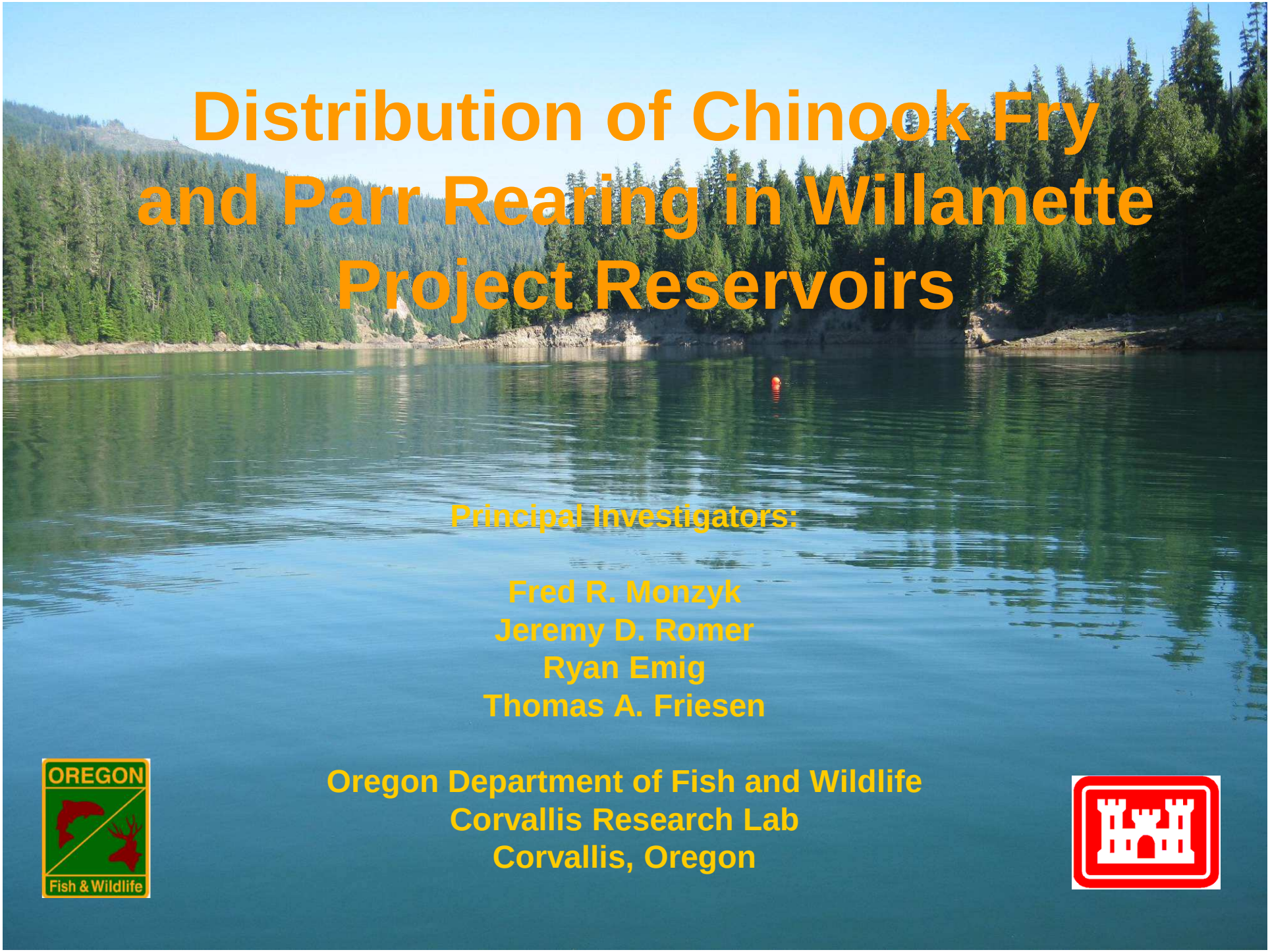

Distribution of Chinook Fry and Parr Rearing in Willamette Project Reservoirs

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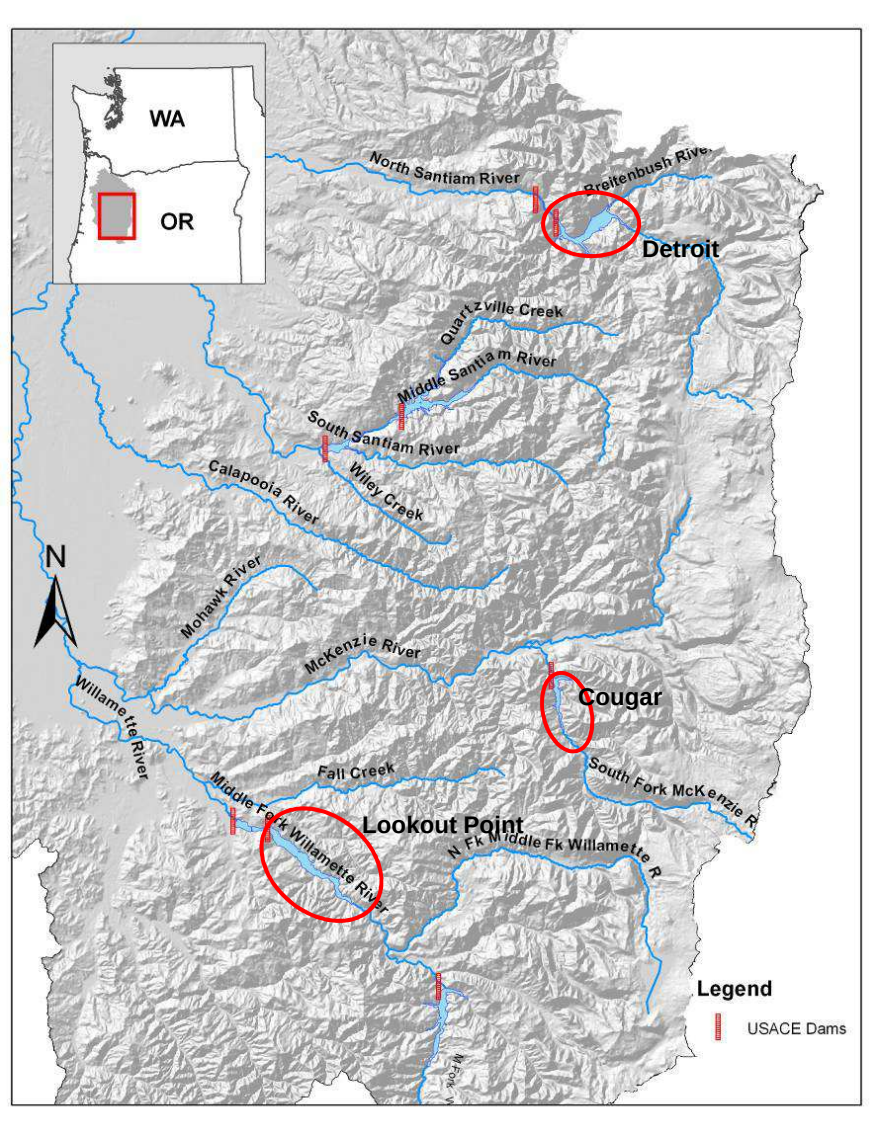
Objectives

