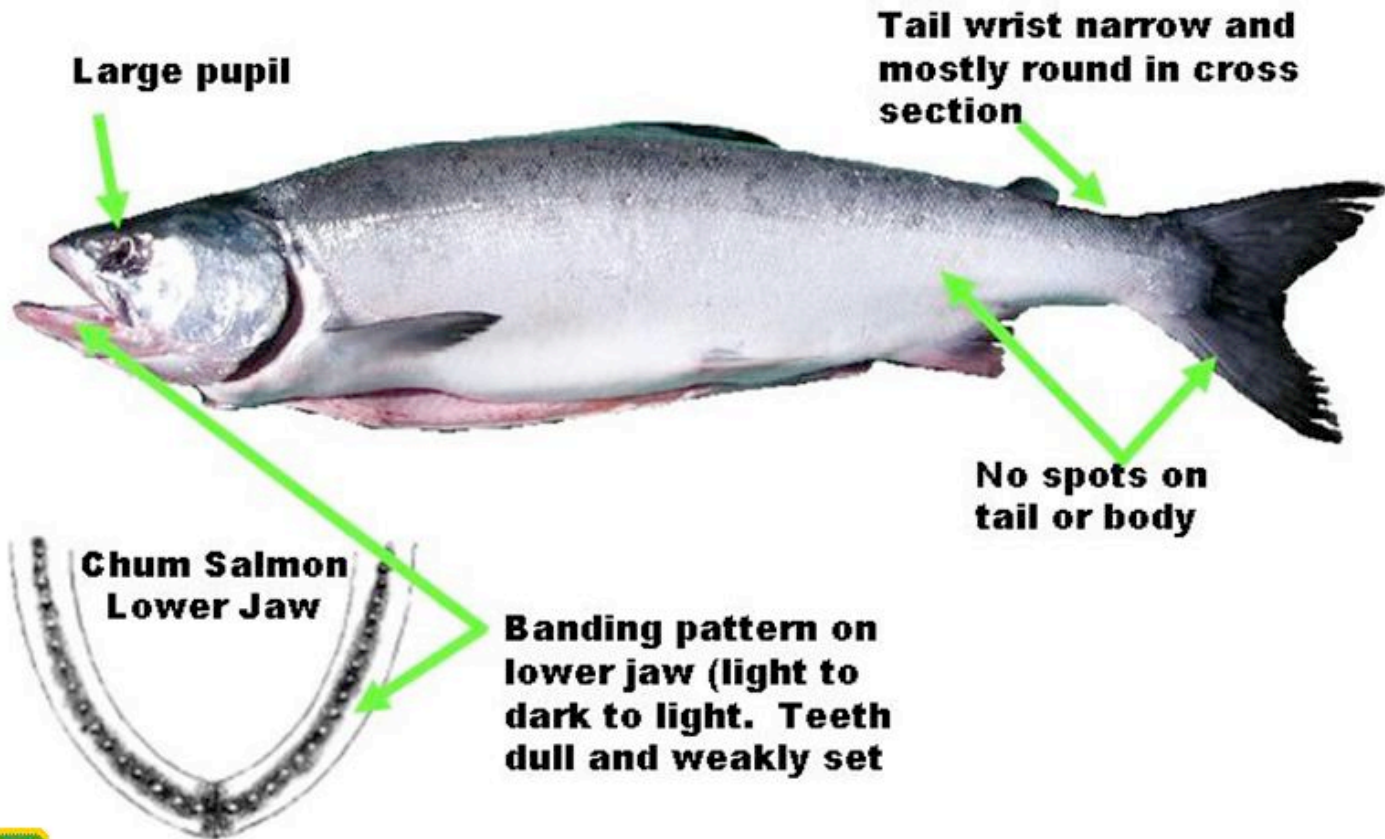
Tail "wrist" is wide in cross section



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***Oncorhynchus kisutch*: Pacific Coho Salmon**

Chum Salmon (*Oncorhynchus keta*)

