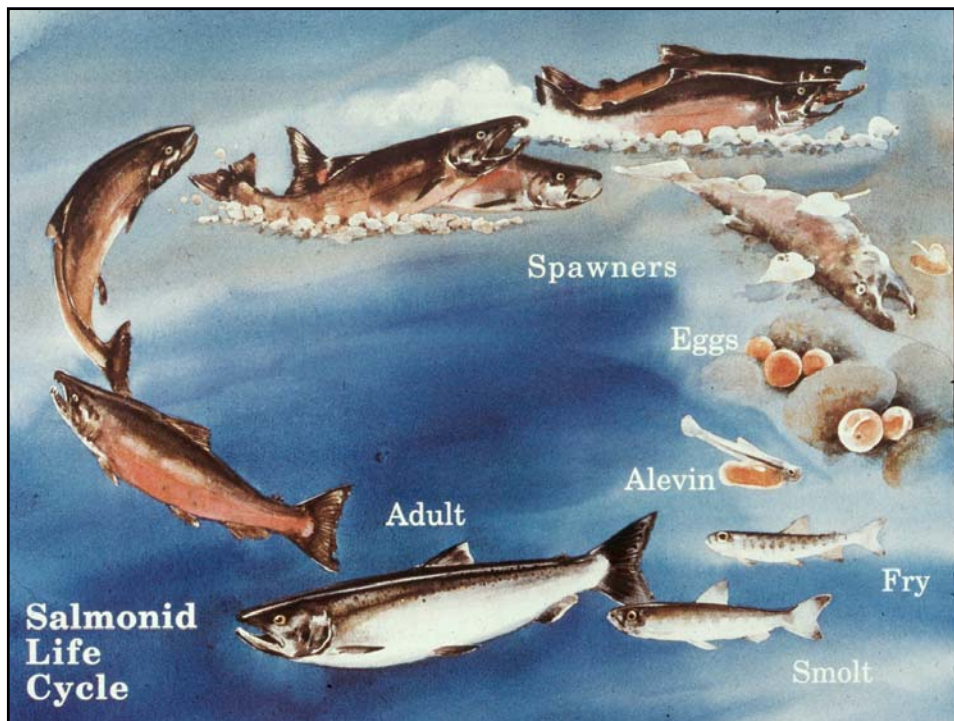


# Above the dam: salmon colonization of new habitat

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## Salmon colonization

Homing vs. straying

Colonization following glaciation 15,000 years ago

In Glacier Bay, AK, salmon colonization is a natural stage of stream succession (Milner et al., 2000)

In New Zealand, chinook salmon introduced in early 1900s rapidly colonized suitable habitat (Quinn et al., 2000)



## Cedar River, Washington



- Largest tributary of Lake Washington
- In 1901, City of Seattle builds Landsburg Dam to supply residents with drinking water
- Landsburg Dam blocks migration of anadromous salmonids

## Fish passage at Landsburg Dam



Beginning September, 2003 Seattle Public Utilities passes chinook salmon, coho salmon and steelhead above Landsburg Dam

