

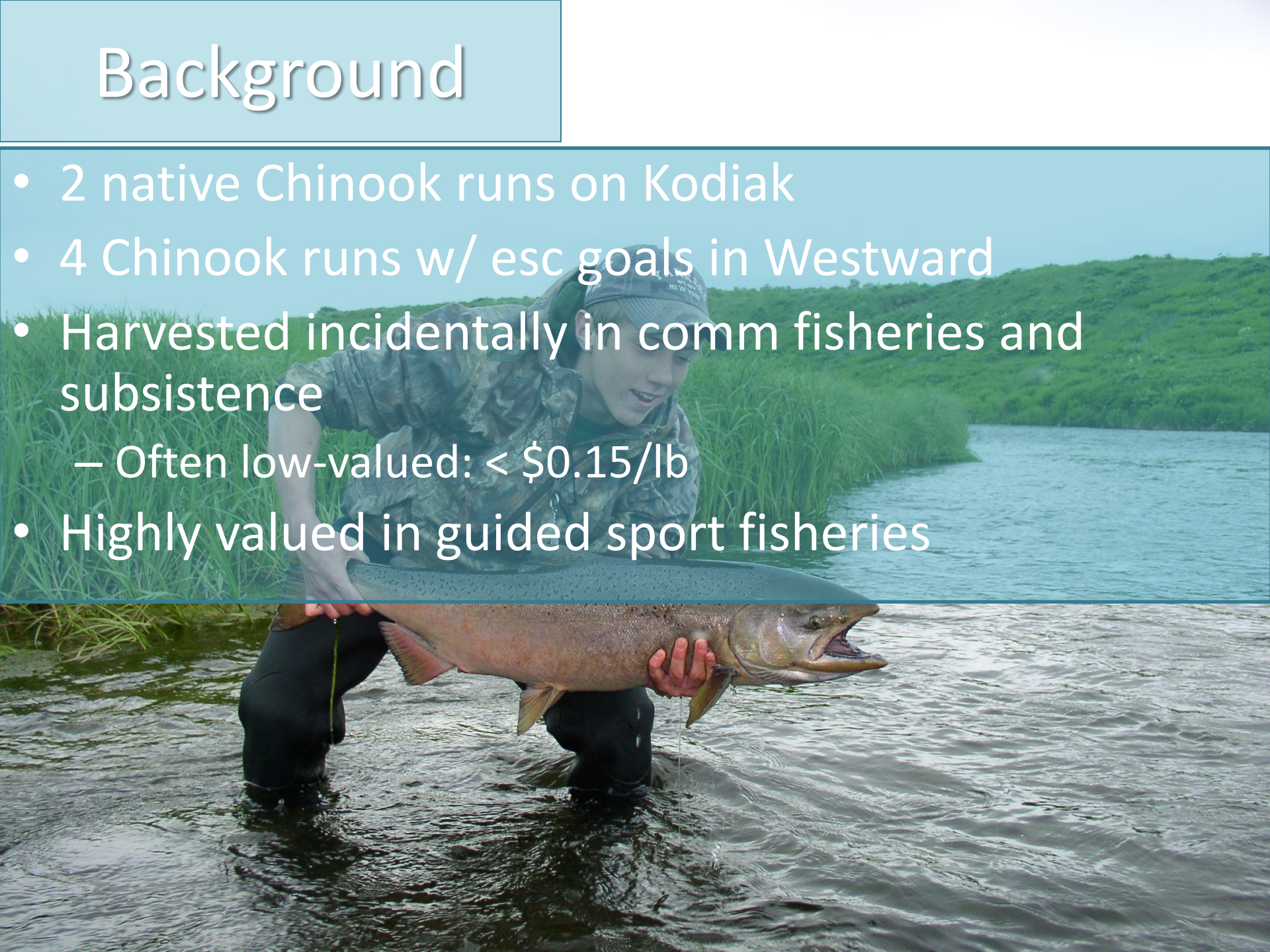
Chinook Salmon Scale Aging in the Westward Region



Tyler Polum
ADF&G Sportfish
Kodiak, AK

Background


- 2 native Chinook runs on Kodiak
- 4 Chinook runs w/ esc goals in Westward
- Harvested incidentally in comm fisheries and subsistence
 - Often low-valued: < \$0.15/lb
- Highly valued in guided sport fisheries