- Determine Chinook Fry Distribution in Reservoirs
  - Longitudinal (along shoreline length)
- Determine Parr Distribution in Reservoirs
  - Longitudinal
  - Vertical (summer to fall)

Study Area



Reservoir Lengths

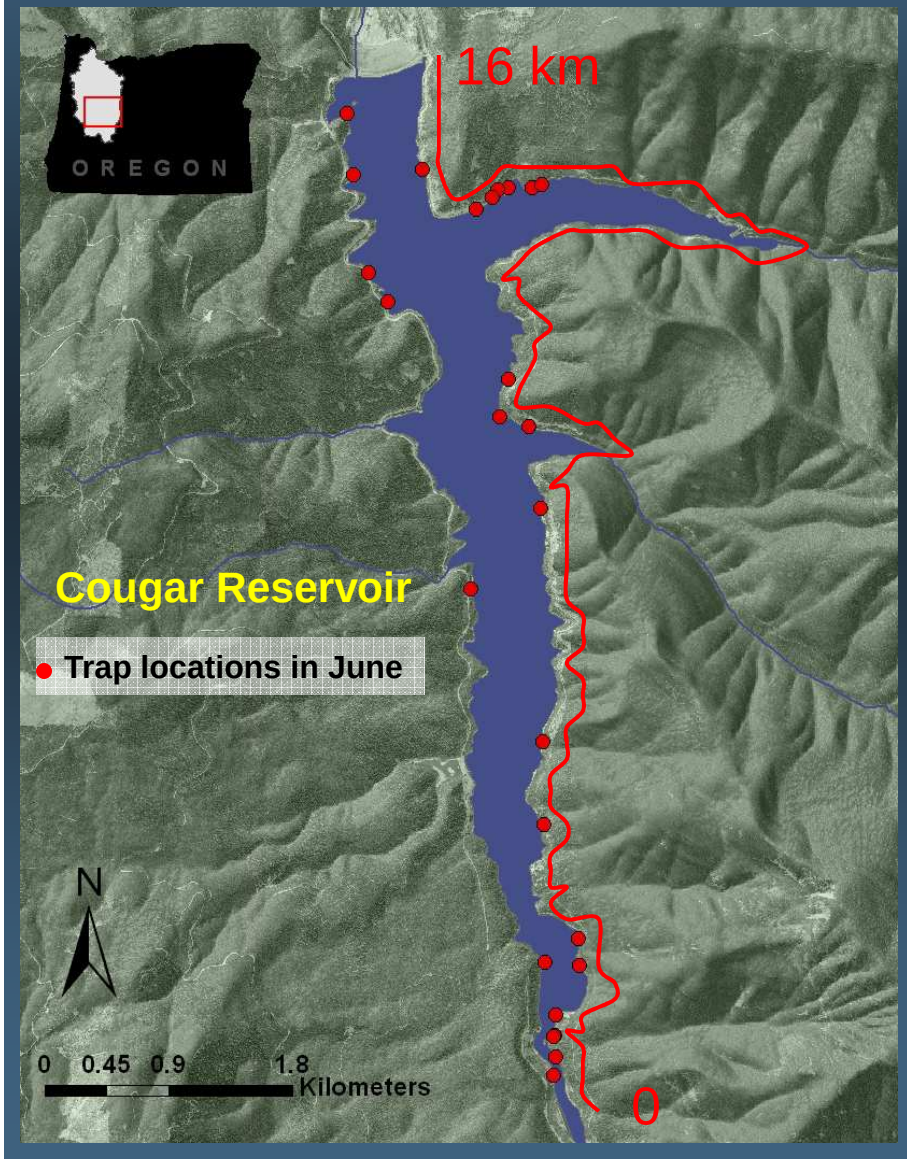
Detroit
- 14 km long
- 31 km max shoreline

