Western Washington University
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Salish Sea Ecosystem Conference

2018 Salish Sea Ecosystem Conference (Seattle, Wash.)

Apr 5th, 10:45 AM - 11:00 AM

Survival of juvenile Cowichan River chinook throughout their first year of life: a summary of PIT tag returns through fall 2017

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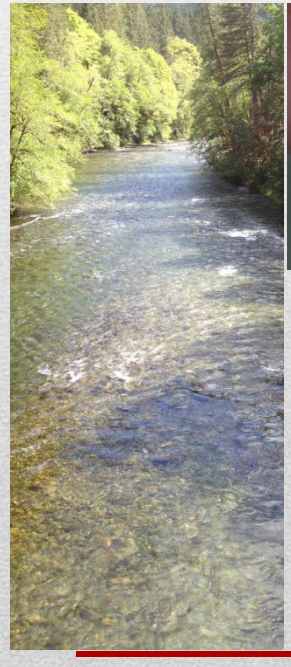
Survival of juvenile Cowichan River Chinook throughout their first year of life

A summary of PIT tag returns through fall 2017



Kevin Pellett

Fisheries and Oceans Canada

April 5, 2018

Fisheries and Oceans Canada

Acknowledgements

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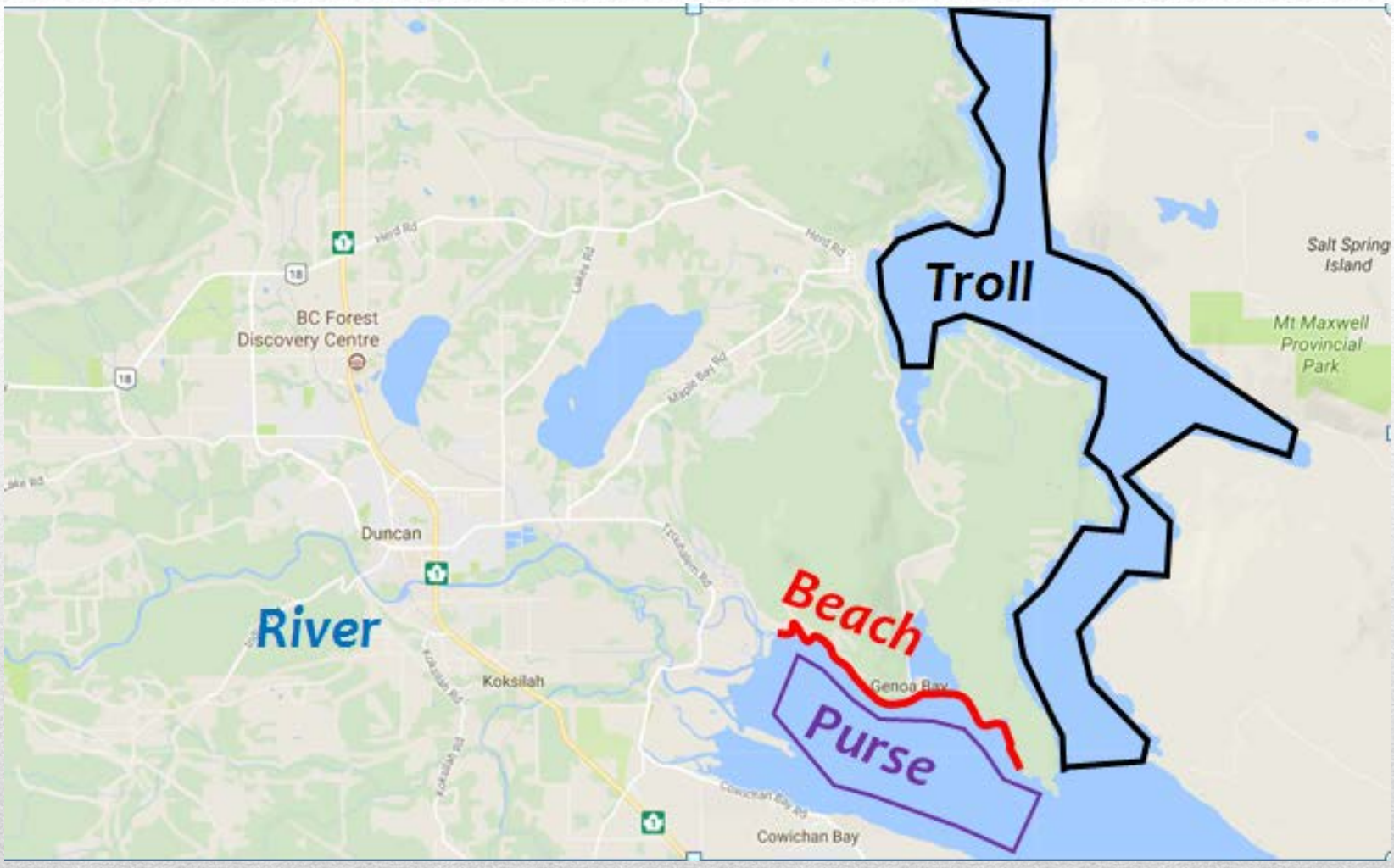
Kintama – David Welch, Erin Rechisky

