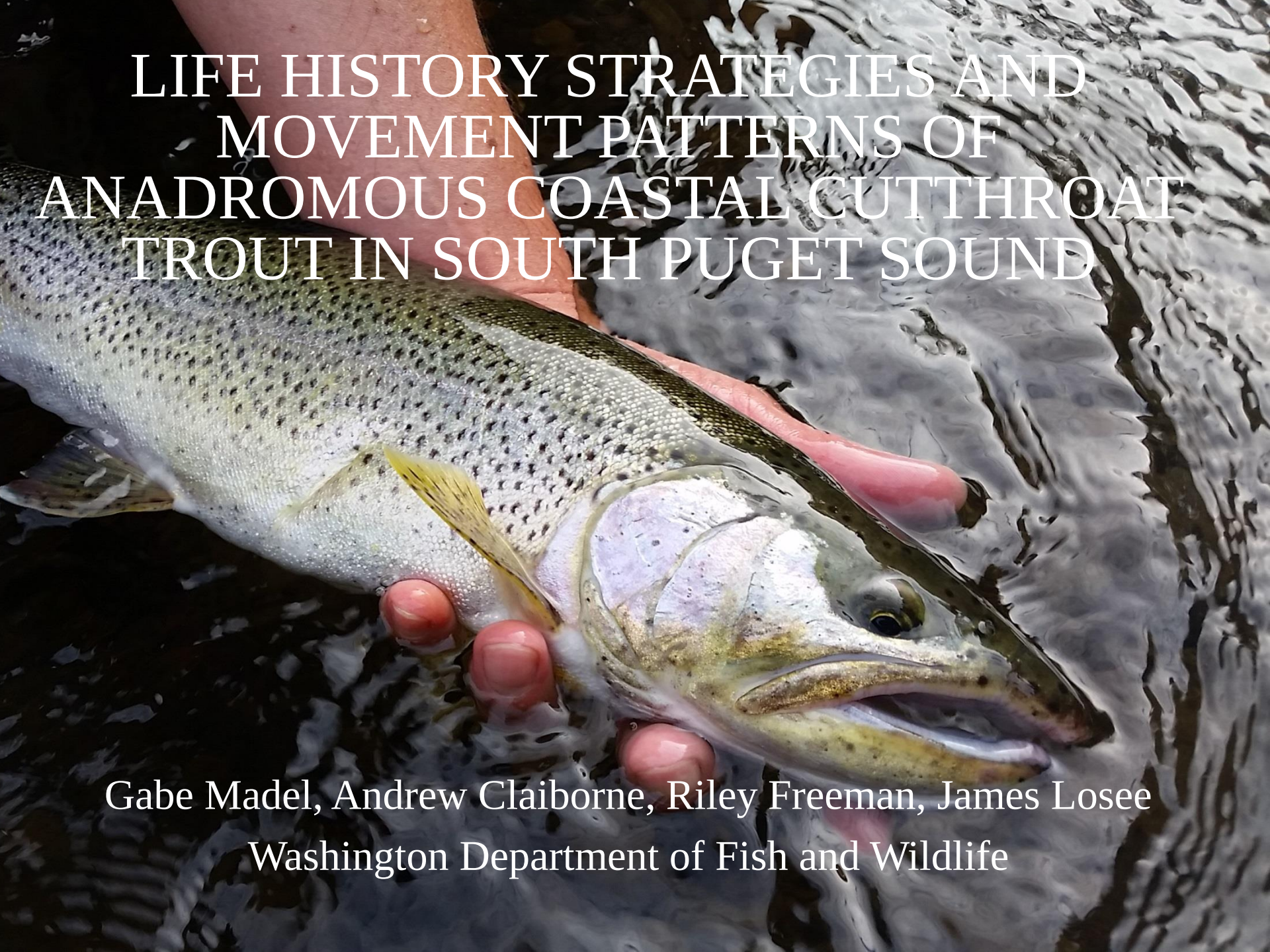
LIFE HISTORY STRATEGIES AND MOVEMENT PATTERNS OF ANADROMOUS COASTAL CUTTHROAT TROUT IN SOUTH PUGET SOUND