Materials and Methods

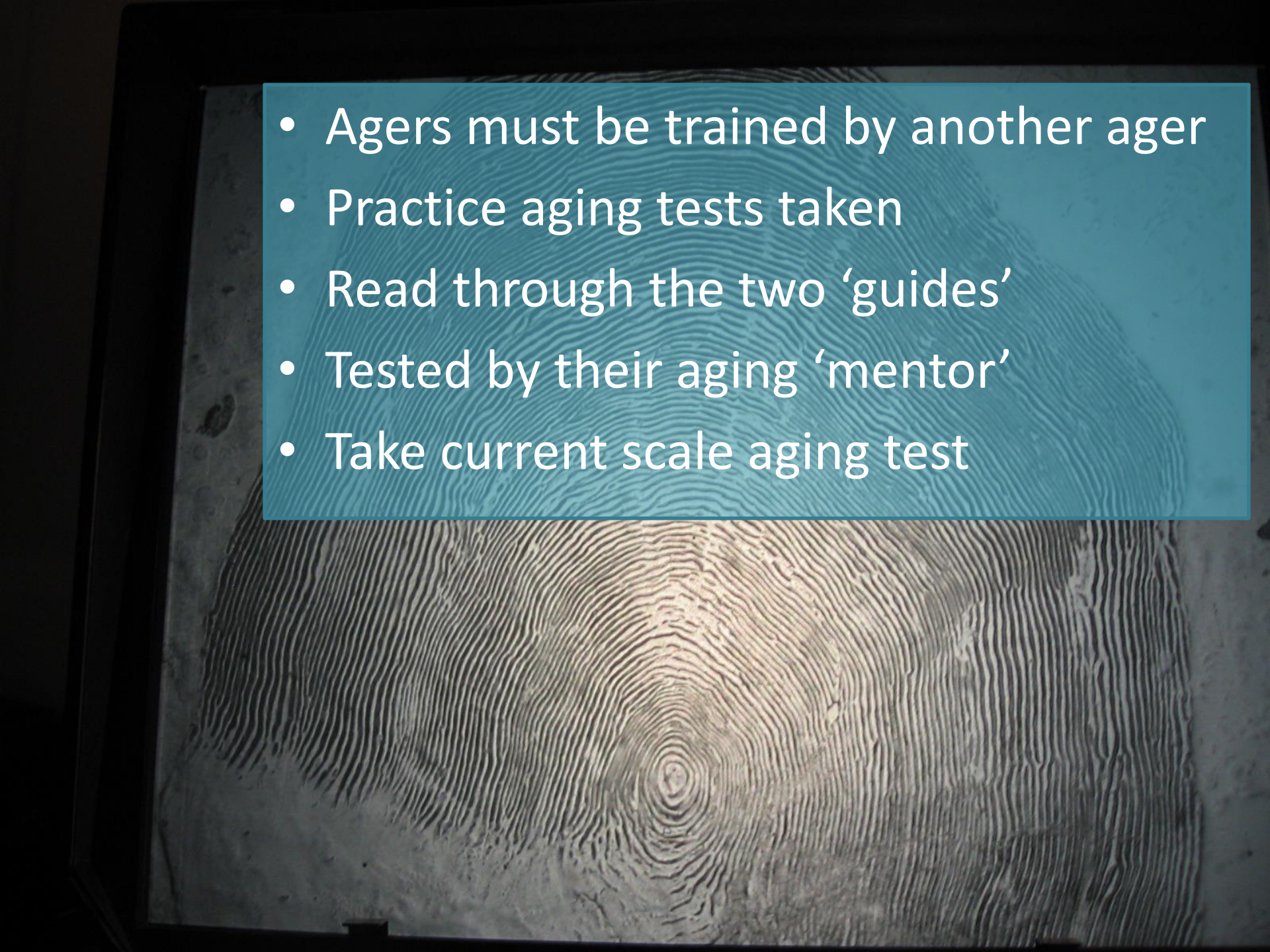
- Collect 3-4 scales, place on gum cards
- Use padded sampling troughs
- Crews are trained pre-season in scale collection

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- The background of the slide features a close-up, detailed view of fish scales, showing their intricate, overlapping patterns and iridescent colors. In the lower portion, the heads of several fish are visible, with their eyes and gills clearly defined. The overall lighting is dramatic, highlighting the textures and colors of the fish's skin and scales.
- Scales pressed on acetate cards with hydraulic press
 - Viewed on Microfiche
 - Use standards set by Mosher (1969)

Training Methods

The background of the slide is a photograph of several salmon in an aquarium. The fish are swimming in clear water, and their silvery scales and fins are visible. The lighting is somewhat dim, creating a naturalistic underwater scene.