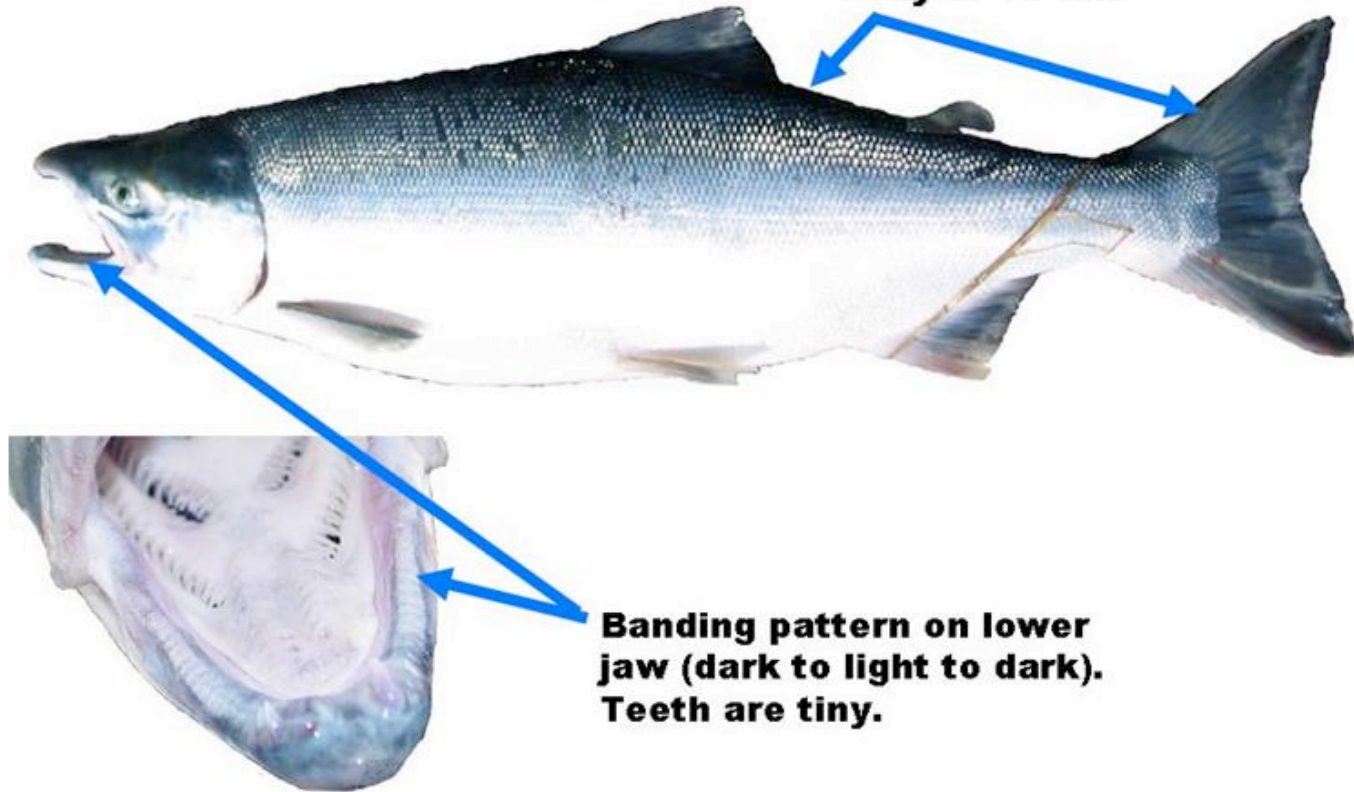


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***Oncorhynchus keta*: Pacific Chum Salmon**

Sockeye Salmon (*Oncorhynchus nerka*)

**No spotting on
body or on tail**



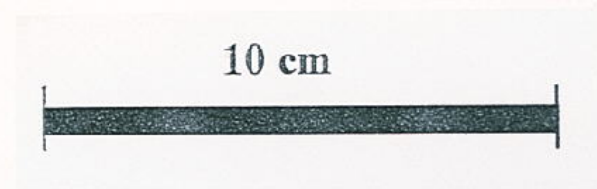
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***Oncorhynchus nerka*: Pacific Sockeye Salmon**



World Wide Web Version, v. 09-24-96

Species: *Oncorhynchus mykiss* (Walbaum, 1792)
Common Name: SL/AFS-Rainbow "Steelhead" Trout
RFE Code: oncomyki E96-001
Photographer: B. Tenge (SPRC, SEA-DO)
Date: 05-31-96
Image #: 305



Scanner: DTS-103AI Drum
Filename: strd002.tif
Date: 08-18-96
Original File: 12Mb, 400dpi
Orig. Image arch.: SEA-DO
Tissue arch.: SEA-DO/SAN-DO
Fish Provided by: Science Branch, SEA-DO
Authentication: 09-18-96, T. Iwamoto, CAS

RFE Team: Tenge, Dang, Barnett, Fry, Savary, Rogers, Gerrity
RFE Funding: OS/CFSAN and ORA
RFE contact: btenge@fdaem.ssw.dhhs.gov
WWW coord.: F. Fry (CFSAN)
Internet: frf@fdacf.ssw.dhhs.gov

***Oncorhynchus mykiss*: Rainbow Trout**



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Scomber scombrus Linnaeus, 1758

***Scomber scombrus*: Atlantic Mackerel**

World Wide Web Version, v. 10-21-97

Species: *Scomber japonicus* (Houttuyn, 1782)

Common Name: SL/AFS-Chub Mackerel

RFE Code: scomjapo I96-001

Photo: B. Tenge (SPRC, SEA-DO)

Film: Fujichrome 64T, 4x5 Format

Date: 09-19-96

Image #: 345



Scanner: DTS-103AI Drum

Filename: sjrd001.tif

Date: 01-23-97

Original File: 13Mb, 400 dpi

Orig. Image arch.: SEA-DO

Tissue arch.: SEA-DO/SAN-DO

Fish Provided by: USDC

Authentication: 09-25-97, T. Iwamoto, CAS

RFE Team: Tenge, Dang, Barnett, Fry, Savary, Rogers, Gerrity

RFE Funding: OS/CFSAN and ORA

RFE contact: btenge@ora.fda.gov

WWW coord.: F. Fry (CFSAN)