Cougar
- 7.5 km
- 16 km max shoreline

Lookout Point
- 17 km
- 25 km max shoreline

Methods

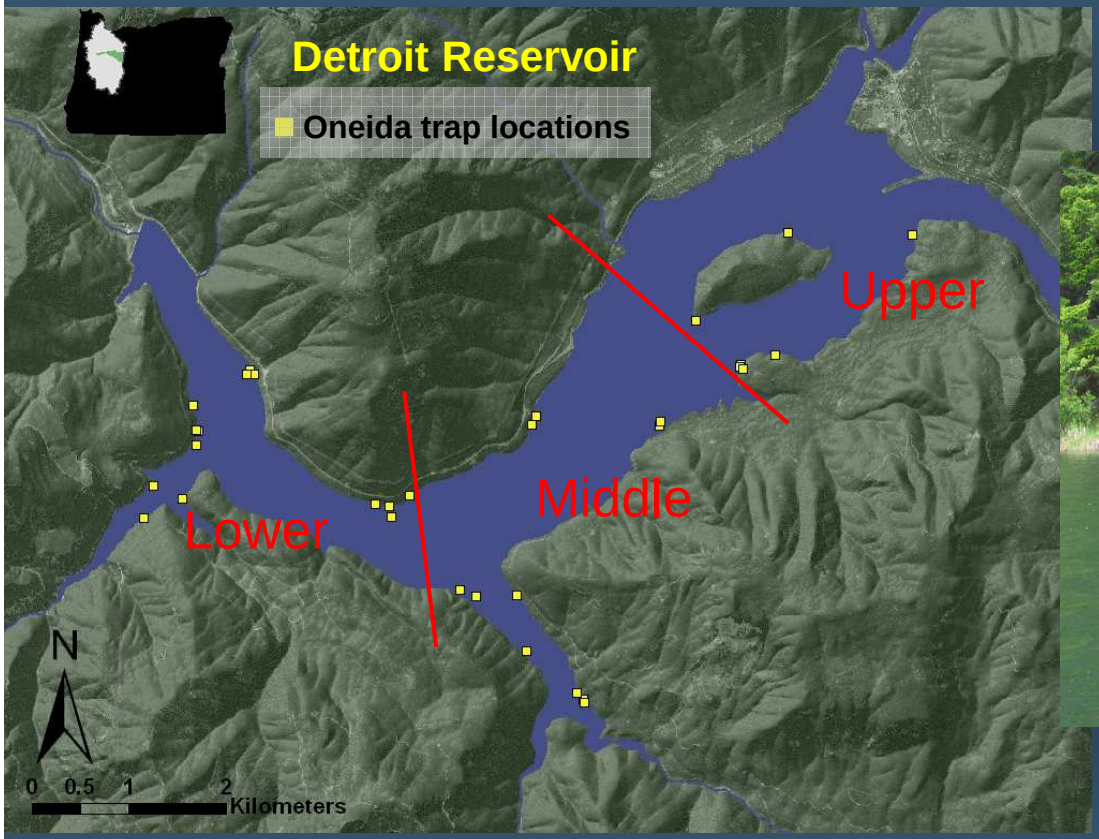
Nearshore Fry Traps

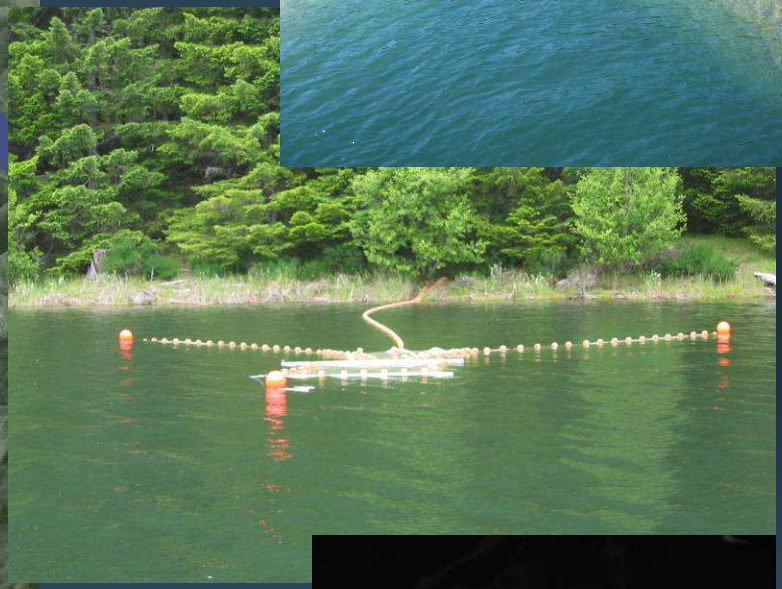


- Traps set 5 m from shore
- Catch by shoreline distance
- June

Methods

Oneida Traps -Parr





- 34 m from shore
- Fished upper 3m of water column
- Catch by section

Methods

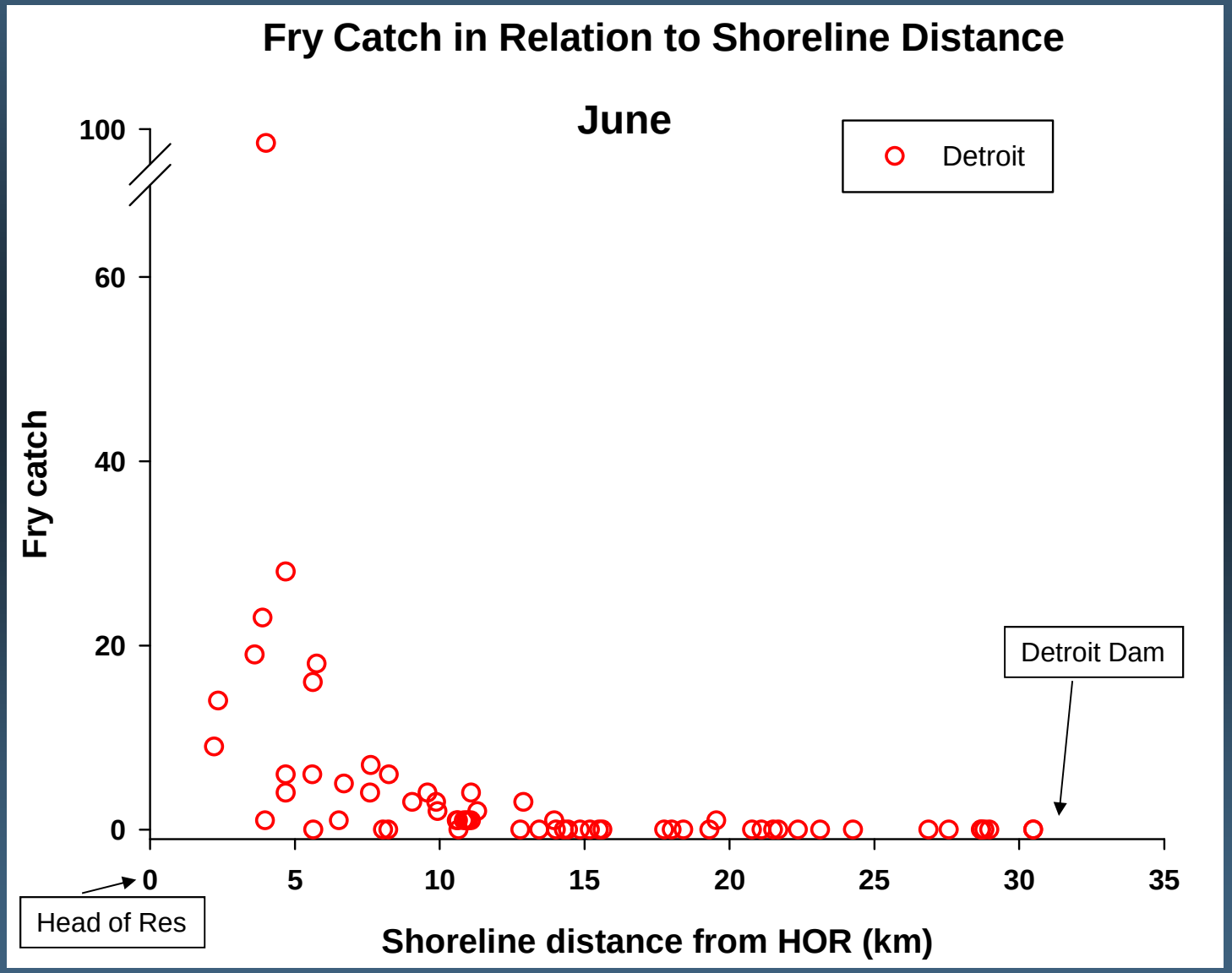
Gill Nets –Parr Vertical Distribution

- Ingram and Korn (1969)
- Set at specific depth intervals (every 15 ft)
- Assessed changes through time (Aug-Nov)
- Detroit and Lookout Point only

