

Biological monitoring using PIT tags in the Englishman River

Presented by

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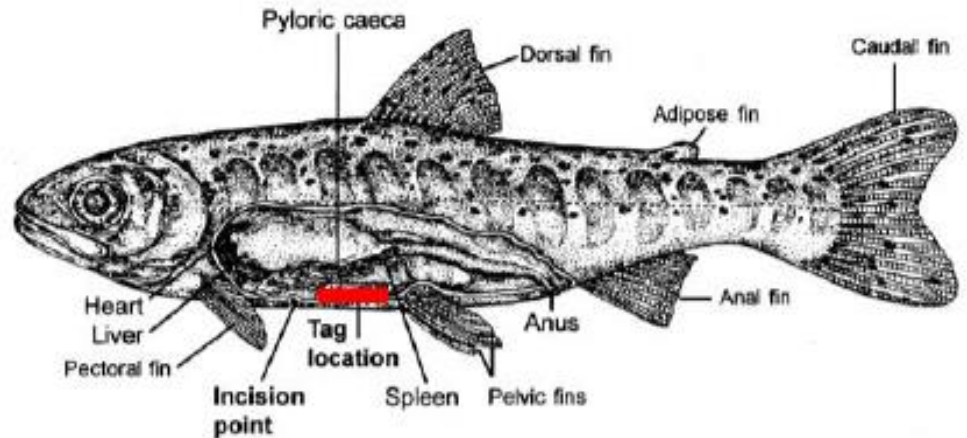
Project Objectives

- BCCF has secured a multi-year initiative to determine survival and mortality trends on streams flowing into ECVI
- Provincial interests include identifying migration timing, residence time and survival of Provincially managed species
- Fish and Wildlife (Provincial Fisheries) is acting in a support role below a BCCF/PSF lead

Roll Out

- PIT technology has been chosen to deliver objectives
- Englishman River is one of several candidate streams on ECVI
- Fish capture and sampling will be a community effort using fences, electro-fishing and occasionally angling for adult species

The Technology



- Instream antenna deployed in river TBD location

Upsides

- No battery = cheap with long life
- Large numbers out = some back

Downsides

- Efficiency variability due to antenna array issues
- Low marine survival periods yield low return rates

Coastal Cutthroat Trout

“A Species of Management Concern”

Species Overview

- Coastal Cutthroat trout are one of two subspecies found in the West with the other being westslope cutthroat trout
- The range of the coastal subspecies (CCT) is both broad and diverse
- Primary “ecotypes” include:
 - Lacustrine (lake dependant forms)
 - Fluvial (stream resident forms)
 - Anadromous (sea run forms)

CCT have adapted for almost every habitat niche



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Anadromous CTT typical life history

- Anadromous CCT can be found in larger watersheds at any time of the year although adults (25+ cm) typically migrate into smaller streams in the early spring to spawn
- The adults return to the ocean in the same spring to resume feeding in the ocean and/or estuary
- Fry emerge in the late spring and reside in the stream for 2 or three years before migrating to the ocean in the spring (May)

Defining features and Morphology (following slides)







Anadromous Coastal Cutthroat Trout

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- Populations show a high degree of stream specific fidelity and should be considered and managed as discrete populations
- Populations can and often are dependant on very small productive habitat segments – particularly in larger watersheds that have a small fraction of qualifying habitat
- Smolt production can range from dozens to hundreds per Km of qualifying habitat



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Threats to local populations

- Habitat degradation and disruption represent a serious threat to stream and population productivity
- Riparian areas are critical to meet many stream form and fish habitat quality needs including:
 - Providing LWD stream channel defining features like scour pools and direct cover
 - Shading stream channels to decrease stream temperatures





How MVIHES can help

- Fish capture can be laborious and really time sensitive – the smaller the stream the more compressed the migration window
- Working with the project will increase pathways of discovery and could yield results that influence fisheries management
- We would encourage participation to learn with the agencies involved and become a better steward of your resource