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Washington Department of Fish and Wildlife


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Coastal CUTTHROAT COALITION
NORTHWEST FLY ANGLERS
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LOWER COLUMBIA FLY FISHERS
IFF

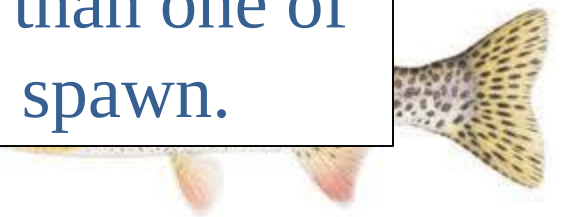
CCT Life History

- Non Migratory

- Fluvial-stream dwelling-migrating
  from large to small streams

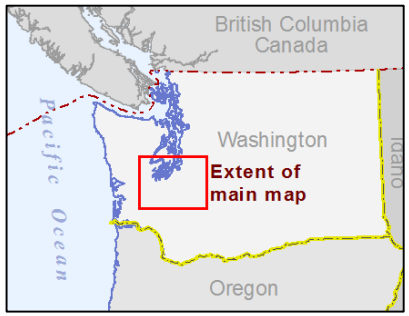
Coastal Cutthroat Trout may use more than one of these strategies before returning to spawn.

- A



- Anadromous-marine, spawns in freshwater
  - 1) ocean migrants that migrate through the estuary to the ocean and return to the estuary before migrating upstream to spawn
  - 2) fish that reside in the estuary during the spring and summer and do not migrate to the ocean
  - 3) fish that overwinter in the estuary or ocean.