Internet: frf@vm.cfsan.fda.gov

10 cm



***Scomber japonicus*: Pacific Mackerel**



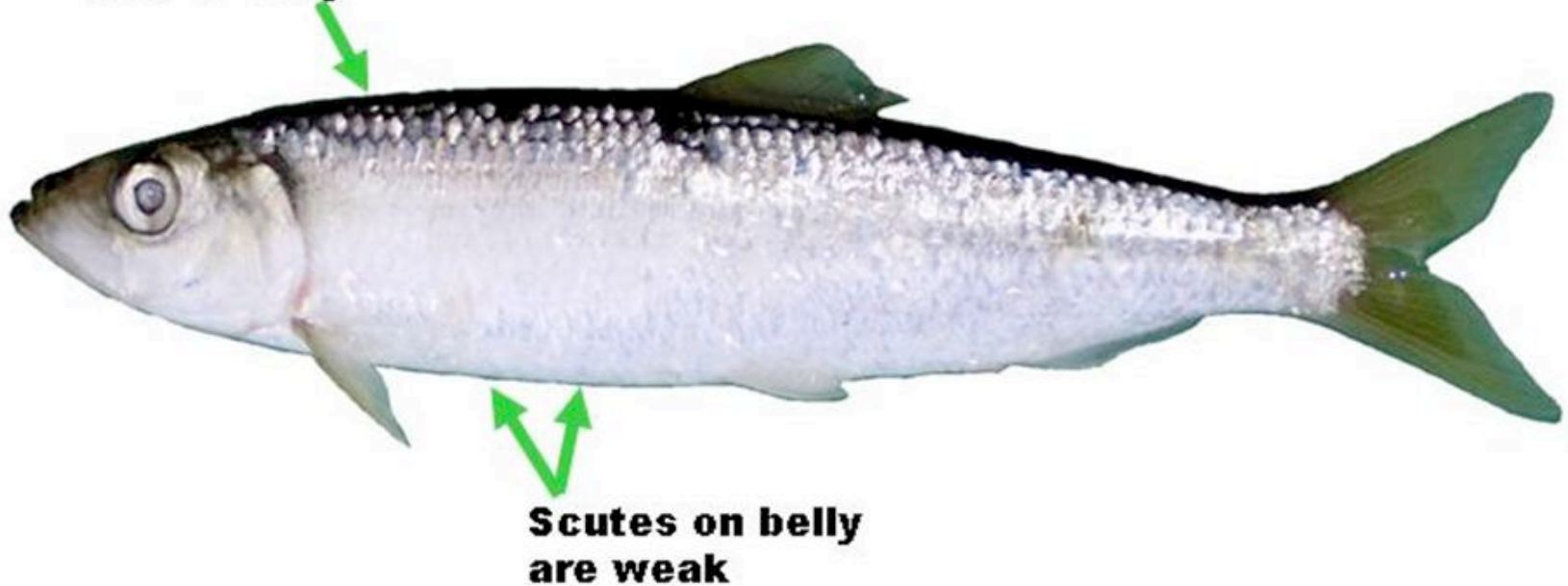
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Clupea harengus Linnaeus, 1758

***Clupea harengus*: Atlantic Herring**

Pacific Herring (*Clupea pallasii*)

**No row of spots on
side of body**



**Scutes on belly
are weak**



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***Clupea pallasii*: Pacific Herring**

