

AYK Region Chinook Salmon Aging



**Chinook Scale Aging Meeting
April 2, 2014 Juneau
Larry DuBois / ADF&G**

Arctic-Yukon-Kuskokwim (AYK) Region



Materials

Gum card 4"x 2.5"

3 scales/fish, 10 fish/card

Acetate (clear-lay)

~165 °F, 3 minutes, 35,000 lbs

Microfiche reader

Indus and Eyecom

15mm lens (48x)

Clear ruler (mm)

Aging Staff Experience

Yukon

FB-1 (<1 season)

FWT-2 (1 season)

Kuskokwim

FWT-4 (7 seasons)

FWT-3 (1 season chum)

Norton Sound

FB-1 (2 seasons)

Age Training – New ager

Review literature

Introduce to easy scales

Age with them

Age independently

Review age discrepancies/patterns

Ages in agreement

Absorbed scales

Consistency

Yukon

- **Multiple agers in field (Emmonak)**
- **Age independently then review ages**
- **Postseason review difficult ages/projects**

Kuskokwim

- **One experienced ager in field (Bethel)**
- **Age once marking uncertain ages**
- **Postseason review ages**
- **Reage percentage from each project (20%-30%)**
- **Age summaries compared, possible further aging**

Norton Sound (Nome)

- **Aging with previous ager**

Yukon River Chinook Salmon Aging Consistency

by

Larry DuBois|

and

Zachary W. Liller

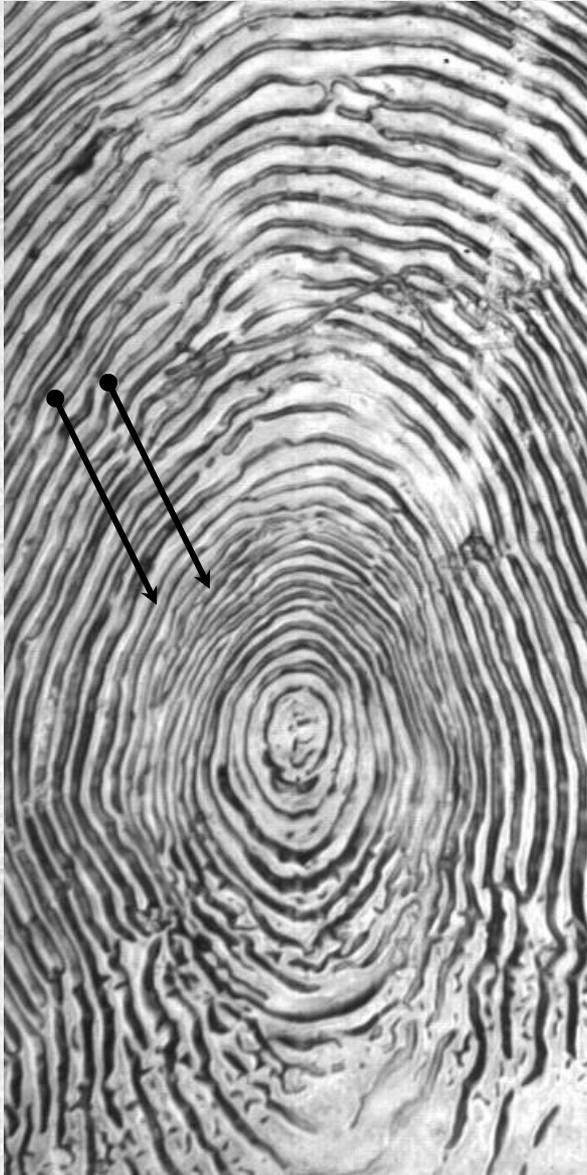
June 2010

Alaska Department of Fish and Game

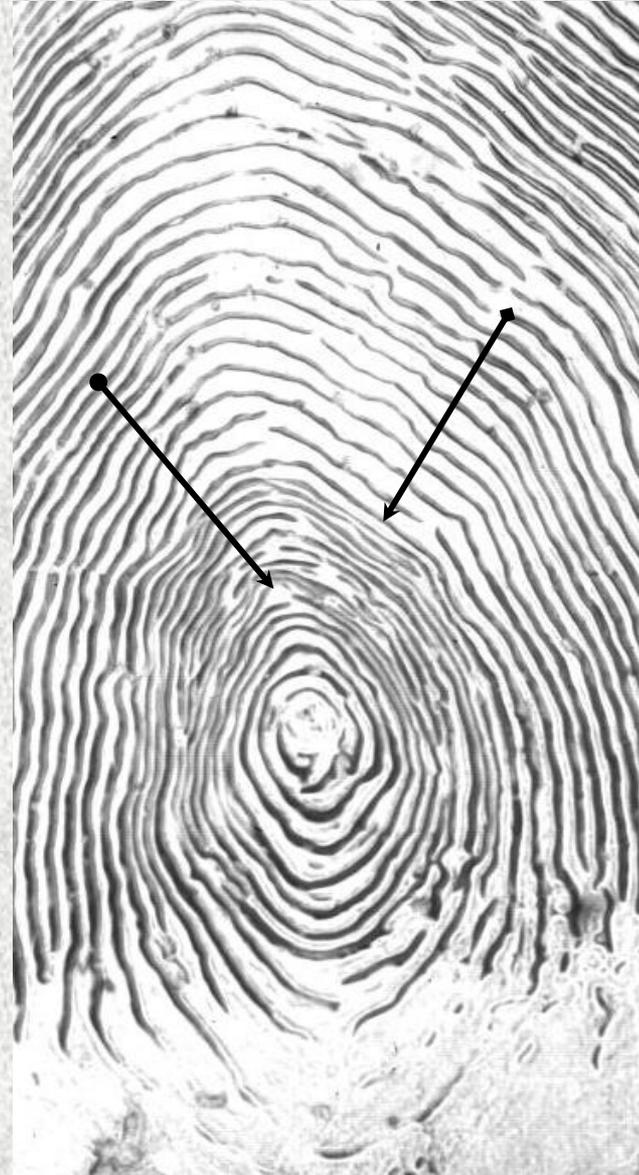
Divisions of Sport Fish and Commercial Fisheries