Puget Sound Cutthroat



Hood Canal

Puget Sound

Shelton

Goldsborough Creek

Tacoma

Skookum Creek

Kennedy Creek

Perry Creek

Deschutes River

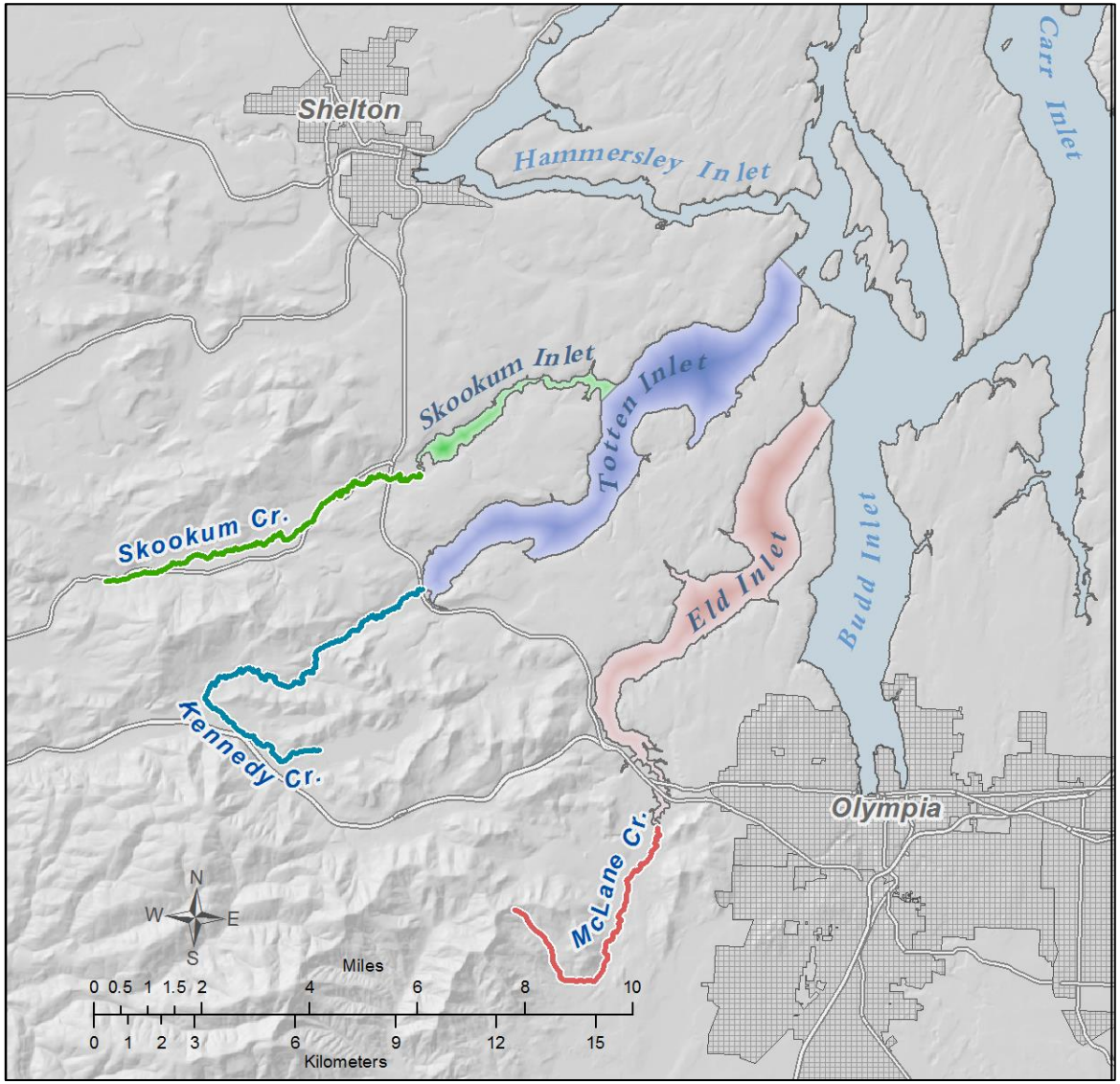
Olympia

McClane Creek

Miles
0 1 2 3 4 5 10 15 20 25
0 2 4 6 8 10 20 30 40
Kilometers