DFO – Stewart Pearce, Andrew Campbell

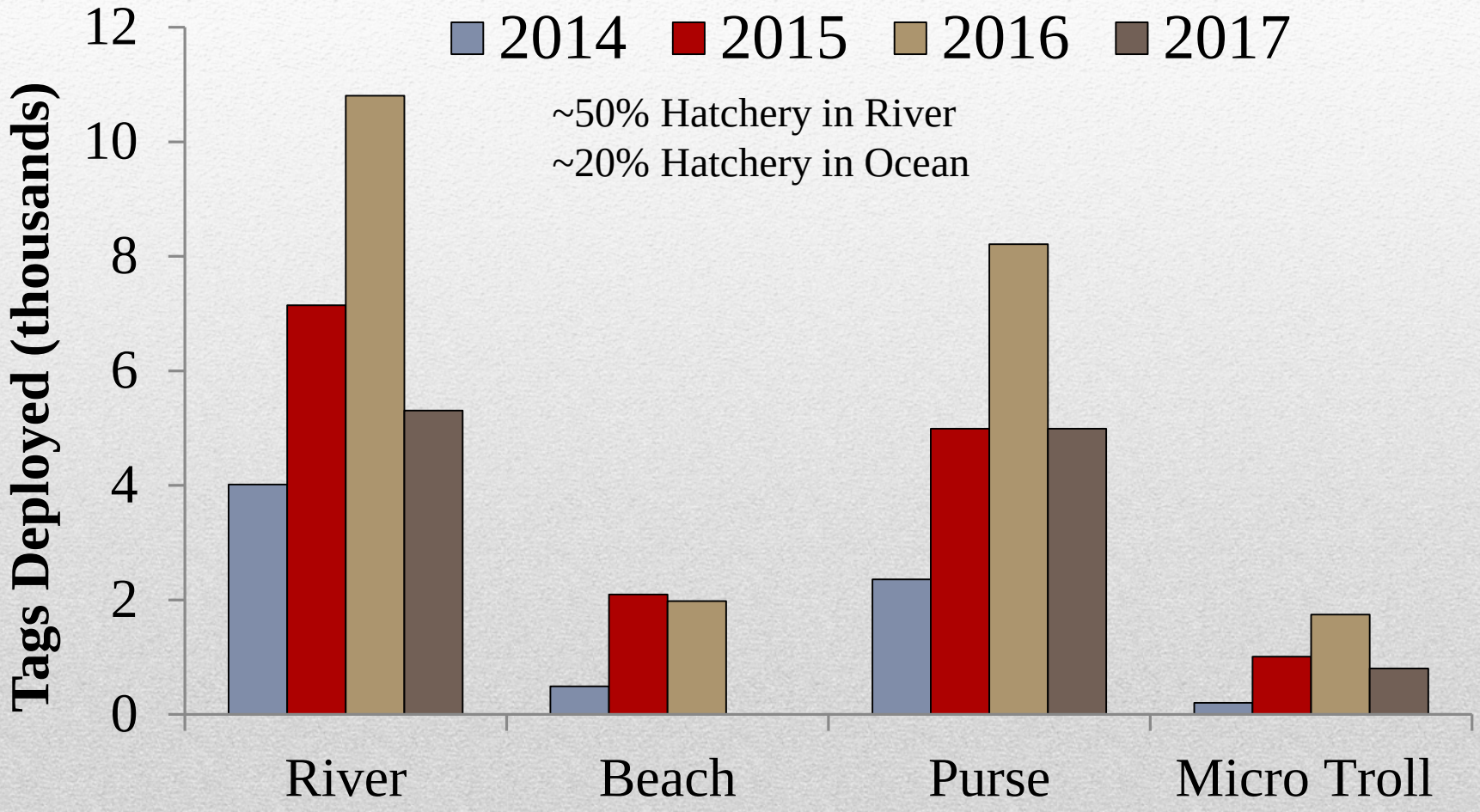

Troll
Salt Spring Island
Mt Maxwell Provincial Park
BC Forest Discovery Centre
Duncan
River
Beach
Purse
Koksilah
Genoa Bay
Cowichan Bay