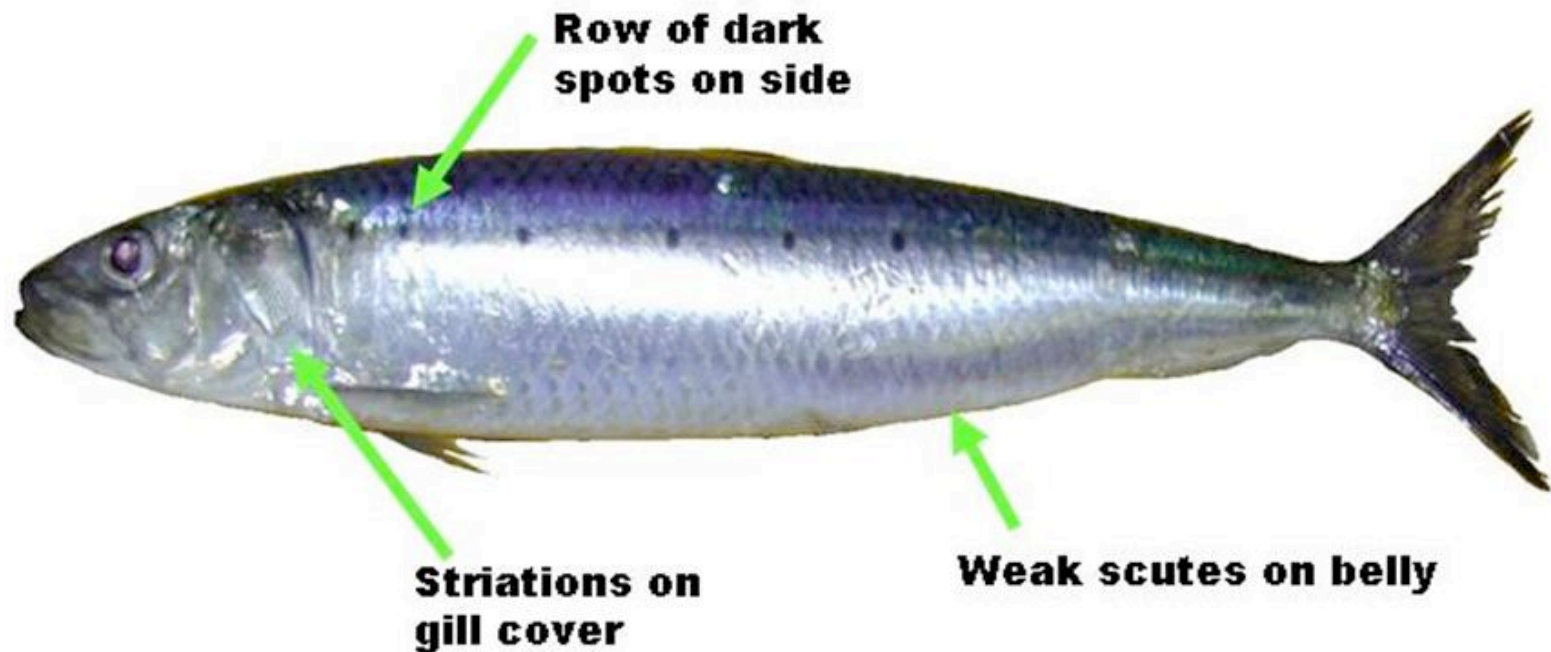


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Sprattus sprattus (Linnaeus, 1758)

***Sprattus sprattus*: European Sprat**

Pacific Sardine (*Sardinops sagax*)



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***Sardinops sagax*: Sardine**



Sardina pilchardus (Walbaum, 1792)

***Sardina pilchardus*: European Pilchard**



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Engraulis encrasicolus (Linnaeus, 1758)

***Engraulis encrasicolus*: European Anchovy**

Northern Anchovy (*Engraulis mordax*)

**Snout projects well
beyond lower jaw**



Mouth very large



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***Engraulis mordax*: Northern Anchovy**



Taxonomía

Reino:	Animalia
Filo:	Chordata
Clase:	Actinopterygii
Orden:	Clupeiformes
Familia:	Engraulidae
Género:	Engraulis
Especie:	E. ringens

***Engraulis ringens*: Peruvian Anchoveta**



Mallotus villosus - capelin

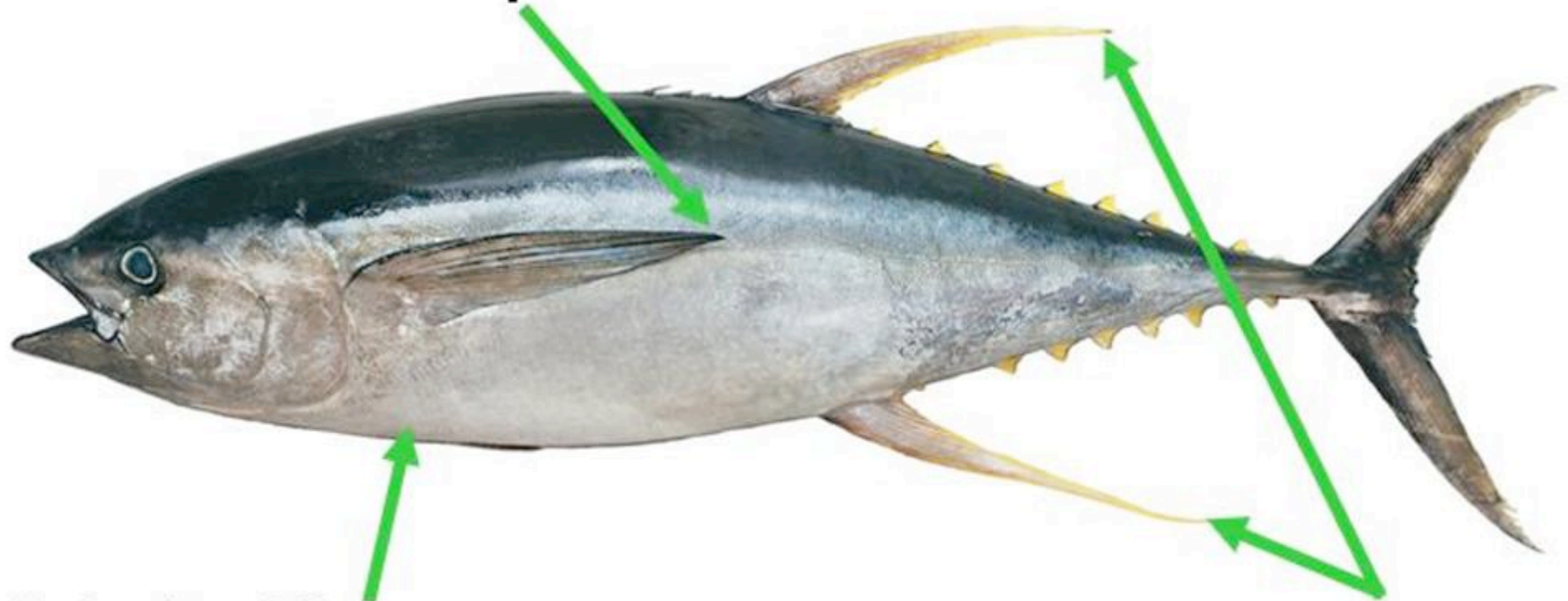
DFO-Claude Nozères

Mallotus villosus - capelin

***Mallotus villosus*: Capelin**

Yellowfin Tuna (*Thunnus albacares*)