Map Created 3/24/2014
WDFW, FP Science Division

Study Area

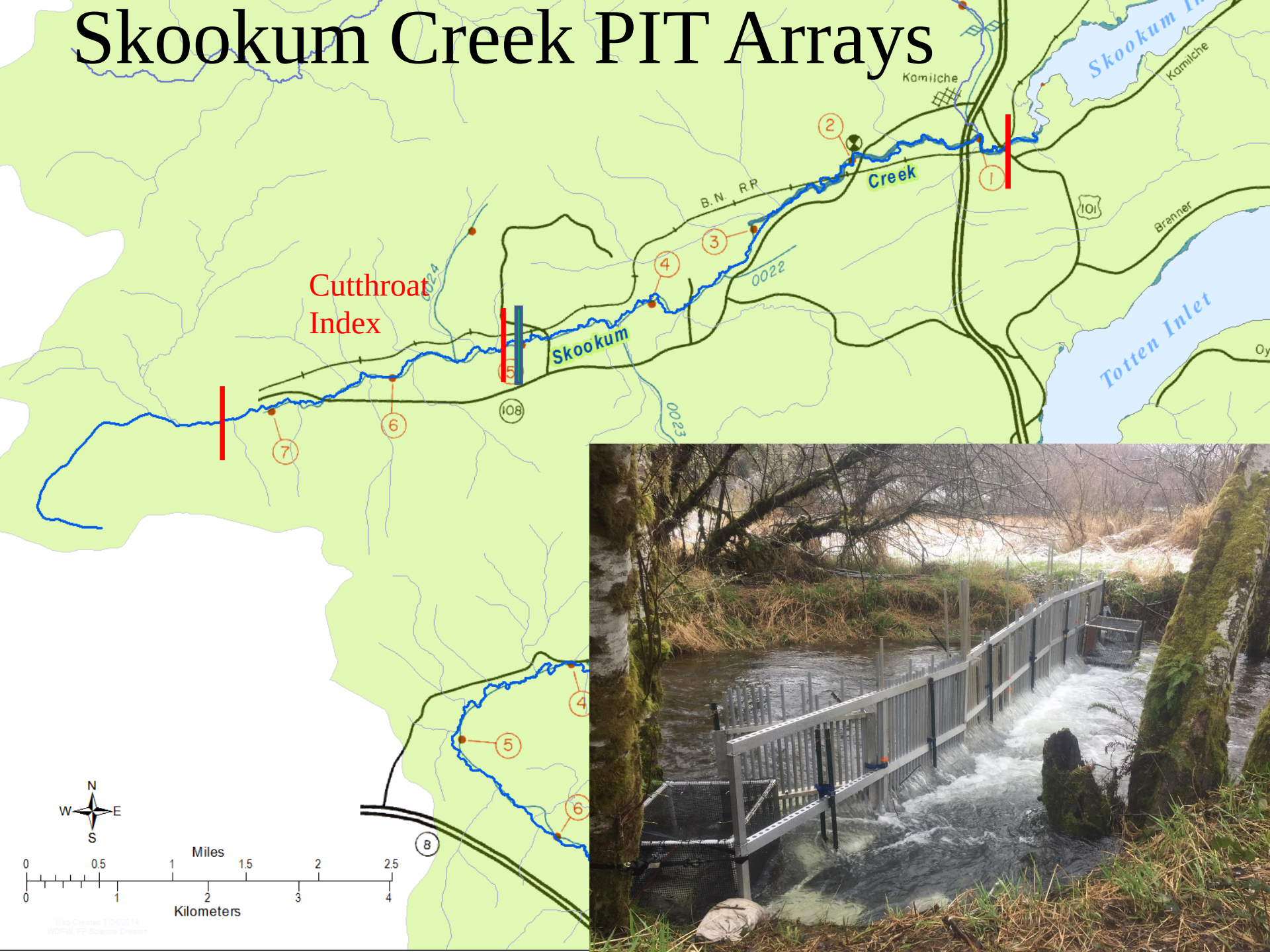

Shelton
Hammersley Inlet
Carr Inlet
Skookum Inlet
Totten Inlet
Skookum Cr.
Eld Inlet
Budd Inlet
Kennedy Cr.
McLane Cr.
Olympia
N
W
E
S
Miles
0 0.5 1 1.5 2 4 6 8 10
0 1 2 3 6 9 12 15
Kilometers