Study Area

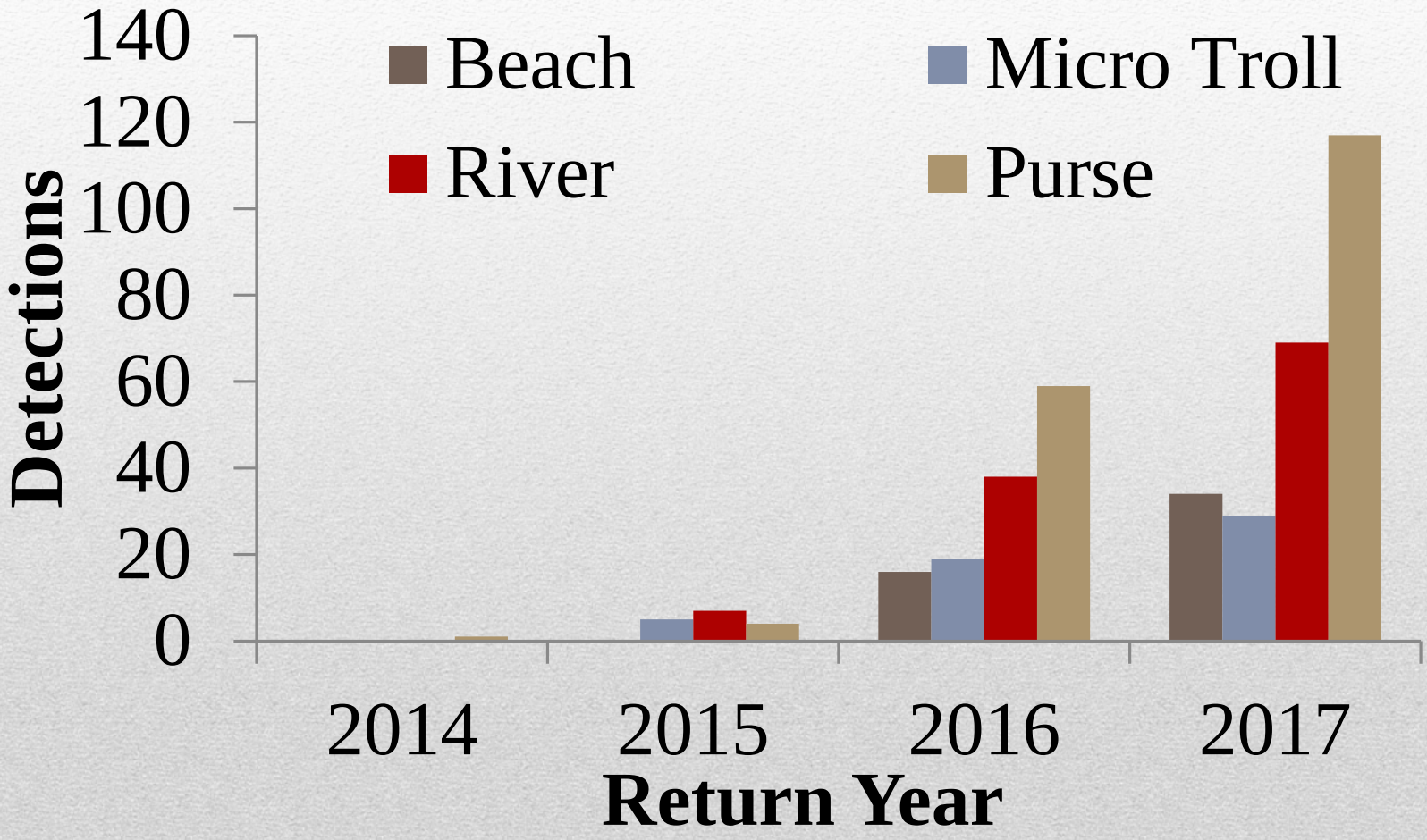
Micro Trolling

PIT Tag Detection Array

