

# Life History Comparison of Selected Natural and Hatchery Populations of Snake River Steelhead

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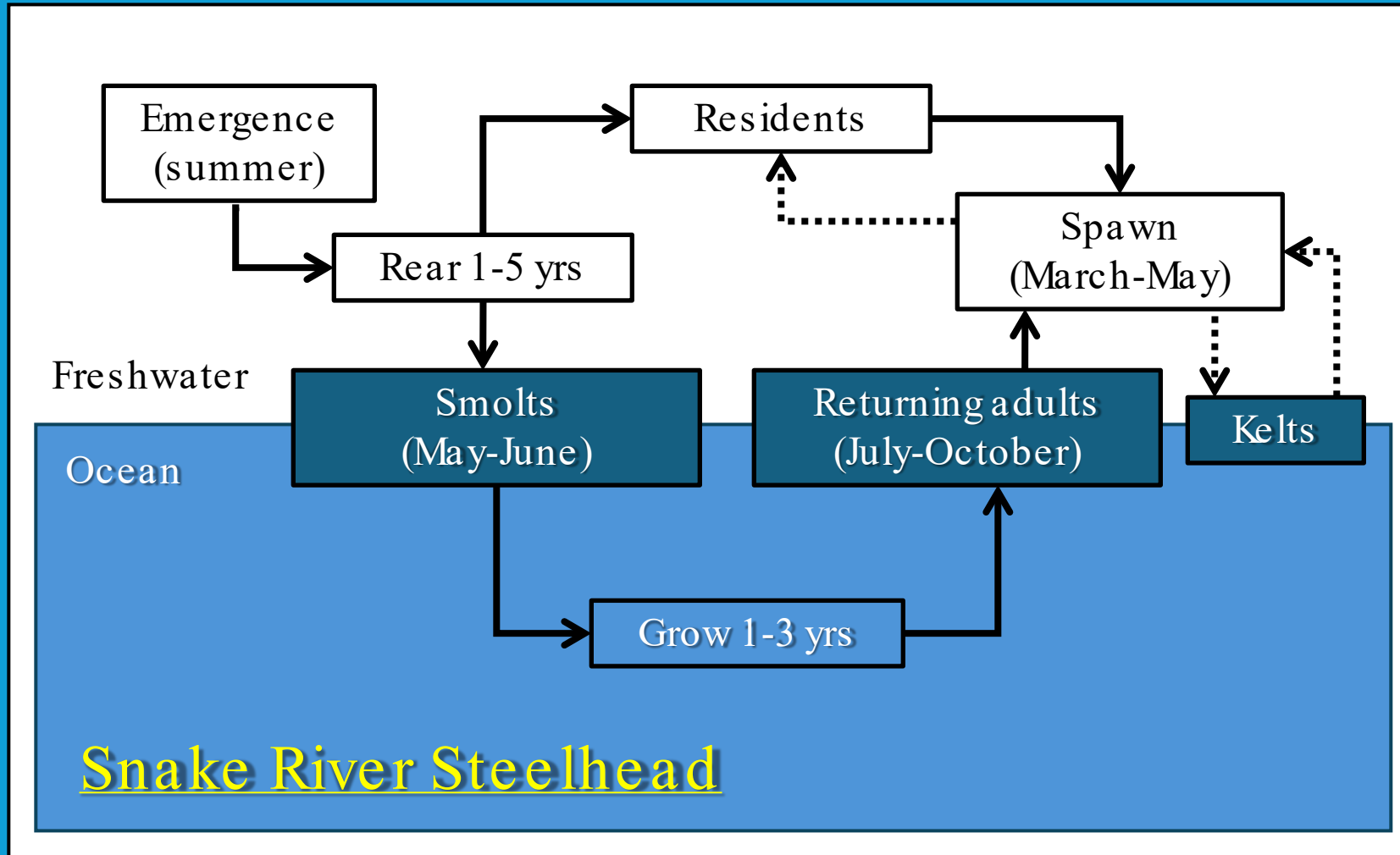


# Today's Menu

- Review basic life history characteristics
- Quick landscape and management history summary
- Snapshot comparisons of selected populations
  - Build from “Life History Diversity of Snake River Steelhead Trout Populations between and within Management Categories”
  - For hatchery data not at hand, we relied on LSRCP reports (last 4-5 yrs)
- A word about natural steelhead in the upper Salmon River