Study goals

- Examine life history strategies of coastal cutthroat in South Puget Sound

- Determine movement patterns in South Sound

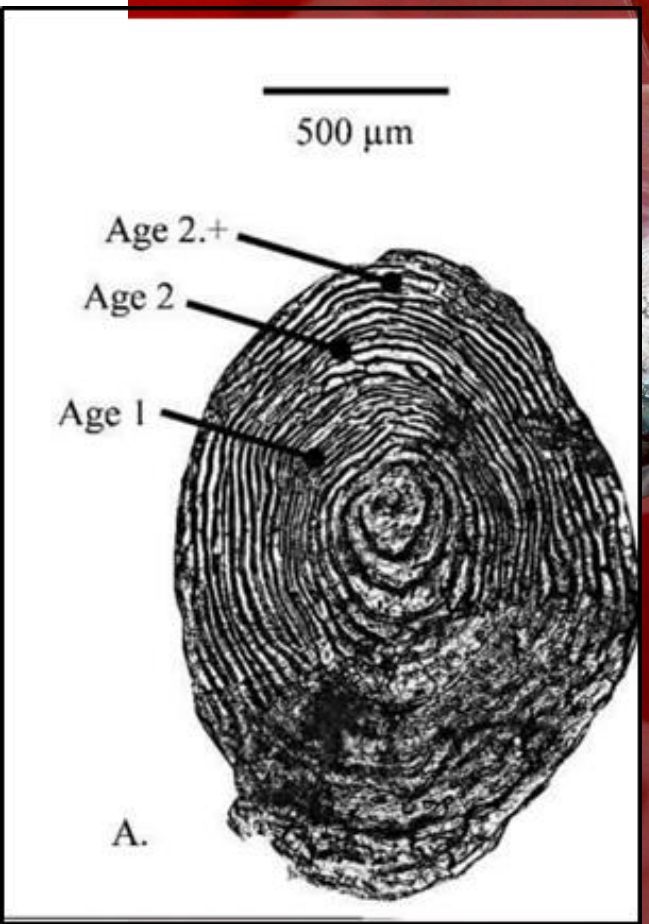
Skookum Creek PIT Arrays



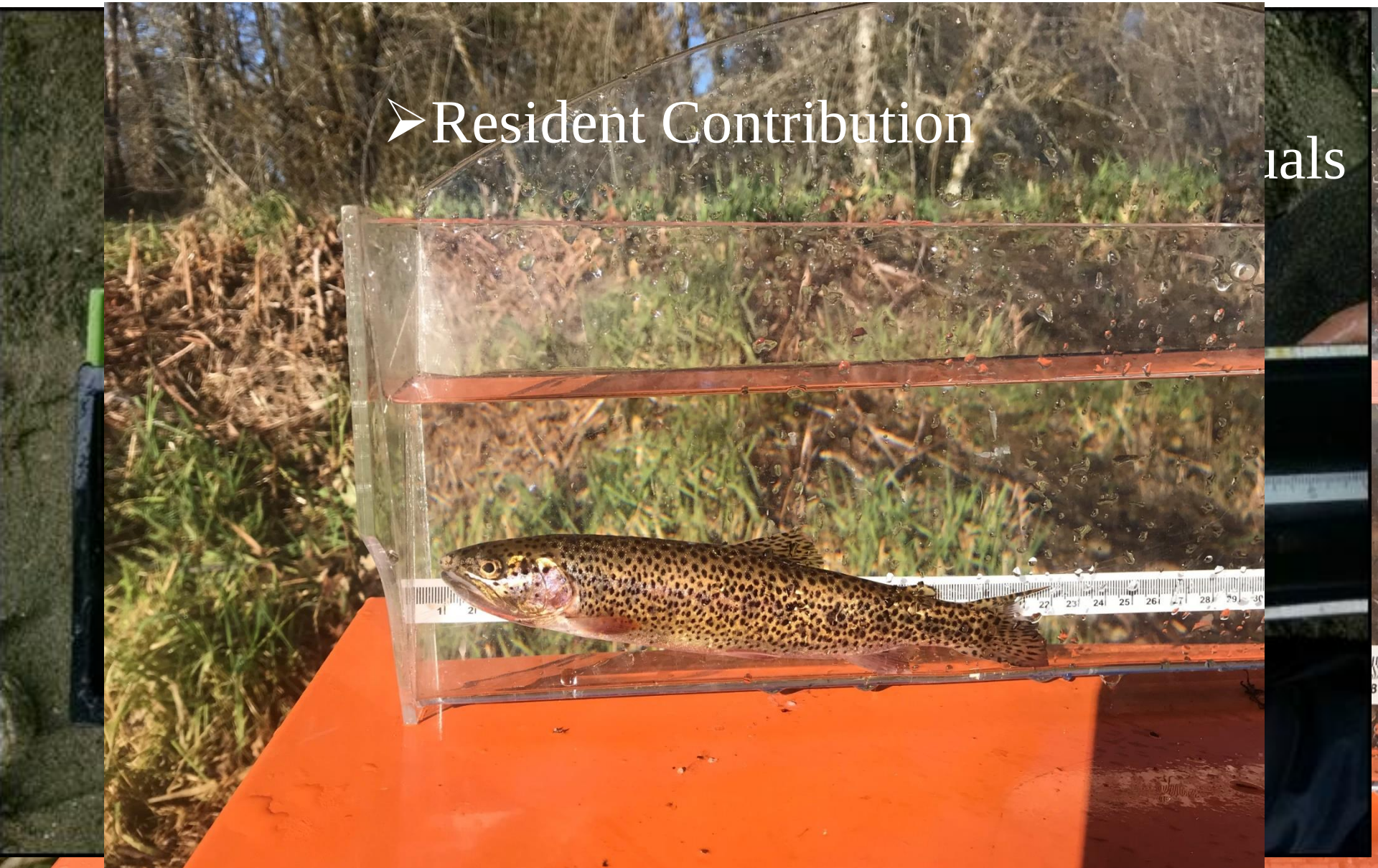
Tagging Efforts