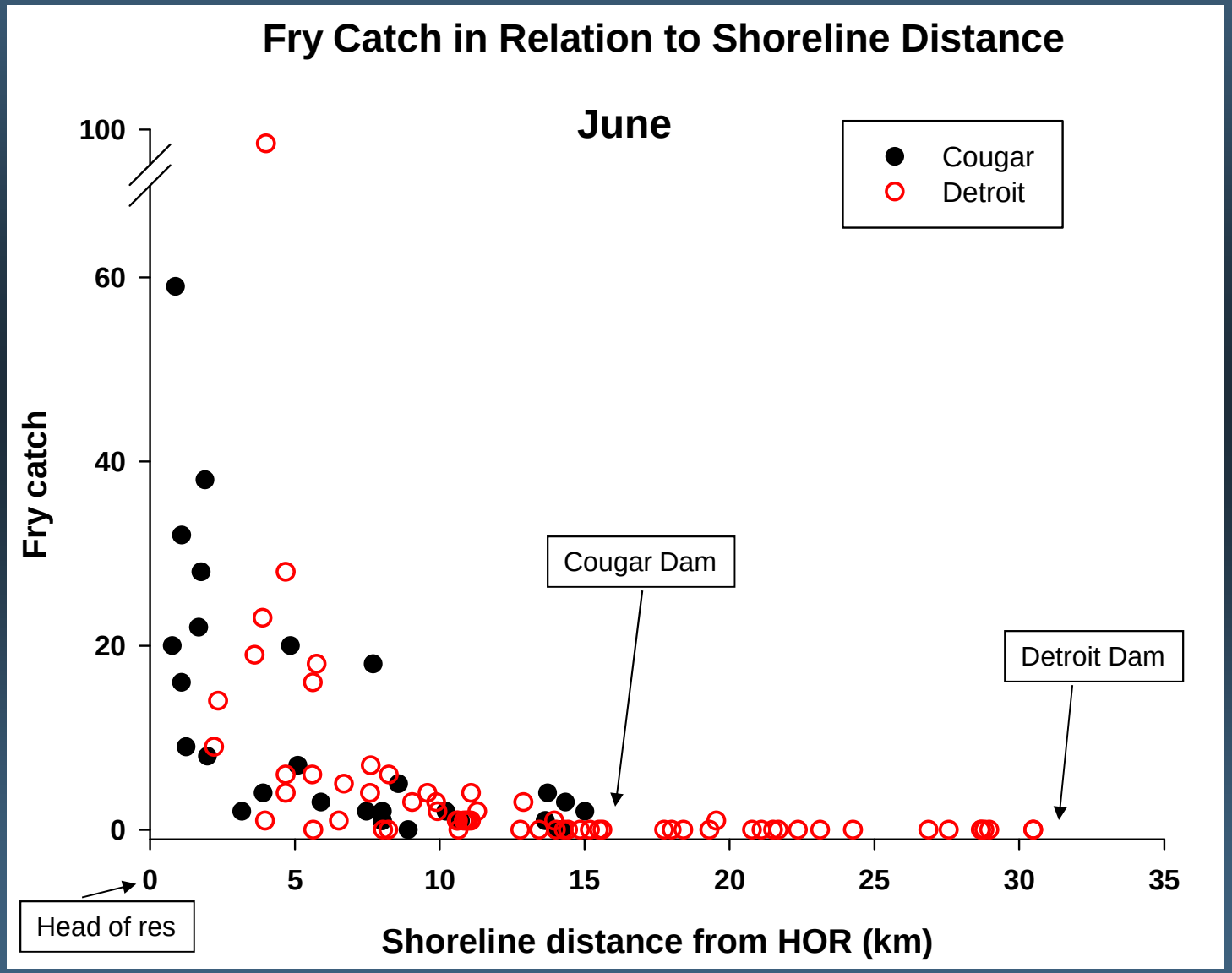
Results

- Fry distribution
  - skewed towards head of reservoir
  - ~15km max dispersion

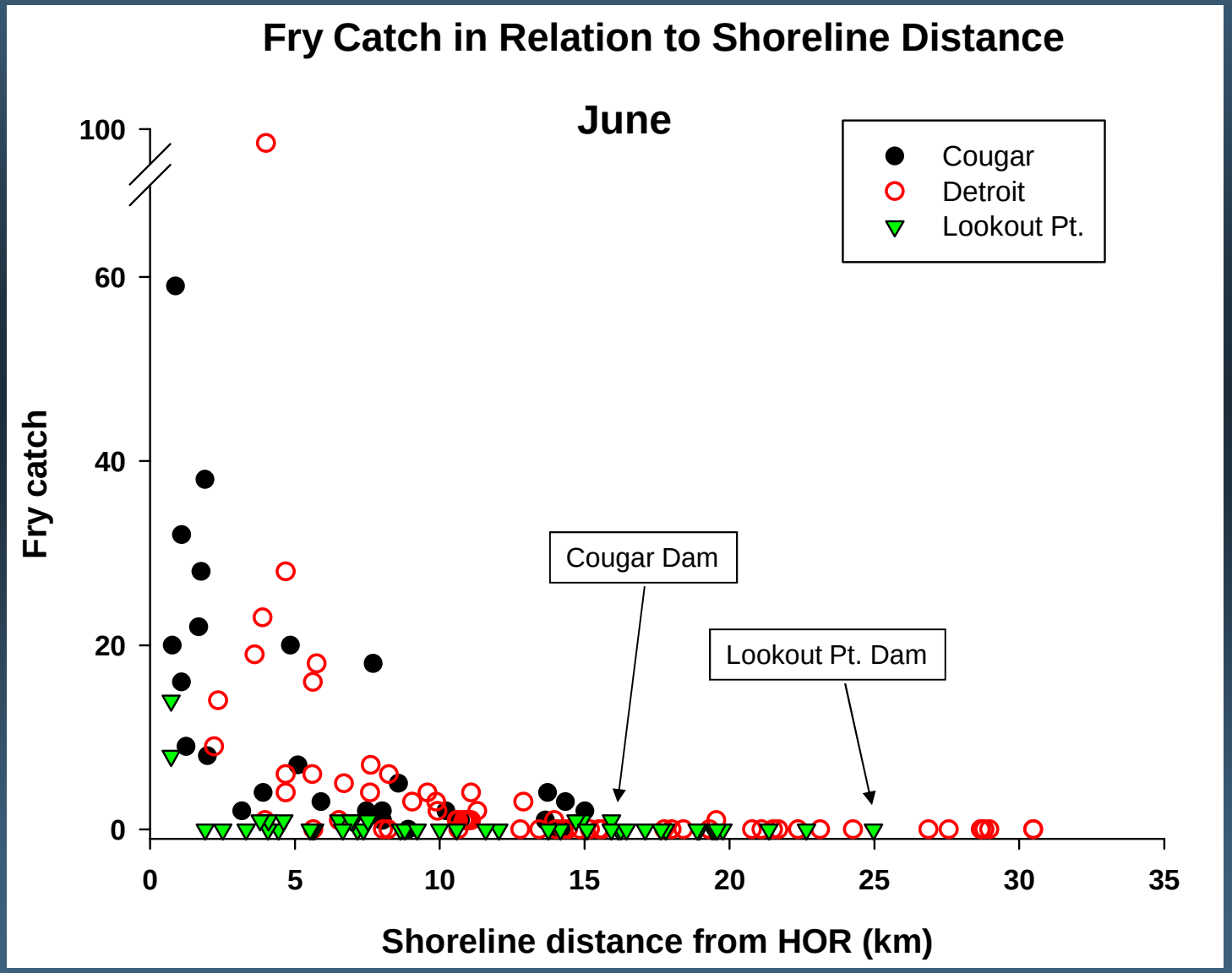
Fry Distribution -Nearshore Traps