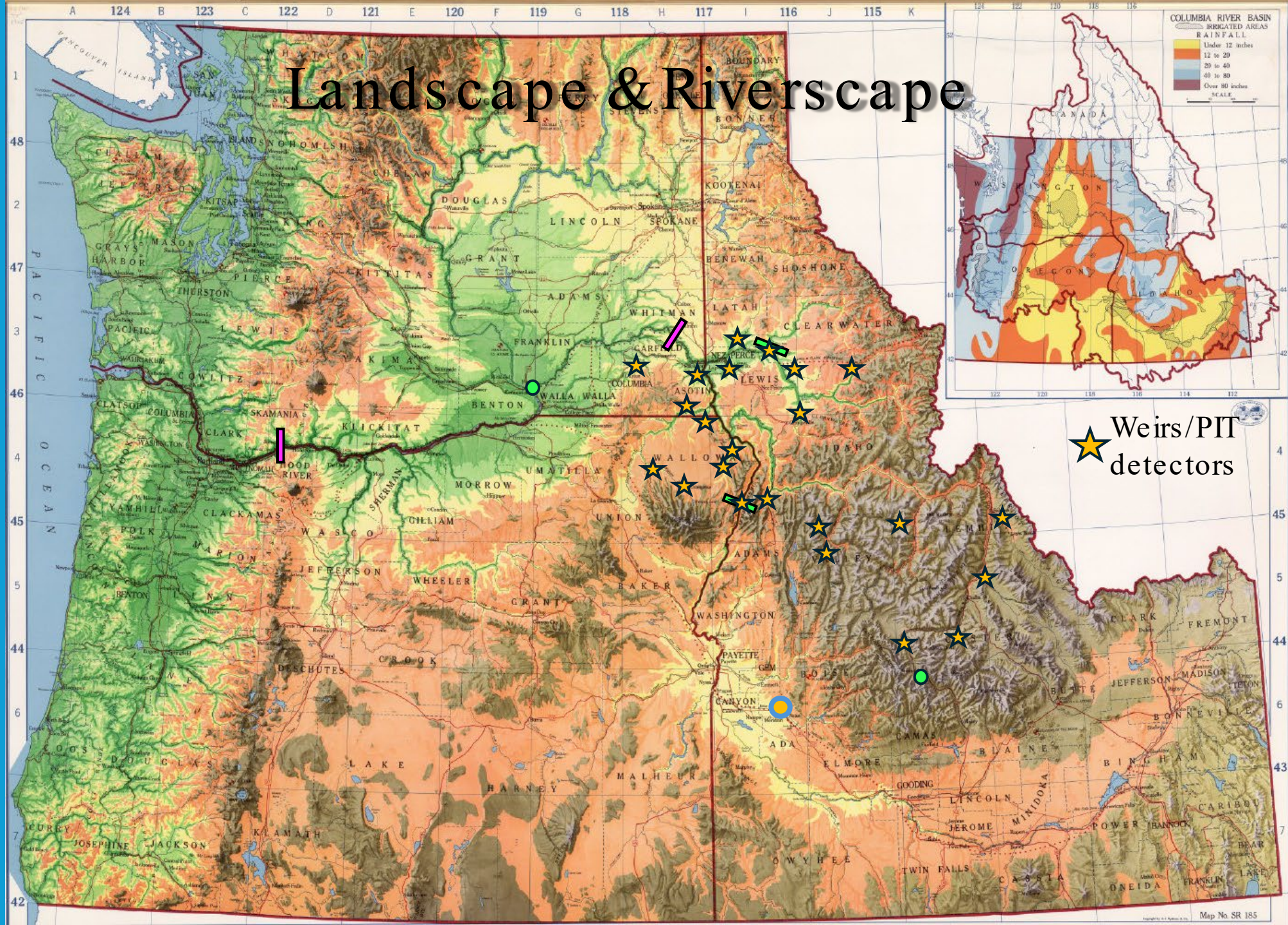


# Basic Life History Template



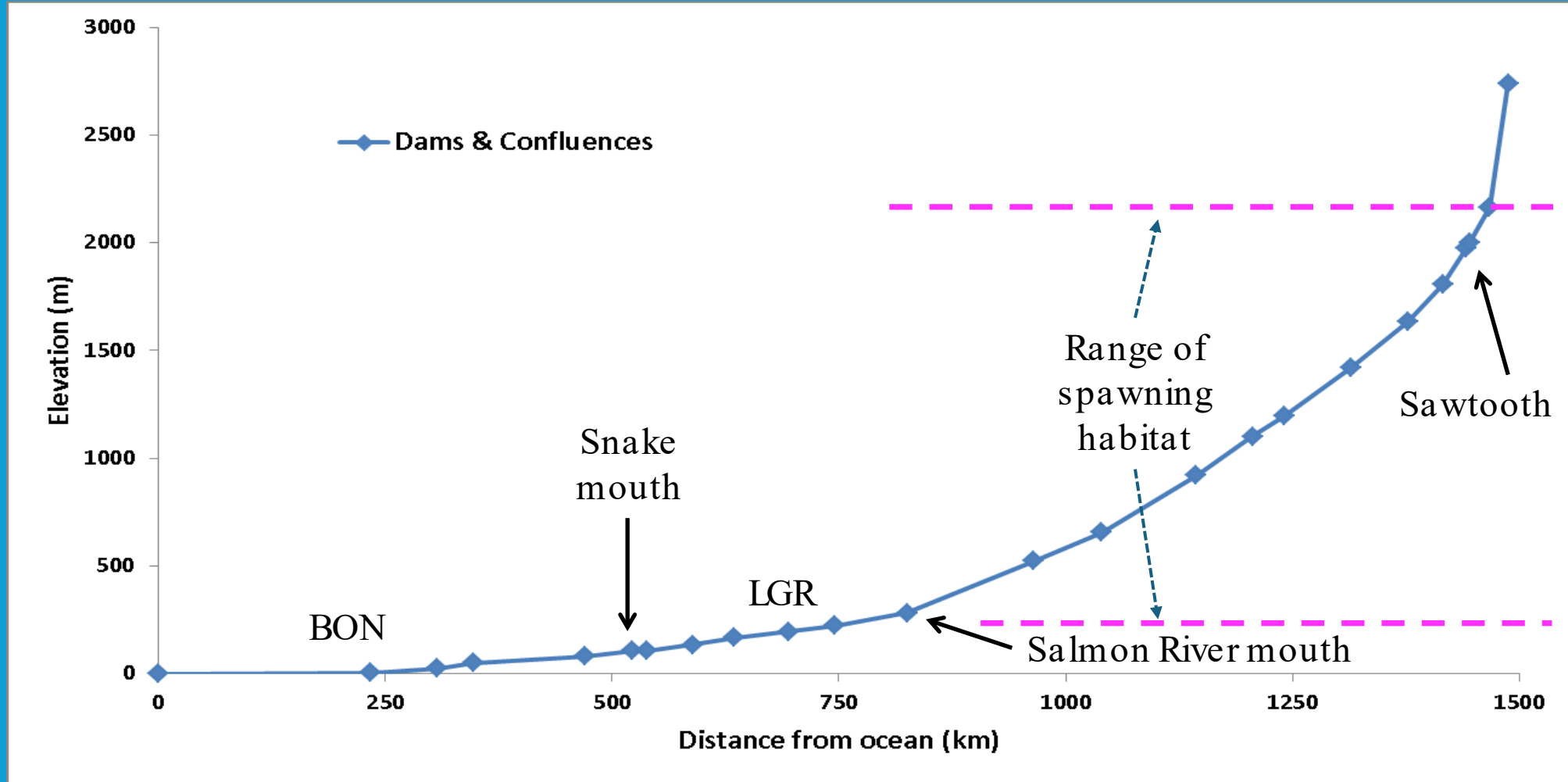


# Landscape & Riverscape

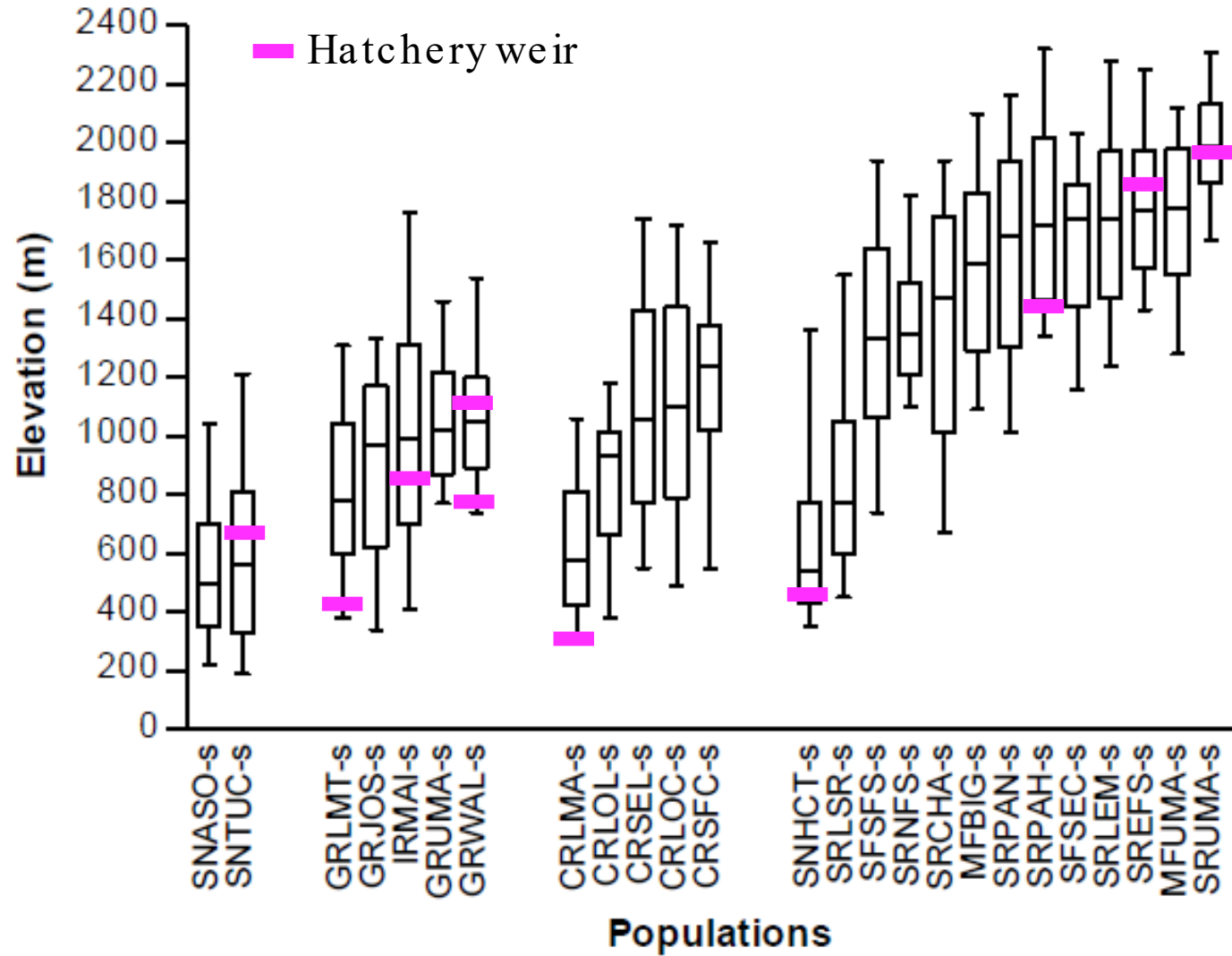