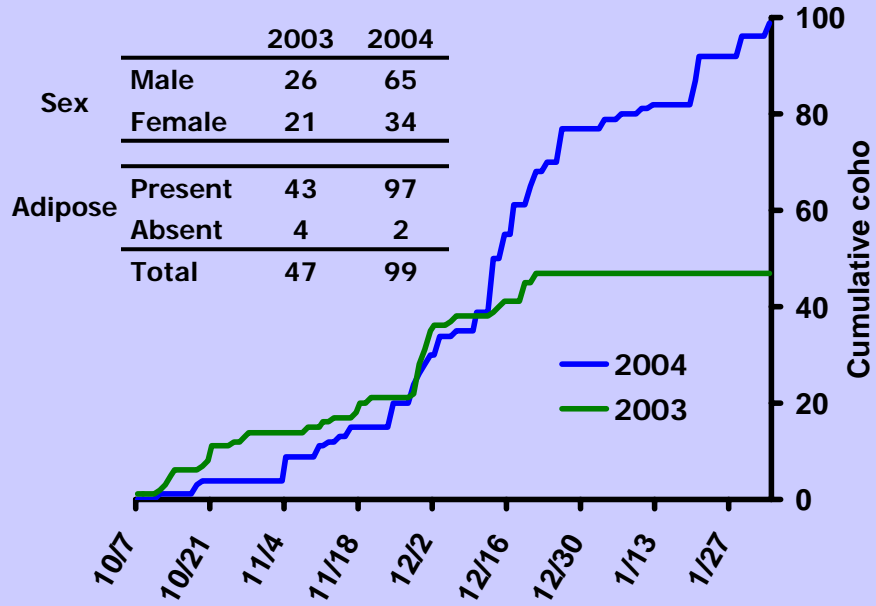


## Objectives

- 1) Describe the passage of adult salmon above Landsburg Dam
- 2) Use radio telemetry to record colonist exploration and identify spawning sites