- Has been responsibility of one SF biologist in recent history
- Use 'Identifying Salmon Species by their Scale Characteristics'
- Use 'Salmon Scales: A Guide to Aging and Identification'
- Built off numerous papers and articles on file in our library

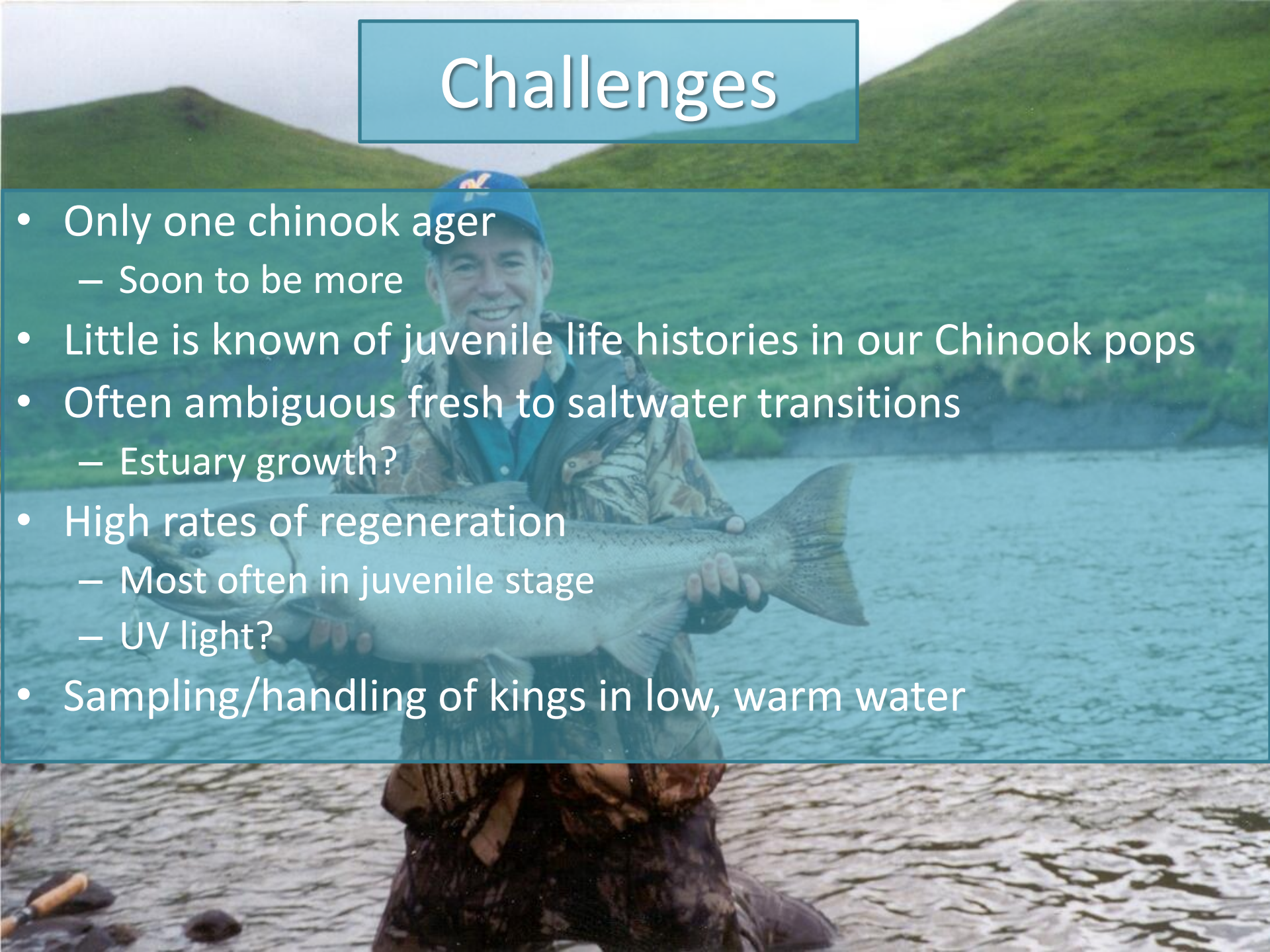
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- Agers must be trained by another ager
 - Practice aging tests taken
 - Read through the two 'guides'
 - Tested by their aging 'mentor'
 - Take current scale aging test