Pectoral fin is long and extends past the first dorsal fin



Underside of the liver (internal) is not striated

Second dorsal fin and anal fin elongate in adults

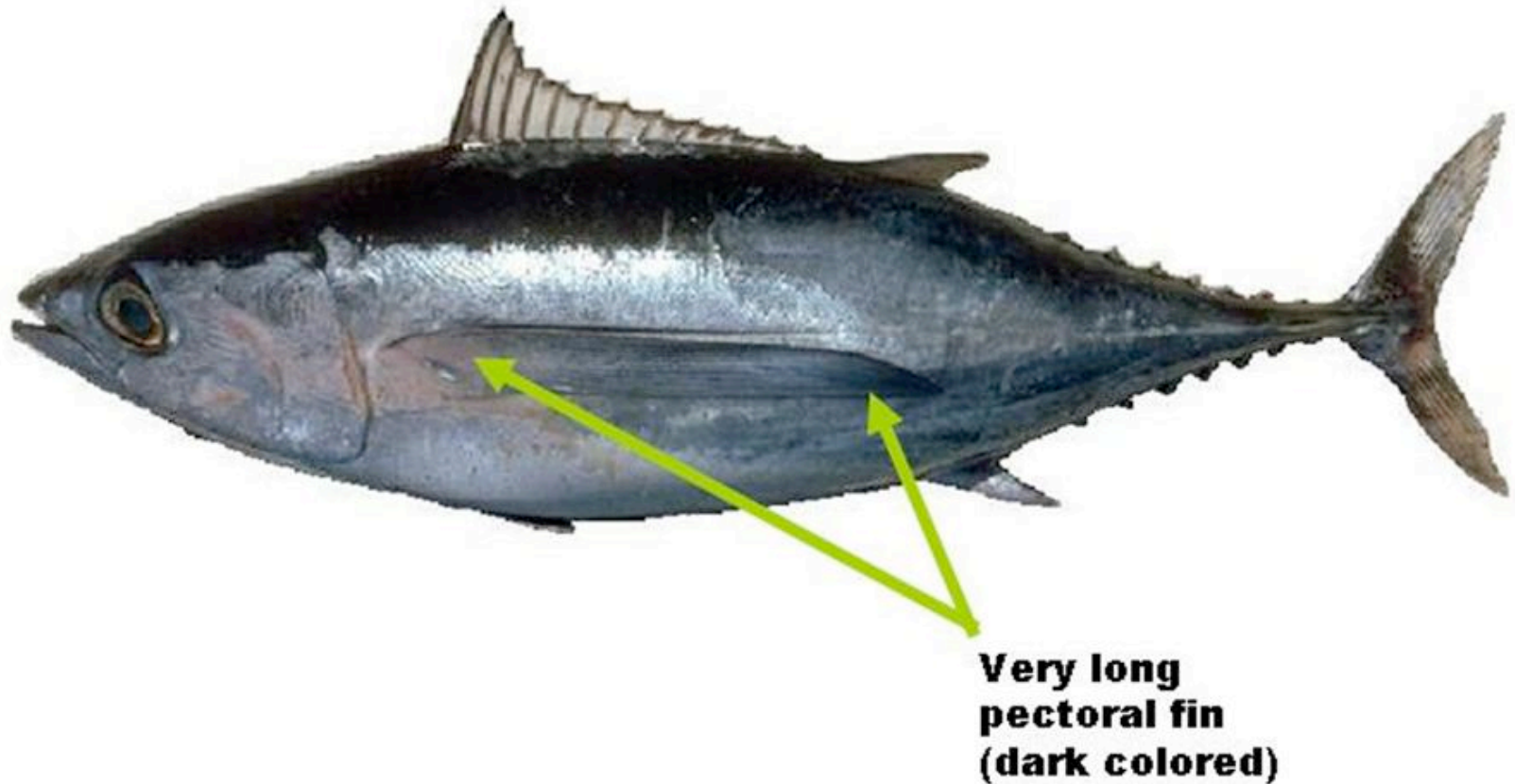


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Original photo courtesy of Hawaii Dept. of Business, Economic Development & Tourism, the Hawaii Seafood Promotion Committee, and Camera Hawaii.