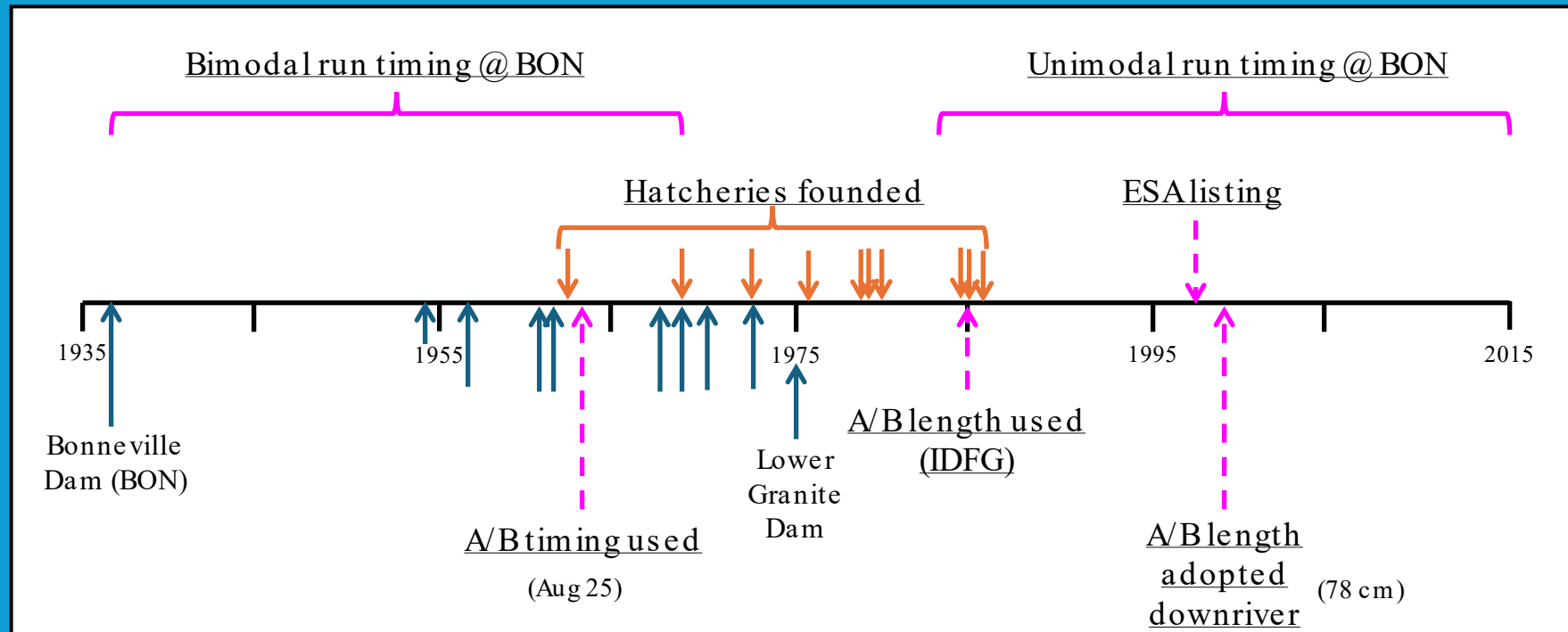
# The Long and Winding Road



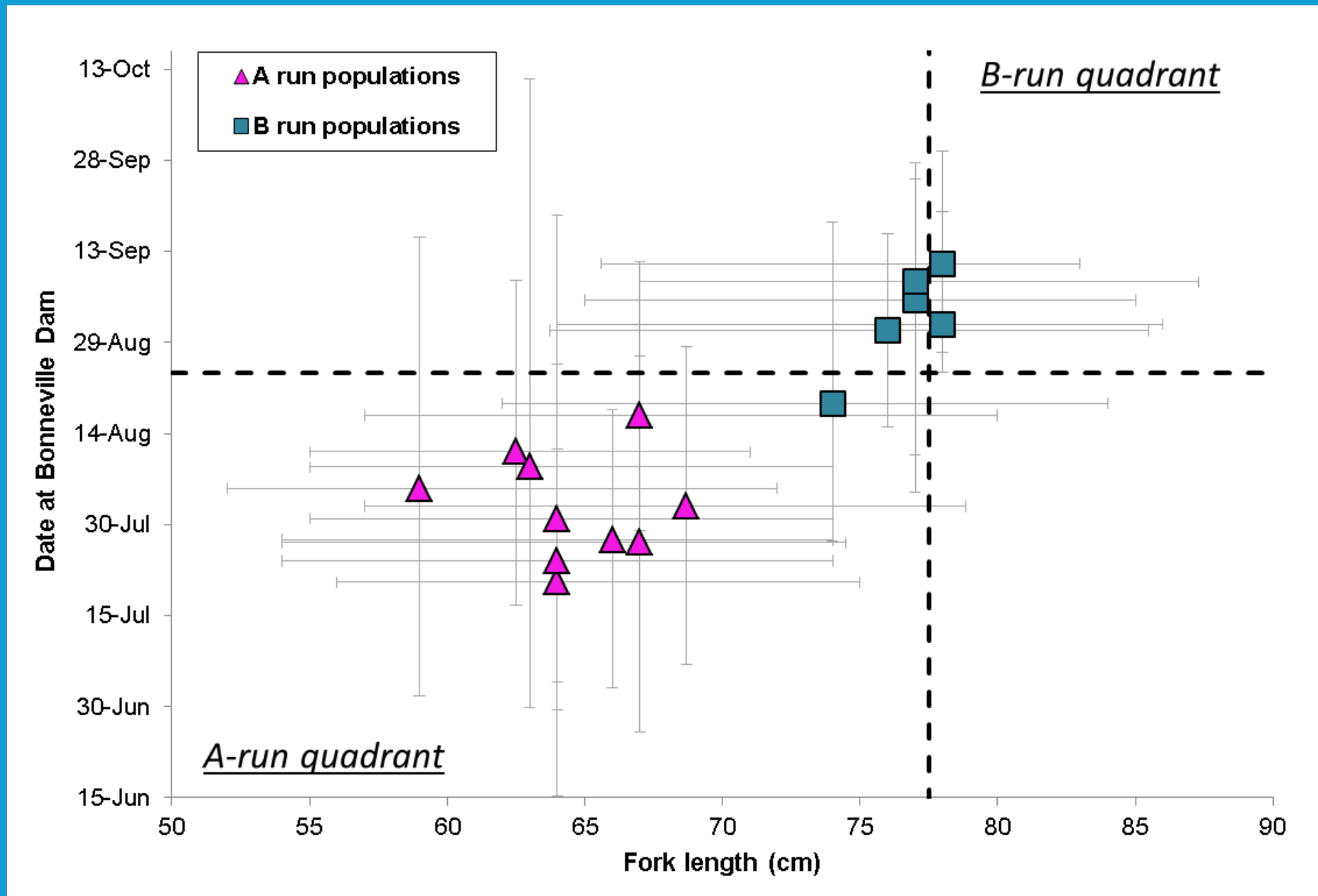
## Snake River Steelhead ESU Spawning Elevation Ranges (Intrinsic)