**Hypothesis:** Coho salmon will spawn primarily in tributaries of the mainstem Cedar River

## Coho salmon passage

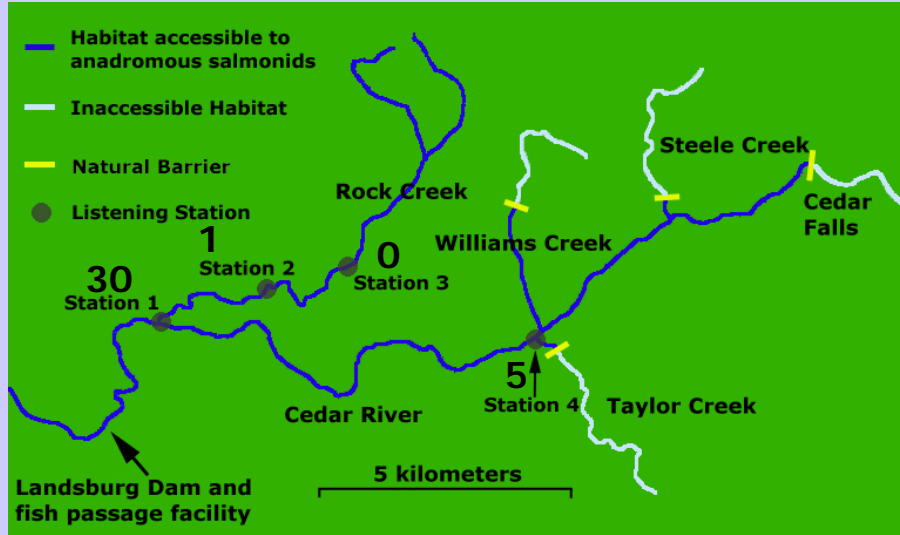


## Coho salmon radio tagging



	2003	2004
Male	23	45
Female	14	4
Total	37	49

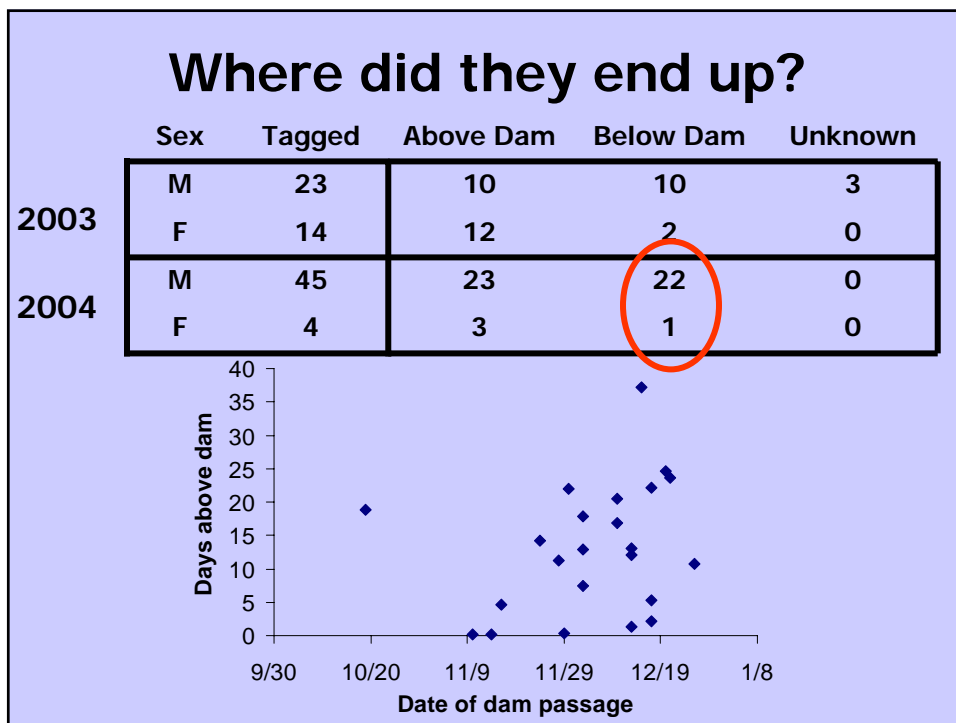
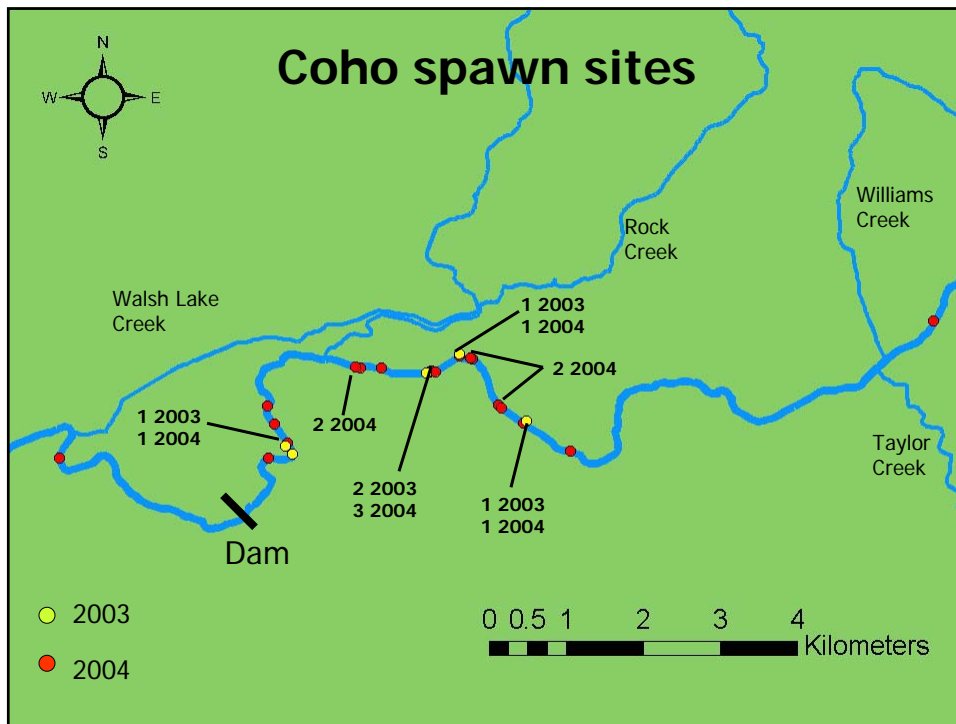
## Listening stations 2003