- 782 Tagged Cutthroat
- ~15% recapture rate
- Over 1,030 Cutthroat captured

Life History Strategies



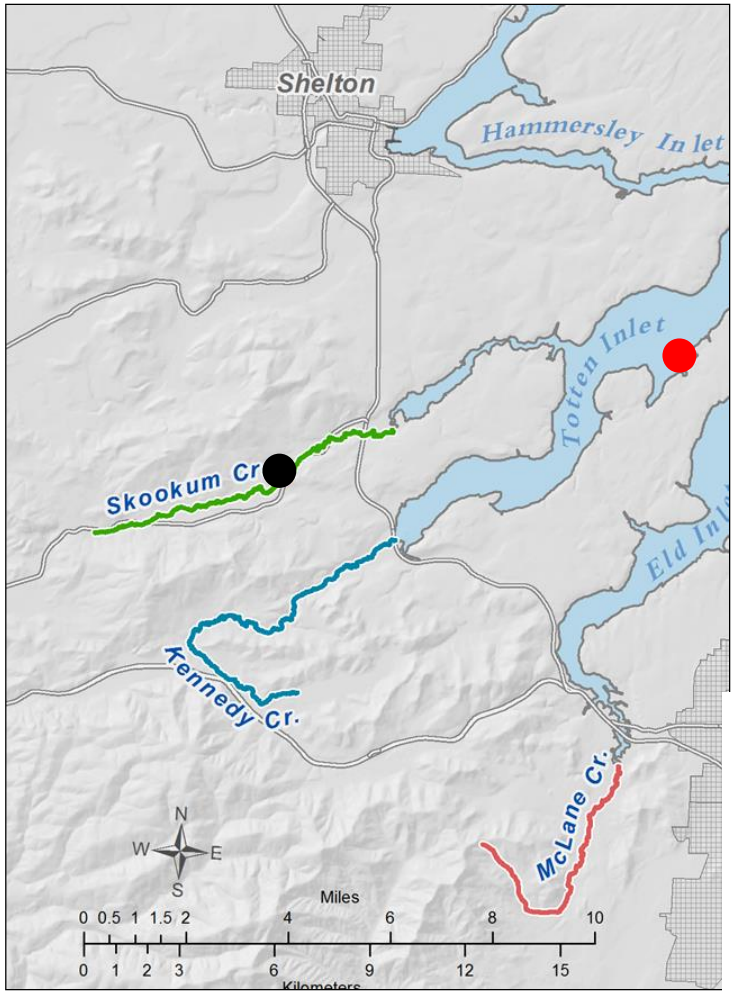
Life History Strategies



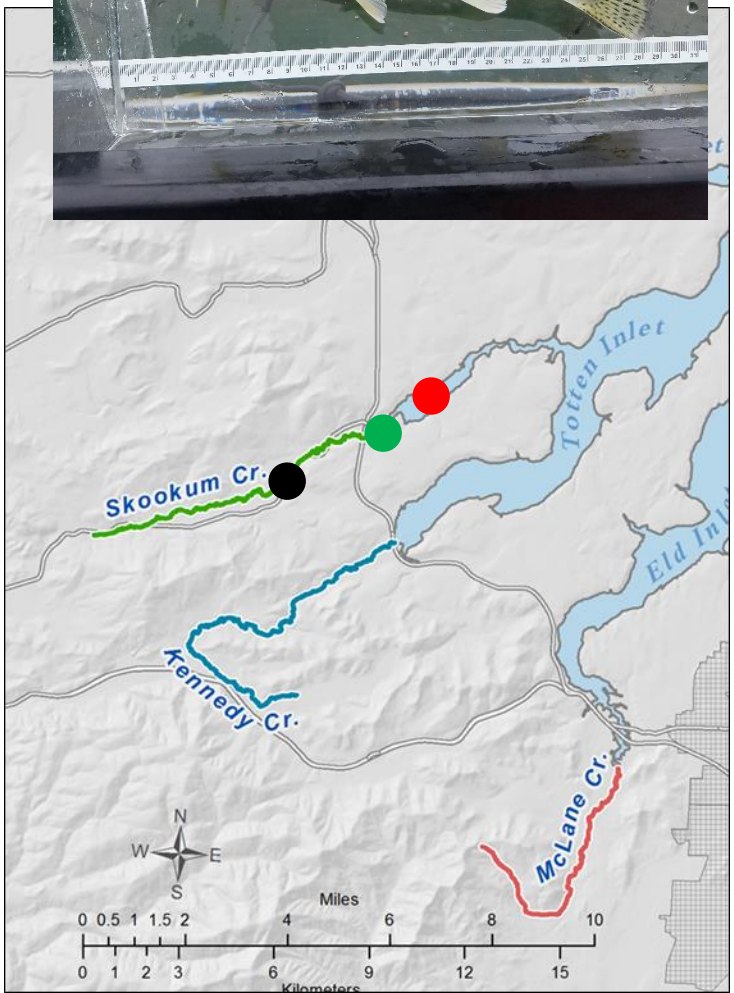
Movement Patterns and Detection Histories