# Steelhead Management Chronology in the Snake & Columbia Rivers

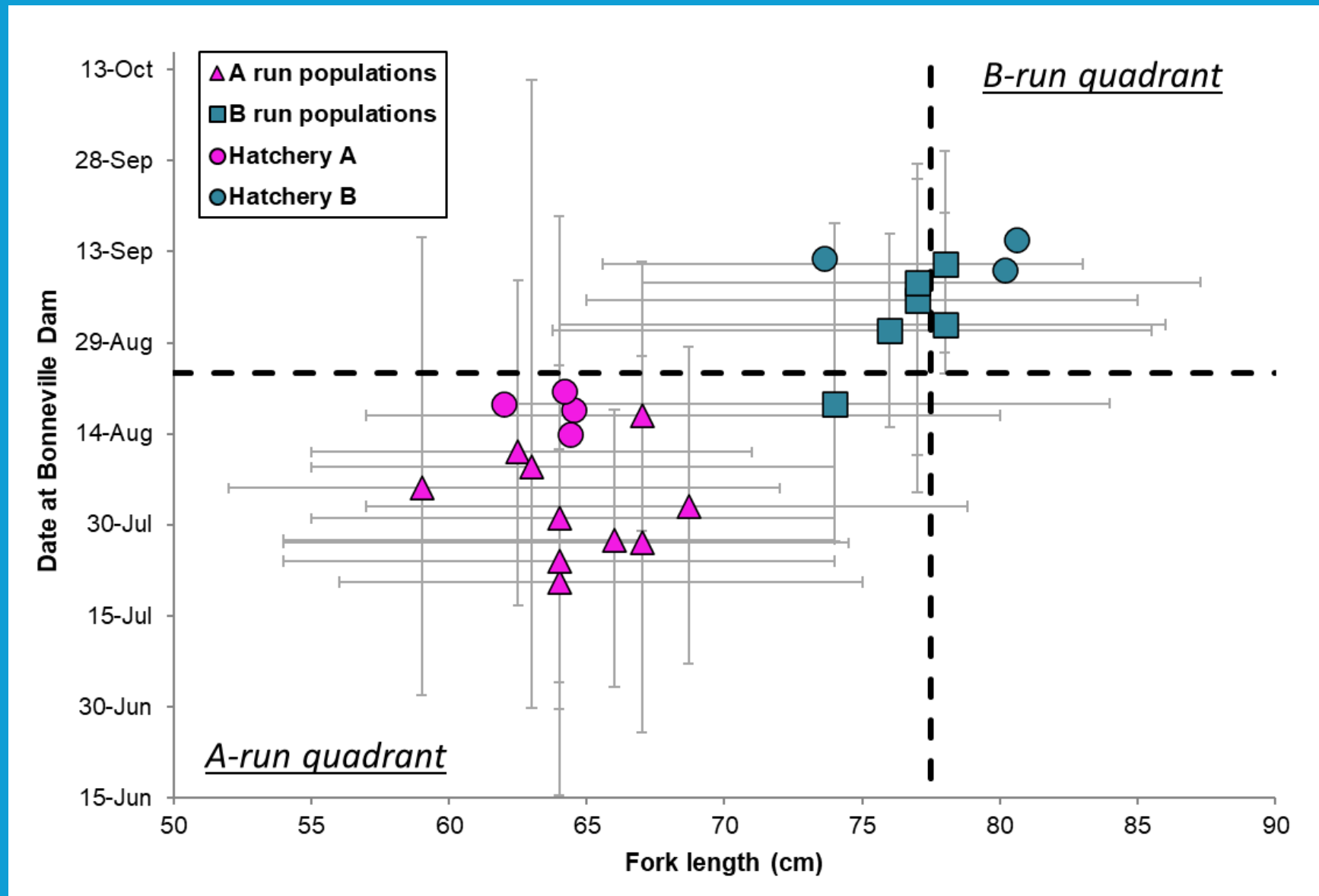


# Gradient between A-type & B-type Steelhead



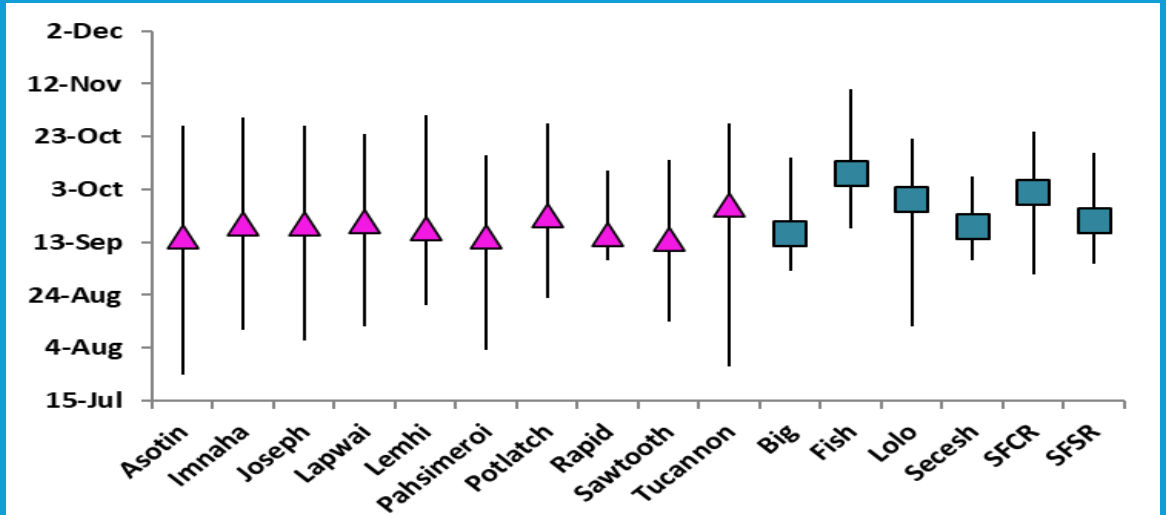


# Gradient between A-type & B-type Steelhead

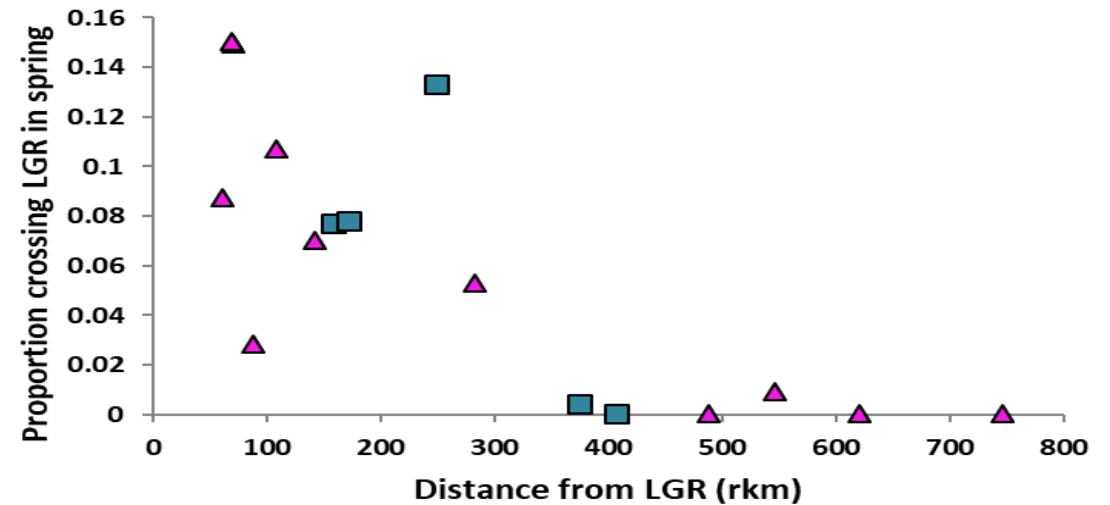


# Migrant Timing at Lower Granite Dam

Median Timing

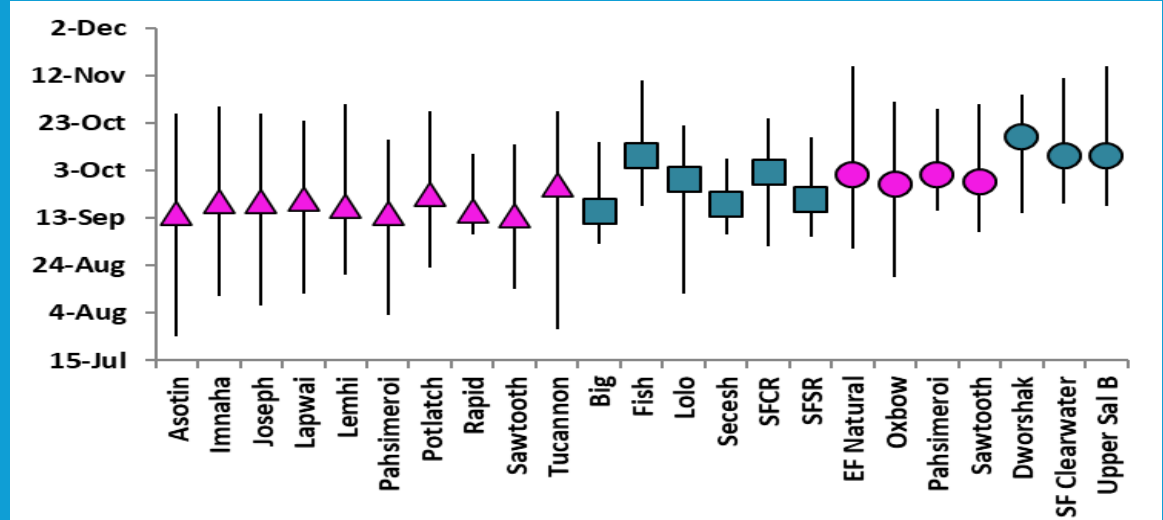


Proportion of spring migrants

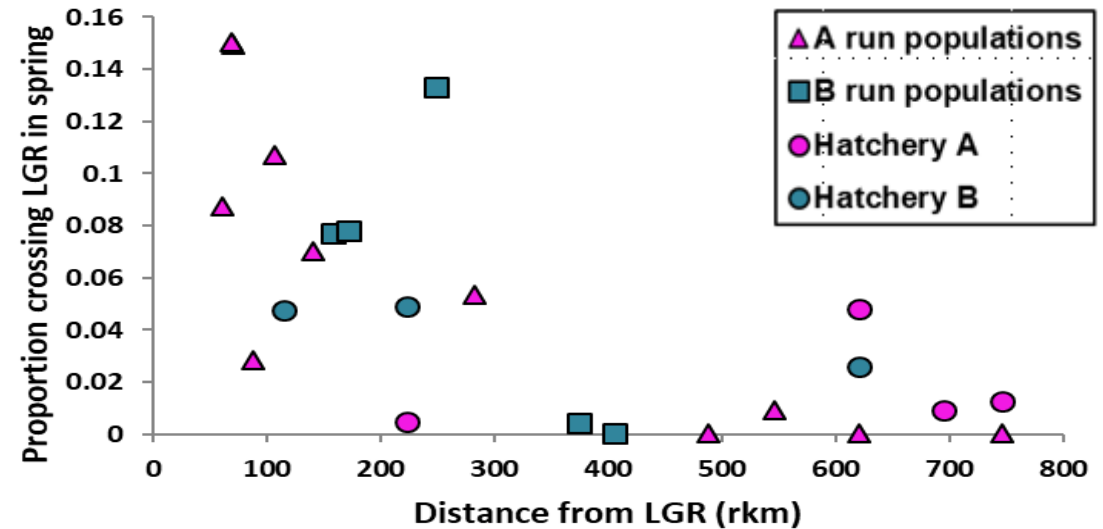


# Migrant Timing at Lower Granite Dam

Median Timing