Steps to Ensure Consistency

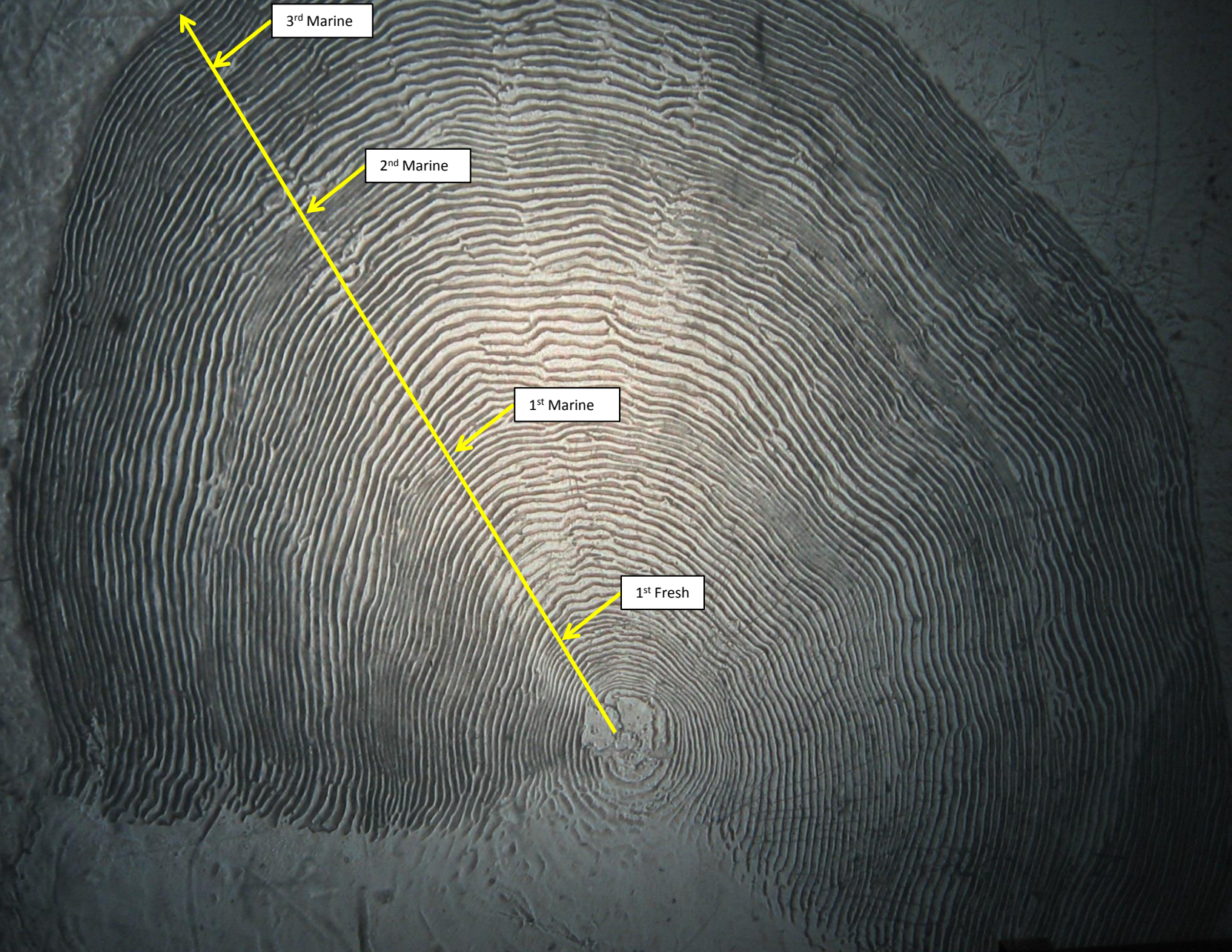
- For Chinook, one ager
- Everyone in region trained by same standard
 - Established by CF salmon and herring staff
- General communication of techniques and challenges between staff
- Most staff age a few stocks annually, are ‘specialized’ in those stocks
- Nothing formal, for now

Challenges

- Only one chinook ager
 - Soon to be more
- Little is known of juvenile life histories in our Chinook pops
- Often ambiguous fresh to saltwater transitions
 - Estuary growth?
- High rates of regeneration
 - Most often in juvenile stage
 - UV light?
- Sampling/handling of kings in low, warm water