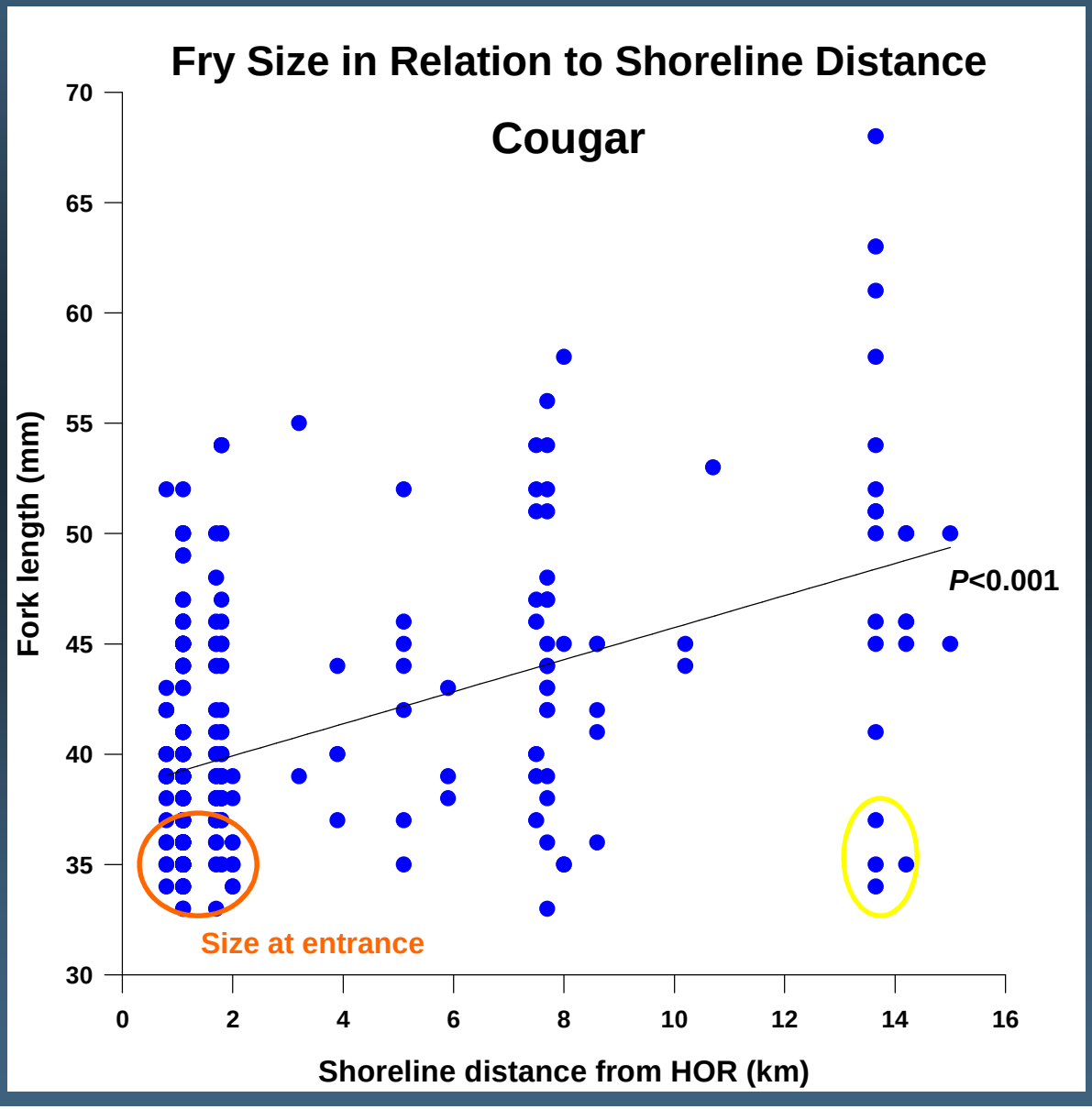
Fry Distribution -Nearshore Traps



Fry Distribution -Nearshore Traps



Fry Distribution -Nearshore Traps



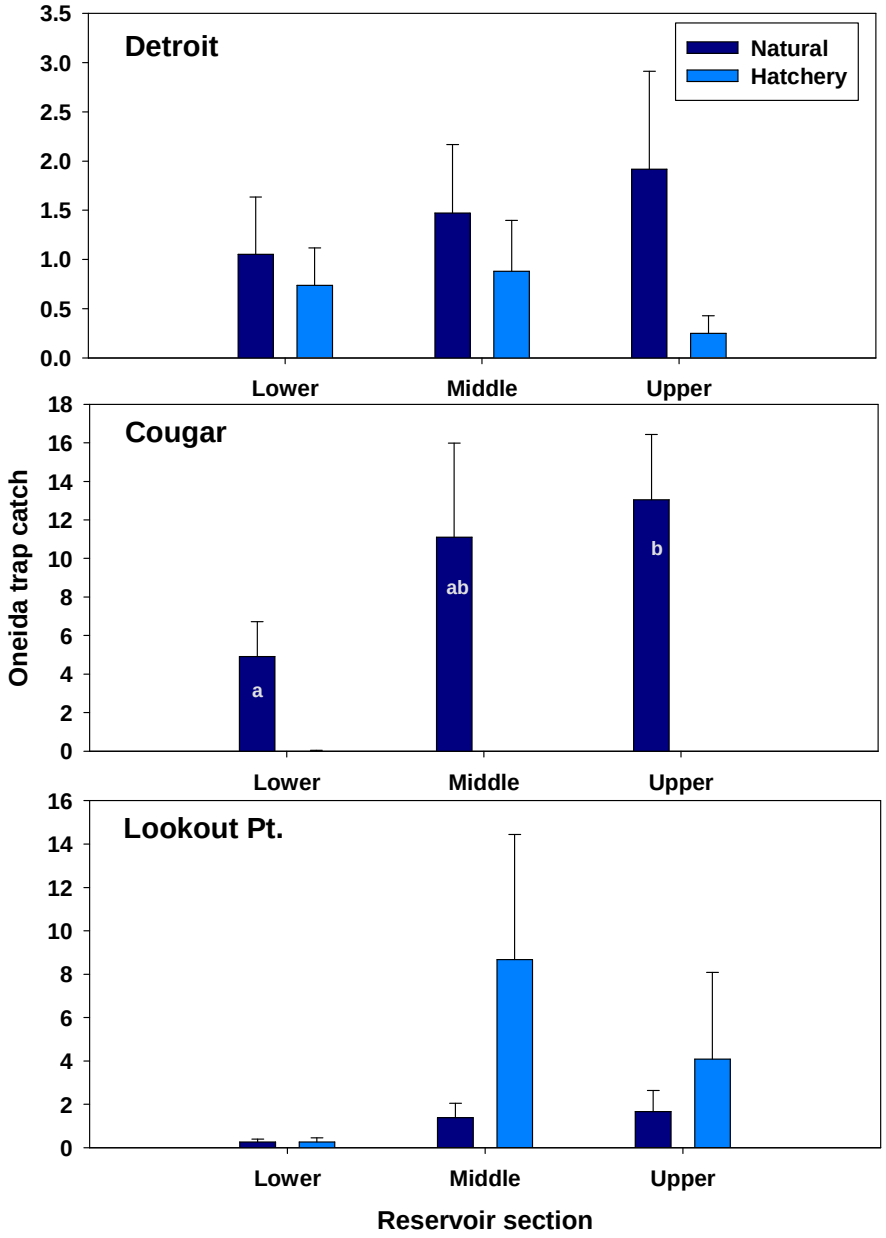
Results

- Fry distribution
