Chinook Salmon Age Interpretation Summary for Copper River Stocks.

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Outline

• Copper River Chinook background.
• Age reading materials and methods.
• Age training methods.
• Ensuring consistency among readers.
• Challenges to aging Chinook scales.
Prince William Sound area
Check current regulations for legal boundaries.

- **Current District lines**
- **Current Subdist. or Stat Areas lines**
- **Other District, Subdist. or stat area lines**
- **Regulatory closed waters**
Chinook Salmon Total Run
Copper River

Median = 70,700

Number of Fish

Inriver Abundance
Lower River Harvesets

0 20,000 40,000 60,000 80,000 100,000 120,000

Median = 70,700
Chinook Salmon ages...Commercial

Median = 1,854 ages

Age 1.2, 1.3, and 1.4 >95% on average
Materials and Methods

Scale collections

- Electronic Fish Measuring Boards
- Scale gum cards and card holders
- Forceps
- Headlamps
Materials and Methods

Age Materials

- Scale Preparation Equipment
- Scale press
- Precut acetates
- Preprinted labels
Materials and Methods

Scale Reading

- Microfiche stations (2 for production)
- Scanning microfiche (imaging and measuring)
- Paper forms for age
Winter Circuli
Summer Circuli
Transition zone
Nucleus (Freshwater growth)
Plus Growth
Radial Striations
Focus
Anterior field
Posterior field

Similar to Clutter and Whitesel (1956) and Yole (1989)
Materials and Methods

Age Interpretation Training

- Read background materials - manual
- Practice reads with experienced staff
- Blind test agreement – among readers
- Assessment of precision - not accuracy
Materials and Methods

Age Interpretation Training

Read (and study) background materials

- **Selected Literature..** Clutter and Whitesel (1956).
- Scale characteristics by species.
- Example scales by species.
### Example Contingency Table – between reader

<table>
<thead>
<tr>
<th>Count of Fish</th>
<th>Reader A</th>
<th>Reader B</th>
<th>1.1</th>
<th>1.2</th>
<th>1.3</th>
<th>1.4</th>
<th>2.2</th>
<th>2.3</th>
<th>2.4</th>
<th>Grand Total</th>
</tr>
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<tbody>
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<td>Reader B</td>
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<td>2</td>
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<td></td>
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</tr>
</tbody>
</table>
Materials and Methods

Maintain Consistency

• Read with experienced readers.
• Blind tests agreement – among readers.
• Second reads by other readers.
Challenges

- No known age scales – Copper River.
  - Chinook Initiative - CWT

- Limited time for collections (individual strata and annually).

- Limited money and time for training, preseason testing, and consistency testing.
7 PM start of sampling event.

1 am break during sampling event.

Questions?