Karluk Esc Age 1.3



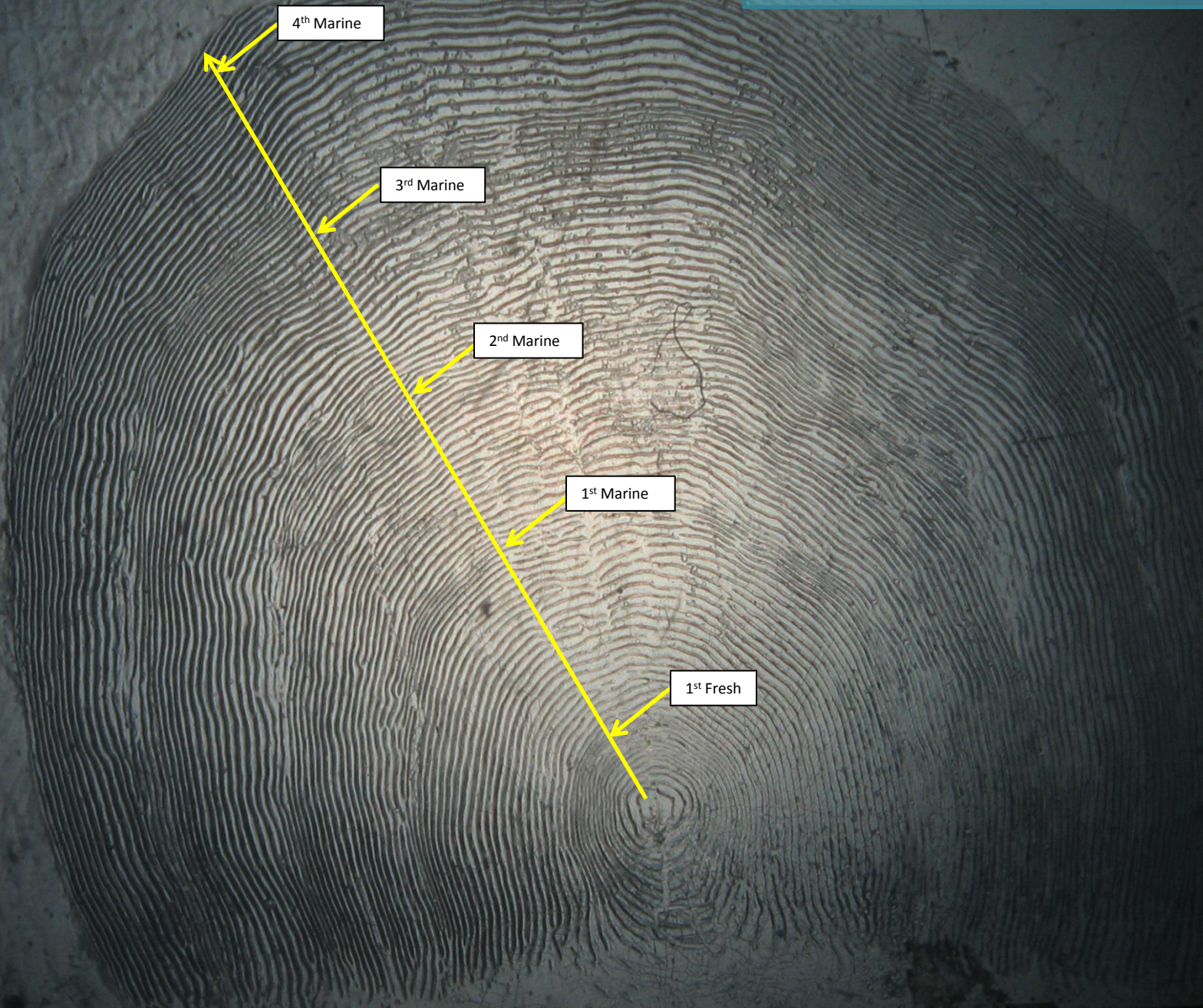
3rd Marine

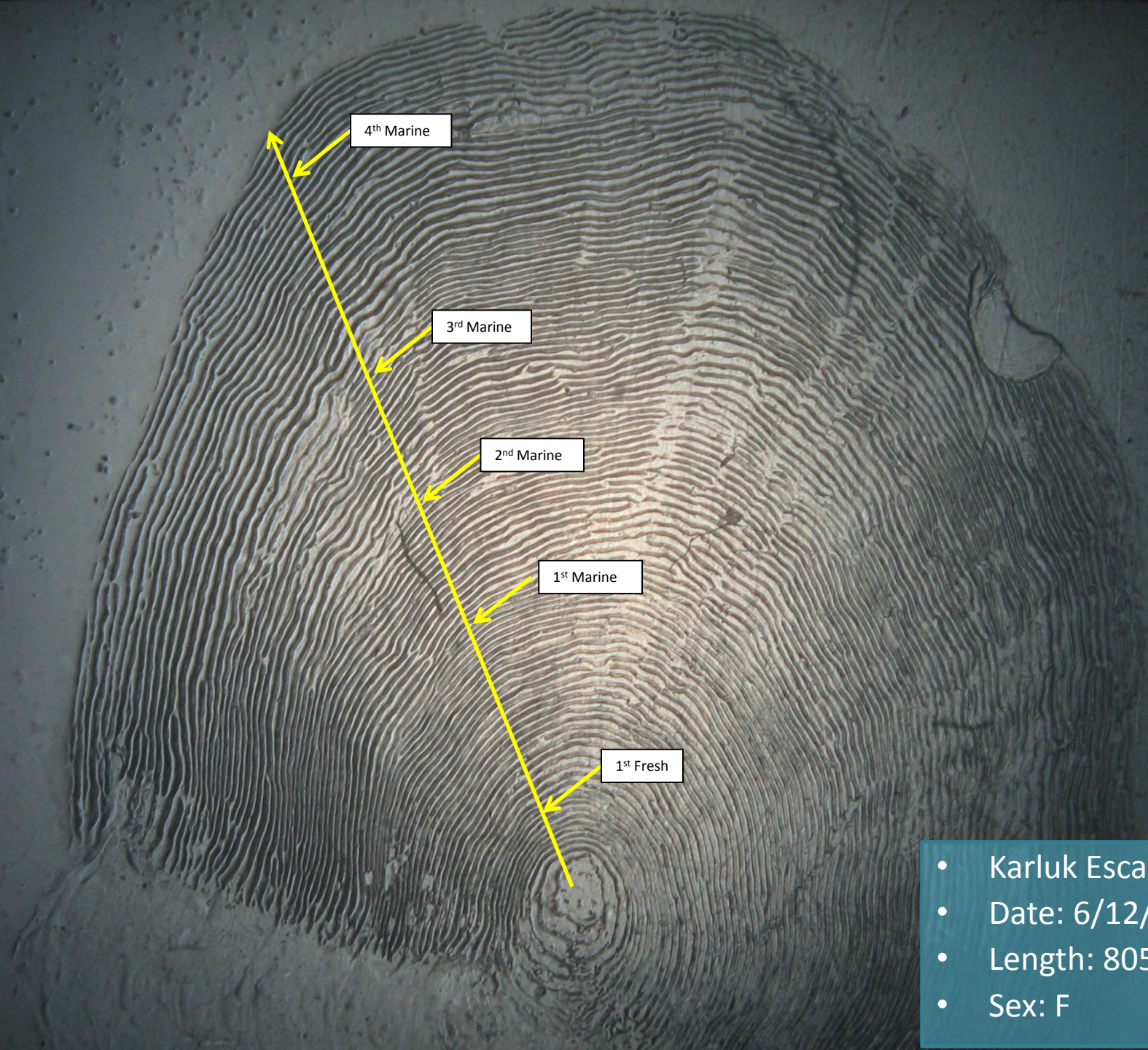
2nd Marine

1st Marine

1st Fresh