Proportion of spring migrants

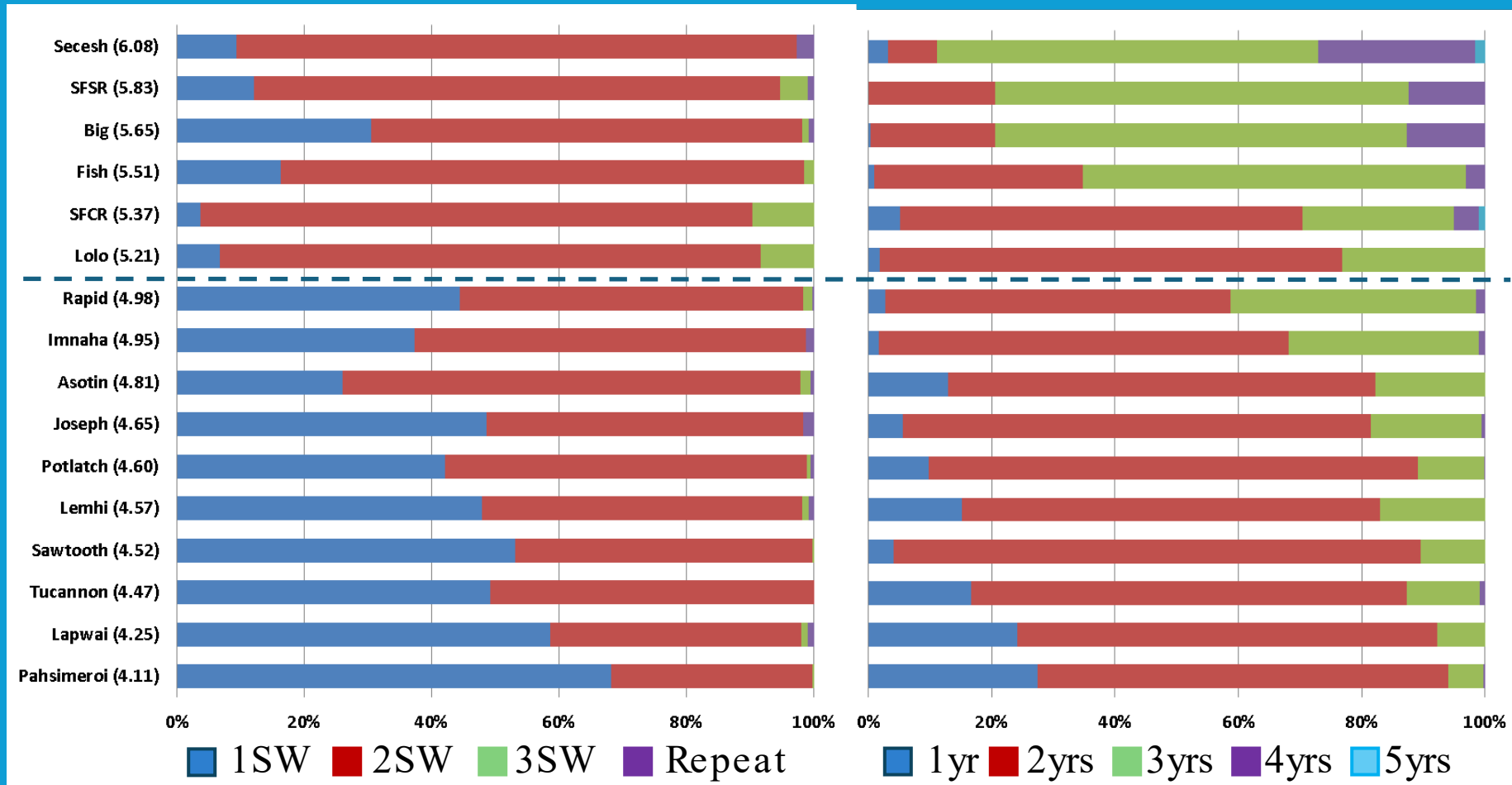




# Natural Adult Age Composition

## Saltwater Age

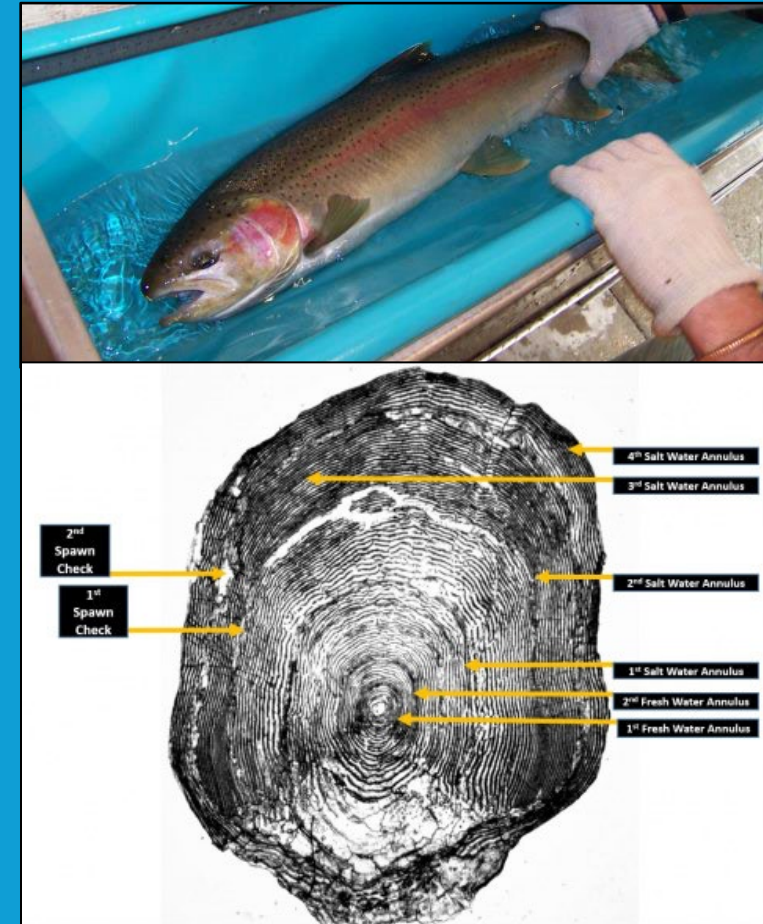
## Freshwater Age



# Repeat Spawner Characteristics 2010-2021

- Small percentage of run
  - average 1.3%, range 0.5%-3.1%
- 89% female
- 56% first spawned after 1 yr in ocean
- 56% skipped a year between spawns
  - One skipped 2 years
- A few on third migration

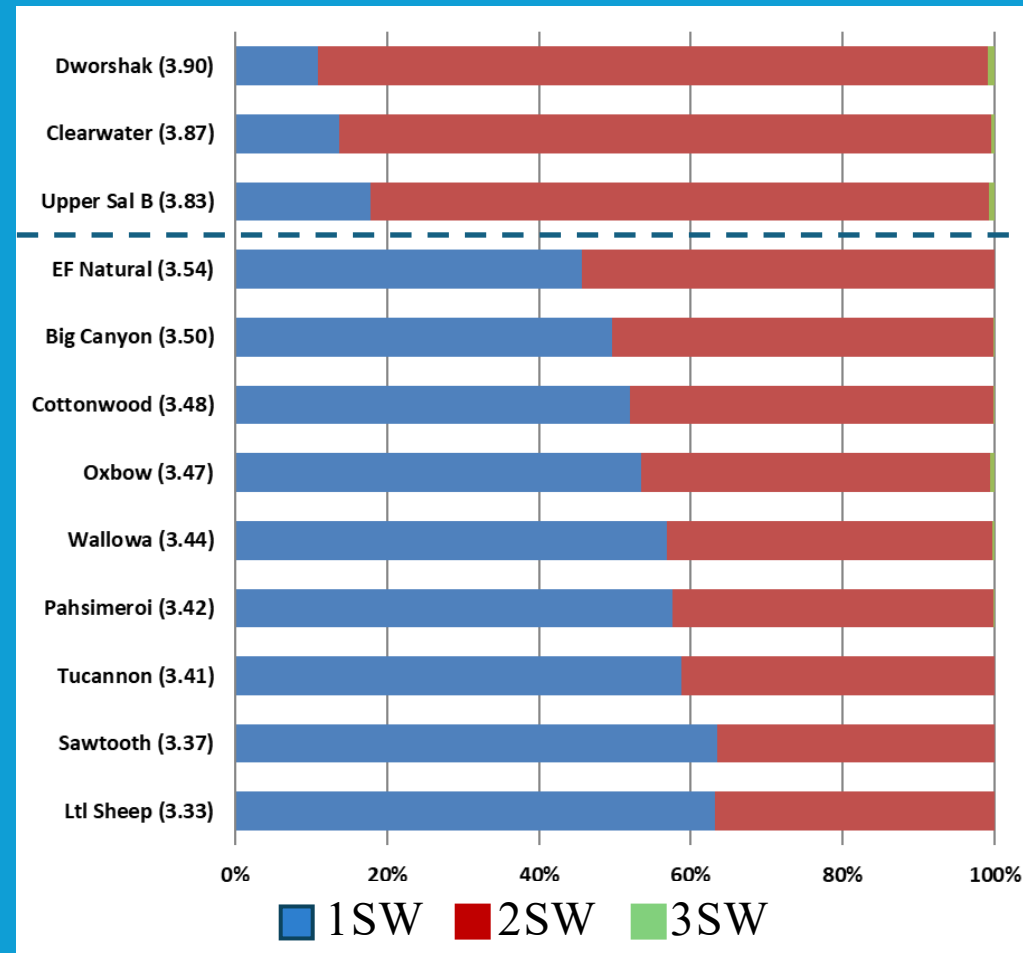
<https://idfg.idaho.gov/blog/2020/10/scale-tale>