***Thunnus albacares*: Yellowfin Tuna**

Albacore (*Thunnus alalunga*)

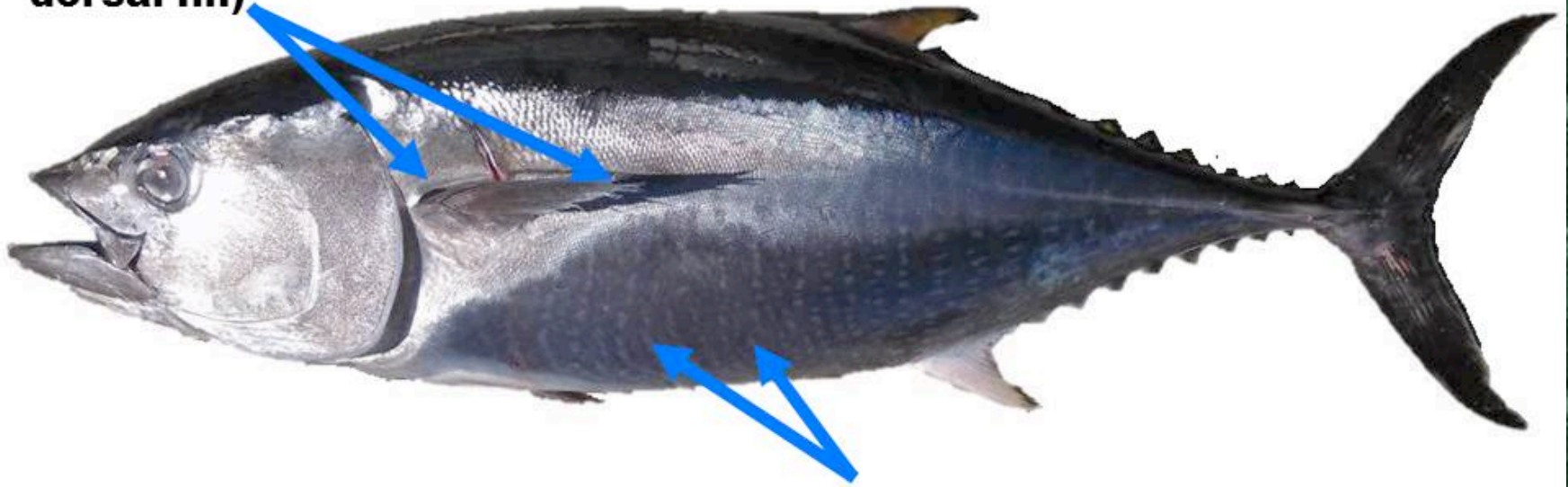


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***Thunnus alalunga*: Albacore Tuna**

Bluefin Tuna (*Thunnus thynnus*)

**Short pectoral fin (ends
before start of second
dorsal fin)**



**Lower half of body
marked with series of
dotted/broken
vertical white lines**



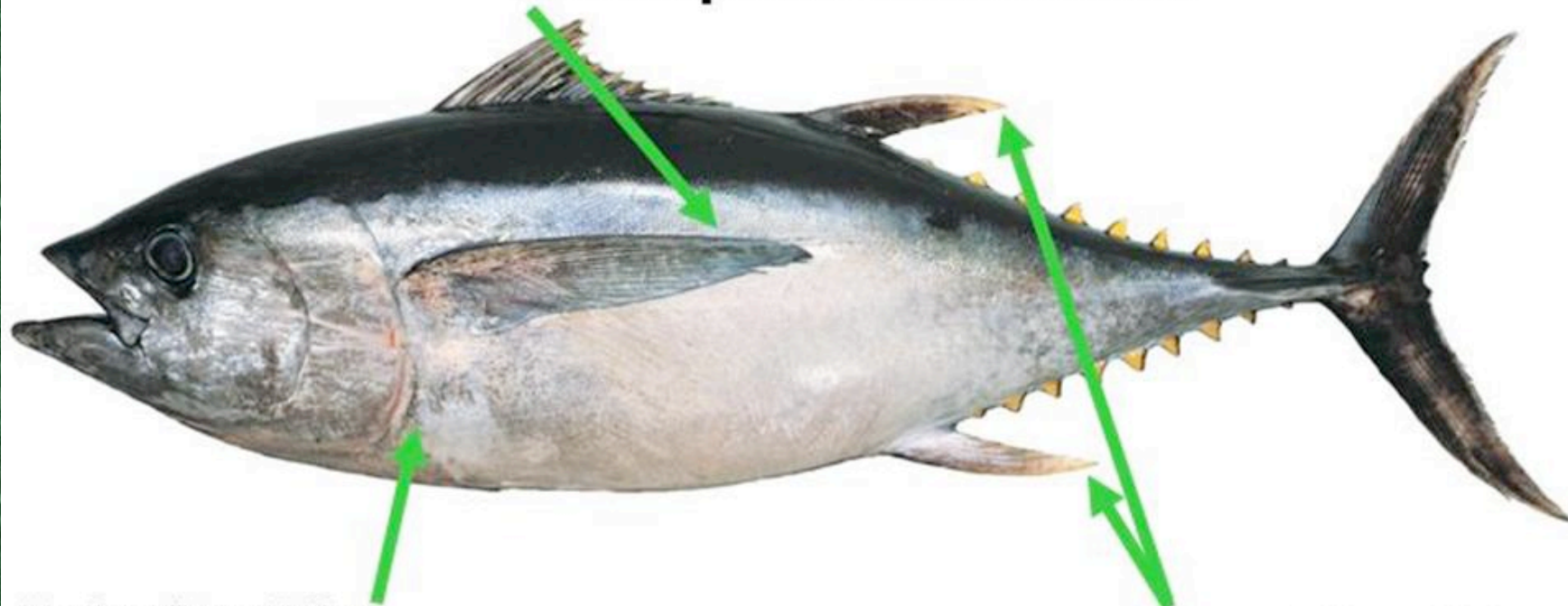
Marine Resources Program

**Oregon Department of Fish & Wildlife
Oregon Ocean Sport Fish Identification Guide**

***Thunnus thynnus*: Bluefin Tuna**

Bigeye Tuna (*Thunnus obesus*)