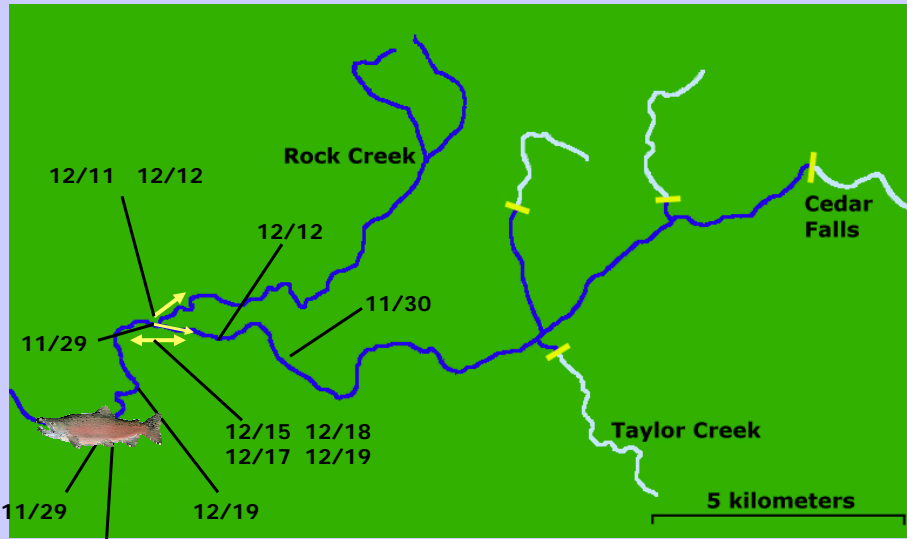
Fish detected

## Mobile radio tracking



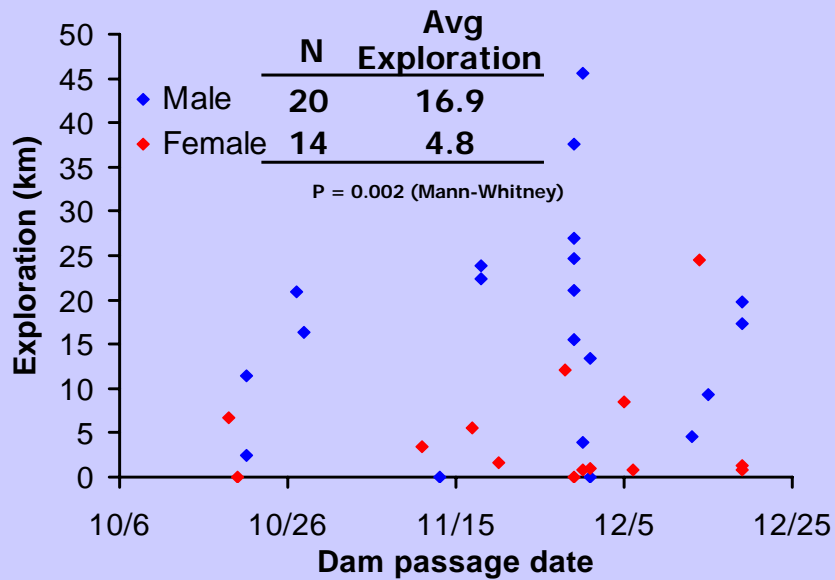


## Tracking narrative: fish 563-24



12/21 final location Male, adipose present, 730 mm

## Exploration 2003

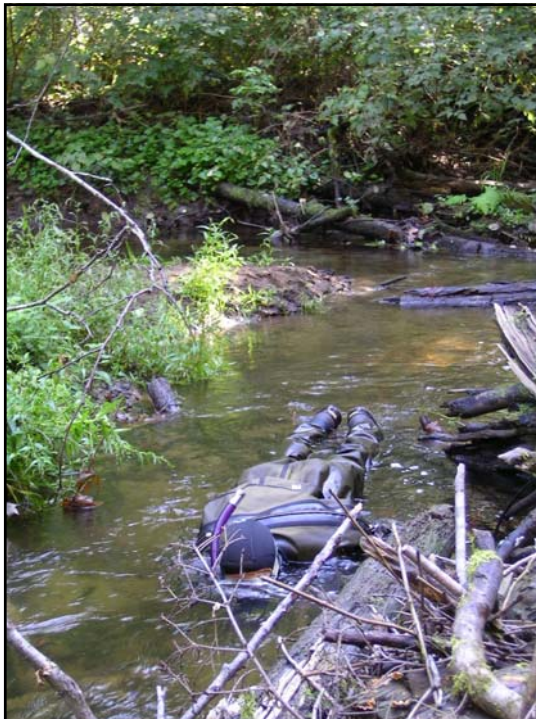


## Conclusions

Colonizing coho salmon spawned primarily in the mainstem Cedar River

A significant number of fish, especially males, eventually moved below the dam

Many fish undertook extensive exploratory movements, and male exploration was generally greater than that of females



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and many more!!