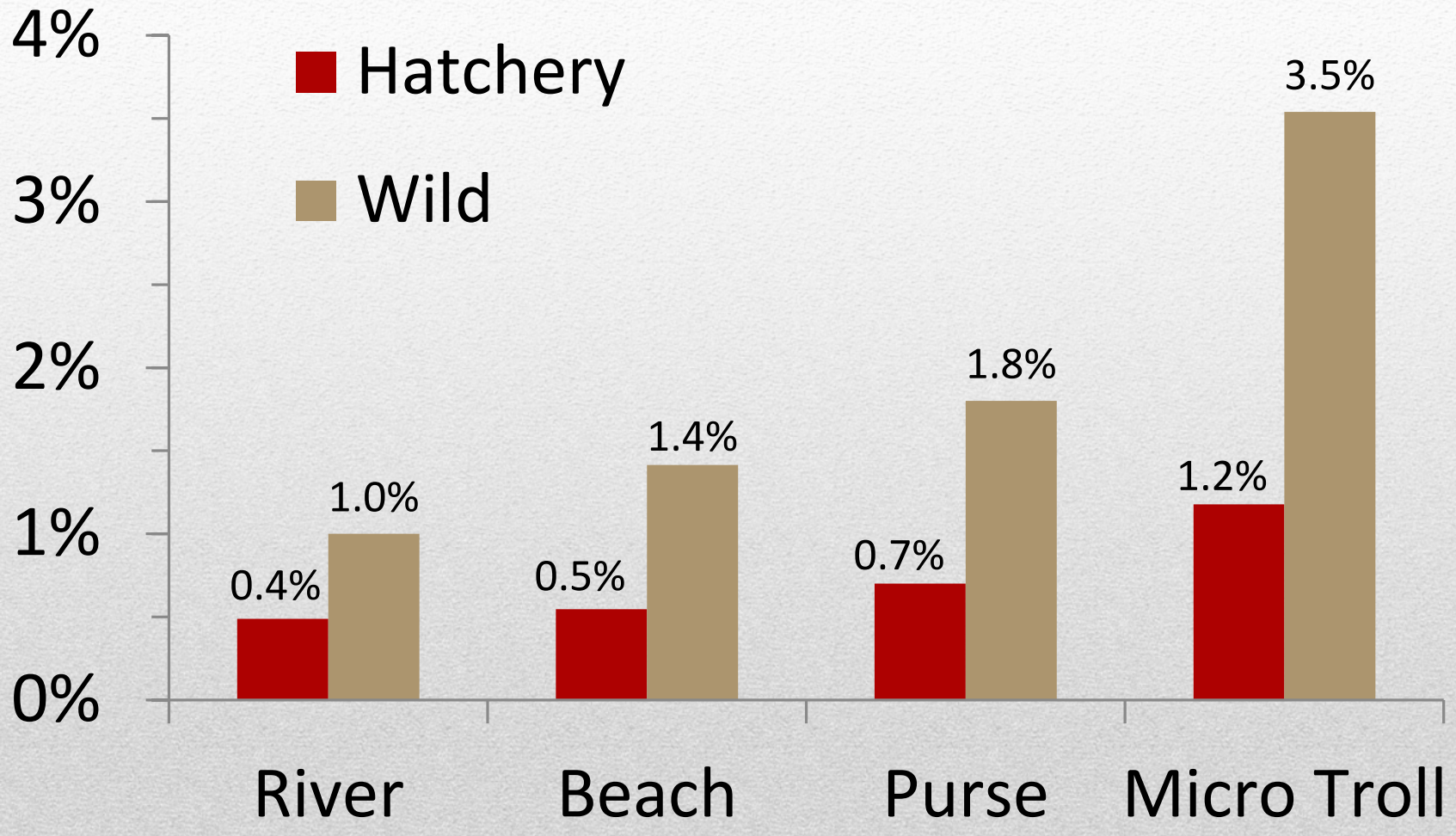
56,156 Tags Over 4 years



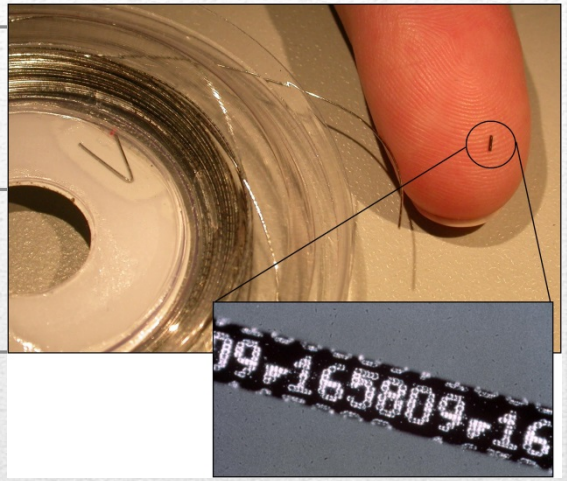
Tag Returns n= 398