Pectoral fin is yellow and long and extends past the first dorsal fin



Underside of the liver (internal) has striations

Second dorsal fin and anal fin are not elongate



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Original photo courtesy of Hawaii Dept. of Business, Economic Development & Tourism, the Hawaii Seafood Promotion Committee, and Camera Hawaii.

***Thunnus obesus*: Bigeye Tuna**

Species: *Sarda chiliensis* (Cuvier, 1832)
Common Name: SL/AFS-Pacific Bonito
RFE Code: sardchil J97-001
Photographer: B. Tenge (SPRC, SEA-DO)
Date: 10-17-97
Image #: 422



Scanner: DTS-103AI Drum
Filename: sbrd001.tif
Date: 10-09-98
Original File: 10Mb, 400dpi
Orig. Image arch.: SEA-DO
Tissue arch.: SEA-DO/SAN-DO
Fish provided by: LOS-DO
Authentication: 03-19-98, T. Iwamoto, CAS

RFE Team: Tenge, Dang, Barnett, Savary, Rogers, Gerrity
RFE Funding: OS/CFSAN and ORA
RFE E-mail Contacts: <http://vm.cfsan.fda.gov/~frf/rfecon.html>



World Wide Web Version, v. 10-14-98

***Sarda chiliensis*: Pacific Bonito**



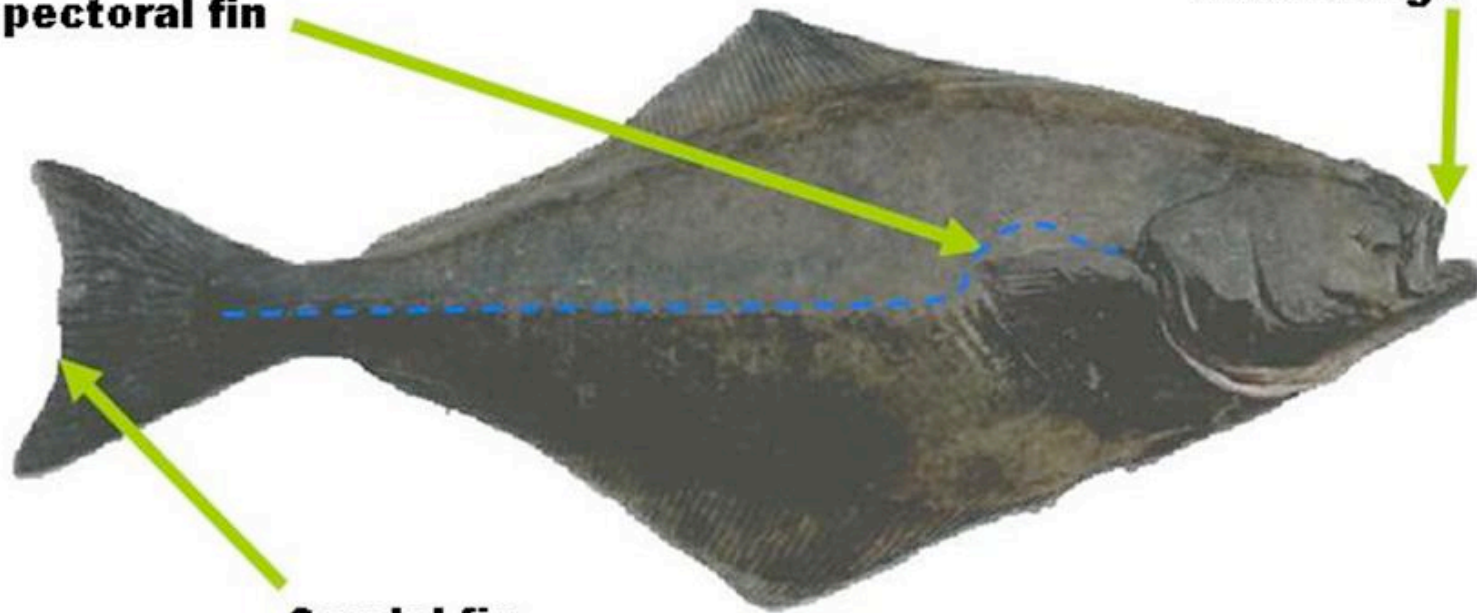
Hippoglossus hippoglossus (Linnaeus, 1758)

***Hippoglossus hippoglossus*: Atlantic Halibut**

Pacific Halibut (*Hippoglossus stenolepis*)