  - skewed towards head of reservoir
  - ~15km max dispersion

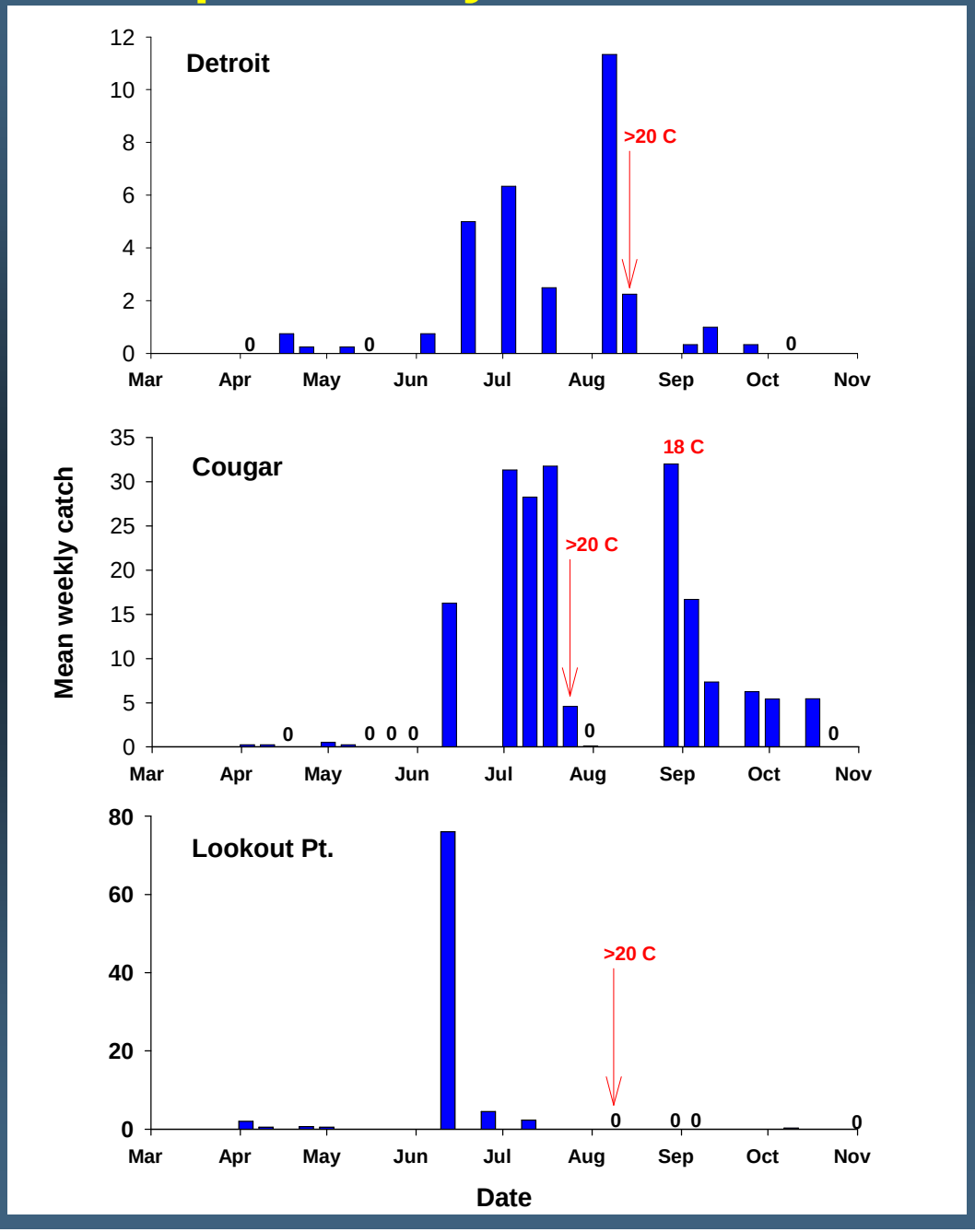
- Parr distribution
  - skewed towards upper reservoir
  - descend into deeper water in late summer