Yukon FW Plus Growth



Lower River

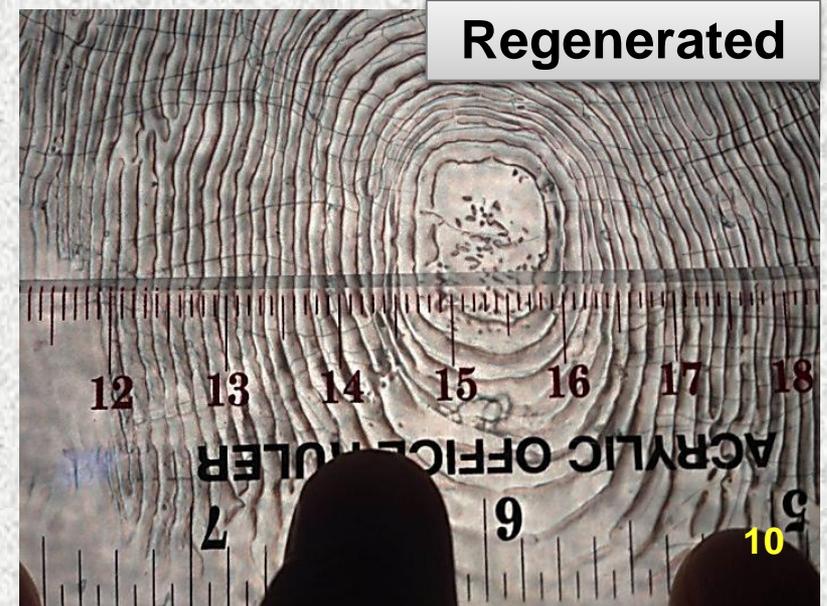
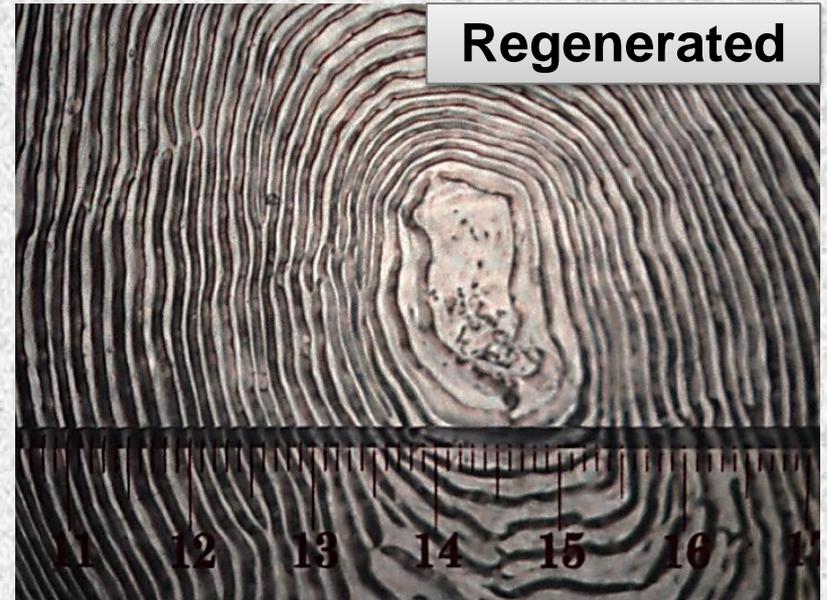
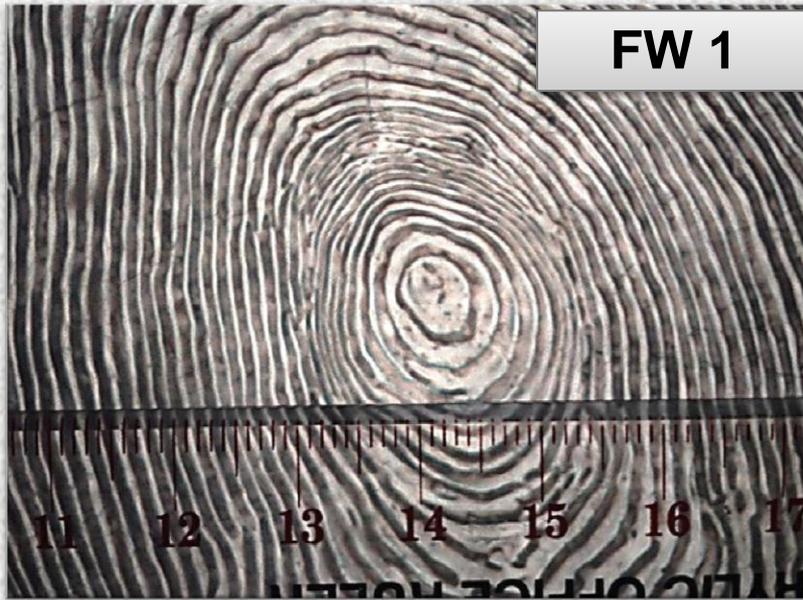