**Lateral line
arches high over
pectoral fin**

Mouth large



**Caudal fin
slightly indented**

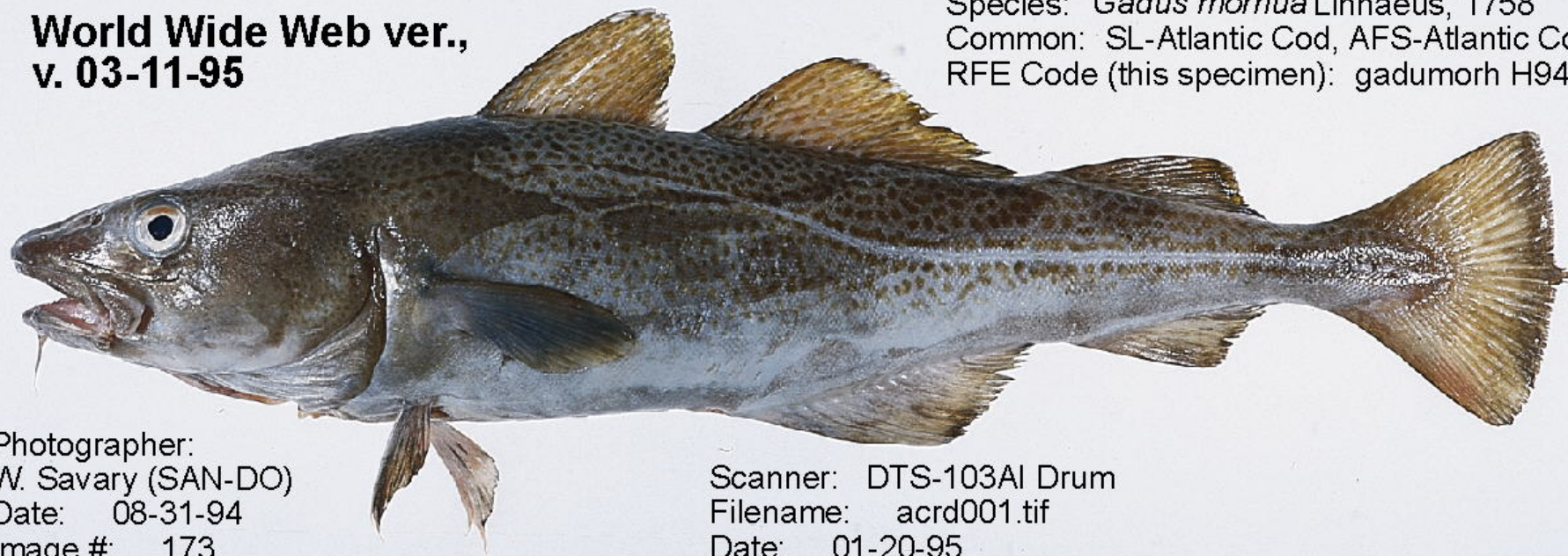


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***Hippoglossus stenolepis*: Pacific Halibut**

**World Wide Web ver.,
v. 03-11-95**

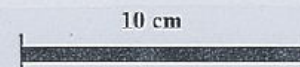
Species: *Gadus morhua* Linnaeus, 1758
Common: SL-Atlantic Cod, AFS-Atlantic Cod
RFE Code (this specimen): gadumorh H94-001



Photographer:
W. Savary (SAN-DO)
Date: 08-31-94
Image #: 173

Fish Provided by: USDC
Authen. B. Lauth, NMFS, 12-28-94
RFE contact: btenge@fdaem.ssw.dhhs.gov
RFE WWW coord.: F. Fry (CFSAN)
Internet: frf@fdacf.ssw.dhhs.gov

Scanner: DTS-103AI Drum
Filename: acrd001.tif
Date: 01-20-95
Original File: 11Mb, 400dpi
Orig. Image Archival: SEA-DO; Tissue Arch: SEA-DO/SAN-DO
RFE Team: Tenge, Barnett, Savary, Rogers, Dang
RFE Funding: OS/CFSAN and ORA



***Gadus morhua*: Atlantic Cod**

World Wide Web ver., v. 09-13-95

Species: *Gadus macrocephalus* Tilesius, 1810
Common Name: SL/AFS-Pacific Cod
RFE Code (this specimen): gadumacr 194-001
Photographer: W. Savary (SAN-DO)
Date: 09-06-94
Image #: 288



Scanner: DTS-103AI Drum
Filename: gmr001.tif
Date: 08-10-95
Original File: 12Mb, 400dpi
Orig. Image arch.: SEA-DO
Tissue arch.: SEA-DO/SAN-DO
Fish Provided by: Local Purchase
Authen. B. Lauth, NMFS, 12-28-94

RFE Team: Tenge, Barnett, Savary, Rogers, Dang
RFE Funding: OS/CFSAN and ORA
RFE contact: btenge@fdaem.ssw.dhhs.gov
RFE WWW coord.: F. Fry (CFSAN)
Internet: frf@fdacf.ssw.dhhs.gov

10 cm



***Gadus macrocephalus*: Pacific Cod**

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