- Seasonal freshwater movements in the summer and fall
- Outmigrants spending 2 years in the sound before the first spawning migration
- Site fidelity in the marine environment: 15% recapture rate
- Marine migrations across inlets
  - Detections from Eld and Totten Inlets
- Individuals exhibiting multiple spawning migrations

Movement Patterns and Detection Histories

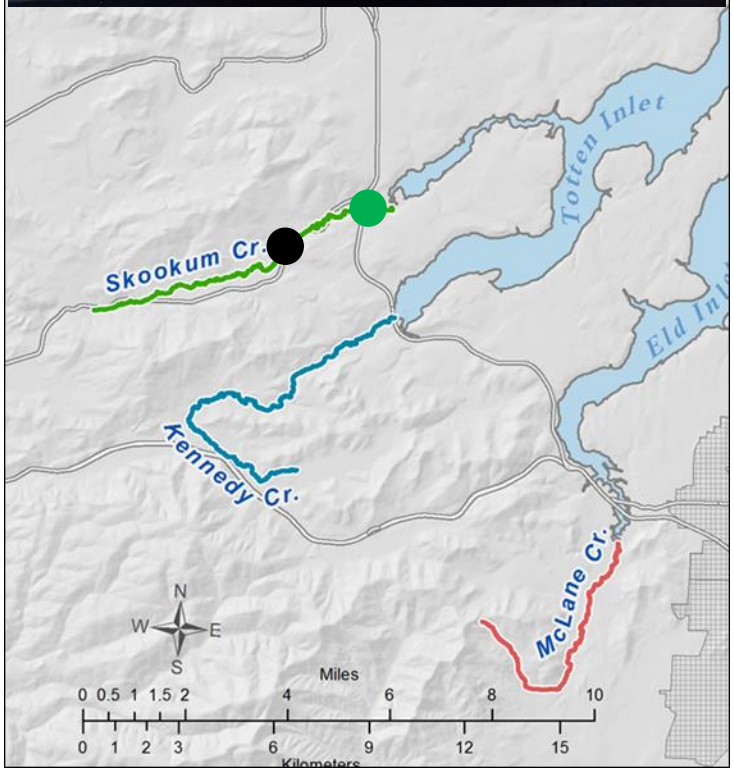


Movement Patterns and Detection Histories



- Tagged January 2017 in Skookum Inlet
- Detected July 27, 2017 on the lowest array, left July 28, 2017
- Detected October 2017 at lowest array, left the same day
- Detected January 2018, migrated up to the spawning index
- Captured in the weir February 2018
- Migrated back into marine water March 18, 2018

Movement Patterns and Detection Histories



- Tagged February 25, 2017 at the weir
- Migrated back into marine water March 5, 2017
- Detected August 7, 2017 at lowest array, left September 1, 2017
- Detected October 2017 at lowest array
- Detected January 2018 in spawning index
- Migrated back into marine water February10, 2018

Conclusions

- Anadromous Coastal Cutthroat display diverse life history strategies in South Puget Sound
- Site fidelity in the marine environment
- Spawning migrations across inlets
- Repeat spawning migrations
- Freshwater entry in the summer and fall months

Questions?

Acknowledgements

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Ongoing and Future Work