Survival to Return



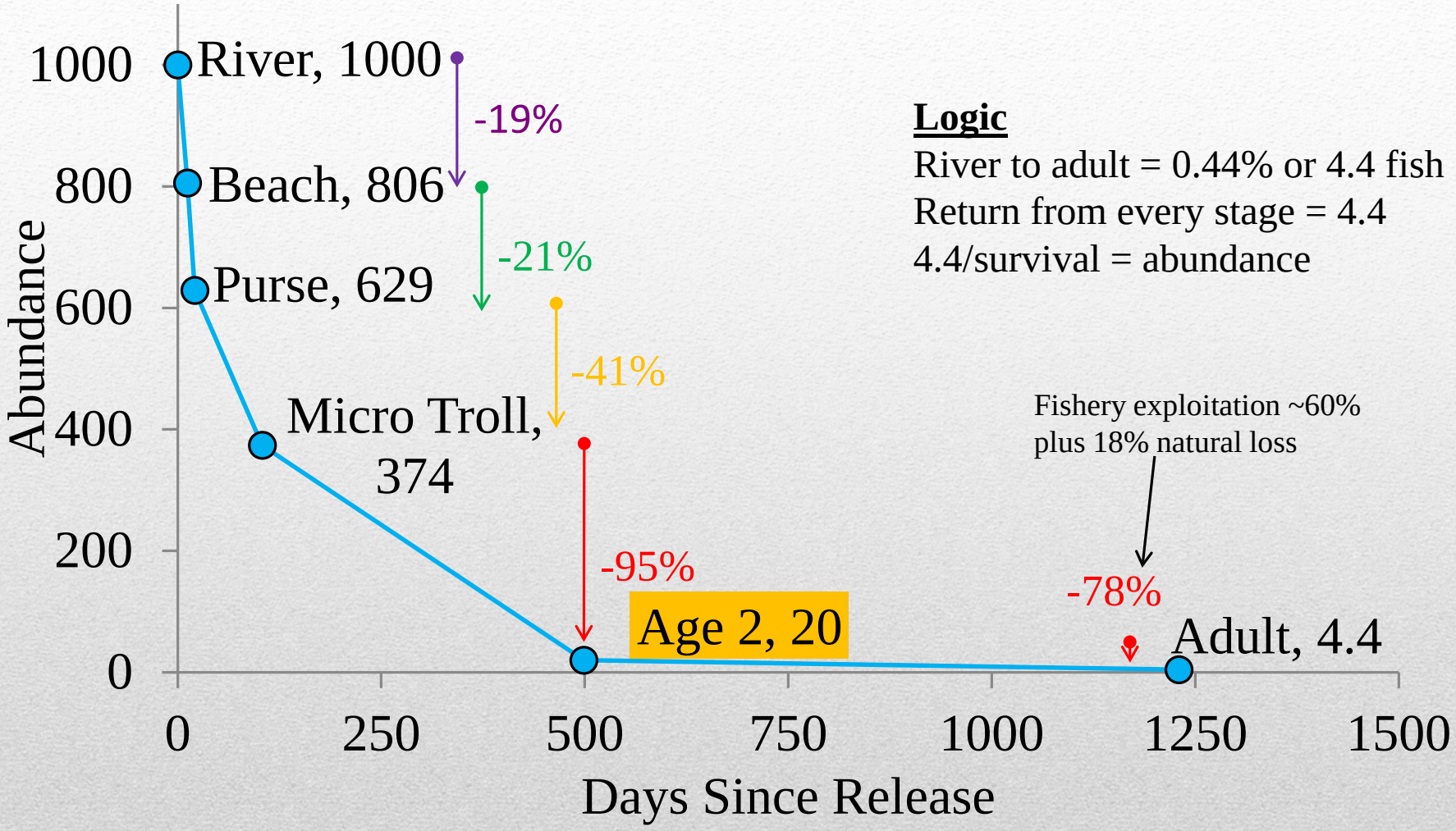
Cowichan Chinook
Survival to Age 2 - CWT