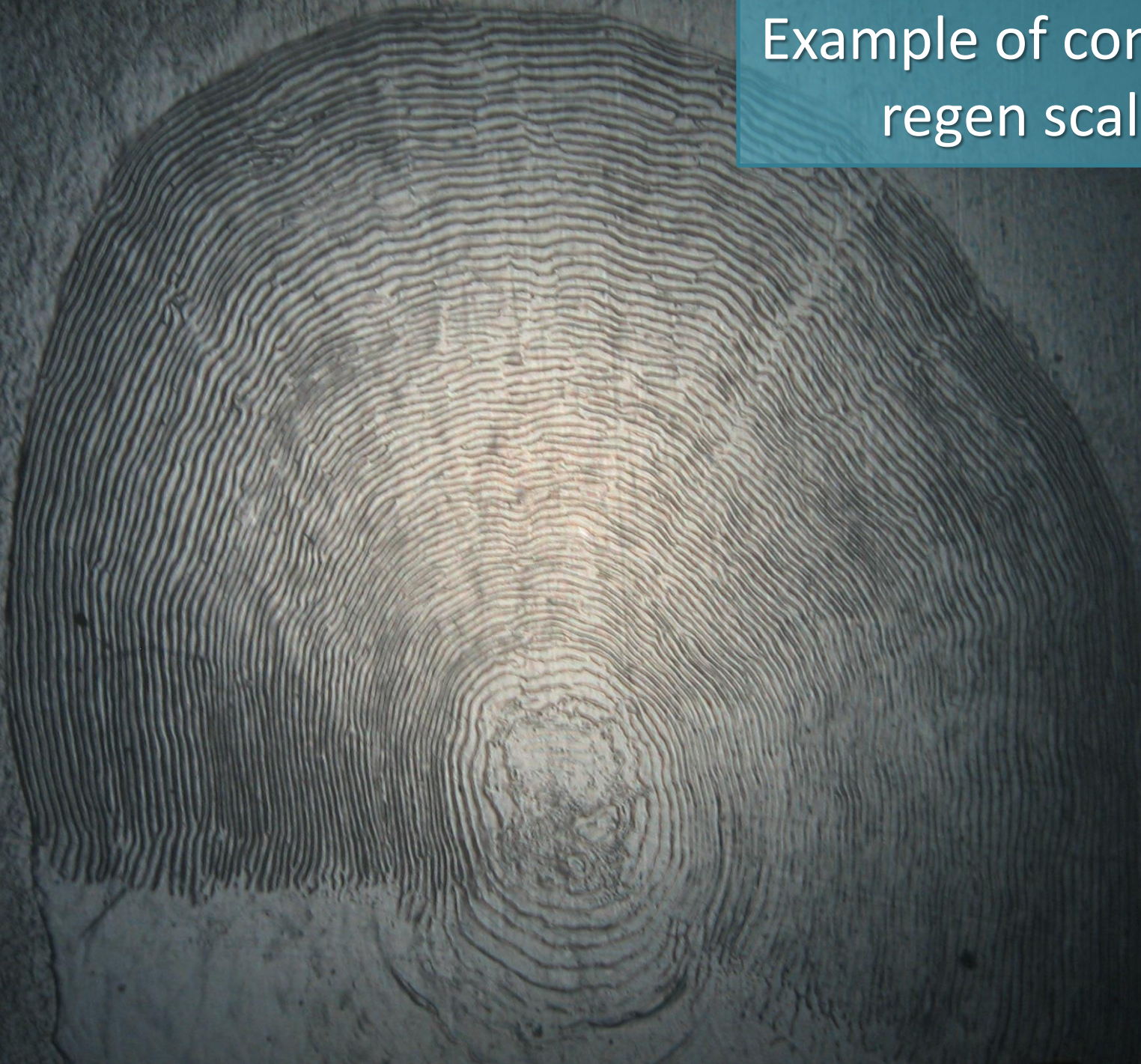
Karluk Esc Age 1.4

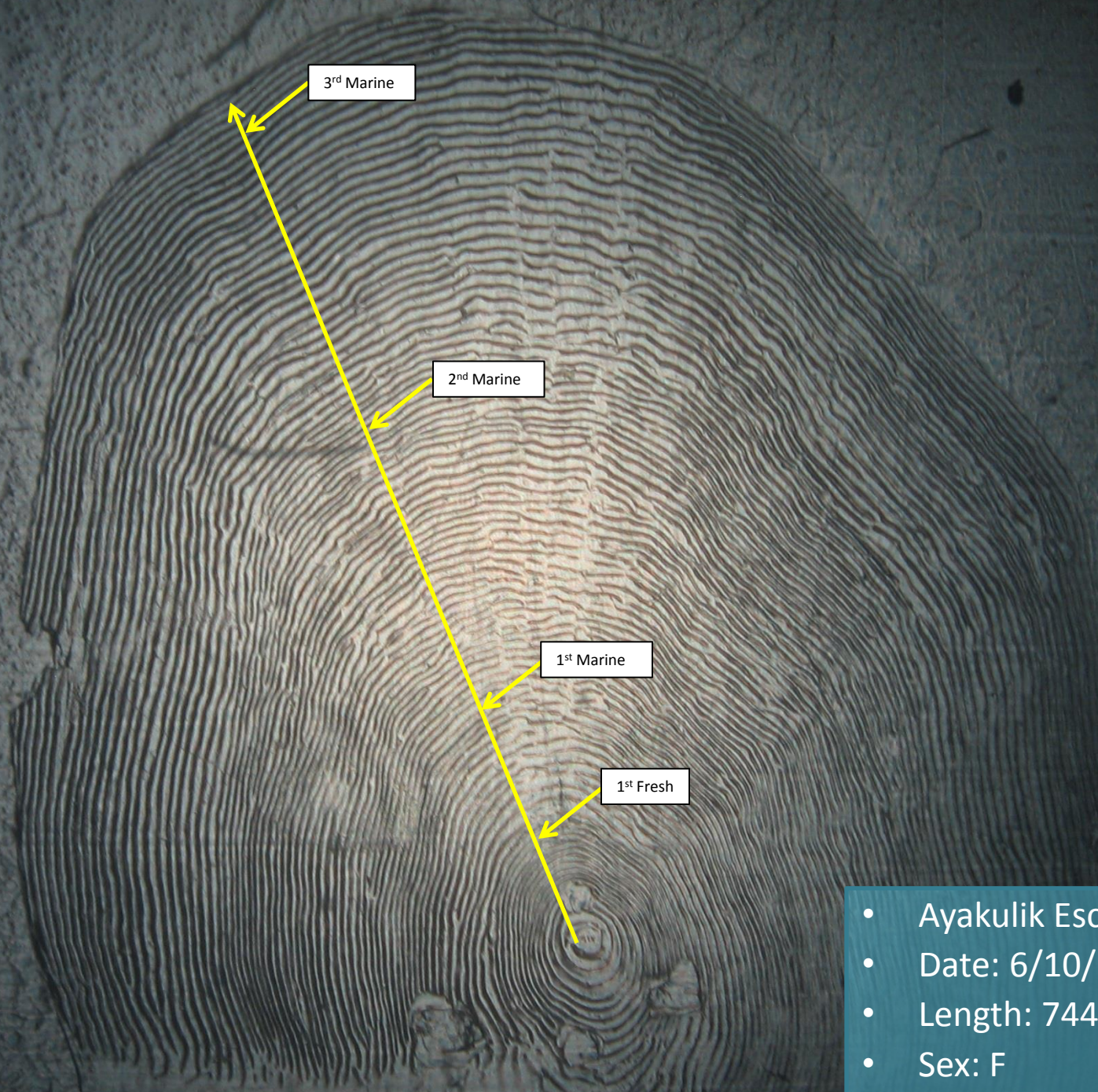




- Karluk Escapement
- Date: 6/12/13
- Length: 805mm