# Hatchery Adult Age Composition

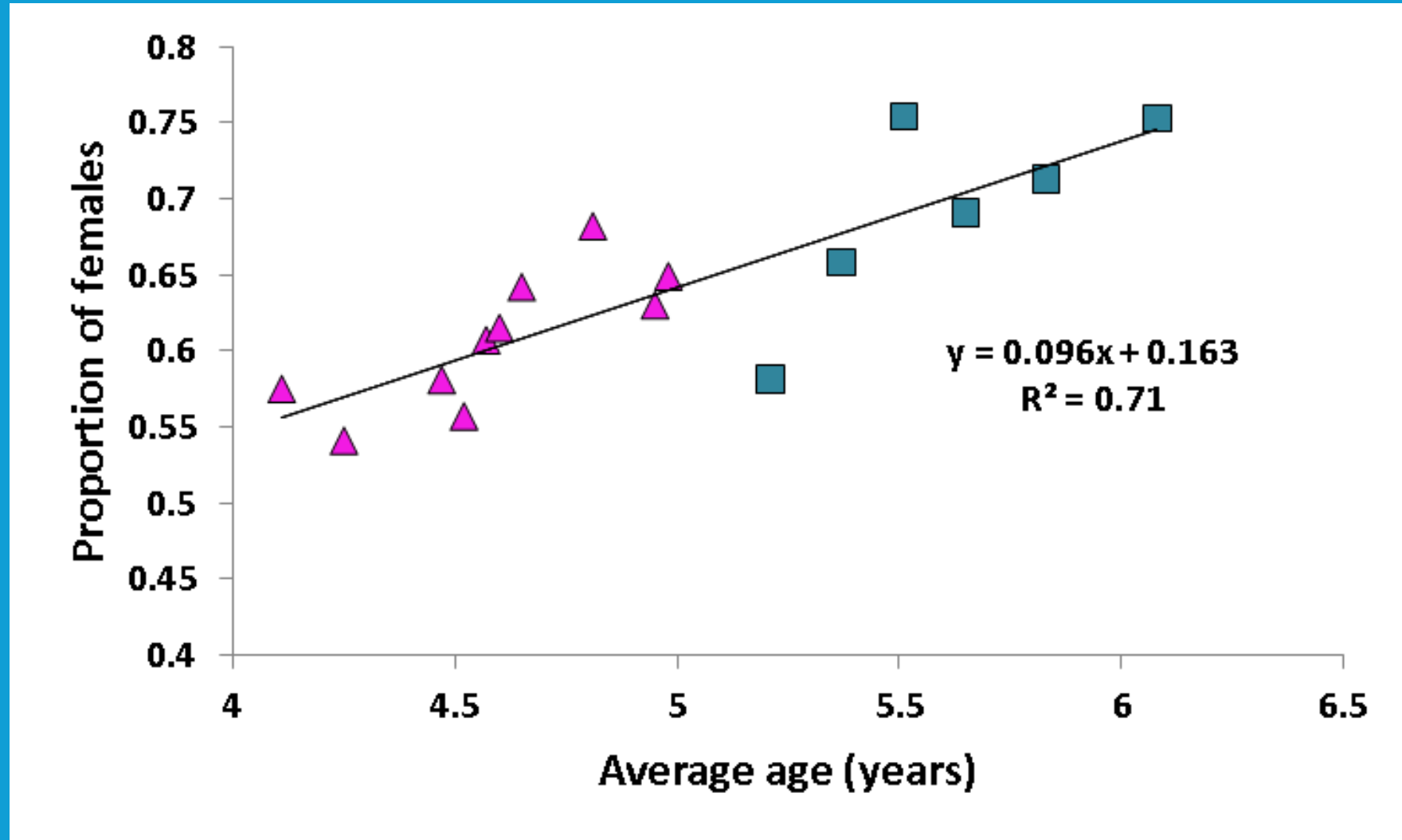
B

A

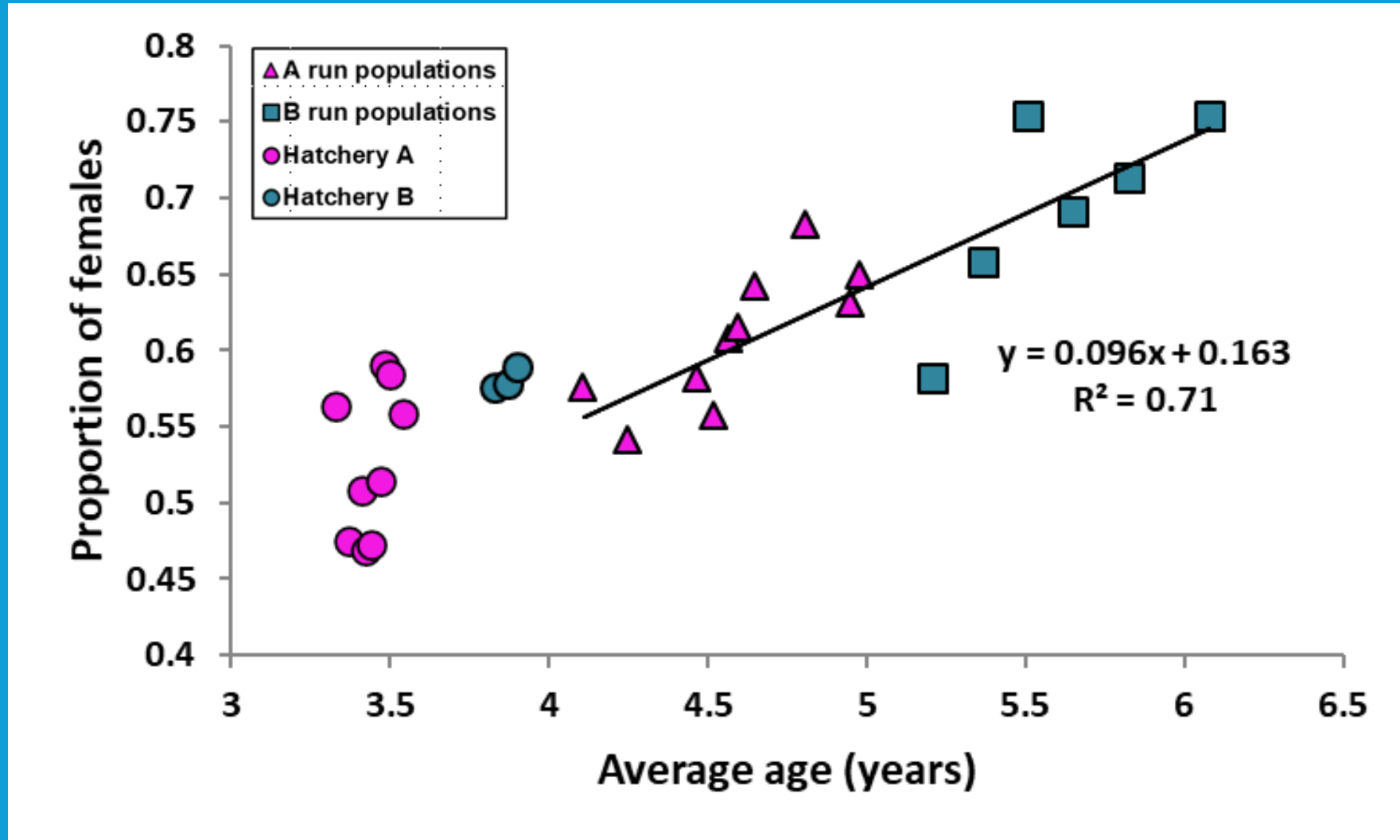




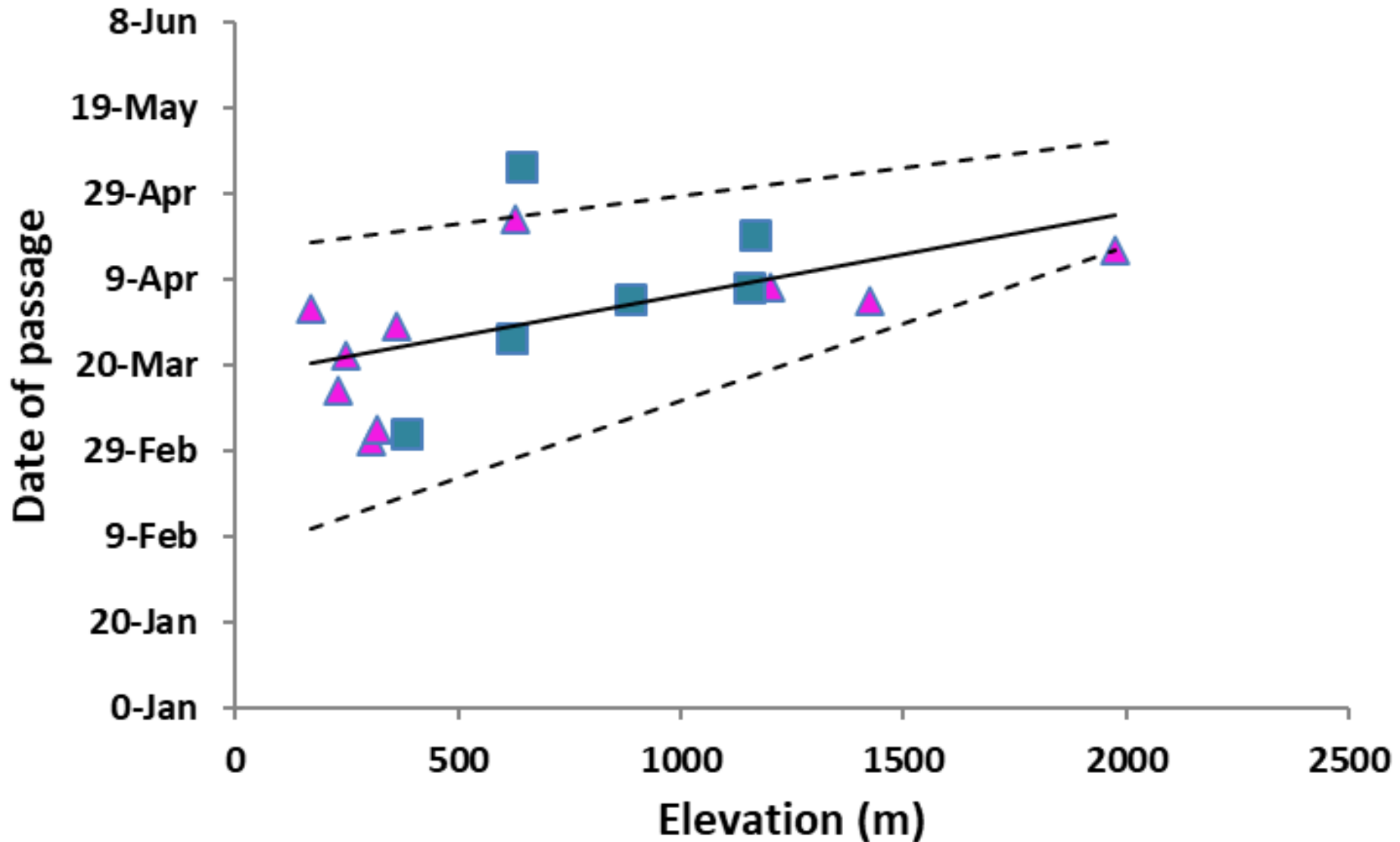
# Age & Sex Composition



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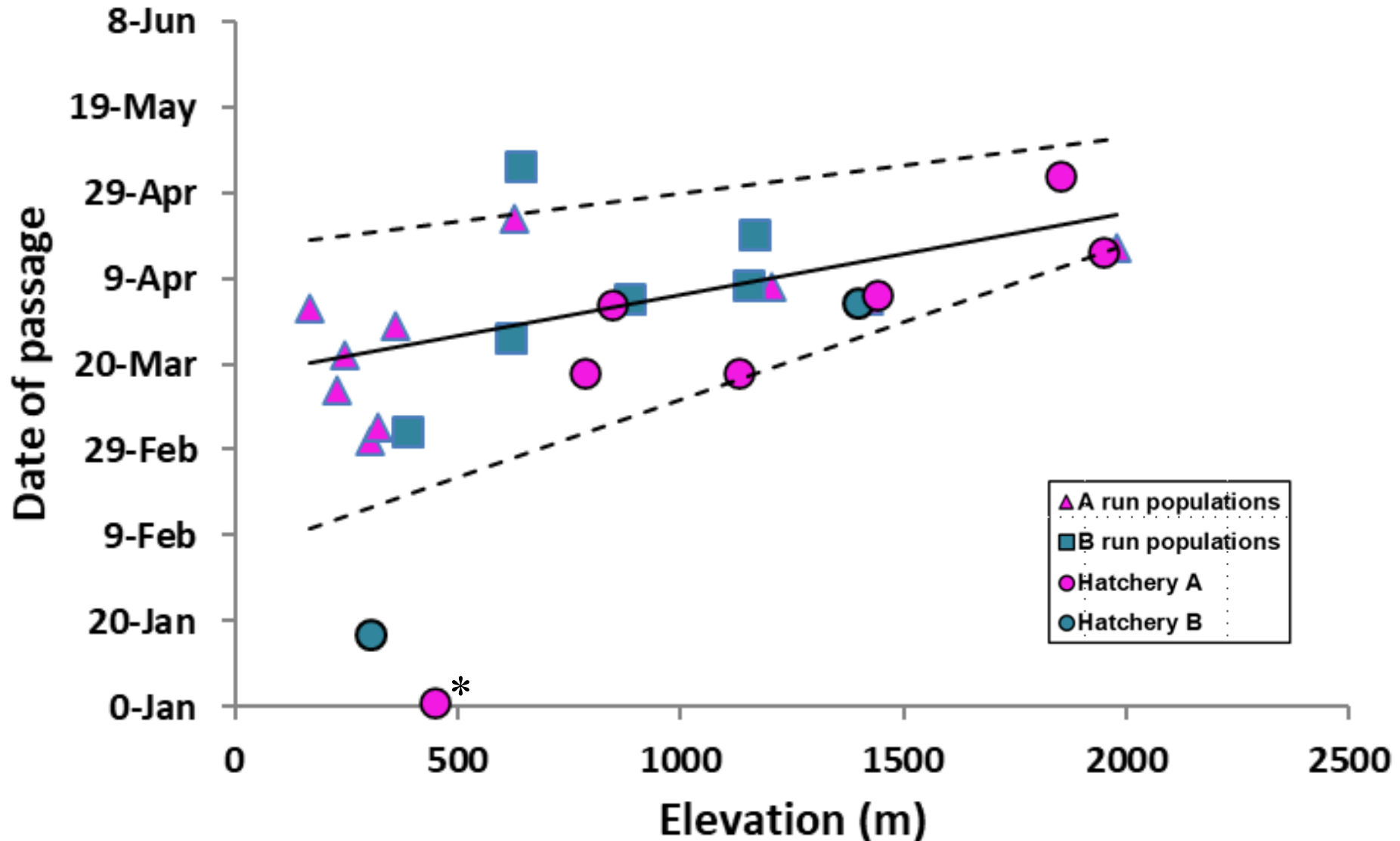