Upper River

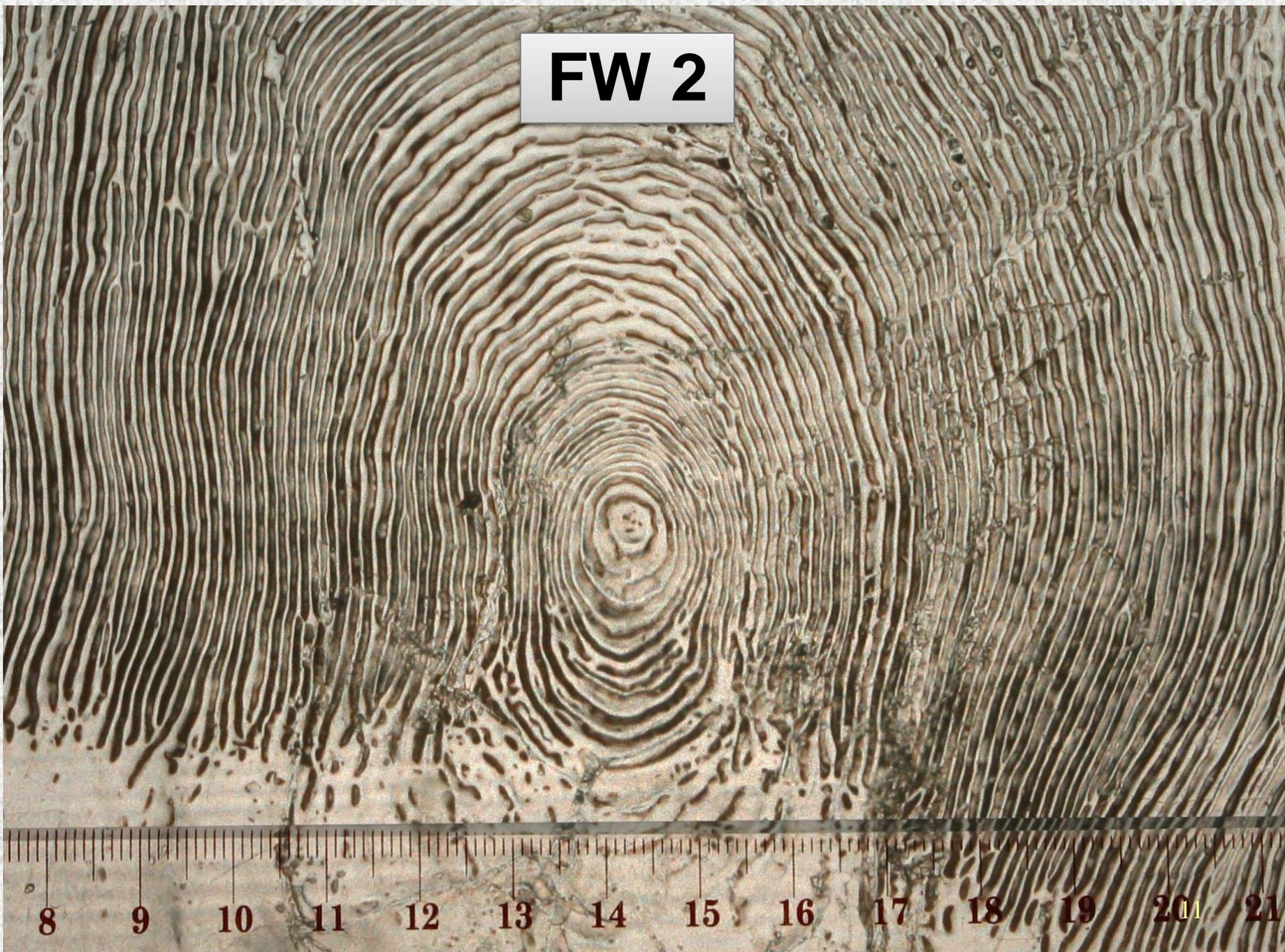
Aging Freshwater

- **First FW circulus diameter ≤ 10 mm (actual 0.21mm)**
- **Freshwater plus growth**
- **Breaking, branching, and compressed circuli**
- **Annulus extends 240° around focus (8-4 o'clock)**
- **Any annulus extension below focus**
- **FW 2 and FW 1 annuli separated by reasonable growth**