- Sex: F

Example of common
regen scale





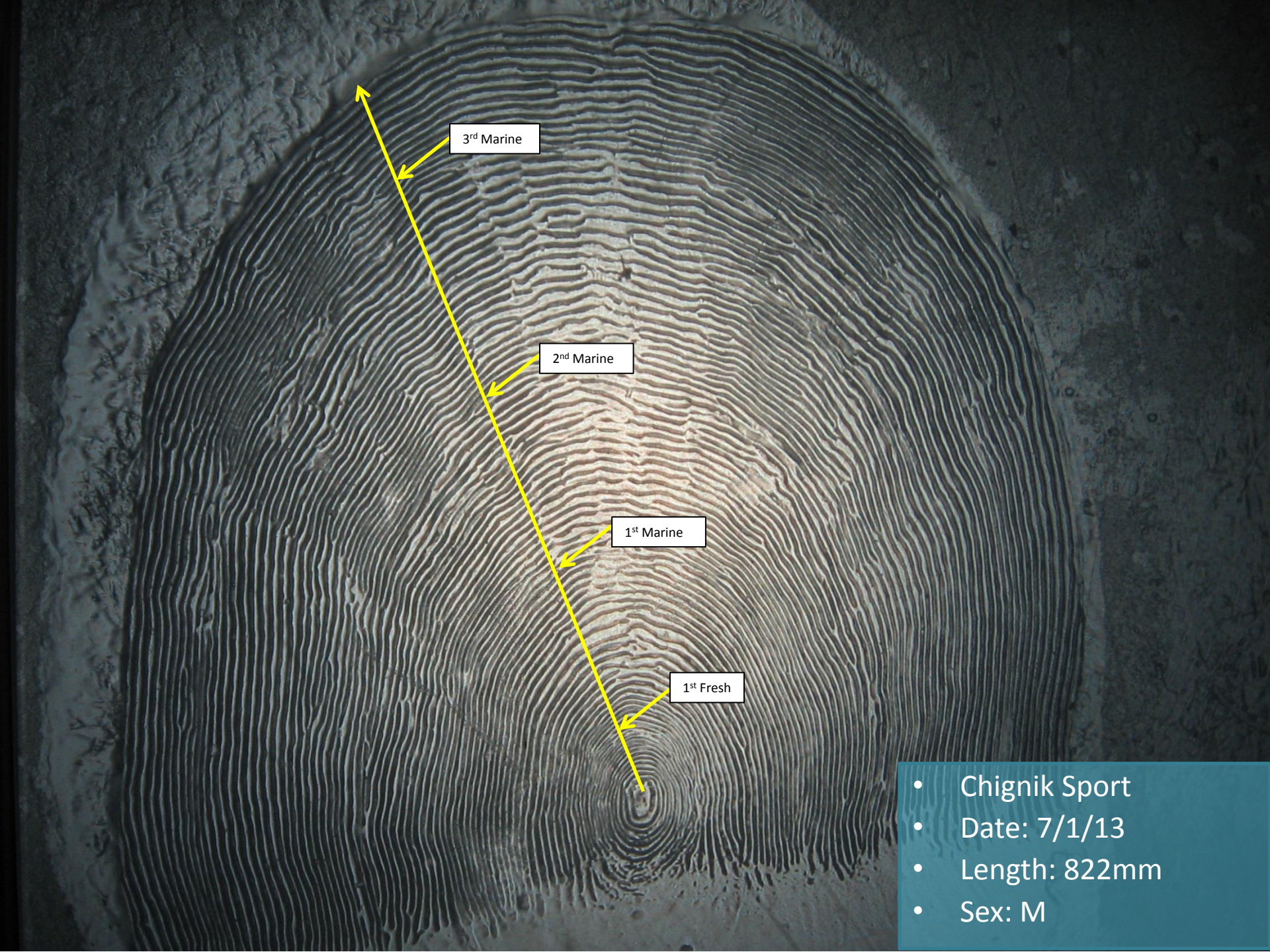
3rd Marine

2nd Marine

1st Marine

1st Fresh

- Ayakulik Escapement
- Date: 6/10/13
- Length: 744mm
- Sex: F



3rd Marine

2nd Marine

1st Marine

1st Fresh

- Chignik Sport
- Date: 7/1/13
- Length: 822mm
- Sex: M