Parr Distribution

Oneida Trap Catch by Reservoir Section

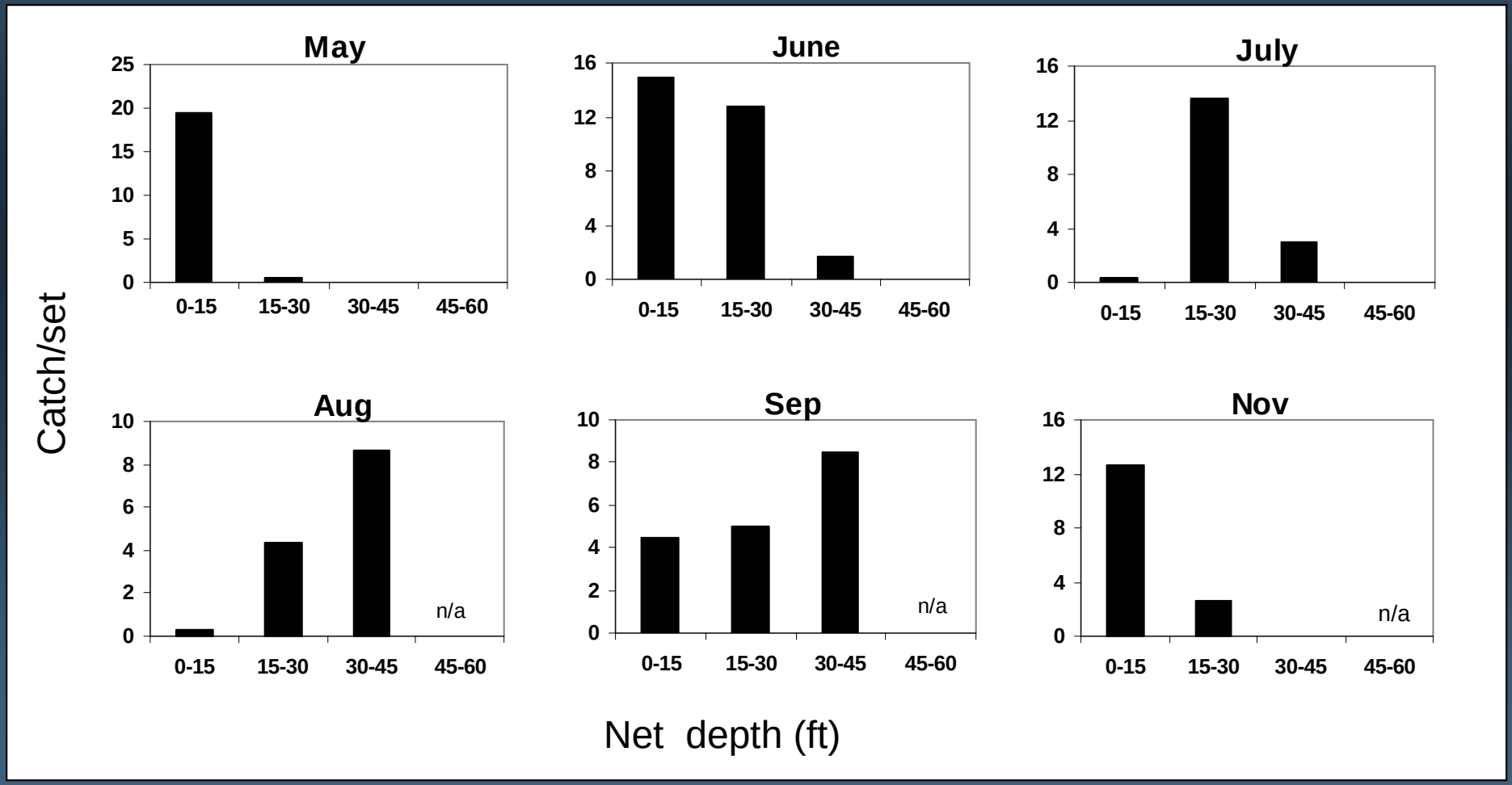


Oneida Trap Catch by Date – Natural Origin

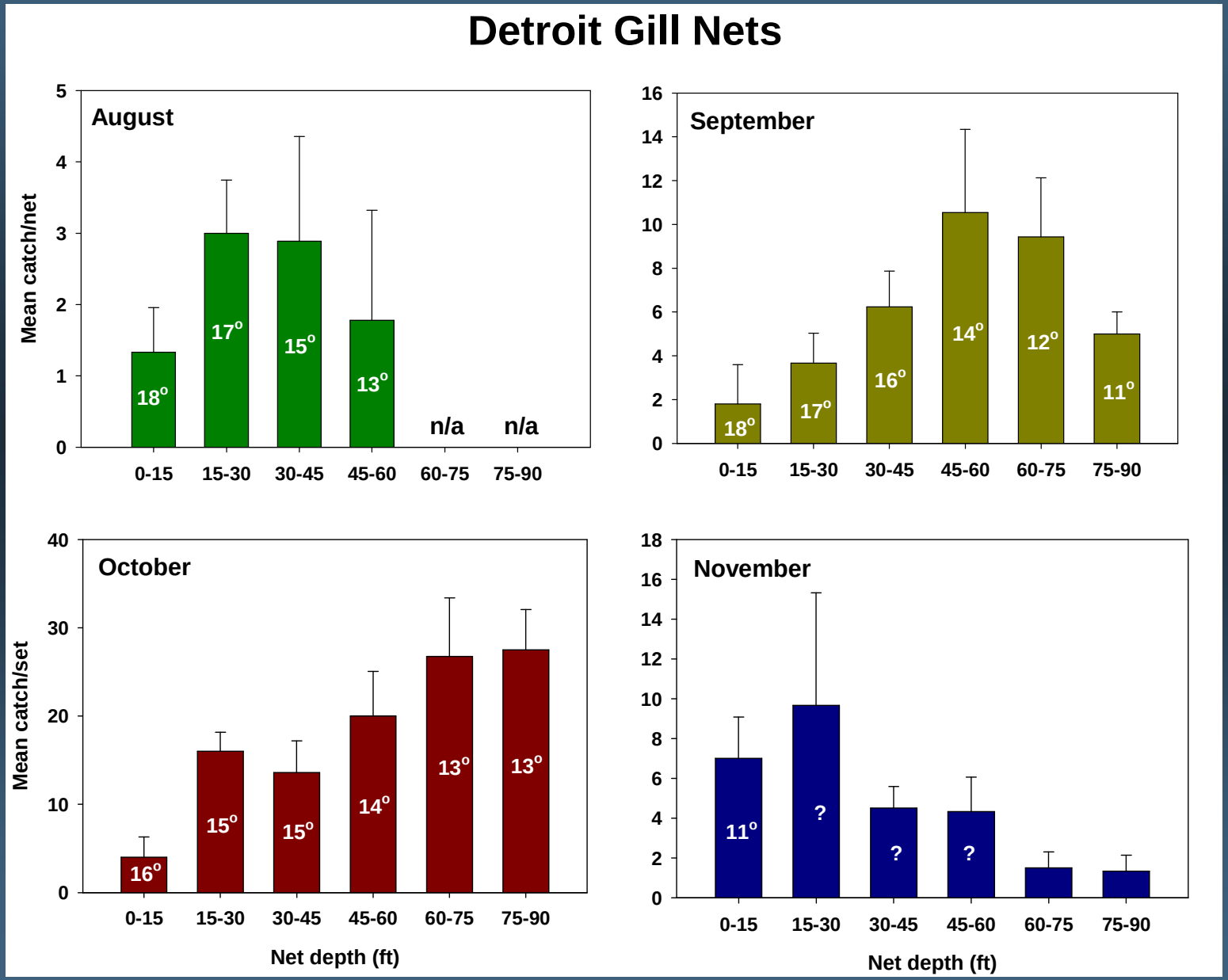


Parr Vertical Distribution

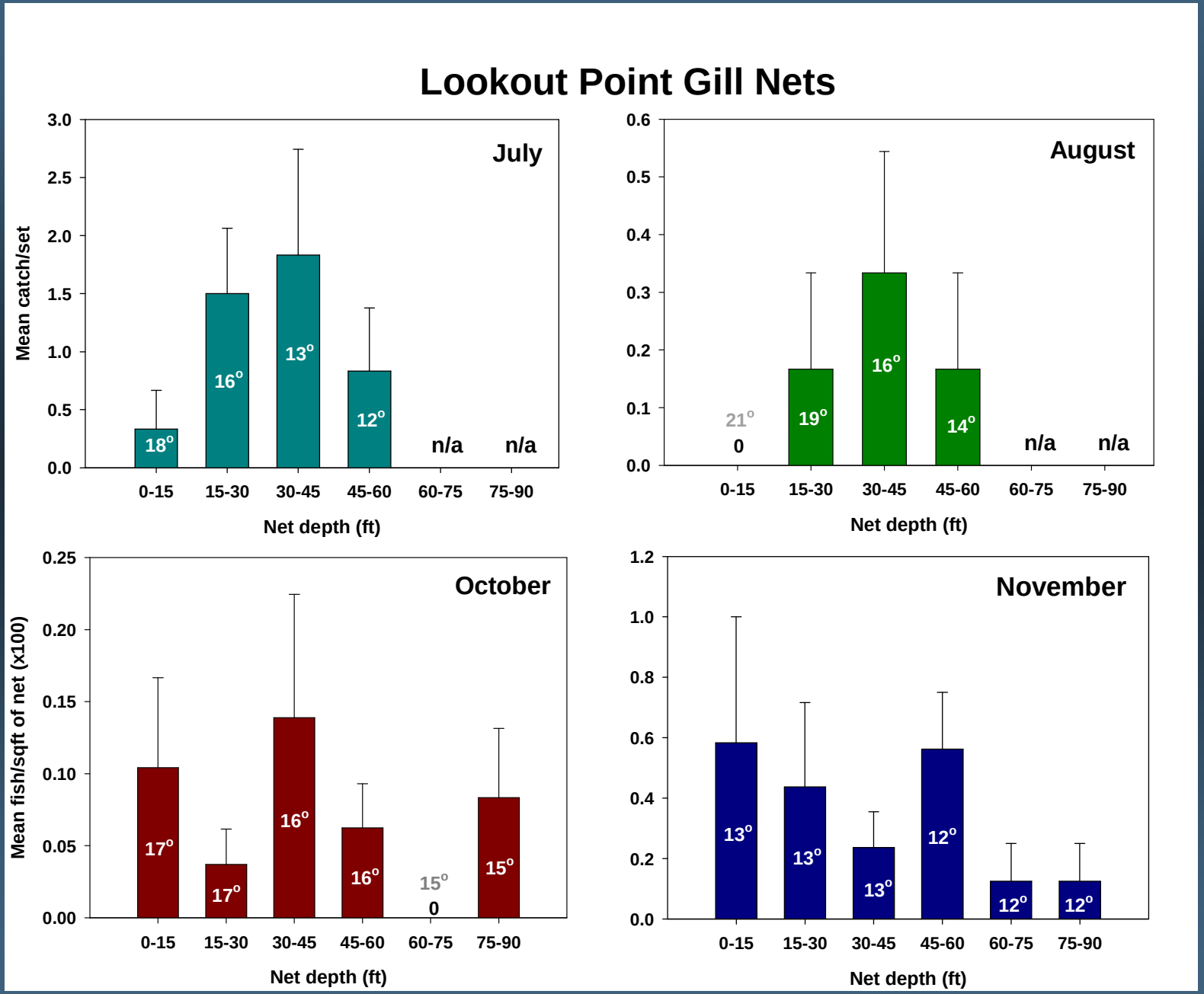
Cougar Reservoir
Ingram & Korn data 1966 -1967



Parr Vertical Distribution



Parr Vertical Distribution



In Conclusion

- Fry concentrated in upper end of reservoir
  - Travel ~15 km along shore
  - Delayed re-fill may improve fry dispersion (?)
- Parr distributed in upper end of reservoir in summer
- Parr descend to cooler water in summer
  - Detroit and LOP parr remain below 45 ft (13.7 m) until November.

Recommended Future Studies

- Expand fry nearshore sampling from April through July
  - Movement patterns
  - Effects of delayed refill
- Increase sampling effort to assess parr vertical distribution

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Kris Clemons
Shelly Goff
Greg Gilham
Mario Minder


The End
HONDA
FOUR
STROKE

Fry Distribution -Nearshore Traps