10mm Diameter 1st Circulus



FW 2



FW 2

4 scales

1 fish

12

W4 Commercial 7/10/13



W4 Commercial 7/20/13



FW 0

W5 Commercial 7/6/13



Salmon River Weir 7/22/13



Aging Saltwater

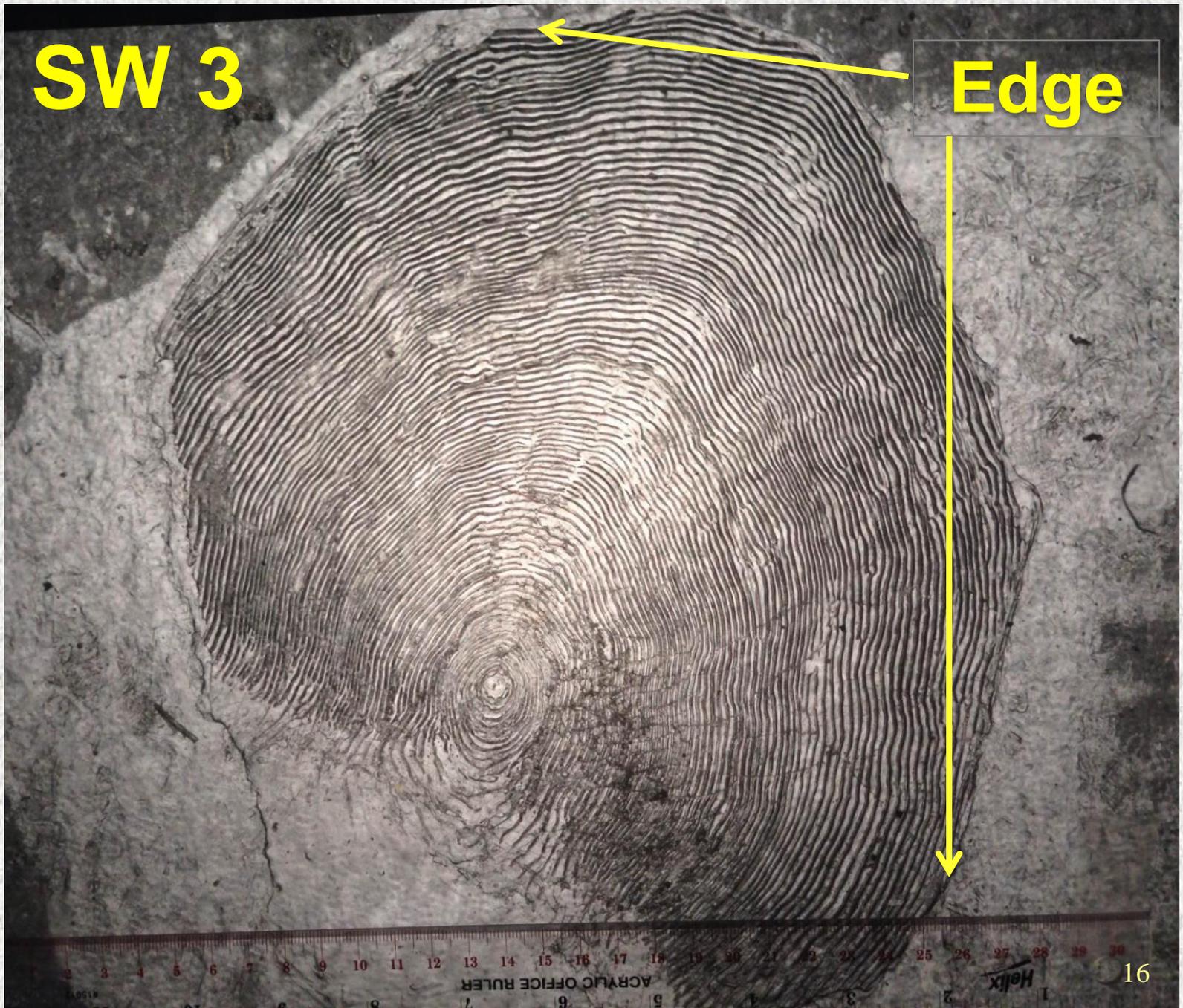
- Expecting SW 1 annulus diameter ~90-110mm
- Gradual compression before annulus
- Annulus ≥ 3 circuli compressed, follow around scale
- Wide circuli spacing after annulus
- Annulus at or near scale edge
- Little if any SW plus growth
- Length may be used to confirm age
- Kuskokwim some portion of non-resorbed scale edge must be visible

SW 5



SW 3

Edge



Aging Saltwater Absorbed Scales (Yukon)

- **Use all scales to piece together full picture**
- **Familiar with SW patterns from lower river scales**
- **Interpreting SW plus growth after last visible annulus**
- **Comparing SW plus growth to previous summer**
- **May add another saltwater annulus (one only)**
- **Assuming similar absorption range by location**
- **Length may be used to confirm age**



SW 3 absorbed



Questions?