# Entry into Spawning Habitat

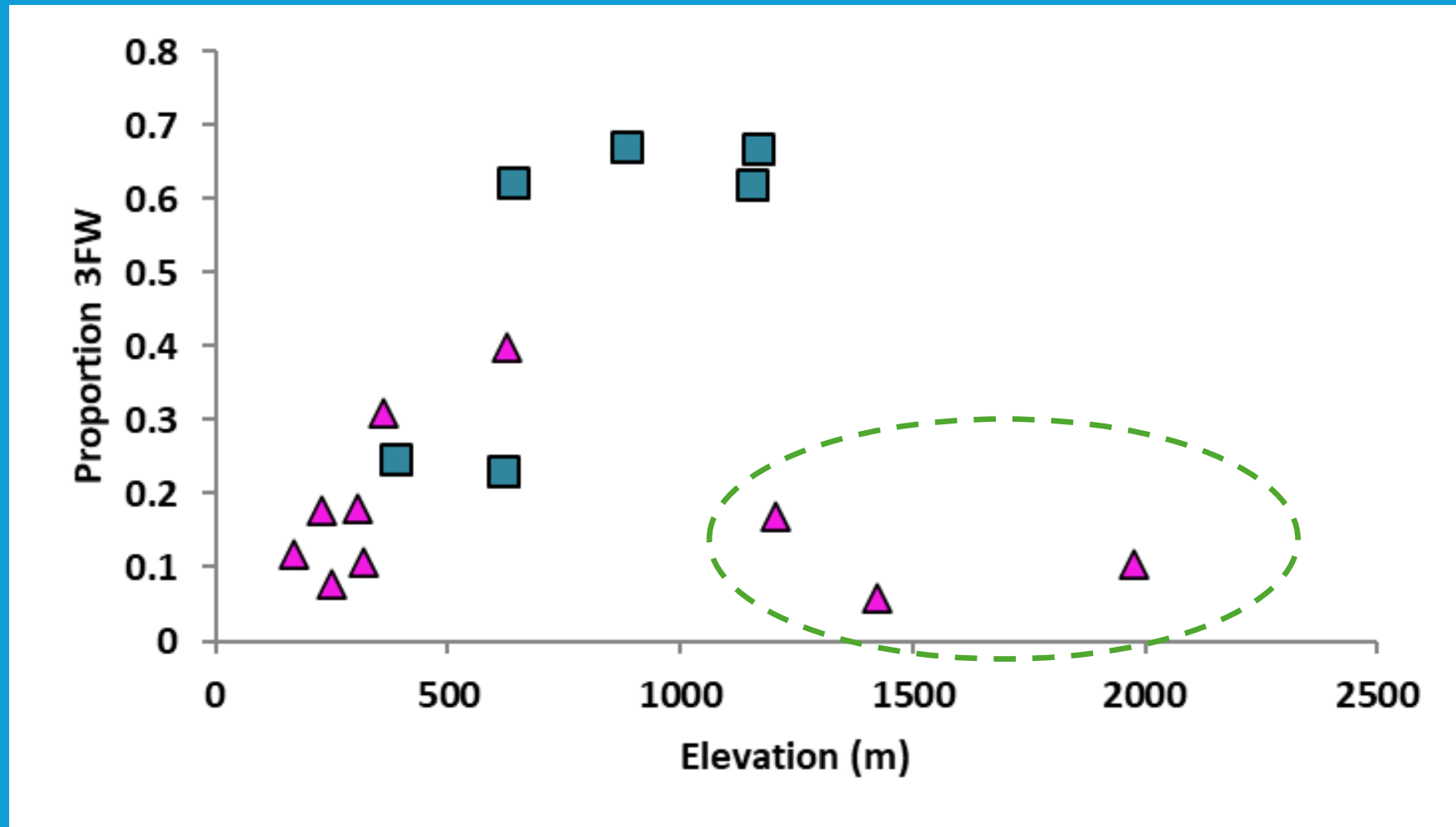




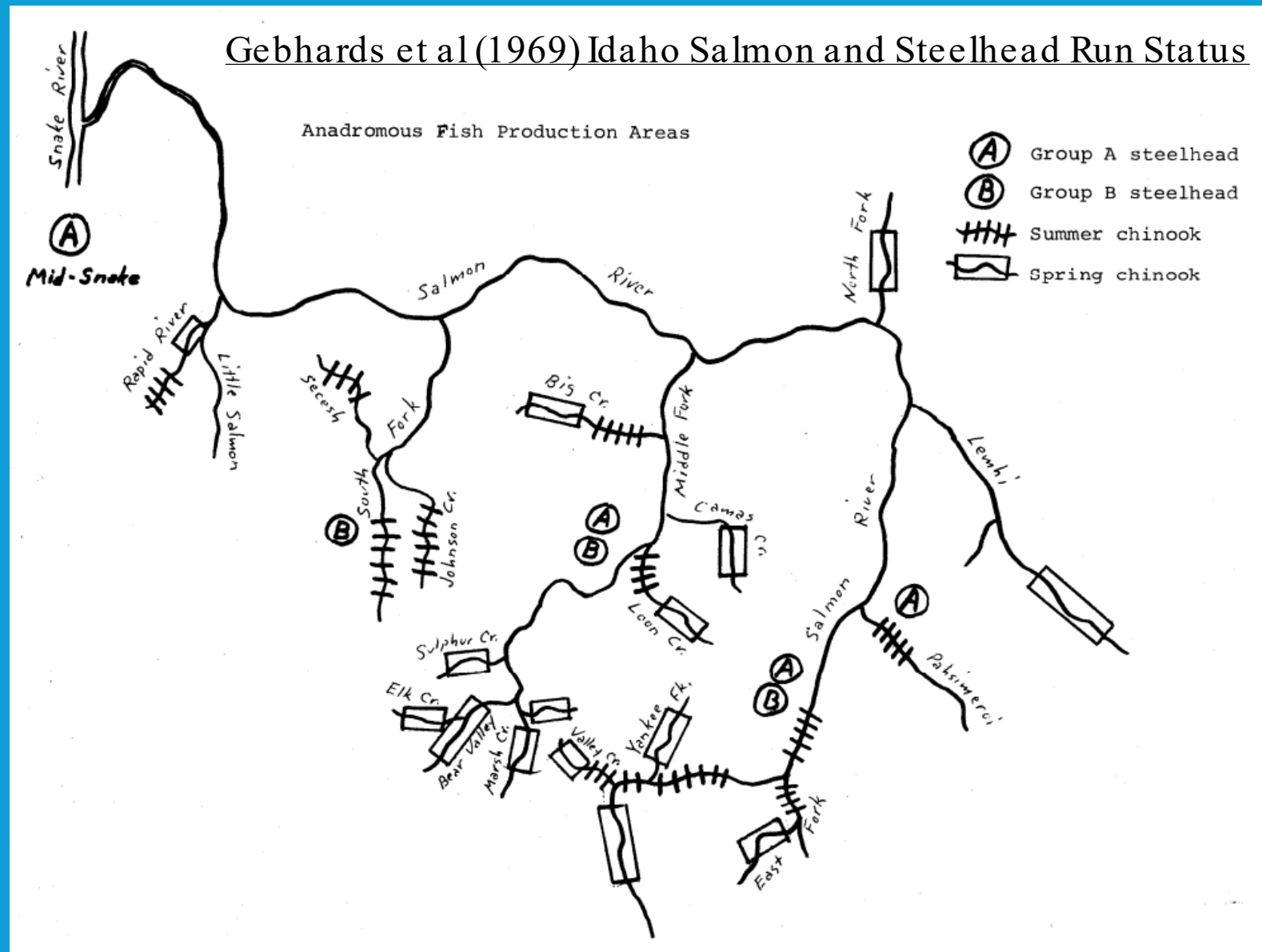
# Entry into Spawning Habitat



# Upper Salmon Natural Steelhead

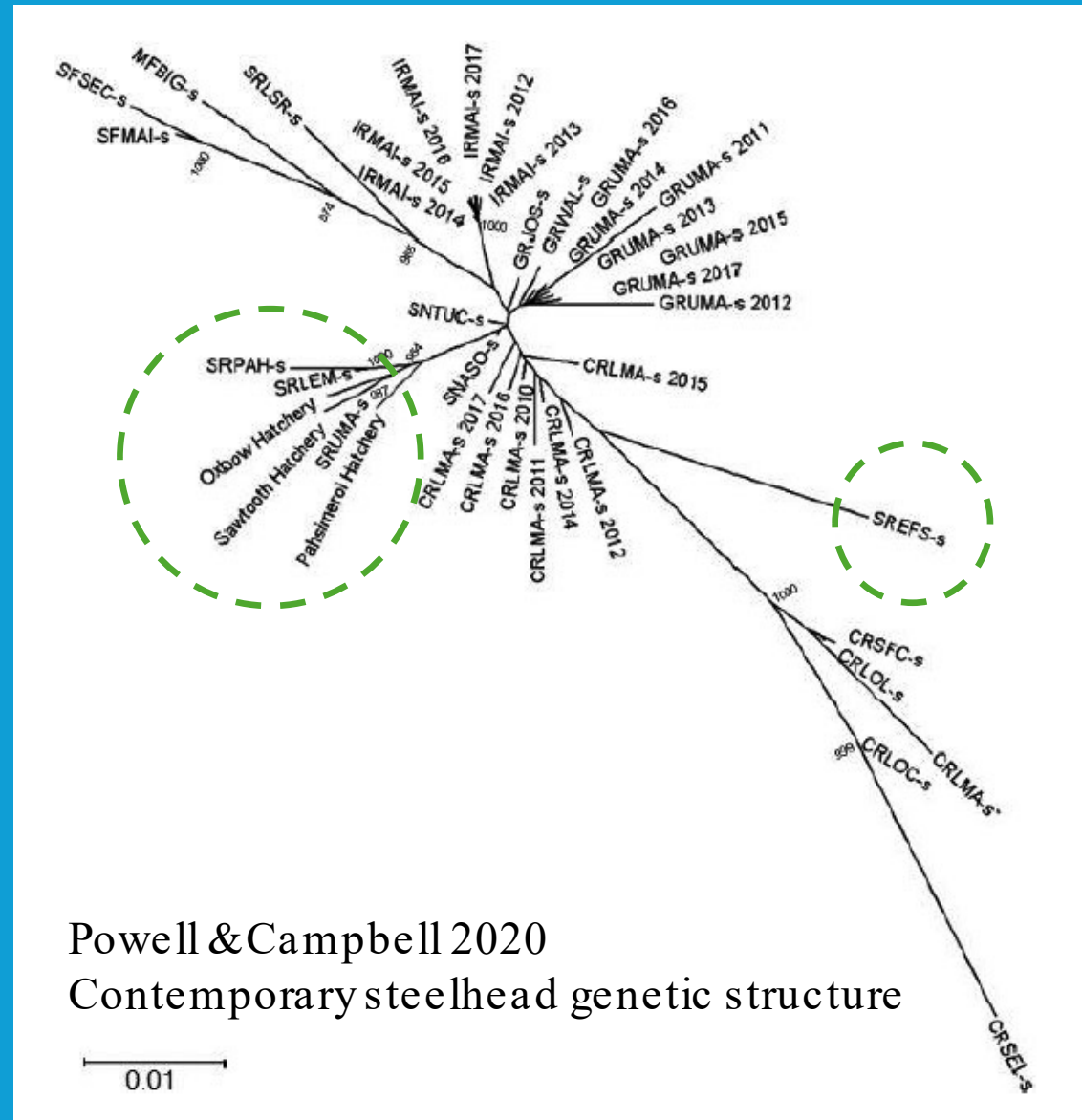


# Upper Salmon Natural Steelhead





# Upper Salmon Natural Steelhead

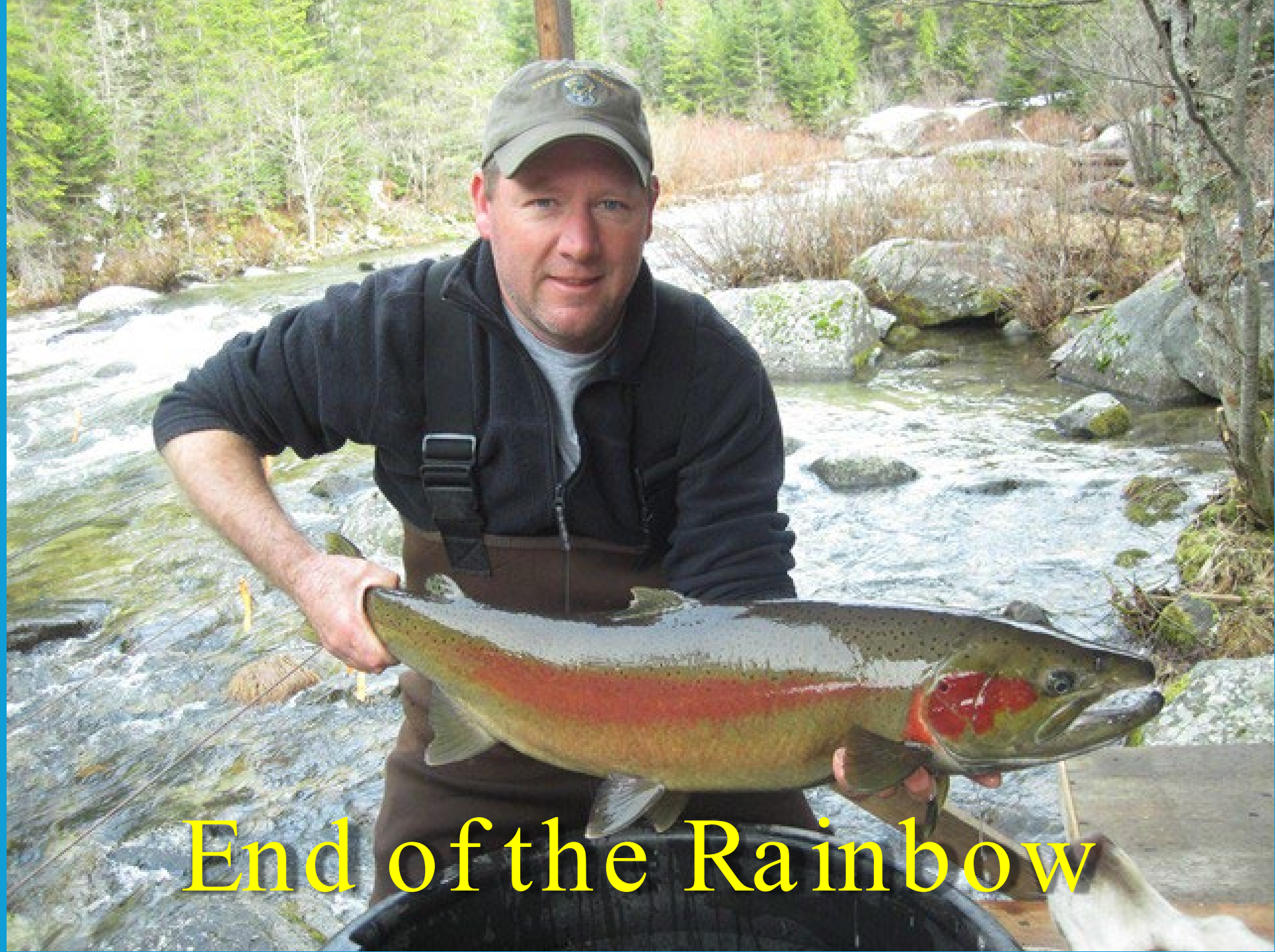


Powell & Campbell 2020  
Contemporary steelhead genetic structure

# Snake River Steelhead Conclusions

- Great diversity in many life history characteristics
  - Few spawners survive to repeat
  - Hatchery populations fit within natural populations
- Hatcheries simplified freshwater phase
- Upper Salmon populations have legacy effects of introductions





End of the Rainbow