8%
6%
4%
2%
0%

1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011

Brood Year



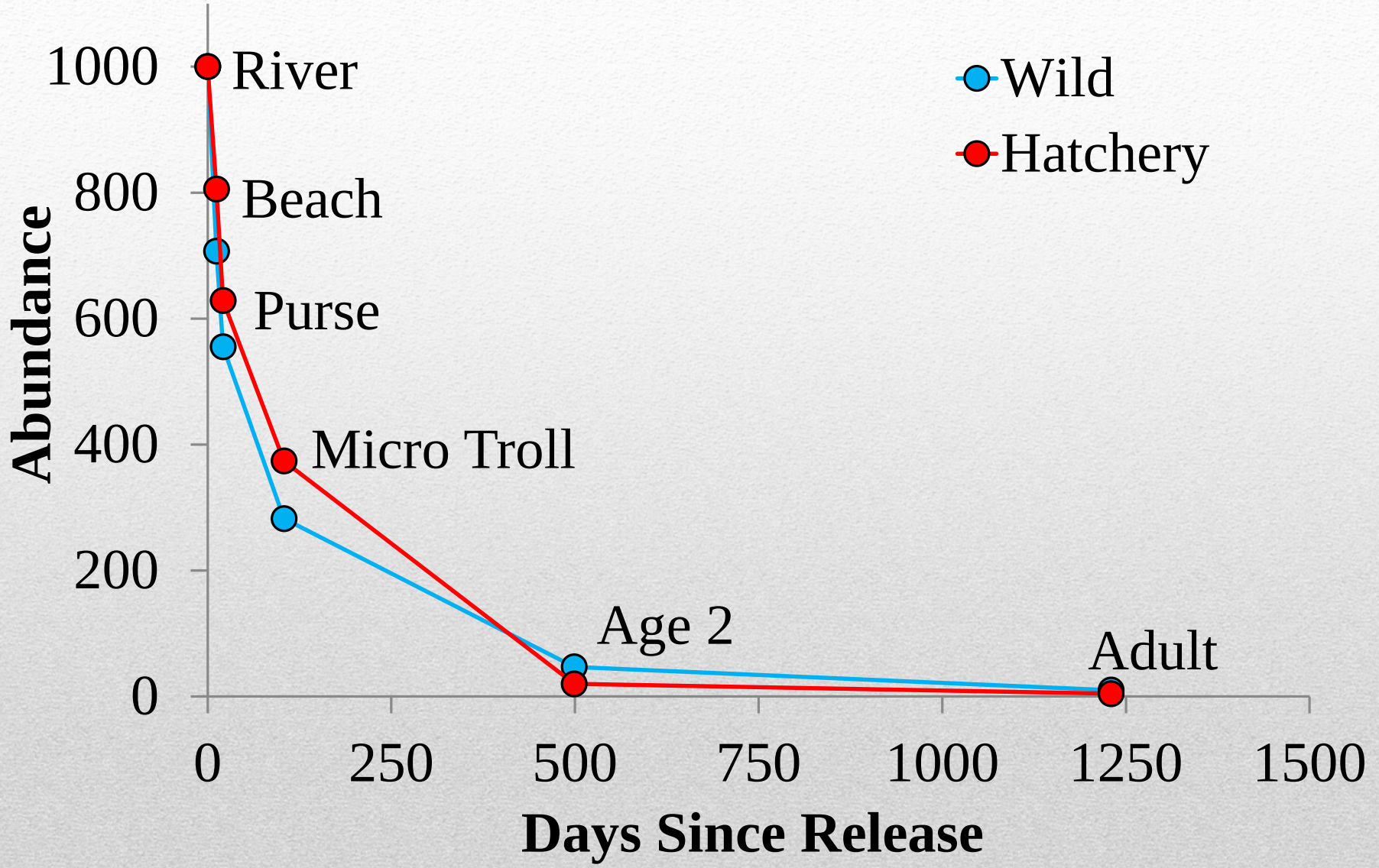
Logic

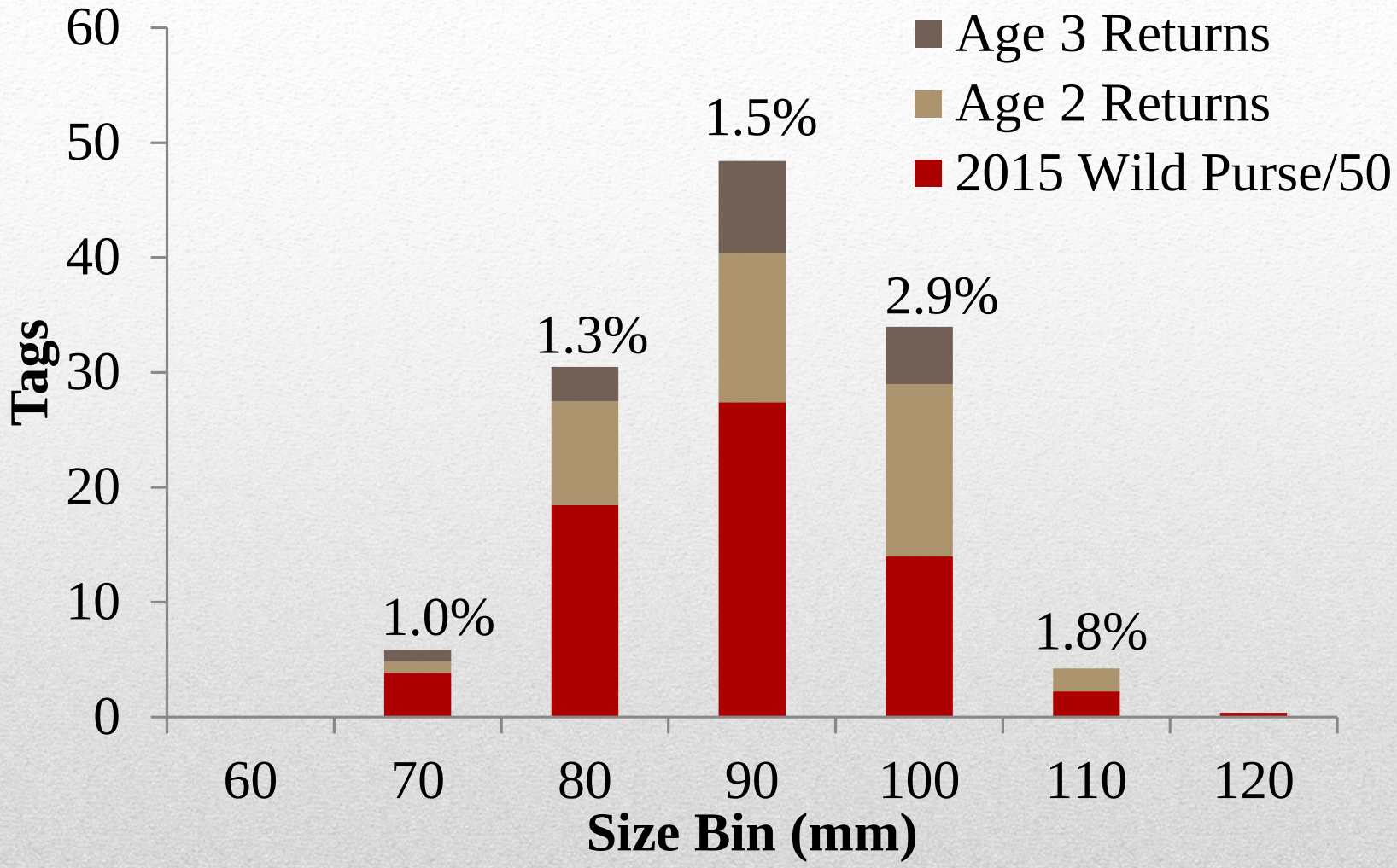
River to adult = 0.44% or 4.4 fish

Return from every stage = 4.4

4.4/survival = abundance

"Decay" Curve – Hatchery


1000
800
600
400
200
0
Abundance
River
Beach
Purse
Micro Troll
Age 2
Adult
Wild
Hatchery
0
250
500
750
1000
1250
1500
Days Since Release



Survival by Size

- Significant returns expected in 2018 from large tagging effort in 2015 and 2016
- All 4 year old returns expected by 2020
- Cowichan population appears to be recovering with strong escapement in 2017 (~10,000 adults) up from 1,260 in 2009.
- Data analysis, reports, publications

Where to from here?

Questions?